



INVESTMENT POLICY STATEMENT
(Adopted September 18, 2014 to be effective October 1, 2014)

TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
ARTICLE 1 – TOTAL FUND AND PORTFOLIO DESIGN	9
1.1. Introduction	9
1.2. Purpose and Design	9
1.3. Roles of Board, Staff, Consultants, and Advisors	9
1.4. Total Fund Objectives.....	10
1.5. Total Fund Investment Standard.....	10
1.6. Total Fund Asset Mix and Benchmarks.....	11
1.7. Total Fund Measurement and Reporting Criteria	13
1.8. Total Fund Portfolio Implementation and Design; Restrictions	15
ARTICLE 2 – PUBLIC MARKETS PORTFOLIOS.....	16
2.1. Public Markets Portfolios Objectives	16
2.2. Public Markets Portfolios Authorized Investments	16
2.3. Internal Public Markets Portfolio Restrictions.....	17
2.4. External Public Markets Portfolio	17
2.5. External Public Markets Portfolio Objectives	18
2.6. Hedge Fund Defined.....	18
2.7. External Public Markets Portfolio Authorization	20
2.8. External Public Markets Portfolio Restrictions	21
2.9. External Public Markets Portfolio Conflicts of Interest.....	21
2.10. Risk Parity	23
2.11. Public Markets Portfolios Restrictions	23
ARTICLE 3 – PRIVATE MARKETS PORTFOLIOS	22
3.1. Private Markets Portfolios	22
3.2. Private Markets Portfolios Authorization	22
3.3. Private Markets Investment Process	22
3.4. Private Markets Authorization of Investments	23
ARTICLE 4 – PRIVATE EQUITY PORTFOLIO.....	23
4.1. Private Equity Portfolio Objectives	23
4.2. Private Equity Portfolio Authorized Investments	24
4.3. Private Equity Portfolio Restrictions	24

ARTICLE 5 – REAL ASSETS PORTFOLIO	24
5.1. Real Assets Portfolio Objectives	24
5.2. Real Assets Portfolio Authorized Investments	24
5.3. Real Assets Portfolio Restrictions	24
ARTICLE 6 – ENERGY AND NATURAL RESOURCES PORTFOLIO	24
6.1. Energy and Natural Resource Portfolio Objectives	24
6.2. Energy and Natural Resource Portfolio Authorized Investments	25
6.3. Energy and Natural Resource Portfolio Restrictions	25
ARTICLE 7 – EMERGING MANAGERS PROGRAM	25
ARTICLE 8 – OVERLAY PORTFOLIOS	26
8.1. Overlay Portfolios Objectives.....	26
8.2. Overlay Portfolios Authorized Investments.....	26
8.3. Overlay Portfolios Restrictions.....	26
ARTICLE 9 – AUTHORIZED USES OF DERIVATIVES	27
9.1. Derivatives Objective and Investment Standard	27
9.2. Derivatives Policy Scope	27
9.3. Derivatives Use by External Managers and Commingled Funds (Hedge Funds).....	27
9.4. Derivatives Definition; Authorization	28
9.5. Derivatives Applications Permitted	28
9.6. Derivatives Applications Not Permitted	28
9.7. Derivatives Documentation and Controls	29
9.8. Derivatives Limitations	29
9.9. Derivatives Risk Management and Compliance	30
ARTICLE 10 – RISK MANAGEMENT AND OVERSIGHT	30
10.1. Market Risk Management.....	30
10.2. Foreign-Exchange Risk Management.....	30
10.3. Credit Risk Management	31
10.4. Liquidity Risk Management	31
10.5. Operations Risk Management.....	32
10.6. Settlement Risk Management	32
10.7. Legal Risk Management	32
10.8. Risk Management Compliance Cure Periods and Remedies	32
10.9. Permitted Uses of Leverage.....	33
ARTICLE 11 – HEALTH INSURANCE PROGRAM PORTFOLIO	33
11.1 Health Insurance Program Portfolio Objective	33
11.2 Authorized Investments for the Health Insurance Program Portfolio	33
ARTICLE 12 – POLITICAL CONTRIBUTIONS; IMPROPER INFLUENCE; PLACEMENT AGENTS AND FINDERS	33
12.1 Scope	33
12.2 Purpose	34
12.3 Philosophy	34
12.4 Required Disclosures	34

12.5	Contractual Representations, Warranties and Covenants	34
12.6	Prohibitions.....	34
12.7	Definitions	35
	APPENDIX A – TRACKING ERROR NEUTRAL (IN ANNUALIZED BASIS POINTS)	36
	APPENDIX B – IIC APPROVAL AUTHORITY AND MANAGER ORGANIZATION ALLOCATION LIMITS	37
	APPENDIX C – EMERGING MANAGERS	39
	APPENDIX D – CURRENCY HEDGE RATIOS.....	40
	APPENDIX E – GENERAL AUTHORITY RESOLUTION	41
	APPENDIX F – POLITICAL CONTRIBUTIONS; IMPROPER INFLUENCE; PLACEMENT AGENTS AND FINDERS QUESTIONNAIRE.....	44
	APPENDIX G - EXTERNAL ADVISORY COMMITTEES OR BOARDS, BOARD OBSERVERS, AND BOARD REPRESENTATION.....	46

EXECUTIVE SUMMARY

This Executive Summary is not intended to replace, and must be read in conjunction with, the Investment Policy Statement. In the event of a conflict between the Executive Summary and the Investment Policy Statement, the Investment Policy Statement shall govern.

**Total Fund and Portfolio Design;
Restrictions**

The Investment Policy Statement provides a formal plan for investing pension trust fund and health insurance program assets. The policy defines the roles and responsibilities of the Investment Division and other parties within that plan.

The Internal Investment Committee is established and assigned the authority to review and approve investments. The IIC's authority is limited by the size of the investments it can approve without also obtaining approval from the Board. The limitations are 0.5% for initial allocations, 1% for follow-on allocations, 3% total to any one organization in each of External Public Markets, Private Equity, Real Assets and Energy and Natural Resources and 6% total to any one organization in the total Trust with each of the foregoing percentage stated as a percentage of the Total Trust and calculated at time of investment. In addition, the CIO has Special Investment Opportunity authority of up to \$1 billion. See "Appendix B – IIC Approval Authority and Manager Organization Allocation Limits."

The Trust's objectives are to (a) control risk and (b) achieve a long-term rate of return that exceeds (i) the assumed actuarial rate of return adopted by the Board, (ii) inflation plus 5% and (iii) the Trust's Policy Benchmark. The Trust is subject to a "prudent person" standard of care under the Texas Constitution.

Within the constraints of the IPS, the Investment Division is authorized to engage advisors and consultants, authorize commitments to be funded over an extended period of years, serve or hire independent third-parties to serve on External Advisory Committees or Boards, as Board Observers or on the governing body of a non-public (private) or a publicly-traded business entity, allow short positions, engage in overlay strategies, rebalance the portfolio, and transfer, withdraw or terminate its investments. Private Market and External Public Markets investments will be submitted to the Board for authorization if the appropriate consultant or advisor does not concur with the investment or at the request of any Board member.

Except as required by fiduciary duties created by the Texas Constitution or applicable law, each TRS investment portfolio, including separate account investments, will comply with Chapters 806 and 807 of the Government Code relating to prohibitions on investments in Sudan and Iran, respectively.

TRS will not invest in securities of any company that derives a significant portion of its revenues from products or services intended exclusively to appeal to a prurient interest in sex through explicit depictions of sexual activity. The restriction does not apply to pooled investment vehicles, provided that the Investment Division shall engage with the managers of such vehicles and use commercially reasonable efforts during due diligence to determine whether such vehicles invest in any company that would not be eligible for direct investment by TRS.

See "Article 1 – Total Fund and Portfolio Design"

<u>Asset Allocation</u>	<u>Asset Class</u>	<u>Target</u>
	<u>Global Equity</u>	
	USA	18%
	Non-US Developed	13
	Emerging Markets	9
	Directional Hedge Funds	4
	Private Equity	13
	<u>Stable Value</u>	
	US Treasuries	11%
	Absolute Return	0
	Stable Value Hedge Funds	4
	Cash	1
	<u>Real Return</u>	
	Global Inflation Linked Bonds	3%
	Real Assets	16
	Energy and Natural Resources	3
	Commodities	0
	Risk Parity	5%
	Total	100%
	In addition to the target, each asset class has minimum and maximum allocations which, with certain exceptions, are +/-5% around the target allocation.	
	See “Section 1.6 – Total Fund Asset Mix and Benchmarks.”	
Measurement and Reporting	Investment performance, policy compliance, asset allocation, external investments activities, derivatives usage, risk limits, liquidity, leverage, private markets strategy, staffing, board and board observer seats, use of placement agents and other information will be monitored and reported to the Board. See “Section 1.7 – Total Fund Measurement and Reporting Criteria.”	
Public Markets Portfolios	<p>The portfolios are authorized to invest in publicly traded or Rule 144A (either through an exchange or over-the-counter) assets such as equities, exchange-traded funds, equity-linked notes, options, futures, swaps, forwards, corporate debt, sovereign or sovereign-sponsored entity debt (including US Treasuries), mortgage-backed securities, collateralized mortgage obligations, commercial mortgage-backed securities, asset-backed securities, any investment in one of the public markets benchmarks, mutual funds, closed end funds, structured notes, structured credit transactions, repurchase transactions, State of Texas pooled investment funds, foreign currencies, short sales, local access products and other investments. See “Section 2.2 –Public Markets Portfolios Authorized Investments.”</p> <p>Certain restrictions apply to the internally managed portfolios including restrictions on the amount of equity of any company that can be held (not more than 20%) and those listed in Section 1.8., See “Section 2.3 – Internal Public Markets Portfolios Portfolio Restrictions.”</p>	
External Public Markets Portfolio	The portfolio is comprised of (a) externally managed public investments that do not qualify as Hedge Funds (Agency Agreements limited to less than 30% of the Trust), (b) Hedge Funds (limited to less than 10% of the Trust) and (c) absolute return portfolios (includes credit-sensitive investments). Hedge Fund is defined in Section 2.6.	

	See “Section 2.7 –External Public Markets Portfolio Authorization” and “Section 2.8 – External Public Markets Portfolio Restrictions.”
Private Markets Portfolio	General principles of investing in private markets apply to the Private Equity, Real Assets and Energy and Natural Resources portfolios. See “Article 3 – Private Markets Portfolios.”
Private Equity Portfolio	The portfolio makes investments either through funds or directly in equity, equity-rights securities, preferred stock, convertible securities, debt obligations, warrants, rights, options and other investments. Private equity strategies are often classified as venture capital, mezzanine, buyout, emerging markets and special situation. See “Article 4 – Private Equity Portfolio.”
Real Assets Portfolio	The portfolio makes investments either through funds or directly in equity, debt, rights, warrants or other investments in real estate, infrastructure, timber, agriculture, oil and gas, mortgage-related investments, real estate investment trusts, master limited partnerships, non-fixed assets and other opportunistic investments in real assets. Real estate investments are often classified as core, core-plus, value-added and opportunistic. See “Article 5 – Real Assets Portfolio.”
Energy and Natural Resources Portfolio	The portfolio makes investments in energy and natural resources related assets through public funds, private equity funds, or directly through equity, equity-rights securities, preferred stock, convertible securities, debt obligations, warrants, rights, options and other investments whether public or private. Energy and natural resource investments are often classified by resource type and where the investment is in the resource value chain (upstream, midstream or downstream). See “Article 6 – Energy and Natural Resources Portfolio.”
Emerging Managers Program	The Investment Division will make a good-faith effort to invest a target allocation of \$1.65 billion with qualified emerging managers in the External Public Markets Portfolio, Private Equity Portfolio and the Real Assets Portfolio. Emerging managers can include, but are not limited to, minority, women, and disabled veteran-owned or -controlled organizations generally with less than \$2 billion assets under management or a performance track record of less than five years. See “Article 7 – Emerging Managers Program” and “Appendix C – Emerging Managers.”
Overlay Portfolios	Overlay Portfolios are designed to manage risk, asset allocation, and market exposures through futures, options, swap agreements, or forward agreements. Overlay Portfolios may be implemented in connection with the Total Fund or with any investment or portfolio within the Total Fund. Overlay portfolios are restricted by the asset allocation limits of the Trust. In addition, certain uses of currency overlays are restricted to less than (a) 5% to all non-US dollar currencies, (b) 2% to any one developed market currency (except the US dollar) and (c) 1% to any emerging market currency, each calculated as a percentage of the Trust. See “Article 8 – Overlay Portfolios.”
Derivatives	<p>Derivatives are authorized only if they efficiently manage and reduce the risk of the overall investment portfolio. Derivatives can be used to (a) implement investment strategies in a lower cost or efficient manner, (b) efficiently manage the Total Fund portfolio, (c) construct portfolios that could not be efficiently constructed using cash market securities, (d) hedge and control risks and (e) facilitate transition trading.</p> <p>Derivatives may only invest in legally permissible policy asset categories and may not be used to circumvent the asset allocation or other policy restrictions. All use of derivatives must be properly documented. All over-the-counter derivatives must be</p>

executed using ISDA documentation or, if centrally cleared, clearing agreements. All counterparties must have a credit rating of at least A- (Standard & Poor's or Fitch) or A3 (Moody's). In addition, the net market value of derivatives positions with any counterparty may not exceed \$500 million (calculated net of collateral) and may not exceed 5% of the total market value of the Fund (without consideration of collateral).

See "Article 9 – Authorized Uses of Derivatives."

Risk Management

The Investment Division will monitor and manage risk of the Total Fund Portfolio including:

Market Risk –will be managed and measured using at a minimum a quantified estimate of downside risk (e.g., value-at-risk), asset allocation limits, private markets holdings analysis, and a quantified estimate of risk relative to the benchmark (tracking error).

Foreign Exchange Risk – will be managed according to a Currency Hedge Ratios approved by the Board. The current Currency Hedge Ratios are stated in Appendix D.

Credit Risk – the primary sources of credit risk are derivative counterparty risk (mitigated by credit provisions in the derivatives documentation), the risk from repurchase agreements (limited to 5% of the Trust market value) and securities lending.

Liquidity Risk – a prudent liquidity management will be established to ensure that the Fund maintains ample liquidity to meet its funding commitments, especially disbursements of benefits and TRS investment activities.

Leverage Risk – the permitted uses of leverage are defined. Leverage will not be used to exceed the asset allocation ranges of the policy.

Other managed risks include operations risk, settlement risk and legal risk.

Compliance cure periods or corrective action plan periods established for violations of policy or other compliance limits are 90 days for passive violations (a violation due to changing market or credit conditions) and 15 days for active violations (a violation due to entering into an agreement or investment that breaches a policy limit at inception or thereafter through failure to monitor).

See "Article 10 – Risk Management and Oversight."

Health Insurance Program

Authorized investments for the Health Insurance Program Portfolio are conservative, short-term securities consistent with the guidelines employed by the Comptroller when investing State funds. See "Article 11 – Health Insurance Program Portfolio."

Political Contributions; Improper Influence; Placement Agents and Finders

The purpose of this policy is to ensure the integrity of all TRS investment transactions and conformity with the highest fiduciary, ethical, and legal standards by all parties involved. All investment decisions made by the Board and the Investment Division must be based solely on the merits in conformity with fiduciary standards and applicable law. All investment decisions and recommendations must be free of impropriety or improper influence and the appearance of either. The Investment Division shall obtain full disclosure of all matters having the potential to harm TRS's reputation or the integrity of TRS's investment processes, or that could constitute unethical or unlawful conduct during the investment due diligence process. Neither TRS nor any TRS investment shall be burdened with or liable for any Placement Fee. Adequate disclosure must be made in connection with any investment in the form of

“Appendix F – Political Contributions; Improper Influence; Placement Agents and Finders Questionnaire.”

See “Article 12 – Political Contributions; Improper Influence; Placement Agents and Finders.”

Tracking Error

Neutral tracking error targets are established for certain portfolios of the Trust:

Internal

Equity (Global Best)	100 bp
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External

Equity (US; Large-Cap)	300 bp
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Equity (International; Developed, EAFE)	300
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Equity (International; Emerging Markets)	300
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Equity (World Equity)	300
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Stable Value Hedge Funds	400
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Directional Hedge Funds	600
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Total Public Fund Tracking Error	100
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In addition, Total Global Inflation Linked and Total Public Fund have maximum tracking error limits of 200 bp and 300 bp, respectively. See “Appendix A – Tracking Error Neutral (in annualized basis points).”

Authority

The employee titles in the Investment Group are specified and three types of investment authority are described including (i) general authority for investment matters, (ii) over-the-counter derivatives contracts and (iii) transfers of funds or assets; fund or account redemptions and withdrawals. In addition, the employees of the Financial Group, Executive Group and Trading Group are also specified and their authority is described. See “Appendix E – General Authority Resolution.”

ARTICLE 1 – TOTAL FUND AND PORTFOLIO DESIGN

1.1. Introduction

The Teacher Retirement System of Texas (“TRS”) administers a pension trust fund and other health insurance programs for retirees and certain active public education employees under State of Texas constitutional and statutory provisions. TRS is governed by a Board of Trustees (the “Board”). TRS provides service and disability retirement benefits and death and survivor benefits for Texas public education employees and their beneficiaries. Benefits are funded by state and member contributions and investment returns.

1.2. Purpose and Design

The purpose of this Investment Policy Statement (this “Policy”) is to provide a formal plan for investing pension trust fund and health insurance program assets to achieve defined investment objectives consistent with the TRS mission statement adopted by the Board and with applicable law.

This Policy also defines the roles and responsibilities of the various entities involved in the investment process and facilitates internal and external communication of investment policy.

The appendices to this Policy are incorporated into and form part of this Policy for all purposes. Capitalized terms not defined in this Policy have the meanings assigned to them in the “TRS Glossary of Investment Terms” (“Glossary”), which definitions are also incorporated into and form part of this Policy for all purposes. Modifications to the appendices or the Glossary that would have a substantive effect on this Policy require Board consideration and adoption.

1.3. Roles of Board, Staff, Consultants and Advisors

The Board has the primary fiduciary responsibility for investing TRS trust assets in accordance with Article XVI, Section 67 of the Texas Constitution and with applicable law. The Board establishes investment objectives and policy, obtains expert advice and assistance, and oversees the employment of a qualified and competent investment staff (“Investment Division”) and legal staff. The Board also monitors the actions of staff, consultants and advisors to ensure compliance with its policies. The Board has a Policy Committee of the Board (“Policy Committee”), an Investment Management Committee of the Board (“IMD Committee”) and a Risk Management Committee of the Board (“Risk Management Committee”), each of which is a standing committee of the Board charged with those responsibilities set forth in the Bylaws of the Board. The Board and the Investment Division are assisted by outside investment consultants and internal and external legal counsel.

- a. The Board Investment Consultant selected by the Board provides education, advice, commentary, and discussion as requested at Board meetings, assists with development and review of investment policies and procedures, performs due diligence and recommends managers or investments, reports on the progress of the Fund in meeting its investment objectives, and compares the performance of the portfolio to established benchmarks. The Investment Division and Investment Consultant provide information as needed to assist the consulting actuary in performance of actuarial services.
- b. The Investment Division has fiduciary responsibilities delegated by the Board under applicable law. The Investment Division manages the Fund according to the Board's policies, advises and informs the Executive Director and the Board about investments, and recommends modifications to this Policy. The Investment Division executes all transactions, performs risk-management functions, and prepares investment reports.
- c. The Internal Investment Committee (“IIC”) is hereby established to review, consider, and authorize proposed external manager engagements and investments as required by this Policy for the Public Markets Portfolios and the Private Markets Portfolios. Additionally, the IIC will manage the currency hedge ratios (set forth in Appendix D) and review as needed.

The permanent IIC membership consists of the Chief Investment Officer (“CIO”), the Deputy CIO and the Chief Risk Officer (“CRO”). There must be a minimum of five members on the IIC and, in addition to the CIO and the Deputy CIO, at least two members must be Investment Division Senior Managing Directors (“SMDs”). The CIO will notify the Chairman of the IMD Committee in advance of any appointment or removal of a SMD from the IIC. Termination

of a member's TRS employment terminates IIC membership as of the date the employee or TRS gives notice of termination, as the case may be.

The CIO will establish procedures and guidelines for the operations of the IIC. The IIC procedures and guidelines may provide that the CIO may appoint and remove select Directors as non-permanent voting members to the IIC. The IIC procedures and guidelines will define a quorum and establish the vote required to authorize an investment or external manager engagement or, if required by this Policy, recommend an investment or external manager engagement to the Board, which vote may not be less than a majority of the then-incumbent IIC members present and voting at a meeting at which a quorum is present. The CIO shall have the power to veto any investment or delegation of investment discretion authorized or recommended by the IIC pursuant to a vote of its members.

The Executive Director or his designee may attend any meeting of the IIC, and the Investment Division shall deliver to the Executive Director copies of all IIC materials, analyses, correspondence, and agendas as and when delivered to IIC members or other TRS employees. The Executive Director is not a member of the IIC, however, acting in his or her capacity as the chief executive officer and chief administrative employee of TRS as set forth in the Board's Bylaws, the Executive Director shall, after consultation with the CIO, have the power to veto any investment or delegation of investment discretion proposed for IIC consideration or authorized or recommended by the IIC pursuant to a vote of its members whenever he deems such veto to be in TRS' best interest.

When this Policy requires that the Board authorize an investment or an engagement of an external manager, the IIC shall vote on whether to recommend such investment or engagement to the Board. The results of the vote shall be reported to the Board in the materials provided to the Board for consideration.

- d. All proposed changes to this Policy will be reviewed by the legal staff for compliance with state and federal laws regarding fiduciary responsibility, investment prudence, ethics compliance, and other applicable standards or requirements before submission to the Policy Committee. Except as authorized by the Executive Director, proposed changes to this Policy will first be presented to the Policy Committee, which will consider recommending the proposed changes to the Board. The Board may consider and adopt proposed changes that have not been considered by the Policy Committee. This Policy shall be reviewed at least once every three years.

1.4. Total Fund Objectives

In this Policy, the total or overall investment portfolio includes all assets invested by TRS to provide retirement, death, health, and disability benefits administered by the system, including cash and cash equivalents (the "Total Fund" or the "Fund") and will be structured and managed to achieve the following objectives:

- a. Control risk through proper diversification of asset classes and by establishing long-term risk and return expectations; and
- b. As applicable to the pension plan, achieve a long-term rate of return that:
 - i. Exceeds the assumed actuarial rate of return adopted by the Board;
 - ii. Exceeds the long-term rate of inflation by an annualized 5%; and
 - iii. Exceeds the return of a composite benchmark of the respective long-term normal asset mix weighting of the major asset classes.

1.5. Total Fund Investment Standard

Article XVI, Section 67(a)(3) of the Texas Constitution and Section 825.301, Government Code, states that the standard of care for TRS investments is a "prudent person" standard. Section 825.301, Government Code, provides that Section 117.004(b), Property Code, applies to TRS investment decisions. Section 117.004(b) generally states that the determination of the prudence of a single investment decision will be made taking into consideration the investment of all of the assets of the trust, or the assets of the collective investment vehicle, as the case may be, rather than a consideration as to the prudence of the single investment of the trust, or the single investment of the collective investment vehicle, as the case may be.

All investments made by the Total Fund must be in "securities" as defined in Government Code Section 825.301(a) provided, however, that until September 1, 2019, TRS may buy and sell those instruments set forth in Section 825.301(a-1), Government Code, to efficiently manage and reduce the risk of the overall investment portfolio.

The Board and the Investment Division may obtain the assistance and advice of external investment experts, including external managers operating under Agency Agreements, and other investment counselors or consultants as needed.

1.6. Total Fund Asset Mix and Benchmarks

The Investment Division will assist the Board in engaging in an asset-liability study for the pension plan at least once every five (5) years to review asset classes, return-risk assumptions, and correlation of returns with applicable benchmarks and across asset classes. A key objective of the asset-liability study shall be the development through statistical modeling techniques of a diversified portfolio that specifies ranges of prudent portfolio exposures and a “long-term target” position for each asset class. The normal portfolio mix will represent the portfolio that is expected to meet the Board’s actuarial return objectives for the pension plan within the risk tolerances specified herein.

Each asset class allocation percentage has a “long-term target” position within the overall portfolio and a maximum and minimum range around that target allocation. All percentages refer to market value.

Each asset class is described by an associated benchmark that describes, in general terms, the opportunity set and return characteristics associated with the asset class. For certain private or more complex asset classes the benchmark serves as a proxy for expected returns rather than an approximation of the actual investments that will characterize that component of the portfolio. Those benchmarks, along with the allocation ranges, are identified in the table on the following page, and are referred to as the “Policy Benchmarks.”

[Table appears on following page]

Asset Class	Benchmark	Bloomberg Ticker	Minimum Range ^{1,2}	Maximum Range ^{1,2}	Target ²
Global Equity:					
USA	MSCI USA Investible Market	MIMUUSAG	13%	23%	18%
Non-US Developed	MSCI EAFE and Canada	NDDUEC	8%	18%	13%
Emerging Markets	MSCI EM	NDUEEGF	4%	14%	9%
Directional Hedge Funds	HFRI Fund of Funds Composite	HFRIFOF	0%	10%	4%
<i>Total Public Equity</i>	<i>Target-weighted Blend</i>		<i>39%</i>	<i>49%</i>	<i>44%</i>
Private Equity	Customized State Street Private Equity Index – lagged one quarter ³		8%	18%	13%
Total Global Equity	Target-weighted Blend		50%	64%	57%
Stable Value:					
US Treasuries ⁴	Barclays Capital (BarCap) Long Treasury Index	LUTLTRUU	0%	20%	11%
Absolute Return (Including Credit Sensitive Investments) ⁵	3 Month LIBOR + 2%	USC0TR03 (plus 2%)	0%	20%	0%
Stable Value Hedge Funds	HFRI Fund of Funds Conservative	HFRIFOFC	0%	10%	4%
Cash	Citigroup 90-day US Treasury	SBMMTB3	0%	5%	1%
Total Stable Value	Target-weighted Blend		11%	21%	16%
Real Return:					
Global Inflation Linked Bonds	BarCap US Treasury TIPS index	LBUTTRUU	0%	8%	3%
Real Assets	NCREIF ODCE – lagged one quarter		11%	21%	16%
Energy and Natural Resources ⁶	75% Cambridge Associates Natural Resources (reweighted ⁵) / 25% quarterly Consumer Price Index – lagged one quarter	CPI (for CPI)	0%	8%	3%
Commodities	Goldman Sachs Commodity Index	SPGCCITR	0%	5%	0%
Total Real Return	Target-weighted Blend		17%	27%	22%
Risk Parity:					
Risk Parity	Risk Parity Benchmark ⁷		0%	10%	5%
TOTAL FUND	Target-weighted Blend				100%

¹ With respect to the maximum range and minimum range, the CIO may increase any maximum range by 5% or decrease any minimum range by 5% (but may not decrease a minimum range below zero) if the CIO concludes in a writing delivered to the Executive Director and to the Board of Trustees stating the action taken and the reasons why the CIO believes that such increase or decrease would be in the best interests of TRS; provided, the maximum range for Total Global Equity may not be increased above 68%. Before taking action, the CIO must request comments from the Chairman of the appropriate Board Committee and TRS consultants and advisors. The Board, at the next succeeding Board meeting, must authorize the increase or decrease if the CIO proposes that the changes continue in effect after such Board meeting. The CIO will notify the Chief Compliance Officer of any such change to a maximum or minimum range. If the Board does not authorize the continuation of the change to a maximum or minimum range after the next succeeding Board meeting, the Investment Division shall use best efforts to rebalance the portfolio to bring the asset classes within the ranges in the table above within 90 days.

² To calculate the Total Fund benchmark, the benchmark weight of each of the Private Equity, Real Assets, Energy and Natural Resources, and Risk Parity will be set each quarter as the ending actual weight from the prior quarter; provided, commencing October 1, 2016 the benchmark weight for Risk Parity shall be 5%. Any difference in the calculated Risk Parity benchmark weight from the target benchmark weight will be offset using other asset classes with 20% of such difference applied to USA, 20% to Non-US Developed, 20% to Directional Hedge Funds, 20% to US Treasuries and 20% to Global Inflation Linked Bonds. Any difference in the calculated Private Equity, Real Assets and Energy and Natural Resources benchmark weights from the target benchmark weights will be offset using other asset classes with 20% of such difference applied to USA, 20% to Non-US Developed, 20% Emerging Markets, 20% to US Treasuries and 20% to Global Inflation Linked Bonds.

The Investment Division does not normally manage the allocations to Private Equity, Real Assets and Energy and Natural Resources on a tactical basis and will use its best efforts to achieve the Target allocation for these assets classes; provided, with notification to and comment sought from the Chairman of the appropriate Board Committee, the Investment Division

may seek to achieve a higher or lower Target so long as such Target is within the Minimum Range and the Maximum Range.

To assist in asset class transition as investments in private market assets are increased to achieve the Targets, prior to October 1, 2017, the Minimum Range for Real Assets will be 8% and the Maximum Ranges for USA, Non-US Developed, Emerging Markets, Total Public Equity, Total Global Equity and Total Stable Value will be 25%, 20%, 15%, 55%, 68% and 23% respectively.

- ³ The Customized State Street Private Equity Index is composed of the quarterly reported SSPEI, one quarter lagged and adjusted for the most recent quarter-end currency spot prices. Quarterly returns are geometrically linked for longer return horizons.
- ⁴ Non-US developed sovereign bonds with a net short market value may be held in the US Treasury portfolio. The absolute value of the market value of the bonds so held may not exceed 2% of the Total Trust.
- ⁵ Absolute Return is a broad category that includes all assets that have a high probability of generating a positive absolute return regardless of market conditions over a one to three year period.
- ⁶ The Energy and Natural Resources benchmark will be calculated on a quarterly basis one quarter lagged. The Cambridge Associates Natural Resources Index is comprised of Timber, Energy and Upstream/Royalties sub-indices and will be reweighted quarterly using its actual weightings based upon beginning of quarter Timber weight and an equal weight for each of Energy and Upstream/Royalties.
- ⁷ The Risk Parity Benchmark will be calculated using a group of risk parity managers. Until September 30, 2015 and annually thereafter, the CIO, in consultation with the Board Investment Consultant and with comment sought from the Chairman of the appropriate Board Committee, will from time to time revise the list of risk parity managers comprising the benchmark. If the benchmark is not provided by a third party, the benchmark will be calculated monthly using an equal weighting of the listed risk parity managers. Any resulting changes to the composition of the benchmark will be presented for Board consideration prior to October 1 for the year commencing on such date.

1.7. Total Fund Measurement and Reporting Criteria

The Investment Division will deliver reports to the Board (and the appropriate Board committee, as applicable) adequate to indicate whether the Total Fund is meeting its objectives and that will permit the Board to monitor each portfolio for compliance with this Policy. The Board will establish performance and risk measurement and attribution standards for the Total Fund, each asset class, and component portfolios.

The following comparisons and reviews will be performed quarterly (unless otherwise noted) and presented to the Board:

- a. **Investment Performance** – Investment performance for the Total Fund and each component portfolio, net of external management fees (if applicable); will be compared with their respective benchmark indices. Fund performance will be judged primarily by comparisons to long-term (3, 5 and 10 year) Policy Benchmark returns.
- b. **Monitoring of compliance with Policy** – Portfolios will be reviewed for compliance with the requirements set forth in this Policy. The Chief Compliance Officer will have overall responsibility for compliance monitoring. However, if considered necessary, TRS will hire external parties to obtain assistance regarding compliance monitoring. To ensure independence in compliance monitoring the Chief Compliance Officer or external parties hired will not be given the authority to trade securities. To ensure ongoing compliance with this Policy and completeness of disclosures to the Board regarding compliance, the Chief Compliance Officer has authority to require certifications from applicable IIC members or Managing Directors disclosing known compliance violations. The Chief Compliance Officer reports all known compliance exceptions to the Board at the next meeting of the Board.
- c. **Asset class exposures and weightings** – The exposure of cash and derivative instruments to each asset class will be aggregated and compared with their respective benchmarks and with the authorized ranges around those benchmarks. Hedge Fund exposure will be reported relative to its statutory limit, if applicable.

- d. **External investments under consideration** – For any external investment under consideration by the Investment Division (including Hedge Funds, external managers, and private markets investments), the Investment Division will provide the Board the following information prior to the date of the applicable IIC meeting:
 - i. Name of the investment vehicle and investment manager;
 - ii. Total fund or strategy size;
 - iii. TRS investment amount under consideration;
 - iv. Investment strategy;
 - v. Names of the external manager or fund principals;
 - vi. Projected TRS commitment or funding date;
 - vii. Placement agent or firm sponsoring the offering or engagement, if any;
 - viii. Prospective fees;
 - ix. Other TRS investments with the firm;
 - x. Historical fund or manager performance; and
 - xi. Type of investment representation contemplated and proposed individual to serve, if any.
- e. **External investments activities** – The Investment Division will provide the Board with a list of all external investments, including any additions, withdrawals, transfers or terminations, on at least a semi-annual basis.
- f. **Derivatives** – The Investment Division shall provide a comprehensive report of all outstanding derivative applications (including derivative types, counterparties, notional amounts, and fair values) used by internal managers and external managers under Agency Agreements on at least a semi-annual basis.
- g. **Risk limit** – The Investment Division will report at least semi-annually the Total Fund and benchmark total estimated risk relative to the upper and lower bounds corresponding to the maximum and minimum downside risk measures that could be achieved through the asset allocation limits in this Policy.
- h. **Liquidity** – The Investment Division will report at least semi-annually to the Board the use of external liquidity funding mechanisms.
- i. **Leverage** – The Investment Division will report the Gross and Net Leverage derived from internal derivative use, internal short sales, external managers, Hedge Funds, and leverage resulting from use of external liquidity funding mechanisms as outlined in the Liquidity Policy on at least a semi-annual basis.
- j. **Transparency report** – The Investment Division will provide a transparency report to the Board that may be used to disclose any of the required information described herein. This report may be delivered in electronic or physical formats.
- k. **Private Markets Long-Term Strategy** – The Investment Division will review with the Board its long-term strategy for each Private Markets Portfolio at least every three years. This review will include information on target sub-strategy allocation, return, risk and liquidity expectations. Tactical deviations from this long-term strategy will be reviewed on an annual basis.
- l. **Staffing** – The Investment Division will provide an update no less than annually reporting on the staffing of key employees in the division, including turnover, transfers and the creation of new positions.
- m. **Placement Agent Disclosures** – The Investment Division shall compile all responses to the placement agent questionnaire (Appendix F) for the purposes of Article 12 and report the results to the Board at least semi-annually. Each response shall include the questionnaire information as of the date the IIC approved the investment. Reports shall include the amounts and recipients of any political contribution or Placement Fee and the relationship of the recipients to the Placement Agent or Texas Elected Official, as applicable.
- n. **Participation as Board Observers or on Governing Boards** – The Investment Division shall provide the Board with an annual report on all board observer positions and positions held by employees or third party representatives serving on the governing body of a business entity in which TRS holds a direct or indirect investment interest.
- o. **IIC Membership** – The Investment Division shall provide the Board and the Executive Director with notice if there is any change to the membership of the IIC.

- p. **Other information** – Any other information or reports as the Board may request or require from time to time.

1.8. Total Fund Portfolio Implementation and Design; Restrictions

- a. The Total Fund investment portfolio is characterized by the following functional portfolios that are charged with the implementation of day-to-day portfolio management activity:
- i. Internal Public Markets Portfolios;
 - ii. External Public Markets Portfolio;
 - iii. Private Markets Portfolios;
 - iv. Overlay Portfolios; and
 - v. Risk Management and Oversight.

- b. The CIO will determine the proper mix of assets allocated for internal management under the parameters of the IPM Portfolio and those to be allocated to the External Manager Portfolio component of the EPM Portfolio. In no event shall the aggregate allocation to external managers pursuant to Agency Agreements exceed 30 percent (or a different percentage of not more than 50 percent if a different percentage is specified in the Government Code) of the Total Fund at the time of investment, as specified in Section 825.301 (a-2), Government Code.

The preceding paragraph does not affect the target allocation and the range of allocation for the Hedge Fund Portfolio, which shall not exceed 10% of the Total Fund, or such lesser or greater percentage as allowed by applicable law and Section 2.7 of this Policy.

- c. The Investment Division is authorized to represent TRS on external advisory committees or boards and as board observers in investments in which TRS has an interest.
- d. Subject to Appendix G, after evaluation of the net benefit to TRS, employees in the Investment Division are authorized to represent TRS or to nominate or appoint third-party independent non-employees to represent TRS on the governing body of a non-public (private) or a publicly-traded business entity in which TRS holds a direct or indirect investment interest.
- e. The objectives, authority and limitations of each of these investment areas, and the authorized uses of derivatives, are described throughout the remainder of this Policy.
- f. Except as required by fiduciary duties created by the Texas Constitution or applicable law, each TRS investment portfolio, including separate account investments, will comply with Chapters 806 and 807 of the Government Code relating to prohibitions on investments in Sudan and Iran, respectively. Additionally, TRS may avail itself of the protection afforded by applicable federal law, including the U.S. Sudan Accountability and Divestment Act and the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010.
- g. TRS will not invest directly in securities of any company that derives a significant portion of its revenues from products or services intended exclusively to appeal to a prurient interest in sex through explicit depictions of sexual activity. These include sexually explicit films, videos, publications, and software; topless bars and strip clubs; and explicit sexually-oriented telephone and Internet services. The restriction does not apply to pooled investment vehicles, provided that the Investment Division shall engage with the managers of such vehicles and use commercially reasonable efforts during due diligence to determine whether such vehicles invest in any company that would not be eligible for direct investment by TRS.
- h. The General Authority Resolution adopted by the Board on September 18, 2014 and designating those officers authorized to execute documents and attached as Appendix E is incorporated in this Investment Policy. Should the Board supersede such resolution, such superseding resolution shall be incorporated in this Investment Policy and replace the superseded resolution as Appendix E as of the effective date of the superseding resolution.

ARTICLE 2 – PUBLIC MARKETS PORTFOLIOS

2.1. Public Markets Portfolios Objectives

The Public Markets Portfolios are comprised of the Internal Public Markets Portfolios and the External Public Markets Portfolios. The primary objectives of the Public Markets Portfolios are to manage publicly-traded, marketable securities and related instruments, in accordance with the risk parameters established by the permitted asset allocation ranges of this Policy, to meet or exceed the performance of the Policy Benchmark, as allocated to the Public Markets Portfolios.

2.2. Public Markets Portfolios Authorized Investments

The Public Markets Portfolios are authorized to invest in the securities described as follows:

- a. Equity securities of all companies traded or listed on a national exchange in the U.S. or in countries in the MSCI ACWI ex-US benchmark, and any component security of a Policy Benchmark.
- b. Common stocks, preferred stocks, convertible bonds, rights, warrants, units and depositary receipts (“DRs”) that trade publicly or pursuant to Rule 144A of the Securities and Exchange Commission (the “SEC”), without regard to the issuer’s principal place of business or jurisdiction of incorporation or organization, including common or preferred stock issued in initial public offerings (“IPOs”).
- c. Illiquid, restricted or non-publicly traded securities offered or sold pursuant to an exemption from registration other than under SEC Rule 144A and which are expected to become public or otherwise freely marketable within three years after the investment date.
- d. Exchange-traded funds (“ETFs”) and closed-end funds tracking an applicable benchmark (or a significant subset or sector of a benchmark) if listed on a U.S. stock exchange or market or on a stock exchange or market in a country in which TRS is authorized to buy and sell securities.
- e. Exchange-listed or private placement equity-linked notes intended to track authorized international equity securities or indices, and registered index funds in any country index series intended to track its respective country index, provided that the country is in the Policy Benchmark.
- f. Exchange-traded futures contracts, options contracts, and options on futures contracts in order to efficiently manage or reduce the risk of the overall investment portfolio, or both, in accordance with this Policy and applicable law.
- g. Over-the-counter swap and option agreements, including but not limited to total return swaps, interest rate swaps, credit default swaps, and currency swaps, to efficiently manage or reduce the risk of the overall investment portfolio, or both. The Fund may also use forward agreements and any other instrument commonly used by institutional investors to manage institutional investment portfolios, in accordance with this Policy and applicable law.
- h. Evidence of indebtedness and securities that evidence an ownership interest in debt obligations that are issued, insured, guaranteed by, supported by, or based on the credit of the following:
 - i. The United States (“U.S.”) or any U.S. agency, department, or government sponsored enterprise (“GSE”);
 - ii. The debt obligations of states, municipalities or any state agency of the United States of America;
 - iii. Corporations chartered by the United States or any state thereof; and
 - iv. Foreign governments, supranationals, subnationals, and corporations chartered by foreign governments.
- i. Agency and non-agency mortgage-backed securities.
- j. Collateralized mortgage obligations (“CMO”).
- k. Commercial mortgage-backed securities (“CMBS”).
- l. Asset-backed securities (“ABS”).

- m. All securities and all types of securities that are either included in the applicable benchmark or that will be added to the benchmark as of the announcement date of their future inclusion.
- n. Mutual funds, closed-end funds, exchange traded funds, structured notes, limited partnerships, commingled funds, or any other security types that:
 - i. Are intended to track or replicate the returns of the Policy Benchmark or a portion thereof or that are intended to reduce the overall tracking error of the portfolio; or
 - ii. Invest in non-dollar fixed income instruments; or
 - iii. Invest in bank loans; or
 - iv. Invest in high yield securities.
- o. Passive funds, structured credit basket transactions, or trusts containing high-yield fixed income securities selected according to defined parameters and, if the investment contract, offering documents, or prospectus requires distribution to TRS of securities held by fund or trust under specified circumstances, such securities.
- p. Repurchase and triparty repurchase transactions.
- q. Investments in State of Texas pooled investment funds.
- r. Foreign currencies that may be required to settle security transactions denominated in those foreign currencies and any authorized instrument or contract intended to manage transaction or currency exchange risk in purchasing, selling or holding investments.
- s. Short sales.
- t. Local Access Products, including equity-linked certificates, participation notes, and low-exercise price call warrants which replicate the performance of an underlying security, index, or market for which investment in the local market or in the ADRs or GDRs, or the total return swap market would be difficult or costly, or both.
- u. Risk Parity portfolios.

In addition to the foregoing, the Public Markets Portfolios are authorized to engage in overlay strategies in accordance with the guidelines set forth in Article 8. Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.

2.3. Internal Public Markets Portfolio Restrictions

- a. Not more than 20% of the outstanding equity securities of a single class of any company may be purchased. In calculating this 20% limit, any amounts that are held in the External Public Markets Portfolios and which are also deemed to be beneficially held by TRS for purposes of Section 13 of the Securities Exchange Act of 1934, including equity securities held in a separate account (or a commingled account in which TRS is deemed to be the beneficial owner for purposes of Section 13 of such act), shall be included.
- b. The IPM Portfolio shall conform to the tracking error target prescribed in Appendix A.

2.4. External Public Markets Portfolio

The component portfolios of the External Public Markets Portfolio (the “EPM Portfolio”) are:

- a. The External Manager Portfolio, which consists of:
 - i. Commingled or other private investment funds which are not determined to be Hedge Funds as defined by Section 2.6 of this Policy, and
 - ii. Separate accounts managed or advised by external managers operating under an Agency Agreement with TRS.
- b. The Hedge Fund Portfolio.

- c. The Absolute Return Portfolio including Credit Sensitive Investments.

2.5. External Public Markets Portfolio Objectives

The primary objective of the EPM Portfolio is to invest directly or indirectly in securities authorized in Section 2.2, commingled funds, Hedge Funds, and related instruments, in accordance with the asset allocation parameters of this Policy, to meet or exceed the performance of the Policy Benchmark over a 5 to 10 year market cycle as allocated to the EPM Portfolio. The EPM Portfolio will employ a wide variety of investment and trading strategies with varying levels of liquidity and leverage. It is expected that some strategies will involve more concentrated, shorter term investments as well as those that are longer term in nature and thus will generally have more tracking error than expected within the IPM Portfolio, while other investments will have less correlation, beta and volatility and thus will offset the overall volatility of the EPM Portfolio and the Total Fund.

2.6. Hedge Fund Defined

In this Policy, “Hedge Fund” means a private, commingled investment vehicle with the following general characteristics, as set forth in Section 825.3012, Government Code:

- a. Is not registered as an investment company;
- b. Issues securities only to accredited investors or qualified purchasers under an exemption from registration; and
- c. Engages primarily in strategic trading of securities and other financial instruments.

“Hedge Fund” includes a private investment fund of funds or other commingled vehicle that itself invests in Hedge Funds. An investment in a Hedge Fund does not involve a delegation of investment discretion to an external manager for purposes of the statutory limit on delegation to external managers.

For the purposes of complying with Section 825.3012, Government Code, the Investment Division shall use the following criteria to analyze and determine whether a private investment fund is “primarily engaged in strategic trading” and should be classified as a hedge fund:

Criteria “Strategic Trading of Securities”	Characteristics Non-Hedge Fund	Characteristics Potential Hedge Fund
1. Variability in Asset Class Concentration	Asset allocation typically stays the same throughout a market cycle, as shown by historical practice	Unconstrained; asset class mix can change dynamically in response to market conditions or as opportunities arise
2. Beta to underlying index specified for the particular mandate	Generally higher levels of beta (e.g., 0.75+)	Often less beta (e.g., <0.75)
3. Securities Traded	Primarily publicly-traded securities	Typically public or private instruments, and often with some illiquid (e.g., “side pockets”) investments segregated for accounting and incentive fee purposes
4. Leverage	Gross leverage less than 250% <i>and</i> net leverage 75% to 125%	Unconstrained by policy and practice – managers often unwilling to commit to constraints
5. Short sales of company-specific securities (i.e., non-derivatives)	Typically <50% gross short	Shorting of company-specific securities is integral to investment strategy or process, with gross short positions exceeding 50%
6. Use of Derivatives	Limited use of derivatives (notional value excluding derivatives used to hedge currency risk is less than 100% of net asset value)	Derivatives are integral to strategy or process (notional value excluding derivatives used to hedge currency risk is greater than 100% of net asset value)
7. Transparency	Generally position-level transparency for investor	Risk-level transparency, but little or no position-level transparency
8. Liquidity	Limited use of lock-ups, short or no notice period; frequent (e.g., monthly) or no redemption windows	Often lock-ups, withdrawal fees, notice periods exceeding 30 days and/or less frequent redemption windows than monthly; gates and ability to suspend redemptions can extend redemption for years or frustrate liquidity goals
9. Performance Fees	May charge performance fees, but often over asset class hurdle	Generally, manager charges management and performance or incentive fees, or both, but usually with no asset class hurdle

In this Section 2.6:

Beta is a measure of an asset’s volatility in relation to a specific market or risk factor, as observed over a market cycle; the measure of an asset’s risk in relation to the market (for example, the S&P500) or to an alternative benchmark or factors. Generally, the return of a security with a beta of 1.5 will be, on average, 1.5 times the market return.

Leverage is a condition in which the net potential monetary exposure of an obligation exceeds the value of the underlying assets supporting the obligation. **Net Leverage** is calculated as the difference between (A) the sum of (i) the market value of all long cash market positions, (ii) the notional value of all long derivative positions, and (B) the sum of (i) the absolute market value of all short cash market positions, and (ii) the absolute notional value of all short derivative positions divided by (C) the net market value of the fund. **Gross Leverage** is the total of (A) the sum of (i) the market value of all long cash market

positions, (ii) the notional value of all long derivative positions, (iii) the absolute market value of all short cash market positions, and (iv) the absolute notional value of all short derivative positions divided by (B) the net market value of the fund. For option based instruments, notional value may be calculated using hedge ratios to derive a delta-equivalent exposure.

Proposed investments in funds classified as Hedge Funds will be reported to the Board of Trustees (and appropriate Board committee, as applicable) quarterly. If the criteria examined do not clearly indicate, based on at least a preponderance of criteria, how a fund should be classified for statutory purposes, Investment Division may elect to present the pertinent information to the IIC for consideration of classification. Further, if the application of any one or more of the criteria for leverage, short sales, and derivatives, standing alone, would classify the fund as a Hedge Fund, but the preponderance of criteria would classify the fund as a non-Hedge Fund, the Investment Division may either decline to authorize the investment or may elect to present the pertinent information to the IIC for consideration of the classification of the fund and, if applicable, authorization for investment.

Prior to investment, the CIO will determine whether each Hedge Fund is a Stable Value Hedge Fund or a Directional Hedge Fund by reference to factors such as investment strategy, underlying investments, correlation, beta, leverage, expected return and expected risk.

2.7. External Public Markets Portfolio Authorization

- a. **Approval Authority – Hedge Fund Portfolio, External Manager and Absolute Return Portfolios** – The IIC is hereby authorized to approve investments in the External Public Markets Portfolio in accordance with the guidelines set forth in Section 2.5. The limits are defined and set forth in Appendix B of this Policy apply to allocations and commitments by the External Public Markets Portfolio.

The Investment Division may authorize an allocation to an external manager even if the external manager will invest the assets in a commingled fund or funds or a tax-qualified collective trust managed by an Affiliate of the external manager, provided, however, that the Investment Division shall determine whether any such commingled fund should be classified as a Hedge Fund for purposes of Section 825.3012, Government Code.

- b. **Board Consideration** – If a Board member desires that any Hedge Fund investment or external manager strategy mandate on the list delivered to the Board under Section 1.7 be submitted for consideration by the Board, the Board member should notify the Executive Director and the CIO sufficiently in advance to permit completion of due diligence and consideration by the Board before the anticipated closing date.
- c. **External Public Markets Advisors and Consultants** – The Investment Division is authorized to engage one or more qualified external advisors (each, an “Advisor”) to assist and advise the Investment Division with respect to investment opportunities within the EPM Portfolio. Each Advisor engaged by the Investment Division must be approved by the CIO and the Board. The applicable advisor or consultant will provide a prudence letter or letter of recommendation for all opportunities presented to the IIC unless an exception has been made by the CIO. Notwithstanding the foregoing, IIC consideration and approval of a sub-manager of an external manager who manages sub-managers does not in any event require a separate, additional prudence letter or letter of recommendation from an Advisor; provided, further, that such external manager of sub-managers (i) is fully liable for any action or omission of the sub-manager as if the action or omission had been taken by such external manager and (ii) recommends the engagement of the sub-manager in writing to the IIC. For avoidance of doubt, this paragraph does not prohibit the CIO from requesting a separate prudence letter from an Advisor with respect to the IIC’s consideration of a sub-manager to be recommended by a manager.
- d. **Allocation measurement** – Only the net long position of each external manager, fund vehicle, separate account, or Hedge Fund will be counted against the asset allocation policy; however, both long and short positions will be modeled (through proxies if necessary) to calculate Total Fund risk.
- e. **Short positions limit** – In addition to investments authorized under Section 2.2, the External Public Markets Portfolio may hold short positions in securities listed on a national exchange or U.S. treasuries. The aggregate short positions exposure of the External Public Markets Portfolio may not exceed 25% of the market value of the External Public Markets Portfolio without the prior written consent of the CIO. In no event may the aggregate short positions exposure of the External Public Markets Portfolio exceed 50% of the market value of the External Public Markets Portfolio, nor may any short sale or position violate the laws or rules of any jurisdiction or exchange in or on which the applicable Securities are traded or listed.

- f. **Overlay strategies** – The External Public Markets Portfolio is authorized to engage in overlay strategies in accordance with the guidelines set forth in Article 8. Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.
- g. **Rebalancing Authority** – Subject to the limits set forth in this Policy, the CIO, Deputy CIO or the head of External Public Markets may add funds to previously approved investments for the purposes of rebalancing or adjusting risks. Such additional investments or allocations shall not, on a monthly basis, exceed 2% of the Hedge Fund Portfolio, External Manager Portfolio, or Absolute Return Portfolio (as appropriate) per investment. This subsection does not affect or limit the authority of the Investment Division to withdraw funds from approved investments.
- h. **Termination Authority** – The CIO, Deputy CIO or the head of External Public Markets may transfer, withdraw or terminate interests in the EPM Portfolio, provided that the action does not result in a material, un-waived breach of the terms and conditions of the applicable investment agreements.

2.8. External Public Markets Portfolio Restrictions

- a. Agency Agreements, considered in the aggregate, may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy, including the provisions of Section 2.2.
- b. The Investment Division may delegate management of not more than 30% (or a different percentage of not more than 50% if a different percentage is specified in the Government Code) of the market value of the assets of the Total Fund to external managers pursuant to Agency Agreements. For avoidance of doubt, this restriction does not apply to assets held by funds (including Hedge Funds) which limit the liability of TRS to the capital contributed and any distributions that TRS might be legally obligated to contribute or repay to the fund.
- c. The Investment Division is authorized to invest up to 10% (unless extended by law, this authority reverts to 5% on September 1, 2019) of the Total Fund in Hedge Funds as defined in Section 2.6. Compliance with the statutory limit is to be determined at the time TRS executes subscription documents for each Hedge Fund investment or additional investment.
- d. Each Agency Agreement with an external manager shall specify the applicable policies, risk controls, portfolio characteristics, reporting requirements, requirements or restrictions, including criteria for determining quality of investments or the use of standard debt rating services.
- e. Each Agency Agreement with an external manager shall terminate on or before September 1, 2019; provided, however, that an Agency Agreement may include provisions for optional renewal or extension of the agreement by the Investment Division beyond September 1, 2019 that are contingent on amendment of TRS statutes to authorize such agreements after that date.

2.9. External Public Markets Portfolio Conflicts of Interest

Conflicts of interest, including the appearance of conflicts, in the selection and engagement of external investment managers will be avoided at all times. Potential or actual conflicts of interest must be evaluated during due diligence and after engagement under applicable ethics policies and statutory provisions, including without limitation Section 825.212, Government Code, which does not apply to Hedge Fund managers in that capacity. The Investment Division will develop guidelines and procedures to identify actual or potential conflicts of interest affecting external managers to be engaged pursuant to Agency Agreements. The Investment Division shall employ reasonable diligence to identify conflicts of interest affecting TRS trustees, employees and advisors with respect to all private investments.

2.10. Risk Parity Portfolios

Risk Parity portfolios are asset allocation strategies that focus upon equalizing the risk contributions of the asset classes or risk factors comprising the portfolio. Risk Parity then uses leverage to scale the resulting portfolio to target a stated level of portfolio risk/return commensurate with typical pension fund unlevered asset allocation strategies.

2.11. Public Markets Portfolios Restrictions

- a. The market value of investments purchased in Public Markets Portfolios pursuant to Section 2.2c will not exceed 2% of the market value of the Total Fund at time of investment; provided, prior to October 1, 2017, this limit will be 1% of the market value of the Total Fund at time of investment.

ARTICLE 3 – PRIVATE MARKETS PORTFOLIOS

3.1. Private Markets Portfolios

The Private Markets Portfolios are (1) the Private Equity Portfolio (the “PE Portfolio”), (2) the Real Assets Portfolio (the “RA Portfolio”) and (3) the Energy and Natural Resources Portfolio (the “ENR Portfolio”).

3.2. Private Markets Portfolios Authorization

The Private Markets Portfolios are authorized to invest in the asset classes specified in this Policy and may hold and exercise rights, options and warrants attached to securities relating to an investment by the Private Markets Portfolios.

Funding of committed capital in Private Markets Portfolios will occur over an extended time period and may take several years before the total allocation to each asset class is fully invested. Because an individual investment may begin to return capital to the investor prior to the full funding of the investor’s commitment, the outstanding invested capital of the investment might at times be substantially less than the total commitment. In recognition of the above characteristics unique to the Private Markets Portfolios, a “committed” allocation to an investment may exceed the respective allocation targets authorized. It will not be a violation of this Policy if changes in the market values of the public assets portfolios or the Private Markets Portfolios cause the market value of the Private Markets Portfolios to exceed the upper limit of the allocation ranges established in this Policy.

3.3. Private Markets Investment Process

Private Markets External Advisors and Consultants

The Investment Division is authorized to engage one or more Advisors to assist and advise the Investment Division with respect to investment opportunities within the Private Markets Portfolios. Each Advisor engaged by the Investment Division to provide investment advice with respect to Private Markets Portfolio investments must be approved by the CIO, the head of Private Equity, the head of Real Assets, or the head of Energy and Natural Resources (as appropriate), and the Board. Subject to the direction of the private equity, real assets, energy and natural resources investment staff, as appropriate (each, a “Private Markets Team”), Advisor duties may include, but are not limited to, the following:

- a. Performing due diligence on specific Private Markets investment opportunities assigned by a Private Markets Team;
- b. Providing research related to private markets and opportunities, economic conditions, and performance expectations;
- c. Assisting a Private Markets Team, upon request, in identifying potential Private Markets investment opportunities;
- d. Providing, upon request, written recommendations to a Private Markets Team regarding investments for the Private Markets Portfolios;
- e. Assisting a Private Markets Team in the negotiation of required investment contracts and legal documentation; and
- f. Providing a prudence letter or letter of recommendation for all opportunities presented to the IIC unless an exception has been made by the CIO.

To the extent an Advisor is directed by a Private Markets Team to perform due diligence on an investment opportunity, such due diligence will be performed in accordance with prudent underwriting objectives established by such Private Markets Team for the applicable Private Markets Portfolio. Each investment opportunity must meet these prudent underwriting standards in order to merit inclusion within the respective portfolios.

3.4. Private Markets Authorization of Investments

Investment Authority. The limits defined and set forth in Appendix B of this Policy apply to allocations and commitments by the Private Markets Portfolios.

If, after due diligence by either of the Advisor and the Investment Division, the Advisor and the Investment Division do not concur on whether a private markets investment within the Investment Division's discretion should be made, the Investment Division may elect to present the opportunity to the appropriate Board committee for consideration of a recommendation to the Board to authorize the investment. Unless the Board authorizes an investment, a proposed investment may not be made without the concurrence of both the Investment Division and the Advisor.

Private markets opportunities that will be considered for investment include the following: primary investments in any legally permissible investment vehicle, including limited liability entities (usually limited partnerships), co-investments, secondary investments, commingled funds, separate accounts, hybrid structures investing in equity or debt, joint ventures, secondary market transactions, entity-level investing or other off-market investments, new and emerging managers, and opportunistic investments (e.g., investments in the management entity of a private markets investment firm or sponsor, public-to-private transactions, and the acquisition of business development company or investment trust assets).

To the extent a Board member desires that any private markets investment opportunity submitted for consideration by the IIC be also submitted for consideration by the trustees, the Board member should notify the Executive Director and the CIO sufficiently in advance to permit completion of due diligence and consideration by the Board and by the appropriate Board committee, as applicable, before the anticipated closing date.

The CIO, Deputy CIO or, as applicable, the head of Private Equity, the head of Real Assets, or the head of Energy and Natural Resources (as applicable) may transfer, withdraw or terminate interests in the Private Markets Portfolios in accordance with the investment documents, provided that the action does not breach any agreement to which TRS is legally bound.

Commitment Authorization. Each investment must be authorized as required by the provisions, guidelines, and limitations established in this Policy. Any structure in which TRS invests shall meet established legal requirements.

Rebalancing Authority. Subject to the limits set forth in this Policy, the CIO, Deputy CIO or, as applicable, the head of Private Equity, the head of Real Assets or the head of Energy and Natural Resources may add funds to previously approved investments for the purposes of rebalancing or adjusting risks. Such additional investments or allocations shall not exceed, on a monthly basis, 2% of each of the Private Equity Portfolio, the Real Assets Portfolio or the ENR Portfolio (respectively, as appropriate) per investment. This subsection does not affect or limit the authority of the Investment Division to withdraw funds from approved investments; provided, the withdrawal does not breach any agreement by which TRS is legally bound.

Overlay Authority. The Private Markets Portfolios are authorized to engage in overlay strategies in accordance with the guidelines set forth in Article 8. Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.

ARTICLE 4 – PRIVATE EQUITY PORTFOLIO

4.1. Private Equity Portfolio Objectives

Diversification

The primary long-term objective of the PE Portfolio is to develop a prudently diversified portfolio of investments that is expected to enhance the overall risk-return profile of the Total Fund and to reduce risk within the PE Portfolio.

The following attributes will be considered in constructing a diversified PE Portfolio: strategy, geography, industry sectors, size of investment, and vintage year.

4.2. Private Equity Portfolio Authorized Investments

Private equity funds build portfolios of private investments in the equity or equity-rights securities of operating companies. Private equity funds may acquire investments in debt obligations, public or private common and preferred stocks, convertible securities, and any warrants, rights, or options attached to any of the foregoing that relate to equity ownership in an issuer. Privately-acquired securities usually have transfer restrictions and are not as liquid as publicly-traded securities. Private equity funds are often classified by strategy, including: venture capital; mezzanine; buyout - acquisition; international - emerging markets; and special situation (e.g., growth equity, turnarounds, distressed).

4.3 Private Equity Portfolio Restrictions

The Private Equity Portfolio is authorized by and is subject to the terms and conditions described in Article 3.

ARTICLE 5 – REAL ASSETS PORTFOLIO

5.1. Real Assets Portfolio Objectives

The RA Portfolio will be structured to achieve the following investment objectives:

- a. As the primary focus, contribute favorably to diversification of the Total Fund through exposure to real assets' low or negative correlation to the Public Markets portfolios.
- b. Provide competitive returns through capital appreciation.
- c. The following attributes will be considered in constructing a diversified RA Portfolio: strategy, geography, property types, size of investment, vintage year, and the number of funds or investment managers represented in the portfolio. No specific geographic diversification or leverage targets are required..

5.2. Real Assets Portfolio Authorized Investments

The RA Portfolio will focus on private or public real estate equity or equity linked investments, private or public real estate debt, infrastructure, timber, agricultural real estate, oil and gas, real asset mezzanine debt or equity, mortgage-related investments, entity-level investments, private or public real estate investment trusts ("REITs"), private or public master limited partnerships ("MLPs"), non-fixed assets and other opportunistic investments in real assets. Real estate investments are often classified by strategy, including: core; core-plus; value-added; and opportunistic. Direct investment in physical commodities is prohibited.

5.3. Real Assets Portfolio Restrictions

The RA Portfolio is authorized by and is subject to the terms and conditions described in Article 3.

ARTICLE 6 – ENERGY AND NATURAL RESOURCES PORTFOLIO

6.1. Energy and Natural Resource Portfolio Objectives

The ENR Portfolio will be structured to achieve the following investment objectives:

- a. Contribute favorably to diversification of the Total Fund by increasing exposure to assets with a higher degree of inflation sensitivity.
- b. Provide competitive returns through capital appreciation.

- c. The following attributes will be considered in constructing a diversified ENR Portfolio: general inflation sensitivity, expected return, strategy, geography, resource exposure, size of investment, vintage year, where investment is in the resources value chain (upstream, midstream or downstream) and the number of funds or investment managers represented in the portfolio. No specific geographic diversification or leverage targets are required.

6.2. Energy and Natural Resource Portfolio Authorized Investments

The ENR Portfolio may invest in private and public energy or natural resource related securities either directly or through funds which may include investments in equity, equity-linked investments including options, warrants, preferred equity, and structured equity, private or public debt, entity-level investments, master limited partnerships, commodity futures, natural resources interests (mineral, royalty or working interests), timber and agricultural property, water, power generation, renewable energy, and associated infrastructure, services and technology. Energy and natural resource investments are often classified by resource type and where the investment is in the resource value chain (upstream, midstream or downstream). Direct investments in physical commodities are prohibited.

6.3. Energy and Natural Resource Portfolio Restrictions

The ENR Portfolio is authorized by and is subject to the terms and conditions described in Article 3.

ARTICLE 7 – EMERGING MANAGERS PROGRAM

TRS shall make a good-faith effort to invest with qualified emerging managers for the External Public Markets Portfolios and the Private Markets Portfolios. For the avoidance of doubt, these portfolios may also include investments in energy and natural resources. The Investment Division is authorized to invest with qualified funds-of-funds managers skilled at identifying small and emerging managers in the private equity, real asset and public equity markets. The target dollar allocation is outlined for this program in Appendix C.

Emerging managers can include, but are not limited to, minority, women, and disabled veteran-owned or -controlled organizations. Conversely, not all minority, women, and disabled veteran-owned or -controlled organizations are necessarily considered emerging managers for the purposes of this program. Whether a management firm is an “emerging manager” depends on all of the facts and circumstances. In general, emerging managers are defined as newer, independent private investment management firms that manage less than \$2 billion, or have a performance track record as a firm shorter than five years, or both.

All investments with emerging managers will be subject to due diligence by an independent qualified external advisor. The Investment Division may appoint Emerging Managers Program consultants, advisors and evaluators without a requirement for approval from the Board. The advisor will present each investment recommendation to the IIC for its approval. In general, an emerging manager should be registered with the appropriate authorities if such registration would be consistent with industry practices. Each investment will have a minimum size of \$5 million. With respect to the External Public Markets Portfolio, the total investment by TRS with each emerging manager may not exceed 40% of such emerging manager’s assets under management. With respect to the Private Equity Portfolio and the Real Assets Portfolio, the total investment by TRS into each fund raised by an emerging manager may not exceed 40% of the size of such fund. This paragraph does not apply to investments executed as part of a fund-of-funds mandate.

The Investment Division shall document its efforts to identify and expand its investments with qualified emerging managers for the purpose of board and legislative reporting on the methods and results, including data disaggregated by race, ethnicity, gender, and fund size. All investments under the emerging manager program must be made prudently and in accordance with fiduciary and ethical standards.

ARTICLE 8 – OVERLAY PORTFOLIOS

8.1. Overlay Portfolios Objectives

Overlay Portfolios are designed to manage risk, asset allocation, and market exposures through futures, options, swap agreements, or forward agreements. Overlay Portfolios may be implemented in connection with the Total Fund or with any investment or portfolio within the Total Fund.

8.2. Overlay Portfolios Authorized Investments

Overlay Portfolios may contract for, buy, sell, and hold the following contracts and derivative instruments in accordance with this Policy:

- a. Exchange-traded futures contracts;
- b. Exchange-traded option contracts;
- c. Options on exchange-traded futures contracts;
- d. Over-the-counter or exchange-traded swap agreements;
- e. Over-the-counter option agreements;
- f. Forward agreements; and
- g. Forward-settling securities transactions.

8.3. Overlay Portfolios Restrictions

Overlay Portfolios may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls or restrictions otherwise established by this Policy or applicable law.

When engaging in currency overlay strategies, the Overlay Portfolio may not increase or decrease the net notional exposure of the Total Fund:

- a. To all non-dollar currencies in aggregate by more than 5% of the market value of the Total Fund;
- b. To any single developed market currency (except for the U.S. Dollar) by more than 2% of the market value of the Total Fund; and
- c. To any single emerging market currency by more than 1% of the market value of the Total Fund.

The foregoing percentage limit restrictions do not apply to currency derivatives used (i) as part of the non-discretionary foreign exchange risk management policy described in Section 10.2, (ii) to settle security transactions denominated in those foreign currencies and any authorized instrument or contract intended to manage transaction or currency exchange risk in purchasing and selling investments and (iii) for hedging the characteristics of an individual investment to align it with the characteristics of such investment's benchmark.

ARTICLE 9 – AUTHORIZED USES OF DERIVATIVES

This Article enumerates the applications, documentation and limitations for the use of derivatives as permitted under Section 825.301, Government Code.

9.1. Derivatives Objective and Investment Standard

The Board's objectives for using derivatives are to efficiently manage and reduce the risk of the overall investment portfolio. Through the use of derivatives, the risks that are bound together in traditional cash market investments can be separated and managed independently.

Derivatives authorized by this Policy may only be used to efficiently manage and reduce the risk of the overall investment portfolio in accordance with applicable law. In addition, all uses of derivatives must comply with the fiduciary standard of prudence set forth in Article XVI, Section 67(a)(3), Texas Constitution, which requires that all TRS investments must be made using the judgment and care under the circumstances then prevailing that persons of ordinary prudence, discretion, and intelligence exercise in the management of their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income there from as well as the probable safety of their capital.

9.2. Derivatives Policy Scope

Except where specifically noted, this Policy applies to all derivatives transactions executed by the Investment Division and by external managers operating under an Agency Agreement. This Policy does not apply to registered or private investment funds, including limited liability entities, issuing securities to TRS.

This Policy applies to all exchange-traded derivatives and over the counter ("OTC") derivative instruments authorized by law. This Policy does not apply to the use of derivatives by private investment funds issuing securities to TRS unless TRS in fact controls and has a legal right to approve the investment policy or guidelines of such funds.

9.3. Derivatives Use by External Managers and Commingled Funds (Hedge Funds)

The Total Fund may have external exposure to derivatives in two ways.

- a. First, the Total Fund will invest as a passive investor in Hedge Funds organized as limited-liability entities, which limits potential losses to the capital contributed to the entity. TRS is not a party to the management agreement between the Hedge Fund and its investment manager. Hedge Fund and other commingled fund managers owe the same legal duties to all investors.
 - i. The Investment Division must exercise thorough due diligence in assessing the scope of the Hedge Fund manager's uses of derivatives, their purpose, experience of the fund manager's staff in managing these positions, inherent leverage, and the manager's systems, controls and operations in determining suitability of these entities for TRS investment.
- b. Second, TRS may delegate discretion, through Agency Agreements, to external managers who act as a TRS agent with respect to Total Fund assets and who are authorized to enter into specified contracts and commitments that will be legally binding on TRS. External managers are TRS fiduciaries.
 - i. For external managers engaged pursuant to Agency Agreements, Investment Division must view the external manager as an extension of the internal Investment Division's investment management processes and must require external managers to comply with this Policy and applicable guidelines and law on the use of derivatives to the same extent as Investment Division. Guidelines for the scope and use of derivatives will be established on a case-by-case basis with each external manager in the applicable Agency Agreement. An external investment manager of publicly-traded investments engaged by TRS under an Agency Agreement may engage in derivatives transactions only if expressly authorized by, and the transactions are consistent with, the overall investment objectives and restrictions established in the Agency Agreement, this Policy, and applicable law. Each Agency Agreement must be consistent with applicable law, this Policy, and other TRS policies. An Agency Agreement may only authorize such uses of derivative instruments when the

Investment Division reasonably concludes after due diligence that the external manager possesses the experience, expertise, and qualifications to prudently use derivatives, and has appropriate operational, compliance, and risk management personnel, policies, and procedures to effectively monitor and control their use, including the use of leverage.

- ii. Selection, engagement, and monitoring of external managers engaged through an Agency Agreement requires a clear understanding of the managers' uses of derivatives, particularly as it relates to various risk controls, compliance functions, and leverage. Investment Division will monitor risk exposures and leverage on both an individual entity and aggregate basis. The permitted uses of derivatives and leverage by each external manager must be fully documented in each Agency Agreement.

9.4. Derivatives Definition; Authorization

Derivatives are financial instruments the value of which are derived, in whole or part, from the value of any one or more underlying securities or assets, or index of securities or assets (such as a bonds, stocks, financial commodities, and currencies). For the purposes of this Policy, derivatives include, without limitation, futures contracts; options; options on futures contracts; forward contracts; swap agreements, including swap contracts with embedded options; any instrument or contract intended to manage transaction or currency exchange risk in purchasing, selling or holding investments; and any other instrument commonly used by institutional investors to manage institutional investment portfolios. Derivatives, for purposes of this policy, do not include currency forwards with a tenor of 30 days or less if such forwards do not require upfront amounts to be paid or received. Derivatives may be purchased through a national exchange or through a direct OTC arrangement with a counterparty.

9.5. Derivatives Applications Permitted

Consistent with the objectives set out in Section 9.1, derivative applications may be used by Investment Division and external managers engaged through Agency Agreements to:

- a. Implement investment strategies in a lower cost and efficient manner;
- b. Efficiently manage the Total Fund portfolio by altering the portfolio's market (systematic) exposure in lieu of trading the underlying cash market securities through purchases or short sales, or both, of appropriate derivatives;
- c. Construct portfolios with risk and return characteristics that could not be efficiently created with cash market securities consistently with the objectives in this Policy and in compliance with applicable law;
- d. Hedge and control risks so that the Total Fund's risk-return profile is more closely aligned with the Total Fund's targeted risk-return profile through purchases or short sales, or both, of appropriate derivatives; and
- e. Facilitate transition trading when holdings must be rebalanced or reallocated among permissible investments as a result of changes to applicable benchmark indexes or policy changes.

The only authorized uses of derivative transactions are efficient portfolio management and reduction of risk in portfolios and to implement investment strategies authorized by this Policy more effectively and at a lower cost than would be possible in the cash market. External managers may not engage in derivative applications that are inconsistent with the applicable Agency Agreement, this Policy and applicable law, unless specifically authorized by the TRS Board and the Agency Agreement has been amended accordingly.

9.6. Derivatives Applications Not Permitted

- a. Derivatives may not be used for any activity a primary purpose of which is speculation or to profit while materially increasing risk to TRS. Derivatives are considered speculative if their uses have no material relation to objectives and strategies specified by this Policy or any related policies or resolutions of the Board, and their use is not reasonably and substantially intended to produce efficiency in portfolio management and reduce market, credit, or liquidity risks applicable to the portfolio. Derivatives may not be used for circumventing limitations or restrictions imposed by this Policy or applicable regulatory requirements. Derivative applications may only be used to invest in asset classes that

are consistent with TRS's legally permissible policy asset categories (including currencies), implementation strategies, and risk-return characteristics.

- b. Investments in derivatives underlain by physical commodities are prohibited unless such derivatives are cash-settled whether by its contract terms, by rolling the position, or by trading out of the position before a delivery obligation can arise. Standing orders or instructions for rolling or trading out of positions may be used to prevent delivery obligations from arising under commodities derivatives contracts.
- c. The Policy does not apply to, or authorize, any use of derivatives underlain by single-asset real estate mortgages, or title to real estate or property affixed to real estate.

9.7. Derivatives Documentation and Controls

Prior to the implementation of a new internal derivative instrument type or application, Investment Division shall document the purpose, justification, baseline portfolio, derivative application portfolio, risks (including, at a minimum, market, modeling, pricing, liquidity, and legal risks), the expected increase or reduction in systematic and idiosyncratic risk resulting from the application, the amount of leverage employed under the strategy, the prudent reasons for employing leverage, and the procedures in place to monitor and manage the derivative exposure. The documentation will be approved by the CIO and reported to the IIC and the Board (or appropriate Board committee, as applicable) at their next regularly-scheduled quarterly meetings. The Investment Division shall adopt fully documented control procedures to properly account and value the Total Fund's exposure to each derivatives application, whether internal or external under an Agency Agreement. The Investment Division shall establish an appropriate risk management procedure to monitor compliance both internally and by external managers and will take corrective action if necessary. The Investment Division shall have due regard for operational risks associated with various derivatives strategies, including risk management, accounting systems, liquidity needs, adequate staffing, and staff qualifications.

9.8. Derivatives Limitations

Counterparty Risks: In order to limit the financial risks associated with derivative applications, guidelines for rigorous counterparty selection criteria and ISDA agreements shall be created by the Investment Division to reduce counterparty risk for over-the-counter ("OTC") derivatives. Any counterparty in an OTC derivative transaction with TRS must have a credit rating of at least A- (Standard & Poor's or Fitch) or A3 (Moody's). All OTC derivative transactions, including those managed through Agency Agreements, must be subject to established ISDA Master Agreements or, if centrally cleared, clearing agreements and have full documentation of all legal obligations of both parties to each transaction. All ISDA Master Agreements entered into by or on behalf of TRS by the Investment Division or an external manager engaged pursuant to an Agency Agreement (if applicable) shall provide for netting of obligations. The Investment Division and external managers may also use collateral arrangements to mitigate counterparty credit or performance risk. The net market value of all OTC derivative positions, including those managed through Agency Agreements, less collateral posted, for any individual counterparty may not exceed \$500 million. The net market value of all OTC derivative positions for any individual counterparty, without consideration of collateral, may not exceed 5% of the total market value of the Fund. If these market-value limits are exceeded, the Investment Division will inform the CIO, Executive Director, and Chairman of the appropriate Board committee as soon as practicable and take appropriate corrective action within a 90-day period or develop a corrective action plan that will be presented to the Board at its next regularly scheduled meeting at which investment matters will be discussed following the initial 90-day corrective action period.

Global Risk Limitations: Notwithstanding other limitations in this Policy, transactions that would cause the aggregate risk exposure of the Total Fund, including externally-managed portfolios, to exceed the aggregate risk limits established by the current asset allocation policies of the Board are not permitted. On a Total Fund basis, the combined economic exposure introduced through both cash and derivative market positions is subject to the asset allocation ranges, risk limits, and other portfolio parameters described in this Policy.

Position Limits: For futures and options positions TRS will comply with all position and aggregate limits established by the applicable regulatory and legal organizations and authorities within each jurisdiction.

9.9. Derivatives Risk Management and Compliance

To ensure compliance with this Article 9, all internally- and externally-managed derivatives (other than derivatives held in Hedge Funds) must be marked to market on a daily basis by the Fund's external custodian(s), and such daily reports will be reviewed for accuracy by the TRS Risk Management staff and Investment Administration Center personnel. Compliance with the requirements of this Policy will be monitored by the Chief Compliance Officer using information systems and data from internal and external sources. Any violations of this Article 9 will be reported immediately to the Executive Director and to the Chief Investment Officer, who will determine, if considered material as determined by Chief Compliance Officer, Chief Investment Officer, and Executive Director, the appropriate remedy and report promptly to the Board (and the appropriate Board committee, as applicable).

ARTICLE 10 – RISK MANAGEMENT AND OVERSIGHT

10.1. Market Risk Management

The Investment Division will establish a framework for measuring enterprise-level risk for both the Total Fund Portfolio and the established benchmark, including any transition benchmarks employed during asset allocation shifts. At a minimum, this framework must include a quantified estimate of downside risk (e.g., value-at-risk (“VaR”), estimated shortfall, or various parametric and non-parametric statistics). The Investment Division will monitor the relative positioning of the Total Fund Portfolio vis-à-vis the benchmark no less frequently than monthly.

- a. **Asset allocation limits** – In addition to the Total Fund Portfolio level risk limits, the portfolio will be constrained to the asset allocation percentages and ranges prescribed by this Policy. Accordingly, the total exposure to each asset class must be based on the individual exposures of each cash security and each outstanding derivative contract.
- b. **Risk limit** – The Investment Division will model and monitor the Total Fund Portfolio and benchmark to ensure that the total estimated risk for the Public Markets portion of the Portfolio is within the upper and lower bounds corresponding to the maximum and minimum downside risk measures that could be achieved through the asset allocation limits in this Policy.
- c. **Proxy securities and indices** – If necessary and prudent, the Investment Division will employ proxies to approximate the economic characteristics of actual investments if the terms and conditions of the actual investments or the underlying holdings are not readily available or where the complexity of the underlying investment renders a deterministic model impractical.
- d. **Private market assets holdings** – The Investment Division may include private investments in this analysis either by proxy or by actually modeling the terms and conditions of the underlying exposures; however, if the inclusion of these investments is deemed to distort the true risk characteristics of the portfolio, the Board may approve the use of an alternative methodology for analyzing the risk characteristics of those investments.
- e. **Active risk limits** – In addition to the portfolio-level risk statistics described above, a target tracking error will be imposed on each asset class mandate whether implemented through internal or external managers or commingled funds. Additionally, a target tracking error will be imposed on the entire portfolio that takes into account both internally and externally managed portfolios and commingled funds as well as both asset allocation and security selection decisions. These limits are specified in Appendix A, attached hereto.

10.2. Foreign-Exchange Risk Management

The objective of the Foreign-Exchange (“F/X”) policy is to effectively manage portfolio return volatility associated with foreign currency risk. F/X risk is the possibility of a negative currency return as a result of adverse movements in foreign exchange rates. The F/X policy sets forth a structure and implementation plan to determine the level of strategic currency risk that the Fund is willing to tolerate.

Currency hedge ratios will be separately applied to the Fund's public-markets and private-markets non-dollar exposures. Each currency hedge ratio is the percentage of aggregate, non-dollar currency exposure to be passively hedged. The hedging horizon is intermediate (one to three years). The results of the currency hedge ratio decisions will be presented to the Board (or the appropriate Board committee, as applicable) for approval by the Board and incorporated into the benchmark as prescribed in Appendix D.

From an implementation perspective, an F/X overlay manager would have responsibility for implementing the currency hedge ratio decisions and would not exercise delegated investment discretion. The F/X overlay may be implemented internally or externally. If external, the non-discretionary F/X overlay manager would not fall under the definition of either an "external manager" or a Hedge Fund. A non-discretionary external F/X overlay manager would merely implement the investment decision that has already been made by the IIC.

10.3. Credit Risk Management

- a. **Counterparty exposures** – The maximum allowable unsecured counterparty exposure for OTC derivative transactions is \$500 million, based on the total net market value of all OTC positions held with each counterparty. The total counterparty exposure for each counterparty, including the collateralized portions of these agreements, may not exceed 5% of the market value of the Total Fund. The minimum credit rating, based on a nationally recognized statistical rating organization ("NRSRO"), must be at least A- or better at the inception of the contract. For any counterparty that experiences deterioration in credit quality that results in a NRSRO rating below the A- level, subsequent to the inception of transaction, additional eligible collateral may be posted, or the transaction may be terminated.
- b. All OTC derivatives must be governed by an ISDA Master Agreement and Credit Support Annex or, if centrally cleared, by clearing agreements, and must include both close-out netting provisions and collateralization provisions.
- c. **Repurchase agreements** – The counterparty limits for repurchase transactions and tri-party repurchase transactions may not exceed 5% of the market value of the Total Fund unless those transactions are covered by a third-party indemnification agreement by an organization that bears a long-term NRSRO credit rating of A- or better and is enhanced by acceptable collateral. Each repurchase agreement will be entered into under the PSA/ISMA Global Master Repurchase Agreement.

Each ISDA Master Agreement must also include a table that delineates the excess purchased securities margin (haircut) required, based on the collateral type, duration, and credit quality.

- d. **Securities lending** – When securities lending activity is performed by an external, third party lending agent, Investment Division will examine the credit underwriting practices of the lending agent, including enforcement of collateral requirements, counterparty analysis, and surveillance. Additionally, Investment Division will periodically review the securities lending lines by counterparty. A securities lending agent must be an organization rated A- or better by a NRSRO. More detailed information about TRS securities lending activities is specified in the separate Securities Lending Policy.

10.4. Liquidity Risk Management

The objective of the Liquidity Risk Management policy is to ensure that the Fund maintains ample liquidity to meet its funding commitments. The two kinds of commitments which necessitate a prudent liquidity policy are:

- a. Disbursements of benefits and related obligations to plan participants, including retirement, death, health, and disability benefits payments.
- b. TRS investment activities: These are mainly associated with risk management and funding of external managers. Some examples include:
 - i. TRS engages in derivatives to efficiently manage and reduce risk of the overall investment portfolio. Use of these instruments requires liquidity for collateral, margin and payment obligations at the time of a reset, call or maturity;
 - ii. TRS funds accounts managed by public markets external managers; and

- iii. TRS manages unfunded capital commitments that the Fund is legally obligated to fund when called by private markets general partners.

External Funding Authority

The Investment Division is authorized to establish external funding mechanisms (such as master repurchase agreements with one or more counterparties) and the flexibility to operate in all types of market liquidity environments to allow prudent management of these commitments while achieving a long-term rate of return and adhering to the asset allocation limits outlined in this Policy. In addition to these external funding mechanisms, TRS will maintain adequate funds in its custodial account to cover investment-related obligations. Finally, the Board authorizes the Investment Division to access the cash holdings backing the OTC swaps to manage its commitments.

Limitations Applicable to External Funding Authority

Liquidity provided from these external funding mechanisms may not exceed 2% of the market value of the Total Fund. The expectation is that the liquidity funded through external funding mechanisms will be short-term (less than 30 days). The Investment Division must seek approval from the CIO for extended use of external funding sources. The Investment Division shall report such approvals for extended use to the Board not later than the next regular quarterly meeting.

10.5. Operations Risk Management

- a. **Overdrafts** – The Investment Division will monitor the frequency and costs associated with all overdraft activity.
- b. **Custodial Bank(s)** – The Investment Division will conduct on-site due diligence to review the operational controls set in place by all custodial banks. The Investment Division will also consider the extent of remedies provided by the custodian and its overall ability to fulfill its commitments should operational failures occur.

10.6. Settlement Risk Management

The Investment Division will monitor unsettled trade activity by counterparty and instrument type.

10.7. Legal Risk Management

Legal documentation for all accounts, investment subscriptions, external managers, investments in private investment funds (Private Markets Portfolios and Hedge Funds), and derivatives will be reviewed, negotiated and approved for TRS execution by internal or external legal counsel, or both. The Investment Division, in consultation with the Office of the General Counsel, will exercise diligence to ensure that all contracts are legally binding and enforceable in a suitable venue. The Investment Division will seek the assistance, review, and advice of legal counsel whenever it is prudent to do so. The Office of the General Counsel has primary responsibility for the engagement of outside legal counsel for investment matters, subject to applicable statutes and rules adopted by the Office of the Attorney General.

10.8. Risk Management Compliance Cure Periods and Remedies

- a. **Passive violations** – A passive violation occurs when the portfolio breaches a prescribed policy limit as the result of changing market or credit conditions. The Investment Division will report the violation to the Board and will remedy the violation within 90 days of the violation or prepare a written action plan that must be approved by Board resolution to extend the cure period beyond 90 days.
- b. **Active violations** – An active violation is caused by entering into an agreement or investment that breaches a policy limit at inception or thereafter through failure to monitor. In this case, a thorough analysis of controls will ensue and be reported to the Chief Investment Officer, the Executive Director and the Chairman of the appropriate Board committee, as soon as practical, and to the full Board at its next regularly scheduled meeting at which investment matters will be discussed. The Investment Division will seek to remedy the violation when possible. In instances where the costs of immediate remedies are prohibitive, the Investment Division will develop a corrective action plan that will be submitted to the CIO within a reasonable time after the violation occurs, not to exceed 15 days, depending

on the nature and complexity of the investment holding and transactions needed to remedy the violation. The Board will be apprised of the violation at its next regularly scheduled meeting along with the corrective action plan.

10.9. Permitted Uses of Leverage

The Investment Division is authorized to use the following types of leverage:

- a. Derivative strategies in accordance with the risk parameters established by the asset allocation ranges of this Policy and applicable legal restrictions;
- b. Short sales in accordance with this Policy;
- c. F/X hedging in accordance with this Policy;
- d. Risk Parity investments in accordance with this Policy;
- e. Embedded leverage within the Total Fund's limited partnership investments; and
- f. Collateralized fundings including securities lending activities, pledges, repurchase and reverse repurchase agreements and other external funding mechanisms.

Leverage will not be used to exceed the risk parameters established by the asset allocation ranges of this Policy.

ARTICLE 11 – HEALTH INSURANCE PROGRAM PORTFOLIO

11.1 Health Insurance Program Portfolio Objective

The primary objective of the Health Insurance Program Portfolio is to preserve capital through investment in conservative, short-term securities.

11.2 Authorized Investments for the Health Insurance Program Portfolio

Section 404.024, Government Code describes the Authorized Investments employed by the comptroller when he or she invests state funds. The Investment Division shall employ this list of Authorized Investments when the Investment Division invests the Health Insurance Program Portfolio.

ARTICLE 12 – POLITICAL CONTRIBUTIONS; IMPROPER INFLUENCE; PLACEMENT AGENTS AND FINDERS

12.1 Scope

This policy applies to all TRS investment transactions other than direct investments in registered and freely marketable securities, including without limitation new agreements (including follow-on and co-investments), sales or transfers of investment interests, increases in funding or capital commitment to an existing relationship or fund, or an amendment that increases management fees or compensation under an agreement.

This policy also applies to attempts to influence TRS investment decisions through contacts with TRS trustees, or contacts with, or political contributions made for the benefit of, one or more Texas Elected Officials, and also applies to contacts with persons employed by any such official.

If any provision of this policy conflicts with a provision of another policy adopted by the TRS board (the "Board"), the stricter provision shall apply.

12.2 Purpose

The purpose of this policy is to ensure the integrity of all TRS investment transactions and decisions and conformity with the highest fiduciary, ethical, and legal standards by all parties involved. All investment decisions made by the Board and the Investment Division and must be based solely on the merits in conformity with fiduciary standards and applicable law. All investment recommendations made by consultants and advisers must be based solely on the merits after the necessary due diligence. All investment decisions and recommendations must be free of impropriety or improper influence and the appearance of either.

12.3 Philosophy

The Board desires that the Investment Division obtain full disclosure of all matters having the potential to harm TRS's reputation or the integrity of TRS's investment processes, or that could constitute unethical or unlawful conduct during the investment due diligence process.

12.4 Required Disclosures and Questionnaire

At a minimum, all external Fund or Manager Parties and if applicable, all Placement Agents that will receive a Placement Fee with respect to an investment or commitment by TRS shall provide detailed written responses to the questionnaire attached hereto as Appendix F as early as reasonably possible in the due diligence process for a TRS investment transaction. The Executive Director is authorized to approve such revisions to Appendix F from time to time as he deems to be in the best interest of TRS and consistent with this policy.

In addition, all Fund or Manager Parties who disclose the involvement of a Placement Agent shall provide a detailed description of the services to be performed by the Placement Agent and how the Placement Agent is used (e.g., with all prospects, or only with a subset of prospects). The Investment Division shall obtain a copy or summary of the terms of an agreement to compensate a Placement Agent for the due diligence file. The Investment Division shall provide all prospective Fund or Manager Parties with a copy of this policy and the Appendix F questionnaire upon commencement of due diligence.

12.5 Contractual Representations, Warranties and Covenants

Each Fund or Manager Party shall represent and warrant to TRS in the executed closing documents for the transaction that its responses to Appendix F to this policy and any supplemental inquiries are true, correct, and complete in all material respects, and shall also covenant to update any such information within 10 business days of any change in the information in the responses.

In addition, each Placement Agent shall fully disclose the terms of its arrangements with a Fund or Manager Party for payment of a Placement Fee and any political contributions by the Placement Agent to any Texas Elected Officials, and shall certify as to the matters addressed in Appendix F, as applicable, to TRS in a writing executed by an authorized officer that the disclosures required by this policy are true and complete in all material respects.

Each final investment agreement shall provide TRS with the option to receive a reimbursement of management or advisory fees equal to the amount of Placement Fees to be paid if any certificates or contractual representations, warranties or covenants relating to this policy have been breached.

12.6 Prohibitions

Neither TRS nor any TRS investment shall be burdened with or liable for any Placement Fee. No TRS investment may be made if the transaction involves either (a) a Placement Agent who is not registered with either of the Securities and Exchange Commission or the Financial Industry Regulatory Authority ("FINRA"), or (b) the sharing of a Placement Fee with a non-registered person or entity. No TRS investment may be made if an authorized officer or the board, in consultation with legal counsel, determines that a disclosed contact with a TRS board member or Texas Elected Official, or a contribution to a Texas Elected Official, has created an unacceptable risk to the integrity and reputation of the TRS investment program or has been made in violation of a TRS policy or applicable law. A contact-based referral, without more, by a trustee of either an

investment opportunity or a Manager or Fund Party contact to the Executive Director, Chief Investment Officer, or Deputy Chief Investment Officer does not constitute such a risk or a violation of this policy.

12.7 Reporting

The investment staff shall compile all responses to the questionnaire and report the results to the Board at least semi-annually. Reports shall include the amounts and recipients of any political contribution or Placement Fee and the relationship of the recipients to the Placement Agent or Texas Elected Official, as applicable.

12.7 Definitions

Affiliate – means a person or entity controlled by or under common control with another person or entity.

Fund or Manager Party – includes, (a) as to a private investment fund, a fund sponsor, the general partner, managing member, or its equivalent with respect to a fund, fund sponsor, or fund management firm, (b) as to an external, separate account investment manager, the asset management entity and the parent of such asset management entity, and (c) as to any other investment transaction, sponsor, investment banker, or other party soliciting an investment, agreement or commitment from TRS and (d) as to (a), (b) and (c), any Affiliate, principal, owner, officer, shareholder, director, managing member, or employee having authority to act on behalf of such fund or firm.

Placement Agent – includes any third party, whether or not affiliated with a Fund or Manager Party, that is a party to an agreement or arrangement (whether oral or written) with a Fund or Manager Party for the direct or indirect payment of a Placement Fee in connection with a TRS investment. Any other person or entity who claims a Placement Fee or who by agreement with a Placement Agent will share in a Placement Agent’s Placement Fee is also deemed to be a Placement Agent whether or not the person or entity is an Affiliate, principal, owner, officer, shareholder, director, managing member, or employee of the first Placement Agent. For purposes of this policy, a “finder” is a Placement Agent.

Placement Fee – includes any compensation or payment, directly or indirectly, of a commission, finder’s fee, or any other consideration or benefit to be paid to a party other than the relevant Fund or Manager Party in connection with a TRS investment, agreement or commitment.

Relative – means a spouse (including an ex-spouse), parent, child (including adopted), sibling, niece, nephew, aunt, or uncle.

Texas Elected Official – includes any elected official of the State of Texas, including but not limited to the governor, lieutenant governor, comptroller of public accounts, attorney general, and any member of the Texas Legislature, and also includes a campaign fund or political action committee, or PAC for an elected official, and any Relative of a Texas elected official.

TRS Person – means any person listed on Exhibit A attached to Appendix F to this Policy or to any other due diligence document, and includes without limitation any current or former TRS board member, Executive Director, Deputy Director, Chief Financial Officer, Investment Division or Office of the General Counsel employee, any investment consultant or actuary, any outside counsel engaged by TRS, and any Relative of a TRS Person, whether or not listed on an Exhibit A, TRS Persons.

**APPENDIX A – TRACKING ERROR NEUTRAL
(IN ANNUALIZED BASIS POINTS)¹**

Internal	Neutral
Equity (Global Best)	100
External	
Equity (USA)	300
Equity (International; Developed, EAFE)	300
Equity (International; Emerging Markets)	300
Equity (World Equity)	300
Stable Value Hedge Funds	400
Directional Hedge Funds	600

	Neutral	Maximum
Total Global Inflation Linked		200
Total Public Fund Tracking Error	100	300

¹ Tracking error will be measured on a realized basis over a three year period.

APPENDIX B – IIC APPROVAL AUTHORITY AND MANAGER ORGANIZATION ALLOCATION LIMITS

Allocations to a single manager organization may only exceed the limits specified in this Appendix B with the prior authorization of the Board.

Article Affected	Portfolio	Initial Allocation or Commitment with Manager Organization, by Portfolio	Additional or Follow-On Allocation or Commitment with the same Manager Organization, by Portfolio	Total Manager Organization Limits, by Portfolio
2.7	External Public Markets Portfolio	0.5%	1%	3%
4.2	Private Equity Portfolio	0.5%	1%	3%
5.2	Real Assets Portfolio	0.5%	1%	3%
6.2	Energy and Natural Resources Portfolio	0.5%	1%	3%
Total IIC Approval Authority, each Manager Organization				6%

All allocation or commitment limits are expressed as a percentage of the Total Fund value and are to be calculated as of the date the applicable investment agreements are executed.

“Affiliate” means any person directly or indirectly controlling, controlled by, or under common control with, another person. A “manager organization” includes its Affiliates without regard to the names of the entities.

The percentage limit for additional or follow-on allocations or commitments applies to each additional or follow-on allocation or commitment by a listed portfolio to a manager organization and is in addition to, and not cumulative of, the limit specified for initial allocations or commitments. By way of example, if a portfolio initially allocates 0.2% of the Total Fund to a manager organization, the portfolio may thereafter allocate or commit up to 1.0% in a single additional or follow-on allocation or commitment to the same manager organization for a total of 1.2% allocated or committed to the same manager organization (0.2%+1.0%). If a portfolio initially allocates 0.2%, then makes an additional allocation or commitment of 0.8%, and desires to make a further additional or follow-on allocation to the same manager organization, the applicable limit for the further additional or follow-on allocation is 1.0% of the Total Fund, for a total of 2.0% allocated or committed to the manager organization (0.2%+0.8%+1.0%). All investments occurring in the six months prior to the follow-on investment, co-investment or additional investment shall be included in the calculation of the percentage limits. If the initial investment occurred less than six months prior to the current investment, the initial allocation limit of 0.5% rather than the follow-on allocation limit of 1.0% will apply.

In calculating the available limits, returned capital is excluded from the sum of existing total allocations or commitments. Committed capital is included during the applicable investment period of a fund without regard to whether the commitment amount is funded or unfunded or the fund is open-ended. After the investment period, committed but unfunded capital is not included in the calculation of outstanding commitments for the purposes of this Appendix B. Capital that has been returned but that is subject to recall by a private investment fund is considered to be committed or allocated for the purposes of the limits in this Appendix B.

Authority for Special Investment Opportunities. Notwithstanding the limits set forth in this Appendix B, the CIO may designate an investment opportunity as a “Special Investment Opportunity” if the circumstances indicate a reasonable probability that a rapid investment response will be required in order for TRS to acquire the investment in excess of the limits on Investment Division authority set forth in this Appendix B. Circumstances requiring a rapid response may include, but are not limited to, distressed situations or market dislocations creating opportunities to acquire interests or assets at pricing that indicates a reasonable probability that the interests or assets are undervalued or will increase in value. The CIO shall notify the Executive Director as promptly as possible of the Special Investment Opportunity. The CIO and the Executive Director shall consult with the Chairman of the Board and the Chairman of the Investment Management Committee and determine if it is not practicable to present the opportunity for consideration by the Board. If the opportunity will not be added to an agenda, and the

CIO and the Executive Director conclude that the investment would be in the best interests of TRS, the CIO and the Executive Director may authorize and conclude an investment up to \$1 billion in that Special Investment Opportunity.

After one investment in a Special Investment Opportunity has been made, no further investment in a Special Investment Opportunity may be made until the Board has reauthorized the CIO's authority to designate a Special Investment Opportunity. Such reauthorization shall renew the CIO's and the Executive Director's authority to invest up to \$1 billion in a Special Investment Opportunity under this provision.

APPENDIX C – EMERGING MANAGERS

Articles Affected:	Portfolio	Target Allocation (in millions)
2.7	External Public Markets Portfolio ¹	250
4.2	Private Equity Portfolio ^{1,2}	950
5.2	Real Assets Portfolio ^{1,2}	450
	Total	1,650

For the avoidance of doubt, these portfolios may also include investments in energy and natural resources.

¹ The CIO may increase or decrease each portfolio Target Allocation by \$200 million; provided, the total Target Allocation must remain unchanged as a result of such increase or decrease.

² Target Allocation based on net market value.

APPENDIX D – CURRENCY HEDGE RATIOS

Portfolio	Currency Hedge Ratio
Public Markets Portfolios	0%
Private Markets Portfolios	0%

APPENDIX E – GENERAL AUTHORITY RESOLUTION

Board of Trustees
General Authority Resolutions Adopted September 18, 2014

Investment Group

Resolved, That Investment Division employees holding the following TRS working titles are members of the “**Investment Group**”:

Chief Investment Officer
Senior Managing Director
Senior Director
Senior Investment Manager

Deputy Chief Investment Officer
Managing Director
Director

Resolved further, That the Executive Director is authorized and directed to designate in writing those individual members of the **Investment Group** who are authorized within the investment areas designated by the Executive Director, in addition to the Chief Investment Officer and the Deputy Chief Investment Officer, to take any one or more of the following actions authorized below in accordance with these resolutions until the authority is revoked.

Resolved further, That the Executive Director is authorized and directed to designate in writing, by investment area and category or item designation, the specific authorities granted to each authorized member of the **Investment Group**, until the authority is revoked.

A. General Authority for Investment Matters other than Derivatives

Resolved further, That the Chief Investment Officer, Deputy Chief Investment Officer, and any other member of the **Investment Group** designated by the Executive Director as having such authority, in addition to any other authority expressly designated by the Executive Director under these resolutions, may act on behalf of TRS to:

- A.1 Buy, sell, or give orders or instructions for transactions in currencies and securities, and any amendments or modifications of such orders or instructions.
- A.2 Direct Investment Operations personnel to deliver, pay, expend, or receive cash, currencies, monies, securities (including restricted or Rule 144A securities) in connection with a contract to buy or sell securities.
- A.3 Give directions and instructions to members of the **Trading Group** or external managers relating to execution, brokerage, clearing or settlement of securities transactions.
- A.4 Direct Investment Operations personnel to fund subscribed investment funds or capital called by investment funds; transfer funds or assets between custodial accounts, including external manager separate accounts; transfer funds to pay fees under an investment contract; and to instruct other cash movements, including movements of cash to and from custodial accounts held by the Comptroller of Public Accounts and transfers of assets in kind for investment under an investment contract.

Notwithstanding any provision of this Section A, authority granted under this Section A does not extend to transactions in derivatives, which are governed exclusively by Section C of these resolutions.

B. Investment Contracting Authority other than Derivatives

Resolved further, That the Chief Investment Officer, Deputy Chief Investment Officer, and any other member of the **Investment Group** designated by the Executive Director as having such authority, in addition to any other authority expressly designated by the Executive Director under these resolutions, may act on behalf of TRS to:

- B.1 Make, execute, deliver, waive, modify, amend, renew, extend, assign, terminate, or transfer, in each case in writing, investment-related documents, including without limitation, written contracts, investment management agreements, subscription agreements, capital commitments, account agreements, consents, certificates, powers of attorney, notes,

deeds, security agreements, pledges, mortgages, endorsements, directions and instructions to amend, modify, fix, and execute written investment guidelines in investment management agreements with external managers and fund managers, and any and all documents necessary or proper to effectuate the authority granted in this Section B.1.

- B.2 Jointly with a member of the **Financial Group** or the **Executive Group**, execute investment fund redemption and withdrawal notices and instructions for the transfer or delivery by wire or physical transfer of cash or securities to a TRS account by a third-party fund, external manager, account, debtor, except that an authorized member of the **Investment Group** may be the sole TRS signatory on subscription agreements, side letter agreements, or other investment-related documents executed by TRS in connection with a new investment, and any amendments or modifications to such documents and agreements other than redemption and withdrawal notices and corresponding instructions for the transfer or delivery by wire or physical transfer of cash or securities.

Notwithstanding any provision of this Section B, the authority granted under this Section B does not extend to transactions in derivatives, which are governed exclusively by Section C of these resolutions.

C. Derivatives Authority

Resolved further, That the Chief Investment Officer or the Deputy Chief Investment Officer and any member of the **Investment Group** who is designated by the Executive Director as a member of the derivatives team, in addition to any authority expressly designated by the Executive Director under these resolutions is authorized may act on behalf of TRS to:

- C.1 Negotiate, make, fix, execute, waive, amend, modify, renew, extend, transfer, assign, endorse, or terminate, in each case in writing, documents related to derivatives transactions, including without limitation, master agreements, schedules, credit support annexes, collateral-management agreements, transaction confirmations, account agreements, and clearing agreements, and deliverables relating to such documents and agreements.
- C.2 Make, execute, waive, amend, modify, renew, extend, transfer, assign, endorse, or terminate, in each case in writing, disclosures, questionnaires, elections, certifications, or other administrative documents and deliverables related to derivatives accounts or transactions.
- C.3 Jointly with a member of the **Financial Group** or the **Executive Group**, execute, amend, modify, or terminate documents, directions, and instructions to deliver and pay cash, currencies, monies, or securities, to margin, collateralize, or settle derivatives transactions.
- C.4 Direct Investment Operations personnel to receive cash, currencies, monies, or securities, to margin, collateralize, or settle derivatives transactions.
- C.5 Buy, sell, or give orders or instructions for transactions in derivatives, and any amendments or modifications of such orders or instructions.
- C.6 Give directions and instructions to members of the **Trading Group** or external managers relating to execution, brokerage, clearing or settlement of derivatives transactions.

Financial Group

Resolved further, That the “**Financial Group**” comprises employees holding the following TRS working titles:

Chief Financial Officer	Director of Investment and Benefit Accounting
Director of General Accounting and Budgeting	Team Leader of Investment Accounting
Manager of Financial Reporting	Assistant Director of General Accounting and Budgeting

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS, jointly with an authorized member of the **Investment Group** or the **Executive Group**, to execute redemption and withdrawal notices and instructions for the transfer or delivery by wire or physical transfer of cash, collateral, margin, or securities to a TRS account by a third-party fund, account, debtor, or derivatives counterparty, except that an authorized member of the **Investment Group** may be the sole TRS signatory on subscription agreements and side letter agreements and any amendments to subscription agreements or side letter agreements.

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS, to execute authorizations to fund subscribed investment funds or capital called by investment funds; transfer funds or assets between custodial accounts, including external manager separate accounts; transfer funds to pay fees under an investment contract; instruct other cash movements, including movements of assets to and from custodial accounts held by the Comptroller of Public Accounts and transfers of assets in kind for investment under an investment contract.

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS to authorize and direct members of the Investment Accounting team to verify or confirm to a custodian or prime broker any order for the transfer or delivery of currencies, monies, securities, or contracts to any other person.

Executive Group

Resolved further, That the “**Executive Group**” comprises employees holding the TRS working titles of Executive Director and Deputy Director, and each member of the **Executive Group** is authorized and empowered to perform, with respect to a particular matter or transaction, any and all of the acts that any and all employees in the **Investment Group** or the **Financial Group** are authorized to perform, except that when joint action by a member of the **Investment Group** and a member of the **Financial Group** is required, only one member of the **Executive Group** may act jointly with a member of either of the **Investment Group** or the **Financial Group**.

Trading Group

Resolved further, That the “**Trading Group**” comprises the employees holding the following TRS working titles: Director – Trading Center, and Trader. Each member of the **Trading Group** is authorized and empowered on behalf of TRS to take the following actions: to place orders or agree with brokers, dealers and market-makers to purchase or sell securities, derivatives, forward contracts, or currency; to monitor and supervise execution and settlement of such orders or agreements; and to negotiate, fix, and vary the commissions, spreads, or discounts for individual orders or agreements to purchase or sell securities, derivatives, forward contracts, or currency.

APPENDIX F – POLITICAL CONTRIBUTIONS; IMPROPER INFLUENCE; PLACEMENT AGENTS AND FINDERS QUESTIONNAIRE

Date: _____

Fund or Manager Name: _____

Investment Name: _____

Completed by: _____

Date submitted: _____

Note: TRS may require completion of a new questionnaire or updating of responses at any time, including as of the closing date for any transaction investment or additional funding. All questions must be answered. Terms not defined in this questionnaire shall have the definitions set forth in Article 12 of the Investment Policy Statement.

- A) Contacts with State Officials; Political Contributions. Has any person lobbied, communicated with, or made political contributions during the past three years on behalf of the Fund or Manager Party to a Texas Elected Official in connection with a prospective investment transaction with a Texas state investment entity, including TRS?
- 1) If the answer is “yes,” please provide a complete list of the name(s) of the entities and individual(s) involved, the approximate dates of the contributions, the amounts of the contributions, a summary of the contacts or communications, and the nature of the discussion in regards to the investment with any Texas state investment entity, including TRS. If the answer is no, please respond with “NA.”
- B) Contacts with TRS Board Members. Has any person lobbied or otherwise communicated on behalf of one or more of the Fund, the Manager Party, or, if applicable, the Placement Agent with a current or former member of the TRS Board of Trustees during the past two years for the purpose of asking the current or former member to seek to influence a decision by the TRS investment staff or a TRS advisor or consultant to recommend that TRS invest?
- 1) If the answer is “yes,” please provide a complete listing of the name(s) of the entities and individual(s) involved, the approximate dates of the contacts or communications, and the nature of the discussion in regards to this investment. If the answer is no, please respond with “NA.”
- C) Placement Agents and Placement Fees. Is or was the Fund, the Manager Party, or if applicable, the Placement Agent a party to any agreement or arrangement (whether oral or written) to pay a Placement Fee to or for the benefit of any Placement Agent (or any other Placement Agent) in connection with TRS’s prospective investment agreement or commitment?
- 1) If the answer to C) is “yes,” please provide a copy of the written agreement or agreements creating the obligation to pay a Placement Fee. If the agreement is not written, please provide a written summary of the agreement. Additionally, please state the amount of the Placement Fee (or the formula for its determination if the amount is not yet determined) and the date of its payment or anticipated payment. If the answer to C) is no, please respond with “NA.”
- 2) If the answer is “yes,” please list the name(s) of the person or entity. If the party to the agreement is an entity, please also list the names of the principal owners, officers, directors, or managing members of the Placement Agent and provide a resume for each such person. If the answer to C) is no, please respond with “NA.”
- 3) If the answer is “yes,” state whether the Placement Agent, or any of its Affiliates, is registered as a lobbyist with any state government or the federal government and identify the registrants and the applicable jurisdictions where registered. If the answer to C) is no, please respond with “NA.”

- 4) Will or did any TRS Person or any Relative of a TRS Person receive, has any such person received, or might any such person receive, any compensation or payment, directly or indirectly, of a commission, finder's fee, or any other consideration or benefit to be paid to a Placement Agent (a "Placement Fee") in connection with TRS's investment? If the answer is "yes," please list the name or names of the TRS Person or Relative of a TRS Person and provide details about the terms of the Placement Fee. If the answer to C) is no, please respond with "NA."
- 5) Will or did any Texas Elected Official or a Relative of a Texas Elected Official receive a Placement Fee in connection with TRS's investment? If the answer is "yes," please list the name or names of the official and provide details about the terms of the Placement Fee, including the amounts and timing of payments. If the answer to C) is no, please respond with "NA."
- 6) Did (or will) any third party person or entity who is not employed or otherwise affiliated with a Placement Agent, including a current or former TRS Person, either (a) recommend the Placement Agent or (b) receive a share of a Placement fee or any other economic benefit in connection with TRS's investment, whether directly or indirectly through a Placement Agent engaged by you? If the answer to C) is no, please respond with "NA."
- 7) If the answer to 6) is "yes," please list the name of the person or entity, the relationship of the person or entity to the Placement Agent and your firm, and provide a description of the arrangement and the reason for the payment. If the answer to C) is no, please respond with "NA."
- 8) State whether the Placement Agent or any of its Affiliates is registered as an investment advisor with the Securities and Exchange Commission or the Financial Industry Regulatory Association, or a similar agency outside the United States. Provide details about each such registration or explain why registration is not required. If the there is no Placement Agent, please respond with "NA."

The undersigned certifies, represents and warrants on behalf of the Fund, the Manager Party, or Placement Agent(s), as applicable that, to the best of its knowledge after due inquiry, (a) it has received, reviewed and understood Article 12 of the TRS Investment Policy Statement ("Article 12") and agrees to abide by Article 12's requirements, (b) the foregoing responses to this questionnaire are complete, true, and correct and do not omit any statement or fact necessary to make any statement made not misleading in any material respect, and (c) no prior statements or representations, if any, whether oral or written, made on behalf of the Fund, the Manager Party, or Placement Agent(s), as applicable, relating to the subject matter of this questionnaire in connection with TRS's due diligence inquiries, a prospective investment agreement, or commitment, as the case may be, including any side letter agreements, were untrue or misleading in any material respect when they were made. The undersigned further acknowledges and agrees that any response to this questionnaire is inaccurate, misleading, incomplete or otherwise untrue or false in any respect, TRS has, in addition to the provisions of Article 12, all remedies at law or in equity with respect to its agreements with the undersigned.

[signature block for Fund or Manager Party]

Date: _____

Attachment: Exhibit A, TRS Persons

APPENDIX G - EXTERNAL ADVISORY COMMITTEES OR BOARDS, BOARD OBSERVERS, AND BOARD REPRESENTATION

- (A) **External Advisory Committees or Boards and Board Observers.** A TRS investment-related agreement may provide that an Investment Division employee may represent TRS by serving:
1. On an advisory committee, advisory board, or similar advisory body to a TRS investment vehicle, whether the position is voting or non-voting; or
 2. As a non-voting TRS observer at meetings of the governing body of an investment vehicle, including a business entity, in which TRS has an interest.
- (B) **Board Representation by a TRS Employee.** A TRS investment-related agreement may provide for TRS representation on the governing body of a non-public (private) or a publicly-traded business entity in which TRS holds a direct or indirect investment interest.
1. **Requirements:**
 - a. The TRS employee representative may not serve in a position that under applicable law has general liability to third parties, such as a general partnership position.
 - b. An agreement for TRS representation on an external governing body must be in writing and, to the extent possible, address limitations on capacity and fiduciary duties, liability insurance, indemnification, travel payments or reimbursements, and perquisites provided to persons on the governing body in the entity's ordinary course of business.
 - c. Duties that an employee owes to TRS must be primary.
 - d. The external entity's insurance and indemnification will be primary relative to any available TRS liability and indemnification coverage.
 - e. If compensation or reimbursement of expenses will be paid, the agreement must require payment of any compensation or reimbursement directly to TRS.
 2. **Qualification:** A TRS employee representative must hold one of the following TRS titles to be eligible to serve: Senior Investment Manager, Director, Senior Director, Managing Director, Senior Managing Director, Deputy CIO, or CIO.
 3. **Authorization:**
 - a. For a non-public (private) entity, either of the CIO or the Deputy CIO, in consultation with the Office of the General Counsel, must authorize an employee to serve.
 - b. For an entity that has issued publicly-traded securities, the CIO and the Executive Director, in consultation with the Office of the General Counsel, must authorize an employee to serve.
 - c. The CIO and Deputy CIO may not serve on an external governing body without prior authorization from the Executive Director.
- (C) **Board Representation by a Non-Employee Independent Third Party.** A TRS investment-related agreement may grant TRS a contractual right or option to appoint, nominate, remove, or replace a non-employee independent third party to serve on the governing body of a business entity in which TRS has or will have an investment interest.
1. **Requirements:**
 - a. A third-party may not be TRS's agent and shall have full discretion when voting as a member of the governing body.
 - b. TRS will not insure or indemnify any third party representative.
 2. **Qualification:** The third party must clear a conflict check.
 3. **Authorization:** The third party must be approved by the head of the applicable investment area and either of the Deputy CIO or the CIO, in consultation with the Executive Director.