NYC Teachers' Retirement System Investment Meeting (Public)

Schedule	Thursday, April 4, 2024 10:00 AM — 1:00 PM EDT
Venue	Zoom Meeting
Organizer	Kim Boston

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PUBLIC AGENDA -

Welcome and Opening

TRS IPS:

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
STATEMENT OF INVESTMENT POLICY
FOR
RESPONSIBLE CONTRACTOR POLICY
MAY 2017

This Policy is effective immediately upon adoption, supersedes all previous Responsible Contractor Policies and shall apply on a prospective basis to all Applicable Investments, as defined in Section II below.

I. INTRODUCTION

This Responsible Contractor Policy ("the Policy") is designed to ensure that contractors, investors, managers, consultants, or other participants selected by the Teachers' Retirement System of the City of New York ("the System" or "TRS") take prudent and careful action in accordance with the Policy, as described herein. TRS, through the Responsible Contractor Policy, supports and encourages fair wages and fair benefits for workers employed by its managers, contractors and subcontractors, subject to fiduciary principles concerning duties of loyalty and prudence, both of which further require competitive returns on TRS real estate and infrastructure investments. Use of this Policy also provides assurance that there is sufficient flexibility in controlling investment risks and returns while using responsible contractors.

TRS has a deep interest in the condition of workers employed by its managers, contractors and subcontractors. TRS endorses small business development, market competition and control of operating costs. Consistent with the ideals espoused by labor unions and other advocates for workers' rights, the System believes that a diverse, adequately compensated, and trained workforce delivers a higher quality product and service, thereby providing the System with a better opportunity for long-term security of its investments, along with a better opportunity for long-term growth and investment return. Adequate compensation includes fair wages and benefits, including healthcare and retirement plans. The System encourages contract issuers to provide unionized contractors with the opportunity to bid on projects.

II. APPLICABLE INVESTMENTS AND PHASING

"Applicable Investments" are domestic equity investments (and associated advisor or partner and subcontractor contracts and bids arising out of those investments) in the private real estate and private infrastructure asset classes, including partnerships, joint ventures and direct investments entered into after the effective date of this Policy. This Policy, in its entirety, shall apply to all Applicable Investments where TRS, whether singly or when its holdings aggregated with those of any other New York City pension system that has adopted a similar Responsible Contractor Policy (collectively, "NYCRS"), owns a greater than 50% ownership interest. For those Applicable Investments in which the aggregate holdings of the NYCRS are less than or equal to a 50% ownership interest, only Articles I through VII shall apply, although the System strongly encourages all managers to comply with the entire policy.

This Policy specifically excludes all other types of investments, including mezzanine debt, hybrid debt, international investments, secondary funds, and indirect, specialty and mortgage investments lacking equity features, and their respective advisors. The practicality, schedule, and method of extending this Policy in the future, beyond those investments and contracts described herein, shall depend on factors that include the structure of the investment and the degree of control TRS can exercise.

III. DEFINITION OF A RESPONSIBLE CONTRACTOR

A Responsible Contractor, as used in this Policy, is a contractor or subcontractor who pays workers fair wages and benefits as evidenced by payroll and employee records. "Fair benefits" may include, but are not limited to, employer-supported family health care coverage, pension benefits and apprenticeship training programs. "Fair wages" and "Fair benefits" are based on relevant market factors that include the nature and location of the project, comparable job or trade classifications, and the scope and complexity of services provided.

IV. INITIAL REQUIREMENTS OF THE RESPONSIBLE CONTRACTOR POLICY

A. **Duty of Loyalty -** Notwithstanding any other considerations, assets will be managed for the exclusive benefit of and with loyalty, honesty, good faith and fairness toward the Applicable Investments and all holders of the ownership interests in such Applicable Investments, including, without limitation, plan participants and beneficiaries.

B. **Prudence -** The Trustees, the Comptroller's Office Staff ("Staff"), and Managers and Advisors are charged with the fiduciary duty to exercise the care, skill, prudence, and diligence appropriate to the task.

C. **Competitive Return -** All investments and services must be made and managed in a manner that produces a competitive, risk-adjusted rate of return.

D. **Local, State, and National Laws –** Managers, contractors and subcontractors shall observe all local, state, and national laws (including, by way of illustration, those related to insurance, withholding taxes, labor, anti-discrimination, environmental, occupational health and safety, and the right to organize unions).

V. RECOMMENDED PRACTICES

The System supports and strongly encourages:

A. The use of qualified contractors certified as **Minority and Women-Owned Business Enterprises ("M/WBEs")** by New York City's Department of Small Business Services or otherwise certified as M/WBEs by a governmental entity in the local market in which the contractor operates.

B. A position of **neutrality** in the event there is a legitimate attempt by a labor organization to organize workers employed in the construction, maintenance, operation, or services at a System-owned property or asset in an Applicable Investment, and strongly encourages managers, property or asset managers and contractors to similarly take a position of neutrality in such an event. To remain "neutral" means not taking any action or making any statement that will directly or indirectly state or imply any support for or opposition to the selection by employees of a collective bargaining agent, or preference or opposition to any particular union as a bargaining agent. Nothing in this Policy obligates or prohibits a manager, property or asset manager or contractor from entering into private neutrality, labor peace or other lawful agreements with a labor organization seeking to represent or who currently represents workers at an Applicable Investment.

   Resolution of any inter-jurisdictional trade disputes shall be the responsibility of the trades and the various state and national building trades councils. This Policy does not call for any involvement by the managers, property or asset managers or contractors in inter-jurisdictional trade disputes.

C. The provision of **employer-paid safety training** by contractors to ensure that all employees have the skills and legal certifications necessary to perform assigned work safely.

D. A **competitive bidding and selection process** when retaining contractors and subcontractors unaffiliated with a building manager to provide construction, maintenance and services. The purpose of this provision is to encourage fair competition and to actively seek bids from all qualified sources within an area, including those identified as Responsible Contractors.

VI. SELECTION PREFERENCE OF A RESPONSIBLE CONTRACTOR

If Initial Requirements A through D in Section IV above are satisfied, the System expresses a strong preference that Responsible Contractors be hired.

VII. INVESTMENT POLICY RESTRICTIONS

The System will not entertain proposals that have the potential of eliminating public sector jobs and will seek investments in which the manager, advisor or partner demonstrates a commitment to standards of good conduct, and will reject investments that would pose a reputational risk to the System or bring public or regulatory scrutiny.

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THE FOLLOWING ARTICLE APPLIES SOLELY TO APPLICABLE INVESTMENTS IN WHICH NYCRS OWNS A GREATER THAN 50% OWNERSHIP INTEREST

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VIII. TRANSITION, ENFORCEMENT, MONITORING AND ADMINISTRATION

A. **Notification -** The System and/or the Staff shall provide a copy of this policy to all current and prospective real estate and infrastructure managers of Applicable Investments.

B. **Solicitation Documents -** All requests for proposal and invitations to bid relating to Applicable Investments shall describe the terms of this Policy and include a copy of the Responsible Contractor Self-Certification Form (Appendix A). Responses by bidders shall include information provided to the manager or contractor (whichever is applicable) in evaluating a bid.

C. **Contracts and Renewals -** All contracts entered into after the effective date of this Policy and pertaining to Applicable Investments, including renewals of such contracts, shall reference this Policy. TRS will take into account compliance with this policy in considering manager contract renewals.

D. **Responsibilities -** The responsibilities of Staff, consultants, managers, property or asset managers and contractors are defined as follows:

1. The Staff and/or consultants shall have the following responsibilities:

    a. Review the managers’ annual reports regarding compliance with the Policy.

    b. Report to the System’s Board of Trustees on incidents of non-compliance of Applicable Investments with the Policy and make recommendations for corrective action as necessary.

    c. Develop and maintain contact lists for all the System’s properties in Applicable Investments.

2. Managers of Applicable Investments shall have the following responsibilities:

a. Communicate the Policy to all property or asset managers.

b. Review a contract listing for each property or asset prepared by each property or asset manager.

c. Maintain a simplified bid summary for each applicable contract. The summary shall identify the contract, the successful bidder, and the bidder's status as a Responsible Contractor.

d. Provide an annual report to the Comptroller's Office Staff, describing their own efforts as well as those by property or asset managers and their subcontractors.

e. Monitor and enforce the Policy, including the investigation of potential violations.

f. Annually, the signatory to the System contract will file a certification statement that their firm complied with the Policy for the preceding year and upon request will provide written substantiation of compliance. This provision will be subject to periodic audits.

g. Select contractors, and encourage contractors to select subcontractors, in a manner consistent with this Policy.

3. Property or asset managers of Applicable Investments shall have the following responsibilities:

a. Communicate in bid documents the Responsible Contractor Policy to contractors seeking to secure construction or building service contracts.

b. Communicate the Policy to any interested party.

c. Ensure there is a competitive bidding process, inclusive of potentially eligible Responsible Contractors. Provide managers with a simplified bid summary for each contract and maintain documentation for successful bidders.

d. Require that bidders provide to the property or asset manager a Responsible Contractor self-certification on a form approved by the System.

e. Provide a listing for applicable service and construction contracts available for bid for each property or asset under management to all interested parties via prompt electronic notification (a website, email distribution, or other suitable technology). All potential bidders, building and service trade unions and councils, will have access to such electronic notification.

f. Provide property or asset level annual report information to managers.

g. Invite input from trade unions/service unions in the development of Responsible Contractor lists.

h. Maintain a list of any interested Responsible Contractors (including names, addresses and telephone numbers).

4. Contractors of Applicable Investments shall have the following responsibilities:

   a. Submit -- to the property or asset manager -- a Responsible Contractor self-certification on a form acceptable to the Comptroller's Office Staff.

   b. Communicate the Responsible Contractor Policy to subcontractors.

   c. Provide the property or asset manager with Responsible Contractor documentation.

   d. Select subcontractors in a manner consistent with this Policy.

E. **Minimum Contract Size -** The Policy shall apply to all Applicable Investment-related contracts of a minimum size of $100,000. Minimum contract size refers to the total project value of the work contracted for and not to any disaggregation by trade or task. For example, a $100,000 contract to paint two buildings in a single office complex would not be treated as two $50,000 contracts, each less than the minimum contract size. Disaggregation designed to evade the requirements of the Policy is not permitted.

F. **Applicable Expenditures Categories -** The Policy shall apply to tenant improvements, capital expenditures, and operational service contracts (such as cleaning and security) related to Applicable Investments.

G. **Fair Wage, Fair Benefits, and Training –** In determining "fair wages" and "fair benefits" (as required in Section III) concerning a specific contract in a specific market, items that may be considered include existing wage practices, state laws, prevailing wages, labor market conditions, and other items.

   In place of a prevailing wage standard, the Policy requires a broad outreach and competitive bidding program, as described in Section I below.

   This Policy is premised upon the availability of a list of Responsible Contractors in every market in which the System owns a property or asset through an Applicable Investment. While managers, their property managers and contractors are responsible for gathering and analyzing information relevant in identifying and hiring a Responsible Contractor, compilation of this list does not depend solely on the managers, property managers, or contractors. This Policy invites the various local trade unions to suggest contractors, which in their view, qualify as Responsible Contractors. Sources of information include local building and service trade unions and/or councils, builders associations, and governments.

H. **Annual Review and Data Forms –** Managers of Applicable Investments must file a Responsible Contractor annual report with BAM and present summary data in a format described and approved by TRS. The annual review shall determine whether each manager, property or asset manager, and contractor conducted a good faith outreach program and a competitive bidding process that included Responsible Contractors. A manager, property or asset manager or contractor will not be faulted merely because a Responsible Contractor does not respond to the invitation to bid. The Staff's review of the managers, property or asset managers, or contractors shall focus on the overall pattern of conduct and not any one specific incident.

I. **Competitive Bidding -** Property or asset managers and contractors shall give notice for invitations to bid related to Applicable Investments based on local market practices (such as providing notice in local trade publications, on bulletin boards, and via union building trades councils). Property or asset managers may seek input from building trades councils for developing lists of responsible contractors for inclusion in the bidding process.

Contractors shall not be permitted to bid on projects if the contractor or its principals or senior executives have been debarred by the City or State of New York for failure to pay prevailing wages or benefits on any prior job for which it was required by law.

Trade unions/service unions are encouraged to deliver to the manager, property or asset manager, or contractor, lists of and contact information for (1) Responsible Contractors and (2) local trade councils and union halls in all markets in which the Responsible Contractor Policy is applicable to the manager, property or asset manager, or contractor. They are also encouraged to provide a national contact person/address where current information can be sent, as well as notifications of trade/service union expansions into new areas. In addition, they may refer interested and qualified Responsible Contractors to the property or asset manager, monitor the local labor markets continually to update the lists and provide technical input as appropriate.

Property or asset managers and contractors may choose a reasonable number of contractors to invite to bid from the list of responsible contractors, as well as from other sources. Given the time and expense required to solicit and evaluate bids, it is not essential to invite all potential bidders.

The property or asset manager must ensure that there is a competitive bidding process, inclusive of potentially eligible responsible contractors, and take care to ensure bidders include such contractors. Large numbers of bidders does not necessarily assure inclusion. Review of bids shall include consideration of loyalty, prudence, competitive risk-adjusted returns and adherence to this Policy.

J. Enforcement –

1. If the Staff receives complaints alleging a violation of this Policy, it shall gather information relating to the complaint and forward it, as appropriate, to the Board. Complaints will be taken seriously. Staff will expect managers to provide prompt communication and full information.

2. If the Staff becomes aware of a formal determination by a law enforcement or regulatory agency or a court, that a manager, property or asset manager or contractor of an Applicable Investment has violated applicable labor laws, regulations, or standards, either directly or by failing to take appropriate steps to prevent or remedy violations and that constitutes a violation of this Policy, then:

    a. The Staff will consider all reasonably available remedies and recommend to the Board any appropriate ones that they believe will address the violation in a manner that satisfies the

Board's fiduciary duties of loyalty and prudence; and

b. The Board shall place the manager on a watch list. If the manager, even after discussions with the Staff and/or consultants, does not modify its pattern of conduct, and/ or cause its property or asset manager(s) or contractor(s) to modify their conduct, the Board shall consider this pattern of conduct along with other information when it reviews the manager's contract for possible renewal, or when considering investment in a subsequent fund or partnership of the manager. The key indicator is a pattern of conduct that is inconsistent with the provisions of the Policy.

Incidents of non-compliance will be reported to the System's Board of Trustees on a timely basis, and no less than quarterly.

APPENDIX A

Certification of Responsible Contractor Status

GENERAL INFORMATION	
Name of Firm	
Address	
City	
Telephone Number ( )	Fax Number ( )
Ownership Structure (Please check one) ____ Sole Proprietorship ____Partnership ____Corporation ____Joint Venture ____Other	
Description of Service(s) Provided	
Contractor's License Number	
RESPONSIBLE CONTRACTOR STATUS	
Please check one of the following boxes: 1. ___ Meets all Responsible Contractor requirements 2. ____ Meets no Responsible Contractor requirements 3. ____ Meets certain of the Responsible Contractor requirements (provide explanation below) Explanation:	

4. Has your firm ever been fined, received an adverse judgment, penalty, or received any mandated changes to its corporate policy in the past 18 months resulting from violations of local, state, or federal labor laws, including but not limited to, the National Labor Relations Board, Equal Employment Opportunity Commission (e.g. sexual harassment and/or discrimination violations), or Occupational Safety & Health Administration (OSHA)? If yes, please explain.

Explanation:

5. In connection with the violations referenced in question 4 above, are you aware of any *pending* complaints or other actions that have been filed in connection with your firm? If yes, please explain. (Affirmative answer(s) to the question will not necessarily disqualify the vendor from being the successful bidder. The level of investigation of the complaints listed in response to the question will be left to the judgment of the investment partner.)

Explanation:

TARGETED VENDOR STATUS

Does your firm meet the definition of a Minority and Women-Owned Business Enterprise?

____ Yes ____No

A Minority and Women-Owned Business Enterprise shall be defined herein as a business enterprise which is certified as a minority/women-owned business enterprise by the New York City Department of Small Business Services, or otherwise certified as a minority/women-owned business enterprise by a government entity in the local market in which the business enterprise operates.

OWNER'S CERTIFICATION OF RESPONSIBLE CONTRACTOR STATUS

On behalf of the above-named firm, the undersigned certifies that the information and response provided herein are true, complete and accurate as of this date, and he/she is aware that any intentionally misrepresented or falsified information may result in disqualification from future contracting opportunities.

Signature____Date ____

Name (please print)_____________________________________Title ____

Principles for Responsible Investment

- Principle 1: We will incorporate ESG issues into investment analysis and decision-making processes.
- Principle 2: We will be active owners and incorporate ESG issues into our ownership policies and practices.
- Principle 3: We will seek appropriate disclosure on ESG issues by the entities in which we invest.
- Principle 4: We will promote acceptance and implementation of the Principles within the investment industry.
- Principle 5: We will work together to enhance our effectiveness in implementing the Principles.
- Principle 6: We will each report on our activities and progress towards implementing the Principles.

Visit https://www.unpri.org/about/the-six-principles for more information on the Principles for Responsible Investment.

Divestment and Exclusion Policy

Scope

This section sets forth TRS' policy for responding to external or internal initiatives that request TRS to sell investments or refrain from making additional investments in individual or groups of securities for reasons that may include non-economic factors ("divestment initiative"). This policy will guide the Board's review of any divestment initiative to ensure a process that is consistent with fiduciary duties of loyalty, prudence and care to the System and its beneficiaries.

This policy applies to public market or other investments where TRS controls the investment guidelines, excluding securities held in a mutual fund or commingled structure where TRS does not control investment guidelines. For private market investments held in a partnership fund structure, TRS may exercise its opt-out rights to protect against the types of financial and reputational risks identified in this policy.

Divestment Considerations and Engagement

TRS wants companies in which it invests to meet high standards of conduct, including ethical business practices and strong environmental, social and corporate governance policies. Although investment in a company does not necessarily signify that TRS approves of the company's products, policies, or practices, TRS believes high standards of conduct promote superior long-term investment performance. TRS further believes that engagement is the most effective way to promote high standards of conduct.

TRS will thus seek resolution of issues through active and direct engagement prior to divestment, wherever practicable and unless the Board determines that engagement would be futile. Engagement may include, but is not limited to, conducting face-to-face meetings with senior management or board(s) of director(s), shareholder resolutions, media campaigns, and exercising other practicable shareholder rights.

A decision to divest is committed exclusively to the discretion of the Board, subject to fiduciary standards. In general, any company considered for divestment must have a significant, clear, and direct nexus to the injury or risk that TRS is seeking to address or avoid. If the Board determines that engagement would be futile or TRS has exhausted all practicable engagement options without achieving satisfactory progress or resolution, the Board may consider divestment.

Investment Analysis

Prior to any divestment decision, the Board shall direct its investment advisor and/or an independent investment consultant to perform an investment analysis to evaluate the potential impacts of the divestment on the investment portfolio, consistent with prudence standards, fiduciary duty and the investment policies and goals of TRS.

A divestment analysis shall include: (i) determining characteristics necessary and sufficient to permit precise, complete and ongoing identification of the companies for divestment, including timelines, asset classes and strategies; (ii) the nature and degree of any increased investment risk posed by the proposed divestment, including incremental and aggregate changes in tracking error; (iii) whether divestment would affect appropriate diversification of the portfolio; (iv) whether divestment would affect portfolio returns; (v) the availability of alternative investments with comparable or equivalent risk and return characteristics; (vi) transaction costs, including liquidity; and (vii) whether divestment would be consistent with the investment policy and objectives of the System.

The Board shall also obtain advice from fiduciary counsel whether a divestment initiative is consistent with fiduciary standards.

Execution and Monitoring

A final resolution approving a divestment initiative shall describe the complete scope and conditions of the divestment, including the names of all companies to be divested and any requirements regarding timeline, duration, asset class, or investment strategy. For private market investments, a divestment initiative will generally be implemented by exercising opt-out rights.

BAM will maintain an Excluded Companies List, on behalf of TRS, reflecting all divestments approved by the System, including the names of the companies approved for divestment and the divestment criteria. BAM will provide to the Board, at least annually, an updated Excluded Companies List, reflecting all companies with publicly issued securities that are subject to previously approved divestments, based on the most up-to-date, complete and accurate information available to BAM, as well as any private market investments that were the subject of an opt-out or were otherwise divested. In addition, BAM will provide timely interim updates to its regular annual analysis on request from the TRS Board.

BAM will provide to all of the System's public market investment advisers the names of the companies on the Excluded Companies List, and will monitor the investment advisers' compliance with the list for the following year, or until such time as the Board approves an updated list. BAM will also notify private market managers of any divestment initiative that applies to private markets. All investment advisers must restrict investments consistent with the Board's divestment determinations. Performance benchmarks may be adjusted accordingly.

BAM will monitor and evaluate the System's portfolio relative to the relevant unconstrained benchmarks of the total portfolio and applicable asset classes and sub-asset classes and report to the System annually on this analysis. The analysis will include an evaluation of how the Excluded Companies List affects the diversification, return, risk, standard deviation and aggregate tracking error relative to the unconstrained benchmark.

BAM will maintain Divestment Execution and Monitoring Procedures ("Divestment Procedure") to ensure appropriate, timely and efficient implementation of divestment decisions and monitoring of their effects. The Divestment Procedure shall provide for steps and process to identify companies to divest, determine and comply with a timeline to divest, identify all transactions such as sales and purchases that are needed along with their associated costs, monitor the effect of divestment on returns and associated tracking errors, reporting to the Board, and any other necessary steps.

Appendix 4

New York City Teachers' Investment Policy Statement

Restrictions on Permissible Investments

Restrictions on Permissible Investments

Public Markets – Emerging Markets

Policy under review.

As of June 20, 2019, as an interim measure pending development of a final Public Market/Emerging Market Policy, the Board lifted country-based restrictions for China, Russia and Pakistan but retained company-specific restrictions for certain companies headquartered in those markets based on identified environmental, social and corporate governance factors.

Private Markets

TRS generally limits its participation in private market investments to those that are located and/or are organized or principally operating in Permissible Markets. Permissible Markets are defined as countries in which "Gross National Income per Capita", as reported in the most recent "World Development Indicators" published by the World Bank, is at or above the threshold established by the World Bank for countries to be categorized as "High Income". However, when prudent, the Board may authorize an exception to these Private Markets restrictions to authorize specific investments in countries that are not considered "High Income".

The Board recognizes that in order to comply with the investment restrictions, Staff will negotiate an opt-out right in respect of the restrictions. This may affect the Fund's access to certain funds and may require that, from time to time, the Fund opt-out of certain investments made by the funds to which capital is committed. The Board has determined that investing absent such policies poses an investment and reputational risk overall that exceeds the potential benefit of investing in such funds or specific investments. Staff, with the assistance of the Consultant, is hereby delegated the authority to evaluate and determine whether individual investments proposed by a fund to TRS would implicate the investment restrictions.

As of 12/31/18, the list of Permissible Markets based on the above criteria includes:

World Bank list of economies (June 2018) (high income only)

https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

Economy	*Code*	*Region*	*Income Group*
Andorra	AND	Europe & Central Asia	High income
Antigua and Barbuda	ATG	Latin America & Caribbean	High income
Argentina	ARG	Latin America & Caribbean	High income
Aruba	ABW	Latin America & Caribbean	High income
Australia	AUS	East Asia & Pacific	High income
Austria	AUT	Europe & Central Asia	High income
Bahamas, The	BHS	Latin America & Caribbean	High income
Bahrain	BHR	Middle East & North Africa	High income
Barbados	BRB	Latin America & Caribbean	High income
Belgium	BEL	Europe & Central Asia	High income

Bermuda	BMU	North America	High income
British Virgin Islands	VGB	Latin America & Caribbean	High income
Brunei Darussalam	BRN	East Asia & Pacific	High income
Canada	CAN	North America	High income
Cayman Islands	CYM	Latin America & Caribbean	High income
Channel Islands	CHI	Europe & Central Asia	High income
Chile	CHL	Latin America & Caribbean	High income
Croatia	HRV	Europe & Central Asia	High income
Curaçao	CUW	Latin America & Caribbean	High income
Cyprus	CYP	Europe & Central Asia	High income
Czech Republic	CZE	Europe & Central Asia	High income
Denmark	DNK	Europe & Central Asia	High income
Estonia	EST	Europe & Central Asia	High income
Faroe Islands	FRO	Europe & Central Asia	High income
Finland	FIN	Europe & Central Asia	High income
France	FRA	Europe & Central Asia	High income
French Polynesia	PYF	East Asia & Pacific	High income
Germany	DEU	Europe & Central Asia	High income
Gibraltar	GIB	Europe & Central Asia	High income
Greece	GRC	Europe & Central Asia	High income
Greenland	GRL	Europe & Central Asia	High income
Guam	GUM	East Asia & Pacific	High income
Hong Kong SAR, China	HKG	East Asia & Pacific	High income
Hungary	HUN	Europe & Central Asia	High income
Iceland	ISL	Europe & Central Asia	High income
Ireland	IRL	Europe & Central Asia	High income
Isle of Man	IMN	Europe & Central Asia	High income
Israel	ISR	Middle East & North Africa	High income
Italy	ITA	Europe & Central Asia	High income
Japan	JPN	East Asia & Pacific	High income
Korea, Rep.	KOR	East Asia & Pacific	High income
Kuwait	KWT	Middle East & North Africa	High income
Latvia	LVA	Europe & Central Asia	High income
Liechtenstein	LIE	Europe & Central Asia	High income
Lithuania	LTU	Europe & Central Asia	High income
Luxembourg	LUX	Europe & Central Asia	High income
Macao SAR, China	MAC	East Asia & Pacific	High income
Malta	MLT	Middle East & North Africa	High income
Monaco	MCO	Europe & Central Asia	High income
Netherlands	NLD	Europe & Central Asia	High income
New Caledonia	NCL	East Asia & Pacific	High income
New Zealand	NZL	East Asia & Pacific	High income
Northern Mariana Islands	MNP	East Asia & Pacific	High income
Norway	NOR	Europe & Central Asia	High income
Oman	OMN	Middle East & North Africa	High income
Palau	PLW	East Asia & Pacific	High income
Panama	PAN	Latin America & Caribbean	High income
Poland	POL	Europe & Central Asia	High income
Portugal	PRT	Europe & Central Asia	High income
Puerto Rico	PRI	Latin America & Caribbean	High income
Qatar	QAT	Middle East & North Africa	High income
San Marino	SMR	Europe & Central Asia	High income
Saudi Arabia	SAU	Middle East & North Africa	High income
Seychelles	SYC	Sub-Saharan Africa	High income
Singapore	SGP	East Asia & Pacific	High income
Sint Maarten (Dutch part)	SXM	Latin America & Caribbean	High income
Slovak Republic	SVK	Europe & Central Asia	High income
Slovenia	SVN	Europe & Central Asia	High income
Spain	ESP	Europe & Central Asia	High income
St. Kitts and Nevis	KNA	Latin America & Caribbean	High income
St. Martin (French part)	MAF	Latin America & Caribbean	High income
Sweden	SWE	Europe & Central Asia	High income
Switzerland	CHE	Europe & Central Asia	High income
Taiwan, China	TWN	East Asia & Pacific	High income
Trinidad and Tobago	TTO	Latin America & Caribbean	High income
Turks and Caicos Islands	TCA	Latin America & Caribbean	High income

United Arab Emirates	ARE	Middle East & North Africa	High income
United Kingdom	GBR	Europe & Central Asia	High income
United States	USA	North America	High income
Uruguay	URY	Latin America & Caribbean	High income
Virgin Islands (U.S.)	VIR	Latin America & Caribbean	High income

Emerging Market Company Review Policy

Scope

This section sets forth TRS' policy for evaluating the publicly traded equity holdings of portfolio companies domiciled in emerging market countries. This policy will guide the Board's review of any holdings which could potentially expose TRS to significant financial and/or reputational risks associated with company practices that are inconsistent with the Board's investment beliefs as characterized by the United Nations Global Compact. In addition, companies which are associated with material controversies which raise significant financial and/or reputational risk will also be reviewed in this process.

As a result of this review, the Board may choose to proceed with regard to an identified company in a manner as prescribed by the Divestment and Exclusion Policy or to take other appropriate action intended to address the above-described risks.

Review Process

The Board will periodically review information provided by third-party vendors which assess and track security issuers on a variety of environmental, social, and governance-related risk metrics.

This review will identify companies which are associated with the following:

- Companies in material violation of the United Nations Global Compact
- Companies with material public controversies which may incur reputational risks

Input will also be gathered from the Board's active investment managers who have invested in these securities to provide additional perspective to the Board in their review process. The third-party vendors will be available to discuss their findings with the Board, as well as market trends in monitoring environmental, social, and governance risks.

Staff and an independent investment consultant will assist the Board in its analysis of the information provided by the third-party vendors and investment managers. It is expected that threshold criteria will be developed in order to facilitate the Board's consideration of which, if any, of the identified companies should be dealt with as prescribed in the Board's Divestment and Exclusion Policy, or through other appropriate action such as reviewing environmental, social, and governance vetting practices at active managers that invested in such companies.

Policy Review

As a new initiative, this policy will be reviewed no later than 18 months from adoption.

OFFICE OF NEW YORK CITY COMPTROLLER SCOTT M. STRINGER
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TO: Trustees of the Teachers' Retirement System of the City of New York ("TRS")
FROM: BAM Investment Committee
DATE: June 7, 2021
RE: Establishment of Asset Allocation, Placeholders and Rebalancing Ranges (Revised)

I. OVERVIEW

This memo reflects changes to TRS' core fixed income allocation targets approved by the TRS Board on May 6, 2021.

ASSET ALLOCATION TABLE:

See Appendix A.

REBALANCING RANGES: Previous (adopted in 2011 and 2016), New (2020), vs. Revised (2021)

See Appendix B.

PLACEHOLDERS: Previous (2016) vs. New

See Appendix C.

DISCLOSURES

Information presented is current as of the date of this posting only. Past performance does not guarantee the future performance of any manager or strategy. The historical information provided herein may have been adversely or favorably impacted by events and economic conditions that will not prevail in the future. Therefore, these results are not indicative of the future performance of any strategy, index, fund, manager or group of managers.

APPENDIX A: ASSET ALLOCATION TABLE	TRS	TRS
Asset Class	**Previous Target**	**New Approved Target (as of 02/26/20)**
U.S. Equity	29.00%	25.00%
Non-U.S. Developed Equity	12.00%	10.00%
Emerging Market Equity	9.00%	9.50%
Total Public Equity	**50.00%**	**44.5%**
Real Estate - Core	5.00%	3.00%
Real Estate - Opportunistic	4.00%	4.00%
Private Equity	6.00%	7.00%
Infrastructure	2.00%	4.00%
Opportunistic Fixed Income	5.00%	5.00%
Total Private Markets	**22.00%**	**23.0%**
Core Fixed Income	17.00%	25.0%
High Yield	5.00%	4.50%
Bank Loans	2.00%	0.00%
TIPS	4.00%	3.00%
Cash/Financing	0.00%	0.00%
Total Fixed Income	**28.00%**	**32.5%**
Total Portfolio	**100.0%**	**100.0%**

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APPENDIX B: REBALANCING RANGES

	TRS	TRS	TRS	TRS	TRS	TRS	TRS	TRS
	2012		2016		NEW (2020)		REVISED (2021)	
	Strategic Allocation	**Rebalancing Range +/-**	Strategic Allocation	**Rebalancing Range +/-**	Strategic Allocation	**Rebalancing Range +/-**	Strategic Allocation	**Rebalancing Range +/-**
PUBLIC EQUITY								
U.S.	31.00%	**6.00%**	29.00%	**5.00%**	25.00%	**5.00%**	25.00%	**5.00%**
Developed Ex-U.S. Equity	9.00%	**4.00%**	12.00%	**4.00%**	10.00%	**4.00%**	10.00%	**4.00%**
Emerging Markets	8.00%	**4.00%**	9.00%	**3.00%**	9.50%	**3.00%**	9.50%	**3.00%**
REITS	3.00%	**1.50%**	0.00%	**0.00%**	0.00%	**0.00%**	0.00%	**0.00%**
PUBLIC FIXED INCOME								
Core +5 Securities(1)	18.00%	**4.00%**	0.00%	**0.00%**	0.00%	**0.00%**	0.00%	**0.00%**
U.S. Treasuries Securities(2)	0.00%	**0.00%**	10.00%	**5.00%**	14.00%	**7.00%**	14.00%(3)	**7.00%**
Core Mortgage-Backed Securities	0.00%	**0.00%**	1.50%	**1.00%**	3.50%	**2.50%**	3.50%	**2.50%**
ETI	0.00%	**0.00%**	2.00%	**1.00%**	2.00%	**1.00%**	2.00%	**1.00%**
Credit - Investment Grade Corporates	0.00%	**0.00%**	3.50%	**1.00%**	5.50%	**2.50%**	5.50%	**2.50%**
Corporate - High Yield Securities	4.00%	**2.00%**	5.00%	**3.00%**	4.50%	**3.00%**	4.50%	**3.00%**
Corporate - Bank Loans	0.00%	**0.00%**	2.00%	**1.00%**	0.00%	**0.00%**	0.00%	**0.00%**
Treasury Inflation Protected Securities	4.00%	**2.00%**	4.00%	**1.00%**	3.00%	**1.00%**	3.00%	**1.00%**
Convertible Securities	3.00%	**1.50%**	0.00%	**0.00%**	0.00%	**0.00%**	0.00%	**0.00%**
Emerging Market Debt	3.00%	**1.50%**	0.00%	**0.00%**	0.00%	**0.00%**	0.00%	**0.00%**
Cash	0.00%	**0-5%**	0.00%	**0.00%**	0.00%	**0.00%**	0.00%	**0.00%**
ALTERNATIVE ASSETS								
Private Equity	6.00%	**2.00%**	6.00%	**3.00%**	7.00%	**3.00%**	7.00%	**3.00%**
Private Real Estate - Core	6.00%	**2.00%**	5.00%	**2.00%**	3.00%	**2.00%**	3.00%	**2.00%**
Private Real Estate - Opportunistic	0.00%	**0.00%**	4.00%	**2.00%**	4.00%	**2.00%**	4.00%	**2.00%**
Private Infrastructure	0.00%	**0.00%**	2.00%	**1.00%**	4.00%	**2.00%**	4.00%	**2.00%**
Opportunistic Fixed Income	5.00%	**2.00%**	5.00%	**2.00%**	5.00%	**2.00%**	5.00%	**2.00%**
Hedge Funds	0.00%	**0.00%**	0.00%	**0.00%**	0.00%	**0.00%**	0.00%	**0.00%**

1) Under the old asset allocation, Core +5 was comprised of Governments/US Treasuries, Mortgages, And Investment Grade Corporates

2) The rebalancing range is applicable to the total U.S. Treasuries strategic allocation.

3) TRS' Revised 2021 Asset Allocation with reference to the US Treasury Allocation is comprised of:

- 1-3yr Treasuries (2.5%)
- 1-10yr Treasuries (8.5%)
- 10+yr Treasuries (3%)

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APPENDIX C: PLACEHOLDERS

PREVIOUS (2016) PLACEHOLDERS

TRS

Real Estate Core	40% U.S. Equity* 12% U.S. Treasuries 24% Investment Grade Corporates 24% Mortgage-Backed Securities
Real Estate Opportunistic	60% U.S. Equity* 8% U.S. Treasuries 16% Investment Grade Corporates 16% Mortgage-Backed Securities
Infrastructure	27% U.S. Equity 18% Developed ex-U.S. Equity 5% Emerging Markets Equity 5% U.S. Treasuries 10% Investment Grade Corporates 10% Mortgage-Backed Securities 25% Treasury Inflation-Protected Securities
Private Equity	100% U.S. Equity
Hedge Funds	N/A
Opportunistic Fixed Income	10% U.S. Treasuries 20% Investment Grade Corporates 20% Mortgage-Backed Securities 50% High Yield Securities**

NEW (2020) PLACEHOLDERS

TRS

Real Estate Core	40% Russell 3000 Index 36% U.S. Treasuries 12% Investment Grade Corporates 12% Mortgage-Backed Securities
Real Estate Opportunistic	24% U.S. Treasuries 8% Investment Grade Corporates 8% Mortgage-Backed Securities 60% Russell 3000 Index
Infrastructure	27% U.S. Equity 18% Developed ex-U.S. Equity 5% Emerging Markets Equity 15% U.S. Treasuries 5% Investment Grade Corporates 5% Mortgage-Backed Securities 25% Treasury Inflation-Protected Securities
Private Equity	100% U.S. Equity
Hedge Funds	N/A
Opportunistic Fixed Income	30% U.S. Treasuries 10% Investment Grade Corporates 10% Mortgage-Backed Securities 50% High Yield Securities

* Existing REITS holdings to be used as a temporary placeholder for U.S. Equity

** Existing Convertibles holdings to be used as a temporary placeholder for High Yield Securities

CURRENCY HEDGING POLICY

- Generally, managers of non-USD exposures will hedge currency risk for fixed income assets, but not for equity assets. However, exceptions may be granted to external fund managers by BAM with full disclosure to the TRS Trustees.

APPROVED ASSET CLASSES

A. GROWTH

A majority of the portfolio is placed in assets that seek to provide growth of capital to the portfolio. These asset classes, anchored by public equity, have above average risk of principal and are expected to offer a return premium for this risk which will fund growth in the real value of the portfolio over time.

1. PUBLIC EQUITY

a. Definition

Public Equity is defined as common and preferred stock of publicly traded companies in the various markets around the globe. (Shares may also be owned in the form of depository receipts and some Rule 144A related securities may be allowed.)

b. Philosophy and Strategy

Public Equity is the largest portion of the portfolio focused on growth of capital. Public Equity performance is critical to meeting overall portfolio goals.

- Active vs. Passive Management:

  Given the significant size of TRS' assets and the challenges of active management, passive management is the default option for all Public Equity Markets because of its low fees and superior odds of success for providing market rates of return and risk.

  To deviate from the passive default, TRS must be convinced of the future efficacy of the active manager, considering both returns and risks.

c. Objectives

Below are the Public Equity asset classes and their performance benchmarks:

Asset Class	Performance Benchmark
U.S. Equity	Russell 3000
Developed/World Equity Markets ex-U.S.	MSCI World ex USA IMI
Emerging Markets Equity	MSCI Emerging Markets (TRS Custom)

The general performance goal for each public equity asset class is to meet or exceed their performance benchmark without taking undue risk and while fulfilling all fiduciary duties. To the extent that a portion of an asset class uses active management, we would expect those active composites to outperform the relevant benchmark index and be median or better compared to manager peer universes over a market cycle.

d. Sector or regional allocation

The Public Equity allocation is divided into the three major sub-asset classes. They are U.S. Equity, Developed/World Equity Markets ex-U.S. Equity and Emerging Markets Equity.

- Style/Capitalization and Sector or Regional Allocations:

The goal of the three sub-asset classes within Public Equity is to be relatively style and capitalization neutral to the various benchmarks, with some room for rebalancing as per the Public Equity Annual Plan. Based on manager benchmarks, the portfolio is designed to have allocations that are neutral to both benchmark sectors and regions. However, to the extent active management is used, the active managers' stock selection may result in overall portfolio tilts relative to benchmark weights. These deviations are monitored by the BAM Risk group and the Public Equity team.

e. Other asset class specific characteristics or comments

Please note that the RSSL and Basket Clause limitations hinder the ability to invest in non-U.S. securities in the same proportion as their weights in the MSCI All Country World Index IMI, typically resulting in an underweight to non-U.S. markets.

2. HIGH YIELD

a. Definition

The High Yield program provides exposure to actively-managed, below investment grade securities with the following typical characteristics: fixed-rate, unsecured, call-protected and bullet payment at maturity.

b. Philosophy and Strategy

The High Yield program is designed to take advantage of opportunities in lower quality, higher yielding debt instruments, predominantly subordinated, fixed-rate securities rated "*non-investment grade*" by Moody's, Standard & Poor's and Fitch. The program employs a variety of external investment managers with active management approaches. The overall program benchmark is the Bloomberg Barclays US High Yield 2% Issuer Capped Index, which includes US and Canadian corporate securities rated between BB+ and CCC, with a maximum allocation of 2% to any one issuer. As appropriate, depending on the manager's investment approach, an individual manager's benchmark may be different from the program benchmark.

c. Objectives

The objective of the High Yield program is total return. The program is expected to outperform the Bloomberg Barclays US High Yield 2% Issuer Capped Index over a full market cycle by 100 basis points (net of fees). Individual manager performance expectations vary, as each employs a distinct approach. Each manager will be evaluated quarterly, annually and over a full market cycle (typically between three and five years, but may be longer).

Managers operate subject to a set of detailed investment guidelines developed by the Office of the Comptroller, Bureau of Asset Management, in accordance with the Board's mandate that outlines the managers' individual investment philosophies and approaches, representative portfolio characteristics, permissible and restricted securities, benchmarks and performance objectives.

Subject to guideline limitations (which may vary by manager due to stylistic differences), value may be added through industry/sector allocation, rating allocation and security selection (including certain securities/issuers not specifically included in the benchmark, such as bank loans, convertibles, investment-grade and non-rated securities; cash equivalents may be used on a limited basis). Duration decisions are not expected to be a notable contributor to performance.

Guideline limitations include, but are not limited to, the direct purchase of defaulted securities and securities of bankrupt companies, and the direct purchase of equity securities; however, common stock may appear in certain High Yield portfolios as a result of debt restructurings.

Managers are monitored through the Watch List process.

d. Sector or regional allocation

High Yield is expected to be a predominantly U.S. exposure.

e. Other asset class specific characteristics or comments

Liquidity and Cash Management:
Although the High Yield program is generally not a source of liquidity for the Fund, benefits may be paid out of the portfolio as required. Typically, cash equivalents are integral to managing the interest rate risk in fixed income portfolios. However, for high yield, interest rate risk is less of a consideration than for investment-grade bond portfolios. As the high yield asset class is dependent on new security issuance and may be characterized by extended periods of relative illiquidity (as compared to the U.S. equity market), high yield managers may be given more latitude to hold cash. As necessary, the Office of the Comptroller, Bureau of Asset Management, may direct managers to sell securities to fund benefit payments and certain other eligible expenses, or as otherwise appropriate for rebalancing purposes.

3. PRIVATE EQUITY

a. Definition

The Private Equity program attempts to provide diversified private markets equity exposure in a cost-effective manner through direct and limited partnerships; including commitments to private equity partnerships, fund of funds partnerships and separate accounts (including, from time-to-time, funds of funds or managers with discretionary mandates), investing in any security throughout the capital structure. In addition, the program is authorized to invest in co-investments and secondary opportunities (including but not limited to purchase of LP interests, co-investments or other pooled investment vehicles), and additional structures meant to capture private equity exposure and returns.

b. Philosophy and Strategy

The Private Equity allocation is focused on contributing long term growth to the total portfolio by investing in illiquid assets for higher expected returns, and obtaining access to a wider universe of investment opportunities vis-à-vis public equities.

c. Objectives

The Private Equity Program will seek to achieve a premium of 300 bps over the Russell 3000 index (net of fees).

d. Sector or regional allocation

The Program will manage investments using a disciplined management strategy with the goal to be diversified prudently across vintage years, strategies, geographies, and managers.

e. Other asset class specific characteristics or comments

The Program will include Emerging Manager investments, which include MWBE managers. Direct investment are permitted only with prior Board authorization.

The maximum commitment to a partnership is limited to the lesser of 15% of a fund-raise, or $300 million. The 15% limit does not apply to a fund of funds manager or a separate account.

The Program's maximum total exposure to a general partner and its affiliates is limited to 20% of the total exposure of the Private Equity program.

4. OPPORTUNISTIC REAL ESTATE

a. Definition

The Opportunistic Real Estate ("ORE") program attempts to provide diversified private markets real estate exposure in a cost-effective manner through commitments to opportunistic real estate funds (open-ended and closed-ended), investment clubs, separate accounts, co-investments, joint ventures and direct investments. These investments may be in any type of security throughout the capital structure (including equity, preferred equity and debt).

b. Philosophy and Strategy

The Opportunistic Real Estate allocation is focused on contributing long term growth to the total portfolio and taking advantage of the ability to accept illiquidity in exchange for an illiquidity premium. Opportunistic Real Estate offers the opportunity to achieve superior risk-adjusted returns by accepting and mitigating different types of risks (such as development, redevelopment , repositioning, etc.) or accepting greater capital market risk (for example, by acquiring assets with complex capital structures that may be difficult to unwind) or seeking areas of greater market inefficiency.

c. Objectives

The ORE program will seek to achieve a premium of 200 bps over the NCREIF ODCE index (net of fees).

d. Sector or regional allocation

The Opportunistic Real Estate program will manage investments using a disciplined management strategy with the goal to be diversified prudently across strategies, property types, vehicles, managers and geography. The Real Estate Program is intended to be diversified globally, with a disproportionate weighting toward the United States due to (i) the absence of currency risk and associated costs, (ii) the absence of withholding taxes, (iii) high transparency, (iv) a well-developed system of property rights and a well-developed legal system and (v) a deep and liquid market. The Real Estate Program will target exposure to investments outside the United States, subject to Attachment D regarding Permissible Markets, no greater than 25% of the total market value.
allocation.

e. Other asset class specific characteristics or comments

Guideline limitations include, but are not limited to, the following:

- Leverage will be targeted not to exceed 75% loan to value for all investments in the ORE portfolio.
- Managers will be required to comply with the Fund's policy regarding the retention of responsible contractors (reference Responsible Contractor Policy).
- The maximum commitment to a single fund by is limited to no more than 15% of a single fund-raise unless either (i) the System receives adequate benefits to offset the associated risk (such as preferred fees and/or enhanced representation as a non-control investor) or (ii) it is determined that the Manager's platform is viable and effective even without the System's commitment.
- A single Manager is limited to managing no more than 20% of the total Real Estate Program allocation.

5. OPPORTUNISTIC FIXED INCOME

a. Definition

The Opportunistic Fixed Income (OFI) program provides exposure to below investment grade public and private, performing and non-performing credit-oriented strategies. Although the program invests in commingled funds, typical OFI mandates are structured as separate accounts that allow managers to draw capital to take advantage of market dislocations as they arise and to return capital when opportunities cease to exist. In return for providing investment managers with long-term liquidity and flexibility through OFI partnerships, OTC will attempt to obtain improved financial and legal terms.

b. Philosophy and Strategy

The OFI program is designed to provide attractive risk-adjusted returns through alternative (non-traditional), active, credit investment strategies. OFI managers will invest in a diversified opportunity set of non-traditional segments of the fixed income market, both public and private. Eligible investments include, but are not limited to, private debt, stressed/distressed debt, high yield debt, bank loans, asset-backed securities, agency and non-agency mortgage-backed securities, mortgage derivatives (IOs/POs), structured products (debt and equity tranches), equity securities (acquired in connection with eligible debt), preferred securities (with downside or control protections), investment grade bonds, convertible bonds, 144A securities, dollar-denominated foreign bonds, bonds denominated in a foreign currency and emerging market debt (hard and local currency). The exposure will evolve over time, and specific limitations will be placed on each manager, depending on the manager's expertise in a given strategy.

c. Objectives

The OFI program aims to enhance the risk-adjusted return of TRS pension assets through public and private non-traditional, active, credit investment strategies. The OFI program is expected to outperform the customized blended benchmark, which consists of 50% Credit Suisse Leveraged Loan Index + 50% JP Morgan Global High Yield Index, by 300 basis points over a full market cycle. The OFI Program will not pursue currency-related trading strategies. Generally, managers will be required to hedge non-USD exposures to limit currency risk. However, some strategies may be denominated in specific currencies, such as EUR, and will not be hedged against USD for diversification reasons.

OFI program investment characteristics may include illiquid individual securities and investment vehicles (securities with no active secondary market and/or limited partnership vehicles or commingled fund structures with limited opportunities for withdrawal), low credit quality, sector concentration, leverage (limited to one turn on average over the term of the mandate; may be applied only on first lien / senior secured), complex securities that may be difficult to price and evaluate, and shorter track records (implicit in opportunistic investing is the willingness to invest with newer strategies and firms).

d. Sector or regional allocation

The OFI program will manage investments using a disciplined management strategy with the goal to be diversified prudently across strategies, property types, vehicles, managers and geography.

e. Other asset class specific characteristics or comments

The OFI program is not expected to provide a source of liquidity for TRS, and accordingly, investments may be illiquid. OFI program investments will be categorized as basket securities.

The program will include emerging manager investments, which include MWBE managers.

The maximum commitment to a partnership is limited to _% of a fund raising. The _% limited does not apply to a fund-of-funds manager or to a separate account.

The maximum total exposure to a general partner and its affiliates is limited to _% of the total exposure of the OFI program.

6. CONVERTIBLE BONDS

a. Definition

Convertible bonds have the characteristics of two types of securities: a bond and an equity option. They combine a corporate bond paying a fixed interest rate with an equity warrant (a long term equity call option) on the issuer's common stock.

b. Philosophy and Strategy

The Convertible Bond Program employs a variety of external managers with active management approaches. The convertible bond market can be relatively inefficient and therefore provides opportunities for total return oriented investors.

c. Objectives

The benchmark for the Convertible Program is the BOAML All Convertible ex M AI Index. This index is not a perfect fit for the Convertible Program but it is the most general and the broadest index. Convertible managers will be measured against their own index and the sum of the average will be measured against the BOAML All convertible ex M AI Index
Convertible bonds have a higher expected return and higher risk than conventional corporate bonds with less volatility than equity returns.

d. Sector or regional allocation

Corporate sectors make up the standard convertible bond program. Region is global, but mostly in the US.

e. Other asset class specific characteristics or comments

Please note that the RSSL and Basket clause limitations may hinder the ability to invest in non-US securities. Exposure limits coincide with overall limits for public securities. Allocations to the managers usually do not exceed 50% of the product AUM.

B. DEFLATION PROTECTION

A portion of the portfolio will be placed in assets that have below-average risk of principal, and which are designed to maintain their value in periods of falling prices (deflation).

PUBLIC FIXED INCOME

a. Definition

Most of the securities of the Public Fixed Income Program are registered in the US 144a (Global Corporates and global sovereigns) markets and rated above BBB-.

b. Philosophy and Strategy

The Public Fixed Income allocation is primarily a means of dampening the total volatility of the pension portfolio and to provide protection from periods of unexpected deflation.

- Active vs Passive Management

  There are inefficiencies in the public fixed income markets. Managers employ active management to capture the inefficiencies in the market. There are some sub-asset classes that are passive where inefficiencies are less.

c. Objectives

Below are the Public Fixed Income sub-asset classes with their relative benchmarks and if they are active or passive.

Sub-Asset Class	Performance Benchmark	Active vs Passive or Both
Investment Grade Corporates	Bloomberg Barclays US Corporate Index	Active
Mortgages	Bloomberg Barclays US MBS Index	Active
Governments	FTSE US BIG Treasury Index 10+	Both

The general performance goal for each Public Fixed Income sub asset class is to meet or exceed their performance benchmark without taking undue risk and while fulfilling all fiduciary duties. To the extent that a sub asset class uses active management, we would expect those active composites to outperform the relevant benchmark index and to be median or better compared to manger peer universes over a market cycle.

The Public Fixed Income Program is a driver of return and diversification at the total fund level. While the explicit objective is total return, given the fundamental nature of fixed income – relatively predictable income and principal payouts, it also extends the duration of the total fund to better match liabilities, and may be used to provide cash for benefit payments.

d. Sector or regional allocation

Sectors include your standard corporate sectors, mortgage sectors and sovereign sectors. Region is global, but mostly in the US.

e. Other asset class specific characteristics or comments

Please note that the RSSL and Basket clause limitations may hinder the ability to invest in non-US securities. Exposure limits coincide with overall limits for public securities. Allocations to the managers usually do not exceed 50% of the product AUM unless it is passive.

C. INFLATION PROTECTION

A portion of the portfolio will be placed in assets that have below average risk of principal and which are designed to maintain their value in periods of rising prices (inflation).

1. BANK LOANS

a. Definition

The Bank Loan (also known as Leveraged Loans) program provides exposure to actively-managed, below investment grade, first lien loans with the following typical characteristics: floating-rate, first lien/secured, redeemable without penalty, quarterly amortization.

b. Philosophy and Strategy

The Bank Loan program is designed to take advantage of opportunities in lower quality, higher yielding, floating-rate bank loan instruments, rated "*non-investment grade*" by Moody's, Standard & Poor's and Fitch. The Bank Loan program employs a variety of external investment managers with active management approaches. As appropriate, an individual manager's benchmark may be different from the program benchmark.

c. Objectives

The objective of the Bank Loan program is total return. The program is expected to outperform the Credit Suisse Leveraged Loan Index, which includes mostly BB, B, CCC and non-rated loans, over a full market cycle by 100 basis points (net of fees). The index includes only issues denominated in US dollars. Individual manager performance expectations vary, as each employs a distinct approach. Each manager will be evaluated quarterly, annually and over a full market cycle (typically between three and five years, but may be longer).

Managers operate subject to a set of detailed investment guidelines developed by OTC, Bureau of Asset Management, in accordance with the Board's mandate that outlines the managers' individual investment philosophies and approaches, representative portfolio characteristics, permissible and restricted securities, benchmarks and performance objectives.

Subject to guideline limitations (which may vary by manager due to stylistic differences), value may be added through industry / sector allocation, rating allocation and security selection (including certain securities/issuers not specifically included in the benchmark, such as high yield and investment grade securities); cash equivalents may be used on a limited basis.

Duration decisions are not expected to be a notable contributor to performance.

Guideline limitations include, but are not limited to, the direct purchase of defaulted securities and securities of bankrupt companies, and the direct purchase of equity securities; however, common stock may appear in certain Bank Loan portfolios as a result of debt restructurings.

Managers are monitored through the Watch List process.

d. Sector or regional allocation

Bank Loans are expected to be a predominantly U.S. exposure.

e. Other asset class specific characteristics or comments

Liquidity and Cash Management
Although the Bank Loan program is generally not a source of liquidity for the Fund, benefits may be paid out of the portfolio as required. Typically, cash equivalents are integral to managing the interest rate risk in fixed income portfolios. However, for bank loans, interest rate risk is less of a consideration than for investment-grade bond portfolios. As the bank loan asset class is dependent on new security issuance and may be characterized by extended periods of relative illiquidity (compared to the U.S. equity market), bank loan managers may be given more latitude to hold cash. As necessary, the Office of the Comptroller, Bureau of Asset Management, may direct managers to sell securities to fund benefit payments and certain other eligible System expenses, or as otherwise appropriate for rebalancing purposes.

2. TREASURY INFLATION PROTECTED SECURITIES (TIPS)

a. Definition
US Treasury Inflation Protected Securities (TIPS) will be the pre-dominant holding, and most other securities will also be denominated in USD.

b. Philosophy and Strategy
The TIPS allocation is primarily to hedge inflation and to provide diversification

- Active vs Passive Management

  There are inefficiencies in the TIPS markets. Managers employ active management to capture the inefficiencies in the market. There are less inefficiencies in the TIPS markets which leads the program to be both active and passive

c. Objectives
The benchmark for the program is the Bloomberg Barclays Global Inflation Linked: US TIPS Index.
The general performance goal is to meet or exceed their performance benchmark without taking undue risk and while fulfilling all fiduciary duties.

d. Sector or regional allocation
Sectors include sovereign sectors. Region is global, but mostly in the US.

e. Other asset class specific characteristics or comments
Please note that the RSSL and Basket clause limitations may hinder the ability to invest in non-US securities. Exposure limits coincide with overall limits for public securities. Allocations to the managers usually do not exceed 50% of the product AUM unless it is passive.

3. CORE REAL ESTATE

a. Definition

The Core Real Estate (“CRE”) program attempts to provide diversified real estate exposure in a cost-effective manner through commitments to core real estate funds (open-ended and closed-ended), investment clubs, separate accounts, co-investments, joint ventures and direct investments. These investments may be in any type of security throughout the capital structure (including equity, preferred equity and debt).

b. Philosophy and Strategy

The inclusion of Core Real Estate in the TRS investment portfolio will allow for global investments in an established asset class that has been shown to:

- Provide attractive risk-adjusted returns over full market cycles on a stand-alone basis.
- Further improve risk-adjusted returns in a broader portfolio by dampening volatility and serving as a hedge against inflation.

Core Real Estate investments are of comparatively low risk. They consist of investments in existing income-producing and substantially leased properties in traditional property types (office, industrial, retail and for-rent multifamily) and tend to use moderate leverage (generally below 40%).

Core-Plus Real Estate investments offer the opportunity to enhance returns by (i) alleviating an identifiable deficiency (in an asset's capital structure, in an asset's physical structure, in an asset's operation, etc.) or (ii) benefitting from market inefficiency. These investments may use slightly more leverage than Core Real Estate investments to improve returns.

c. Objectives

The CRE portion of the Program is expected to meet or exceed the NCREIF ODCE index (net of fees).

d. Sector or regional allocation

The Program will manage investments using a disciplined management strategy with the goal to be diversified prudently across strategies, property types, vehicles, Managers and geography. The Real Estate Program is intended to be diversified globally, with a disproportionate weighting toward the United States due to (i) the absence of currency risk and associated costs, (ii) the absence of withholding taxes, (iii) high transparency, (iv) a well-developed system of property rights and a well-developed legal system and (v) a deep and liquid market. The Real Estate Program will target exposure to investments outside the United States, subject to Attachment D regarding Permissible Markets, no greater than 25% of the total market value.

e. Other asset class specific characteristics or comments

Guideline limitations include, but are not limited to, the following:

- Leverage will be targeted not to exceed 50% loan to value for all investments in the Core/ Core-Plus portfolio.
- Managers will be required to comply with the Fund's policy regarding the retention of responsible contractors (reference Responsible Contractor Policy).
- The maximum commitment to a single fund by is limited to no more than 20% of a single fund-raise unless either (i) the System receives adequate benefits to offset the associated risk (such as preferred fees and/or enhanced representation as a non-control investor) or (ii) it is determined that the Manager's platform is viable and effective even without the System's commitment.
- A single Manager is limited to managing no more than 20% of the total Real Estate Program allocation.

4. REITS

a. Definition

The Real Estate Equity Securities (REES) program is dedicated to equity securities of real estate investment trusts and real estate operating companies, defined as:

- Real Estate Investment Trust (REIT) **-** A corporation or trust formed for the ownership of real estate which is owned in share units by investors. REITs must be publicly traded and registered with the appropriate government agency to be eligible for purchase in the portfolio.

- Real Estate Operating Company (REOC) **–** An entity having at least fifty percent of its assets invested in real estate, and engaged in the ownership and operation of real estate in the ordinary course of its business.

b. Philosophy and Strategy

Investments are permitted in publicly traded real estate equity securities through broadly diversified actively managed accounts. Managers will be retained to manage such accounts within agreed upon guidelines.

The active managers would adhere to a well-structured investment process, and invest in publicly traded real estate equity securities that have a compelling valuation relative to their underlying real estate value and net asset value growth prospects.

The portfolio of REITS and REOCS would provide both income and capital appreciation in the long-term. Returns for both REITs and REOCs tend to be more stable over market cycles. This is attributable to the income component which typically represents a larger proportion of the total return yet with more volatility than private real estate.

c. Objectives

Below are the performance benchmarks for domestic and global public real estate securities managers.

Manager's Target Portfolio Mix	Performance Benchmark
Domestic	Dow Jones U.S. Select Real Estate Securities Index
Global	FTSE EPRA/NAREIT Developed Real Estate Index

The general performance goal for each active manager is to outperform the relevant benchmark index (net of fees) over a market cycle without taking undue risk while fulfilling all fiduciary duties.

d. Sector or regional allocation

The REES program will manage investments using a disciplined management strategy with the goal to be diversified prudently across strategies, property types, managers, and geography The active managers' securities selection may result in overall portfolio tilts relative to benchmark weights. These deviations are monitored by the BAM Risk group in conjunction with the Public Equity and Real Estate teams.

e. Other asset class specific characteristics or comments

Investments in authorized securities are subject to the requirements and limitations set forth in each bespoke account. Please note that the RSSL and Basket Clause limitations could hinder the ability to invest in non-U.S. securities, which may result in no or limited exposure to non-U.S. markets.

5. INFRASTRUCTURE

a. Definition

The Infrastructure program will invest in infrastructure funds (open-ended and close-ended), separate accounts, co-investments, joint ventures and direct investments. These investments may be in any type of security throughout the capital structure. Both Core and Non-Core Infrastructure Investments, as explained more fully below, will be pursued.

b. Philosophy and Strategy

Core Infrastructure Investments include the lower risk strategies that acquire assets that operate in an environment of limited competition as a result of natural monopolies, government regulation or concessions, and generate a reliable income stream. These types of assets are part of core and value-added infrastructure strategies. These investments are in quality assets that benefit from high barriers to entry and inelastic demand for the product or service being provided. These investments are expected to comprise a majority of the infrastructure portfolio, or 60-100%.

Non-Core Infrastructure Investments seek to capture superior risk-adjusted returns caused by market imbalances. These types of investments are part of opportunistic strategies and will have higher risk driven by the following factors: competition, growth, construction, development, technology, and commodity pricing. Correspondingly, these investments will have higher expected returns than the Core Infrastructure Investments. The Infrastructure Program will target a range of 0-40% for these types of investments.

Portfolio construction will be driven by (i) broad allocation ranges to Core and Non-Core Infrastructure Investments and (ii) market opportunities and conditions. Core Infrastructure Investments will represent a majority of the Infrastructure Program. The remaining allocation will be available for Non-Core Infrastructure investment opportunities that emerge over the market cycle.

Actual percentages may differ substantially from these targets during the initial years of the program.

c. Objectives

The performance benchmark for the Infrastructure Portfolio is to meet or exceed the Consumer Price Index (“CPI”) plus 4% (net of fees) over a rolling 5-year period.

d. Sector or regional allocation

The Infrastructure program will seek to invest in opportunities in a variety of infrastructure sectors, including but not limited to, transportation, energy, power, utilities, water, wastewater, communications and social infrastructure.

e. Other asset class specific characteristics or comments

Guideline limitations include, but are not limited to, the following:

- Infrastructure partnerships generally do not hedge currency risk and the infrastructure program will not generally require currency hedges
- The average leverage of all investments in the infrastructure program will be no higher than 65%.

- Managers will be required to comply with the Fund's policy regarding the retention of responsible contractors (reference Responsible Contractor Policy).
- Exposure limit at manager level: a single General Partner is limited to managing no more than 20% of the total Infrastructure Program allocation when fully invested.
- Exposure limit within the fund: the maximum commitment to a single investment is limited to no more than 15% of a single fund-raise. This limit will not apply to a separate account.

Teachers' Retirement System of the City of New York

Economically Targeted Investment Policy

Proposed: September 1, 2005
Adopted: September 1, 2005
Revised: November 6, 2008
Revised: (Dated upon approval)

Purpose of Economically Targeted Investments Policy

The purpose of this Policy is to establish the parameters by which the Teachers' Retirement System of the City of New York ("TRS," or the "System") may invest through its Economically Targeted Investments ("ETI") Program (the "Program"). ETIs are investments in a variety of asset classes that generate rates of return commensurate with the overall risk, liquidity, security and structure of comparable non-targeted investments while providing collateral economic benefits (benefits that enhance quality of life and promote economic development and activity) to the targeted areas. ETIs address capital gaps, thereby promoting the quality of life, growth and economic development in the targeted areas. For the purpose of this Policy, "Targeted Areas" are defined as primarily the five boroughs of New York City and secondarily the six surrounding New York Counties: Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester.

This Policy, as of its adoption date, supersedes the Economically Targeted Investment Policy as adopted on November 6, 2008.

Objectives of Economically Targeted Investments

The System has mandated investments in Economically Targeted Investments:

- to achieve competitive returns commensurate with the risk, liquidity and structure of the investment;
- to provide collateral economic benefits for the Targeted Areas;
- to address market inefficiencies in the Targeted Areas, and in particular capital gaps that affect the low-, moderate- and middle-income neighborhoods and populations of the Targeted Areas;
- to promote economic development and attract additional investment in the Targeted Areas;
- to increase the diversification of its assets; and
- to reduce the volatility of the overall portfolio of the System.

The System also expects that commitments to and investments in ETIs will establish, maintain and continually improve the reputation of the System as an investor. The System will make both continuous use of and contributions to the best practices of investors in ETIs, including rigorously applying the standard of valuing the achievement of risk-adjusted, market rates of return above the achievement of any collateral results. TRS will seek investments in which the proposer demonstrates a commitment to standards of good conduct, including compliance with all Federal, State and local laws, including, but not limited to, labor, anti-discrimination, environmental, and health and safety laws, and any of the stated policies of TRS. Furthermore, TRS will seek to avoid investment programs that are likely to cause reputational damage to the retirement system. TRS encourages the submission of proposals for review from proposers that demonstrate a strong commitment to diversity in their firms.

The operation of the Program is subject to the exclusive benefit rule and all other applicable laws, including requirements of prudence and will be operated in accordance with Department of Labor Interpretive Bulletin 2015-1, 29 CFR Part 2509 (2509.2015.01) or superseding bulletins from the Department of Labor relating to the fiduciary standard under ERISA in considering economically targeted investments.

Asset Allocation

ETIs may cross a variety of asset classes. The System will seek to achieve a target allocation of 2% of assets to ETIs where practical and consistent with the standards in this and other policies. The Trustees acknowledge that in order to achieve the 2 percent target allocation, BAM staff may need to commit assets in excess of the 2 percent with respect to certain forward-rate commitment programs. Actual investments in ETI's shall not exceed 2 percent without Board authorization.

Responsibilities and Delegation

Role of Board of Trustees

The Board shall approve this Policy. In addition, the Board shall:

- Oversee performance;
- Approve investments;
- Delegate investment approval authority as appropriate; and
- Approve the retention of consultants and advisors ("Consultants"), outside legal counsel and other external resources as necessary.

Role of the Comptroller's Office Staff

The duties of the Economically Targeted Investment Staff of the Comptroller's Office (the "Staff") include, but are not limited to:

- Implementing and managing the operations of the program consistent with this policy and the direction of the Trustees;
- Developing and proposing a Plan for the Board's consideration, modification and adoption;
- Implementing the Plan as approved by the Trustees;
- Preparing new investment initiatives for the consideration of the Trustees;
- Evaluating and recommending investment programs and opportunities to the Trustees; and
- Monitoring and reporting to the Board on the performance of the program.

The duties of the Comptroller's Office legal staff (the "Legal Staff") are to assist the Staff in implementing the Trustees directives, including, but not limited to:

- Reviewing this Policy and any other policies developed as part of the Program;
- Participating in procurement of Consultants and other necessary experts; and
- Implementing trustee directions regarding the retention of outside legal counsel and other Consultants, performing legal work and providing legal advice in the ordinary course on the development and implementation of the program, managing and working with retained outside counsel, and ensuring statutory and regulatory compliance of investments.

Performance Benchmarking

The performance of each investment shall be measured against an appropriate benchmark, to be identified initially in conjunction with the making of the investment and to be modified from time to time to provide a suitable measurement of performance relative to investments with similar levels of risk, liquidity, security and structure. The collateral economic benefits shall be quantified to the extent possible and measured alongside the anticipated goal of the investment.

Staff shall report regularly to the Board on the performance of ETIs.

Investment Operations

General Approach

The Staff shall review and manage investments guided by the Plan, this policy statement and, in addition, the policy statement governing investments in the asset class to which an investment under consideration belongs. Staff shall seek to identify the most attractive investment opportunities available consistent with the above and with the investment objectives articulated in the Plan. All targeted investments shall be consistent with sound fiduciary standards (i.e. standards of prudence).

The Plan

Staff shall from time to time present to the Board for its approval a Plan which shall provide guidance to the Staff in the management, operations and investments of the Program.

Investment Parameters

Only those ETI investments that comparable in terms of risk, liquidity, security and structure to similar non-ETI investments will be considered. Per Bulletin 2509.2015.01's supplementary information section, collateral economic benefits may be considered in investment opportunities when either: (1) the collateral benefit influences the risk or return of the portfolio; or (2) if the ETI investment has an expected rate of return that is commensurate to rates of return of alternative investments with similar risk characteristics.

Although the Targeted Areas are the five boroughs of New York City, ETIs may also provide benefits to additional areas outside of New York City.

Prohibited Investments

Investments that provide concessionary rates of return, that place social benefit concerns above the risk-adjusted return to the System or that violate any policy of TRS are not permitted.

Investment Limits

Commitment Size: The System will not consider any investment programs (which may consist of one or more similar investments) which are expected to result in the investment across all of the New York City Retirement Systems (TRS; the New York City Employees' Retirement System; the New York City Police Pension Fund, Subchapter 2; the New York City Fire Department Pension Fund, Subchapter 2; and the Board of Education Retirement System [collectively, the "Systems"]) of less than $20 million in the aggregate over three years. Neither shall it consider individual investments across the Systems of less than $10 million unless such investments are made in the context of an investment program which is anticipated to result in the investment by the Systems of $20 million in the aggregate over three years.

Concentration: ETIs are, by definition, geographically concentrated. In order to mitigate this concentration risk, staff shall use a variety of tools, including but not limited to, guarantees, co-investors, and experienced managers.

Equity Investment Vehicles

The only equity structures that the System will consider will be those which provide limited liability to the System.

Minimum Requirements

The following shall be the minimum requirements for all ETI investments:

- All proposed investments must offer market rates of return on a risk-adjusted basis, with returns comparable to similar (non-ETI) products with similar risks, structures, liquidity and conditions;
- Investments must fill a capital gap or reach a sector of the market that is not efficiently served by the market;
- Investments must provide collateral economic benefits to the Targeted Areas;
- The proposing organization and/or the principals of a firm providing an investment must have three years' verifiable experience in and adequate staff for the type of investment proposed, and must provide a verifiable track record of relevant investment performance which demonstrates an ability to generate risk-adjusted returns with the product being proposed or a product substantially similar to the one being proposed; and
- The proposing organization and/or the principals must have demonstrated an ability to cooperate and to work well together with governmental and non-governmental financial entities as applicable and to manage a stable organization.

Evaluation Criteria

Proposed investments will be evaluated according to the following factors:

- The fit within the Plan and the System's portfolio;
- The clarity of the proposed investment or program and its parameters and goals;
- The extent to which the proposer demonstrates that the proposed investment or program will produce the anticipated risk-adjusted return and collateral benefits;
- The quality, reputation and experience of the investment managers and their ability to implement a proposed program or investment;
- The quality of controls and reporting systems (including audited financials, risk management systems and reports to investors); and
- The appropriateness of terms and conditions.

Investment management

Staff and Consultants shall be responsible for monitoring the performance of investments.

Teachers' Retirement System of the City of New York

Corporate Governance Principles and Proxy Voting Guidelines

April 2017

Adopted April 21, 2016

Last amended April 2017

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I. INTRODUCTION

About the Teachers' Retirement System

The Teachers' Retirement System of the City of New York ("TRS") provides retirement benefits for pedagogical and administrative personnel employed by the New York City Department of Education and certain employees of New York City charter schools and the City University of New York.

- The Qualified Pension Plan ("QPP") is a defined benefit plan that provides retirement security to over 195,000 active and inactive members, retirees and beneficiaries.
- The Tax-Deferred Annuity ("TDA") Program is a voluntary defined contribution plan that is available as a supplemental benefit to participants in the QPP.

The TRS aims to fulfill its obligations to beneficiaries by achieving a competitive risk-adjusted market rate of return, consistent with its asset allocation, while prudently mitigating downside risks to TRS' investments, including those affecting the sustainability of its long-term returns.

The Office of the New York City Comptroller serves as the chief investment advisor and custodian of assets of TRS' QPP, as well as to four other, independent retirement systems that, collectively, comprise the New York City Retirement Systems. In addition to the TRS' QPP, other City Retirement systems include the New York City Employees' Retirement System ("NYCERS"), the New York City Police Pension Fund ("Police"), the New York City Fire Department Pension Fund and the Board of Education Retirement System of the City of New York. The Teachers' Retirement Board administers the TDA program, including retaining a custodian for program assets.

The Comptroller's Office is responsible for actively monitoring the City Retirement Systems' investments, voting corporate proxies consistent with the systems' respective policies, and engaging portfolio companies on behalf of the City retirement systems. The Comptroller of the City of New York serves as a trustee to four of the five City systems, including TRS. The Comptroller's Office is similarly responsible for voting corporate proxies for TRS' TDA program.

For purposes of these Guidelines, and specifically with respect to Section II, entitled Proxy Voting Policy, the term "Systems" generally applies to TRS QPP and TDA programs, as well as the pension and benefit programs of the other City Retirement Systems, provided that the TRS Board and Proxy Committee retain the discretion to modify or implement TRS-specific proxy guidelines.

Statement of Purpose and Principles

The Corporate Governance Principles and Proxy Voting Guidelines (the "Policy") outline the philosophy and guidance that frame TRS' analysis when casting votes on corporate proxies of the portfolio companies in which TRS invests, consistent with its fiduciary duties, and informs TRS' general approach to company and regulatory engagement.

The Policy is rooted in TRS' view that the right to vote shares is considered an asset of the benefit fund. A fiduciary's responsibility to manage the assets of the fund therefore includes the duty to vote proxies on issues that may affect the value of the shares. This is consistent with U.S. Department of Labor guidance, reaffirmed in 2015 and directed at certain private sector pension plans that are subject to the Employee Retirement Income Security Act of 1974 (ERISA).

TRS' approach to proxy voting and sound corporate governance is derived and guided by who TRS fundamentally is as an investor:

- ❖ **Beneficiary-focused:** Our duty is to promote the retirement security of our beneficiaries.
- ❖ **Long-term:** Our investment horizon stretches decades in order to cover our actuarial liabilities.
- ❖ **Diversified, or "universal" owners:** Our fiduciary obligation compels us to mitigate risk by diversifying our investments across the market, thereby positioning us as "universal owners" with a financial stake across a wide number of companies and an economic interest in the overall performance of the financial markets and broader economy in which TRS invests.

As diversified, long-term investors, TRS believes that advocating sound corporate governance practices and responsible business practices at portfolio companies promotes shareowner value creation. Simply put, better managed companies deliver superior and more sustainable results. TRS also believes that good governance protects against downside risks to long-term financial performance. And critically, TRS believes that good governance engenders investor confidence that, in turn, fosters stable financial markets that will be conducive to the long-term economic growth upon which its investments depend.

Core Principles

TRS first adopted formal proxy voting policies in 1987. Several basic principles, consistent with TRS' duty to promote shareowner value, inform the guidelines in this Policy:

- ❖ **Accountability:** Portfolio companies should adopt policies and practices by which the board of directors is accountable to shareowners.
- ❖ **Investor Rights:** Shareowners should have strong investor rights and protections.
- ❖ **Aligned Interests:** Directors and executives should have incentives that align their interests with those of shareowners.
- ❖ **Transparency:** Financial markets work more efficiently when companies provide shareowners accurate, thorough, and timely information on material matters.
- ❖ **Sustainability:** Companies should effectively manage financial, governance, social, environmental and other material risks to long-term performance and advance policies and practices that create sustainable shareowner value.

Active Ownership Commitment and Legacy

TRS advances its core principles by actively exercising its rights as a shareowner, or being an "active owner" of the companies in which it invests. By voting corporate proxies at each portfolio company and engaging companies to promote practices in line with its core principles, often in collaboration with the other Systems, TRS has strengthened the independence and accountability of boards of directors, aligned executive pay with long-term firm performance, and promoted more transparent, sustainable, and responsible business practices.

TRS and the other Systems forged their commitment to active ownership partly in response to the corporate boardroom battles and the effects of the globalization of capital markets in the 1980s. In response to new risks posed by these market forces, the Systems developed tools and strategies, and a commitment to investor collaboration, that provided the building blocks of the TRS' current approach to active ownership:

- In 1984, TRS first urged companies doing business in apartheid-torn South Africa to adhere to specific human rights principles or face divestment – a core commitment of TRS and the other Systems until the first democratic elections in South Africa in 1994.
- In 1985, TRS and the Systems co-founded the Council of Institutional Investors (CII) in response to a wave of hostile takeovers by corporate raiders. CII, whose members now include public, union and corporate pension funds with more than $3 trillion in assets, has become the leading voice for effective corporate governance and strong shareowner rights in the U.S market.
- In 1986, TRS, working with the other Systems, were among the first large institutional investors to exercise their rights under the Securities Exchange Act of 1934 to submit shareowner proposals for a vote at annual shareowner meetings. The proposals initiated a multi-year effort by the Systems to advocate that companies adopt the MacBride Principles, broad equal employment guidelines designed to eliminate employment discrimination in Northern Ireland.
- In 1989, the Systems worked with a small group of investors to found Ceres in response to the Exxon Valdez oil spill, one of the worst environmental disasters in history. Today, Ceres and its Investor Network on Climate Risk (INCR) mobilize global investors and companies to integrate sustainability into their investment risk analysis and decision-making and advocate for strong climate and energy policies in the U.S. and globally.
- In 1992, the Systems helped pave the way for investors to challenge workplace discrimination and address employment practices when they filed a shareowner proposal to ban sexual orientation discrimination at Cracker Barrel, which had said it would no longer hire gay employees. After the Securities and Exchange Commission (SEC) not only permitted the company to omit the proposal from its ballot because it dealt with "ordinary business," but also set a new standard whereby employment-based shareowner proposals would "always be excludable by corporations," the Systems challenged the decision in court. While the lawsuit was unsuccessful, the resulting investor outcry later prompted the SEC to reverse its position.

TRS' approach to active ownership has continued to evolve over the past 25 years. In addition to constructively engaging companies to improve practices and protect value, TRS and its fellow New York City Retirement Systems have pursued securities litigation to recover losses and hold accountable companies that clearly fail to act in the interests of their shareowners. The Systems, for example, acted as co-lead plaintiff in cases that obtained a $3.2 billion class action settlement with Cendant Corporation in connection with alleged accounting fraud and a $624 million class action settlement with Countrywide Financial for deceptive mortgage practices that contributed to the global financial crisis.

TRS also recognized the importance of regulatory engagement, for example advocating stronger corporate governance rights and investor protections following the collapse of Enron and WorldCom in 2001 and the global financial crisis of 2008, both of which exposed widespread and costly failures of corporate governance. The TRS and its fellow Systems have also supported government rules and regulations requiring greater disclosure of climate-related risks as well as the diversity of corporate directors, among other existing and proposed reforms.

Key regulatory reforms enacted since 2001 were previously the subject of shareowner proposals sponsored by TRS and other institutional investors. These include regulatory reforms requiring majority-independent boards of directors and key board committees and enabling shareowners to cast advisory votes on executive compensation ("say-on-pay").

One of the most critical investor rights that TRS and other investors have long sought through regulatory reform is the right for long-term shareowners to nominate directors using the corporate proxy statement, known as "proxy access." Although the SEC proposed a proxy access rule in 2003 and again in 2009 following the global financial crisis, strong corporate opposition has thwarted a lasting rule. In 2014 TRS, jointly with the other Systems, launched a broad effort to enact proxy access on a company-by-company basis. Working with numerous institutional investors, the investor campaign has rapidly succeeded in making proxy access a common shareowner right at U.S. companies.

Approach to Active Ownership

TRS' history and experience serves as the foundation for its approach to promoting its core principles through active ownership, which encompasses:

- **Proxy Voting:** Responsibly voting proxies at portfolio companies.
- **Company Engagement:** Actively monitoring and engaging companies on their environmental, social and governance policies, practices and disclosures, including by filing shareowner proposals.
- **Regulatory Advocacy:** Advocating for regulatory and policy reforms to strengthen shareowner rights, improve corporate disclosure and improve the integrity and sustainability of financial markets and the economy.
- **Active Collaboration:** Collaborating with other long-term investors, both formally as active members of numerous institutional investor associations, and informally, in order to advance sound governance and sustainable business practices at individual companies and across the market.
- **Legal Action:** Exercising their rights to pursue legal action to recover losses on behalf of the Systems' beneficiaries and other affected investors in select cases of egregious fraud, misconduct, or corporate malfeasance.

Proxy Voting Oversight and Procedure

The Office of the Comptroller executes TRS' corporate governance policies, including proxy voting, portfolio monitoring, and shareowner engagements and initiatives. The Bureau of Asset Management at the Office of the Comptroller, through its Corporate Governance and Responsible Investment division, is responsible for casting the TRS' proxy votes, consistent with the policies adopted by TRS, engaging portfolio companies and regulators, and submitting shareowner proposals that have been approved by TRS.

The TRS Board appoints a Proxy Committee, as defined in its Investment Policy Statement. The Proxy Committee promulgates TRS' voting policies and procedures, including the Policy. This Policy primarily focuses on the United States market, although the core principles may generally apply to other investment markets as well. TRS has separately adopted global proxy voting guidelines that address proxy voting in markets other than the United States.

The Office of the Comptroller implements the Policy on behalf of the TRS. The Policy provides general guidance and parameters on items that regularly appear on corporate proxies. The Office of the Comptroller casts votes in a manner that is consistent with the philosophy, intent, and spirit of this Policy. In implementing the Policy and the principles that underlie it, the Office of the Comptroller may oppose proxy items sponsored by shareowners that appear overly prescriptive, unduly seek to micromanage portfolio companies, or otherwise contradict this Policy in letter or intent, absent a broader justification aligned with the core principles of this Policy. The Office of the Comptroller may consider multiple sources of information, including research from outside vendors, direct dialogue with company directors and managers, and portfolio managers, in assessing and deciding proxy votes in line with the Policy, fiduciary duty, and the economic interests of TRS.

In a contested director election, the Office of the Comptroller may, but is not obligated, to have discussions with the company and/or dissident nominees involved in the contest to consider their views. In the event that the Office of the Comptroller speaks with representatives from one side of the contest, it will not refuse a request for a discussion from representatives of the other side.

Reporting

The Office of the Comptroller provides periodic reports on proxy voting activities to the TRS Proxy Committee, including at minimum during semiannual Proxy Committee meetings held in the spring and fall of each year. Summary proxy voting information is also included in the Systems' annual report on shareowner initiatives, which is publicly available on the Office of the Comptroller's website.

Securities Lending

The Office of the Comptroller implements TRS' securities lending policy with respect to assets for which the Comptroller is statutory custodian. The Office of the Comptroller may seek to recall securities on loan in order to cast a vote on a proxy item on behalf of TRS, including securities on loan through TRS' tax deferred annuity program, where it is in the economic interest of the Systems, consistent with its fiduciary duty and established policy, and sufficient advance notice is provided.

Conflicts of Interest Policy

Potential conflicts of interest on the parts of the trustees and/or the staff of the Office of the Comptroller are addressed by Chapter 68 of the New York City Charter and the Rules of the New York City Conflicts of Interest Board.

II. PROXY VOTING POLICY

Section 1: The Board of Directors: Composition and Structure

The Systems rely on the corporate directors they elect to promote and protect long-term shareowner value. The Systems believe corporate directors best serve the Systems' interests when the board of directors is composed of a diverse group of highly-qualified individuals who:

- Focus on sustainable value creation, particularly over the long-term;
- Align the company's business strategy, including capital allocation and executive incentive programs, with the board's long-term business objectives;
- Ensure effective oversight of risks to firm value, including but not limited to material operational, financial, environmental, and social factors;
- Objectively scrutinize and assess management performance;
- Uphold an unequivocal standard and expectation for ethical conduct and responsible business practices;
- Ensure a robust process for board refreshment and prudent CEO succession planning; and
- Demonstrate accountability to shareowners and other important stakeholders, including employees and the communities in which the company operates.

Each director should possess relevant skills, expertise and experience, and the ability to devote sufficient time in light of other professional commitments. Moreover, each director should be capable of performing the duties objectively and free of any conflicts of interest.

Boards should be composed of directors who, collectively, are best equipped to effectively oversee the company's strategy for creating and protecting firm value. Accordingly, the Systems encourage board diversity. Diverse perspectives, skills, expertise, and backgrounds may enhance the board's decision-making and ability to exercise prudent oversight on shareowners' behalf, as well as better position the board to pursue market opportunities. The Systems view diversity broadly and believe diverse boards may encompass considerations such as professional background, expertise, skills, age, race, gender, ethnicity, geography, sexual orientation, and gender identity. Director attributes should be relevant to the company's business and enhance the board's capacity to effectively oversee strategy and risk, including operational, regulatory, climate-related and environmental, human capital, macroeconomic, and financial risks. Board nominating policies and practices should define and reflect the board's view of diversity.

1.1 Election of Directors

The Systems evaluate individual director nominees in an uncontested election and the performance of the board as a whole, according to the factors below.

1.1a Independence

At least two-thirds of the board should be composed of independent directors. The Systems consider an independent director to be someone whose only nontrivial professional, familial, or financial connection to the corporation, its chair, CEO or any other executive officer is his or her directorship. To determine independence, the Systems use the definition adopted by the Council of Institutional Investors, which may exceed the minimum standards established in stock exchange listing requirements (see the Appendix). The Systems may vote against, or withhold support from, any and all non-independent director nominees where a board has failed to constitute a two-thirds majority of independent directors.

1.1b Committee Independence

Independent directors should comprise in full all key board committees, including the Audit Committee, the Compensation Committee, and the Nominating Committee. The Systems oppose non-independent director nominees serving on key board committees.

1.1c Board Attendance

The Systems may withhold support from incumbent director nominees who have failed to attend at least 75% of board or committee meetings during the preceding term, absent a compelling, disclosed justification. Companies should clearly disclose individual director attendance figures for board and committee meetings, including whether attendance was in-person or otherwise, such as telephonically or via web access. Excused absences should not be categorized as attendance.

1.1d Over-boarding

The Systems generally oppose director nominees who have an excessive number of outside commitments that may jeopardize their ability to adequately fulfill their responsibilities as a director. The Systems generally consider any director nominee who serves on more than a total of four public company boards to be over-boarded. If the director nominee is a chief executive officer of a public company, the Systems generally withhold support from the director's nomination to boards other than the company where the individual serves as chief executive, if the nominee serves on more than a total of three public company boards.

1.1e Accountability

(i) Majority Shareowner Votes

The Systems expect boards of directors to be responsive to shareowners' votes. The Systems generally oppose director nominees who failed to receive the majority of votes cast in a previous director election at the company, taking into account actions taken to address the issues that prompted the previous dissent.

The Systems may oppose all incumbent directors of a board committee that has failed to address a shareowner proposal that received majority support and addresses a matter that is within the purview of that board committee. (In the event of a classified board, the Systems may oppose all incumbent directors up for election at the meeting).

The Systems believe that the full board is ultimately responsible for actions taken by its committees. The Systems may vote against some or all incumbent directors of a board where the board has failed to act on a shareowner proposal that addresses a fundamental governance issue and receives a majority of votes cast, absent a compelling justification from the board. The Systems generally oppose all incumbent director nominees of a board where the board fails to implement a proposal that twice receives the support of a majority of votes cast.

(ii) Interaction with Shareowners

The Systems expect the appropriate independent directors to be available to engage in dialogue with shareowners on matters of significance, in order to understand shareowners' views. Accordingly, all companies should establish board-shareowner communications policies. Such policies should disclose reasonable ground rules by which directors will meet with shareowners.

The Systems may oppose all incumbent directors of a nominating committee of a board that is unresponsive to reasonable requests for director engagement from significant shareowners.

1.1f Performance

Board Performance

The Systems assess the performance of each nominee to the board. The Systems may oppose some or all incumbent director nominees if:

- ❖ The company has chronically underperformed peers and either the board has failed to take reasonable steps to address the poor performance, or the board maintains multiple governance provisions that may insulate directors from accountability, such as a classified board, supermajority vote requirements, dual-class share structure, and a poison pill that has not been approved by shareowners;
- ❖ A director nominees has problematic previous experience; for example, the Systems may oppose nominees who served as an executive or a director of a company with egregious performance, legal, accounting, or compensation problems, taking into consideration the individual's specific role and committee assignments;
- ❖ Any nominee who has demonstrated a lack of integrity or ability to represent shareowner interests, such as, but not limited to, having been convicted of financial, corporate, or securities fraud, including insider trading, or having a history of misconduct, regulatory sanctions, or ethical violations relating to corporate responsibilities; or
- ❖ There has been a material failure of governance, legal, or regulatory compliance; risk management (including with respect to financial or non-financial risks); or other fiduciary responsibility at the company.

Committee Performance

The Systems assess incumbent nominees' track record of committee service and may oppose nominees who fail in their qualifications or performance, as outlined in the committee's charter or detailed below. If no member of a committee is available for election (due to, for example, a classified board structure or no relevant committee has been constituted by the board) and the Systems would otherwise oppose one or more committee members due to concerns about committee performance, the Systems may oppose all incumbent directors of the board up for election.

The Systems may oppose incumbent nominees who serve on the Nominating Committee if:

- ❖ The Committee has failed to nominate or appoint candidates who would constitute a board composed of at least two-thirds independent directors;
- ❖ A current director nominee failed to receive a majority of votes cast in an uncontested election at a previous meeting of the company, taking into consideration actions taken by the board to address the issues that prompted the previous vote;
- ❖ The board has failed to ensure adequate director succession planning and board refreshment, as indicated by unusually high average tenure and an inadequate number of new directors in recent years, taking into consideration factors such as the company's performance and governance profile;
- ❖ The board unilaterally adopted a governance provision that weakens shareowner rights without shareowner approval (such as an exclusive forum bylaw, fee-shifting bylaw, or mandatory arbitration bylaw), or is currently seeking shareowner approval for such a governance provision pursuant to a bundled bylaw or charter amendment rather than as an individual proposal (and in egregious instances, the Systems may withhold from all incumbent board nominees);
- ❖ The board adopted or renewed a poison pill that was not approved by shareowners within a reasonable time period, taking into consideration the date of its next annual meeting.

The Systems may oppose incumbent directors who serve on the Audit Committee if:

- ❖ Material accounting fraud has occurred at the company;
- ❖ The company discloses a material weakness in its internal controls over financial reporting and fails to remedy the weakness in a timely way, taking into account the nature of the material weakness;
- ❖ The company receives an adverse opinion in its financial statements from its auditor for the preceding fiscal year;
- ❖ The company's financial statements lack adequate transparency or indicate aggressive accounting practices;
- ❖ The company pays excessive non-audit fees to the auditor (generally greater than 30% of the total fees paid to the firm in the prior year) during the preceding fiscal year;
- ❖ The company does not provide shareowners the opportunity to ratify the appointment of its external audit firm;

- The company enters into an inappropriate indemnification agreement with its auditor that unduly limits the ability of the company, or its shareowners, to pursue legal recourse against the audit firm;
- The company repeatedly fails to file its quarterly and/or annual financial statements in a timely manner;
- Executives or directors have pledged their company shares or used company shares in hedging activities;
- Legal or regulatory proceedings against the company or one of its employees indicate inadequate oversight of legal and regulatory compliance (unless the board has constituted a separate committee charged with oversight of compliance and regulatory affairs).

The Systems may oppose incumbent directors serving on the Compensation Committee if:

- The Compensation Committee has repeatedly approved executive or director compensation awards or policies, including in the most recent fiscal year, that are excessive or inconsistent with long-term performance, or has otherwise failed to adequately align executive pay with performance;
- The Systems would have voted against management's say-on-pay proposal but the company has not presented a say-on-pay proposal for shareowner approval on the current proxy;
- The board fails to take adequate steps in response to a high opposition vote on the company's previous say-on-pay proposal;
- The Compensation Committee changed performance goals to allow for payments that would not have been awarded based on the original goals, or performance-based compensation was paid despite goals not being attained;
- The Compensation Committee re-priced stock options without shareowner approval in the past two years.

1.2 Contested Elections

Contested elections generally occur when an alternate board candidate or alternate slate of candidates seeks election to the board without the support of the incumbent board. When evaluating competing slates, the Systems assess:

- To what extent is there a compelling case that change is in the Systems' economic interests;
- Which nominees – dissident or incumbent – are more likely to protect and create long-term value.

In evaluating director nominees in a contested election, the Systems consider:

- The long-term financial performance of the company relative to its industry;
- The company's existing governance policies and practices;
- Any proposed strategic plan for the company and the likelihood that such proposals will enhance the company's long-term value;
- The qualifications and track record of each incumbent nominee, dissident nominee, and the dissident nominee's sponsor or proponent;
- The equity ownership positions of all nominees, as well as the sponsors of dissident director nominees.

The Systems may vote for certain, but not necessarily all, dissident nominees, where the dissident nominees have made a compelling case that change is warranted. The Systems may also elect to cumulate their votes in support of certain incumbent or dissident nominees, where voting provisions enable cumulative voting.

1.3 Annual Director Elections: *For*

Boards should enable shareowners to review and elect each member of the board on an annual basis. The Systems generally vote for proposals to declassify a board of directors. Inversely, the Systems oppose proposals to classify a board into separate groups for periodic elections.

1.4 Majority Vote Standard for Director Elections: *For*

Each director in an uncontested election should be elected by a majority vote standard, by which the director nominee must receive a majority of votes cast in order to be elected. The Systems support a plurality vote standard, whereby the nominees receiving the most votes will be elected, only in contested elections where there are more nominees than available board seats.

1.5 Cumulative Voting in Contested Director Elections: *For*

Cumulative voting allows each shareowner to cast as many votes as equal to the number of shares held, multiplied by the number of directors to be elected. Each shareowner may cast all such cumulated votes for a single candidate or split votes among several candidates.

The Systems generally support cumulative voting provisions that exclusively apply to contested director elections. Cumulative voting may be particularly in the Systems' economic interests when a board is controlled by insiders or affiliates or where the company's ownership structure includes one or more shareowners who control a majority-voting block of a company. In such circumstances, cumulative voting increases the ability of non-affiliated shareowners to elect one or more directors.

The Systems generally oppose proposals to establish cumulative voting on voting items other than contested director elections. The Systems also generally oppose proposals to rescind cumulative voting, unless the proposals specifically pertain to uncontested director elections.

1.6 Independent Board Leadership: *For*

The chair of the board should be an independent director. The Systems believe that independent board leadership is key to promoting objective board oversight of the company, to the benefit of shareowners.

1.7 Board Size: *Case-by-Case*

The Systems generally support reasonable requests to establish, or modify, a company's board size in its governance policies, unless the board size appears unduly restrictive, appears to have been set in an effort to deter or dilute the participation of dissident directors, or otherwise may jeopardize the board's responsiveness to shareowners.

1.8 Director Term Limits: *Against*

The Systems encourage ongoing board refreshment. However, the Systems generally oppose requests for a board to establish specific term limits for directors. Term limits may be an overly stringent mechanism that may impede the continuing service of directors who otherwise may offer institutional knowledge and benefit shareowners.

1.9 Director Age Limits: *Against*

The Systems encourage an appropriately diverse range of ages among board directors. Companies may wish to establish their own age limits for board participation, as appropriate. However, the Systems generally oppose requests for companies to require directors to retire at specified ages. The Systems consider that such limitations may be unduly rigid and deny the board the availability of seasoned perspectives to the benefit of shareowners.

1.10 Proxy Access: *For*

The Systems generally support reasonable proposals to enable long-term shareowners with an appropriate level of equity ownership to nominate director candidates for listing on a company's proxy. Such proxy access provisions should incorporate suitable safeguards to prevent abuse, should not be a means to exercise a change-in-control of the board or company, and should not include onerous or overly restrictive provisions. Absent any problematic features, the Systems generally vote in favor of proxy access proposals with provisions no more restrictive than requiring three percent aggregate ownership and three years of continuous ownership.

1.11 Establish a Board Committee: *Case-by-Case*

The Systems evaluate requests for a board to establish a new standing board committee on a case-by-case basis, taking into consideration the rationale for the committee, the extent to which the board or an existing board committee is adequately positioned to perform the duties of the proposed committee, and the extent to which the mandate for the committee represents a compelling risk to the firm's value and business strategy.

1.12 Right to Remove Directors: *For*

Shareowners should have the right to remove directors with or without cause.

1.13 Director Indemnification: *Case-by-Case*

The Systems generally support reasonable requests to indemnify directors in order to facilitate the attraction and retention of qualified directors and officers that may benefit the company. The Systems consider such requests on an individual basis to ensure that shareowners remain protected in the event of egregious misconduct by directors or officers. The Systems generally oppose requests for indemnification if such requests extend overly broad protections or cover actions or decisions already undertaken by directors or officers.

Section 2: Investor Rights

The Systems espouse robust, accessible, and equitable investor rights and protections to promote accountability at the companies in which the Systems invest and in order to access legal recourse in the event of malfeasance. The Systems believe that strong investor rights promote integrity both at portfolio companies and in the broader financial markets, thereby promoting a stable investment climate that is conducive to long-term economic growth and in the Systems' fundamental economic interests.

The Systems therefore support policies and practices that ensure the sanctity of shareowners' rights as equity owners.

2.1 Confidential Ballot: *For*

The Systems support confidential voting provisions by which the inspectors of election are independent, non-employees, and all proxies, ballots, and voting tabulations that identify shareowners are kept confidential, except when disclosure is mandated by the law of the corporation's state of incorporation.

2.2 Bundled Voting Items: *Against*

The Systems support shareowners' ability to vote on each material matter brought before them for consideration as a separate and distinct voting item. Disparate voting items should not be combined or bundled into one voting item presented for shareowners' approval.

2.3 Universal Ballot: *For*

Companies should enable shareowners to cast proxy votes in contested director elections on one ballot that includes both board-recommended and dissident directors.

2.4 Reimbursement of Proxy Solicitation Expenses: *Case-by-Case*

The Systems may support reasonable requests for a company to reimburse shareowners who nominate directors in a contested election. In assessing the reasonableness of a proposal, the Systems consider whether the request applies to sponsors of fewer than the majority of directors to be elected and whether the request would only apply if nominees are supported by the majority of votes cast in the election. The Systems generally oppose reimbursement where shareowners are permitted to cumulate their votes for directors or where such a request would apply to contested elections commenced prior to the enactment of a reimbursement provision.

2.5 Exclusion of Broker Non-Votes from Voting Tabulations: *For*

Broker non-votes should be used exclusively for the establishment of a quorum. Broker non-votes should be excluded when tabulating the results of items presented for a shareowner vote.

2.6 Timely Disclosure of Vote Results: *For*

Companies should provide shareowners timely disclosure of the results of all matters voted upon at an annual meeting or special meeting of shareowners. Disclosure should include the vote tallies for each item submitted for shareowners' vote. Companies should aim to exceed regulatory requirements, including making available preliminary voting results at the meeting in question, when practical.

2.7 Right to Act By Written Consent: *For*

The Systems generally support reasonable requests to permit shareowners to act by written consent.

2.8 Right to Call A Special Meeting: *For*

Shareowners who aggregate at least 10% of outstanding shares of a company should have the right to call a special meeting of shareowners under reasonable terms and timelines.

2.9 Supermajority Voting Requirements: *Against*

The Systems generally believe that shareowners should be able to adopt, amend, or modify a corporate bylaw or charter, or to take other action that requires or receives a shareowner vote, by a simple majority of votes cast. A supermajority provision in that regard is a requirement in a corporation's charter or bylaw that requires the approval of more than a simple majority of votes cast. At companies with a shareowner with a particularly significant ownership stake, the Systems may support a supermajority requirement after assessing the specific provisions of the policy or action that is subject to a supermajority vote and the economic interests of the Systems.

2.10 Reincorporation: *Case-by-Case*

A corporation's state or country of incorporation may impact a company's business economics and shareowner rights. The Systems assess each proposal to reincorporate from one jurisdiction to another by examining the company's stated rationale and any effects on the company's financial and business profile, including the extent to which a reincorporation may enhance or reduce investors' legal rights. All other matters being equal, the Systems generally support requests to reincorporate in a jurisdiction with stronger investor and governance protections, and generally oppose reincorporation to jurisdictions that would diminish investor rights.

2.11 Restrictions on Litigation Rights: *Against*

The Systems believe that strong legal rights for investors serve to deter misconduct and protect shareowner value. In the event of misconduct, shareowners should have reasonable recourse to recover losses. The Systems generally oppose proposals or provisions that would weaken, or otherwise disadvantage, shareowners' legal recourse in the event of egregious and costly corporate misconduct or malfeasance.

Exclusive forum provisions in corporate charters or bylaws designate one legal jurisdiction as the sole forum for the resolution of intra-corporate disputes and certain types of litigation. Mandatory arbitration clauses attempt to prohibit shareowners from pursuing legal recourse through courts. The Systems consider such provisions to unnecessarily thwart statutory rights otherwise provided to investors.

Fee-shifting provisions in corporate bylaws require a shareowner who unsuccessfully brings legal action against a corporate entity to pay all legal fees and expenses of the company related to the litigation. The Systems consider that such “loser-pay” provisions unduly disregard standard legal practice by which parties to legal actions typically bear their own costs. As such, these provisions may have the negative consequence of deterring legal recourse in the event of fraud or misconduct in the financial markets. The Systems therefore generally oppose fee-shifting provisions.

2.12 Advance Notice Requirements: *Case-by-Case*

The Systems may support reasonable requests to require adequate advance notice of certain items an investor intends to present for shareowner approval at a meeting of shareowners. The Systems do not support overly onerous or restrictive advance notice requirements that may serve to unduly thwart investors’ rights.

2.13 Meeting Adjournment to Enable Further Solicitation: *Case-by-Case*

The Systems generally do not support requests for a board to adjourn a meeting of shareowners in order to facilitate further investor solicitation. The Systems may support such a request where a quorum has not been established or where the request is related to a corporate transaction that is presented for shareowner approval and that the Systems have determined merits support.

2.14 In-Person Annual Meetings: *For*

In-person annual meetings provide shareowners the opportunity to communicate to senior management and directors, and to fellow shareowners, in a face-to-face, unfiltered and real-time way at least once per year. All directors should attend the annual meeting and be available, when requested by the chair, to respond directly to questions from shareowners.

Companies should hold shareowner meetings by remote communication (so-called "virtual” meetings) only as a supplement to traditional in-person shareowner meetings, not as a substitute. Companies incorporating virtual technology into their shareowner meeting should use it as a tool for broadening, not limiting, shareowner meeting participation. With this objective in mind, a virtual option, if used, should facilitate the opportunity for remote attendees to participate in the meeting to the same degree as in-person attendees.

The Systems may oppose all incumbent directors of a nominating committee subject to election at a “virtual only” annual meeting.

Section 3: Capital: Structure, Authorizations, and Corporate Transactions

Voting items regarding a firm's capital structure and corporate transactions have a fundamental impact on the Systems' economic interest in the firm and prospective returns. The Systems carefully assess matters regarding capital structure and corporate transactions from a fiduciary point of view, by assessing the risk/reward profile of the proposal and prospective economic benefits to the Systems.

3.1 Common Stock Authorization: *Case-by-Case*

The Systems consider requests to authorize the issuance of common stock on a case-by-case basis, assessing the board's stated rationale for the authorization, the company's track record in responsibly using share authorizations, and the dilutive impact of the share issuance. The Systems generally oppose requests that would increase authorization to issue stock by more than 50 percent, unless the request is related to a corporate transaction, such as a merger or acquisition, that is presented for shareowner approval on the same ballot and that the Systems have determined they will support. The Systems also generally oppose requests at companies with multiple classes of common stock where the authorization request would increase the number of shares in a class with superior voting rights.

3.2 Preferred Stock Authorization: *Case-by-Case*

The Systems examine requests to issue or increase the issuance of preferred shares on a case-by-case basis.

The Systems may support reasonable requests to issue preferred shares where a company has made a compelling case that such a request would financially benefit the firm's value, the company has historically used preferred shares in a responsible manner, and the dilutive impact of the request is minimal. The Systems generally oppose blank check preferred shares that may improperly be used as an anti-takeover device.

3.3 Preemptive Rights: *For*

Preemptive rights permit shareowners to maintain a proportionate interest in a corporation by exercising a right to purchase new shares before the shares are offered to the public. The Systems generally support preemptive rights offered on equal terms to all current shareowners to enable a corporation to attract new capital while preserving existing shareowners' ability to maintain a stable economic interest in the company.

3.4 Shareowner Approval of Targeted Share Placements: *For*

The Systems generally favor requiring shareowner approval for a company to issue shares to a designated owner. Shareowners should be able to assess the rationale, economic effects, and prospective impact of targeted share placements.

3.5 Mergers and Acquisitions: *Case-by-Case*

The Systems consider mergers, acquisitions, and other corporate transactions on a case-by-case basis, with the sole concern being how the total value generated will best further the long-term economic interests of the Systems. In determining their vote, the Systems evaluate:

- **Rationale:** The strategic rationale and prospects of the transaction to deliver viable economic value;
- **Valuation:** The transaction's valuation and any associated premium;
- **Governance:** The strength of the governance and investor rights of the resulting entity;
- **Fairness:** The fairness of the process, including the negotiations with transaction partners, the objectivity of advisors, and the independence of board oversight;
- **Conflicts:** Any potential conflicts of interest that jeopardize the integrity of the board's or advisers' recommendations, including golden parachutes and contingency fees.

The Systems also take into consideration the entirety of their investments affected by the proposed transaction.

3.6 Fair Price Provisions: *Against*

Fair price provisions impose certain minimum price and procedural requirements on proposed transactions that may be used to impede a takeover. The Systems believe that state law generally provides for recourse through appraisal rights or otherwise if minority shareowners contest the valuation of a proposed transaction, and accordingly, generally oppose fair price provisions that may deter transactions that may be in shareowners' economic interests.

3.7 Greenmail: *Against*

The Systems generally oppose the use of corporate assets to repurchase shares, typically at a premium, from a designated shareowner, often in an effort to deter a change in control. These "greenmail" payments unduly discriminate against other shareowners who are not offered the same premium and may deter a takeover that is otherwise in the interest of all shareowners. The Systems generally support requests for bylaw or charter amendments that restrict a company's ability to make greenmail payments.

3.8 Poison Pills: *Case-by-Case*

Shareowner Rights Plans, generally known as "poison pills," provide mechanisms to deter a hostile takeover attempt by making the bid economically unattractive. "Flip-in" poison pills confer certain rights upon specified triggering events, such as the acquisition of a specified percentage of shares by one acquirer, for shareowners to purchase common or preferred shares at a significant discount, effectively diluting the share position of the acquirer and deterring a change in control. "Flip-over" poison pills enable shareowners to purchase the shares of an acquiring shareowner at a discount if specified ownership thresholds are surpassed.

The Systems generally believe the adoption of a poison pill plan should be submitted for shareowner approval. Where a board unilaterally enacts a poison pill, exclusively as an exercise of its fiduciary duty and after determining in particular circumstances that awaiting shareowner approval would not be in shareowners interests, the poison pill plan should expire within one year of the date of adoption unless approved by shareowners.

The Systems assess shareowner rights plans on a case-by-case basis, assessing factors such as the plan's stated rationale, the mechanisms of the plan, its duration, and the reasonableness of triggering events. The Systems generally oppose shareowner rights plans with triggers less than twenty percent of outstanding shares, that do not expire within twelve months if not approved by a majority of votes cast by shareowners, or that include features that would impede a future board from terminating the plan.

3.9 One Share, One Vote: *For*

The Systems believe that one share of company stock should entitle the holder to one vote. Multiple classifications of stock with unequal voting rights violate the principle of "one share-one vote." The Systems generally vote for proposals to recapitalize company stock into one class of stock by which all holders have equal voting rights. The Systems generally vote against proposals to establish a multiple class stock structure.

Section 4: Incentives: Compensation and Benefits

The Systems support compensation incentives and awards for executives, directors, and throughout a portfolio company's operations that promote, sustain, and protect long-term value creation.

Executive compensation incentives should align executives' interests with the long-term interests of the corporation and its shareowners. Compensation incentives should attract and retain qualified executives and reward them for superior long-term company performance.

Reasonable and effective executive compensation plans should align:

- **Value** with long-term performance;
- **Performance periods**, including both annual and long-term incentive pay, with the company's long-term business strategy;
- Multiple, diverse, and reaching performance **metrics** with the company's long-term objectives, both financial and non-financial, to create value;
- **Executive risk** with the interests of long-term shareowners, as demonstrated by considerable executive and director company equity ownership and prohibitions on shielding executives and directors from changes in equity value through hedging strategies and other protections;
- **Pay magnitude**, as measured by total compensation expenses to senior executives, with the appropriate role senior executives perform in delivering performance compared to relevant peers and the company's broader workforce, or human capital.

Boards should clearly articulate the company's compensation philosophy and describe how compensation plans advance the company's strategic objectives. The disclosures should include specific plan details, such as performance metrics and any designated peer group, and the rationale for their selection. Incentive performance metrics should be derived from, aligned with, and justified by the company's articulated business strategy.

4.1 Advisory Vote on Executive Compensation, or "Say-on-Pay": *Case-by-Case*

In evaluating management say-on-pay proposals, the Systems consider the following aspects of a company's executive compensation:

1. The link between pay and performance as reflected in actual compensation paid. The Systems generally oppose management's say-on-pay vote when actual compensation paid to executives is inconsistent with long-term performance or excessive. To determine whether compensation is excessive and/or disconnected from performance, the Systems evaluate long-term performance relative to peers, the level of pay relative to peers, and the change (direction and magnitude) in pay over time relative to absolute and peer performance.
2. The quality and clarity of executive compensation disclosures. The Systems expect clear, comprehensive, and accurate pay disclosures. The Systems may oppose or abstain on say-on-pay votes when the company provides inadequate or opaque disclosure that fails to enable an assessment of the appropriateness of the company's pay practices and provisions.

3. The existence and prevalence of problematic or egregious compensation practices that may impose significant expenses unrelated to company performance, may incent excessive or overly short-term risk-taking by executives, or are otherwise inconsistent with sustainable, long-term value creation. In assessing program design, the Systems assess factors such as those defined below.

    - An equity compensation program currently in place that was opposed by the Systems when implemented or last amended.
    - Change-in-control payments greater than three times average annual compensation (consisting of base salary plus annual bonus) during the previous five years, or that include single triggers in which an executive receives a payout without loss of employment; accelerated vesting of unearned equity; provisions for executives' employment protection for an extended period (more than 2 years); or added pension credits based on years of service or other factors.
    - Excessive equity dilution.
    - Commitments to pay executives' excise tax obligations, or "tax gross-ups," except in the context of perquisites, such as reasonable relocation benefits, that are generally available to all employees.
    - Multi-year employment contracts that include guaranteed payments, including bonuses and equity compensation that are not related to performance; extraordinary death benefits reserved for executives, or "golden coffins;" or special recruitment bonuses or "golden hellos."
    - Excessive perquisites, such as personal use of corporate aircraft, financial and tax planning services.
    - Inappropriate selection of peer group or performance benchmarks, or changes to these metrics without a compelling rationale.
    - Supplemental pension benefits that include variable pay, credits for unearned time, and/or the use of unduly favorable formulas.
    - Inadequate stock ownership guidelines or permissive practices allowing executives to hedge their company equity holdings.
    - Stock option re-pricing.
    - Discretionary payouts lacking adequate justification.
    - An unjustified gap between the compensation of the CEO and the next highest paid executives (i.e. internal pay disparity) or an excessively high disparity between CEO pay and median worker pay compared to peers or over time that lacks a compelling justification.
    - Unresponsiveness to shareowner concerns, including the failure to adequately respond to majority shareowner votes on compensation-related proposals.

4.2 Annual Advisory Votes on Executive Compensation: *For*

The Systems support providing shareowners the right to review and approve, on an advisory basis, executives' compensation plans on an annual basis.

4.3 Director Compensation: *Case-by-Case*

The Systems believe that compensation for independent directors should consist of a salary (retainer) or restricted shares of company equity. Independent directors should not receive other forms of equity incentives, such as performance-based restricted shares or options, that may create perverse incentives and jeopardize the directors' ability fulfill their oversight role. Independent directors should not receive excessive perquisites and should not be entitled to any retirement awards or benefits for their service as directors.

4.4 Adopt Advisory Votes on Director Compensation: *Case-by-Case*

Directors should be adequately compensated for the experience and expertise that they contribute to the company. The Systems believe that a company should retain the flexibility to determine compensation for directors that is commensurate with the service they provide. Excessive compensation, however, may imperil a director's independence and objectivity. Accordingly, the Systems generally oppose requests to establish an advisory vote for shareowners on director compensation. The Systems may support proposals where the Systems believe historic director compensation is excessive, directors maintain inadequate equity ownership, or where there is otherwise concern that director pay practices are not in the interests of shareowners.

4.5 Equity Compensation Plans: *Case-by-Case*

The Systems assess requests to approve equity compensation plans, and any amendments to such plans, on a case-by-case basis. The Systems generally support equity plans that serve to attract, motivate, and retain executive talent and align the interests of executives with the long-term interests of the corporation and its shareowners. The Systems generally oppose plans that may result in an excessive transfer of value from the company to executives, create incentives for overly excessive risk-taking, or otherwise conflict with shareowners' interests.

In assessing equity plans, the Systems assess:

- The cost of the plan relative to peers, including its dilutive impact. The Systems generally oppose equity plans that may, in aggregate with outstanding equity plans, prompt greater than 10 percent dilution at mature companies. The Systems may support equity plans that result in dilution of up to 20 percent at companies with market capitalization of no more than $100 million, companies where employee participation in the equity plan is particularly broad, or at select start-up companies, such as in information technology.

- Core provisions of the plan. The Systems generally support clearly defined performance criteria and strong clawback provisions in equity plans. The Systems generally oppose equity plan provisions allowing share repricing, evergreen plans that do not expire, liberal change-in-control provisions that may result in windfall awards disconnected from performance, and lack of minimal vesting periods for equity to be granted through the plan.

- The company's track record and oversight of responsibly deploying equity plans, including the company's recent burn rate relative to peers, the rigor of performance metrics required of recent equity grants, the current extent of equity ownership among senior executives, and the full independence of each director serving on the compensation committee.

4.6 Employee Stock Purchase Plans: *Case-by-Case*

The Systems may support requests to authorize or amend an employee stock purchase plan if such plans offer share purchases at prices not less than 85 percent of the share value, do not prompt dilution exceeding 5 percent of outstanding shares, and are generally available to all employees.

4.7 Pay-For-Performance: *For*

Incentive compensation to senior executives should be tied to the attainment of robust, reaching performance criteria that are aligned with, and justified by, the company's long-term business objectives. The Systems generally support reasonable requests for the company to adopt rigorous performance criteria for a significant majority of incentive compensation. The Systems believe that performance criteria should be adequately linked to accomplishments that are reasonably influenced by executive actions and decisions. Performance criteria should not be unduly influenced by market forces outside of the control or influence of executives. Similarly, performance criteria should be based on actual performance and not unduly manipulated, directly or indirectly, by executive actions. Accordingly, the results of performance measures, such as earnings per share, should be adjusted, as applicable, for the impact of capital changes under which management may exert influence, such as share repurchases. Any adjustments to generally accepted accounting principles (GAAP) should be clearly disclosed, explained, and justified to shareowners.

4.8 Sustainability and Non-Financial Incentive Metrics: *Case-by-Case*

Performance criteria for incentive compensation should be rooted in the company's long-term business strategy to create and protect value. The Systems may support reasonable requests for a company to include performance criteria related to a company's compelling non-financial risks, such as workplace safety and health, environmental performance, or other factors, that may serve to enhance long-term value in the interests of shareowners. The Systems generally oppose requests to adopt unduly prescriptive targets or criteria for incentive compensation awards. The Systems believe boards are generally best positioned to determine the specific criteria for incentive awards and that those criteria should be clearly disclosed to shareowners.

4.9 Equity Ownership Guidelines: *For*

Senior executives and directors should maintain equity ownership in the company in order to promote the alignment of executives' interests with those of shareowners. The Systems generally support reasonable requests for companies to adopt equity ownership guidelines to ensure that directors and senior executives maintain "skin in the game." The Systems generally oppose requests for directors to receive all compensation in equity or to obtain minimum equity ownership prior to board service, which may unduly restrict otherwise qualified directors from serving as directors.

4.10 Equity Retention Requirements: *Case-by-Case*

Equity compensation should align executives' and shareowners' interests and provide incentives for executives to produce and protect lasting firm value. The Systems generally support reasonable requests for senior executives to retain a substantial amount of equity awards for a long-term, such as during the tenure of employment or for a reasonable period of time past employment. The Systems may oppose requests for equity retention that are inappropriately high or applicable to a wide segment of employees for whom the requirements may create an undue burden.

4.11 Principles for 10b5-1 Pre-Arranged Trading Plans: *For*

The Systems generally support requests to ensure robust guidelines for senior executives' use of Securities and Exchange Commission Rule 10b5-1, which permits issuers and their officers and directors to structure trading programs in advance to permit pre-planned share trades without running afoul of insider trading regulations. Guidelines may include public disclosure of the adopted plan within two days, amendments and terminations only under extraordinary circumstances, a report on transactions made under the program, and the use of an independent broker. Such provisions may protect shareowners' from inappropriate use of pre-arranged trading plans.

4.12 Prohibitions on Hedging or Pledging Company Equity: *For*

Executives and directors should be prohibited from engaging in speculative activity with company equity shares, such as hedging transactions or pledging shares as collateral in a margin account. Executives and directors should have a long-term interest in company shares that is aligned with other shareowners and does not have the potential disruption or conflicts of interest that may arise from hedging or pledging company shares.

4.13 Compensation Consultant Independence: *For*

The Systems believe that it is in shareowners' economic interests for the board of directors and the compensation committee to receive objective counsel on executive compensation program design. The Systems generally support requests for compensation committees or boards of directors to ensure that consultants are independent and free of any potential conflicts of interest. The Systems also support disclosure of the names of compensation consultants employed and fees paid to any compensation consultants engaged by the board.

4.14 Restrictions on Executive Compensation: *Against*

The Systems generally oppose requests that would unduly impose limitations on the size or format of overall executive compensation pay levels, such as prescribing a maximum level of pay, capping pay under certain conditions, or tying pay levels to overly arbitrary formulas.

4.15 Internal Pay Disparity Analysis: *For*

The Systems may support reasonable requests for companies to disclose an analysis of pay levels among senior executives and between senior executives and company employees in general. Analysis of pay between a chief executive officer and other named executive officers in the proxy statement may promote stable succession planning among key executives to the benefit of long-term shareowners. Similarly, as employee compensation may serve a critical function in motivating and rewarding employees to achieve corporate objectives, shareowners may benefit from disclosure of summary information addressing internal pay practices. The Systems generally oppose requests to link pay to prescribed ratios of pay between segments of employees or requests to disclose data that may be confidential or otherwise place a company at risk.

4.16 Compensation Recoupment, or "Clawback" Policies: *For*

The Systems support the principle of "pay-for-performance." In order to buttress the performance basis of compensation, companies should establish clear policies that enable a company to recoup or cancel incentive-based compensation, to the extent practicable, in the event that a board later determines that due to a financial restatement or misconduct (including lack of proper supervisory oversight) during a pertinent performance period, the performance was either not actually attained or not sustained. The Systems generally support reasonable requests for companies to adopt clawback provisions in pay plans and practices. The Systems also may support reasonable requests to defer a portion of incentive compensation payment for senior executives for a defined period of time, also known as "bonus escrow" or "bonus banking," in order to assess the sustained results of the criteria upon which the bonus is paid and facilitate adjustments to incentive rewards aligned with performance.

4.17 Shareowner Approval or Limit Executive Retirement Plans and "SERP's": *For*

The Systems generally support requests to limit the benefits provided under a company's supplemental executive retirement plan, or "SERP," by restricting compensation covered under the plan to annual salary and excluding variable elements such as bonus and incentive payments. The Systems also support requests to subject extraordinary executive retirement benefits, such as a supplemental executive retirement plan, to shareowner ratification, unless executives' retirement benefits are consistent with those provided all company employees.

4.18 Shareowner Approval of Severance Payments, or "Golden Parachutes:" *For*

Severance arrangements may be appropriate in some circumstances. However, severance payments may also impose excessive costs on a company and risk unduly rewarding an executive who has failed to deliver performance on shareowners' behalf. Accordingly, the Systems generally support requests for executive severance agreements to be ratified by shareowners.

4.19 Advisory Votes on Golden Parachutes: *Case-by-Case*

Executive severance payments, or "golden parachutes," provide guaranteed payments to executives in the event of job loss generally related to a change in control. Such arrangements may serve as an incentive to executives to negotiate in the best interest of shareowners during a change in control in an objective manner and without consideration for their personal benefit or employment security.

The Systems consider board-sponsored advisory proposals to approve golden parachutes related to a proposed corporate transaction on a case-by-case basis. The Systems may support reasonable severance arrangements that reflect the executives' job performance and are in shareowners' economic interests. The Systems generally oppose severance arrangements that are excessive, constitute significant unearned income that is unrelated to job performance, and lack best practice features without adequate justification. Best practice features include, but are not limited to, the following.

- Clear narrative and tabular disclosures;
- Total payments, including perquisites, do not exceed more than three times the average of the previous five years' compensation;
- No excise tax payments, or "tax gross-ups,"
- Payments are "double triggered;" that is, any severance payment is contingent upon both the consummation of the corporate transaction and an executive's actual separation from employment;
- Any accelerated vesting of unearned equity awards is justified by the performance of the company or the services provided by the executive;

- There are no recent amendments that unduly favor executives;
- Approval of the corporate transaction is not contingent upon the ratification of the golden parachute payments.

4.20 Limits on Automatic Equity Acceleration: *For*

Compensation provisions in executive contracts, equity plans, or grant awards that disregard equity vesting requirements and automatically pay equity grants in full upon a change-in-control or a severance event inherently violate the principle of pay-for-performance. No unearned awards or payments to executives should be made to executives upon a change in control event alone; any payments should be based on a "double trigger" of both the change in control and a severance from employment. The Systems generally support requests for companies to limit automatic equity acceleration upon corporate transactions or severance. The Systems may support requests to tie any acceleration of equity vesting upon a severance to actual performance or a pro rata portion of time employed during an unvested equity grant's performance period.

4.21 Prohibition on Tax Gross-Ups: *For*

Commitments by companies to pay executives' excise taxes on perquisites or prospective severance payments, also known as "tax gross ups," are not in shareowners' interests since they can be costly and are not linked to performance. The Systems generally support requests to prohibit tax gross-ups, except for gross-up provisions that may apply more generally to management employees, such as a relocation or expatriate tax equalization policy.

4.22 Shareowner Approval of Executive Death Benefits, or "Golden Coffins:" *For*

Awarding executives with extraordinary death payments, bonuses, or benefits posthumously sever the relationship between pay and performance and may unduly misallocate corporate assets that may otherwise be deployed to generate long-term value. Executive death benefits, or "golden coffins," may include bonuses and special awards, accelerating vesting of unearned equity awards upon an executive's death, or using corporate assets to cover life insurance policy premiums where the policy does not apply to company management employees more generally. The Systems generally support requests to subject executive death benefits to shareowner approval.

Section 5: Financial Reporting

Capital markets operate most efficiently when investors have complete, accurate, and timely information about material aspects of company performance.

Financial reporting forms the foundation of all corporate reporting, and also provides the context for additional reporting. The Systems rely on companies to provide thorough, regular, clear, and reliable information about financial performance, in accordance with Generally Accepted Accounting Principles (GAAP). Any additional reporting that does not conform to GAAP should be clearly explained and justified. In all circumstances, GAAP reporting should receive greater emphasis.

5.1 Shareowner Ratification of the Auditor: *For*

Auditors play a crucial role in independently reviewing and ensuring the integrity and accuracy of financial reports presented to shareowners. Accordingly, the Systems believe all companies should submit the appointment of the independent auditor for shareowner ratification on an annual basis.

5.2 Auditor Ratification: *Case-by-Case*

The Systems assess requests to ratify the appointment of an auditor on a case-by-case basis, taking into account the following factors:

- **Independence:** The Systems may oppose an auditor that has, or has had within the past five years, a financial interest in the company or any significant professional or personal affiliation with the company, its directors, or executives.
- **Performance:** The Systems generally oppose auditors where the company has had a material financial restatement, material weakness in internal controls, fraud, or misapplication of Generally Accepted Auditing Principles (GAAP) during the auditor's tenure, or where there is otherwise reason to believe the auditor has rendered an opinion on financial statements that does not accurately represent the company's financial condition. The Systems may also consider the audit firm's performance at other companies and any related regulatory sanctions.
- **Conflicts of Interest:** Non-audit related fees should be kept to a minimum in order to ensure the independence of the auditor and avoid potential conflicts of interest. The Systems may oppose an auditor if the company pays excessive, or consistently and unusually high, non-audit related fees to the auditor. The Systems generally consider that a company should not pay more than 30% of fees to an appointed auditor for non-audit related services.
- **Investor Protections:** The Systems may also oppose the ratification of an audit firm where the company has agreed to an inappropriate indemnification provision or a mandatory alternative dispute resolution process with its auditor, either of which unduly limits the ability of the company, or its shareowners, to pursue legal recourse against the audit firm.

5.3 Audit Firm Rotation: *Case-by-Case*

The Systems believe excessive tenure may compromise an audit firm's independence and objectivity. The Systems believe regular rotation of a firm's auditor may enhance the quality of the audit, and thereby serve to protect shareowners' interests. The Systems assess proposals to mandate audit firm rotation by considering the company's existing procedure, if any, for periodically conducting competitive bidding for the audit function (such as every five years), the tenure of the current audit firm, the existence of any significant auditing concerns at the company, and the reasonableness of the rotation period advocated by the proposal.

Section 6: Environmental and Social Issues

Environmental, social, regulatory, operational, and other matters may present risks or opportunities for a firm's ability to create and sustain long-term value. The Systems believe that robust corporate reporting should go well beyond financial reporting. The Systems encourage companies to clearly disclose and prudently manage material environmental, social, and operational risks to the firm's business objectives. The Systems similarly support comprehensive qualitative and quantitative reporting of a firm's material financial, environmental, and social performance, including issuing periodic reports on the firm's sustainability policies, practices and performance in adherence to internationally-recognized sustainability reporting methods, such as the Global Reporting Initiative.

6.1 Public Reporting of Environmental Risks and Management: *For*

The Systems generally support reasonable proposals requesting greater disclosure or public reporting of a company's policies, oversight mechanisms, and initiatives regarding efforts to mitigate any adverse impact of its operations on the environment and the communities in which it operates. Companies that proactively mitigate and manage environmental risks are, in the Systems' view, better positioned to reduce legal and regulatory liabilities and promote stronger community and regulatory relationships, both to the benefit of shareowner value.

6.2 Climate Risk Mitigation and Greenhouse Gas Emission Reductions: *For*

Climate change presents regulatory, financial, and operational risks to individual companies and to the broader financial markets. The Systems support companies that proactively develop policies, initiatives, and objectives to mitigate risks related to climate change.

The Systems generally support requests for companies to disclose and quantify their exposure to climate-related risks and to assess the potential impact of government regulation on business operations and assets, including greenhouse gas emissions and carbon reserves, as applicable. The Systems also support reasonable requests for companies to define quantifiable targets to reduce greenhouse gas emissions and to publicly report on their performance against such goals. In assessing the reasonableness of the proposal, the Systems evaluate the quality of the company's current disclosures and the company's economic exposure to climate-related risks.

The Systems generally oppose overly prescriptive proposals that require a company to divest or discontinue its significant business operations or impose specific targets for its emissions reductions.

6.3 Water Risk and Stewardship: *For*

Sustainable economic growth for both individual companies as well as the broader market rely on responsible stewardship of finite natural resources, particularly water. As diversified investors, the Systems support reasonable efforts by companies to integrate sustainable water use policies and practices into global operations, including the utilization of water conservation technologies and processes to mitigate risks to business operations, reputations, and share value.

6.4 Cease or Discontinue Business Lines or Operations Due to Environmental Risk: *Against*

The Systems generally oppose requests for immediate discontinuation of a legal product line or business operation unless either that product line or operation poses compelling, catastrophic legal and economic risks to the company's long-term viability and the Systems' economic interests, or a viable alternative or replacement product has been demonstrated to enhance the company's value and such elimination would not financially harm the company.

6.5 Energy Efficiency and Conservation: *For*

The Systems generally support reasonable requests for companies to enhance operational efficiency and reduce operating costs by conserving energy or otherwise pursuing energy efficiency, including reporting to shareowners on energy efficiency initiatives. The Systems may oppose proposals requiring overly onerous or prescriptive targets or objectives.

6.6 Renewables: *For*

Companies that pursue cost-effective alternative energy sources, such as wind and solar power, may create strategic business advantages while minimizing the detrimental environmental impact of fossil fuel energy sources.

The Systems generally support reasonable requests for companies to assess and publicly disclose the feasibility of using or developing alternative energy sources, such as solar and wind power, and adopting and disclosing targets or objectives for the use of renewable energy sources.

The Systems generally oppose overly prescriptive proposals requiring a company to meet specific, defined targets for adopting renewable energy sources, absent a comprehensive evaluation of the economic benefits of the alternative energy source.

6.7 Proper Use and Handling of Toxics and Hazardous Materials: *For*

The Systems generally support reasonable proposals calling for a company to adopt policies and/or report on efforts to mitigate the risks of using or reducing exposure to toxic chemicals. The Systems assess proposals to phase out specific hazardous substances or materials on a case-by-case basis. The Systems may support requests to phase out or eliminate chemicals with a known track record, or where evidence suggests a strong cause for concern, for creating legal, reputational, and environmental liabilities to the detriment of shareowner value, such as chloro fluorocarbons (CFC's) and polyvinyl chlorides (PVC's).

6.8 Product Recycling: *For*

As part of promoting sustainable value on behalf of shareowners, the Systems believe companies should assess and seek to minimize potential environmental risks and liabilities that may result from inappropriate disposal of their products by end users.

The Systems generally support reasonable requests for companies to disclose efforts to enhance product recycling and minimize the risks of inappropriate product disposal. The Systems generally oppose overly prescriptive requests that unduly impose targets or specific methods by which companies must ensure safe product disposal or recycling, as well as requests that could reveal proprietary information.

6.9 Tobacco Advertising and Production: *Case-by-Case*

The Systems believe that it is in shareowners' economic interest for tobacco and tobacco-related companies to mitigate the legal, regulatory, and reputational risks inherent in the production and sale of a heavily regulated product.

The Systems generally support requests for tobacco and tobacco-related companies to assess and disclose the health impact and risks of their products, to adhere to reasonable standards of advertising, or to report or assess the impact of their advertising on consumer markets.

The Systems generally oppose proposals requesting that companies stop producing or selling tobacco or tobacco-related products. The Systems believe it is not in shareowners' economic interests to discontinue sales of a legal product.

6.10 Product Sales and Marketing: *Case-by-Case*

The Systems generally support freedom of speech. Advertising and sales of heavily-regulated products, such as tobacco and tobacco-related items, alcoholic beverages, guns and ammunition, and certain food products, particularly to minors, may, however, create reputational and regulatory risks for companies that may be detrimental to a company's economic value and performance.

The Systems may support reasonable requests for companies in heavily-regulated product markets to assess or report on the impact of their advertising on consumer segments or to adhere to reasonable, established standards of advertising.

The Systems generally oppose overly prescriptive proposals that would direct or restrict a company's sales or advertising, unless the proponent makes a credible case for potential detrimental economic impact on the company. The Systems also generally oppose proposals that may unduly impede free speech rights.

6.11 Product and Food Safety: *Case-by-Case*

The Systems believe that ensuring companies' product safety, including food and consumer goods, promotes shareowner value by reducing the risks of expensive recalls, litigation, and detrimental reputational impacts of unsafe products.

The Systems generally support reasonable proposals that request clear and accurate labeling or disclosure of a product's content, provided that the requested labeling or disclosure would not divulge trade secrets, unless the trade secret includes the presence of hazardous content; a report or assessment of the safety of a company's products and services; or to abide by recognized and credible standards of product safety. Additionally, the Systems generally support reasonable requests for accurate labeling of food products, including disclosing when products may contain genetically-modified organisms.

The Systems generally do not believe requests for companies to discontinue the sale of legal products are generally in shareowners' economic interests.

6.12 Gun Safety: *For*

In light of potential legal and regulatory liabilities, the Systems believe it is prudent for guns and ammunitions manufacturers to carefully examine safety policies and practices in order to deter gun violence and preserve firm value. The Systems generally support reasonable requests for guns and ammunitions manufacturers and related companies to report on policies and procedures to promote gun safety, assure only lawful sales, and prevent gun violence.

6.13 Equal Employment Opportunity and Non-Discrimination: *For*

The Systems support robust policies affirming equal employment opportunity and reasonable requests for companies to disclose and report on the implementation of such policies. Discrimination in employment based on race or ethnic origin, age, gender or sex (including pregnancy), national origin, religion, sexual orientation, gender identity, disability, veteran status, or other factors unrelated to work performance may undermine employee morale and productivity, limit the pool of qualified job candidates, and create legal and operational risks for companies.

The Systems promote equal employment opportunity throughout portfolio companies' global operations, as well as their supplier base. The Systems advocated the Sullivan Principles, established in 1977 by the Reverend Leon Sullivan, to promote equal opportunity and combat racial discrimination in South Africa under apartheid. The Systems also support the MacBride Principles, a set of nine principles founded in 1984 by Nobel Peace Prize winner Sean McBride, aimed at promoting equal opportunity for employment and deter religious discrimination in Northern Ireland. The Systems believe that global policies for non-discrimination, such as those enshrined in the Sullivan Principles and the MacBride Principles, are a means by which companies can promote equal employment opportunity, mitigate the legal and reputational risks of employment discrimination in local markets, and promote a meaningful peace that facilitates a stable economic and investment environment.

6.14 Human Capital Development: *For*

Human capital development encompasses a broad range of practices, including but not limited to employee training and development, fair labor practices, health and safety, responsible contracting, and diversity, both with respect to the company's own domestic and international employees as well as the employees of vendors throughout the global supply chain. Collectively or individually, a company's human capital management practices may impact company performance.

Accordingly, the Systems support clear board oversight and disclosure of material information addressing the role that a company's workforce – also known as the firm's human capital – plays in generating long-term value for shareowners.

The Systems generally support requests to disclose material information related to a company's strategies to develop, motivate, and retain a productive workforce in line with a company's business strategy, as well as to mitigate the risks or assess the impact of labor strife that may undermine firm performance. The Systems encourage effective employee engagement, fair compensation, adequate training and development, and suitable rates of retention at portfolio companies that are conducive to driving long-term value.

The Systems generally oppose employment policies and job requirements at portfolio companies that may infringe upon civil liberties, such as drug testing unless justifiable by probable cause or job hazards, credit checks, and health or fitness standards, that are unrelated to job performance.

6.15 Occupational Safety and Health: *For*

The Systems believe that companies that safeguard the health and safety of employees will better protect and promote long-term value. The Systems therefore encourage portfolio companies to abide by international health and safety standards as defined by the International Labor Organization and support reasonable requests for companies to assess and disclose internal compliance with stated safety and health standards.

6.16 Human Rights: *For*

Corporate violations of human rights in their domestic and international operations, as well as in their supply chains, have not only a human toll, but also create legal, operational, and reputational risks, such as loss of consumer confidence, that may negatively impact shareowner value.

The Systems generally support requests for companies to adopt robust human rights policies, founded upon internationally-recognized human rights standards, such as the United Nations Global Compact, the United Nations Guiding Principles on Business and Human Rights (also known as the "Ruggie Principles"), and the International Labor Organization. Such comprehensive human rights policies should incorporate consistent standards throughout a company and its supply chain and, where applicable, address issues such as child labor, prison labor, and human trafficking. Human rights policies should also include unequivocal labor rights, as outlined by the International Labor Organization, including the freedom of employees to form or join a union of their choosing, the right to collectively bargain compensation and working conditions, and equal pay protections.

The Systems also encourage human rights policies to apply to all operations and regions of operation, including indigenous communities, migrant or undocumented communities, and conflict zones. The Systems support board oversight and clear policies, procedures, and practices to assess and ensure compliance with a company's human rights policy.

The Systems generally support requests to assess and disclose the economic impact of human rights-related consumer or other boycotts and sanctions. The Systems generally oppose requests to discontinue the legal sale of products or services to specific markets or conflict zones.

6.17 Cybersecurity and Privacy: *For*

A company's use of electronic consumer data creates legal, reputational, and financial risks if companies' use of consumer data violates consumers' expectations of privacy, confidentiality, and freedom of expression or censorship. For example, some authoritarian governments have used the internet and related technologies to identify and repress political dissidents and restrict access to information, raising concerns regarding human rights, including the freedom of expression. Security breaches and otherwise failing to secure private consumer data, financial or otherwise, may create significant reputational, legal, and operational risks for a company. Moreover, the transfer or sale of consumer data may violate consumers' expectations as to a company's use of such data.

The Systems generally support reasonable proposals that seek board oversight and enhanced disclosure of policies and practices on how consumer data is used and protected, and to assess risks to human rights and firm value. In evaluating reasonableness, the Systems consider applicable market-specific laws, regulations, and sanctions that may be imposed on the company and the company's current policies and disclosures, and whether the proposal is overly prescriptive or could facilitate the use of the internet for hate speech or the illicit distribution of regulated products, such as tobacco or guns.

The Systems generally oppose resolutions that would prescribe subjective review of media content, may prompt censorship, or otherwise may unduly infringe upon freedom of expression.

6.18 Military and Weapons Issues: *Case-by-Case*

A portfolio company's involvement in the research, production, and distribution of military weaponry and defense systems may create certain reputational, regulatory, and operational risks related to the products' safety and end-use. The Systems review proposals pertaining to weaponry and defense systems with a view that portfolio companies that actively disclose and have policies in place to monitor risks will better protect shareowner value.

To mitigate such risks, the Systems generally support reasonable proposals requesting disclosure of a firm's involvement in the research, production, and distribution of military weaponry, such as nuclear weaponry and missile defense systems, including assessment of the safe handling thereof. In assessing the reasonableness of a proposal, the Systems take into account whether the request would place the company at a competitive disadvantage or violate the terms of a company's defense contracts.

The Systems generally oppose proposals calling to discontinue research, production, or distribution of military weaponry and defense systems. The Systems also generally oppose proposals requiring conversion of military production facilities to civilian use. The Systems believe that public policy on defense systems should be deliberated and determined through the government process.

6.19 Animal Welfare: *Case-by-Case*

The Systems support policies and practices that promote the humane treatment of animals by portfolio companies. Companies with proper animal care practices, in the Systems' view, are better positioned to avoid legal, operational, and reputational risks resulting from animal abuse and therefore will better safeguard shareowner value.

The Systems generally support reasonable proposals requesting disclosure of the use of animals in a company's research and product development, adoption of animal use-and-care policies, and the application of a company's animal care policy to its subcontractors and suppliers. The Systems generally favor reporting on the feasibility of replacing animal testing for household and consumer products. The Systems also support humane treatment of animals in food production, for example in animal husbandry and the food supply chain.

The Systems generally do not support requests to cease or eliminate animal testing where viable alternatives are not available.

6.20 Health Care Policy: *For*

The Systems believe that individual firms' profitability and performance and the broader economy may benefit from accessible, quality, cost-efficient, and equitable employee health care. Efficient and widely-available employee health care may promote economic competitiveness at individual companies by reducing health care costs from firm-level competition, enhance productivity by facilitating good health and reducing employee absenteeism, and expand consumer markets for health care providers and pharmaceutical companies' products. Accordingly, the Systems generally support reasonable requests for companies to review and publicly report on health care policies and practices.

6.21 Access to Health Care and Medicines: *For*

Broad and equitable access to health care may expand the consumer base for individual firms and promote stable conditions for economic growth in global markets. The Systems recognize that pandemics in numerous regions of the world undermine economic growth.

The Systems generally support reasonable requests for companies to assess and report on legal, regulatory, and marketing risks of health care policies and practices, such as patent use and pharmaceutical pricing strategies, and/or their impact on long-term firm value.

The Systems also generally support proposals that promote equitable access to reproductive health care, including the research thereof, and conversely, generally oppose proposals that seek to curtail access to legal health care rights and provisions.

The Systems believe it is not the role of shareowners to prescribe pricing policies for portfolio companies' products, including pharmaceuticals. Accordingly, the Systems generally oppose overly prescriptive requests to restrict or reduce health product prices.

6.22 Political Contributions and Lobbying Disclosure: *For*

Corporate expenditures on lobbying and contributions in support of, or opposition to political candidates or campaign initiatives create certain legal, compliance, and reputation risks.

The Systems therefore generally support reasonable requests that boards exercise oversight and transparency of corporate political spending by regularly reviewing and publicly disclosing all corporate assets spent on political expenditures. Board oversight and transparency promote the alignment of corporate political involvement with a company's business strategy and interests, help mitigate the risks inherent in corporate political participation, and safeguard corporate assets from being deployed under undue influence of individual corporate officers' personal political preferences.

The Systems generally oppose proposals that would prohibit corporate political spending or subject corporate political contributions to shareholder approval.

The Systems review other political spending proposals on a case-by-case basis, taking into consideration the nature of the request and how it aligns with the Systems' view on political participation outlined above, and the company's current policies, practices, and disclosures, including any history of campaign finance violations.

6.23 Charitable Contributions: *Case-by-Case*

The Systems believe that corporate philanthropy is a customary business practice and consistent with a corporation's interests in furthering stakeholder relations and community development.

The Systems generally support board oversight and transparency of significant uses of corporate assets to philanthropic or charitable causes.

The Systems generally oppose overly prescriptive proposals related to charitable contributions, including prohibitions on the use of corporate assets to any charitable, educational, or other similar organizations, or proposals that would establish, direct, or restrict corporate contributions to particular organizations, causes, or scholarships.

6.24 Responsible Lending Practices: *For*

The Systems generally support reasonable requests to financial service providers to ensure board oversight and publicly report on the risk profile of their financial products, including promoting fair lending practices and avoiding usurious, or "predatory," lending that may undermine consumer loyalty and create reputational and regulatory risks, to the detriment of long-term firm value.

6.25 Risk Mitigation of Financial Products and Practices: *Case-by-Case*

Companies' use, exposure to, or marketing of financial products and services may expose the company to certain regulatory, legal, and economic risks. The Systems may support reasonable requests to evaluate, disclose, or establish procedures to mitigate the risks of certain financial products or procedures. The Systems generally oppose requests to disclose or report proprietary or confidential information or otherwise divulge information that would place the company at a competitive disadvantage.

6.26 International Finance and Trade Issues: *Case-by-Case*

The Systems assess proposals related to international finance and trade issues on a case-by-case basis to determine whether they are consistent with the long-term interests of the company. The Systems may support reasonable requests to disclose or assess lending standards and/or to assess the impact of international trade agreements on a company's business strategy.

The Systems generally oppose overly prescriptive requests to define lending criteria or forgive debt.

The Systems generally abstain if inadequate information is presented to assess the proposal.

III. Appendix

Council of Institutional Investors (CII) Independent Director Definition

Introduction

A narrowly drawn definition of an independent director (coupled with a policy specifying that at least two-thirds of board members and all members of the audit, compensation and nominating committees should meet this standard) is in the corporation's and shareowners' financial interest because:

- ❖ Independence is critical to a properly functioning board;
- ❖ Certain clearly definable relationships pose a threat to a director's unqualified independence;
- ❖ The effect of a conflict of interest on an individual director is likely to be almost impossible to detect, either by shareowners or other board members; and
- ❖ While an across-the-board application of any definition to a large number of people will inevitably miscategorize a few of them, this risk is sufficiently small and is far outweighed by the significant benefits.

Independent directors do not invariably share a single set of qualities that are not shared by non-independent directors. Consequently no clear rule can unerringly describe and distinguish independent directors. However, the independence of the director depends on all relationships the director has, including relationships between directors, that may compromise the director's objectivity and loyalty to shareowners.

Boards have an obligation to consider all relevant facts and circumstances to determine whether a director should be considered independent. These considerations include the director's years of service on the board. Extended periods of service may adversely impact a director's ability to bring an objective perspective to the boardroom.

Basic Definition of an Independent Director

An independent director is someone whose only nontrivial professional, familial or financial connection to the corporation, its chairman, CEO or any other executive officer is his or her directorship. Stated most simply, an independent director is a person whose directorship constitutes his or her only connection to the corporation.

Guidelines for Assessing Director Independence

The notes that follow are supplied to give added clarity and guidance in interpreting the specified relationships. A director will not be considered independent if he or she:

A. Is, or in the past five years has been, or whose relative is, or in the past five years has been, employed by the corporation or employed by or a director of an affiliate;

Notes: *An "affiliate" relationship is established if one entity either alone or pursuant to an arrangement with one or more other persons, owns or has the power to vote more than 20 percent of the equity interest in another, unless some other person, either alone or pursuant to an arrangement with one or more other persons, owns or has the power to vote a greater percentage of the equity interest. For these purposes, joint venture partners and general partners meet the definition of an affiliate, and officers and employees of joint venture enterprises and general partners are considered affiliated. A subsidiary is an affiliate if it is at least 20 percent owned by the corporation.*

Affiliates include predecessor companies. A "predecessor" is an entity that within the last five years was party to a "merger of equals" with the corporation or represented more than 50 percent of the corporation's sales or assets when such predecessor became part of the corporation.

"Relatives" include spouses, parents, children, step-children, siblings, mothers and fathers-in-law, sons and daughters-in-law, brothers and sisters-in-law, aunts, uncles, nieces, nephews and first cousins, and anyone sharing the director's home.

B. Is, or in the past five years has been, or whose relative is, or in the past five years has been, an employee, director or greater-than-20-percent owner of a firm that is one of the corporation's or its affiliate's paid advisers or consultants or that receives revenue of at least $50,000 for being a paid adviser or consultant to an executive officer of the corporation;

Notes: *Advisers or consultants include, but are not limited to, law firms, auditors, accountants, insurance companies and commercial/investment banks. For purposes of this definition, an individual serving "of counsel" to a firm will be considered an employee of that firm.*

The term "executive officer" includes the chief executive, operating, financial, legal and accounting officers of a company. This includes the president, treasurer, secretary, controller and any vice-president who is in charge of a principal business unit, division or function (such as sales, administration or finance) or performs a major policymaking function for the corporation.

C. Is, or in the past five years has been, or whose relative is, or in the past five years has been, employed by or has had a five percent or greater ownership interest in a third-party that provides payments to or receives payments from the corporation and either: (i) such payments account for one percent of the third-party's or one percent of the corporation's consolidated gross revenues in any single fiscal year; or (ii) if the third-party is a debtor or creditor of the corporation and the amount owed exceeds one percent of the corporation's or third party's assets. Ownership means beneficial or record ownership, not custodial ownership;

D. Has, or in the past five years has had, or whose relative has paid or received more than $50,000 in the past five years under, a personal contract with the corporation, an executive officer or any affiliate of the corporation;

Notes: *CII members believe that even small personal contracts, no matter how formulated, can threaten a director's complete independence. This includes any arrangement under which the director borrows or lends money to the corporation at rates better (for the director) than those available to normal customers—even if no other services from the director are specified in connection with this relationship;*

E. Is, or in the past five years has been, or whose relative is, or in the past five years has been, an employee or director of a foundation, university or other non-profit organization that receives significant grants or endowments from the corporation, one of its affiliates or its executive officers or has been a direct beneficiary of any donations to such an organization;

Notes: *A "significant grant or endowment" is the lesser of $100,000 or one percent of total annual donations received by the organization.*

F. Is, or in the past five years has been, or whose relative is, or in the past five years has been, part of an interlocking directorate in which the CEO or other employee of the corporation serves on the board of a third-party entity (for-profit or not-for-profit) employing the director or such relative;

G. Has a relative who is, or in the past five years has been, an employee, a director or a five percent or greater owner of a third-party entity that is a significant competitor of the corporation; or

H. Is a party to a voting trust, agreement or proxy giving his/her decision making power as a director to management except to the extent there is a fully disclosed and narrow voting arrangement such as those which are customary between venture capitalists and management regarding the venture capitalists' board seats.

CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
SCOTT M. STRINGER

New York City Retirement Systems Ethics and Compliance Policy

PURPOSE OF THE POLICY

The New York City Employees' Retirement System, the Teachers' Retirement System for the City of New York, the New York City Police Pension Fund, the New York City Fire Pension Fund, and the New York City Board of Education Retirement System (collectively the "Systems"), in furtherance of the management and investment of the assets of the Systems, have determined to establish a comprehensive written Ethics and Compliance Policy (the "Policy") for investment consultants (the "Consultants") and investment managers (the "Managers") that do or seek to do business with the Systems. The Boards of Trustees of the Systems (the "Boards") have requested that the Bureau of Asset Management ("BAM") of the New York City Office of the Comptroller implement the Policy on behalf of the Systems.

The purposes of the Policy are:

- to identify and ensure disclosure of any potential risk, conflicts of interest and/or other ethical issues both before and after entering into contracts or transactions with the Consultants' and the Managers' firms;
- to ensure that proper internal compliance controls are in effect at the Consultants' and Managers' firms, so as to reduce the risk to the Systems;
- to provide a protocol for ensuring that Consultants and Managers are in compliance with the federal securities laws and the rules of the U.S. Securities and Exchange Commission ("SEC"), and other applicable law;
- to obtain timely disclosure from the Consultants and the Managers as to actual or alleged non-compliance with the Consultants' and the Managers' internal controls or with applicable law.

A Consultant or Manager which discloses a conflict of interest or other violation of this Policy to BAM must refrain from giving advice or making decisions about any matters affected by the conflict of interest or other violation of this Policy, until and unless authorized by the Boards.

ANNUAL CERTIFICATION OBLIGATION OF CONSULTANTS AND MANAGERS

Annually, Consultants and Managers shall complete and submit an Annual Certification, Compliance Questionnaire, and relevant documents (collectively, the "Annual Statement") to BAM.

Consultants and Managers, in their Annual Statements, must further disclose all information specified in sub-sections A and B below. Although the firm's Form ADV or other SEC filings may be provided as a supplement, the firm must make full and complete disclosure in the Compliance Questionnaire itself (and provide further explanation in a separate document if necessary).

A. Conflicts

A conflict of interest exists for a Consultant or Manager whenever the Consultant or Manager has a direct or indirect pecuniary interest or a relationship with a third party (without regard to whether the relationship is direct, indirect, personal, private, commercial, or business), and the interest or relationship could diminish the Consultant's or the Manager's independence of judgment in the performance of the Consultant's or the Manager's responsibilities to the Systems.

Consultants and Managers must promptly disclose conflicts of interest which may also include: relational conflicts, compensation conflicts and conflicts relating to the Systems' other Advisors.

B. Compliance with Law

Managers and Consultants, as applicable, shall further certify compliance with, and provide any disclosures required by, the following:

1. *Managers/Consultants Must Have a Code of Ethics*
Every Manager/Consultant must have a robust Code of Ethics that satisfies the requirements of Rule 204A-1 under the Investment Advisers Act, regardless of whether the Manager/Consultant is required to register under that Act.

2. *Managers/Consultants Must Have Third-Party Review of Controls*
The Systems require that the Managers and Consultants conduct a third-party review of their compliance program for sufficiency and effectiveness. Each Manager/Consultant must certify that it has a periodic review of its Compliance manual and compliance controls by an independent third-party at least once every three years. The periodic review should mirror that under Rule 206(4)-7 of the Investment Advisers Act of 1940. Internal review by the General Counsel, Chief Compliance Officer, or similar official of the firm or any of its Affiliates does not qualify as an independent review.

Note: For the purpose of this Policy, the term "*Affiliate*" is defined as any person that controls, is under common control with, or is controlled by the Manager. The term "control" is defined as the power to direct or cause the direction of the management and policies of the applicable entity through ownership of voting securities or beneficial interests, by contract or otherwise. Persons or entities having control include any Manager, managing member, manager or executive officer of the applicable entity, and any direct or indirect holder of a 10% or greater ownership interest in the Manager, or such applicable entity. An Affiliate includes a parent, subsidiary, debtor, creditor, entity under common ownership, entity in which the Manager/Consultant has invested or which has an investment in the Manager/Consultant or entity with which the Manager/Consultant has a strategic alliance.

3. *Managers/Consultants Must Provide Updates on Government Investigations and Enforcement Actions*

Managers/Consultants must, unless prohibited by law, promptly notify BAM in detail with respect to the commencement of, status of, or significant developments in, any government investigation of the Manager/Consultant or its employees in connection with any potential violations of applicable laws, or any enforcement action in connection therewith.

4. *Managers/Consultants Must Complete NYC Disclosure Requirements*
   Manager/Consultant must submit to the Comptroller's Office completed due diligence related disclosure forms prior to consideration of the investment manager's fund by the Systems.

NON-COMPLIANCE WITH THE POLICY: BOARD REPORTING REQUIREMENTS

To the extent BAM receives or obtains information indicating that a proposed or existing Manager/Consultant is substantially out of compliance with the Policy and/or substantially in violation of applicable law, BAM will report such information to the Board for whatever action the Board deems appropriate, which may include termination of the Manager/Consultant.

DISSEMINATION OF THE POLICY TO MANAGER/CONSULTANT

1. Current Manager/Consultant: BAM shall provide copies of the Policy to all current Managers/Consultants annually and upon any amendment passed by the Boards that affects Managers/Consultants.

2. Prospective and New Manager/Consultant: Manager/Consultant seeking to do business with the Systems will be required to certify compliance with the Policy, and provide the disclosures required by the Policy, at the time they submit their response to a Request for Proposals ("RFP") or, in the event that there is no RFP process, during the selection process.

Adopted: Effective May 2005
Amended: Effective October 2019

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM SECURITIES LITIGATION PROTOCOL

I. Objectives

TRS Board of Trustees objectives in choosing an active role in domestic securities litigation include the following:

a. Preservation of plan assets and collection of all amounts due to TRS;

b. Maximizing the net recovery to TRS in individual actions and class actions; and

c. Effecting corporate governance reforms, when appropriate.

TRS Board of Trustees objectives in choosing an active role in foreign securities recovery efforts also include preservation of plan assets and maximizing net recoveries with the awareness that a recovery is not generally available without active participation.

Out of the enormous volume of securities cases being filed, TRS Board of Trustees will consider those where the amount of loss sustained by TRS and attributable to some type of wrongdoing is of a magnitude to justify the time, expense and effort involved in being lead plaintiff in a class action or in filing an independent action either in state or federal court, or in pursuing some other recovery alternative. The Law Department as TRS' legal representative and the Comptroller's Office as its investment advisor will work together in the best interests of TRS to recommend those cases best suited for TRS' active participation.

II. Retention of Counsel

On an as-needed basis, Requests for Proposals ("RFPs") shall be issued by the Law Department, as counsel to TRS, to retain a pool of law firms that will be available to evaluate and litigate domestic securities claims. Each firm selected must have a recognized expertise in the area of securities litigation. Special attention will be paid to experience in class actions, especially under the Private Securities Litigation Reform Act ("PSLRA"), experience as counsel to other institutional investors (preferably other public pension funds), a demonstrated understanding of the special responsibilities of a public fund trustee and how public employees' retirement systems function, as well as experience with corporate governance reforms.

The RFP Evaluation Panel, which will be established for each RFP and identified to the Trustees, shall evaluate each firm that responds to the RFP based on criteria set forth in the RFP. Following an evaluation of the content of the proposals by the RFP Evaluation Panel, the Law Department will provide the Trustees with a report which sets forth: 1) the evaluation criteria and weighting as established in the RFP, 2) the names of the firms that respond to the RFP, 3) the pre-interview ratings of all responding firms, and 4) the names of all firms determined to be eligible for consideration and invited to interview. Trustees will be afforded the opportunity to review and comment on the report prior to the interview process. The Law Department will advise the Trustees of the date, time and place each firm will be interviewed and will make such interviews open to any Trustee to attend. Subsequent to the interviews, the Law Department will issue a memorandum with the Evaluation Panel's recommendations for which law firms should be retained for the pool. The Trustees will be afforded an opportunity to comment on the recommended pool.

III. Identification of Potential Cases

The first step in this process is to identify those cases or claims ("potential cases") that would warrant TRS' active involvement in securities litigation. Early identification of potential cases allows the Law Department and the Comptroller's Office more time to analyze each case and recommend strategies, and allows TRS Board of Trustees more time to respond to any such joint recommendations. To meet this goal, the Comptroller, as requested by the Law Department for litigation-related purposes, may authorize the custodial bank to provide information on securities trading data to the Law Firms retained by the Law Department to represent the Funds. The Law Department's contracts with the Firms will require them to maintain confidentiality and security of the securities trading data by employing best practices approved by the Law Department and assented to by the Comptroller's Office. The Law Firms should be able to provide the Law Department and the Comptroller's Office with loss estimates for the Funds within days of a federal securities class action being filed, early enough in the 60-day statutory time period for filing a lead plaintiff motion to allow for careful analysis of potential cases by the Law Department and the Comptroller's Office and a thoughtful consideration by TRS Board of Trustees of any recommendations from the Law Department and the Comptroller's Office.

IV. Review and Analysis of Potential Cases

A. Joint Recommendation to TRS Board of Trustees from the Law Department and the Comptroller's Office

The Law Department will consult with pool Counsel and will fully analyze all relevant legal issues. The Law Department, in conjunction with the Comptroller's Office, might consider, among other things, the following in issuing a recommendation to the Trustees:

a. What was the alleged wrongdoing? What are the legal claims?

b. What is the degree to which TRS Board of Trustees is offended by the wrongdoing?

c. What is the amount of TRS' loss and the Funds' losses collectively?

d. What are the defenses? What are the merits of the case? Is TRS likely to prevail?

e. Are the losses collectible? What is the defendant's financial condition? Are insurance carriers involved? How many defendants will there be?

f. Will there be other consequences if TRS wins or loses? For instance, will success bankrupt the company or adversely affect other investments that TRS has in the same company?

g. Are there others who are more appropriate to serve as lead plaintiff? (In which case, TRS may defer to them or seek to join them as co-lead plaintiff.)

h. What economic and administrative costs will be involved? (Typically, all out-of-pocket costs should be advanced by Litigation Counsel who accepts the case on a contingency basis.)

i. Does TRS have a separate claim which is not covered by the class complaint or are there unusual facts that suggest a benefit to independent non-class litigation?

j. Would failure in the litigation adversely affect TRS? For example, might the litigation result in the disclosure, subject to a protective order, of material non-public information about the company that could interfere with TRS' future anticipated trading strategy? Are there other possible adverse consequences?

k. Should TRS Board of Trustees and the other Funds consider seeking to serve as co-lead plaintiff with other parties?

l. Is the suit a nuisance suit? Should TRS Board of Trustees consider supporting the company in a motion to dismiss?

m. Are there any potential conflicts with other members of the class?

n. Is there a need for corporate governance changes? Are there individual actors that need to be pursued to deter future wrongdoing?

o. What actions should be taken regarding securities issued in foreign jurisdictions where there may be no automatic recovery as a class member?

The Law Department, in conjunction with the Comptroller's Office, will then make a written recommendation to TRS Board of Trustees whether or not to pursue a particular case, and, if feasible, identification of the pool firm that will serve as counsel or the entity that will pursue claims arising from losses from foreign securities. If time permits, such a recommendation would be presented in person by a representative of the Law Department who would be available to answer questions the Trustees may have. Should the Law Department and the Comptroller's Office disagree as to the recommendation, a memorandum shall be submitted by each to explain its position. The Law Department shall be responsible for soliciting and obtaining the Comptroller's Office's memorandum to present to the Trustees, along with the Law Department's recommendation. The TRS Board of Trustees will make the final determination on how to proceed.

B. Litigation Counsel

Litigation Counsel will be selected by the Law Department based on, among other things, suitability for a particular matter (including, for example, their expertise in the jurisdiction in which a case is being brought and expertise in the particular type of suit). For domestic litigation approved by TRS, the Law

Department will invite all pool members to submit written proposals for handling the litigation. For foreign litigation approved by TRS, the Law Department will determine what vehicles are available for litigation, so that it can solicit competitive proposals where possible and in TRS' interest. The proposal will focus on the litigation factors discussed in Section V.A of this Protocol and propose the most appropriate strategy for conducting the litigation. The proposal will also include a fee schedule. Selection of counsel for any given case will be based on an evaluation of the litigation strategy proposed, the suggested fee and the expertise and resources of the firm.

V. Interaction with TRS

The Law Department will issue a report by the 15th of each month to TRS Board of Trustees that will include significant potential cases being evaluated as well as the status of pending securities litigation. TRS Board of Trustees will make the final determination on whether to proceed with a particular securities law case and whether to settle on a proposed recovery.

The Comptroller's Office shall submit to the Trustees and to the Law Department, in a manner to be agreed upon, a report on the status of claims made in domestic securities class actions where TRS is not an active litigant. The Law Department shall designate a contact attorney for Trustees to contact for information regarding securities litigation.

TRS' Counsel shall serve as liaison between the Trustees and the Law Department on securities litigation issues.

TEACHERS' RETIREMENT

SYSTEM OF THE CITY OF NEW YORK

INVESTMENT POLICY STATEMENT

QUALIFIED PENSION PLAN

Adopted June 15, 2006

Amended through May 2019

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https://www.unpri.org/about/the-six-principles

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Preface

EXECUTIVE SUMMARY

The following Investment Policy Statement (IPS) addresses the key elements involved in the Teachers Retirement Board's (the "Board") oversight of the Qualified Pension Plan (the "Fund"). Most importantly, the Board's investment objective is to ensure that the investment portfolio, in combination with employee and employer contributions, allows the TRS to meet current and future benefit obligations and plan expenses. The IPS is the document within which policies and practices are defined that guide the Board and other key parties in the management of the Fund in a manner consistent with this objective, fiduciary duty and with the Board's principles and beliefs.

The IPS provides detail regarding policies and practices that help to ensure that key principles such as a focus on appropriate fees, a commitment to diversity, and attention to environmental, social and governance (ESG) factors in the investment portfolios are prioritized in the management of the Fund. Key aspects of the management of the Fund are discussed including the following.

- Roles and responsibilities of key parties and service providers: Oversight and management of the Fund is led by the Board, but involves a wide range of individuals, agencies and service providers acting at the Board's direction. The IPS describes how those who contribute to these efforts including Board members, consultants, investment managers, the Office of the Comptroller (OTC), the master custodian and others are identified or retained as well as their responsibilities and authorities.
- Eligible investments and approved asset classes: The Board seeks to invest the Fund to maintain an appropriate level of diversification. As a result, the Fund invests in a very broad range of global capital markets, both public and private. The IPS provides guidance regarding which asset classes are approved for investment along with relevant details regarding the structuring, benchmarking and restrictions associated with specific asset class holdings. Each asset class allocation has a primary role to play within the Fund and asset classes are organized into categories describing this role: Growth, Deflation Protection, Inflation Protection and Economically Targeted Investments (ETI).
- Portfolio asset allocation and implementation: The Fund's asset allocation policy which provides target asset class allocations, rebalancing ranges and implementation timelines is a key determinant of the Fund's expected and realized risk and return. The IPS describes how asset allocation policy is established, monitored and reviewed on an ongoing basis for the Fund. This policy is then implemented through the retention of external asset managers. The selection of and ongoing evaluation of asset managers involves due diligence, monitoring and reporting processes which vary by asset class and strategy and are outlined in the IPS.
- Ongoing monitoring and reporting. On an ongoing basis, individual mandates, asset class composites and the entire Fund are monitored by OTC and consultants to confirm that

expectations regarding performance and risk characteristics are being met. In addition, OTC and consultants monitor portfolio managers' investment manager organizations, personnel and investment processes to confirm that these firms continue to be appropriate managers for the Fund. The Board receives regular reporting on all these matters in order to carry out its oversight responsibilities.

- Corporate governance: The Board has important fiduciary responsibilities regarding the oversight of corporate governance practices of the companies in which the Fund invests. The IPS provides detail regarding how these responsibilities are carried out including the role of the Proxy Sub-Committee and the OTC's responsibilities in executing the Board's corporate governance policies through its voting of proxies, review of proxy voting guidelines and regular reporting to the Board on these matters. In addition, the Board may decide to take an active role in securities litigation to effect corporate governance reforms, when it deems it appropriate.

The IPS includes significant detail on the above topics as well as other relevant matters. In addition, the Appendices contain additional specific policies which have been approved by the Board and which govern certain areas of its oversight responsibilities such as the ETI Policy and the Securities Litigation Protocol.

Section I. PURPOSE OF THE INVESTMENT POLICY STATEMENT

The Teachers Retirement Board ("Board") of the Teachers' Retirement System of the City of New York ("TRS") adopts a written, comprehensive and integrated Investment Policy Statement ("IPS") in furtherance of the management and investment of the assets of the Qualified Pension Plan (the "Fund"). This Fund does not include the assets of the Variable Annuity Programs.

The IPS sets forth the investment objectives and philosophy of TRS investment program, as well as the assignment of investment policy roles.

STATEMENT OF INVESTMENT BELIEFS

TRS is an organization, founded in 1917, which administers and invests New York City teachers', pedagogical employees' and school related personnel's wages deferred for retirement. The public sector employees who participate in our system are devoted not only to the students of the City of New York, but to equality, economic and social justice, and workers' rights. The following investment beliefs provide the foundation for the exercise of the TRS Board's fiduciary responsibilities. Our ultimate goal is to provide secure and sustainable pensions to our members and beneficiaries.

We believe that a long-term investment horizon provides benefits and challenges:

- This allows the Funds to take on a prudent level of market and illiquidity risk to achieve return objectives.
- This also encourages consideration of factors such as environmental, social and governance ("ESG") which can have a material impact on long term investment performance.
- We favor strategies, managers, companies, and countries with strong human capital practices characterized by standards of good conduct, including fair labor practices, health and safety, responsible contracting, and diversity.
- Climate change poses risks and opportunities to our investment portfolio. We seek to mitigate the risks, take advantage of opportunities, and reduce the contributions our investments make to climate change.
- A long-term investment horizon requires that the portfolio structure be mindful of long-term global economic trends.

We believe that strategic asset allocation is the primary determinant of long-term total portfolio risk and return:

- Although strategy and manager selection are important contributors to total portfolio results, particularly in private market strategies, the Funds' exposure to market risks, including equity risk, interest rate duration, currency, etc. will dominate the total portfolio's long-term results.
- Given the difficulty of predicting investment results in any given market or time-period, fund diversification across time periods, geography and markets is a fundamental aspect of the long-term asset allocation policy.
- Strategic asset allocation should be periodically reconsidered in the context of changing market conditions, changes in the forecast liabilities and other significant inputs.
- In the event of extreme market risks or opportunities, shorter-term or more tactical modifications of the long-term asset mix should be considered.
- A wide variety of risks should be considered in the asset allocation and investment selection processes including but not limited to market risk, operational risk, illiquidity risk, and reputational risk.

We believe that capital used to pay expenses and fees is an asset of the Funds and should be deployed in an effective, transparent, and judicious manner:

- We favor the use of indexing to implement public market investment strategies, except in those cases in which a compelling case can be made that active management can reap incremental benefits for the Funds.
- We believe that active management fees should be structured to take advantage of the System's scale and to align interests between the System and the manager.
- Manager, asset class and total fund fees should be consistent with objectives, realized results, and reasonable expectations and be periodically reviewed.

We believe that the success of the System's investment programs requires the effective collaboration of a variety of competencies including:

- Well defined and implemented investment policy and beliefs which are aligned with investment practices
- Thoughtful Board oversight and ongoing trustee education
- The retention of highly competent, effective staff and best-in-class managers, partners, and advisors who are responsive and transparent
- Operational excellence and continuous improvement

IPS PRINCIPLES

A. Fees

TRS feel strongly that all external managers should have compensation plans and disclosure policies that are aligned with the interests of TRS pension beneficiaries. To that end, the TRS trustees ask that BAM, as their investment advisor, endeavor to limit external management contracts to those vendors who agree to performance compensation plans that keep fees below average for comparable funds until measurable value added has been delivered to fund beneficiaries. Furthermore, managers should be completely transparent with regard to all charges being assessed for their services. Exceptions to these board expectations must be explicitly highlighted in any manager recommendation to Trustees.

1. Alignment of interests

There shall be an alignment of interests between General Partners and investors (General Partner investment relative to contemplated commitment, waterfall, treatment of transaction fees, clawbacks and lookbacks, operating budget, transparency, etc.).

2. Reject above-market fees

Terms and conditions must be appropriate relative to similar investment opportunities, including fee and governance provisions. TRS will reject investment with above-market fees relative to similar investments, taking into consideration all factors relevant to a prudent investment analysis.

3. Institutional Limited Partners Association (ILPA)

The Board requires Institutional Limited Partners Association (ILPA) Fee Reporting and Capital Call & Distribution templates from all private market managers. The Board views the ILPA Reporting Template as the standard for collecting fee and expense data for private market funds.

B. Diversity

The Board is dedicated to expanding exposure to top performing fund managers that demonstrate exceptional potential and are committed to diversity in their investment decision-making process, ownership structure and compensation and profit sharing policies.

1. Diverse Practitioners

The Board believes that diverse professionals and decision-makers contribute to organizational quality and economic performance. The Board specifically believes, as has been demonstrated empirically, that:

- Diversity is positively correlated with stronger financial performance and lower volatility and risk.
- Diversity improves decision-making and prevents groupthink.
- Diverse decision-makers can add long-term value and increase returns.
- Diversity creates competitive advantage based on diverse perspectives and background.
- Commitment to diversity can decrease litigation and regulatory risk.

It is the policy of the Board to recognize and seek the value and competitive advantage added to organizations by diversity in decision-making and the workforce and integrate consideration of diversity factors in the selection, evaluation and monitoring of investment managers and services providers, consistent with fiduciary duty. The Board also seeks to promote consideration of diversity in investment decision-making to improve performance broadly in the industry.

2. MWBE and Emerging Managers

The Board seeks to access unique and diverse investment opportunities, including small Minority and Women-owned Business Enterprise (MWBE) fund managers, and to foster the growth and development of successful managers with whom it invests across all asset classes. By investing with managers who actively cultivate diversity in their organizations, offer diversification of talent and strategies and provide appropriate and competitive risk-adjusted rates of return, we seek to deliver superior long-term, risk-adjusted investment returns to the Fund.

The Emerging Manager Program seeks managers that meet the following minimum criteria:

- Experienced investors that are capable of generating competitive risk- adjusted returns and manage funds which may have shorter track records than more established managers.
- Institutional quality operations with established front/back office, systems and risk management; which may be in-house or outsourced to 3rd party services providers.
- Broad institutional capital base with significant GP commitment, where appropriate.

C. Responsible Contractor Policy (RCP)

The Responsible Contractor Policy (RCP) is designed to ensure that contractors, investors, managers, consultants, or other participants selected by TRS take prudent and careful action in accordance with the RCP. TRS, through the RCP, supports and encourages fair wages and fair benefits for workers employed by its managers, contractors and subcontractors, subject to fiduciary principles concerning duties of loyalty and prudence, both of which further require competitive returns on TRS real estate and infrastructure investments. Use of the RCP also provides assurance that there is sufficient flexibility to address investment risks and returns while using responsible contractors. Based on provisions set forth in the RCP, firms will report periodically on their compliance with the RCP (Appendix 1).

D. ESG

The Board believes that environmental, social and corporate governance (ESG) issues can affect the performance of investment portfolios over time and that applying the Principles for Responsible Investment may better align TRS' investments with the broader interests of society. (See Appendix 2.)

Section II. INVESTMENT POLICY ROLES

A. Teachers' Retirement Board

TRS is administered by the Board, which is comprised of seven members each of whom may vote, pursuant to the New York City Administrative Code, as described below.

1. Two Board members are appointed by the Mayor. One of these members must also be a member of the Panel on Education Policy.
2. The Comptroller.
3. Three Teacher-Members are elected to the Board by the members of TRS.
4. The Chair of the Panel on Education Policy.

Board members or the appointing official may designate alternate representatives as authorized by law.

The Board shall elect from its membership a chair.

Each act of the Board requires the concurrence of the Comptroller or of one member appointed by the Mayor, as well as a member elected by the TRS membership and at least two other members of the Board.

The Board, as a fiduciary, is responsible for the oversight of the Fund. Responsibilities of the Board include the following:

- Establish and adopt, from time to time, written investment policies, including delegations of authority, desired risk levels, investment time horizons, and proxy voting policies. The written investment policies will guide the management of the Fund consistent with the

Fund's investment goals and objectives.

- Adopt an appropriate asset allocation strategy that diversifies assets in a manner consistent with the Board's risk/return objectives. The investment of the Fund's assets is governed by federal, state and local law. The Board may invest in securities and other eligible investments consistent with New York State Banking Law, New York State Retirement Social Security Law (RSSL), and other applicable laws and rules, subject to applicable restrictions.

- Approve an Annual Implementation Plan, developed by the OTC, to implement the Board's asset allocation strategy and investment goals.

- Consider and approve appropriate investment strategies including securities lending.

- Approve the retention of the Fund's actuary.

- Approve the manager structure for implementation of investment strategies, including such factors as manager style and active vs. passive (indexed) management approaches. Select consultants and managers to implement the investment strategies.

- Approve the commencement of securities litigation, its strategy, and settlement.

- Monitor the performance of Fund assets as well as the investment activities of all managers and investment consultants as they affect Fund assets.

- Approve reasonable and necessary investment expenses to acquire, manage and protect Fund assets.

B. Comptroller

Under the New York City Administrative Code, the Office of the Comptroller ("OTC") serves as custodian for TRS' Fund assets. As custodian, the OTC performs activities including:

- Selection of one or more custody banks, including a Master Custodian for the safekeeping of TRS' Fund assets, and monitoring of the performance of the custodians.

- Oversight of the Master Custodian's management of books and records which includes booking and valuing public and private market assets.

- Oversight of the monthly accounting statements rendered by the Master Custodian and their reconciliations with investment managers regarding trades and positions of publicly-traded securities; and oversight of the periodic information provided by managers and consultants regarding private asset classes.

- Review, audit and process payments to investment managers, investment counsel, consultants and other vendors.

By delegation of the Board of Trustees, which is reviewed quarterly, the OTC is authorized to invest the assets of the Fund and act as Investment Advisor. The Bureau of Asset Management (BAM) is the unit within the OTC that carries out this function.

In its role as Investment Advisor, the OTC provides investment advice, implements Board decisions, and reports on investment performance. In carrying out these functions, the OTC:

- Advises the Board on all investment issues, including:
    - Investment policy and strategy
    - Asset allocation
    - Manager structure
    - Manager selection
    - Financial and economic developments that may affect the Fund.

- Staff will manage allocations, including sector and geographic exposures as per the latest Annual Implementation Plan approved by the TRS Board.

- Evaluates and recommends to the Board potential investment partners, consultants and managers for TRS' Fund assets pursuant to established procedures and Board policies. This responsibility includes reviewing and reporting on the diversity practices of recommended investment partners, consultants and managers, and other issues that may potentially cause reputational risk.

- Rebalances the portfolio within ranges established by the Board.

- Monitors the performance of managers, including compliance with TRS policies and, in addition, develops a Manager Watch List consisting of managers who have been selected for either performance or organizational reasons to be monitored on an even closer basis.

- Implements portfolio transitions to effectuate Board decisions.
- Negotiates, enters into, renews, administers and terminates agreements with managers, consultants and investment partners on behalf of the Board.
- Directs managers to sell assets to meet TRS' liquidity needs, and transfers cash to TRS' accounts.
- Provides the Board's Proxy Committee analyses of proxy issues and vote recommendations, votes proxies of equity securities, and recommends and implements such annual ownership initiatives.
- Reports regularly to the Board on potential issues requiring Board attention, including matters that may pose potential reputational risk to the Fund.
- Provides regular reports to the Board on the performance of Fund assets.

In executing each of these responsibilities, the OTC works closely with consultants selected by the Board.

C. Executive Director

The TRS Executive Director is responsible for the internal administration of the Retirement System. The Board appoints the Executive Director. He or she oversees the internal processes necessary for the accurate and timely payment of all benefits and the proper accounting of all financial transactions. He or she is further responsible for the establishment, monitoring and safeguarding of TRS' internal records and satisfying TRS' external reporting requirements.

The Executive Director organizes Board meetings and reports to the Board on operational issues, benefit payments, and service levels. He or she ensures that TRS maintains efficient operating procedures consistent with the statutory structure of the Fund in compliance with federal, state and local legislation.

D. Actuary

The Actuary offers information and advice to the Board as assistance in the Board's determination of an asset allocation. In particular, the Actuary provides guidance with respect to future cash flows, liabilities, risks and the impact of the asset allocation on the funding of TRS.

The Actuary advises the Board regarding funding issues, including the level of the Actuarial Interest Rate ("AIR") assumption that the Actuary would support for a given asset allocation. The Actuary periodically recommends to the Board an AIR assumption. The AIR assumption is ultimately codified in the New York City Administrative Code.

Section III. ROLES AND RESPONSIBILITIES OF SERVICE PROVIDERS

The Board retains service providers to assist in the management of the Fund. Such providers include, but are not limited to, investment managers, general and specialist consultants, and attorneys. The providers perform in a fiduciary capacity and must exercise the requisite duties of care and loyalty to TRS. The OTC retains the Master Custodian for the Fund.

A. General Consultant

The Board employs a general consultant, which performs as a fiduciary to the Board. The responsibilities of the consultant include:

- Advising the Board on the investment of TRS' assets.
- Advising the Board regarding strategies for the allocation of assets across capital markets that will generate a long-term return consistent with the Board's investment objectives and risk tolerance.
- Developing cost-effective structures for the implementation of the Board's asset allocation that will maximize excess returns by managers while minimizing the volatility of the returns.
- Assisting the OTC in identifying potential managers, in conducting research in screening managers and in negotiating manager investment guidelines.
- Monitoring the managers employed by TRS and providing reports and analyses to the Board and the OTC relating to material events such as, but not limited to, relative performance, material changes to senior personnel, investment process and organization.
- Preparing presentations or position papers on topical issues and specific projects.
- Attending meetings as required.

B. Public Market Investment Managers

Fund assets are generally managed externally by managers retained by the Office of the Comptroller, acting on behalf of and with authorization from the Board.

Responsibilities include:

- Arranging, ordering and monitoring the purchase and sale of securities for the Fund's portfolio. The manager at all times must exercise the highest standard of care to which a professional, ERISA fiduciary or Investment Advisor is subject.
- Adhering to portfolio investment guidelines, including maintaining risk management and oversight policies designed to ensure compliance.
- Advising the OTC on possible amendments to portfolio guidelines that are in the best interest of the Fund, as appropriate, given the dynamic nature of the capital markets.
- Advising the OTC on capital actions relating to securities in or proposed for the portfolio.
- Submitting monthly and quarterly reports summarizing portfolio activity.
- Reporting significant changes in ownership or control of the firm or changes in organizational structure or professional staffing.
- Attending account review meetings with OTC and/or TRS as necessary, but on at least an annual basis.
- Providing accurate and timely reporting of positions and trades to the OTC.

C. Private Market Investment Managers

Fund assets are generally managed externally by managers retained by the Office of the Comptroller, acting on behalf of and with authorization from the Board.

Responsibilities include:

- Sourcing, investing, monitoring and exiting investments.
- Adhering to investment partnership agreement requirements and guidelines, including requirements on fiduciary standard of care and TRS-specific negotiated terms and provisions.
- Submitting quarterly and annual reports summarizing partnership activity and performance information.
- Providing accurate and timely quarterly and annual financial statements to the OTC.

D. Master Custodian

- By statute, the Comptroller is the custodian of TRS' assets, as well as the assets of other New York City Retirement Systems. Assets include such property as cash (in any currency), securities, any other assets, and earnings and profits thereon.
- The Comptroller retains by Agreement a Master Custodian to safeguard the property of the funds that the Custodian or its agents, representatives or sub-custodians may receive from time to time for deposit, and for other purposes.
- The Master Custodian and its agents and sub-custodians are fiduciaries to the Comptroller, TRS, and other Systems and Funds.
- The Master Custodian holds the assets in the Fund Accounts, settles purchases and sales of the securities, collects income, makes payment from the accounts at the Comptroller's direction, and maintains books and records to clearly identify cash, securities and other property.
- The Master Custodian is responsible for the safekeeping of all assets, transaction processing, reporting, performance measurement and compliance using industry-accepted standards, except for accounts where some of these responsibilities are performed by another custodian for a specific account.
- The Master Custodian is responsible for the preparation, audit and distribution of investment account reports, plan accounting and specialized reporting for the various TRS portfolios.
- The Master Custodian assists the Comptroller in verifying compliance with legal restrictions, investment guidelines and other policies set by TRS. It provides class action services including, notification of, filing, follow-up and collection of settlement proceeds on TRS' behalf and posts settlements to various accounts. The Master Custodian also provides the Comptroller the underlying data to support TRS' proxy voting.

E. Alternative Asset Class Consultants

TRS retains one or more specialist private market consultants to assist in the implementation of its strategic allocation to private equity, private real estate and infrastructure, and any other alternative asset class to which the Board may allocate assets. The consultant(s) are fiduciaries and advise the OTC and the Board on all aspects of its private market investment program. The responsibilities of the private market consultant(s) include:

- Providing strategic advice:
    - Periodic assessments of industry best practices with regard to policies and procedures.

- Analysis of TRS' existing private market portfolios.
  - Recommendations with respect to proposed sub-asset allocations (e.g., allocations to corporate finance/buyout funds, venture capital, etc.).
  - Annual and longer-term investment pacing analyses, translating the TRS allocations to asset class, sub-asset allocations and existing portfolio into proposed investment plans.
  - Periodic reports on the state of the specific private market marketplace.
  - Such other strategic advice and services as TRS or the OTC may reasonably require.
- New investment identification and evaluation, including:
  - Periodic reports on current and anticipated investment opportunities.
  - Specific summary and detailed due diligence reports on prospective individual private market, limited partnerships and other alternative investment opportunities and evaluating the investment merits of such opportunities in the context of the TRS portfolio, policies and plans.
  - Detailed non-legal assistance in the negotiation and documentation of authorized commitments.
- Portfolio monitoring
  - Periodic and real-time reports on developments at and performance of individual partnerships and other investments in the TRS' portfolio.
  - Where necessary, advising on and assisting in actions to protect the interests of TRS as an investor and to ensure compliance by general partners with the terms of their partnership agreements.
  - Reviewing capital calls and distributions to insure they are in keeping with the terms of the partnership agreement.
  - Reviewing and recommending courses of action on partnership amendments.
  - Meeting regularly with the OTC's staff and making regular presentations to the Board concerning each of these areas of work, as well as individual investment opportunities, and such other topics as the Board or the OTC may request.

Section IV. ELIGIBLE INVESTMENTS AND POLICY RESTRICTIONS

The investment of the Fund's assets is governed by federal, state and New York City law. The Board may invest in securities and other eligible investments primarily described in Section 235 of the New York State Banking Law and Article 4-A of the New York State Retirement Social Security Law (RSSL), Sections 176 - 179a, subject to applicable restrictions. Within the parameters of the law, the Board establishes asset allocations subject to the following overall policies:

- Up to 70% of Fund assets may be invested in public equities, including common stock, preferred stock, and investment company shares. Within the overall 70% limit:
    - Up to 70% of Fund assets may be invested in equity securities of U.S.- based publicly traded companies that are traded on a U.S. exchange.
    - Up to 10% of Fund assets may be invested in equity securities of non-U.S.-based publicly traded companies that are traded on a U.S. or foreign exchange and meet certain other requirements.
    - Up to 10% of Fund assets may be invested in equity and debt real estate. These investments are included in the overall 70% limit on public equities, even if the underlying securities are not publicly traded.
- Fund assets generally may be invested in mortgages, bonds, notes and other fixed income securities of U.S. and certain other issuers.
- In addition, under RSSL Section 177's Basket Clause, the Fund may invest up to 25% of its assets in investments that do not qualify or are not otherwise expressly authorized under RSSL Section 177 or other provisions of law, subject to certain limitations.
- The Board has a Divestment and Exclusion Policy (Appendix 3). Use of this policy may result in the exclusion of specific securities or sectors from the universe of eligible investments. The Board may also establish restrictions on permissible markets, sectors or companies (see Appendix 4).

Section V. INVESTMENT OBJECTIVE

The overall investment objective of TRS is to achieve a competitive market rate of return compatible with its risk tolerance and with prudent investment practices, and which, together with employee and employer contributions, will allow it to meet current and future benefit obligations and plan expenses. TRS maintains a long-term perspective in formulating and implementing its Investment Policy, and in evaluating its investment performance because of the long-term nature of its liabilities.

In implementing its investment objective, the Board considers capital market assumptions on projected returns and risk of a variety of asset classes, as well as the current AIR assumption.

Based on the actuarial assumptions and methods recommended by the Actuary and adopted by the Board, the return on assets net of expenses, together with employee and annual employer contributions, is expected to fully allow the Fund to meet current and future benefit obligations. Investment performance that exceeds or underperforms the AIR assumption may materially affect future funding rates. The Board seeks to have long-term investment performance that will equal or exceed its AIR assumption.

Section VI. ASSET ALLOCATION AND REBALANCING

The Board expects asset allocation to be the primary determinant of the Fund's ability to achieve its investment objective. The Board will review asset allocation at least every three years. A strategic allocation should be chosen that is expected to best achieve objectives over the next five to ten years. Target asset allocation should be chosen that balances the twin objectives of providing adequate return and minimizing asset drawdowns, consistent with the assumed investment return adopted by the Board.

Diversification of asset classes, geographic exposure and other relevant factors should be pursued as a means of controlling drawdown risk.

The Board may also conduct an asset/liability study when, in its discretion, it believes such a study could assist in the asset allocation process.

When the Board desires to conduct an asset allocation review the OTC works with TRS' general consultant to present the Board with alternative structures reflecting different risk and return scenarios and asset class diversification strategies. Risk analysis should include an evaluation by the NYC actuary of the effect of tail scenarios on future annual required contributions (ARC) for each asset allocation considered. In recommending capital market assumptions and considering asset classes, the OTC and the consultant coordinate their efforts with those of the general consultants to the other New York City Retirement Systems.

Assets are rebalanced to ensure that the Fund's actual investment mix remains consistent with its asset allocation policy. Volatility in the capital markets and/or over- or under-performance of a particular asset class drives the need to rebalance. The Board reviews its asset mix on a quarterly basis. This range is designed to constrain the extent to which changes in capital markets result in long-term divergences between asset allocation policy and actual investment mix. Variations from target allocations should be minimized through regular re-balancing. Purposeful tactical shifts within rebalancing ranges should be rare and fully disclosed to the

Board on a timely basis. Any tactical shifts outside of the approved rebalancing ranges should be submitted to the Board for approval in advance of implementation.

The OTC implements the Board's rebalancing policy. The OTC monitors the actual investment mix and compares it with the asset allocation policy on a monthly basis. In cases in which benefits and expenses are not sufficient to fully rebalance the portfolio, the OTC will develop and implement a plan to rebalance, taking into account a range of factors such as liquidity constraints and relative transactions costs.

Coincident with the asset allocation study, the Board reviews with its consultant and OTC the rebalancing ranges for each asset class and asset class component and makes any revisions to those ranges that seem appropriate given changes in capital market conditions.

The most recently approved Long Term Strategic Allocation targets as well as rebalancing ranges and "parking places" (asset classes used to hold capital until target allocations can be fully implemented) are included in the Appendix 5 to this IPS.

Section VII. GUIDELINES

The OTC adopts detailed investment guidelines for separate account managers to ensure implementation of Board mandates. Managers are responsible for certifying their compliance with guidelines on a quarterly basis. The OTC also monitors guideline compliance through the Master Custodian's system and its internal risk and compliance systems.

For the Currency Hedging Policy, please see Appendix 6.

SECTION VIII: OPT-OUT RIGHTS

All policy restrictions are designed to ensure that portfolio holdings are consistent with the Board's values as expressed in ESG guidelines, responsible contracting policies and other Board policies, unless otherwise approved by the Board.

- **Opt-out Rights**

The Board seeks private markets managers who adhere to investment practices that support sustainable, long term returns for the Fund. Accordingly, fund documents for such investments shall provide the ability for TRS to "opt-out" of certain transactions. Such provisions shall apply to investments that violate specific restrictions adopted by the Board through its Divestment and Exclusion Policy (Appendix 3), and to investments that have the potential of eliminating public sector jobs. Further, the Fund will seek investments in which the proposer demonstrates a commitment to standards of good conduct, including compliance with all federal, state and local laws, including, but not limited to, labor, anti-discrimination, environmental, and health and safety laws, and will reject investments that would pose a reputational risk to the Investor or bring public or regulatory scrutiny.

Section IX. LIQUIDITY

The Fund's asset allocation policy does not include an allocation to cash which is defined as all securities with maturity of 90 days or less at issuance. Managers are generally expected to be fully invested but may maintain limited cash balances to manage duration of bond portfolios, or as a result of implementing purchases or sales of assets. Cash balances for liquidity are expected to remain below 5%, except in unusual circumstances.

Section X. INVESTMENT CLASSES

A. Public Market Investments:

- The portfolio's return objective is to meet or exceed its benchmarks after all fees and costs.

- Return goals are met without taking undue risk and while fulfilling all fiduciary duties.

- Where active management is used, TRS seeks to build portfolios of managers that provide relatively uncorrelated excess returns. This may improve rebalancing opportunities and protect against different managers relying on similar factors or drivers of return. Active manager fee levels will be set with the expectation that TRS will retain the majority of the excess returns.

- Manager allocations will be adjusted periodically to preserve target exposure to sub strategies within the asset class.

- When possible and prudent, the BAM staff will attempt to achieve manager rebalancing in a counter-cyclical manner, adding to positions that have recently underperformed and trimming from those with recent strong results.

- Managers are monitored continuously by BAM staff and significant concerns are expressed to the Board as they arise.

B. Private Market Investments in Partnership Fund Structures:

- Staff, with assistance of the consultant, is delegated authority to determine whether investments proposed by managers violate TRS restrictions.

- Staff, as appropriate, will recommend to the Board the purchase or sale of LP interests in the secondary market, to optimize the Program's performance.

- Managers must comply with RCP as set forth in Appendix 1.

- Private market investments are required to add a premium over public market equivalents.

See Appendix 7 for details on each approved asset class.

C. Economically Targeted Investments (ETI)

The TRS Trustees have approved an economically targeted investment program for investments across asset classes that are located in New York City and qualifying adjacent municipalities. Parameters and guidelines for this program are included in the Economically Targeted Investment Policy (set forth in Appendix 8).

ETIs are investments in a variety of asset classes which generate rates of return commensurate with the overall risk, liquidity, security and structure of comparable non-targeted investments while providing collateral economic benefits (benefits that enhance the quality of life and promote economic development and activity) to low, moderate, or middle income residents. The Board, in its ETI Policy, has established requirements regarding the qualifications of prospective managers of ETIs and evaluation criteria, by which prospective investments will be considered.

Section XI. INVESTMENT MANAGER SELECTION

A. Public and Private Market Manager Diligence Process and Evaluation Criteria

BAM and the consultants follow formal due diligence protocols for reviewing both private and public market managers. After this review, managers and specific allocations are recommended by BAM to the TRS Board for approval.

Public Market manager searches are executed pursuant to rules laid out by the City's Procurement Policy Board (PPB). PPB rules establish roles for the TRS Board, consultants and BAM for the review and consideration of potential managers. Final manager selection is made by the TRS Board.

Ongoing due diligence includes monthly and quarterly performance reviews, quarterly organizational reviews through a questionnaire, periodic on-site manager meetings and ad hoc follow up as warranted.

As part of its ongoing due diligence of managers, BAM has established a watch list that is provided to the Board on a regular basis.

In Private Markets, the CIO must approve in-depth due diligence conducted by the asset class teams. Required due diligence includes on-site meetings, separate calls by BAM's Compliance and Risk Units, and evaluation by the BAM Investment Committee (IC). The IC meets regularly to review potential manager recommendations. The IC evaluation will cover a range of factors, generally including:

- Performance, including prior fund absolute and relative performance, performance consistency, loss control, extent of realizations, and performance drivers, such as operating initiatives and capital structure activities
- Strategy, including competitive advantages, degree of differentiation, strategic focus, target returns, sourcing and investment process, and ability to consistently generate strong investment outcomes
- Organization, including team depth, capabilities, experience, stability and resources, economic alignment and alignment with the Board's investment beliefs, risk management and compliance procedures
- Strategic fit with portfolio, including consistency with objectives of annual implementation plan and other portfolio management, exposure and pacing considerations
- Proposed terms, including fees and governance terms

B. Brokerage

The Board delegates discretion over placement and execution of securities transactions to its managers. It is the intention of the Board that all securities transactions be effected to the best advantage of the Fund regarding price and execution. The Board recognizes that "soft dollar" commissions are allowed under Section 28(e) of the Securities and Exchange Act of 1934 (commonly referred to as the "safe harbor" provisions). BAM is aware of and monitors "soft dollars" and the ongoing monitoring includes the discussion of managers' approach to soft dollars.

The Board supports diversity among brokers providing securities transaction services to its managers. Managers are encouraged, to the greatest extent possible, consistent with best execution, to use minority- and women-owned brokerage firms. Managers will report the use of minority- and women-owned brokerage firms to the OTC.

Section XII. PERFORMANCE, MONITORING AND EVALUATION

A. Benchmarks

The Board monitors Fund performance against a variety of applicable benchmarks.

1. Policy Benchmark

To monitor the Fund, the Board adopts a Policy Benchmark, which reflects the performance of the markets to which the Board has allocated assets. As new asset allocation studies are conducted, and funds are re-allocated to new or existing asset classes, the Policy Benchmark will be adjusted to reflect such allocations. The Policy Benchmark serves as a minimum performance objective for the Fund, and allows the Trustees to evaluate the implementation of its asset allocation strategy. The Policy Benchmark will be included in all quarterly evaluation reports of TRS. The most current version of the Policy Benchmark is listed in Appendix 5

2. Asset Class Benchmarks

An Asset Class Benchmark will be selected for each individual asset class. Asset Class Benchmarks may reflect a single publicly available index or, if appropriate, may be customized (for example, by combining two or more indexes) to more closely reflect the investment objective for that asset class within the Pension Fund. The Board will review performance of each asset class relative to its selected benchmark on a quarterly basis.

3. Investment Manager Benchmarks

Each manager is evaluated relative to an Investment Manager Benchmark composed of a market index. Each Investment Manager Benchmark will be clearly specified, measurable, and, for liquid securities, investable. Benchmarks may be customized for a particular style or styles. The appropriate Investment Manager Benchmark and expected active management premium shall be determined in advance of funding by mutual agreement between the manager, the OTC and the consultant.

4. Peer Group Analysis

The Board reviews the performance of the Fund relative to a peer group of other major public pension funds on a quarterly basis. However, due to differences in asset allocation, time horizon, and risk tolerance between public pension funds, comparisons of Fund performance to the AIR assumption and Policy Benchmark are the primary evaluation methods used by the Board.

Managers will also be evaluated periodically against the performance of peer managers who are managing similar mandates.

B. Investment Information

The Board monitors the performance of the Fund and of individual managers through ongoing monthly reports and quarterly reviews of performance, market developments, and manager reviews. BAM and the Board may monitor individual managers through the watch list. The OTC and the consultant also report to the Board periodically on issues identified by the OTC, the consultant, or the Board as requiring additional review.

On a quarterly basis, the Board reviews a performance report that includes a commentary prepared by the consultant summarizing portfolio developments and performance. The quarterly performance report also provides detailed quantitative information regarding the risk and performance of Fund assets. Performance is evaluated relative to appropriate market benchmarks, peer comparison universes, and a variety of relevant time periods.

Managers provide daily and monthly reports regarding portfolio holdings and transactions to the OTC. Managers also complete a detailed quarterly questionnaire regarding portfolio holdings and organizational developments. Responses to the questionnaire are reviewed by the consultant and the OTC. Material developments affecting the Fund are reported to the Board.

Section XIII. RISK MANAGEMENT

Risk management is an integral component of achieving TRS's investment objectives.

The practice of risk management involves identifying, quantifying and monitoring the sources of risk and return in the pension investment portfolio, as well as analyzing the risk associated with separate asset classes and prospective investments. An objective of risk management is to achieve an optimal tradeoff between investment risk and return.

From an organizational perspective, risk management is practiced in BAM by both the investment strategy staff and a dedicated risk management unit independent of the investment strategy teams. The responsibilities of the risk management unit are to:

- oversee the periodic production of risk reports
- create a framework to measure and understand the sources of investment performance
- evaluate benchmark appropriateness
- participate in the due diligence process

Section XIV. PORTFOLIO TRANSITIONS

Transition management is an integral part of portfolio management. When the Board terminates a manager and re-allocates assets to another manager, or funds a new mandate, the portfolio must be transitioned. The OTC typically selects and works with transition managers to implement each transition unless there is a compelling reason not to use a transition manager.

Transitions are to be completed in a cost-efficient manner given the characteristics of the portfolios and market conditions. Cost-efficiency for equity portfolio transitions is measured by an analysis of total implementation shortfall. The OTC provides a post-trade analysis of the transition to the Board on a quarterly basis.

Section XV. SECURITIES LENDING

The Board has authorized the Comptroller to enter into agreements establishing participation in securities lending programs. Securities lending enables the Fund to use its asset base to augment investment income. It involves the temporary exchange of securities owned by the Fund for other securities or cash of a greater value, with an obligation of the borrower to pay a fee to the Fund, and to return a like quantity of the borrowed securities at a future date. The fee paid by the borrower is agreed in advance, while the Fund has contractual rights similar to those it would have as the beneficial owner of the securities except that the Fund does not retain voting rights on loaned equity securities.

The objective of securities lending is to earn income through a conservatively operated and well controlled program. There is no absolute return expectation; rather, income is expected to be commensurate with the market demand for the securities made available by the Fund and the return earned on the investment of cash collateral. Cash collateral received will be invested in a high-quality investment program that emphasizes the return of principal, maintains required daily liquidity, and ensures diversification across approved investment types. Those objectives are pursued within the parameters governing the program as outlined in the securities lending agreements with agent banks. Each agent bank is required to act as a fiduciary with respect to TRS and the Fund, and to have systemic and procedural controls in place to ensure adherence to guidelines for operating the securities lending program on behalf of the Fund. The results of the securities lending program are reported to the Board on a quarterly basis.

Section XVI. SECURITIES LITIGATION PROTOCOL

TRS' objectives in choosing to take an active role in securities litigation include the following:

- Preservation of Fund assets and collection of all amounts due to TRS;
- Maximizing the net recovery to the class; and
- Effecting corporate governance reforms, when appropriate.

TRS will use the process outlined in the Securities Litigation Protocol, (set forth in Appendix 9), in evaluating and acting on any situation in which securities litigation may be appropriate.

Section XVII. INVESTMENT EXPENSES

It is the policy of the Board that expenses such as consultants' and investment advisors' fees, attorneys' fees and costs, funding for Personal and Other Than Personal Services resources for the OTC and other costs that may necessarily be incurred in acquiring, managing and protecting the Fund's investments may be paid from any income, interest or dividends derived from the Fund's deposits or investments. The Board adopts a budget for the incurrence of consultants' and investment advisors' fees, attorneys' fees and other costs. OTC reviews the expenses and costs and arranges for their payment by the custodian bank. Pursuant to a budget, the Board also funds the expenditures of additional resources of Personal Services and Other Than Personal Services for the OTC, which will report at least annually to the Board regarding the additional resources.

Section XVIII. CORPORATE GOVERNANCE

A. Proxy Voting

TRS established a Proxy Sub-Committee, to promulgate proxy voting policies and procedures, and oversee TRS' sponsorship of shareowner proposals to improve corporate governance and sustainability of companies in which TRS invests. See Appendix 10 for Corporate Governance and Proxy Voting Guidelines.

The Proxy Sub-committee seeks to ensure that companies follow sustainable business practices, which advance their long-term economic value, which do not negatively affect TRS's investments and which are consistent with TRS's duties as a signatory to the Principles of Responsible Investment.

The Proxy Sub-Committee consists of three parties: Teacher Representative, Comptroller Representative and Mayoral Representative, who shall appoint a Chair among them. All actions of the Proxy Sub-Committee must be subsequently ratified by the full TRS Board. The Proxy Sub-Committee recommends for TRS Board approval shareholder resolutions to be filed at various companies.

- The Chair, or the OTC with notification to the Chair, shall call all Proxy Sub-Committee meetings. If time does not allow a meeting to be called, the Chair or the OTC shall set up a conference call among the Sub-Committee members and the OTC's staff. If a conference call is not feasible, the Chair or the OTC shall conduct a telephone or an e-mail poll of the Sub-Committee members. If a Trustee is not available his/her vote shall be recorded as an abstention.

- Role of the Office of the Comptroller: The OTC executes TRS' corporate governance policies, including proxy voting, portfolio monitoring, and shareowner engagements and initiatives.
  - Shareholder Proposal Program: At least annually, the OTC makes recommendations to the Proxy Sub-Committee for shareholder proposals and the targeted companies. The Proxy Sub-Committee, on behalf of the TRS Board, then approves which recommendations will comprise TRS's shareholder proposal program.

  - Annual Review of Proxy Voting Guidelines: At least each spring, the OTC reviews new proxy voting issues with the Proxy Sub-Committee. The OTC makes recommendations for any changes to the Proxy Voting Guidelines. The Proxy Sub-Committee, on behalf of the TRS Board, then approves any such changes that it deems appropriate.

  - Procedures for Proxy Voting not Covered by the Proxy Voting Guidelines: In the case of any proxy proposal not covered by the Proxy Voting Guidelines, the OTC shall vote the proposal consistent with the spirit of the current Proxy Voting Guidelines and its fiduciary duties. In any such cases, the OTC shall report to the Proxy Sub-Committee on such votes at its next meeting with the Proxy Sub-Committee and shall recommend any corresponding changes to the Proxy Voting Guidelines as a result thereof.

  - Annual Reports: The OTC shall submit annual summary reports to the Proxy Sub-Committee on the results of the TRS' shareholder proposal program.

Section XIX. ETHICS AND COMPLIANCE POLICY

In furtherance of the management and investment of the assets of the Fund, The Board has established a comprehensive written Ethics and Compliance Policy for investment consultants and for investment managers that do business with the Fund.

A copy of the Policy can be found in Appendix 11.

Section XX. THE PRINCIPLES FOR RESPONSIBLE INVESTMENT

The Trustees, acknowledging a duty to act in the best long-term interest of TRS' beneficiaries, adopted the UNEP Principles for Responsible Investment. It is believed that environmental, social and corporate governance (ESG) issues can affect the performance of investment portfolios over time and that applying these Principles may better align TRS' investments with the broader interests of society.

As stated in those principles, it is the intent of the Trustees, where consistent with their fiduciary duties, to:

- Incorporate ESG issues into investment analysis and decision-making processes;
- Be active owners and incorporate ESG issues into ownership policies and practices;
- Seek appropriate disclosure on ESG issues by the entities in which TRS invests;
- Promote acceptance and implementation of the Principles within the investment industry;
- Work with other adopters of the Principles to enhance the effectiveness of their implementation; and
- Share information on our activities and progress towards implementation of the Principles.

See Appendix 2 for a full copy of the Principles.

Section XXI. REVIEW AND MODIFICATION OF THE IPS

The TRS Board reserves the right to amend the IPS at any time it deems such amendment to be necessary or to comply with changes in Federal, State or City Laws or regulations as these changes may affect the investment of Fund assets. In any event, a review of this IPS shall be undertaken no less frequently than every three years.

APPENDICES

Appendix 1:	**Responsible Contractor Policy (RCP)**
Appendix 2:	**Principles for Responsible Investment** https://www.unpri.org/about/the-six-principles
Appendix 3:	**Divestment Policy**
Appendix 4:	**Restrictions on Permissible Investments**
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Appendix 4

~~**New York City Teachers' Investment Policy Statement Restrictions on Permissible Investments**~~

Emerging Market~~s~~ ~~Public Company~~ Review Policy

Scope

This section sets forth TRS' policy for evaluating the publicly traded equity holdings of portfolio companies domiciled in emerging market countries. This policy will guide the Board's review of any holdings which could potentially expose TRS to significant financial and/or reputational risks associated with company practices that are inconsistent with the Board's investment beliefs as characterized by the United Nations Global Compact. In addition, companies which are associated with material controversies which raise significant financial and/or reputational risk will also be reviewed in this process.

~~As a result of this review, the Board may choose to proceed with regard to an identified company in a manner as prescribed by the Divestment and Exclusion Policy or to take other appropriate action intended to address the above-described risks.~~

Public ~~Review Process~~ Markets

The Board will periodically review information provided by third-party vendors which assess and track security issuers on a variety of environmental, social, and governance-related risk metrics.

This review will identify companies which are associated with the following:

- Companies deemed non compliant with~~in material violation of~~ the United Nations Global Compact (UNGC)

Companies with material public controversies as determined by having been assigned a "Red" controversy flag by MSCI, or a "category 5" designation by Sustainalytics. ~~which may incur reputational risks~~

~~Companies that either vendor has deemed non-compliant with the UNGC principles, or to which MSCI has assigned a "Red" controversy flag or Sustainalytics assigned a "Category 5" designation, shall be considered for exclusion~~. As a result of this review, the Board may choose to proceed with regard to an identified company in a manner as prescribed by the Divestment and Exclusion Policy or to take other appropriate action intended to address the above-described risks.

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Input will also be gathered from the Board's active investment managers who have invested in these securities to provide additional perspective to the Board in their review process. The third-party vendors will be available to discuss their findings with the Board, as well as market trends in monitoring environmental, social, and governance risks.

Staff and an independent investment consultant will assist the Board in its analysis of the information provided by the third-party vendors and investment managers. ~~It is expected that threshold criteria will be developed in order to facilitate the Board's consideration of which, if any, of the identified companies should be dealt with as prescribed in the Board's Divestment and Exclusion Policy, or through other appropriate action such as reviewing environmental, social, and governance vetting practices at active managers that invested in such companies.~~

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~~Consistent with the TRS Divestment and Exclusion policy, prior to any divestment decision, the Board shall direct its investment advisor and/or an independent investment consultant to perform an investment analysis to evaluate the potential impacts of the divestment on the investment portfolio, consistent with prudence standards, fiduciary duty and the investment policies and goals of TRS.~~

~~**Policy Review**~~

~~As a new initiative, this policy will be reviewed no later than 18 months from adoption.~~

Private Markets Emerging Markets Policy

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Given the unique attributes of private market investments, including the rigorous diligence undertaken by Managers prior to making a particular private market investment due to the illiquid nature of such investments relative to public market investments, the Board has determined to provide Managers with discretion to invest in emerging private markets, provided, however, that the markets are included in TRS' Approved Equity Markets list. TRS' "Approved Equity Markets" list means the constituents of the MSCI All Country World Index, as amended from time to time ("MSCI ACWI"), but excluding Saudi Arabia.

~~Investments in emerging private equity markets shall in all instances be subject to requirements of prudence, and to investment restrictions on rejecting any investment that would pose a reputational risk to the Investor or bring public or regulatory scrutiny, or that would result in the loss of public sector jobs (individually or collectively "Investment Restrictions" or "Restrictions"), subject to the exclusive benefit rule.~~

TEACHERS' RETIREMENT

SYSTEM OF THE CITY OF NEW YORK

INVESTMENT POLICY STATEMENT

QUALIFIED PENSION PLAN

Adopted TK

Amended through TK

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Preface

EXECUTIVE SUMMARY

The following Investment Policy Statement (IPS) addresses the key elements involved in the Teachers Retirement Board's (the "Board") oversight of the Qualified Pension Plan (the "Fund"). Most importantly, the Board's investment objective is to ensure that the investment portfolio, in combination with employee and employer contributions, allows the TRS to meet current and future benefit obligations and plan expenses. The IPS is the document within which policies and practices are defined that guide the Board and other key parties in the management of the Fund in a manner consistent with this objective, fiduciary duty and with the Board's principles and beliefs.

The IPS provides detail regarding policies and practices that help to ensure that key principles such as a focus on appropriate fees, a commitment to diversity, and attention to environmental, social and governance (ESG) factors in the investment portfolios are prioritized in the management of the Fund. Key aspects of the management of the Fund are discussed including the following.

- Roles and responsibilities of key parties and service providers: Oversight and management of the Fund is led by the Board, but involves a wide range of individuals, agencies and service providers acting at the Board's direction. The IPS describes how those who contribute to these efforts including Board members, consultants, investment managers, the Office of the Comptroller (OTC), the master custodian and others are identified or retained as well as their responsibilities and authorities.

- Eligible investments and approved asset classes: The Board seeks to invest the Fund to maintain an appropriate level of diversification. As a result, the Fund invests in a very broad range of global capital markets, both public and private. The IPS provides guidance regarding which asset classes are approved for investment along with relevant details regarding the structuring, benchmarking and restrictions associated with specific asset class holdings. Each asset class allocation has a primary role to play within the Fund and asset classes are organized into categories describing this role: Growth, Deflation Protection, Inflation Protection and Economically Targeted Investments (ETI).

- Portfolio asset allocation and implementation: The Fund's asset allocation policy which provides target asset class allocations, rebalancing ranges and implementation timelines is a key determinant of the Fund's expected and realized risk and return. The IPS describes how asset allocation policy is established, monitored and reviewed on an ongoing basis for the Fund. This policy is then implemented through the retention of external asset managers. The selection of and ongoing evaluation of asset managers involves due diligence, monitoring and reporting processes which vary by asset class and strategy and are outlined in the IPS.

- Ongoing monitoring and reporting. On an ongoing basis, individual mandates, asset class composites and the entire Fund are monitored by OTC and consultants to confirm that expectations regarding performance and risk characteristics are being met. In addition, OTC and consultants monitor portfolio managers' investment manager organizations, personnel and investment processes to confirm that these firms continue to be appropriate managers for the Fund. The Board receives regular reporting on all these matters in order to carry out its oversight responsibilities.

- Corporate governance: The Board has important fiduciary responsibilities regarding the oversight of corporate governance practices of the companies in which the Fund invests. The IPS provides detail regarding how these responsibilities are carried out including the role of the Proxy Sub-Committee and the OTC's responsibilities in executing the Board's corporate governance policies through its voting of proxies, review of proxy voting guidelines and regular reporting to the Board on these matters. In addition, the Board may decide to take an active role in securities litigation to effect corporate governance reforms, when it deems it appropriate.

- The IPS includes significant detail on the above topics as well as other relevant matters. In addition, the Appendices contain additional specific policies which have been approved by the Board and which govern certain areas of its oversight responsibilities such as the ETI Policy and the Securities Litigation Protocol.

Section I. PURPOSE OF THE INVESTMENT POLICY STATEMENT

The Teachers Retirement Board ("Board") of the Teachers' Retirement System of the City of New York ("TRS") adopts a written, comprehensive and integrated Investment Policy Statement ("IPS") in furtherance of the management and investment of the assets of the Qualified Pension Plan (the "Fund"). This Fund does not include the assets of the Variable Annuity Programs.

The IPS sets forth the investment objectives and philosophy of TRS investment program, as well as the assignment of investment policy roles.

STATEMENT OF INVESTMENT BELIEFS

TRS is an organization, founded in 1917, which administers and invests New York City teachers', pedagogical employees' and school related personnel's wages deferred for retirement. The public sector employees who participate in our system are devoted not only to the students of the City of New York, but to equality, economic and social justice, and workers' rights. The following investment beliefs provide the foundation for the exercise of the TRS Board's fiduciary responsibilities. Our ultimate goal is to provide secure and sustainable pensions to our members and beneficiaries.

We believe that a long-term investment horizon provides benefits and challenges:

- This allows the Funds to take on a prudent level of market and illiquidity risk to achieve return objectives.

- This also encourages consideration of factors such as environmental, social and governance ("ESG") which can have a material impact on long term investment performance.

- We favor strategies, managers, companies, and countries with strong human capital practices characterized by standards of good conduct, including fair labor practices, health and safety, responsible contracting, and diversity.

- Climate change poses risks and opportunities to our investment portfolio. We seek to mitigate the risks, take advantage of opportunities, and reduce the contributions our investments make to climate change.

- A long-term investment horizon requires that the portfolio structure be mindful of long-term global economic trends.

We believe that strategic asset allocation is the primary determinant of long-term total portfolio risk and return:

- Although strategy and manager selection are important contributors to total portfolio results, particularly in private market strategies, the Funds' exposure to market risks, including equity risk, interest rate duration, currency, etc. will dominate the total portfolio's long-term results.

- Given the difficulty of predicting investment results in any given market or time-period, fund diversification across time periods, geography and markets is a fundamental aspect of the long-term asset allocation policy.

- Strategic asset allocation should be periodically reconsidered in the context of changing market conditions, changes in the forecast liabilities and other significant inputs.

- In the event of extreme market risks or opportunities, shorter-term or more tactical modifications of the long-term asset mix should be considered.

- A wide variety of risks should be considered in the asset allocation and investment selection processes including but not limited to market risk, operational risk, illiquidity risk, and reputational risk.

We believe that capital used to pay expenses and fees is an asset of the Funds and should be deployed in an effective, transparent, and judicious manner:

- We favor the use of indexing to implement public market investment strategies, except in those cases in which a compelling case can be made that active management can reap incremental benefits for the Funds.

- We believe that active management fees should be structured to take advantage of the

System's scale and to align interests between the System and the manager.

- Manager, asset class and total fund fees should be consistent with objectives, realized results, and reasonable expectations and be periodically reviewed.

We believe that the success of the System's investment programs requires the effective collaboration of a variety of competencies including:

- Well defined and implemented investment policy and beliefs which are aligned with investment practices
- Thoughtful Board oversight and ongoing trustee education
- The retention of highly competent, effective staff and best-in-class managers, partners, and advisors who are responsive and transparent
- Operational excellence and continuous improvement

IPS PRINCIPLES

A. Fees

TRS feel strongly that all external managers should have compensation plans and disclosure policies that are aligned with the interests of TRS pension beneficiaries. To that end, the TRS trustees ask that BAM, as their investment advisor, endeavor to limit external management contracts to those vendors who agree to performance compensation plans that keep fees below average for comparable funds until measurable value added has been delivered to fund beneficiaries. Furthermore, managers should be completely transparent with regard to all charges being assessed for their services. Exceptions to these board expectations must be explicitly highlighted in any manager recommendation to Trustees.

1. **Alignment of interests**

   There shall be an alignment of interests between General Partners and investors (General Partner investment relative to contemplated commitment, waterfall, treatment of transaction fees, clawbacks and lookbacks, operating budget, transparency, etc.).

2. **Reject above-market fees**

   Terms and conditions must be appropriate relative to similar investment opportunities, including fee and governance provisions. TRS will reject investment with above-market fees relative to similar investments, taking into consideration all factors relevant to a prudent investment analysis.

3. **Institutional Limited Partners Association (ILPA)**

   The Board requires Institutional Limited Partners Association (ILPA) Fee Reporting and Capital Call & Distribution templates from all private market managers. The Board views the ILPA Reporting Template as the standard for collecting fee and expense data for private market funds.

B. Diversity

The Board is dedicated to expanding exposure to top performing fund managers that demonstrate exceptional potential and are committed to diversity in their investment decision- making process, ownership structure and compensation and profit sharing policies.

1. **Diverse Practitioners**

   The Board believes that diverse professionals and decision-makers contribute to organizational quality and economic performance. The Board specifically believes, as has been demonstrated empirically, that:

   - Diversity is positively correlated with stronger financial performance and lower volatility and risk.
   - Diversity improves decision-making and prevents groupthink.
   - Diverse decision-makers can add long-term value and increase returns.
   - Diversity creates competitive advantage based on diverse perspectives and background.
   - Commitment to diversity can decrease litigation and regulatory risk.

   It is the policy of the Board to recognize and seek the value and competitive advantage added to organizations by diversity in decision-making and the workforce and integrate consideration of diversity factors in the selection, evaluation and monitoring of investment managers and services providers, consistent with fiduciary duty. The Board also seeks to promote consideration of diversity in investment decision-making to improve performance broadly in the industry.

2. **MWBE and Emerging Managers**

   The Board seeks to access unique and diverse investment opportunities, including small Minority and Women-owned Business Enterprise (MWBE) fund managers, and to foster the growth and development of successful managers with whom it invests across all asset classes. By investing with managers who actively cultivate diversity in their organizations, offer diversification of talent and strategies and provide appropriate and competitive risk-adjusted rates of return, we seek to deliver superior long-term, risk- adjusted investment returns to the Fund.

The Emerging Manager Program seeks managers that meet the following minimum criteria:

- Experienced investors that are capable of generating competitive risk- adjusted returns and manage funds which may have shorter track records than more established managers.

- Institutional quality operations with established front/back office, systems and risk management; which may be in-house or outsourced to 3rd party services providers.

- Broad institutional capital base with significant GP commitment, where appropriate.

C. **Responsible Contractor Policy (RCP**)

The Responsible Contractor Policy (RCP) is designed to ensure that contractors, investors, managers, consultants, or other participants selected by TRS take prudent and careful action in accordance with the RCP. TRS, through the RCP, supports and encourages fair wages and fair benefits for workers employed by its managers, contractors and subcontractors, subject to fiduciary principles concerning duties of loyalty and prudence, both of which further require competitive returns on TRS real estate and infrastructure investments. Use of the RCP also provides assurance that there is sufficient flexibility to address investment risks and returns while using responsible contractors. Based on provisions set forth in the RCP, firms will report periodically on their compliance with the RCP (Appendix 1).

D. **ESG**

The Board believes that environmental, social and corporate governance (ESG) issues can affect the performance of investment portfolios over time and that applying the Principles for Responsible Investment may better align TRS' investments with the broader interests of society. (See Appendix 2.)

Section II. INVESTMENT POLICY ROLES

A. Teachers' Retirement Board

TRS is administered by the Board, which is comprised of seven members each of whom may vote, pursuant to the New York City Administrative Code, as described below.

1. Two Board members are appointed by the Mayor. One of these members must also be a

member of the Panel on Education Policy.

2. The Comptroller.
3. Three Teacher-Members are elected to the Board by the members of TRS.
4. The Chair of the Panel on Education Policy.

Board members or the appointing official may designate alternate representatives as authorized by law.

The Board shall elect from its membership a chair.

Each act of the Board requires the concurrence of the Comptroller or of one member appointed by the Mayor, as well as a member elected by the TRS membership and at least two other members of the Board.

The Board, as a fiduciary, is responsible for the oversight of the Fund. Responsibilities of the Board include the following:

- Establish and adopt, from time to time, written investment policies, including delegations of authority, desired risk levels, investment time horizons, and proxy voting policies. The written investment policies will guide the management of the Fund consistent with the Fund's investment goals and objectives.
- Adopt an appropriate asset allocation strategy that diversifies assets in a manner consistent with the Board's risk/return objectives. The investment of the Fund's assets is governed by federal, state and local law. The Board may invest in securities and other eligible investments consistent with New York State Banking Law, New York State Retirement Social Security Law (RSSL), and other applicable laws and rules, subject to applicable restrictions.
- Approve an Annual Implementation Plan, developed by the OTC, to implement the Board's asset allocation strategy and investment goals.
- Consider and approve appropriate investment strategies including securities lending.
- Approve the retention of the Fund's actuary.
- Approve the manager structure for implementation of investment strategies, including such factors as manager style and active vs. passive (indexed) management approaches. Select consultants and managers to implement the investment strategies.
- Approve the commencement of securities litigation, its strategy, and settlement.

- Monitor the performance of Fund assets as well as the investment activities of all managers and investment consultants as they affect Fund assets.

- Approve reasonable and necessary investment expenses to acquire, manage and protect Fund assets.

B. Comptroller

Under the New York City Administrative Code, the Office of the Comptroller ("OTC") serves as custodian for TRS' Fund assets. As custodian, the OTC performs activities including:

- Selection of one or more custody banks, including a Master Custodian for the safekeeping of TRS' Fund assets, and monitoring of the performance of the custodians.

- Oversight of the Master Custodian's management of books and records which includes booking and valuing public and private market assets.

- Oversight of the monthly accounting statements rendered by the Master Custodian and their reconciliations with investment managers regarding trades and positions of publicly-traded securities; and oversight of the periodic information provided by managers and consultants regarding private asset classes.

- Review, audit and process payments to investment managers, investment counsel, consultants and other vendors.

By delegation of the Board of Trustees, which is reviewed quarterly, the OTC is authorized to invest the assets of the Fund and act as Investment Advisor. The Bureau of Asset Management (BAM) is the unit within the OTC that carries out this function.

In its role as Investment Advisor, the OTC provides investment advice, implements Board decisions, and reports on investment performance. In carrying out these functions, the OTC:

- Advises the Board on all investment issues, including:
    - Investment policy and strategy
    - Asset allocation
    - Manager structure
    - Manager selection
    - Financial and economic developments that may affect the Fund.

- Staff will manage allocations, including sector and geographic exposures as per the latest Annual Implementation Plan approved by the TRS Board.

- Evaluates and recommends to the Board potential investment partners, consultants and managers for TRS' Fund assets pursuant to established procedures and Board policies. This responsibility includes reviewing and reporting on the diversity practices of recommended investment partners, consultants and managers, and other issues that may potentially cause reputational risk.
- Rebalances the portfolio within ranges established by the Board.
- Monitors the performance of managers, including compliance with TRS policies and, in addition, develops a Manager Watch List consisting of managers who have been selected for either performance or organizational reasons to be monitored on an even closer basis.
- Implements portfolio transitions to effectuate Board decisions.
- Negotiates, enters into, renews, administers and terminates agreements with managers, consultants and investment partners on behalf of the Board.
- Directs managers to sell assets to meet TRS' liquidity needs, and transfers cash to TRS' accounts.
- Provides the Board's Proxy Committee analyses of proxy issues and vote recommendations, votes proxies of equity securities, and recommends and implements such annual ownership initiatives.
- Reports regularly to the Board on potential issues requiring Board attention, including matters that may pose potential reputational risk to the Fund.
- Provides regular reports to the Board on the performance of Fund assets.
- Maintains and updates the IPS in consultation with the Boards and General Consultant.

In executing each of these responsibilities, the OTC works closely with consultants selected by the Board.

C. Executive Director

The TRS Executive Director is responsible for the internal administration of the Retirement System. The Board appoints the Executive Director. He or she oversees the internal processes necessary for the accurate and timely payment of all benefits and the proper accounting of all financial transactions. He or she is further responsible for the establishment, monitoring and safeguarding of TRS' internal records and satisfying TRS' external reporting requirements.

The Executive Director organizes Board meetings and reports to the Board on operational issues, benefit payments, and service levels. He or she ensures that TRS maintains efficient operating procedures consistent with the statutory structure of the Fund in compliance with federal, state and local legislation.

D. Actuary

The Actuary offers information and advice to the Board as assistance in the Board's determination of an asset allocation. In particular, the Actuary provides guidance with respect to future cash flows, liabilities, risks and the impact of the asset allocation on the funding of TRS.

The Actuary advises the Board regarding funding issues, including the level of the Actuarial Interest Rate ("AIR") assumption that the Actuary would support for a given asset allocation. The Actuary periodically recommends to the Board an AIR assumption. The AIR assumption is ultimately codified in the New York City Administrative Code.

Section III. ROLES AND RESPONSIBILITIES OF SERVICE PROVIDERS

The Board retains service providers to assist in the management of the Fund. Such providers include, but are not limited to, investment managers, general and specialist consultants, and attorneys. The providers perform in a fiduciary capacity and must exercise the requisite duties of care and loyalty to TRS. The OTC retains the Master Custodian for the Fund.

A. General Consultant

The Board employs a general consultant, which performs as a fiduciary to the Board. The responsibilities of the consultant include:

- Advising the Board on the investment of TRS' assets.
- Assisting the Comptroller and Board to maintain and update the Investment Policy Statement.
- Advising the Board regarding strategies for the allocation of assets across capital markets that will generate a long-term return consistent with the Board's investment objectives and risk tolerance.
- Developing cost-effective structures for the implementation of the Board's asset allocation that will maximize excess returns by managers while minimizing the volatility of the returns.
- Assisting the OTC in identifying potential managers, in conducting research in screening managers and in negotiating manager investment guidelines.
- Monitoring the managers employed by TRS and providing reports and analyses to the Board and the OTC relating to material events such as, but not limited to, relative performance, material changes to senior personnel, investment process and organization.
- Preparing presentations or position papers on topical issues and specific projects.
- Attending meetings as required.

B. Public Market Investment Managers

Fund assets are generally managed externally by managers retained by the Office of the Comptroller, acting on behalf of and with authorization from the Board.

Managers are generally identified through a manager search process consistent with the PPB Rules. Managers who are not chosen through this selection process for an allocation may be placed in a pool to be considered for potential future use. Selections from the pool must be approved by the TRS Board. After Board approval, all selected managers are required to enter into an investment management contract.

Responsibilities include:

- Arranging, ordering and monitoring the purchase and sale of securities for the Fund's portfolio. The manager at all times must exercise the highest standard of care to which a professional, ERISA fiduciary or Investment Advisor is subject.
- Adhering to portfolio investment guidelines, including maintaining risk management and oversight policies designed to ensure compliance.
- Advising the OTC on possible amendments to portfolio guidelines that are in the best interest of the Fund, as appropriate, given the dynamic nature of the capital markets.
- Submitting monthly and quarterly reports summarizing portfolio activity.
- Reporting significant changes in ownership or control of the firm or changes in organizational structure or professional staffing.
- Attending account review meetings with OTC and/or TRS as necessary, but on at least an annual basis.
- Providing accurate and timely reporting of positions and trades to the OTC.

C. Private Market Investment Managers

Fund assets are generally managed externally by managers retained by the Office of the Comptroller, acting on behalf of and with authorization from the Board.

Responsibilities include:

- Sourcing, investing, monitoring and exiting investments.
- Adhering to investment partnership agreement requirements and guidelines, including requirements on fiduciary standard of care and TRS-specific negotiated terms and provisions.

- Submitting quarterly and annual reports summarizing partnership activity and performance information.

- Providing accurate and timely quarterly and annual financial statements to the OTC.

D. Master Custodian

- By statute, the Comptroller is the custodian of TRS' assets, as well as the assets of other New York City Retirement Systems. Assets include such property as cash (in any currency), securities, any other assets, and earnings and profits thereon.

- The Comptroller retains by Agreement a Master Custodian to safeguard the property of the funds that the Custodian or its agents, representatives or sub-custodians may receive from time to time for deposit, and for other purposes.

- The Master Custodian performs in a fiduciary capacity ~~and its agents and sub-custodians are fiduciaries~~ to the Comptroller, TRS, and other Systems and Funds, and is responsible for ensuring that its agents and sub custodian exercise the similar standard of care.

- The Master Custodian holds the assets in the Fund Accounts, settles purchases and sales of the securities, collects income, makes payment from the accounts at the Comptroller's direction, and maintains books and records to clearly identify cash, securities and other property.

- The Master Custodian is responsible for the safekeeping of all assets, transaction processing, reporting, performance measurement and compliance using industry-accepted standards, except for accounts where some of these responsibilities are performed by another custodian for a specific account.

- The Master Custodian is responsible for the preparation, audit and distribution of investment account reports, plan accounting and specialized reporting for the various TRS portfolios.

- The Master Custodian assists the Comptroller in verifying compliance with legal restrictions, investment guidelines and other policies set by TRS. It provides class action services including, notification of, filing, follow-up and collection of settlement proceeds on TRS' behalf and posts settlements to various accounts. The Master Custodian also provides the Comptroller the underlying data to support TRS' proxy voting.

E. Alternative Asset Class Consultants

TRS retains one or more specialist private market consultants to assist in the implementation of its strategic allocation to private equity, private real estate and infrastructure, and any other alternative asset class to which the Board may allocate assets. The consultant(s) are fiduciaries and advise the OTC and the Board on all aspects of its private market investment program. The responsibilities of the private market consultant(s) include:

- Providing strategic advice:
- Periodic assessments of industry best practices with regard to policies and procedures.
- Analysis of TRS' existing private market portfolios.
- Recommendations with respect to proposed sub-asset allocations (e.g., allocations to corporate finance/buyout funds, venture capital, etc.).
- Annual and longer-term investment pacing analyses, translating the TRS allocations to asset class, sub-asset allocations and existing portfolio into proposed investment plans.
- Periodic reports on the state of the specific private market marketplace.
- Such other strategic advice and services as TRS or the OTC may reasonably require.
- New investment identification and evaluation, including:
- Periodic reports on current and anticipated investment opportunities.
- Specific summary and detailed due diligence reports on prospective individual private market, limited partnerships and other alternative investment opportunities and evaluating the investment merits of such opportunities in the context of the TRS portfolio, policies and plans.
- Detailed non-legal assistance in the negotiation and documentation of authorized commitments.
- Portfolio monitoring
- Periodic and real-time reports on developments at and performance of individual partnerships and other investments in the TRS' portfolio.
- Where necessary, advising on and assisting in actions to protect the interests of TRS as an investor and to ensure compliance by general partners with the terms of their partnership agreements.
- Reviewing capital calls and distributions to insure they are in keeping with the terms of the partnership agreement.

- Reviewing and recommending courses of action on partnership amendments.
- Meeting regularly with the OTC's staff and making regular presentations to the Board concerning each of these areas of work, as well as individual investment opportunities, and such other topics as the Board or the OTC may request.

Section IV. ELIGIBLE INVESTMENTS AND POLICY RESTRICTIONS

The investment of the Fund's assets is governed by federal, state and New York City law. The Board may invest in securities and other eligible investments primarily described in Section 235 of the New York State Banking Law and Article 4-A of the New York State Retirement Social Security Law (RSSL), Sections 176 - 179a, subject to applicable restrictions. Within the parameters of the law, the Board establishes asset allocations subject to the following overall policies:

- Up to 70% of Fund assets may be invested in public equities, including common stock, preferred stock, and investment company shares. Within the overall 70% limit:
    - Up to 70% of Fund assets may be invested in equity securities of U.S.- based publicly traded companies that are traded on a U.S. exchange.
    - Up to 10% of Fund assets may be invested in equity securities of non-U.S.-based publicly traded companies that are traded on a U.S. or foreign exchange and meet certain other requirements.
    - Up to 10% of Fund assets may be invested in equity and debt real estate. These investments are included in the overall 70% limit on public equities, even if the underlying securities are not publicly traded.
- Fund assets generally may be invested in mortgages, bonds, notes and other fixed income securities of U.S. and certain other issuers.
- In addition, under RSSL Section 177's Basket Clause, the Fund may invest up to 35% of its assets in investments that do not qualify or are not otherwise expressly authorized under RSSL Section 177 or other provisions of law, subject to certain limitations.
- The Board has a Divestment and Exclusion Policy (Appendix 3). Use of this policy may result in the exclusion of specific securities or sectors from the universe of eligible investments. The Board may also establish restrictions on permissible markets, sectors or companies (see Appendix 4).

Opt-out Rights

Commented [KV1]: @Hirsh, Alison Is this intended to be part of IV or a new section?

The Board seeks private markets managers who adhere to investment practices that support sustainable, long term returns for the Fund. Accordingly, fund documents for such investments shall provide the ability for TRS to "opt-out" of certain transactions. Such provisions shall apply to investments that violate specific restrictions adopted by the Board through its Divestment and Exclusion Policy (Appendix 3), and to investments that have the potential of eliminating public sector jobs. Further, the Fund will seek investments in which the proposer demonstrates a commitment to standards of good conduct, including compliance with all federal, state and local laws, including, but not limited to, labor, anti-discrimination, environmental, and health and safety laws, and will reject investments that would pose a reputational risk to the Investor or bring public or regulatory scrutiny.

Section V. INVESTMENT OBJECTIVE

The overall investment objective of TRS is to achieve a competitive market rate of return compatible with its risk tolerance and with prudent investment practices, and which, together with employee and employer contributions, will allow it to meet current and future benefit obligations and plan expenses. TRS maintains a long-term perspective in formulating and implementing its Investment Policy, and in evaluating its investment performance because of the long-term nature of its liabilities.

In implementing its investment objective, the Board considers capital market assumptions on projected returns and risk of a variety of asset classes, as well as the current AIR assumption.

The AIR assumption is a key actuarial assumption affecting future TRS' funding rates and pension liabilities. Based on the actuarial assumptions and methods recommended by the Actuary and adopted by the Board, the return on assets net of expenses, together with employee and annual employer contributions, is expected to fully allow the Fund to meet current and future benefit obligations. Investment performance that exceeds or underperforms the AIR assumption may materially affect future funding rates. The Board seeks to have long-term investment performance that will equal or exceed its AIR assumption.

Section VI. ASSET ALLOCATION AND REBALANCING

The Board expects asset allocation to be the primary determinant of the Fund's ability to achieve its investment objective. The Board will review asset allocation at least every three years. A strategic allocation should be chosen that is expected to best achieve objectives over the next five to ten years. Target asset allocation should be chosen that balances the twin objectives of providing adequate return and minimizing asset drawdowns, consistent with the assumed investment return adopted by the Board.

Diversification of asset classes, geographic exposure and other relevant factors should be pursued as a means of controlling drawdown risk.

The Board may also conduct an asset/liability study when, in its discretion, it believes such a study could assist in the asset allocation process.

When the Board desires to conduct an asset allocation review the OTC works with TRS' general consultant to present the Board with alternative structures reflecting different risk and return scenarios and asset class diversification strategies. Risk analysis should include an evaluation by the NYC actuary of the effect of tail scenarios on future annual required contributions (ARC) for each asset allocation considered. In recommending capital market assumptions and considering asset classes, the OTC and the consultant coordinate their efforts with those of the general consultants to the other New York City Retirement Systems.

Assets are rebalanced to ensure that the Fund's actual investment mix remains consistent with its asset allocation policy. Volatility in the capital markets and/or over- or under-performance of a particular asset class drives the need to rebalance. The Board reviews its asset mix on a quarterly basis. This range is designed to constrain the extent to which changes in capital markets result in long-term divergences between asset allocation policy and actual investment mix. Variations from target allocations should be minimized through regular re-balancing.

Purposeful tactical shifts within rebalancing ranges should be rare and fully disclosed to the Board on a timely basis. Any tactical shifts outside of the approved rebalancing ranges should be submitted to the Board for approval in advance of implementation.

The OTC implements the Board's rebalancing policy. The OTC monitors the actual investment mix and compares it with the asset allocation policy on a monthly basis. The primary tool for controlling asset class exposure is the payment of pension benefits and expenses from Fund assets. As funds are needed for these payments, the OTC seeks to liquidate assets in overweight classes. When possible, Assets are liquidated with a goal of maintaining the Board's allocation decisions to asset classes and to portfolio structure targets within asset classes. In cases in which benefits and expenses are not sufficient to fully rebalance the portfolio, the OTC will develop and implement a plan to rebalance, taking into account a range of factors such as liquidity constraints and relative transactions costs.

Coincident with the asset allocation study, the Board reviews with its consultant and OTC the rebalancing ranges for each asset class and asset class component and makes any revisions to those ranges that seem appropriate given changes in capital market conditions.

The most recently approved Long Term Strategic Allocation targets as well as rebalancing ranges and "parking places" (asset classes used to hold capital until target allocations can be fully implemented) are included in the Appendix 5 to this IPS.

Section VII. GUIDELINES

The OTC adopts detailed investment guidelines for separate account managers to ensure implementation of Board mandates. Managers are responsible for certifying their compliance with guidelines on a quarterly basis. The OTC also monitors guideline compliance through the Master Custodian's system and its internal risk and compliance systems.

Staff will manage program allocations, including sector and geographic exposures as per the latest Annual Implementation Plan approved by the TRS Board.

As necessary, the OTC may direct managers to sell securities to fund benefit payments and certain other eligible Fund expenses, or as otherwise appropriate for rebalancing purposes.

All new allocations to external managers must be approved by the TRS Board unless the Board has delegated manager selection (eg., Emerging Private Equity Managers) to OTC .

Any provisions, modifications or exceptions to these guidelines may be amended by consent of the Board.

For the Currency Hedging Policy, please see Appendix 6.

Section VIII. LIQUIDITY

The Fund's asset allocation policy does not include an allocation to cash which is defined as all securities with maturity of 90 days or less at issuance. Managers are generally expected to be fully invested but may maintain limited cash balances to manage duration of bond portfolios, or as a result of implementing purchases or sales of assets. M a n a g e r s Cash balances for liquidity are expected to remain below 5%, except in unusual circumstances.

Section IX. INVESTMENT CLASSES

A. Public Market Investments:

- The portfolio's return objective is to meet or exceed its benchmarks after all fees and costs.
- Return goals are met without taking undue risk and while fulfilling all fiduciary duties.
- Where active management is used, TRS seeks to build portfolios of managers that provide relatively uncorrelated excess returns. This may improve rebalancing opportunities and protect against different managers relying on similar factors or drivers of return. Active manager fee levels will be set with the expectation that TRS will retain the majority of the excess returns.
- Manager allocations will be adjusted periodically to preserve target exposure to sub strategies within the asset class.
- When possible and prudent, the BAM staff will attempt to achieve manager rebalancing in a counter-cyclical manner, adding to positions that have recently underperformed and trimming from those with recent strong results.
- Managers are monitored continuously by BAM staff and significant concerns are expressed to the Board as they arise.

B. Private Market Investments in Partnership Fund Structures:

- Staff, with assistance of the consultant, is delegated authority to determine whether investments proposed by managers violate TRS restrictions.
- Staff, as appropriate, will recommend to the Board the purchase or sale of LP interests in the secondary market, to optimize the Program's performance.
- Managers must comply with RCP as set forth in Appendix 1.
- Private market investments are required to add a premium over public market equivalents.

See Appendix 7 for details on each approved asset class.

C. Economically Targeted Investments (ETI)

The TRS Trustees have approved an economically targeted investment program for investments across asset classes that are located in New York City and qualifying adjacent municipalities.

Parameters and guidelines for this program are included in the Economically Targeted Investment Policy (set forth in Appendix 8).

ETIs are investments in a variety of asset classes which generate rates of return commensurate with the overall risk, liquidity, security and structure of comparable non-targeted investments while providing collateral economic benefits (benefits that enhance the quality of life and promote economic development and activity) to low, moderate, or middle income residents.

The Board, in its ETI Policy, has established requirements regarding the qualifications of prospective managers of ETIs and evaluation criteria, by which prospective investments will be considered.

Section X. INVESTMENT MANAGER SELECTION

A. Public and Private Market Manager Diligence Process and Evaluation Criteria

BAM and the consultants follow formal due diligence protocols for reviewing both private and public market managers. After this review, managers and specific allocations are recommended by BAM to the TRS Board for approval.

Public Market manager searches are executed pursuant to rules laid out by the City's Procurement Policy Board (PPB). PPB rules establish roles for the TRS Board, consultants and BAM for the review and consideration of potential managers. Final manager selection is made by the TRS Board.

Ongoing due diligence includes monthly and quarterly performance reviews, quarterly organizational reviews through a questionnaire, periodic on-site manager meetings and ad hoc follow up as warranted.

As part of its ongoing due diligence of managers, BAM has established a watch list that is provided to the Board on a regular basis.

In Private Markets, the asset class teams in private markets (including but not limited to Alternative Credit, Infrastructure, Real Estate and Private Equity), along with the specialty consultants for each asset class, continuously review funds in the market, co-investments and other investment opportunities in accordance with the annual implementation plans that the Board approves each year to implement the Board's asset allocation strategy and investment goals. These plans set a goal of total annual commitments to the asset class as well as goals for sub-strategies, sectors, geographies and themes within each asset class in accordance with longer-term pacing plans. These targets, goals and plans do not represent commitments, as actual investment recommendations and commitments will vary based on the opportunity set, macroeconomic developments, vintage risk, the performance of existing investments, and other factors.

The OTC must approve in-depth due diligence conducted by the asset class teams. Required due diligence includes on-site meetings, separate calls by BAM's Compliance and Risk Units, and evaluation by the BAM Investment Committee (IC). The IC meets regularly to review potential manager recommendations. The IC evaluation will cover a range of factors, generally including:

- Performance, including prior fund absolute and relative performance, performance consistency, loss control, extent of realizations, and performance drivers, such as operating initiatives and capital structure activities

- Strategy, including competitive advantages, degree of differentiation, strategic focus, target returns, sourcing and investment process, and ability to consistently generate strong investment outcomes

- Organization, including team depth, capabilities, experience, stability and resources, economic alignment and alignment with the Board's investment beliefs, risk management and compliance procedures

- Strategic fit with portfolio, including consistency with objectives of annual implementation plan and other portfolio management, exposure and pacing considerations

- Proposed terms, including fees and governance terms, including TRS-specific provisions outlined in the IPS and/or provided for in the TRS side-letter for limited partnerships;

- Co-Investments: relevant items noted above applicable to the manager of the co-investment, a qualitative and quantitative determination of risk/return, investment merits and considerations, and an evaluation of sector concentration within the overall portfolio.

The OTC has final discretion to make the recommendation for a commitment to the Board at an investment meeting.

The Board will also take into consideration the review of the investment by the specialty consultant; it is possible that an investment will be recommended by the OTC and not by the specialty consultant, or that the OTC and the consultant may differ in the recommended investment amount. The Board has final say over the investment decision and amount to commit.

Once the Board makes a decision to move forward with an investment, OTC will move forward with finalizing the partnership agreements using the terms approved by the Board. Any subsequent material variation in terms or if any proposed changes in terms fail to substantially meet the Board's intent, then such changes must be approved by the Board prior to contract finalization; unless the Board has granted OTC the ability to materially change, modify or drop a Board-approved term.

B. Brokerage

The Board delegates discretion over placement and execution of securities transactions to its managers. It is the intention of the Board that all securities transactions be effected to the best advantage of the Fund regarding price and execution. The Board recognizes that "soft dollar" commissions are allowed under Section 28(e) of the Securities and Exchange Act of 1934 (commonly referred to as the "safe harbor" provisions). BAM is aware of and monitors "soft dollars" and the ongoing monitoring includes the discussion of managers' approach to soft dollars.

The Board supports diversity among brokers providing securities transaction services to its managers. Managers are encouraged, to the greatest extent possible, consistent with best execution, to use minority-and women-owned brokerage firms. Managers will report the use of minority- and women-owned brokerage firms to the OTC.

Section XI. PERFORMANCE, MONITORING AND EVALUATION

A. Benchmarks

The Board monitors Fund performance against a variety of applicable benchmarks.

1. Policy Benchmark

To monitor the Fund, the Board adopts a Policy Benchmark, which reflects the performance of the markets to which the Board has allocated assets. As new asset allocation studies are conducted, and funds are re-allocated to new or existing asset classes, the Policy Benchmark will be adjusted to reflect such allocations. The Policy Benchmark serves as a minimum performance objective for the Fund, and allows the Trustees to evaluate the implementation of its asset allocation strategy. The Policy Benchmark will be included in all quarterly evaluation reports of TRS. The most current version of the Policy Benchmark is listed in Appendix 5

2. Asset Class Benchmarks

An Asset Class Benchmark will be selected for each individual asset class. Asset Class Benchmarks may reflect a single publicly available index or, if appropriate, may be customized (for example, by combining two or more indexes) to more closely reflect the investment objective for that asset class within the Pension Fund. The Board will review performance of each asset class relative to its selected benchmark on a quarterly basis.

3. Investment Manager Benchmarks

Each manager is evaluated relative to an Investment Manager Benchmark composed of a market index. Each Investment Manager Benchmark will be clearly specified, measurable, and, for liquid securities, investable. Benchmarks may be customized for a particular style or styles. The appropriate Investment Manager Benchmark and expected active management premium shall be determined in advance of funding by mutual agreement between the manager, the OTC and the consultant.

4. Peer Group Analysis

The Board reviews the performance of the Fund relative to a peer group of other major public pension funds on a quarterly basis. However, due to differences in asset allocation, time horizon, and risk tolerance between public pension funds, comparisons of Fund performance to the AIR assumption and Policy Benchmark are the primary evaluation methods used by the Board.

Managers will also be evaluated periodically against the performance of peer managers who are managing similar mandates.

B. Investment Information

The Board monitors the performance of the Fund and of individual managers through ongoing monthly reports and quarterly reviews of performance, market developments, and manager reviews. BAM and the Board may monitor individual managers through the watch list. The OTC and the consultant also report to the Board periodically on issues identified by the OTC, the consultant, or the Board as requiring additional review.

On a quarterly basis, the Board reviews a performance report that includes a commentary prepared by the consultant summarizing portfolio developments and performance. The quarterly performance report also provides detailed quantitative information regarding the risk and performance of Fund assets. Performance is evaluated relative to appropriate market benchmarks, peer comparison universes, and a variety of relevant time periods.

Managers provide daily and monthly reports regarding portfolio holdings and transactions to the OTC. Managers also complete a detailed quarterly questionnaire regarding portfolio holdings and organizational developments. Responses to the questionnaire are reviewed by the consultant and the OTC. Material developments affecting the Fund are reported to the Board.

C. Watch List

BAM will maintain a Watch List of managers with performance issues or organizational changes that necessitate careful monitoring. Staff will typically meet more often (or have calls) with Managers on the Watch List to discuss the issue of concern and update the Board as appropriate.

Section XII. RISK MANAGEMENT

Risk management is an integral component of achieving TRS's investment objectives.

The practice of risk management involves identifying, quantifying and monitoring the sources of risk and return in the pension investment portfolio, as well as analyzing the risk associated with separate asset classes and prospective investments. An objective of risk management is to achieve an optimal tradeoff between investment risk and return.

From an organizational perspective, risk management is practiced in BAM by both the investment strategy staff and a dedicated risk management unit independent of the investment strategy teams. The responsibilities of the risk management unit are to:

- Oversee the periodic production of risk reports
- Create a framework to measure and understand the sources of investment performance
- Evaluate benchmark appropriateness
- Participate in the due diligence process

Section XIII. PORTFOLIO TRANSITIONS

Transition management is an integral part of portfolio management. When the Board terminates a manager and re-allocates assets to another manager, or funds a new mandate, the portfolio must be transitioned. The OTC typically selects and works with transition

managers to implement each transition unless there is a compelling reason not to use a transition manager.

Transitions are to be completed in a cost-efficient manner given the characteristics of the portfolios and market conditions. Cost-efficiency for equity portfolio transitions is measured by an analysis of total implementation shortfall. The OTC provides a post-trade analysis of the transition to the Board on a quarterly basis.

Section XIV. SECURITIES LENDING

The Board has authorized the Comptroller to enter into agreements establishing participation in securities lending programs. Securities lending enables the Fund to use its asset base to augment investment income. It involves the temporary exchange of securities owned by the Fund for other securities or cash of a greater value, with an obligation of the borrower to pay a fee to the Fund, and to return a like quantity of the borrowed securities at a future date. The fee paid by the borrower is agreed in advance, while the Fund has contractual rights similar to those it would have as the beneficial owner of the securities except that the Fund does not retain voting rights on loaned equity securities.

The objective of securities lending is to earn income through a conservatively operated and well controlled program. There is no absolute return expectation; rather, income is expected to be commensurate with the market demand for the securities made available by the Fund and the return earned on the investment of cash collateral. Cash collateral received will be invested in a high-quality investment program that emphasizes the return of principal, maintains required daily liquidity, and ensures diversification across approved investment types. Those objectives are pursued within the parameters governing the program as outlined in the securities lending agreements with agent banks. Each agent bank is required to act as a fiduciary with respect to TRS and the Fund, and to have systemic and procedural controls in place to ensure adherence to guidelines for operating the securities lending program on behalf of the Fund. The results of the securities lending program are reported to the Board on a quarterly basis.

Section XV. SECURITIES LITIGATION PROTOCOL

TRS' objectives in choosing to take an active role in securities litigation include the following:

- Preservation of Fund assets and collection of all amounts due to TRS;
- Maximizing the net recovery to the class; and
- Effecting corporate governance reforms, when appropriate.

TRS will use the process outlined in the Securities Litigation Protocol, (set forth in Appendix 9), in evaluating and acting on any situation in which securities litigation may be appropriate.

Section XVI. INVESTMENT EXPENSES

It is the policy of the Board that expenses such as consultants' and investment advisors' fees, attorneys' fees and other investment-related costs, including funding for Personal and Other Than Personal Services resources for the OTC and other costs that may necessarily be incurred in acquiring, managing and protecting the Fund's investments may be paid from any income, interest or dividends derived from the Fund's deposits or investments. The Board adopts a budget for the incurrence of consultants' and investment advisors' fees, attorneys' fees and other costs. OTC reviews the expenses and costs and arranges for their payment by the custodian bank. Pursuant to a budget, the Board also funds the expenditures of additional resources of Personal Services and Other Than Personal Services for the OTC, which will report at least annually to the Board regarding the additional resources.

Section XVII. CORPORATE GOVERNANCE

A. Proxy Voting

TRS established a Proxy Sub-Committee, to promulgate proxy voting policies and procedures, and oversee TRS' sponsorship of shareowner proposals to improve corporate governance and sustainability of companies in which TRS invests. See Appendix 10 for Corporate Governance and Proxy Voting Guidelines.

The Proxy Sub-committee seeks to ensure that companies follow sustainable business practices, which advance their long-term economic value, which do not negatively affect TRS's investments and which are consistent with TRS's duties as a signatory to the Principles of Responsible Investment.

The Proxy Sub-Committee consists of three parties: Teacher Representative, Comptroller Representative and Mayoral Representative, who shall appoint a Chair among them. All actions of the Proxy Sub-Committee must be subsequently ratified by the full TRS Board. The Proxy Sub-Committee recommends for TRS Board approval shareholder resolutions to be filed at various companies.

- The Chair, or the OTC with notification to the Chair, shall call all Proxy Sub-Committee meetings. If time does not allow a meeting to be called, the Chair or the OTC shall set up a conference call among the Sub-Committee members and the OTC's staff. If a conference call is not feasible, the Chair or the OTC shall conduct a telephone or an e-mail poll of the Sub-Committee members. If a Trustee is not available his/her vote shall be recorded as an abstention.

- Role of the Office of the Comptroller: The OTC executes TRS' corporate governance policies, including proxy voting, portfolio monitoring, and shareowner engagements and initiatives. The Bureau of Asset Management (BAM) at the OTC, through its Corporate Governance and Responsible Investment division, is responsible for casting the TRS' proxy votes, consistent with the latest approved TRS Proxy Voting Guidelines (set forth in Appendix 10), engaging portfolio companies and regulators, and submitting shareowner proposals that have been approved by TRS.

    - Shareholder Proposal Program: At least annually, the OTC makes recommendations to the Proxy Sub-Committee for shareholder proposals and the targeted companies.

The Proxy Sub-Committee, on behalf of the TRS Board, then approves which recommendations will comprise TRS's shareholder proposal program.

- Annual Review of Proxy Voting Guidelines: At least each spring, the OTC reviews new proxy voting issues with the Proxy Sub-Committee. The OTC makes recommendations for any changes to the Proxy Voting Guidelines. The Proxy Sub-Committee, on behalf of the TRS Board, then approves any such changes that it deems appropriate.

- Procedures for Proxy Voting not Covered by the Proxy Voting Guidelines: In the case of any proxy proposal not covered by the Proxy Voting Guidelines, the OTC shall vote the proposal consistent with the spirit of the current Proxy Voting Guidelines and its fiduciary duties. In any such cases, the OTC shall report to the Proxy Sub-Committee on such votes at its next meeting with the Proxy Sub-Committee and shall recommend any corresponding changes to the Proxy Voting Guidelines as a result thereof.

- Annual Reports: The OTC shall submit annual summary reports to the Proxy Sub-Committee on the results of the TRS' shareholder proposal program.

Section XVIII. ETHICS AND COMPLIANCE POLICY

In furtherance of the management and investment of the assets of the Fund, The Board has established a comprehensive written Ethics and Compliance Policy for investment consultants and for investment managers that do business with the Fund.

A copy of the Policy can be found in Appendix 11.

Section XIX. THE PRINCIPLES FOR RESPONSIBLE INVESTMENT

The Trustees, acknowledging a duty to act in the best long-term interest of TRS' beneficiaries, adopted the UNEP Principles for Responsible Investment. It is believed that environmental, social and corporate governance (ESG) issues can affect the performance of investment portfolios over time and that applying these Principles may better align TRS' investments with the broader interests of society.

As stated in those principles, it is the intent of the Trustees, where consistent with their fiduciary duties, to:

- Incorporate ESG issues into investment analysis and decision-making processes;
- Be active owners and incorporate ESG issues into ownership policies and practices;
- Seek appropriate disclosure on ESG issues by the entities in which TRS invests;
- Promote acceptance and implementation of the Principles within the investment industry;

- Work with other adopters of the Principles to enhance the effectiveness of their implementation; and
- Share information on our activities and progress towards implementation of the Principles.

See Appendix 2 for a full copy of the Principles.

Section XX. REVIEW AND MODIFICATION OF THE IPS

The TRS Board reserves the right to amend the IPS at any time it deems such amendment to be necessary or to comply with changes in Federal, State or City Laws or regulations as these changes may affect the investment of Fund assets. In any event, a review of this IPS shall be undertaken no less frequently than every three years.

APPENDICES

Appendix 1: Responsible Contractor Policy (RCP)

Appendix 2: Principles for Responsible Investment

https://www.unpri.org/about/the-six-principles

Appendix 3: Divestment Policy

Appendix 4: Restrictions on Permissible Investments

Appendix 5: Asset Allocation

Appendix 6: Currency Hedging Policy

Appendix 7: Approved Asset Classes

Appendix 8: Economically Targeted Investment Policy

Appendix 9: Securities Litigation Protocol

Appendix 10: Proxy Voting Guidelines

Appendix 11: Ethics and Compliance Policy

Appendix 12: IPS Modification Table

APPROVED ASSET CLASSES

~~A. GROWTH~~

~~A majority of the portfolio is placed in assets that seek to provide growth of capital to the portfolio. These asset classes, anchored by public equity, have above average risk of principal and are expected to offer a return premium for this risk which will fund growth in the real value of the portfolio over time.~~

1. PUBLIC EQUITY

a. Definition

Public Equity is defined as common and preferred stock of publicly traded companies in the various markets around the globe. (Shares may also be owned in the form of depository receipts and some Rule 144A related securities may be allowed.)

b. Philosophy and Strategy

Public Equity is the largest portion of the portfolio focused on growth of capital. Public Equity performance is critical to meeting overall portfolio goals.

- Active vs. Passive Management:

  Given the significant size of TRS' assets and the challenges of active management, passive management is the default option for all Public Equity Markets because of its low fees and superior odds of success for providing market rates of return and risk.

  To deviate from the passive default, TRS must be convinced of the future efficacy of the active manager, considering both returns and risks.

c. Objectives

Below are the Public Equity sub-asset classes and their performance benchmarks:

Sub-Asset Class	Performance Benchmark
U.S. Equity	Russell 3000
Developed/World Equity Markets ex-U.S.	MSCI World ex USA IMI
Emerging Markets Equity	MSCI Emerging Markets ~~(TRS Custom)~~

The general performance goal for each public equity ~~asset class~~ investment manager is to meet or exceed their performance benchmark without taking undue risk and while fulfilling all fiduciary duties. To the extent that a portion of an asset class uses active management, we would expect those active composites to outperform the relevant benchmark index and be median or better compared to manager peer universes over a market cycle.

d. Sector or regional allocation

The Public Equity allocation is divided into the three major sub-asset classes. They are U.S. Equity, Developed/World Equity Markets ex-U.S. Equity and Emerging Markets Equity.

- Style/Capitalization and Sector or Regional Allocations:

The goal of the three sub-asset classes within Public Equity is to be relatively style and capitalization neutral to the various benchmarks, with some room for rebalancing as per the Public Equity Annual Plan. Based on manager benchmarks, the portfolio is designed to have allocations that are neutral to both benchmark sectors and regions. However, to the extent active management is used, the active managers' stock selection may result in overall portfolio tilts relative to benchmark weights. These deviations are monitored by the BAM Risk group and the Public Equity team.

e. Other asset class specific characteristics or comments

Please note that the Retirement Social Security Law (RSSL) and Basket Clause limitations may hinder the ability to invest in non-U.S. securities in the same proportion as their weights in the MSCI All Country World Index IMI, ~~typically~~ which could result~~ing~~ in an underweight to non-U.S. markets.

2. HIGH YIELD

a. Definition

The High Yield program provides exposure to actively-managed, below investment grade securities with the following typical characteristics: fixed-rate, unsecured, call-protected and bullet payment at maturity.

b. Philosophy and Strategy

The High Yield program is designed to take advantage of opportunities in lower quality, higher yielding debt instruments, predominantly subordinated, fixed-rate securities rated "*non-investment grade*" by at least one of Moody's, Standard & Poor's, and Fitch. The program employs a variety of external investment managers with active management approaches. The overall program benchmark is the Bloomberg ~~Barclays~~ US High Yield 2% Issuer Capped Index, which includes US and Canadian corporate securities, as well as global bonds (SEC registered) of issuers in developed market countries which are rated between BB+ and CCC, with a maximum allocation of 2% to any one issuer. As appropriate, depending on the manager's investment approach, an individual manager's benchmark may be different from the program benchmark.

c. Objectives

The objective of the High Yield program is ~~total return. The program is expected~~ to outperform the Bloomberg ~~Barclays~~ US High Yield 2% Issuer Capped Index over a full market cycle by 50 to ~~100~~ 150 basis points (net of fees). Individual manager performance expectations vary, as each employs a distinct approach. Each manager will be evaluated quarterly, annually and over a full market cycle (typically between three and five years, but may be longer).

Commented [A1]: BAM to confirm. Is an expected return premium needed in this document for public markets?

Managers operate subject to a set of detailed investment guidelines developed by the Office of the Comptroller, Bureau of Asset Management, in accordance with the Board's mandate that outlines the managers' individual investment philosophies and approaches, representative portfolio characteristics, permissible and restricted securities, benchmarks and performance objectives.

Subject to guideline limitations (which may vary by manager due to stylistic differences), value may be added through industry/sector allocation, rating allocation and security selection (including certain securities/issuers not specifically included in the benchmark, such as bank loans, convertibles, investment-grade and non-rated securities; cash equivalents may be used on a limited basis). Duration decisions are not expected to be a notable contributor to performance.

Guideline limitations include, but are not limited to, the direct purchase of defaulted securities and securities of bankrupt companies, and the direct purchase of equity securities; however, common stock may appear in certain High Yield portfolios as a result of debt restructurings.

~~Managers are monitored through the Watch List process.~~

Commented [A2]: Isn't this a given for all managers irrespective of asset class?

d. Sector or regional allocation

High Yield is expected to be a predominantly U.S. exposure.

e. Other asset class specific characteristics or comments

<u>Liquidity and Cash Management:</u>
~~Although the High Yield program is generally not a source of liquidity for the Fund, benefits may be paid out of the portfolio as required. Typically, cash equivalents are integral to managing the interest rate risk in fixed income portfolios. However, for high yield, interest rate risk is less of a consideration than for investment-grade bond portfolios.~~ As the high yield asset class is dependent on new security issuance and may be characterized by extended periods of relative illiquidity (as compared to the U.S. equity market), high yield managers may be given more latitude to hold cash. ~~As necessary, the Office of the Comptroller, Bureau of Asset Management, may direct managers to sell securities to fund benefit payments and certain other eligible expenses, or as otherwise appropriate for rebalancing purposes.~~

3. PRIVATE EQUITY

a. Definition

The Private Equity program attempts to provide diversified private markets equity exposure in a cost-effective manner through direct and limited partnerships; including commitments to private equity partnerships, fund of funds partnerships and separate accounts (including, from time-to-time, funds of funds or managers with discretionary mandates), investing in any security throughout the capital structure. In addition, the program is authorized to invest in co-investments and secondary opportunities (including but not limited to purchase of LP interests, co-investments or other pooled investment vehicles), and additional structures meant to capture private equity exposure and returns.

b. Philosophy and Strategy

The Private Equity allocation is focused on contributing long term growth to the total portfolio by investing in illiquid assets for higher expected returns, and obtaining access to a wider universe of investment opportunities vis-à-vis public equities.

c. Objectives

The Private Equity Program will seek to achieve a premium of 300 bps over the Russell 3000 ~~I~~index (net of fees).

Commented [A3]: BAM Asset Class Team to reconfirm appropriateness

d. Sector or regional allocation

The Program will manage investments using a disciplined management strategy with the goal to be diversified prudently across vintage years, strategies, geographies, and managers.

e. Other asset class specific characteristics or comments

The Program will include Emerging Manager investments, which include MWBE managers. Direct investment are permitted only with prior Board authorization.

The maximum commitment to a partnership is limited to the lesser of 15% of a fund-raise, or $~~300~~ 400 million. The 15% limit does not apply to a fund of funds manager or a separate account.

The Program's maximum total exposure to a general partner and its affiliates is limited to 20% of the total exposure of the Private Equity program.

Commented [A4]: BAM asset class team to reconfirm thresholds remain appropriate

4. ~~OPPORTUNISTIC~~ PRIVATE REAL ESTATE

a. Definition

The ~~Opportunistic~~ Private Real Estate ("~~ORE~~PRE") program attempts to provide diversified private markets real estate exposure in a cost-effective manner through commitments to core and non-core opportunistic real estate funds (open-ended and closed-ended), ~~investment clubs,~~ separate accounts, co-investments, joint ventures and direct investments. These investments may be in any type of security throughout the capital structure (including equity, preferred equity and debt).

b. Philosophy and Strategy

The ~~Opportunistic~~ Private Real Estate allocation is focused on contributing long term growth to the total portfolio and taking advantage of the ability to accept illiquidity in exchange for an illiquidity premium.

The allocation will be comprised of private real estate strategies ~~which sit~~ across the real estate market spectrum and includes:

Core Real Estate investments are of comparatively low risk. They consist of investments in existing income-producing and substantially leased properties in traditional property types (office, industrial, retail and for-rent multifamily) and tend to use moderate leverage (generally below 40%).

Core-Plus Real Estate investments offer the opportunity to enhance returns by (i) alleviating an identifiable deficiency (in an asset's capital structure, in an asset's physical structure, in an asset's operation, etc.) or (ii) benefitting from market inefficiency. These investments may use slightly more leverage than Core Real Estate investments to improve returns.

Opportunistic Real Estate offers the opportunity to achieve superior risk-adjusted returns by accepting and mitigating different types of risks (such as development, redevelopment~~-~~, repositioning, etc.) or accepting greater capital market risk (for example, by acquiring assets with complex capital structures that may be difficult to unwind) or seeking areas of greater market inefficiency.

c. Objectives

The Core Real Estate portion of the Program is expected to meet or exceed the NCREIF ODCE Index (net of fees).

The ORE program will seek to achieve a premium of 200 bps over the NCREIF ODCE ~~I~~index (net of fees).

Commented [A5]: BAM asset class team to reconfirm appropriateness

d. Sector or regional allocation

The Opportunistic Real Estate program will manage investments using a disciplined management strategy with the goal to be diversified prudently across strategies, property types, vehicles, managers and geography. The Real Estate Program is intended to be diversified globally, with a disproportionate weighting toward the United States due to (i) the absence of currency risk and associated costs, (ii) the absence of withholding taxes, (iii) high transparency, (iv) a well-developed system of property rights and a well-developed legal system and (v) a deep and liquid market. The Real Estate Program will target exposure to investments outside the United States, subject to Attachment D regarding Permissible Markets, no greater than 25% of the total market value. allocation.

e. Other asset class specific characteristics or comments

Guideline limitations for the Core Real Estate portion of the Program include, but are not limited to, the following:

- Leverage will be targeted not to exceed 50% loan to value for all investments in the Core/ Core- Plus portfolio.
- Managers will be required to comply with the Fund's policy regarding the retention of responsible contractors (reference Responsible Contractor Policy).
- The maximum commitment to a single fund by is limited to no more than 20% of a single fund-raise unless either (i) the System receives adequate benefits to offset the associated risk (such as preferred fees and/or enhanced representation as a non-control investor) or (ii) it is determined that the Manager's platform is viable and effective even without the System's commitment.
- A single Manager is limited to managing no more than 20% of the total Real Estate Program allocation.
- Consistent with fiduciary duty, the System will not knowingly make investments with the potential of eliminating without replacement structurally sound workforce or affordable housing stock, as defined by HUD, nor invest with managers with a history of so doing.

Guideline limitations for the Opportunistic Real Estate portion of the Program include, but are not limited to, the following:

- Leverage will be targeted not to exceed 75% loan to value for all investments in the ORE portfolio.
- Managers will be required to comply with the Fund's policy regarding the retention of responsible contractors (reference Responsible Contractor Policy).
- The maximum commitment to a single fund ~~by~~ is limited to no more than 15% of a single fund-raise unless either (i) the System receives adequate benefits to offset the associated risk (such as preferred fees and/or enhanced representation as a non-control investor) or (ii) it is determined that the Manager's platform is viable and effective even without the System's commitment.
- A single Manager is limited to managing no more than 20% of the total Real Estate Program allocation.

Commented [A6]: Asset class team to confirm

5. ~~OPPORTUNISTIC FIXED INCOME~~ALTERNATIVE CREDIT

Commented [A7]: One question about nomenclature: we seem to now use the term "Alternative Credit" instead of "OFI." Under the previous regime AC included high-yield, which is now part of Public Fixed Income. Performance reporting continues to use OFI. Just wondering whether we should stick to OFI or switch to AC?

a. Definition

The ~~Opportunistic Fixed Income~~Alternative Credit (~~OFI~~AC) program provides exposure to below investment grade public and private, performing and non-performing credit-oriented strategies. Although the program invests in commingled funds, typical ~~OFI~~ AC mandates are structured as separate accounts that allow managers to draw capital to take advantage of market dislocations as they arise and to return capital when opportunities cease to exist. In return for providing investment managers with long- term liquidity and flexibility through ~~OFI~~ AC partnerships, OTC will attempt to obtain improved financial and legal terms.

b. Philosophy and Strategy

The ~~OFI~~AC program is designed to provide attractive risk-adjusted returns through alternative (non-traditional), active, credit investment strategies. ~~OFI~~AC managers will invest in a diversified opportunity set of non-traditional segments of the fixed income market, both public and private. Eligible investments include, but are not limited to, private debt, stressed/distressed debt, high yield debt, bank loans, asset-backed securities, agency and non-agency mortgage-backed securities, mortgage derivatives (IOs/POs), structured products (debt and equity tranches), equity securities (acquired in connection with eligible debt), preferred securities (with downside or control protections), investment grade bonds, convertible bonds, 144A securities, dollar-denominated foreign bonds, bonds denominated in a foreign currency and emerging market debt (hard and local currency). The exposure will evolve over time, and specific limitations will be placed on each manager, depending on the manager's expertise in a given strategy.

c. Objectives

The ~~OFI~~AC program aims to enhance the risk-adjusted return of TRS pension assets through public and private non-traditional, active, credit investment strategies. The ~~OFI~~AC program is expected to outperform the customized blended benchmark, which consists of 50% Credit Suisse Leveraged Loan Index + 50% JP Morgan Global High Yield Index, by ~~300~~ 200 basis points over a full market cycle. The ~~OFI~~AC Program will not pursue currency-related trading strategies. Generally, managers will be required to hedge non-USD exposures to limit currency risk. However, some strategies may be denominated in specific currencies, such as EUR, and will not be hedged against USD for diversification reasons.
~~OFI~~AC program investment characteristics may include illiquid individual securities and investment vehicles (securities with no active secondary market and/or limited partnership vehicles or

commingled fund structures with limited opportunities for withdrawal), low credit quality, sector concentration, leverage (limited to one turn on average over the term of the mandate; may be applied only on first lien / senior secured), complex securities that may be difficult to price and evaluate, and shorter track records (implicit in opportunistic investing is the willingness to invest with newer strategies and firms).

d. Sector or regional allocation

The ~~OFI~~AC program will manage investments using a disciplined management strategy with the goal to be diversified prudently across strategies, ~~property types~~, vehicles, and managers ~~and geography~~.

e. Other asset class specific characteristics or comments

The ~~OFI~~AC program is not expected to provide a source of liquidity for TRS, and accordingly, investments may be illiquid. ~~OFI~~AC program investments will be categorized as basket securities.

The program will include emerging manager investments, which include MWBE managers.

The maximum commitment to a partnership is limited to 20 % of a fund raising. The 20 % limited does not apply to a fund-of-funds manager or to a separate account.

The maximum total exposure to a general partner and its affiliates is limited to 20 % of the total exposure of the ~~OFI~~AC program.

Commented [A8]: TRS did not include limits on OFI commitments

Commented [A9R8]:

Commented [A10]: BAM asset class team to confirm thresholds

~~6.1. **CONVERTIBLE BONDS**~~

~~7.1.~~

~~8.1. **Definition**~~

~~9.1. Convertible bonds have the characteristics of two types of securities: a bond and an equity option. They combine a corporate bond paying a fixed interest rate with an equity warrant (a long term equity call option) on the issuer's common stock.~~

~~10.1.~~

~~11.1. **Philosophy and Strategy**~~

~~12.1. The Convertible Bond Program employs a variety of external managers with active management approaches. The convertible bond market can be relatively inefficient and therefore provides opportunities for total return oriented investors.~~

~~13.1.~~

~~14.1. **Objectives**~~

~~15.1. The benchmark for the Convertible Program is the BOAML All Convertible ex M AI Index. This index is not a perfect fit for the Convertible Program but it is the most general and the broadest index. Convertible managers will be measured against their own index and the sum of the average will be measured against the BOAML All convertible ex M AI Index~~

~~16.1. Convertible bonds have a higher expected return and higher risk than conventional corporate bonds with less volatility than equity returns.~~

~~17.1.~~

~~18.1. **Sector or regional allocation**~~

~~19.1. Corporate sectors make up the standard convertible bond program. Region is global, but mostly~~

~~in the US.~~

~~20.~~1.

~~21.~~1. ~~**Other asset class specific characteristics or comments**~~

~~22.~~1. ~~Please note that the RSSL and Basket clause limitations may hinder the ability to invest in non-US securities. Exposure limits coincide with overall limits for public securities. Allocations to the managers usually do not exceed 50% of the product AUM.~~

~~23. DEFLATION PROTECTION~~

~~24. A portion of the portfolio will be placed in assets that have below-average risk of principal, and which are designed to maintain their value in periods of falling prices (deflation).~~

~~25.~~

~~26.~~6. PUBLIC FIXED INCOME

a. Definition
Most of the securities of the Public Fixed Income Program are registered in the US 144a (Global Corporates and global sovereigns) markets and rated above BBB-.

b. Philosophy and Strategy
The Public Fixed Income allocation is primarily a means of providing income and dampening the total volatility of the pension portfolio and to provide protection from periods of unexpected deflation.

- Active vs. Passive Management

  There are inefficiencies in the public fixed income markets. Managers employ active management to capture the inefficiencies in the market. There are some sub-asset classes that are passive where inefficiencies are less.

c. Objectives
Below are the Public Fixed Income sub-asset classes with their relative benchmarks and if they are active or passive.

Sub-Asset Class	Performance Benchmark	Active vs. Passive or Both
Investment Grade Corporates	Bloomberg ~~Barclays~~ US Corporate Index	Active
Mortgages	Bloomberg ~~Barclays~~ US MBS Index	Active
Governments	FTSE US BIG Treasury Index 10+	Both

The general performance goal for each Public Fixed Income sub asset class manager is to meet or exceed their performance benchmark without taking undue risk and while fulfilling all fiduciary duties. To the extent that a sub asset class uses active management, we would expect those active composites to outperform the relevant benchmark index and to be median or better compared to manger peer universes over a market cycle.

The Public Fixed Income Program is a driver of return and diversification at the total fund level. While the explicit objective is total return, given the fundamental nature of fixed income – relatively predictable income and principal payouts, it also extends the duration of the total fund to better match liabilities, and may be used to provide cash for benefit payments.

d. Sector or regional allocation
Sectors include ~~your~~ standard corporate sectors, mortgage sectors and government ~~sovereign~~ sectors. Region is global, but mostly in the US.

e. Other asset class specific characteristics or comments
Please note that the RSSL and Basket clause limitations may hinder the ability to invest in non- US securities. Exposure limits coincide with overall limits for public securities. Allocations to the managers usually do not exceed 50% of the product AUM unless it is passive.

~~B. INFLATION PROTECTION~~

~~A portion of the portfolio will be placed in assets that have below average risk of principal and which are designed to maintain their value in periods of rising prices (inflation).~~

~~1. BANK LOANS~~

~~a. Definition~~

~~The Bank Loan (also known as Leveraged Loans) program provides exposure to actively-managed, below investment grade, first lien loans with the following typical characteristics: floating-rate, first lien/secured, redeemable without penalty, quarterly amortization.~~

~~b. Philosophy and Strategy~~

~~The Bank Loan program is designed to take advantage of opportunities in lower quality, higher yielding, floating-rate bank loan instruments, rated "*non-investment grade*" by Moody's, Standard & Poor's and Fitch. The Bank Loan program employs a variety of external investment managers with active management approaches. As appropriate, an individual manager's benchmark may be different from the program benchmark.~~

~~c. Objectives~~

~~The objective of the Bank Loan program is total return. The program is expected to outperform the Credit Suisse Leveraged Loan Index, which includes mostly BB, B, CCC and non-rated loans, over a full market cycle by 100 basis points (net of fees). The index includes only issues denominated in US dollars. Individual manager performance expectations vary, as each employs a distinct approach. Each manager will be evaluated quarterly, annually and over a full market cycle (typically between three and five years, but may be longer).~~

~~Managers operate subject to a set of detailed investment guidelines developed by OTC, Bureau of Asset Management, in accordance with the Board's mandate that outlines the managers' individual investment philosophies and approaches, representative portfolio characteristics, permissible and restricted securities, benchmarks and performance objectives.~~

~~Subject to guideline limitations (which may vary by manager due to stylistic differences), value may be added through industry / sector allocation, rating allocation and security selection (including certain securities/issuers not specifically included in the benchmark, such as high yield and investment grade securities); cash equivalents may be used on a limited basis.~~

~~Duration decisions are not expected to be a notable contributor to performance.~~

~~Guideline limitations include, but are not limited to, the direct purchase of defaulted securities and securities of bankrupt companies, and the direct purchase of equity securities; however, common stock may appear in certain Bank Loan portfolios as a result of debt restructurings.~~

~~Managers are monitored through the Watch List process.~~

~~d. Sector or regional allocation~~

~~Bank Loans are expected to be a predominantly U.S. exposure.~~

~~e. Other asset class specific characteristics or comments~~

~~Liquidity and Cash Management~~

~~Although the Bank Loan program is generally not a source of liquidity for the Fund, benefits may be paid out of the portfolio as required. Typically, cash equivalents are integral to managing the interest rate risk in fixed income portfolios. However, for bank loans, interest rate risk is less of a consideration than for investment-grade bond portfolios. As the bank loan asset class is dependent on new security issuance and may be characterized by extended periods of relative illiquidity (compared to the U.S. equity market), bank loan managers may be given more latitude to hold cash. As necessary, the Office of the Comptroller, Bureau of Asset Management, may direct managers to sell securities to fund benefit payments and certain other eligible System expenses, or as otherwise appropriate for rebalancing purposes.~~

~~2. TREASURY INFLATION PROTECTED SECURITIES (TIPS)~~

~~a. Definition~~

~~US Treasury Inflation Protected Securities (TIPS) will be the pre-dominant holding, and most other securities will also be denominated in USD.~~

~~b. Philosophy and Strategy~~

~~The TIPS allocation is primarily to hedge inflation and to provide diversification~~

- ~~Active vs Passive Management~~

  ~~There are inefficiencies in the TIPS markets. Managers employ active management to capture the inefficiencies in the market. There are less inefficiencies in the TIPS markets which leads the program to be both active and passive~~

~~c. Objectives~~

~~The benchmark for the program is the Bloomberg Barclays Global Inflation Linked: US TIPS Index.~~

~~The general performance goal is to meet or exceed their performance benchmark without taking undue risk and while fulfilling all fiduciary duties.~~

~~d. Sector or regional allocation~~

~~Sectors include sovereign sectors. Region is global, but mostly in the US.~~

~~e. Other asset class specific characteristics or comments~~

~~Please note that the RSSL and Basket clause limitations may hinder the ability to invest in non-US securities. Exposure limits coincide with overall limits for public securities. Allocations to the managers usually do not exceed 50% of the product AUM unless it is passive.~~

~~27. CORE REAL ESTATE~~

~~f. Definition~~

~~The Core Real Estate (“CRE”) program attempts to provide diversified real estate exposure in a cost-effective manner through commitments to core real estate funds (open-ended and closed-ended), investment clubs, separate accounts, co-investments, joint ventures and direct investments. These investments may be in any type of security throughout the capital structure (including equity, preferred equity and debt).~~

~~g. Philosophy and Strategy~~

~~The inclusion of Core Real Estate in the TRS investment portfolio will allow for global investments in an established asset class that has been shown to:~~

- ~~Provide attractive risk-adjusted returns over full market cycles on a stand-alone basis.~~
- ~~Further improve risk-adjusted returns in a broader portfolio by dampening volatility and serving as a hedge against inflation.~~

~~Core Real Estate investments are of comparatively low risk. They consist of investments in existing income-producing and substantially leased properties in traditional property types (office, industrial, retail and for-rent multifamily) and tend to use moderate leverage (generally below 40%).~~

~~Core-Plus Real Estate investments offer the opportunity to enhance returns by (i) alleviating an identifiable deficiency (in an asset's capital structure, in an asset's physical structure, in an asset's operation, etc.) or (ii) benefitting from market inefficiency. These investments may use slightly more leverage than Core Real Estate investments to improve returns.~~

~~h. Objectives~~

~~The CRE portion of the Program is expected to meet or exceed the NCREIF ODCE iIndex (net of fees).~~

~~i. Sector or regional allocation~~

~~The Program will manage investments using a disciplined management strategy with the goal to be diversified prudently across strategies, property types, vehicles, Managers and geography. The Real Estate Program is intended to be diversified globally, with a disproportionate weighting toward the United States due to (i) the absence of currency risk and associated costs, (ii) the absence of withholding taxes, (iii) high transparency, (iv) a well-developed system of property rights and a well-developed legal system and (v) a deep and liquid market. The Real Estate Program will target exposure to investments outside the United States, subject to Attachment D regarding Permissible Markets, no greater than 25% of the total market value.~~

~~j. Other asset class specific characteristics or comments~~

~~Guideline limitations include, but are not limited to, the following:~~

- ~~Leverage will be targeted not to exceed 50% loan to value for all investments in the Core/ Core- Plus portfolio.~~
- ~~Managers will be required to comply with the Fund's policy regarding the retention of responsible contractors (reference Responsible Contractor Policy).~~
- ~~The maximum commitment to a single fund by is limited to no more than 20% of a single fund-raise unless either (i) the System receives adequate benefits to offset the associated risk (such as preferred fees and/or enhanced representation as a non-control investor) or (ii) it is determined that the Manager's platform is viable and effective even without the System's commitment.~~
- ~~A single Manager is limited to managing no more than 20% of the total Real Estate Program allocation.~~
- ~~Consistent with fiduciary duty, the System will not knowingly make investments with the potential of eliminating without replacement structurally sound workforce or affordable housing stock, as defined by HUD, nor invest with managers with a history of so doing.~~

~~3.1.~~ ~~REITS~~

~~a. Definition~~

~~The Real Estate Equity Securities (REES) program is dedicated to equity securities of real estate investment trusts and real estate operating companies, defined as:~~

- ~~Real Estate Investment Trust (REIT) - A corporation or trust formed for the ownership of real estate which is owned in share units by investors. REITs must be publicly traded and registered with the appropriate government agency to be eligible for purchase in the portfolio.~~

- ~~Real Estate Operating Company (REOC) – An entity having at least fifty percent of its assets invested in real estate, and engaged in the ownership and operation of real estate in the ordinary course of its business.~~

~~b.~~a. ~~Philosophy and Strategy~~

~~Investments are permitted in publicly traded real estate equity securities through broadly diversified actively managed accounts. Managers will be retained to manage such accounts within agreed upon guidelines.~~

~~The active managers would adhere to a well-structured investment process, and invest in publicly traded real estate equity securities that have a compelling valuation relative to their underlying real estate value and net asset value growth prospects.~~

~~The portfolio of REITS and REOCS would provide both income and capital appreciation in the long-term. Returns for both REITs and REOCs tend to be more stable over market cycles. This is attributable to the income component which typically represents a larger proportion of the total return yet with more volatility than private real estate.~~

~~c.~~a. ~~Objectives~~

~~Below are the performance benchmarks for domestic and global public real estate securities managers.~~

~~Manager's Target Portfolio Mix~~	~~Performance Benchmark~~
~~Domestic~~	~~Dow Jones U.S. Select Real Estate Securities Index~~
~~Global~~	~~FTSE EPRA/NAREIT Developed Real Estate Index~~

~~The general performance goal for each active manager is to outperform the relevant benchmark index (net of fees) over a market cycle without taking undue risk while fulfilling all fiduciary duties.~~

~~d.~~a. ~~Sector or regional allocation~~

~~The REES program will manage investments using a disciplined management strategy with the goal to be diversified prudently across strategies, property types, managers, and geography The active managers' securities selection may result in overall portfolio tilts relative to benchmark weights. These deviations are monitored by the BAM Risk group in conjunction with the Public Equity and Real Estate teams.~~

~~e.~~a. ~~Other asset class specific characteristics or comments~~

~~Investments in authorized securities are subject to the requirements and limitations set forth in each bespoke account. Please note that the RSSL and Basket Clause limitations could hinder the ability to invest in non-U.S. securities, which may result in no or limited exposure to non-U.S. markets.~~

7. INFRASTRUCTURE

a. Definition

The Infrastructure program will invest in infrastructure funds (open-ended and close-ended), separate accounts, co-investments, joint ventures and direct investments. These investments may be in any type of security throughout the capital structure. Both Core and Non-Core Infrastructure ~~I~~investments, as explained more fully below, will be pursued.

b. Philosophy and Strategy

Core Infrastructure Investments include the lower risk strategies that acquire assets that operate in an environment of limited competition as a result of natural monopolies, government regulation or concessions, and generate a reliable income stream. These types of assets are part of core and value-added infrastructure strategies. These investments are in quality assets that benefit from high barriers to entry and inelastic demand for the product or service being provided. These investments are expected to comprise a majority of the infrastructure portfolio, or 60-100%.

Non-Core Infrastructure Investments seek to capture superior risk-adjusted returns caused by market imbalances. These types of investments are part of opportunistic strategies and will have higher risk driven by the following factors: competition, growth, construction, development, technology, and commodity pricing. Correspondingly, these investments will have higher expected returns than the Core Infrastructure Investments. The Infrastructure Program will target a range of 0-40% for these types of investments.

Portfolio construction will be driven by (i) broad allocation ranges to Core and Non-Core Infrastructure Investments and (ii) market opportunities and conditions. Core Infrastructure Investments will represent a majority of the Infrastructure Program. The remaining allocation will be available for Non-Core Infrastructure investment opportunities that emerge over the market cycle.

Actual percentages may differ substantially from these targets during the initial years of the program.

c. Objectives

The performance benchmark for the Infrastructure Portfolio is to meet or exceed the Consumer Price Index (“CPI”) plus 4% (net of fees) over a rolling 5-year period.

d. Sector or regional allocation

The Infrastructure program will seek to invest in opportunities in a variety of infrastructure sectors, including but not limited to, transportation, energy, power, utilities, water, wastewater, communications and social infrastructure.

e. Other asset class specific characteristics or comments

Guideline limitations include, but are not limited to, the following:

- Infrastructure partnerships generally do not hedge currency risk and the infrastructure program will not generally require currency hedges.
- The average leverage of all investments in the infrastructure program will be no higher than 65%.

- Managers will be required to comply with the Fund's policy regarding the retention of responsible contractors (reference Responsible Contractor Policy).
- Exposure limit at manager level: a single General Partner is limited to managing no more than 20% of the total Infrastructure Program allocation when fully invested.
- Exposure limit within the fund: the maximum commitment to a single investment is limited to no more than 15% of a single fund. ~~raise. This limit will not apply to a separate account.~~

~~**CONVERTIBLE BONDS**~~

~~**Definition**~~

~~The Pension does not have a strategic target to Convertible Bonds at this time. Convertible bonds have the characteristics of two types of securities: a bond and an equity option. They combine a corporate bond paying a fixed interest rate with an equity warrant (a long- term equity call option) on the issuer's common stock.~~

~~**Philosophy and Strategy**~~

~~The Convertible Bond Program employs a variety of external managers with active management approaches. The convertible bond market can be relatively inefficient and therefore provides opportunities for total return oriented investors.~~

~~**Objectives**~~

~~Convertible bonds are a difficult to benchmark asset class, though a broad market The benchmark for the Convertible Program convertible bonds is the ICE BofA BOAML All Convertibles ex Mandatories AI Index. This index is not a perfect fit for the Convertible Program but it is the most general and the broadest index. If employed, Convertible managers will be measured against their own index, and the sum of the average will be measured against the BOAML All convertible ex M AI Index~~

~~Convertible bonds generally have a higher expected return and higher risk than conventional corporate bonds with less volatility than equity returns.~~

~~**Sector or regional allocation**~~

~~Corporate sectors make up the standard convertible bond program. Region is global, but mostly in the US.~~

~~**Other asset class specific characteristics or comments**~~

~~Please note that the RSSL and Basket clause limitations may hinder the ability to invest in non-US securities. Exposure limits coincide with overall limits for public securities. Allocations to the managers usually do not exceed 50% of the product AUM.~~

~~**REITS**~~

~~**Definition**~~

~~The Real Estate Equity Securities (REES) program is dedicated The Pension does not have a strategic target to REITs at this time.). However, where permitted in equity managers' guidelines, REITs may be held within other equity portfolios. A broadly diversified portfolio of real estate equity securities may include the to equity securities of real estate investment trusts and real estate operating companies, defined as:~~

Real Estate Investment Trust (REIT) - A corporation or trust formed for the ownership of real estate which is owned in share units by investors. REITs must be publicly traded and registered with the appropriate government agency to be eligible for purchase in the portfolio.

Real Estate Operating Company (REOC) – An entity having at least fifty percent of its assets invested in real estate, and engaged in the ownership and operation of real estate in the ordinary course of its business.

Philosophy and Strategy

The Pension does not have a strategic target to REITs at this time. However, the Pension may at times invest in Investments are permitted in publicly traded real estate equity securities through broadly diversified actively managed accounts. Managers will be retained to manage such accounts within agreed upon guidelines.

REIT portfolios can be implemented through either active or passive management.

The active managers would be expected to adhere to a well-structured investment process, and invest in publicly traded real estate equity securities that have a compelling valuation relative to their underlying real estate value and net asset value growth prospects.

The A portfolio of REITS and REOCS would be expected to provide both income and capital appreciation in the long- term. Returns for both REITs and REOCs tend to be more stable over market cycles. This is attributable to the income component which typically represents a larger proportion of the total return yet with more volatility than private real estate.

Objectives

Below are the typical performance benchmarks for domestic and global public real estate securities managers.

Manager's Target Portfolio MixGeographic Exposure	Performance Benchmark
Domestic	Dow Jones U.S. Select Real Estate Securities Index
Global	FTSE EPRA/NAREIT Developed Real Estate Index

The general performance goal for each active manager is to outperform the relevant benchmark index (net of fees) over a market cycle without taking undue risk while fulfilling all fiduciary duties.

Sector or regional allocation

The REES A real estate equity securities portfolio program will manage investments would be expected to be using a disciplined management strategy with the goal to be diversified prudently across strategies, property types, managers, and geography The aActive managers' securities selection may result in overall portfolio tilts relative to benchmark weights. These deviations are monitored by the BAM Risk group in conjunction with the Public Equity and Real Estate teams.

Other asset class specific characteristics or comments

Investments in authorized securities are subject to the requirements and limitations set forth in each bespoke account guidelines. Please note that the RSSL and Basket Clause limitations couldmay hinder the ability to invest in non-U.S. securities, which may result in no or limited exposure to non-U.S. markets.

TREASURY INFLATION PROTECTED SECURITIES (TIPS)

Definition

The Pension does not currently have a strategic target to Treasury Inflation Protected Securities (TIPS). However, where permitted in fixed income managers' guidelines, TIPS may be held within other fixed income portfolios.US Treasury Inflation Protected Securities (TIPS) will be the pre-dominant holding, and most other securities will also be denominated in USD.

Philosophy and Strategy

The TIPS may, in certain economic environments, help to allocation is primarily to hedge inflation and to provide diversification. There are certain shorter-term environments, such as when real yields rise dramatically, which may result in TIPS not providing an inflation hedge.

Active vs. Passive Management

There are inefficiencies in the TIPS markets. Managers employ active management to capture the inefficiencies in the market. There are less inefficiencies in the TIPS markets which leads the program to be both active and passive.

Objectives

The a broad market benchmark for U.S. TIPS the program is the Bloomberg Barclays Global Inflation Linked: US TIPS Index – L Series.
The general performance goal of a TIPS portfolio would be is to meet or exceed their performance benchmark without taking undue risk and while fulfilling all fiduciary duties.

Sector or regional allocation

Sectors include sovereign sectors. Region is global, but mostly in the US.

Other asset class specific characteristics or comments

Please note that the RSSL and Basket clause limitations may hinder the ability to invest in non-US securities. Exposure limits coincide with overall limits for public securities. Allocations to the managers usually do not exceed 50% of the product AUM unless it is passive.

BANK LOANS

Definition

The Pension does not currently have a strategic target to Bank Loans (also known as Leveraged Loans) at this time. However, where permitted in fixed income managers' guidelines, Bank Loans may be held within other fixed income portfolios. The Bank Loan (also known as Leveraged Loans) program provides exposure to actively-managed, below investment grade, first lien loans with the following typical characteristics: floating-rate, first lien/secured, redeemable without penalty, quarterly amortization.

Philosophy and Strategy

The Bank Loan program is designed to take advantage of opportunities in lower quality, higher yielding, floating-rate bank loan instruments, rated "*non-investment grade*" by Moody's, Standard & Poor's and Fitch. The Bank Loan program employs a variety of external investment managers with active management approaches. As appropriate, an individual manager's benchmark may be different from the program benchmark.

Objectives

The objective of the Bank Loan program is total return. The program is expected to outperform the Credit Suisse Leveraged Loan Index, which includes mostly BB, B, CCC and non-rated loans, over a full market cycle by 100 basis points (net of fees). The index includes only issues denominated in US dollars. Individual manager performance expectations vary, as each employs a distinct

~~approach. Each manager will be evaluated quarterly, annually and over a full market cycle (typically between three and five years, but may be longer).~~

~~Managers operate subject to a set of detailed investment guidelines developed by OTC, Bureau of Asset Management, in accordance with the Board's mandate that outlines the managers' individual investment philosophies and approaches, representative portfolio characteristics, permissible and restricted securities, benchmarks and performance objectives.~~

~~Subject to guideline limitations (which may vary by manager due to stylistic differences), value may be added through industry / sector allocation, rating allocation and security selection (including certain securities/issuers not specifically included in the benchmark, such as high yield and investment grade securities); cash equivalents may be used on a limited basis.~~

~~Duration decisions are not expected to be a notable contributor to performance.~~

~~Guideline limitations include, but are not limited to, the direct purchase of defaulted securities and securities of bankrupt companies, and the direct purchase of equity securities; however, common stock may appear in certain Bank Loan portfolios as a result of debt restructurings.~~

~~Managers are monitored through the Watch List process.~~

~~Sector or regional allocation~~

~~Bank Loans are expected to be a predominantly U.S. exposure.~~

~~f. Other asset class specific characteristics or comments~~

~~Liquidity and Cash Management~~
~~As the bank loan asset class is dependent on new security issuance and may be characterized by extended periods of relative illiquidity (compared to the U.S. equity market), bank loan managers may be given more latitude to hold cash.~~

~~**Liquidity and Cash Management**~~

~~**Although the Bank Loan program is generally not a source of liquidity for the Fund, benefits may be paid out of the portfolio as required. Typically, cash equivalents are integral to managing the interest rate risk in fixed income portfolios. However, for bank loans, interest rate risk is less of a consideration than for investment-grade bond portfolios. As the bank loan asset class is dependent on new security issuance and may be characterized by extended periods of relative illiquidity (compared to the U.S. equity market), bank loan managers may be given more latitude to hold cash. As necessary, the Office of the Comptroller, Bureau of Asset Management, may direct managers to sell securities to fund benefit payments and certain other eligible System expenses, or as otherwise appropriate for rebalancing purposes.**~~

8. Short term Cash Management

a. Definition

The Short Term Trading Desk (the "short-term desk") is an investment group within the NYC Comptroller's Bureau of Asset Management. The short-term desk is responsible for overseeing the investment of the short-term cash of the five NYC Employee Retirement Systems.

b. Philosophy and Strategy

The core philosophy of the short-term desk is to support the operational liquidity needs of the pensions funds by ensuring the timely availability of funds for necessary expenditures while safely earning a return on cash investments. The short-term desk does not hold excess cash investments beyond what is needed for operational expenditure purposes.

c. Objectives

The main goals and objectives of the short-term desk are to achieve a prudent risk-adjusted return on short-term cash that is comparable to that offered by the safest and most liquid short-term instruments, consistent with the relevant Investment Guidelines, and in accordance with best compliance practices. The desk seeks to earn a return on cash consistent with minimizing risk and maximizing liquidity.

d. Sector or regional allocation

Permissible short-term cash investments include the highest-quality commercial paper including asset backed commercial paper, U.S. government Treasuries, and U.S. agencies. Other permissible investments include 2a-7 government money market funds, repurchase agreements on U.S. Treasury securities, and Bank Certificates of deposit.

All short-term cash investments are denominated in U.S. dollars. Some commercial paper issuers and bank support providers of asset-backed commercial paper are headquartered in foreign countries.

e. Other asset class specific characteristics or comments

Short-term investments are subject the below maturity guidelines:

1. U.S. Treasury securities: 1 year
2. U.S. Agency debt and securitized instruments: 1 year
3. High Grade Commercial Paper: 180 days
4. Repurchase Agreements for U.S. Treasury securities and U.S. Agency debt and securitized instruments: 35 days
5. Certificates of Deposit: 180 days

Short-term investments are invested with the following concentration guidelines:

1. U.S. Treasury Securities: as much as 100% may be invested in U.S Treasury securities.

2. U.S. Agency debt and securitized instruments: as much as 100% may be invested in U.S Agency securities.
3. High Grade Commercial Paper
   a. As much as 70% may be invested in High Grade Commercial Paper. No more than 20% in a single corporate issuer's outstanding notes.
4. Repurchase Agreements for U.S. Treasury securities and U.S. Agency debt and securitized instruments.
   a. As much as 100% may be invested in Repurchase Agreements.
   b. Maximum total repurchase agreement amounts will be established for each eligible approved dealer. These amounts will be continuously monitored.
5. Certificates of Deposit: as much as 50% may be invested in Certificates of Deposit.
6. 2A-7 Government Money Market Funds: as much as 50% may be invested in Institutional 2a-7 Government Money Market Funds.

Climate and Net Zero Investment Policies

Contents:

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April 4, 2023 Resolution Re: **TRS' NET ZERO IMPLEMENTATION PLAN**

WHEREAS, the Board of Trustees of the Teachers' Retirement System of the City of New York (the "System") has a fiduciary duty to evaluate and address the immediate, long-term and systemic risks that climate change poses to the System's investment portfolio; and

WHEREAS, the Board of Trustees is committed to supporting a just transition to a low carbon economy based on strong human capital practices and standards of good conduct, including fair labor practices, health and safety, responsible contracting, and diversity; and

WHEREAS, the Board has taken certain actions to address the risks and opportunities of climate change for the System's investment portfolio, including but not limited to integrating environmental, social and governance (ESG) factors in investment decisions, actively engaging portfolio companies to mitigate climate change and reduce greenhouse gas emissions; prudently divesting from public securities of certain fossil fuel reserve owners based on a fiduciary investment analysis and doubling climate change solutions investments that generate competitive risk-adjusted return consistent with the System's investment policy and goals; and:

WHEREAS, on October 21, 2021 the Board adopted an aspirational goal of achieving net zero GHG emissions by 2040 across our investment portfolio to mitigate the systemic risks of climate change to our investments and the real economy, while taking into account the best available scientific knowledge and fulfilling fiduciary duty, and directed our investment advisors to develop a prudent implementation plan for the net zero goal consistent with the rationale and elements of its Climate Action Plan and annually report on the implementation plan and its progress; now therefore, be it:

RESOLVED, the Board of Trustees hereby adopts the attached Net Zero Implementation Plan and directs our investment advisors to prudently carry it out and regularly report on progress towards achieving it.

RESOLVED, the Board will continue to ensure prudence, skill and care in investment decisions and to seek competitive market rate risk-adjusted returns consistent with fiduciary duty and the System's investment policy and goals as it oversees the execution of the Net Zero Implementation Plan.

2023 TRS Net Zero Implementation Plan

On October 20, 2021 the Board adopted the following resolution:

WHEREAS, climate change is creating devastating physical, social and economic effects that may undermine the stability and health of the global economy; and

WHEREAS, the Intergovernmental Panel on Climate Change (IPCC) has confirmed, based on the best available scientific knowledge, that limiting global temperature increase to 1.5 degrees Celsius is necessary to prevent the worst climate impacts and requires ensuring global greenhouse gas (GHG) emissions are net zero by no later than 2050; and

WHEREAS, the IPCC found the negative impacts of climate change are growing worse in every region of the world and require "immediate, rapid and large-scale reductions in greenhouse gas emissions" and reaching net zero by 2040 substantially improves the probability of limiting warming to 1.5 degrees Celsius; and

WHEREAS, the Board of Trustees of the Teachers' Retirement System of the City of New York (the "System") has a fiduciary duty to evaluate and address the immediate, long-term and systemic risks that climate change poses to the System's investment portfolio; and

WHEREAS, the Board of Trustees is committed to supporting a just transition to a low carbon economy based on strong human capital practices and standards of good conduct, including fair labor practices, health and safety, responsible contracting, and diversity; and

WHEREAS, the Board has taken certain actions to address the risks and opportunities of climate change for the System's investment portfolio, including but not limited to integrating environmental, social and governance (ESG) factors in investment decisions, actively engaging portfolio companies to mitigate climate change and reduce greenhouse gas emissions; prudently divesting from public securities of certain fossil fuel reserve owners based on a fiduciary investment analysis and doubling climate change solutions investments that generate competitive risk-adjusted return consistent with the System's investment policy and goals; and:

WHEREAS, the number of commitments by countries, asset owners, asset managers and corporations to achieve net zero emissions has grown rapidly and cover a majority of global emissions but are not yet sufficient to ensure limiting warming to 1.5 degrees Celsius; and

WHEREAS, it is understood that our ability to prudently align our portfolio with a 1.5 degrees Celsius pathway depends upon the success of countries, businesses, investors and other entities across the economy globally in reducing emissions in line with a 1.5 degrees Celsius pathway; now therefore, be it:

RESOLVED, the Board of Trustees will strive to prudently achieve net zero GHG emissions by 2040, as an aspirational goal, across our investment portfolio to mitigate the systemic risks of climate change to our investments and the real economy, while taking into account the best available scientific knowledge and fulfilling fiduciary duty; and

RESOLVED, the Board will undertake to:

1. Prudently grow our investments in climate change solutions across all feasible asset classes, targeting \$4.2 billion across the portfolio by 2025 and \$19 billion by 2035, recognizing these to be aspirational goals that are subject to periodic updates taking into account the System's asset allocation, pipeline and opportunity sets for each asset class;
2. Study and explore prudent interim targets for reducing emissions consistent with a 1.5 degrees Celsius pathway for our assets and plan to set a target for 2030 or earlier;
3. Incorporate consideration of climate change risk and opportunity and net zero alignment in the evaluation, due diligence, selection and monitoring of asset managers;
4. Develop the capacity to report the carbon footprint attributable to our total assets consistent with the TCFD framework, beginning with annual analysis of the Scope 1, 2 and 3 emissions attributable to our public market assets, and explore other prudent tools for evaluating climate risks to the portfolio;
5. Prioritize proxy voting, engagement and policy advocacy that promote alignment with a 1.5 degrees Celsius pathway by the companies we invest in, and to prudently allocate the funds needed to enhance our capacity to do so; and

RESOLVED, the Board will pursue this goal by ensuring prudence, skill and care in investment decisions and continuing to seek competitive market rate risk-adjusted returns consistent with the System's investment policy and goals; and

RESOLVED, the Board adopts the Net Zero Asset Owner Commitment of the Paris Aligned Investment Initiative (PAII), a formal partner of the United Nations Framework Convention on Climate Change's (UNFCCC's) Race to Zero campaign, allowing the System to collaborate with and learn from other asset owners and asset managers on best practices for achieving net zero emissions; and

RESOLVED, the Board adopts the attached Climate Action Plan as guidance for an approach to achieving its net zero goal and directs its investment advisors to develop a prudent implementation plan for the net zero goal consistent with the rationale and elements of this guidance and annually report on the implementation plan and its progress.

RESOLVED, that this resolution will be appended to the TRS Investment Policy Statement.

[LINK to] 2021 Climate Action Plan

This Climate Action Plan is designed to put TRS on the path to taking prudent, responsible action, pursuant to our Investment Beliefs, to "mitigate the risks, take advantage of opportunities, and reduce the contributions our investments make to climate change." It builds upon existing policies and past actions of the Board to seek to achieve our ambitions on climate change consistent with our fiduciary duty.

Executive Summary

- The System has a fiduciary duty to serve solely in the best interests of their members and beneficiaries and has a fiduciary interest in the overall performance of the financial markets and broader economy in which the System invests.
- Climate change is creating devastating physical, social and economic effects that undermine the stability and health of the global economy. To avoid the worst climate impacts, the world must limit global temperature increase to 1.5º C and ensure net zero greenhouse gas (GHG) emissions by 2050 at the latest, and preferably by 2040 or sooner.
- TRS is committed to supporting a just transition to a low carbon and net zero economy based on strong human capital practices and standards of good conduct, including fair labor practices, health and safety, responsible contracting, and diversity.
- TRS commits to the goal of achieving net zero greenhouse gas GHG emissions by 2040 in our portfolio to mitigate the systemic risks of climate change to our investments and the real economy, consistent with the best available scientific knowledge and fiduciary duty, and adopts the Net Zero Asset Owner Commitment of the Paris Aligned Investment Initiative (PAII).
- TRS shall direct its investment advisors to develop an implementation plan, for the Board's review and approval, to achieve this goal and prudently address:

    - Increasing climate change solutions investments that achieve competitive market rate risk-adjusted returns, with an initial goal of doubling such investments in the portfolio to approximately $4 billion by 2025 and achieving a total of $17 billion by 2035; additionally exploring goals for net zero aligned investments.
    - Developing and updating interim targets for reducing portfolio greenhouse gas emissions beginning with a target for 2030 or earlier using Scope 1 and 2 emissions and eventually including Scope 3 emissions.
    - Consideration of climate change risk and opportunity and net zero alignment in the evaluation, due diligence, selection and monitoring of asset managers.
    - Analyzing the carbon footprint of public markets investments annually for Scope 1, 2 and 3 emissions and appropriately expanding to additional asset classes.
    - Exploring appropriate tools for evaluating climate risks to the portfolio.
    - Prioritize proxy voting, engagement and policy advocacy that promote net zero emissions.

Climate Action Plan

Background and Rationale

Fiduciary Duty

The System has a fiduciary obligation to serve solely in the best interests of their members and beneficiaries. We seek to fulfill this by achieving a competitive risk-adjusted market rate return, consistent with our asset allocation, while prudently mitigating downside risks to the System's investments, including those affecting the sustainability of our investments' long-term returns. Sustainable long-term performance is critical since our investment horizon spans decades to meet the System's actuarial liabilities.

One fundamental way we mitigate risk is by diversifying our investments across time periods, geography and markets. We have a direct economic interest in the overall strength of the financial markets and broader economy in which the Systems invest. We have a fiduciary duty, therefore, to protect against downside and systemic risks and foster stable financial markets and long-term economic growth essential to the performance of the System's investments.

Systemic Risks of Climate Change

Climate change is generating increasingly devastating effects that risk undermining the stability and health of the global economy. Global GDP may suffer an 18% loss by 2050 if no action is taken on climate change.[1] The impacts of climate change have affected all regions of the world and include, but are not limited to: extreme heat waves, severe fires, intense droughts, rising sea levels, increased flooding, extreme weather events and melting polar ice. These impacts in turn cause long-lasting economic, social and environmental disruptions such as premature deaths; lost jobs and labor productivity; declines in food production and distribution; damage to property and critical infrastructure; increased social inequality, poverty and hunger; threats to public health; water scarcity; mass human migrations; and loss of biodiversity and ecosystems. We regard these climate change-related risks as systemic—we cannot diversify them away—and severe, as they can lead to the failure of broad segments of the market and economy. Some negative impacts are already irreversible, and many will rapidly worsen without immediate and ambitious global action.

Importance of Net Zero Emissions

The 2015 Paris Agreement, signed by nearly all nations of the world, established the goal to limit global temperature increase to well below 2.0º Celsius compared to pre-industrial levels, and to make efforts toward a limit of 1.5º Celsius.[2] In 2018, the Intergovernmental Panel on Climate Change (IPCC) confirmed, based on the best available scientific knowledge, that limiting temperature rise to 1.5º C is necessary to avoid the worst climate impacts and preserve livable conditions.[3] The IPCC found that accomplishing this limit requires reducing CO_2 emissions by

[1] World economy set to lose up to 18% GDP from climate change if no action taken, reveals Swiss Re Institute's stress-test analysis | Swiss Re.
[2] The Paris Agreement | UNFCCC.
[3] Chapter 3 — Global Warming of 1.5 ºC (ipcc.ch).

45% by 2030 (compared to 2010 levels) and ensuring CO_2 emissions are “net zero” by 2050 along with deep reductions of non-CO_2 emissions such as methane.[4] The IPCC defines net zero emissions as the point when “anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period.”[5]

While 2050 is the ultimate deadline for achieving net zero emissions, the IPCC found that reaching net zero ten years earlier, by 2040, substantially improves the probability of limiting warming to 1.5º C and avoiding temporary overshoots of 1.5º C that would have harmful impacts.[6] The latest IPCC report released in August 2021 further found that negative climate change impacts are worsening in and affecting every region of the world; warming is occurring faster; and “unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5º C or even 2º C will be beyond reach.”[7]

Achieving net zero emissions requires vastly reducing GHG emissions in the real economy and investing in and growing solutions that mitigate the impacts of climate change and facilitate a low-carbon transition of the economy in line with science and 1.5º C pathways. As of May 2021, the number of commitments by countries to achieve net zero emissions has grown rapidly and covers around 70% of the global CO_2 emissions. However, current global commitments and efforts are not yet adequate to achieve net zero emissions and align with a 1.5º C trajectory, necessitating more concerted and expanded action.

Just Transition

The 2015 Paris Agreement acknowledged the need to account for “the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities.” TRS’ Investment Beliefs state that we favor “strong human capital practices characterized by standards of good conduct, including fair labor practices, health and safety, responsible contracting, and diversity." This statement underscores our commitment, consistent with our fiduciary duty, to ensure that our investments support a just transition from a carbon-based to a low carbon and net zero economy. A just transition depends on genuine stakeholder engagement with local communities, workers and their union representatives, and environmental advocates. The projects in which we invest must provide tangible economic benefits to the communities in which they operate, hiring local workers, with a priority if applicable to displaced workers from fossil fuel-related industries. We will make efforts to ensure that the energy transition does not result in lowering of overall compensation levels, replacement of local with nonlocal workforce, or reductions in maintenance, staffing, or workforce skill levels that have potential to compromise worker, public or environmental safety. Our responsible contractor policy expresses our belief that a diverse, adequately compensated,

[4] Chapter 2 — Global Warming of 1.5 ºC (ipcc.ch).
[5] Glossary — Global Warming of 1.5 ºC (ipcc.ch). Removal of greenhouse gases can be conducted through technologies to capture and store carbon as well as using natural solutions such as restoring forests.
[6] Chapter 2 — Global Warming of 1.5 ºC (ipcc.ch).
[7] Climate change widespread, rapid, and intensifying – IPCC — IPCC.

and trained workforce delivers a higher quality product and service. We support paying workers fair wages and benefits, workforce training and safety and health, and a position of neutrality with regard to union organizing.

TRS' Commitments

Net Zero Emissions Goal

TRS commits to the goal of achieving net zero GHG emissions by 2040 across our investment portfolio to mitigate the systemic risks of climate change to our investments and the real economy, while taking into account the best available scientific knowledge and fulfilling fiduciary duty. TRS will pursue this goal by encouraging portfolio companies to reduce their emissions; ensuring prudence, skill and care in investment decisions; and continuing to seek competitive market rate risk-adjusted returns. Achieving this goal depends on the commitments and successful efforts of countries, states, cities, businesses, investors and other actors across the economy to reduce emissions in line with a net-zero world.

To support our efforts to prudently achieve this goal, TRS adopts the Net Zero Asset Owner Commitment[8] of the Paris Aligned Investment Initiative (PAII), a formal partner of the United Nations Framework Convention on Climate Change's (UNFCCC's) Race to Zero campaign[9], allowing us to collaborate with and learn from other large asset owners and leading practitioners.

TRS shall direct its investment advisors to develop an implementation plan for the net zero goal that prudently considers climate change risk and opportunity as well as material environmental, social and governance (ESG) factors in our investment portfolio, along with all additional risks and investment considerations, and annually report on the plan and its progress.

The implementation plan shall include but not be limited to the elements below:

Climate Change Solutions and Net Zero-Aligned Investments

Climate change presents a large and growing set of investment opportunities, chiefly in assets that benefit from the accelerating transition to a low carbon, clean energy economy. The International Energy Agency estimates that, to achieve net zero emissions by 2050, clean energy investments need to triple by 2030 to over $4 trillion each year, resulting in well over $100 trillion over the next three decades.[10] TRS shall adopt prudent goals to increase investments in climate change solutions across the investment portfolio, consistent with fiduciary duty, in order to achieve competitive market rate risk-adjusted returns appropriate for each asset class. Climate change solutions are investments in economic activities that contribute substantially to mitigating, remediation, adaptation and/or resilience in relation to climate change impacts. Such

[8] PAII-Net-Zero-Asset-Owner-Commitment-Statement.pdf (parisalignedinvestment.org).
[9] Race To Zero Campaign | UNFCCC.
[10] Net Zero by 2050 – Analysis - IEA.

activities include but are not limited to renewable energy, energy efficiency, sustainable water, and pollution prevention.

TRS sets an initial goal of doubling investments in climate change solutions across our portfolio from approximately $2 billion to $4.2 billion by 2025 and achieving a total of $19 billion of climate solutions investments by 2035, consistent with fiduciary duty and our investment objectives. TRS shall develop and periodically assess and update climate solutions investment goals in consultation with our investment advisors, taking into account the System's asset allocation, pipeline and opportunity sets for each asset class.

TRS shall also explore developing and adopting prudent goals to increase the amount of our investments that are aligned with net zero pathways subject to sufficient development of data, tools and methodologies to measure and assess such alignment. Net zero pathways are economic, emissions and technology trajectories that are needed to limit global warming to 1.5º C.

Portfolio Greenhouse Gas Emission Reduction Targets

TRS shall adopt prudent interim targets for reducing greenhouse gas emissions at appropriate portfolio and/or asset class levels beginning with a target for 2030 or earlier and an updated interim target for every five years thereafter. TRS shall apply such targets to Scopes 1 and 2 emissions and explore targets for reducing Scope 3 emissions as methodologies and data further develop in this area. TRS shall develop a prudent approach to determining such targets, in consultation with our investment advisors, and include consideration of science-based targets for achieving net zero emissions as well as methodologies for assessing alignment of investments with 1.5º C pathways.

Asset Manager Evaluation, Selection and Monitoring

Prudent consideration of climate change risk and opportunity and net zero alignment in the evaluation, due diligence, selection and monitoring of asset managers in all asset classes, consistent with fiduciary duty will be a factor in investment due diligence. Actions may include assessing manager frameworks of financial materiality; modifying and enhancing due diligence questions related to climate change and net zero alignment; reviewing the proxy voting history of asset managers related to climate change, including shareholder proposals and director elections; and strengthening processes for monitoring and reporting related to these issues.

Risk Management

To augment existing risk management approaches, carbon footprint analyses of our public equity, investment grade fixed income and high yield credit portfolios measuring Scopes 1, 2 and 3 emissions will be conducted annually. TRS will seek to expand this analysis to additional asset classes, including private markets, as methodologies and data further develop.

TRS shall direct BAM to explore procuring appropriate and prudent tools for evaluating climate risks to the portfolio including scenario analysis and ways of assessing 1.5º C pathways, net zero alignment, transition risks and physical risks and seek to conduct such analysis annually.

Engagement and Policy

TRS shall continue our principles in proxy voting and engagement with portfolio companies to prioritize climate change mitigation and greenhouse gas emission reductions, energy efficiency and conservation, use of cost-effective renewable energy and other measures to enhance shareholder value consistent with 1.5º C pathways. TRS will also explore prudent efforts to deepen proxy voting and engagement efforts to advance net zero emissions particularly in coalition with other asset owners such as our participation in Climate Action 100+. Consistent with our Divestment and Exclusion Policy, where TRS has conducted extensive engagement with high GHG emitting companies without achieving satisfactory progress or resolution on mitigating risk, or determines that engagement would be futile, we may consider prudent divestment from such companies. Consistent with our fiduciary duty, TRS will continue to seek opportunities to engage with policy-making and regulatory entities to advance legislation, policy, regulations and programs that support achieving net zero emissions in the real economy and appropriately engage market actors to promote alignment with net zero pathways.

NetZero Annual Implementation Update & Recommendations:

TRS - Annual Climate Report 2023 – Draft

Message from the Comptroller

The climate crisis is not "coming," it's already here. The summer of 2023 was the hottest ever on earth. Floods, wildfires, and heat waves have become commonplace across the globe. Without bold action, they will become more frequent and more catastrophic in the coming years and decades – with profound consequences for our communities, our economy, and our portfolio. Climate change is putting trillions of dollars of assets at risk of destabilization.

As "universal investors," invested broadly across the global economy, TRS has nowhere to hide from the impacts of higher temperatures, rising seas, and more frequent disasters on property and infrastructure, crop yields, supply chains, insurance premiums, and the many other impacts of climate crisis.

Climate risk is a financial risk. And that's why bold action to confront climate risk – especially reducing emissions financed by our investments – is consistent with our fiduciary duty to mitigate financial risks, including by taking advantage of investment opportunities and reducing the contributions our investments make to climate change. The transition to clean energy presents enormous investment opportunities, as solar, wind, renewable power, new technologies to reduce reliance on fossil fuels, and climate solutions scale up across the planet.

Last year, TRS issued its Net Zero Implementation Plan to decarbonize its portfolio, achieve net zero greenhouse gas emissions, and support climate transition on the timeline of the Paris Accords. The plan builds on our divestment from fossil fuel reserve owners, through disclosure, active engagement with our asset managers and portfolio companies to push for science-based targets and for diligent follow-through, and by significantly expanding our investments in climate solutions.

This report describes our work over the past year. While we are proud of the many steps we have taken, we are cognizant and sober about the fact that our financed emissions increased over the past year (after declines the prior three years), reflecting the same trend in the global economy.

As we publish this report, we gravely fear another trend: large American financial institutions are back-tracking on climate commitments. In February 2024, in a win for climate deniers, BlackRock, State Street, JPMorgan, and PIMCO withdrew from Climate Action 100+, a key resource for engagement with the largest emitters in the TRS portfolio. Bank of America reneged on its commitment to stop financing new coal mines, coal-burning power plants and Arctic drilling projects. Since the Paris Accords, U.S. banks have pumped over $1 trillion of investment into the expansion of fossil fuel infrastructure.

To be clear, that is regression rather than progress. TRS will not be able to achieve net zero on its own. We will either succeed in building a broader coalition to reduce emissions … or we will collectively burn up trillions of dollars as the world blows past 2 degrees of warming in the coming years.

But that clarity only increases our resolve for ambitious action. Together, we can and must achieve the emission reductions – not just in our portfolios, but in the real world – that are necessary to prevent climate change from destroying trillions of dollars of economic value, prematurely ending millions of lives, and fundamentally and irreversibly altering the natural world that all life depends on.

With primary attention to satisfying the fiduciary duties owed to TRS and its members, in the spirit of insistent partnership, and with high ambition for collective action on the timetable required,

Brad Lander, New York City Comptroller

Executive Summary

This is the first annual report of the progress that TRS is making under the Net Zero Implementation Plan ("Plan") the Board adopted on April 4, 2023 to achieve net zero portfolio GHG emissions by 2040.

The Plan commits TRS to:

- annual disclosure of our GHG emissions and progress towards our emissions reduction targets;
- engagement with our portfolio companies and asset managers to make progress towards net zero
- increased investments in climate change solutions
- divestment from fossil fuel reserve owners and private markets investments in the production, exploration, or extraction of fossil fuels.

Consistent with its fiduciary duties to invest solely in the interests of its participants and beneficiaries and to maximize long-term investment returns in order to fund the pension benefits earned, the Board remains committed to its stated Investment Belief that its role as a fiduciary obligates it to "mitigate the risks, take advantage of opportunities, and reduce the contributions our investments make to climate change."

This report details the activities and progress of the past year, and plans for 2024, in portfolio company and investment manager engagement, investments in climate solutions, fossil fuel divestment, and Just Transition, as well as disclosure of our Scopes 1, 2 and 3 carbon footprint and related metrics.

Summary of 2023 Accomplishments

Climate Solutions: One of the key pillars of the Net Zero Plan is to grow TRS' investments in climate solutions. TRS had an interim target of $4.2 billion in climate solutions by 2025, with an ultimate goal of $19 billion by 2035.

- In 2023, TRS increased investments in climate solutions by over a $1 billion of total exposure. Those investments are detailed below.
- With a current total exposure of $4.22 billion in climate solutions, TRS has already exceeded its $4.2 billion target for 2025.

Asset Manager Engagement: As a universal investor with virtually 100% externally managed assets, TRS must work with our asset managers to decarbonize our portfolio and drive decarbonization at portfolio companies. Building upon Comptroller Lander's letter to BlackRock in 2022 underscoring the importance of addressing climate risks to investments, the Bureau of Asset Management ("BAM") sent a letter to all asset managers communicating TRS' clear and ambitious expectations regarding net zero commitments and implementation plans. To set a baseline and track our managers' decarbonization progress over time, BAM developed and distributed a robust ESG questionnaire to all TRS asset managers regarding net zero and science-based target (SBT) commitments, the collection of carbon emissions data, and physical climate risk assessments.

- BAM received a response from asset managers representing 95% of assets under management (AUM).
- The questionnaire results show that 35% of TRS' investment funds that comprise 35% of total AUM currently measure and report Scopes 1 and 2 emissions.
- The questionnaire results also indicate that 19% of investment funds that comprise 35% of TRS' AUM have adopted a net zero goal or intend to adopt one in the next 18 months.

- BAM is using the questionnaire results along with the TRS carbon footprint to focus engagement on active managers that are contributing the most to TRS' portfolio GHG emissions without requisite policies and processes in place to reduce real world emissions.
- BAM established a new asset manager due diligence process that incorporates an enhanced ESG evaluation, which has resulted in surfacing major ESG concerns earlier in the asset manager selection process and allows BAM to identify such issues for trustees.

Science-Based Targets: The TRS Net Zero Plan highlights the importance of companies and asset managers setting science-based targets (SBTs) as a first step for creating a clear roadmap toward a net zero portfolio by 2040. This past year, BAM initiated robust engagement with portfolio companies and asset managers to adopt SBTs, with a goal of achieving SBTs for 70% of TRS' Scopes 1 and 2 public equity and corporate bonds financed emissions by 2025. As a result of these efforts, TRS has made significant progress toward that goal.

- The percent of TRS' financed emissions in Scopes 1 and 2 that are covered by science-based targets has increased from 22.2% to 36% (including commitments to adopt science-based targets). This is a significant increase, but not clearly on track for our goal of 70% by 2025.
- Because utilities represent one of the highest emitting sectors in the TRS portfolio, BAM targeted 35 utility companies to push to adopt SBTs.
- On behalf of TRS and the other NYC Systems with net zero goals, the Comptroller's Office co-convened the UN Recognition and Accountability Framework Asset Owner Consultation with the UN Framework Convention on Climate Change, and the Office now serves as the Science-Based Targets Thematic Lead for Climate Action 100+.

Climate Banking Engagement: In the years since the Paris Accords, U.S. banks have lent well over a trillion dollars to the expansion of fossil fuels. To push these lenders to engage more urgently in climate transition, consistent with their own net zero commitments, TRS filed shareholder proposals at five major North American banks urging adoption of 2030 interim GHG emissions reduction targets based on absolute emissions in addition to emissions intensity. Four of the five went to a vote and received 13.5% shareholder support on average. In 2024 TRS is filing shareholder proposals for the banks to disclose the ratio of financing through equity and debt underwriting and project finance in low-carbon energy supply relative to that in fossil-fuel energy supply.

Just Transition: A Just Transition toward a low-carbon economy must not recreate the inequities of the fossil fuel economy, but instead deliver tangible labor and environmental justice benefits. However, a widely adopted, holistic Just Transition framework for investors does not yet exist. BAM is recommending an initial approach to a Just Transition definition and framework to inform TRS investment decision-making, consistent with fiduciary duties, that identifies concrete investor strategies to advance Just Transition priorities.

Private Markets Divestment Policy: TRS' Plan makes clear that real economy decarbonization must include an approach to keeping fossil fuels in the ground. TRS completed a full divestment from fossil fuel reserve owners in public markets in 2023. In the Plan TRS announced a new policy to expand its exclusion of fossil fuel exploration, extraction, and production to private markets investments, which has now been implemented in our private markets limited partnership agreement side letters.

Disclosure: After showing substantial declines from 2019 to 2022, our GHG emissions for the year ended June 30, 2023 increased substantially, reflecting the uptick in global emissions that accompanied the post-pandemic surge in economic activity. Our portfolio GHG emissions as of 2023 are lower than the baseline year of 2019, but higher than they were in 2022.

- Scopes 1 and 2:
    - After average annual 10.8% declines in Scopes 1 and 2 financed emissions intensity from 2019-22, it increased by 7.25% in Fiscal Year (FY) 23.
    - Overall, TRS' Scopes 1 and 2 financed emissions intensity has decreased 21.71% as of June 30, 2023 since December 31, 2019.
    - TRS' carbon footprint increased less than TRS' benchmark – as TRS completed the divestment of some companies owning fossil fuel reserves (which have been on the fossil fuel exclusion list) in fiscal year 2023.
- Scope 3:
    - Scope 3 financed emissions intensity increased 43.47% in FY 23.
    - Last year, TRS Scope 3 financed emissions intensity was 36% lower than the benchmark; it is 20% lower now.

These increases in portfolio GHG emissions over the past year are a genuine concern. While TRS knew, of course, that the road to Net Zero would not be linear, and that the post-pandemic economy would not sustain the emissions declines of prior years, we must acknowledge that this is regression, not progress.

TRS is pleased with the progress we made during the first year actively implementing our Plan, while recognizing that achieving decarbonization of the real-world economy is a huge challenge. We are committed to playing our part by engaging with our portfolio companies and asset managers, investing our capital in climate solutions that will generate the appropriate risk-adjusted returns , pushing for a Just Transition, and fully disclosing the greenhouse gas emissions for which our investments are responsible, as much as possible and consistent with our fiduciary duties.

TRS hopes this report will engage readers and inspire other investors to join us in our efforts to prevent climate change from further harming the planet on which we all depend to create long-term, sustainable economic growth.

Summary of 2023 TRS Net Zero Actions

DISCLOSE Emissions and Risk

As of June 30, 2023, TRS' Scope 1 & 2 financed emissions intensity (tons of financed emissions/ million dollars invested (FE/$m)) was 63.9, marking an increase of 7.25% from June 30, 2022. TRS is a little less than 10% away from its 2025 interim emissions reduction target of 32%, compared to the December 2019 baseline.

Materials, Utilities, Energy, and Industrials remain the highest emitting sectors in both the TRS portfolio and the blended benchmark; the top 70% financed emissions are attributed to 163 companies in the TRS portfolio, compared to 203 companies in the benchmark.

As of June 30, 2023, TRS' Scope 3 financed emissions intensity (tons of financed emissions / million dollars invested (FE/$m)) was 346.9, marking an increase of 43.47% from June 30, 2022.

ENGAGE for Alignment and Action

As of June 30, 2023, 29.3% of TRS' absolute Scope 1 and 2 financed emissions in public equity and corporate bonds are covered by science-based targets validated by the SBTi with an additional 6.7% committed to setting science-based targets with SBTi within the next two years. This results in 36% of absolute Scope 1 and 2 financed emissions in TRS' public equity and corporate bonds portfolio being covered by SBTi-approved science-based targets or commitments to set such targets in the next two years. Our goal is 70% of Scope 1& 2 portfolio emissions with science-based targets by 2025.

On behalf of TRS, the Comptroller has engaged with 35 utilities without SBTs representing 10.27% of Scopes 1 & 2 financed emissions.

On behalf of TRS, the Comptroller is serving as thematic lead for Climate Action 100+ on topic of science-based targets and net zero.

35% of investment funds that comprise 35% of TRS' total AUM stated they measure and report Scope 1 and 2 emissions for the investments of the fund/product they manage for the System. 19% of investment funds that comprise 35% of TRS' AUM stated they have adopted a net zero goal or intend to adopt one in the next 18 months. Our goal is 100% of public markets managers to have net zero goals or science-based targets and an accompanying implementation plan by 2025 and 100% of private markets managers to have these by 2026.

INVEST in Climate Change Solutions

As of June 30, 2023, TRS has a total of $4.22 billion in invested and unfunded commitments in climate change solutions across all asset classes, exceeding the 2025 goal of $4.2 billion.

DIVEST to De-Risk

TRS added language in its private markets side letter for managers to commit to exclude investments in the production, exploration, ownership or extraction of fossil fuels.

Section 1: Invest in Climate Change Solutions

One of the key pillars of the Plan is to grow TRS' investments in climate solutions. TRS has a goal of investing a total of $19 billion in climate change solutions by 2035, and an interim goal of $4.2 billion by 2025, consistent with our fiduciary duties and our investment objectives. **As of June 30, 2023, TRS has a total of $4.22 billion in invested and unfunded commitments in climate change solutions across all asset classes, an increase of 31.3% or almost $1 billion over year end 2022.** Since TRS has already surpassed its 2025 target of $4.2 billion, the Board is considering increasing its interim goal. This result comes as global leaders closed the annual United Nations Climate Change Conference (COP28) with a commitment to "laying the ground for a swift, just and equitable transition, underpinned by deep emissions cuts and scaled-up finance."

Examples of climate solutions investments TRS has made include:

- **Intersect Power**, a clean energy company bringing innovative and scalable low-carbon solutions to its customers in retail and wholesale energy markets.
- **Form Energy**, which is developing, manufacturing, and commercializing a new class of cost-effective, multi-day energy storage systems that will enable a reliable and fully renewable electric grid year-round.
- **Nextracker,** which provides intelligent solar tracker solutions for utility-scale and distributed generation projects to transform photovoltaic (PV) plant performance.

Details of TRS' climate solutions investments along with definitions by asset class are in Appendix A.

TRS - Climate Solutions Investments ($million) - Jun 30, 2023								
	Total Portfolio	Public Equity Active	Public Equity Passive	Public Fixed Income	Alternative Credit	Private Equity	Real Estate	Infrastructure
2Q 2023 (1Q23 data for infrastructure) - Including unfunded commitments								
06/30/23 total NAV	96016	18625	25646	32338	3652	8050	5538	2168
06/30/23 climate exposure	4222	755	1668	483	130	161	527	497
06/30/23 climate %	4.40%	4.06%	6.50%	1.49%	3.56%	2.00%	9.52%	22.91%

TRS - Climate Solutions Investments ($million) - Dec 31, 2022								
	Total Portfolio	Public Equity Active	Public Equity Passive	Public Fixed Income	Alternative Credit	Private Equity	Real Estate	Infrastructure
4Q 2022 (2Q22 data for real estate; 3Q22 data for infrastructure) - Including unfunded commitments								
12/31/22 total NAV	90017	17030	22985	31798	3368	7738	5322	1776
12/31/22 climate exposure	3215	678	1139	434	32	157	397	378
12/31/22 climate %	3.57%	3.98%	4.96%	1.37%	0.96%	2.02%	7.46%	21.26%

Analysis of Changes from Dec 2022 to Jun 2023								
	Total Portfolio	Public Equity Active	Public Equity Passive	Public Fixed Income	Alternative Credit	Private Equity	Real Estate	Infrastructure
Total NAV % Change	6.7%	9.4%	11.6%	1.7%	8.5%	4.0%	4.1%	22.0%
Climate exposure % Change	**31.3%**	**11.4%**	**46.4%**	**11.3%**	**302.2%**	**3.0%**	**32.8%**	**31.5%**

Section 2: Asset Managers: Net Zero Plans by 2025 and 2026

TRS' Net Zero Implementation Plan set the following expectations for our asset managers:

- All our public markets asset managers to have a net zero goal or science-based targets, and an implementation plan covering, at a minimum, assets managed for the System, by June 30, 2025 and private markets asset managers to have these by June 30, 2026. We expect public markets managers to have their goals, targets and plans in place by June 30, 2025. For private markets managers the expectation will apply for commitments TRS makes from June 30, 2026 forward.
- All managers to cover Scopes 1 and 2 emissions and material Scope 3 emissions of underlying investments in their targets and plans.
- BAM will review the proxy voting record of public markets asset managers related to climate change, including shareholder proposals and director elections.

To help achieve these expectations, BAM integrates consideration of climate risks and opportunities and net zero alignment in asset manager due diligence, monitoring and engagement and will annually report a summary of the status of the System's managers to the Board.

2.1 Monitoring and Engagement of Asset Managers

In July 2023, BAM sent a letter to all of TRS' current managers ensuring they are aware of the Systems' Net Zero by 2040 expectations and encouraging them to align with these expectations consistent with fiduciary duty and their investment objectives.

Along with the letter, BAM sent managers the annual ESG questionnaire. In 2023, BAM revised and updated its annual ESG questionnaire to managers to add more specific questions related to climate and net zero alignment. The climate-related topics include:

- The managers' adoption of a net zero goal, science-based targets, or alternative decarbonization goals for the funds and strategies in which the System invests as well as the managers' total AUM.
- The managers' adoption of a written implementation plan to achieve any formal decarbonization goals.
- The percentage of total Scope 1, 2, and 3 emissions currently measured for the funds/products managed for the System as well as for the managers' total AUM.
- The assessment of physical climate risk, transition risk, nature-related impacts and dependencies, and water-related risks and stewardship.

BAM received responses from 143 managers for 431 funds that represent 95% of TRS' AUM. These answers provide a baseline from which to measure progress towards the expectations outlined in the Net Zero Implementation Plan.

As a starting baseline for formal decarbonization goals across TRS' portfolio, the following percentages of managers stated they have adopted, or intend to adopt in the next 18 months, net zero goals, science-based targets, other decarbonization goals or implementation plans. The goals and targets apply to the funds or products the managers invest in for TRS:

- 19% of investment funds that comprise 35% of TRS' AUM, adopted or intend to adopt **a net zero goal**
- 15%, that comprise 11% of the AUM, adopted or intend to adopt **science-based targets**
- 25%, that comprise 36% of AUM, adopted or intend to adopt **other decarbonization goals**
- 29%, that comprise 39% of the AUM, adopted or intend to adopt **written implementation plans** to support their decarbonization goals.

We expect these numbers, which were reported in the summer of 2023, to improve over time after receipt of our July 2023 net zero expectations letter and with subsequent targeted engagement of managers throughout the year. Results by asset class appear in Appendix B.

As a starting point for GHG emissions disclosure, about 35% of managers covering 35% of TRS AUM stated they measure and report Scope 1 and 2 emissions for the investments of the fund/product they manage for the System. 21% of managers covering 23% of the AUM stated they measure and report Scope 3 emissions for the fund/product.

The majority of TRS managers are already beginning to assess the impacts of climate change and related risks in their portfolio.

- 84% of investment funds that comprise 90% of AUM currently or intend to assess physical climate risk exposure for some or all of their investments.
- 79% of investment funds that comprise 93% of AUM assess or plan to assess transition risk in some or all of their investments.
- 73% of investment funds that comprise 83% of the AUM assess or plan to assess nature-related impacts and dependencies.
- 77% of investment funds that comprise 86% of the AUM assess or plan to assess water-related risks and water stewardship.

Based on information collected from the questionnaire, BAM will prioritize engagement of managers to encourage and support further adoption of net zero goals, science-based targets or other decarbonization goals along with written implementation plans. Given the outsized share of TRS' public markets financed emissions concentrated in actively managed funds, working with active public markets managers is a critical component of the decarbonization strategy. In addition, BAM will seek to further understand the integration and pricing of physical, transition, nature, and water risks. BAM will report activity, findings and progress from this engagement to the Board in the 2024 Plan Report.

Pursuant to the Net Zero Implementation Plan, BAM is consulting with some of the System's existing private markets managers to develop a proposal for how managers without control over portfolio companies can address GHG emissions in their investments. This is particularly applicable to some investments in Alternative Credit, Private Equity Growth and Real Estate Debt.

BAM will continue to monitor and, to the extent practicable, participate in industry initiatives to develop frameworks and guidance for net zero alignment in private markets asset classes and non-control investments. BAM will provide a progress report on this work in the 2024 Plan Report.

2.2 Due Diligence of Asset Managers

BAM conducts due diligence of material environmental, social, and governance (ESG) factors, including climate change-related risks and opportunities, for all asset managers across all asset classes as part of the overall diligence process conducted prior to approvals and recommendations of investments to the Board. Climate change poses both systemic and idiosyncratic risks for the investment portfolio and is, therefore, actively assessed in the diligence for all managers and strategies and explored in more depth where it may be more financially material.

As a starting point for diligence, BAM utilizes the Due Diligence Questionnaire template of the Institutional Limited Partners Association (ILPA) for private markets managers and a similar template for public markets managers. The ILPA-based template is used along with the BAM-specific supplement described above. These questionnaires collect written disclosures of how managers consider climate change-related risks and opportunities in diligence and portfolio management, whether and how they measure the greenhouse gas emissions of their investments, what climate commitments or targets they have and whether they report in line with the Task Force on Climate-Related Financial Disclosures (TCFD) recommendations. During diligence, the BAM team asks clarifying questions about the written responses as well as questions about the managers' climate-related practices using specific past investments as examples.

BAM looks at the managers' past management and governance of the exposure to physical risks stemming from climate change as well as the management and governance related to climate-related transition risks stemming from evolving regulation and market preferences. In addition, BAM diligences the manager's future plans to integrate and price-in climate-related physical and transition risks and opportunities where material.

BAM also looks at the manager's progress in decreasing its contribution to the systemic risks of climate change and evolving market preferences through emissions reduction pathways. In 2023, BAM adopted specific diligence questions related to climate change and net zero alignment including whether managers measure the Scope 3 emissions of their investments; whether they have specifically adopted net zero goals, science-based targets or other emissions reduction targets for their investments; whether they have a written plan to support these goals or targets; and whether their goals or targets cover Scope 3 emissions of their investments. For specific high emitting sectors, we conduct deeper diligence. For example, for midstream oil and gas assets, we diligence our managers' monitoring and management of methane leaks at portfolio companies given methane's global warming potential is 28 times that of carbon dioxide.[1] BAM summarizes and reports findings related to climate-related ESG diligence in investment memoranda to the Board.

In recognition of the importance of nature as a vital carbon sink and subject of the cascading impacts of climate change, BAM has been monitoring the release of the final Task Force on Nature-Related Financial Disclosures (TNFD framework), which is harmonized with the TCFD/ISSB S2 framework, and will make a recommendation on the next steps to help mitigate the systemic risk from large-scale ecosystem collapse.

[1] Microsoft Word - Global-Warming-Potential-Values.docx (ghgprotocol.org)

Section 3: Public Markets Portfolio Companies: Science-Based Targets

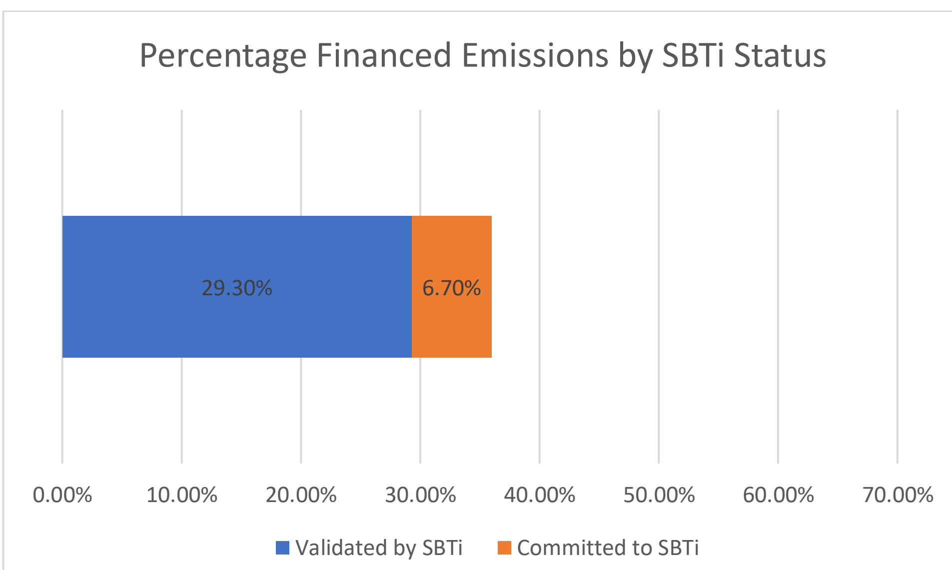
The Plan highlights the importance of setting science-based targets (SBTs) as a first step for creating a clear roadmap toward a net zero portfolio by 2040:

- TRS seeks to have companies representing 70% of Scopes 1 & 2 (S1S2) financed emissions (FE) to adopt science-based targets (SBTs), to be approved by SBTi or otherwise independently verified with globally established science-based standards by June 30, 2025.
    - TRS seeks to have companies representing 90% of Scopes 1, 2 & 3 financed emissions to adopt SBTs by 2030 with such targets also approved by SBTi or other independent globally established standards.
- TRS will focus efforts toward engagement of these companies by prioritizing portfolio companies in the highest emitting sectors in Scopes 1 and 2 - Energy (primarily oil and gas), Utilities, Industrials, and Materials - in developed markets as well as the largest emerging markets portfolio companies in those sectors.

In 2023 TRS initiated robust engagement with portfolio companies and asset managers to adopt SBTs to achieve the Plan's goals for increasing alignment of our public equity and corporate bonds portfolio companies with science-based pathways to limit global warming to 1.5° Celsius.

3.1 Current Science-Based Targets Coverage

In the last year, the percentage of TRS' publicly listed portfolio companies that have set science-based targets or committed to do so through the Science-Based Target Initiative (SBTi) has increased significantly from 22.18% in 2022 to a total of 36%. As of June 30, 2023, 29.3% of TRS Scope 1 and 2 financed emissions in public equity and corporate bonds are covered by science-based targets validated by the SBTi, with an additional 6.7% committed to setting science-based targets with SBTi within the next two years. This results in 36% of Scope 1 and 2 financed emissions in TRS' public equity and corporate bonds portfolio being covered by SBTi-approved science-based targets or commitments to set such targets in the next two years.



3.2 Engagement Activity and Initial Results

To achieve TRS' SBT goals, BAM assessed the public markets portfolio for the highest emitters and current portfolio coverage of SBTs and developed a focus list of companies for engagement. BAM found that in 2022 161 companies were responsible for 70% of TRS' Scope 1 and 2 financed emissions with the highest concentration among Utilities and Energy companies.

BAM prioritized engagement of companies by sector, share of financed emissions, and availability of sectoral guidance from SBTi. BAM determined to initially focus on the Utilities sector for the following reasons:

- Utilities are linchpins in efforts to decarbonize the global economy - other high emitting companies purchase power directly from utilities.
- According to the International Energy Agency, under a net zero by 2050 energy scenario, electricity utilities must hit net zero emissions by 2040.[2] The decarbonization of the global economy is dependent on a quicker transition in the utility sector.
- There is robust sector-based guidance from SBTi for the Utilities sector which acknowledges the need for the sector to decarbonize at a faster pace than other sectors of the economy.

BAM constructed an initial target list of 35 high-emitting utility companies without SBTs, that are based in North America or Europe, and owned by at least two of the three New York City pension funds that have net zero goals. Collectively, these companies represented 10.27% of TRS' Scope 1 and 2 financed emissions in 2023. In August 2023, Comptroller Lander sent letters to these 35 utility companies encouraging their adoption of science-based targets validated by SBTi or another third-party entity.

All 35 utility companies responded to the engagement letter. BAM has conducted additional direct engagement with over half of the letter recipients and will continue engagement throughout 2024. While nearly all of these companies have made net zero commitments, the vast majority are not yet covered by or committed to science-based targets.

BAM also proactively reached out to the U.S. utility trade association, the Edison Electric Institute (EEI), to discuss their work assisting their members with setting science-based targets. From both EEI and individual companies with whom BAM has had direct engagements, we have learned that the industry is generally concerned with their ability to utilize SBTi methodology and is eager to find and utilize a different approach to setting science-based targets.

Alongside distribution of our engagement letter, BAM also engaged with the U.S. utility trade association, the Edison Electric Institute (EEI), to discuss their members' approach to science-based targets. From both EEI and individual companies with whom BAM has had direct engagements, we have learned that, while a small handful of their members have submitted plans to SBTi, the majority of their members have expressed concerns with their ability to utilize SBTi methodology. EEI is therefore in the process of developing an alternative, science-based target-setting protocol for the utility industry, in partnership with the Electric Power Research Institute (EPRI).

As stated in the Net Zero Implementation Plan, TRS remains open to other methodologies beyond SBTi that are science-based and where targets can be verified by a third-party. As a result of BAM's direct company engagement and engagement with EEI on behalf of the industry, BAM is considering how to

[2] https://www.iea.org/reports/world-energy-outlook-2022

formally review the methodology under development and consider whether TRS' goals can be satisfied through this forthcoming approach.

3.3 Climate Action 100+ Thematic Lead and Collaboration with Other Net Zero Asset Owners

On behalf of TRS and other Systems with net zero goals, BAM serves as a lead thematic investor on the topic of science-based targets and net zero for the Climate Action 100+ (CA100+). CA100+ established this new theme and role for its second phase based on discussions with BAM and other members and the need for greater collaboration on this important systemic issue. As thematic lead, BAM will facilitate collaborative activities and engagements across sectors and lend topical expertise to existing CA 100+ engagement teams to increase the number of companies with science-based targets. BAM has proposed three initial areas for collaboration in the coming year:

1. Establish a cohort of CA 100+ signatory investors that are requesting third-party verified science-based targets from high-emitting companies.
2. Develop a shared understanding of what is acceptable to investors as a science-based target.
3. Identify key actions that a company should take to ensure accountability after it sets science-based targets.

Specific engagement opportunities will flow from these topics.

In addition, on behalf of TRS and the other NYC Systems with net zero goals, the Comptroller has been actively reaching out to other global net zero asset owners to foster collaboration. During NYC Climate Week in September 2023 the Comptroller co-hosted a roundtable for Net Zero asset owners, and the UN Framework Convention on Climate Change (UNFCCC), the secretariat for the Conference of the Parties (COP), asked the Comptroller to co-convene the UN Recognition and Accountability Framework Asset Owner Consultation in the lead-up to COP 28. A dozen asset owners from Europe, Asia and the U.S. participated in the consultation and in follow-up conversations as well. TRS is an active member of the Paris-Aligned Asset Owners Organization and is considering joining the Net Zero Asset Owners Alliance as well.

FUTURE STRATEGY

3.4 Continued Portfolio Company Engagement

In addition to continuing the work that BAM began with the Utilities sector, on behalf of TRS and the other Systems with net zero plans BAM plans to continue engaging with higher emitting portfolio companies to encourage third-party validated science-based targets in three additional waves between now and June 30, 2025. BAM expects to begin engagement with high-emitting Materials sector companies in early 2024. BAM will employ a similar approach as it took with Utilities companies – a letter from the Comptroller to encourage adoption of science-based targets followed by direct engagement and engagement through additional channels (e.g., trade associations, industry events, etc.) BAM will continue to utilize the new science-based targets thematic lead role through CA100+ to accelerate this activity.

To the extent that BAM will need to evaluate non-SBTi standards, BAM plans to work with third-party experts and other stakeholders to ensure that alternative standards are truly science-based and meet the requirements of TRS' Net Zero implementation plan.

3.5 Assessing Net Zero Alignment of Portfolio Companies

Pursuant to the Net Zero Implementation Plan, BAM is exploring data sources, tools, frameworks and methodologies for assessing the net zero alignment of portfolio companies as recommended by the Paris-Aligned Asset Owners ("PAAO") Net Zero Investment Framework (NZIF). NZIF recommends assessing and setting targets for the net zero alignment of portfolio companies based on the categories of not aligned, committed to aligning to net zero, aligning to net zero, aligned to net zero and achieving net zero. NZIF recommends six main criteria for how to classify a company in these categories. They include whether a company (1) has a net zero goal; (2) has interim emissions reduction targets (including for material Scope 3 emissions); (3) reports emissions performance relative to targets; (4) discloses Scopes 1, 2 and 3 emissions; (5) has a detailed decarbonization strategy; and (6) has capital expenditures supporting net zero alignment. NZIF recommends the following methodologies to support assessment of the alignment of companies in line with the criteria above: (1) Climate Action 100+ Benchmark, (2) Transition Pathway Initiative (TPI) carbon performance and management quality indicators and (3) Science-Based Targets Initiative. NZIF specifically recommends using SBTi for assessing companies against alignment criteria 2, 3 and 4. NZIF also states that private data providers may also support assessment of alignment of companies in line with NZIF criteria.

Section 4: Engagement with Banks

In 2023, TRS filed shareholder proposals that requested that **Bank of America**[3], **Goldman Sachs**, **JPMorgan**, **Morgan Stanley**, and **Royal Bank of Canada** disclose interim 2030 absolute greenhouse gas (GHG) reduction targets for their lending and underwriting in the high-emitting sectors of oil and gas and power generation. These targets should align with a science-based net-zero pathway and complement the emission intensity targets the banks have already set for these sectors.

An absolute financed emissions target aims to reduce GHG emissions by a set amount, while an intensity target is a normalized metric that sets an organization's emissions target relative to an economic or operational variable. Unlike absolute targets, intensity targets do not necessarily correlate with emissions reductions. Relying solely on intensity targets could allow a bank's clients to invest in expanded volumes of fossil fuel production with increased absolute financed emissions in the real economy as long as the bank's overall intensity per dollar decreases.

As signatories to the Net Zero Banking Alliance (NZBA), the five banks have previously committed to achieving net-zero GHG emissions by 2050 and to reporting progress against absolute emissions and/or emissions intensity targets and some have begun to do so.

[3] Co-filed with the New York State Common Retirement Fund

All of the proposals, except at Morgan Stanley, went to a vote and received 13.5 % of votes cast on average. The proposal at Morgan Stanley was withdrawn for procedural reasons.

In 2024, TRS will continue to advocate for improved disclosure to track banks' progress towards their own net zero goals. TRS, NYCERS, and BERS filed shareholder proposals requesting the calculation and disclosure of an energy supply ratio that shows the banks' total financing through equity and debt underwriting and project finance in low-carbon energy supply relative to that in fossil-fuel energy supply.

Bloomberg New Energy Finance (BNEF) annually publishes an Energy Supply Banking Ratio report that compares banks' "low-carbon" energy supply financing to their fossil fuels financing. BNEF aggregates climate scenarios to project that the overall clean energy supply ratio must reach 4:1 by 2030, 6:1 during the 2030s and 10:1 thereafter. BNEF's methodology uses numerous assumptions and estimates because of inadequate reporting from banks.

BNEF reports the 2022 ratios for the banks where we are filing the 2024 resolutions as follows:

RBC	0.4
Citi	0.6
JP Morgan	0.8
B of A	1.0
Goldman Sachs	1.2
Morgan Stanley	1.3

BNEF puts the global real economy ratio for 2022 at 1:1 ($2 trillion each for fossil fuels and low-carbon supply), with the bank financing ratio at .73. By urging them to disclose their ratio of clean to fossil fuel financing, we hope the banks will increase the former while reducing the latter, focus on accelerating the transition, and disclose more information about their financing to have them take their commitments to net zero seriously. We believe that the ratio would complement the banks' aggregate financed emissions disclosures and provide investors a more robust picture.

Section 5: Just Transition

The TRS Net Zero Implementation Plan includes a commitment to support a Just Transition "in the investment process, consistent with our fiduciary duties." The trustees directed BAM to recommend an initial approach for this effort by the fourth quarter of 2023. As articulated in the net zero implementation plan, the recommended approach should:

- Integrate assessments of how TRS investments support a Just Transition to a low-carbon and net zero economy to mitigate systemic risk, adhere to human rights standards and support sustainable value creation, consistent with our fiduciary duties.

- Develop and apply prudent frameworks for a Just Transition assessment in:
  - Diligence and monitoring of investment managers
  - Shareholder engagement
  - Other appropriate aspects of the investment process.
- To develop the framework, BAM shall continue to assess data, methodologies, and standards for evaluating how TRS investments support a Just Transition, including but not limited to ensuring genuine stakeholder engagement with local communities, workers and their union representatives, and environmental advocates; providing tangible economic benefits to the communities in which companies operate; and hiring local workers, with a priority if applicable to displaced workers from fossil fuel-related industries.

While many asset owners and investors have committed to incorporating the Just Transition into their investment strategies and net zero plans, there is not yet a widely adopted, formal, holistic framework for investors. This document lays out a beginning definition and workplan and summarizes existing and relevant literature.

5.1 Defining a Just Transition

Just Transition is a term that is used broadly and often poorly defined. Since TRS' adoption of the Net Zero by 2040 plan, the team at BAM developed a definition that could be applicable to TRS' work as asset owners and allocators that will inform investment decision-making moving forward, consistent with TRS' fiduciary duties:

As we implement our Net Zero by 2040 plan and transition away from fossil fuels, a Just Transition requires that the workers and communities who have powered our economy must benefit from the transition. Investments in climate solutions must not recreate the inequities of the fossil fuel economy, but strive to deliver tangible labor and environmental justice benefits. TRS supports the preamble to the 2015 Paris Accord: "When taking action to address climate change we will respect, promote and consider our obligations to human rights, the right to health, the rights of indigenous peoples, local communities, workers, migrants, children, persons with disabilities and people in vulnerable situations, as well as gender equality, empowerment of women and intergenerational equity."[4]

5.2 Investor Strategies

As institutional investors with fiduciary oversight and duty, BAM has identified five strategies through which to implement Just Transition Priorities:

1. Investment policy
2. Manager selection and engagement
3. Coalition building with other asset owners
4. Individual portfolio company engagement
5. Regulatory advocacy

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[4] 2015 United Nations Paris Agreement, p. 2, [ADOPTION OF THE PARIS AGREEMENT - Paris Agreement text English (unfccc.int)]

Given the limited resources and scope, BAM recommends focusing immediate energy on investment policy, manager selection and engagement, coalition building with other asset owners and individual portfolio engagement, particularly in private markets. Regulatory advocacy is not in the immediate purview of the System's trustees, so the focus is on strategies one through four below.

1. Investment Policy
   a) TRS will update our Net Zero by 2040 implementation plan with a clear definition of Just Transition and these strategies.
2. Manager Selection & Engagement
   a) Ask all potential asset managers in both public and private markets to disclose their Just Transition definition and plans and how Just Transition factors into their investment decision-making.
   b) Include a question about Just Transition plans and implementation in BAM's annual ESG questionnaire with all managers in both public and private markets.
3. Coalition Building
   a) BAM is working to build a coalition of global high ambition net zero asset owners. In partnership with the UN, Comptroller Lander and BAM have met with more than a dozen large asset owners to discuss Net Zero plans. Just Transition is an important component of this partnership work. To maximize impact, BAM will work to ensure that asset owners have a generally agreed upon definition and can work together to push asset managers to adhere to the principles of a Just Transition, as defined above.
4. Individual portfolio company engagement
   a) Public Markets
      i. TRS is a universal investor with shares in almost every public company, with the exception of those companies NYCERS has divested. It is therefore imperative that TRS focus our portfolio company engagement to maximize impact. 86 US-based companies are responsible for the majority of TRS's 2023 Scopes 1 and 2 2023 financed emissions. TRS will include Just Transition priorities in our engagement with those companies. As we engage with these priority companies, we will identify stakeholders and meet with them to understand the nature of the specific concerns regarding their economic and community impacts and will develop proposals and engagements based on the stakeholder demands, assuming they are aligned with our fiduciary duty and interest.
      ii. TRS will introduce Just Transition shareholder proposals at targeted companies as necessary.
   b) Private Markets
      i. As is true across TRS' ESG work, our engagement with private market portfolio companies is different than its public market equivalent. Beyond our asset manager engagement, often individual portfolio company engagement is done on an as-needed basis. As TRS identifies material and investor-related concerns with portfolio companies, including relevant information from stakeholders, we will reach out to the asset manager. TRS intends to continue this model and work to publicize our prioritization of Just Transition principles so that key stakeholders are aware of our role.

5.3 Engaging Stakeholders to Advance a Just Transition

One of the key principles of Just Transition rests in the understanding that, all too often, the communities that are most affected by climate change, pollution and resulting economic changes are considered an after-thought in the decision-making process and are not seen as experts in developing potential solutions.

Given the scope and reach of the System's investments, TRS acknowledge sthat it will not be possible to engage all affected communities. However, as we engage individual portfolio companies in particular, it is imperative that we meet with and learn from affected stakeholders to develop our engagement priorities and proposals.

BAM has identified three stakeholder communities that it believes TRS should engage and learn from as the System embarks on the planning process. TRS will engage key stakeholders to advise on possible priorities in our coalition building, asset manager and portfolio company engagement. Stakeholders will primarily fall within the following categories:

1. Workers' Rights & Labor Unions – particularly those most affected by the transition from a fossil-fuel based economy to a green economy.
2. Front-line environmental justice organizations, with an emphasis on those in NYC and in North America.
3. Organizations and Individuals who focus on global fairness and emerging markets, as needed.

As TRS engages with these stakeholders we understand that different stakeholders may have different, even competing, perspectives on what a company should do to ensure a just transition. Additionally, TRS will assess if stakeholder priorities are consistent with our fiduciary duty and whether they are requests that TRS, in our capacity as asset owners, can address.

Section 6: Divest to De-Risk

In 2015, TRS began excluding from its portfolio publicly-traded companies which derive at least 50% of their revenue from thermal coal production, mining and/or processing. In 2018, TRS voted to set a goal to divest from fossil fuel owners in publicly traded equity and fixed income securities within five years following. TRS completed the divestment in fiscal year 2023 for a total of approximately $2 billion, subsequently evaluating the impact of this divestment on our portfolio annually.

Consistent with the Board's Fossil Fuel Reserve Owner Divestment resolution, TRS' Net Zero Implementation Plan provides that BAM shall ask all private markets managers recommended for Board approval to commit across the recommended fund to exclude investments in exploration, extraction or production of oil, gas, or thermal coal, or to otherwise provide TRS with the ability to opt out of such investments. BAM has implemented this policy by adding language to private markets side letters and is assessing all investments for exploration, extraction or production of oil, gas or thermal coal in their funds or products under consideration during the diligence process, consistent with fiduciary duty.

In addition, the Net Zero Implementation Plan stated TRS will explore further potential prudent actions in the thermal coal value chain, including coal infrastructure and coal-powered electricity generation, as part of our engagement strategy, to manage the phaseout of high-risk fossil fuel assets and expedite the transition to a clean energy economy. Such actions may include consideration of additional exclusions of the coal value chain to address the high financial and climate risk of thermal coal, subject to investment analysis to ensure compliance with our fiduciary duties and an assessment of Just Transition plans for workers. We have not taken additional action in this area yet but will maintain the objective of exploring prudent ways to address uncompensated risks of the thermal coal value chain in TRS' portfolio.

Section 7: Disclose Emissions and Risk

Public Equity and Corporate Bonds Interim Scope 1 and 2 Emissions Reduction Targets and Annual Carbon Footprint Analysis

We know that our progress towards Net Zero will not be smooth or linear, just as we are seeing in the global economy. After showing substantial declines from 2019 to 2022, our GHG emissions for the year ended June 30, 2023 increased substantially, reflecting the uptick in global emissions that accompanied the post-pandemic surge in economic activity. Our portfolio GHG emissions as of 2023 are still lower than the baseline year of 2019.

In our Net Zero Implementation Plan, TRS set aspirational targets to reduce the Scope 1 and 2 financed emissions intensity in our public equity and corporate bonds (including investment grade, high yield and convertible bonds) portfolio by 32% by 2025, 59% by 2030, and 100% by 2040, using a baseline of December 31, 2019. For these interim emissions reduction targets, TRS uses "financed emissions intensity" (tons of CO_2 equivalent emissions/$million invested) based on Enterprise Value Including Cash (EVIC) as the primary metric for emissions. We also report, measure and evaluate changes in absolute financed emissions (which will be also referred to as financed emissions or FE in this report) and weighted average carbon intensity (WACI) (tons of CO_2/$million sales) and strive toward comparable progress among all metrics. Scope 3 emissions and target-setting are discussed in the subsection further below on Scope 3 emissions. For definitions of Scopes 1, 2 and 3, please see Appendix E.

TRS' Scope 1 and 2 financed emissions intensity had decreased by 27% during the years between December 31, 2019, and June 30, 2022, yielding an average annual reduction of 10.8%. However, from June 30, 2022 to June 30, 2023, TRS' Scope 1 and 2 financed emissions intensity increased by 7.25%. This was a lower rate of increase than the benchmark's increase of 17.63%. Additional details are discussed below. Overall, TRS' Scope 1 and 2 financed emissions intensity decreased 21.71% from Dec 31, 2019 until Jun 30, 2023.

Public Equity and Corporate Bonds Annual Carbon Footprint Analysis

On behalf of TRS, BAM conducted an annual updated carbon footprint analysis of the System's public equity and corporate bond portfolios and a blended benchmark[5] portfolio. The analysis used holdings

[5] Blended benchmark for TRS, as of Jun 30, 2023, is comprised of: Russell 3000 45.87%, MSCI Ex-US Developed Equity 18.35%, MSCI Emerging Market Equity 17.43%, Bloomberg Agg IG 10.09%, Bloomberg HY 8.26%

data as of June 30, 2023 and MSCI's carbon footprint data and analytics[6]. Public equity and corporate bonds constituted 54.6% of TRS' total assets as of June 30, 2023. Corporate bonds include only 1) investment grade and 2) high yield.

7.1 Scope 1 and 2

7.1.1 Scope 1 and 2 – Financed Emissions and Intensity

During Fiscal Year 2023 TRS' public equity and corporate bonds portfolio experienced a lower increase than the blended benchmark, because of TRS completing the divestment of some companies owning fossil fuel reserves, which had been on the fossil fuels exclusion list, as depicted in Table 1. Most of the increase in the emissions intensity was driven by the increase in underlying Scope 1 and 2 emissions of the portfolio companies, followed by change in EVIC of companies, and new investments.

Table 1: Public Equity and Corporate Bonds Scope 1 and 2 Financed Emissions and Intensity

TRS - Financed Emissions Intensity - Scope 1 and 2		
	TRS Portfolio Tons carbon emissions/$m invested	Blended Benchmark Tons carbon emissions/$m invested
31-Dec-19	81.62	79.95
30-Jun-22	59.58	60.70
30-Jun-23	63.90	71.40
Change % (2022-2023)	7.25%	17.63%
Change % (2019-2023)	-21.7%	-10.69%
TRS – Absolute Financed Emissions - Scope 1 and 2		
	TRS Portfolio Tons carbon emissions	Blended Benchmark Tons carbon emissions
31-Dec-19	3,951,681	3,844,316.78
30-Jun-22	2,786,341	2,823,438
30-Jun-23	3,349,152	3,744,197
Change % (2022-2023)	20.20%	32.61%
Change % (2019-2023)	-15.25%	-2.60%

TRS' public equity and corporate bonds total financed emissions (FE) also increased, but by a lower rate than the increase in the benchmark's total FE during this time. More than half of the increase in FE was driven by changes in the market value of securities, and more than a third of the increase can be explained by the increase in underlying Scope 1 and 2 emissions of the portfolio companies, amongst other factors.

[6] As MSCI makes progress on PCAF alignment, some of these metrics may evolve. We continue to monitor evolving industry guidance and standards for calculating the portfolio carbon footprint. We are moving to more closely align with the PCAF standard for the asset classes in which there is guidance next year. The current footprint is calculated using the MSCI Carbon Analytics tool.

TRS' financed emissions intensity and FE have both decreased since the baseline year of 2019, and that too by more than the benchmark during that period.

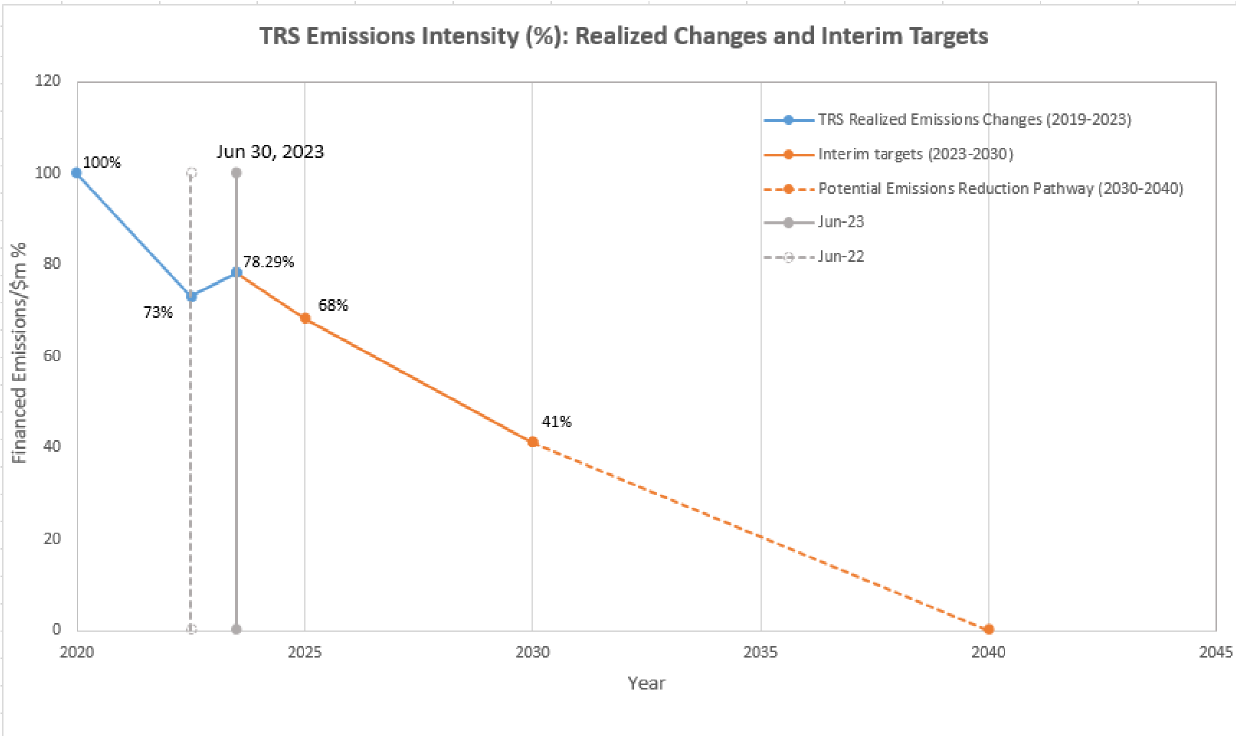
The highest emitting sectors in both the TRS portfolio and the benchmark are Materials, Utilities, Energy, and Industrials, representing almost 81.7% of financed emissions, and 22.4% of portfolio weight (see Table 2) in the TRS portfolio. On behalf of TRS, BAM is pursuing active engagement with portfolio companies in these high emitting sectors, starting with Utilities (see more details on engagement in Section 3 above).

Table 2: High Emitting Sectors (Scope 1 and 2) – Jun 30, 2023

TRS Portfolio			TRS Blended Benchmark		
GICS Sector	**Portfolio Weight**	**Contribution to Scope1,2 FE**	**GICS Sector**	**Portfolio Weight**	**Contribution to Scope1,2 FE**
Materials	5.2%	44.1%	Materials	4.7%	30.8%
Utilities	2.8%	17.4%	Utilities	3.1%	24.1%
Industrials	11.7%	10.3%	Energy	5.2%	21.1%
Energy	2.7%	9.9%	Industrials	10.2%	8.6%
Top 4 High Emitting Sectors	**22.4%**	**81.7%**	**Top 4 High Emitting Sectors**	**23.2%**	**84.5%**

Figure 1 below shows the percentage of Scope 1 and 2 emissions reductions needed for the public equity and corporate bonds portfolios each year to achieve the interim emissions reduction targets of 2025 and 2030 and net zero emissions by 2040. TRS would need to reduce emissions by approximately an additional 10% by 2025 to achieve its interim target of 32% emissions reduction.

Fig 1: TRS – Realized and Projected Emissions Reduction Targets (Scope 1 and 2)



While we continue to assess sources of (and changes in) emissions increases in TRS portfolio and engage with the highest emitting sectors and companies in pursuit of our targets, it is important to note that some of this increase is in line with the expected post-pandemic increase in economic activity in the US[7] (EIA 2022) and the increase in global energy-related emissions[8] (IEA 2023).

For details on TRS' Scope 1 and 2 emissions by sub-asset class, by active vs. passive equity, by sector, and by WACI, please see Appendix C.

7.2 Scope 3 Financed Emissions

7.2.1. Scope 3 – Financed Emissions and Intensity

TRS' public equity and corporate bonds portfolio experienced a greater increase in Scope 3 financed emissions intensity than the benchmark, as depicted in Table 4. Most of this increase was driven by the increase in underlying Scope 3 emissions of the portfolio companies, followed by change in EVIC of companies, and new investments.

[7] https://www.eia.gov/todayinenergy/detail.php?id=50958#:~:text=As%20the%20U.S.%20economy%20began,remaining%20virtually%20flat%20in%202023.

[8] https://www.iea.org/reports/co2-emissions-in-2022

Table 4: Public Equity and Corporate Bonds - Scope 3 - Financed Emissions and Intensity

TRS - Financed Emissions Intensity - Scope 3		
	TRS Portfolio Tons carbon emissions/$m invested	Blended Benchmark Tons carbon emissions/$m invested
30-Jun-22	241.80	379.00
30-Jun-23	346.90	431.90
Change % (2022-2023)	43.47%	13.96%
TRS - Financed Emissions - Scope 3		
	TRS Portfolio Tons carbon emissions	Blended Benchmark Tons carbon emissions
30-Jun-22	11,346,047	17,625,211
30-Jun-23	18,190,595	22,644,318
Change % (2022-2023)	60.33%	28.48%

TRS' total Scope 3 financed emissions also increased more than the benchmark during this time. More than half of this change can be attributed to an increase in the underlying Scope 3 emissions of the portfolio companies, and the rest is explained by the changes in the market value of securities, EVIC, and addition of new securities amongst other factors.

The highest emitting sectors for Scope 3 in both TRS' portfolio and the benchmark are Materials, Consumer Discretionary, Energy, and Industrials, collectively representing more than 70% of financed emissions, and almost 31% of portfolio weights (see Table 5). The top 70% of Scope 3 financed emissions are attributed to 333 companies in the TRS' portfolio compared to 282 in the benchmark.

TRS has not yet set interim Scope 3 emissions reductions goals due to inadequate data. We plan to set such goals by 2025 as data availability and quality improve.

Table 5: High Emitting Sectors (Scope 3) – Jun 30, 2023

TRS Portfolio			TRS Blended Benchmark		
GICS Sector	**Portfolio Weight**	**Contribution to Scope 3 FE**	**GICS Sector**	**Portfolio Weight**	**Contribution to Scope 3 FE**
Industrials	11.7%	21.4%	Energy	5.2%	35.1%
Energy	2.7%	20.2%	Materials	4.7%	16.2%
Consumer Discretionary	12.4%	15.7%	Industrials	10.2%	16.1%
Materials	5.2%	15.0%	Consumer Discretionary	11.3%	12.2%
Top 4 High Emitting Sectors	**31.9%**	**72.3%**	**Top 4 High Emitting Sectors**	**31.4%**	**79.5%**

For details on TRS' Scope 3 emissions by sub-asset class, by active vs. passive equity, by sector, and by WACI, please see Appendix D.

7.3 Sector Decarbonization Targets

BAM will review the sectoral target setting guidance by the Net Zero Investment Framework and Net Zero Asset Owners Alliance Target Setting Protocol, and propose interim emissions reduction targets for TRS' highest emitting sectors in 2024.

7.4 Private Markets

On behalf of TRS, BAM continues to evaluate tools and data sources for conducting carbon footprint analyses for our Private Equity, Alternative Credit, Real Estate, and Infrastructure portfolios. We are also reviewing industry frameworks for applicable guidance, including from Net Zero Asset Owner's Alliance (NZAOA), Net Zero Investment Framework (NZIF), Science-Based Targets Initiative (SBTi), Institutional Investors Group on Climate Change (IIGCC) and Initiative Climate International (iCI), for our private asset classes' emissions assessment and net zero guidance.

7.5 Task Force on Climate-Related Financial Disclosures (TCFD)/ISSB S2 Climate Standards Reporting

As part of our commitment to the Paris-Aligned Asset Owner Alliance, and as outlined in our Net Zero Implementation Plan, TRS pledged to produce a climate report in accordance with the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD wound down in October 2023 as part of the consolidation of international sustainability standards under the International Financial Reporting Standards (IFRS) International Sustainability Standards Board (ISSB). The TCFD will now become the ISSB S2 Climate Standards starting in 2024.

TRS plans to publish an ISSB S2 Climate aligned report (formerly the TCFD) in 2024. With this change we also plan to transition and align our carbon accounting metrics as closely as possible to the PCAF standard, as recommended by the TCFD, CDP, and the US Treasury.

Appendices

Appendix A – Climate Solutions Investments

Table 7: TRS – Climate Solutions Investments

TRS - Climate Solutions Investments ($million) - Jun 30, 2023								
	Total Portfolio	Public Equity Active	Public Equity Passive	Public Fixed Income	Alternative Credit	Private Equity	Real Estate	Infrastructure
2Q 2023 (1Q23 data for infrastructure) - Including unfunded commitments								
06/30/23 total NAV	96016	18625	25646	32338	3652	8050	5538	2168
06/30/23 climate exposure	4222	755	1668	483	130	161	527	497
06/30/23 climate %	4.40%	4.06%	6.50%	1.49%	3.56%	2.00%	9.52%	22.91%

TRS - Climate Solutions Investments ($million) - Dec 31, 2022								
	Total Portfolio	Public Equity Active	Public Equity Passive	Public Fixed Income	Alternative Credit	Private Equity	Real Estate	Infrastructure
4Q 2022 (2Q22 data for real estate; 3Q22 data for infrastructure) - Including unfunded commitments								
12/31/22 total NAV	90017	17030	22985	31798	3368	7738	5322	1776
12/31/22 climate exposure	3215	678	1139	434	32	157	397	378
12/31/22 climate %	3.57%	3.98%	4.96%	1.37%	0.96%	2.02%	7.46%	21.26%

Analysis of Changes from Dec 2022 to Jun 2023								
	Total Portfolio	Public Equity Active	Public Equity Passive	Public Fixed Income	Alternative Credit	Private Equity	Real Estate	Infrastructure
Total NAV % Change	6.7%	9.4%	11.6%	1.7%	8.5%	4.0%	4.1%	22.0%
Climate exposure % Change	**31.3%**	**11.4%**	**46.4%**	**11.3%**	**302.2%**	**3.0%**	**32.8%**	**31.5%**

To comprehensively account for the climate solutions exposure in our portfolios and to be consistent with the best practices recommended in the Climate Investment Roadmap 2022 by IIGCC (The Institutional Investors Group on Climate Change), TRS adopted a new weighted average calculation method to account for climate solutions investments in public markets replacing the prior method of accounting for climate solutions investments. The prior method counted all of a company's market value as a climate solutions investment if 50% of more of its revenue was derived from climate solutions activity. The new method counts only the percentage of a company's market value that is the percentage of its revenue derived from climate solutions activity.

Definitions of Climate Solutions Investments

Public Equity: Companies that derive revenue from MSCI's Environmental Impact categories of alternative energy, energy efficiency, green building, pollution prevention, or sustainable water. New weighted average method adopted as of 4Q 2022.

Public Fixed Income: Companies that derive revenue from MSCI's Environmental Impact categories of alternative energy, energy efficiency, green buildings, sustainable water, pollution prevention, or sustainable agriculture. New weighted average method adopted as of 4Q 2022.

Also includes green bonds based on manager surveys conducted by Fixed Income Team. Managers were allowed discretion in defining green bonds.

Alternative Credit: Opportunistic Fixed Income **(**OFI) market values are based on manager surveys conducted by Alternative Credit Team. The definition of climate solutions used for OFI is "investments in companies that generate 50% or more revenue from clean and renewable energy technologies and assets including (1) renewable energy such as solar, wind, geothermal and hydropower; (2) energy efficiency and energy smart technologies such as power storage, fuel cells and carbon capture and storage; (3) energy efficient transport and (4) low carbon buildings." This definition is a summary of the MSCI and Burgiss definitions as well as a reflection of a definition by Ceres. Total OFI NAV based on data from Alternative Credit Team.

Private Equity: Companies predominantly focused on a business activity classified under the Burgiss category of "Eco Friendly" activities, including renewable energy, biofuel and other clean tech or associated companies. All data is NAV.

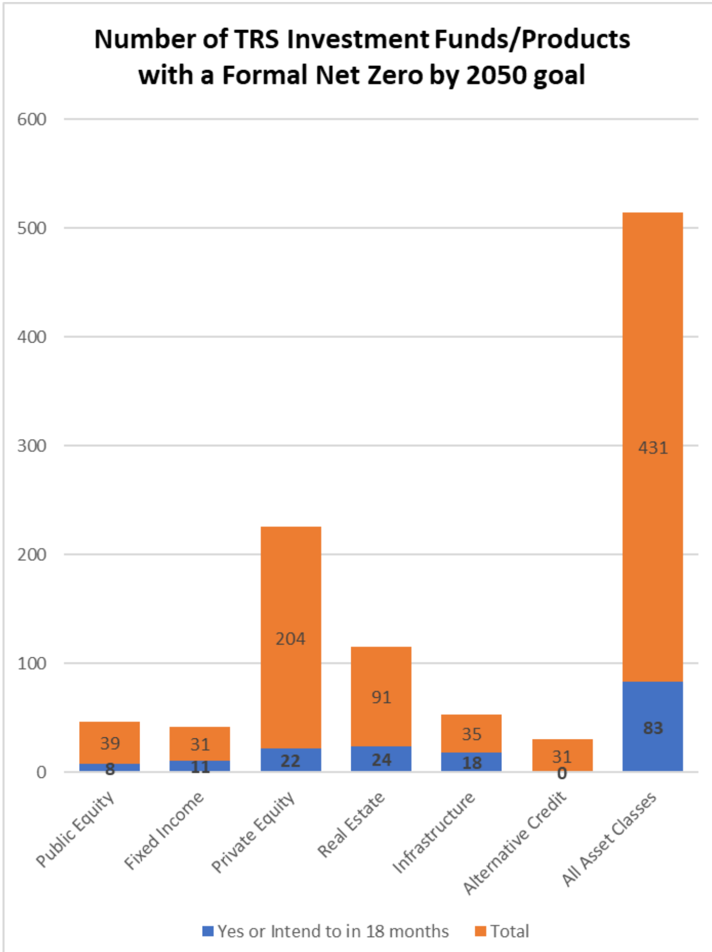
Real Estate: Properties certified as Energy Star. Includes properties certified as LEED only if they are also certified as Energy Star. All data is based on manager surveys conducted by the Real Estate Team. All data is NAV.

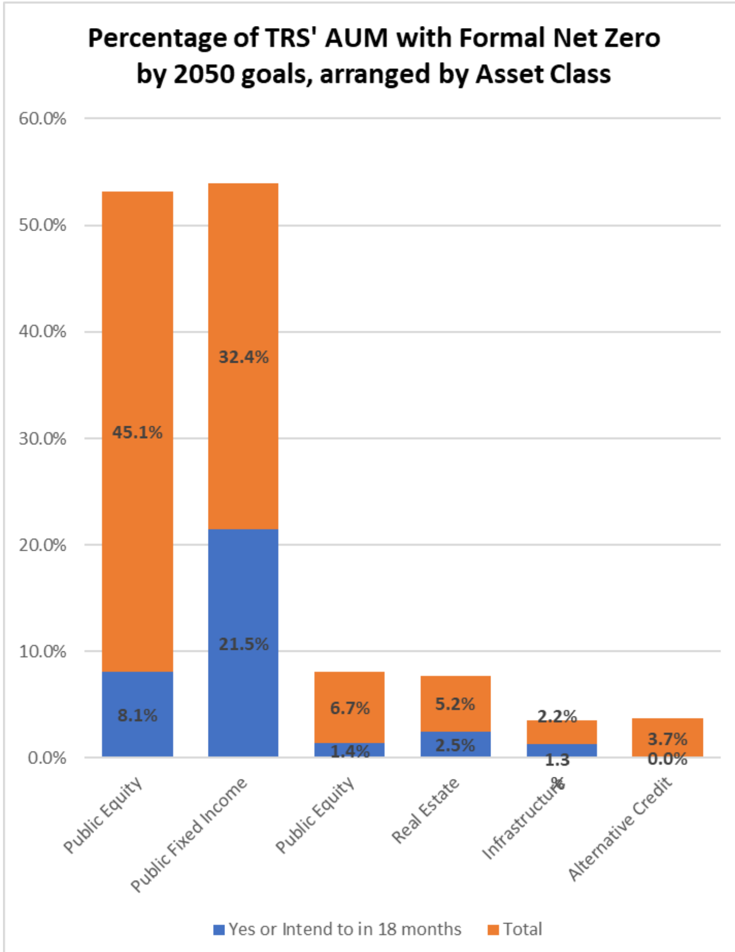
Infrastructure: Includes categories of alternative energy, energy efficiency, green buildings, sustainable water, pollution prevention, and sustainable agriculture. Data for 2Q 2023 is based on 1Q 2023.
Climate solutions identified by Infrastructure Consultant for 1Q 2023.

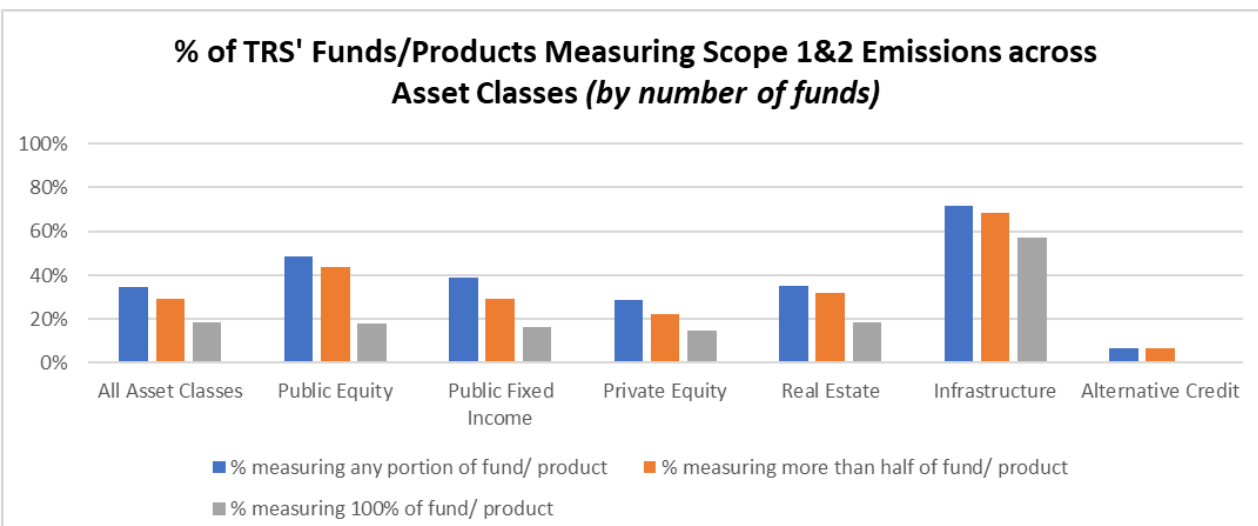
Economically Targeted Investments (ETI): ETI data is incorporated in the data for Public Fixed Income and Real Estate due to the portfolio's investment structure.

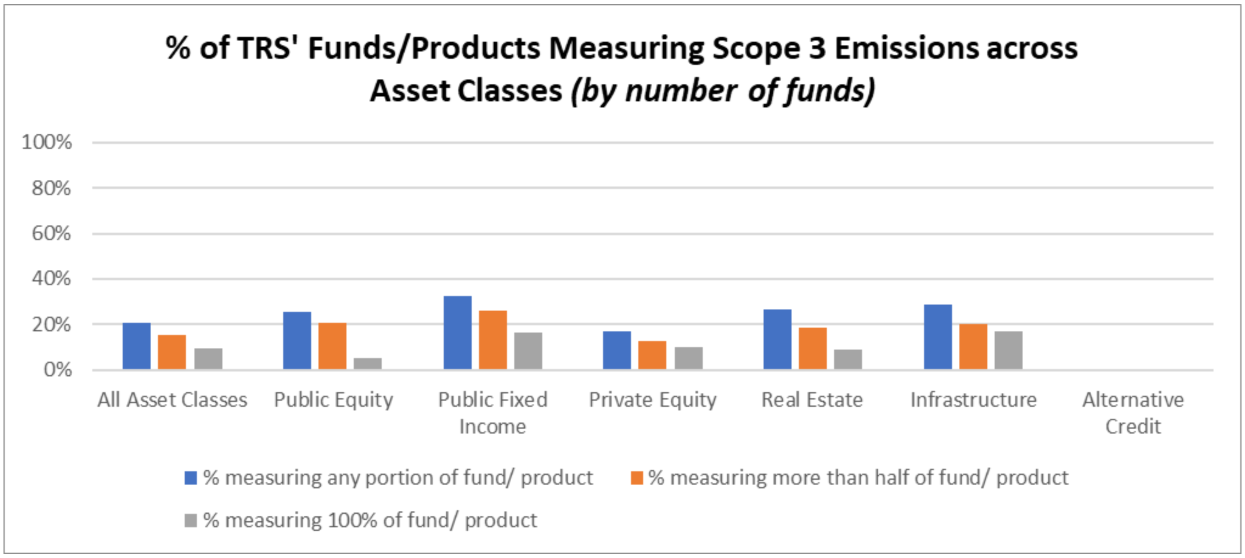
The calculations include only assets for which BAM provides investment advice and, therefore, does not include VSFs.

Appendix B – Annual ESG Questionnaire Net Zero Results by Asset Class




Percentage of TRS' AUM with Formal Net Zero by 2050 goals, arranged by Asset Class
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
45.1%
8.1%
32.4%
21.5%
6.7%
1.4%
5.2%
2.5%
2.2%
1.3%
3.7%
0.0%
Public Equity
Public Fixed Income
Public Equity
Real Estate
Infrastructure
Alternative Credit
Yes or Intend to in 18 months
Total


% of TRS' Funds/Products Measuring Scope 1&2 Emissions across Asset Classes *(by number of funds)*
100%
80%
60%
40%
20%
0%
All Asset Classes
Public Equity
Public Fixed Income
Private Equity
Real Estate
Infrastructure
Alternative Credit
% measuring any portion of fund/ product
% measuring more than half of fund/ product
% measuring 100% of fund/ product



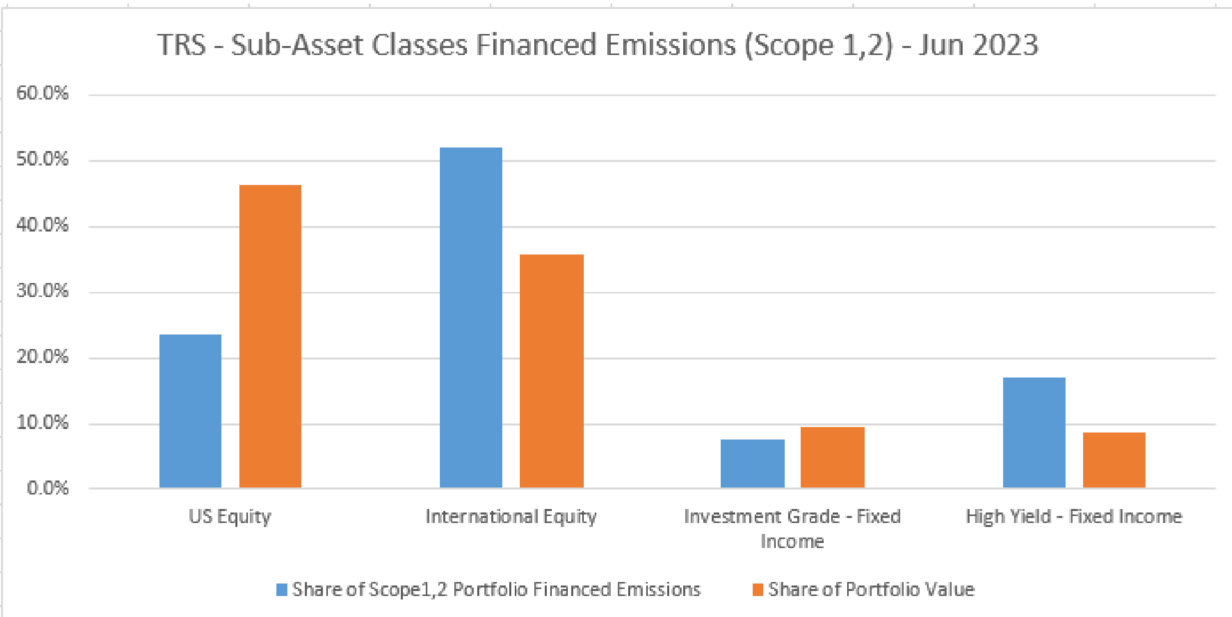
Note that 0% of Alternative Credit is measuring Scope 3 emissions. Carbon accounting methodologies are still developing for many kinds of alternative credit products like CLOs, MBS, etc.

Appendix C – Scope 1 and 2 Financed Emissions Breakdowns

Scope 1 and 2 – Sub-Asset Classes Financed Emissions

As of June 30, 2023, total public equity and corporate bonds represent about 82% and 18% of the measured public security portfolio's market value, but their contributions to Scope 1 and 2 financed emissions are 75.6% and 24.4%, respectively. U.S. equity has both lower total financed emissions and lower financed emissions intensity than international equity. Within fixed income, high yield has more than twice the total financed emissions and emissions intensity of investment grade corporate bonds.

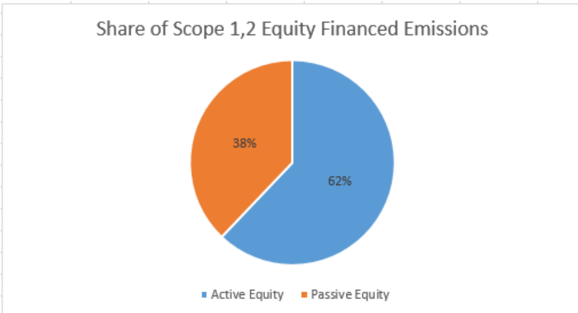
Sub-Asset Classes Financed Emissions (Scope 1 and 2) – June 30, 2023

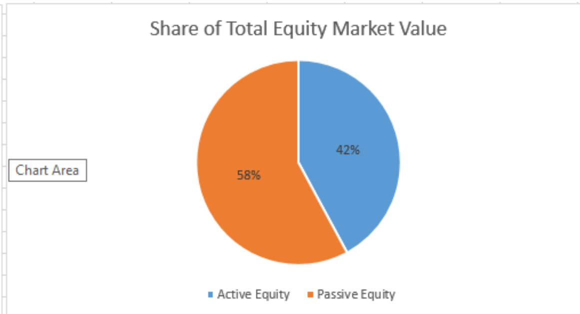


Between June 2022 and June 2023, however, high yield bonds saw the largest percentage increase in Scope 1 and 2 financed emissions. High yield also had the largest contribution of the sub-asset classes to the increase in Scope 1 and 2 financed emissions from 2022 to 2023. The Materials sector drove the majority of this increase in the Scope 1 and 2 financed emissions in high yield.

While passive equity has a larger share than the active equity strategy in TRS' portfolio's total public equity market value, the contribution of actively managed equity to Scope 1 and 2 financed emissions (and the financed emissions intensity) is much higher than that of the passive portion (see Fig 3).

Active vs Passive Equity Financed Emissions (Scope 1 and 2) – June 30, 2023



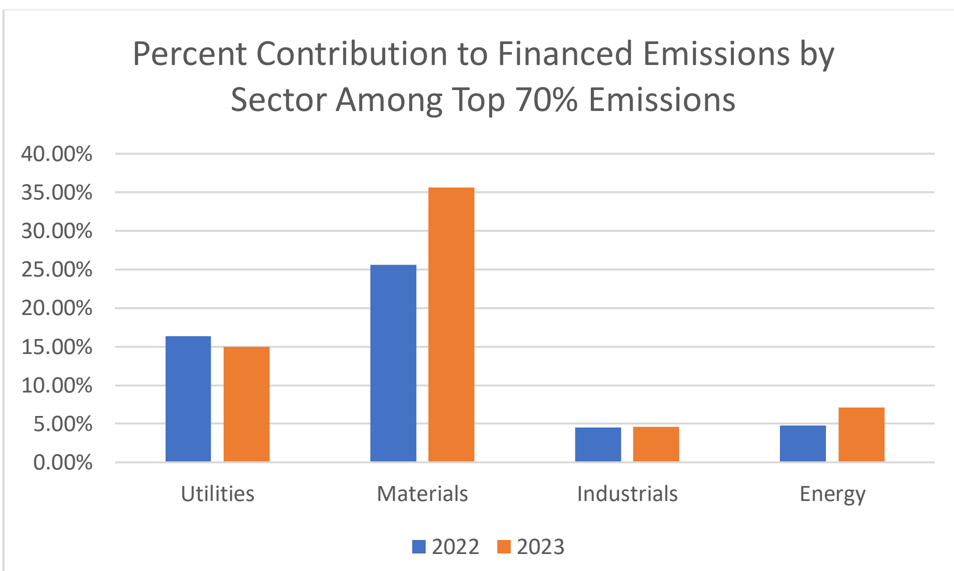


Scope 1 and 2 - Top 70% Financed Emissions

The top 70% of Scope 1 and 2 financed emissions are attributed to 163 companies in the TRS portfolio, compared to 203 companies in the benchmark. Both the total number of companies responsible for the top 70% of financed emissions and the sectoral distribution of these top emitters is comparable to 2022 for the TRS portfolio and benchmark.

Fig 4: Sector Contribution to Top 70% Financed Emissions (Scope 1 and 2)

June 2022 and June 2023



The Materials sector remains the highest emitting sector among the top 70% of financed emissions. This year, 69 Materials companies contributed 35.6% to TRS total Scope 1 and 2 financed emissions in public equity and corporate bonds. This information continues to be critical to our engagement activities towards the TRS goal of 70% of Scope 1 and 2 financed emissions covered by science-based targets by June 30, 2025. Our engagement efforts are focusing on Materials companies in 2024.

Scope 1 and 2 – Weighted Average Carbon Intensity (WACI)

TRS - Weighted Average Carbon Intensity - Scope 1 and 2		
	TRS Portfolio Tons carbon emissions/$m sales	Blended Benchmark Tons carbon emissions/$m sales
30-Jun-22	172.35	177.70
30-Jun-23	156.10	176.00
Change % (2022-2023)	-9.43%	-0.96%

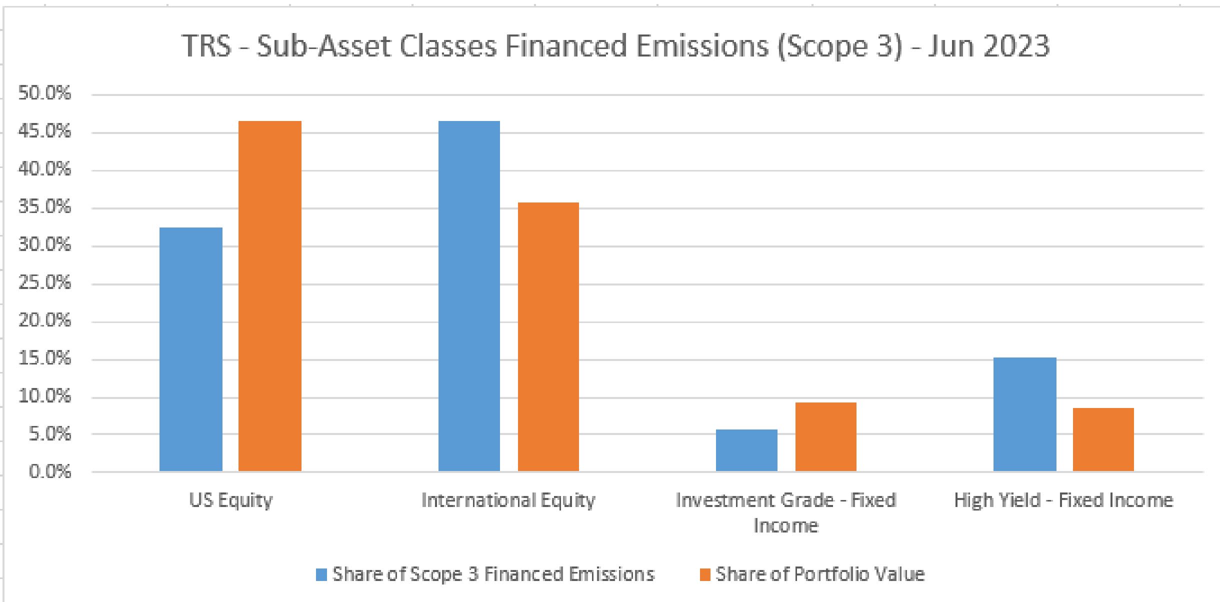
Weighted Average Carbon Intensity (WACI) (financed emissions per million dollars of sales) decreased by 9.43% from June 2022 to June 2023, as the increase in emissions was outdone by the combination of increase in sales of the portfolio companies and divestments related WACI reduction, amongst other factors. This increase in sales is consistent with the increase in economic activity that is also driving increase in company emissions.

Appendix D – Scope 3 Financed Emissions Breakdowns

Scope 3 – Sub-Asset Classes Financed Emissions

As of June 30, 2023, public equity and corporate bonds represented approximately 82% and 18% respectively of their combined market value, but their contributions to Scope 3 financed emissions are 79% and 21%, respectively. U.S. equity has both lower Scope 3 financed emissions and lower emissions intensity than international equity. Within corporate bonds, high yield has more than twice the total Scope 3 financed emissions and emissions intensity of investment grade corporate bonds.

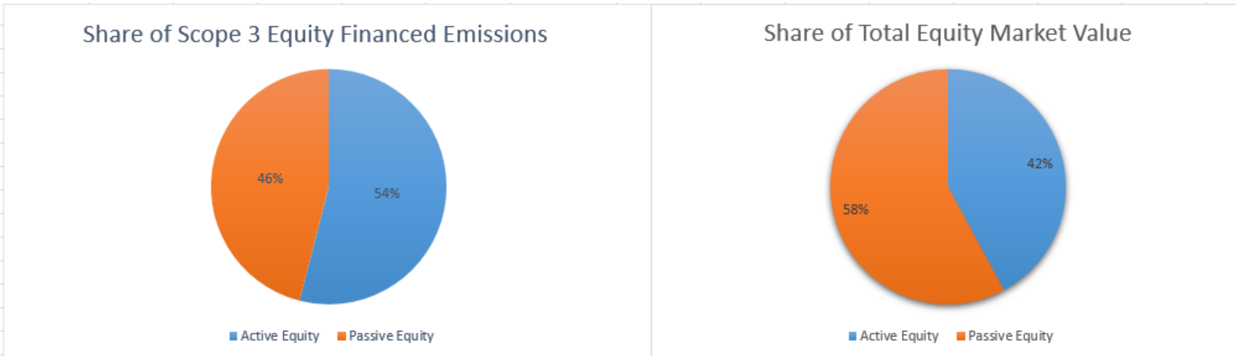
Sub-Asset Classes Financed Emissions (Scope 3) – June 30, 2023



Between June 2022 and June 2023, high yield saw the largest percentage increase in Scope 3 financed emissions. The Financials and Materials sectors drove much of this increase in the Scope 3 financed emissions in high yield. International equity, though, had the largest contribution to the change/increase in Scope 3 financed emissions from 2022 to 2023.

While passive equity has a larger share than the active equity strategy in TRS' portfolio's total public equity market value, the contribution of actively managed equity to Scope 3 financed emissions (and the financed emissions intensity) is higher than that of the passive portion (see Fig 6).

Active vs Passive Equity FE (Scope 3) – Jun 30, 2023



Scope 3 – Weighted Average Carbon Intensity (WACI)

Scope 3 – Weighted Average Carbon Intensity

TRS - Weighted Average Carbon Intensity - Scope 3		
	TRS Portfolio Tons carbon emissions/$m sales	Blended Benchmark Tons carbon emissions/$m sales
30-Jun-22	642.40	809.30
30-Jun-23	647.90	792.00
Change % (2022-2023)	0.86%	-2.14%

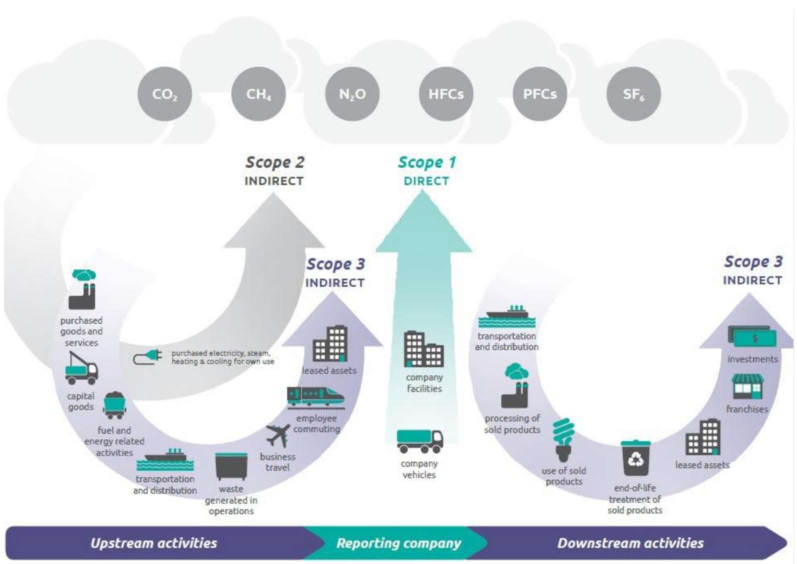
Scope 3 Weighted Average Carbon Intensity (WACI) (financed emissions per million dollars of sales) increased by less than 1% from June 2022 to June 2023, as the increase in Scope 3 emissions outpaced the increase in sales of the portfolio companies, amongst other factors. This increase in sales is consistent with the increase in economic activity that is also driving the increase in company emissions.

Appendix E – Definitions of GHG Emissions and Categories (Scopes 1, 2 & 3)

Scopes 1, 2 and 3 are ways of categorizing the different sources of GHG emissions from a company's direct operations and its wider value chain.

Scope 1	Scope 2	Scope 3
Covers the direct emissions from sources owned or controlled by a company – for example, by running its boilers and vehicles	Covers indirect emissions from the generation of energy a company purchases	Covers all other indirect emissions up and down a company's supply and value chain. For example, a petroleum company's Scope 3 emissions include the emissions from the gasoline they produce when it is burned by a customer's car. A bank's Scope 3 emissions include those from extracting fossil fuels from projects they finance. It is estimated that Scope 3 emissions constitute 75% of firms' emissions on average[10].

<u>Illustration of Scopes 1, 2 and 3 emissions</u>



Source: Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011)

OFFICE OF NEW YORK CITY COMPTROLLER BRAD LANDER
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TO: Trustees of the Teachers' Retirement System of New York City (TRS)
FROM: John Adler, Alison Hirsh, BAM Investment Committee
DATE: April 4, 2024
RE: Recommendation to join Net Zero Asset Owners Alliance, Institutional Investors Group on Climate Change, and GRESB

OVERVIEW

BAM recommends TRS (the "System" or the "Board") join the following organizations to access additional resources and collaborate with peers to support the System's prudent efforts to achieve net zero emissions across the investment portfolio:

1. Net Zero Asset Owners Alliance ("NZAOA" or "the Alliance")
2. Institutional Investors Group on Climate Change ("IIGCC")
3. GRESB (formerly Global Real Estate Sustainability Benchmark)

Collectively these memberships will allow BAM and the System to effectively mobilize with other high-ambition net zero asset owners, which is designed to increase the impact of the System's goals of real economy decarbonization. This is increasingly important in light of the recent withdrawal of BlackRock, State Street, and other U.S. asset managers from Climate Action 100+. See Appendix A for a summary of how membership in these organizations will complement existing memberships including Ceres, Climate Action 100+, Paris Aligned Asset Owners (PAAO), and Principles for Responsible Investment (PRI).

These recommendations follow the System's Net Zero Implementation Plan which provide that a) "BAM will research whether to recommend that TRS consider joining the UN-convened Net Zero Asset Owners Alliance ("NZAOA"), which provides additional resources for asset owners that have set net zero targets, or other comparable coalitions;" and b) BAM will present recommendations to the System on data sources and approaches including GRESB, which applies to real assets.

The membership base of all three organizations is primarily European. These investors are generally seen as the global leaders on net zero action - well ahead of most North American funds. Given the net zero ambitions of TRS, these organizations would place the System among high-ambition peers on net zero and give BAM access to leading strategies, approaches, and research on net zero. NZAOA is an active membership organization of asset owners where there is an expectation that members will take certain actions, detailed below. By contrast, both IIGCC and GRESB are primarily research and data service providers. At no time will NZAOA, IIGCC or GRESB serve as direct or indirect fiduciaries of the System during the course of any private market transaction investment negotiations.

The total cost of the three memberships would be $51,975 per year (based on exchange rates as of 2/12/24), to be apportioned on a pro rata basis among the NYC Retirement Systems that elect to join.

1. NET ZERO ASSET OWNERS ALLIANCE (NZAOA)

NZAOA will provide operational and reputational value to the System based on its organizational structure and membership base. NZAOA is comprised of 88 global asset owners who are committed to net zero and implementing the interim steps required to get there. Together they have $9.5 trillion assets under management as of January 25, 2024. The Alliance is structured to enable its members to decarbonize their own portfolios in line with their fiduciary duty while advancing the shared, overarching goal of real economy decarbonization.

BAM believes TRS is well-positioned to join the Alliance. Formal collaboration with the other asset owners will be invaluable in meeting the System's net zero commitments and in operationalizing specific components of the implementation plan. As the Board's Net Zero Implementation Plans say, "it is our hope that other investors will be aligned with the key elements of this plan, collaborate with us to magnify its impact, and use it as a jumping off point to go even further to address climate change and inspire us and others to redouble our own efforts and effectiveness."

Specifically, the System knows that it cannot change asset manager behavior without working with other asset owners. NZAOA members are industry-leading in the areas of asset manager engagement and net zero portfolio alignment. BAM expects that the System can also work with partners in NZAOA – particularly international investors – on increasing the impact of the System's manager and portfolio company engagement.

A. History & Governance

Convened by the United Nations Environment Programme and the Principles for Responsible Investing (PRI), NZAOA is a member-led initiative launched in 2019 of asset owners committed to portfolio decarbonization and net zero by 2050. U.S. pension fund members include CalPERS, UN Joint Staff Pension Fund, and Wespath.

- The Alliance is governed by an elected Steering Group comprised of members from each continent. The Steering Group sets the strategic direction of the Alliance to meet the net zero by 2050 objective by approving all strategic, directional interventions of the Alliance.
- All NZAOA members convene twice each quarter, once at the staff level and once at the "principal" level.
- The efforts and implementation of the Alliance are undertaken by working groups of Alliance members grouped into "Work Tracks" with specific goals:
- Measurement, reporting, verification (MRV): work to establish a framework for Alliance target-setting and reporting
- Engagement: advance engagements with sectors, companies and asset managers
- Policy: advance engagement and policy asks with policymakers
- Financing Transition: develop practices through which asset owners can support the growth of supply side opportunities and investments
- Communication: ensure transparent and public communication of the content from the above tracks

Of these tracks, BAM sees the engagement track as particularly valuable. Specifically, NZAOA members are advancing market-leading work on asset manager engagement – an area of critical importance to the Implementation Plans.

B. Commitment

Each member of NZAOA is required to sign a commitment document that underpins the Alliance's activities. The commitment includes endorsing the following high-level goals, all of which fit well within our already approved NetZero by 2040 plan:

- Meet fiduciary duty to manage risks and achieve target returns by approaching sustainability considerations holistically, incorporating but not limited to climate change, and emphasize emissions reduction in the real economy.
- Transition investment portfolios to net-zero GHG emissions by 2050 consistent with a maximum temperature rise of 1.5°C above pre-industrial levels, regularly report on progress and establish intermediate targets every five years.
- Advocate for and engage on corporate and industry action and public policies for a low-carbon transition of economic sectors in line with science and considering associated social impacts.
- Expect that governments will follow through on their own commitments to meet the objectives of the Paris Agreement.

Additional significant commitments required of members include:

- Set intermediate targets in line with the Alliance's Target Setting Protocol, within 12 months of joining, and annually publish targets and progress toward targets, including emissions reductions.
- Seek to align with policy positions of the Alliance.
- Participate in the Alliance including Work Tracks and principal-level meetings.
- Make an annual contribution to the Alliance in accordance with the fee structure.

C. NZAOA Target Setting Protocol

The Alliance's Target Setting Protocol (the "Protocol") provides guidance to members on how to fulfill the Alliance's commitments. The Protocol is designed "to allow Alliance members to employ the combination of approaches that best supports their unique decarbonization and engagement strategies within their fiduciary duty to meet risk adjusted returns." In addition, all elements of the Protocol are subject to the unilateral decision of the member. A member may determine not to follow the guidance but must then provide an explanation to the Alliance. *BAM assesses that the System is in substantial compliance with the Protocol based on the Implementation Plan.*

Details on the Protocol and the System's status regarding the different targets are in Appendix B.

D. Position Alignment

NZAOA has developed positions on several topics including thermal coal, carbon dioxide removal (CDR), governmental carbon pricing and the oil and gas sector. Members commit to considering to "adopt and publish, where applicable, a corresponding individual investment policy or approach, informed by the Alliance's position, as applicable within twelve months of joining the Alliance, or within twelve months of publication of the Alliance Position." Where the member chooses not to adopt or publish, where applicable, a corresponding policy or approach, the member will provide an explanation to NZAOA as to why that is.

BAM assesses that the Alliance's positions are largely consistent with the policies and approaches of TRS, with additional assessment needed in particular for the Alliance's oil and gas position. See Appendix C for links to and brief summaries of the Alliance's positions. The Alliance's oil and gas position includes recommendations to not invest in private markets in certain greenfield oil and gas infrastructure, including certain upstream, midstream and downstream infrastructure that are not aligned with 1.5°C pathways. The System currently has policies through their side letters in private markets to exclude investments in upstream oil and gas. However, it has no policies related to midstream or downstream oil and gas infrastructure. BAM will assess whether any additional policies or approaches are prudent and provide recommendations, as needed, to the Board. If the Board subsequently determined to fully adopt the Alliance's oil and gas position, or other new investment policy positions, the Board would need to revise its existing investment policies accordingly. As stated above, a member may choose to not adopt a policy position if they provide an explanation. Evaluation of member compliance for policy positions as well as target setting is subject to an accountability review process (Accountability Mechanism) which may result in de-listing as a last resort in cases of severe misalignment.

E. Next Steps

BAM recommends the Board vote to join NZAOA in 2024 in order to best position the System to meet its interim goals and begin implementing its medium-term goals – particularly with regard to asset managers and new investments.

The cost of membership is 20,000€ ($21,546 as of 2/12/24) annually, which would be prorated across the NYC Retirement Systems that vote to join. The System would have 12 months after joining before reporting is required and to formally align with the Alliance's positions.

2. INSTITUTIONAL INVESTORS GROUP ON CLIMATE CHANGE (IIGCC)

An international organization based in Europe with a membership of over 400 asset owners and managers with over $65 trillion under management, IIGCC is structured to support enhancement of investment practices through technical support, research, and advocacy. IIGCC membership would enhance BAM's ability to stay on top of best practices and recommend policies, practices, and tactics designed to achieve the System's net zero goals.

IIGCC has three broad areas of focus: 1) investor practices, 2) corporate engagement, and 3) policy. The organization enables members to pursue their own goals and better work with like-minded investors through:

- Resources such as presentations, briefing documents, research, analysis and strategic tools.
- Regular forums on particular components of net zero implementation
- Involvement in engagement activity in global markets.
- Policy updates, ensuring members stay informed on key policy developments and milestones.
- Shareholder resolution updates and corporate engagement support.

In addition to operating as an independent organization, IIGCC is a co-convener (with Ceres, in which TRS is already a member) of the Climate Action 100+ (CA100+). While membership with IIGCC is not required to continue work with the CA100+, BAM believes that joining will enhance ongoing corporate engagement work (especially outside of North America) and allow greater access to international CA100+ signatories. BAM also expects that IIGCC will provide critical insight into how like-minded investors are addressing challenges in private markets.

Membership Details

There are no reporting requirements associated with IIGCC's membership.

Members are recommended to attend the annual general meeting of IIGCC to exercise their right to vote on resolutions and governance, and throughout the year participate in IIGCC's work by attending some of the regular members' meetings and/or joining working groups and initiatives that IIGCC facilitates.

The cost of membership is £12,220 annually ($15,429 as of 2/12/24), which would be pro-rated across the NYC Retirement Systems that vote to join.

3. GRESB

Founded in the Netherlands in 2009 to streamline ESG data collection for institutional investors, GRESB is currently the most used sustainability disclosure and asset benchmarking tool for the real estate and infrastructure industry. Globally, GRESB currently covers 2,084 real estate entities with $7.2 trillion of gross asset value and 687 infrastructure assets and 172 funds with a total gross asset value of $1.6 trillion. GRESB collects information from fund managers and then validates, scores, and independently benchmarks that information for distribution to its investor members.

Funds & Manager Participation

To take best advantage of GRESB, the System would need to ask its fund managers to report their data to GRESB each year. Currently 21% of the System's real estate funds (by count) report to GRESB, but among those funds not currently reported to GRESB, 57% are managed by firms who report at least one other fund to GRESB. GRESB would assist the System in efforts to encourage non-reporting funds to begin reporting. At this time, BAM is not recommending GRESB reporting to be mandatory in fund documents with fund managers. If the System approves joining GRESB, BAM will work with the Comptroller's Office of the General Counsel to develop an appropriate plan to request manager participation in GRESB.

Membership

Joining GRESB would give the System more detailed information on its real estate and infrastructure portfolios at an affordable cost and thereby allow for more robust engagement. There is currently no single provider for real estate and infrastructure that provides comprehensive financed emissions and benchmarking information. GRESB would provide additional data that the System doesn't currently have access to and should improve over time. We will continue to evaluate other sources of data for real assets and may in the future recommend another if warranted.

Joining GRESB would give the System access to:

- Annual ESG Benchmark Reports covering the System's participating funds, including high level scoring, ranking, and granular analysis of over 100 ESG indicators.
- Reported consumption and emissions data for participating funds along with other key metrics
- The GRESB Transition Risk Module, an analysis of the portfolio's current state of alignment for participating funds with the Carbon Risk Real Estate Monitor (CRREM) decarbonization pathways, the leading global standard for operational decarbonization of real estate that enables investors to align real estate portfolio with 1.5° and 2.0° scenarios.
- A portfolio analysis tool for participating funds, which is a customizable benchmark by sector, property type, and Gross Asset Value.
- The ability to export data sets for participating funds including GHG emissions of the portfolio by scopes, property subtype, and percent change year over year as well as net zero metrics such as the percentage of assets with net zero targets, alignment with SBTi and other frameworks, and interim targets.

In addition to these tools, GRESB membership would give the System access to meetings and discussions with members and new opportunities to collaborate with like-minded investors. Because GRESB is the industry leading standard, membership would position the System to better influence the market as it moves towards net zero. NY State Common, CalPERS, and APG are among the System's peers currently using GRESB.

The cost of membership is $15,000 annually, which would be pro-rated across the NYC Retirement Systems that vote to join.

DISCLOSURES

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Appendix A – Summary of Complementary Benefits of NZAOA, IIGCC and GRESB

Memberships in NZAOA, IIGCC and GRESB would complement the System's existing memberships and participation in other organizations such as the Principles for Responsible Investment (PRI), Council of Institutional Investors (CII), Ceres, Climate Action 100+ and Paris-Aligned Asset Owners (PAAO). Specifically, the proposed memberships would provide more benefit to the System's work toward net zero ambitions through greater networks and opportunities for collaboration with other asset owners globally, more systematic collective work on manager engagement, access to additional research and technical expertise, more opportunity and tools to align with industry best practices and, particularly in the case of GRESB, access to more climate and sustainability data for real asset investments.

Existing Memberships (through the System or Comptroller's Office)

General ESG Issues

- *Principles for Responsible Investment (PRI)*: Signatories (asset owners and asset managers) are required to report on their responsible investment activities annually and are assessed on their reporting by PRI. PRI offers various resources, guides, convenings and collaborative stewardship engagements on a wide range of ESG topics and asset classes.
- *Council of Institutional Investors (CII)*: Provides education, resources and collaborative stewardship engagements to primarily U.S. asset owner members focused on strengthening corporate governance and shareowner rights related to a wide range of ESG topics.

Net Zero, Climate and Environmental Sustainability

- *Ceres*: Supports members (asset owners, asset managers, companies and nonprofits) to advance environmental sustainability through the capital markets by providing resources and collaborations on a wide range of environmental and climate issues and asset classes.
- *Climate Action 100+*: Supports 700 global investors (asset owners and asset managers) to directly engage and benchmark 170 focus companies to improve climate change governance, reduce emissions and strengthen climate-related financial disclosures.
- *Paris-Aligned Asset Owners (PAAO)*: Supports 56 asset owner signatories that have committed to achieving net zero portfolio emissions by 2050 or sooner and requires signatories to report net zero plans and progress. PAAO and NZAOA are the two global U.N. affiliated member organizations of asset owners with net zero commitments. NZAOA would provide, relative to PAAO, a greater and different network of global asset owners, more systematic and organized efforts to engage managers toward net zero alignment and access to more technical assistance on net zero-related methodologies. This is also discussed below under "Proposed Memberships".

Proposed Memberships

Net Zero Asset Owners Alliance (NZAOA)

- Provides access to a greater network of leading asset owners, particularly more international asset owners, committed to achieving net zero portfolio emissions, with greater opportunities for collaboration. Currently, NZAOA has 88 members and PAAO has 56 members. Very few members overlap.
- Offers more systematic and focused working groups on key goals of asset manager engagement; measurement and reporting; policy; financing climate transition; and communication.
- Provides additional technical guidance and assistance on net zero approaches with the NZAOA Target Setting Protocol which is significantly aligned with the PAAO Net Zero Investment Framework (NZIF).

Institutional Investors Group on Climate Change ("IIGCC")

- Provides access to a greater network of leading asset owners and asset managers, particularly more international investors, working on climate change, with greater opportunities for collaboration.
- Provides expanded network and resources to enhance corporate engagement, especially outside of North America and more access to international Climate Action 100+ signatories.
- Provides access to unique research, analysis, technical expertise and resources on climate and net zero implementation in public markets and private markets.

GRESB

- Provides more detailed and standardized climate and sustainability data on real estate and infrastructure investments, through participating funds, and thereby allows for more robust diligence and engagement of managers and benchmarking and analysis of participating funds.
- Provides access to meetings with members and new opportunities to collaborate on real assets.
- Enables the System to help increase utilization of GRESB as the leading industry standard on sustainability data for real assets and improve transparency and data.

Appendix B - Summary of NZAOA Target Setting Protocol

The Protocol recommends four types of targets: (1) Sub-portfolio emission reduction targets (2) Engagement targets (3) Financing transition (climate solution investment) targets and (4) Sector targets. It recommends engagement targets and reporting on climate solution investments as mandatory and then setting targets for at least two additional target types.

1. Sub-portfolio emission reduction targets: Set targets in line with science to reduce Scope 1 and 2 emissions for listed equities, publicly traded corporate bonds, infrastructure, private equity and real estate asset classes. Protocols for additional asset classes will be issued in 2024. Members are to track, but not yet set targets on Scope 3 at the portfolio level "until interpretation of these emissions in a portfolio context becomes clearer and data becomes more reliable." Guidance for target-setting varies by asset class and whether funds are existing or new.
    a. Listed equities and publicly traded corporate bonds: Set emissions reduction targets for these asset classes within 12 months of joining the Alliance.
    b. Infrastructure, private equity and real estate: Guidance differs for existing funds and new funds.
        i. Existing funds: Establish a systematic engagement approach with existing fund managers (not including run-off funds) within 12 months of joining. Members are to annually engage with such managers to encourage reporting Scope 1 and 2 GHG emissions (Scope 3 where possible) and setting intermediate emissions reduction targets aligned with a 1.5°C pathway for each asset.
        ii. New funds: New funds are defined as fund commitments made 12 months after joining the Alliance. All new funds are to have emissions reduction targets by the end of 2026. Members shall use their influence during the due diligence phase to call for 1.5°C aligned reduction targets. After commitment, members are to conduct systematic engagement with asset managers of new funds to encourage them to set emissions reduction targets aligned with a 1.5°C pathway for each asset as soon as possible and by the end of 2026.

System's Status: *Already in Compliance*. The System has adopted emissions reduction targets for public equity and corporate bonds aligned with a 1.5°C pathway. The System has also set targets for all private markets funds to have net zero goals or alternative decarbonization approach and implementation plans by 2025. In addition, the System is systematically informing managers of the System's expectations that managers adopt net zero goals or alternative decarbonization approach by 2025 during due diligence and monitoring and are developing a systematic approach for manager engagement.

2. Engagement targets: Set targets to conduct engagement for at least two and where possible all four of the following:
    a. Corporate engagement: Identify either i) 20 companies likely to have the largest real-world decarbonization impact or ii) the companies responsible for at least 65 percent of financed emissions in the public equity and corporate bond portfolio.

b. Asset manager engagement: Maintain structured engagement approach encompassing selection, appointment and monitoring activities of asset managers.
c. Sector engagement: Participate in Alliance sector workstreams or contribute to reports and engagement activities for sectoral workstreams outside of the Alliance.
d. Position paper contributions: Participate in engagement track working group and support drafting of Alliance position papers or contribute to other similar initiatives.

System's Status*: In compliance with a. and b.* The System has adopted a target for the highest emitting companies comprising 70 percent of Scope 1 and 2 financed emissions in the public equity and corporate bond portfolio to have science-based targets by 2025 and 90% of Scope 1, 2 and 3 emissions to have science-based targets by 2030. In addition, BAM is developing, on behalf of the System, a systematic approach to engaging managers.

3. Financing transition (climate solution investment) targets: Report climate solution investments to the Alliance and ideally show a positive trend in such investments over time.

System's Status: *In compliance*. The System has adopted quantitative targets for 2025 and 2035 to increase climate solutions investments across the portfolio consistent with fiduciary duty and investment objectives.

4. Sector targets: Progressively implement sector emission reduction targets covering Scope 1 and 2 beginning with the most material sectors (from an owned-carbon emissions standpoint) including, at a minimum, oil & gas, utilities (including coal), transport and steel. Sector targets for utilities and energy sectors should reflect the scientific consensus to withdraw financing from new coal related assets and new oil and gas fields and respectively refrain from investing in, or providing finance to, assets that support the expansion of coal, oil or gas production and to scale down production.

System's Status: *Carrying out the System's Net Zero Implementation Plan will put it in compliance*. The System's Implementation Plan provide that BAM will evaluate the Scopes 1 and 2 emissions and science-based decarbonization pathways of specific sectors of the portfolio and set prudent interim emissions reduction targets for the most material sectors in the portfolio.

BAM assesses that the System is likely in substantial compliance with the Protocol based on the Implementation Plan.

DISCLOSURES

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Appendix C - NZAOA Positions

Visit this link to review NZAOA Positions: NZAOA Positions – United Nations Environment – Finance Initiative (unepfi.org). Below are investor-related highlights of the Positions.

Position on the Oil and Gas Sector (March 2023) highlights:

- Investors should explicitly consider portfolio allocation decisions as they relate to investment risks and opportunities inherent to the energy transition and climate change impacts.
- No new investments in infrastructure projects in new upstream oil and gas fields.
- Investment in oil distribution and storage and gas pipeline transmission, distribution and storage should be limited to brownfield projects. Investments in the conversion of gas pipelines to transport hydrogen are acceptable. No investment in new midstream infrastructure for gas unless aligned with 1.5°C low/no overshoot pathways.
- No investment in oil-fired power generation infrastructure. Investment in refineries and petrochemicals should be limited to brownfield projects. No investment in unabated new baseload gas-fired power generation or in infrastructure using gas as a fuel to produce hydrogen in the absence of carbon capture, utilization and storage. No new gas infrastructure unless it is designed with carbon reduction measures sufficient to align with 1.5°C low/no overshoot pathways.
- Investors should strengthen stewardship and engagement in the oil and gas sector including, but not limited to, engaging on science-based targets and lobbying; support development of stronger climate-related resolutions; and set expectations for managers to advance such engagement.

Position on Governmental Carbon Pricing (June 2022) highlights:

- Governmental carbon pricing is a necessary policy to achieve net-zero emissions and reach the Paris agreement goals. When designing carbon pricing policy, policymakers should seek to ensure appropriate coverage and ambition, deliver a just transition, provide a predictable price signal, minimize competitive distortions and promote international cooperation.

Position on the Coronavirus Recovery (January 2021) highlights:

- NZAOA supports key factors for a sustainable recovery from the coronavirus including but not limited to building better resilience; increasing portion of recovery spending that is green and facilitates decarbonization of companies; phasing out government subsidies of fossil fuel production and consumption; fast tracking of legislative or regulatory measures to attract private sector capital; and coordinating international response from companies.

Thermal Coal Position (November 2020) highlights:

- No further thermal coal power plants should be financed, built, developed or planned other than plants already under active construction.
- There should be immediate cancellation of all new thermal coal projects including thermal coal plant, coal mines and related infrastructure that are in pre-construction phase.

- There should be a phase-out of all unabated existing coal-fired electricity generation in accordance with 1.5°C pathways. The most recent energy system models require an accelerated transition in developed economies including phase outs in most thermal coal assets by 2030 for industrialized countries and a full phase out globally by 2040.
- Implement abatement technologies and a just transition that minimize the cost of carbon neutrality by 2050 and maximize social value.
- Engage policymakers, non-governmental organizations and companies to incentivize clean energy technologies and meeting energy needs in developed and emerging economies with low-carbon options while supporting workers and communities impacted by the energy transition.

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Telephone: (212) 669 – 3257 | Email: smeier@comptroller.nyc.gov

TO: Trustees of the Teachers' Retirement System of the City of New York ("TRS" or the "System")
FROM: John Adler, BAM Investment Committee
DATE: April 4, 2024
RE: 2030 Climate Change Solutions Investments Goals

The Bureau of Asset Management (BAM) is recommending that TRS (adopt Climate Change Solutions Investments Goals for 2030.

In 2021 TRS adopted Climate Change Solutions Goals for 2035 of $19 billion for the System. This goal corresponds to a system-wide goal of $50 billion for 2035.

At that time the TRS also adopted an interim goal for 2025 of $4.2 billion for the System. This interim goal corresponds to a goal of $11 billion across all five NYC retirement systems for 2025.

Interim results for calendar year end 2023 show that TRS has already exceeded its 2025 goal. System-wide climate exposure as of 12/31/23 comes to $11.4 billion, also exceeding the 2025 goal.

The BAM Office of ESG has recalibrated the model that was used in 2021 to calculate prudent, achievable climate solutions goals incorporating each System's updated strategic asset allocations and capital markets assumptions, updated asset projections from the Actuary, and the same CAGR (Compounded Annual Growth Rate) that informed the previous modeling. As a result, BAM is comfortable recommending a new goal for 2030, which is approximately 25% higher than the previously projected (but unpublished) goal.

	Climate Exposure ($) Dec 2023 (interim)	Climate Exposure as a % of AUM Dec 2023 (interim)	Current Climate Target ($) FY2025	Older/Unpublished Climate Exposure Projection ($) FY2030	Proposed Climate Exposure Target ($) FY2030	Proposed Climate Target as a % of Projected AUM FY2030
TRS	$4.4 billion	4.4%	$4.2 billion	$8.4 billion	$10.5 billion	7.2%
All 5 Systems Combined	$11.4 billion	4.4%	$11 billion	$22 billion	$27 billion	7.4%

The proposed 2030 climate solutions goal is $10.5 billion for TRS. This goal corresponds to a system-wide goal of $27 billion. BAM is not recommending a change to the 2035 goals.

DISCLOSURES

The information contained in this Executive Appendix is confidential, may not be distributed to unauthorized persons, and may contain material non-public information pertaining to certain investment activities and portfolio companies. Federal, state, and/or foreign securities laws prohibit any person who has received such information from purchasing or selling such securities based on material non-public information or from communicating such information to any other person under circumstances in which it is reasonably foreseeable that such person is likely to purchase or sell such securities.

TRS INVESTMENT MEETING

PUBLIC SESSION

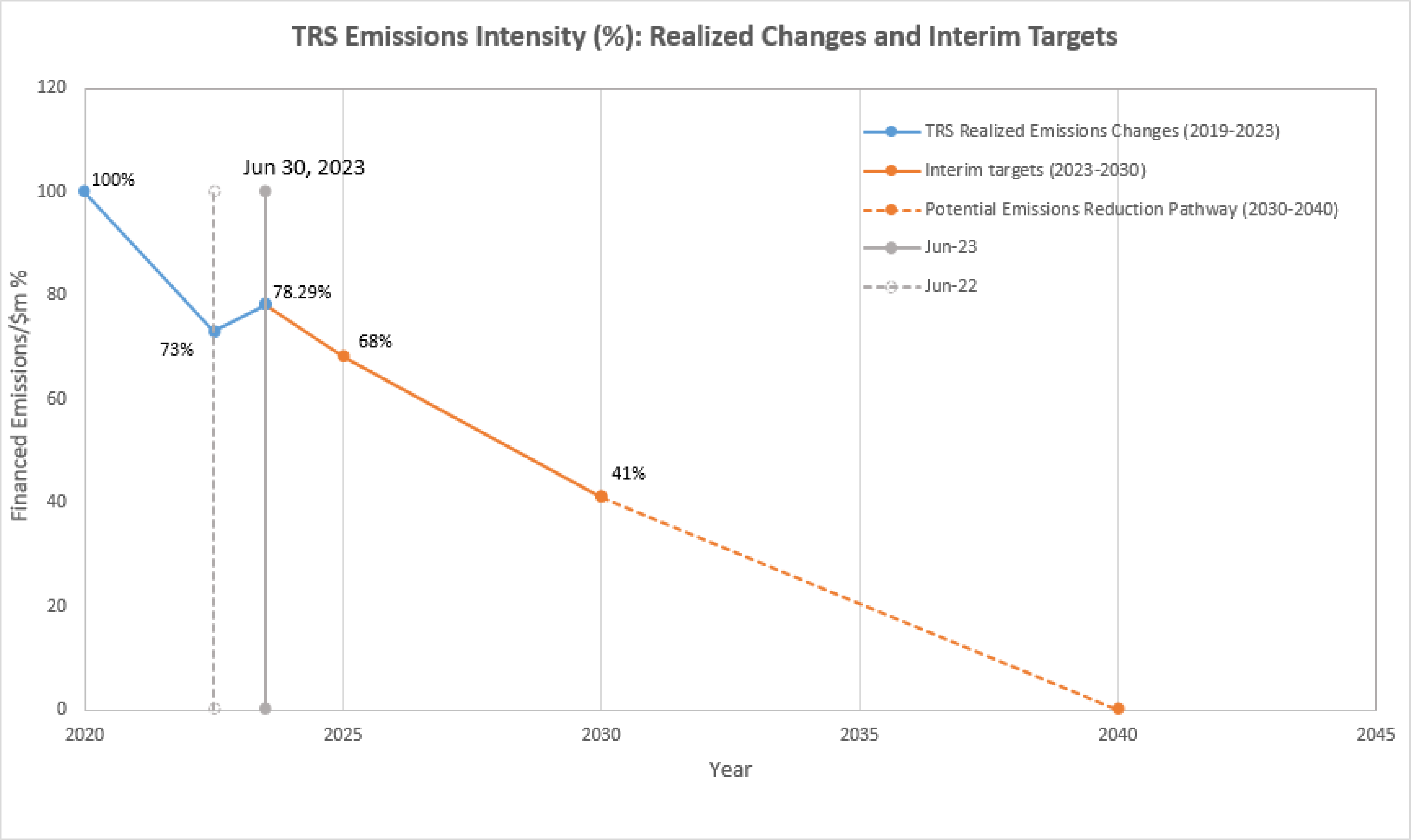
April 4, 2024

TRS

Net Zero Report and Recommendations

2023 Net Zero Annual Report

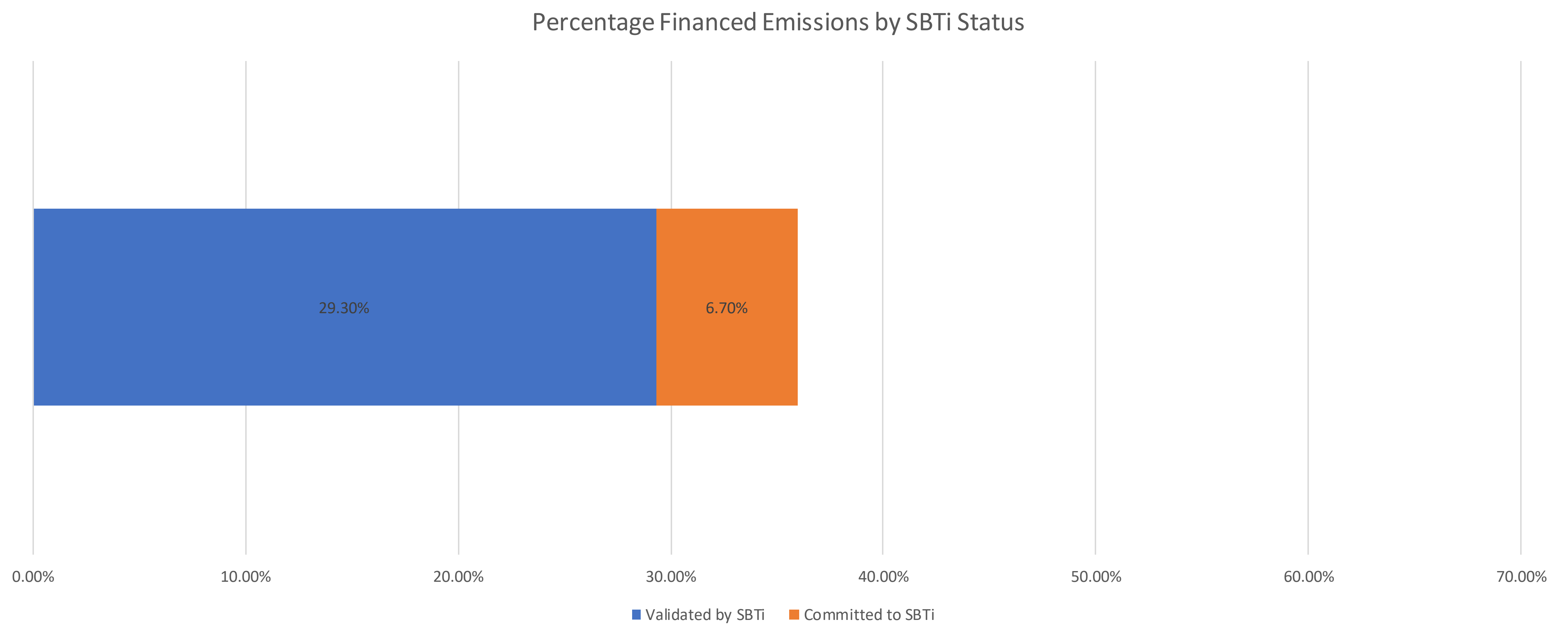
TRS – Realized and Projected Emissions Reduction Targets (Scope 1 and 2)



Asset Manager Engagement - ESG questionnaire

Question	% Investment Funds	% AUM
Measure /Report Scopes 1 & 2 emissions	35%	35%
Adopted Net Zero goal or intend to in next 18 months	19%	35%
Adopted Science-Based Targets or intend to in next 18 months	15%	11%
Adopted Other Decarbonization Goals or intend to in next 18 months	25%	36%

Science-Based Targets



Portfolio Company Engagement

- Because Utilities represent one of the highest emitting sectors in the TRS portfolio, in 2023 BAM targeted 35 utility companies to push to adopt SBTs. Engagement is ongoing.
- In 2024 BAM will begin engaging high-emitting Materials sector companies.
- In 2023 NYCERS, BERS and TRS filed shareholder proposals at 5 major banks urging adoption of 2030 interim GHG emissions reduction targets based on absolute emissions in addition to emissions intensity.
- In 2024 NYCERS, BERS, TRS and Police filed shareholder proposals at 6 major banks to disclose the ratio of financing of low-carbon energy supply to fossil-fuel energy supply. So far JP Morgan and Citi have agreed to such disclosure.

Just Transition

- The annual report contains a recommended definition of Just Transition and initial approach to a framework to inform Board investment decision-making, consistent with fiduciary duties, that identifies concrete investor strategies to advance Just Transition priorities.
- ***As we implement our Net Zero by 2040 plan and transition away from fossil fuels, a Just Transition requires that the workers and communities who have powered our economy must benefit from the transition. Investments in climate solutions must not recreate the inequities of the fossil fuel economy, but strive to deliver tangible labor and environmental justice benefits. TRS supports the preamble to the 2015 Paris Accord: "When taking action to address climate change we will respect, promote and consider our obligations to human rights, the right to health, the rights of indigenous peoples, local communities, workers, migrants, children, persons with disabilities and people in vulnerable situations, as well as gender equality, empowerment of women and intergenerational equity."***

Private Markets Divestment Policy

- TRS added language in private markets side letters for managers to commit to exclude investments in the production, exploration, ownership, or extraction of fossil fuels.

Questions?

CLIMATE SOLUTIONS INVESTMENTS

TARGET SETTING FOR 2030

2023 Updates
- In 2021, TRS' board adopted climate solutions investments goals for 2035 of $19 billion, and an interim goal for 2025 of $4.2 billion *As of Dec 31st, 2023* TRS has surpassed its 2025 climate investments target, and the climate exposure for the 5 systems combined exceeded the 2025 target as well*
2030 Target Setting
- Updated strategic asset allocation and capital markets assumptions - Updated actuarial projections for the systems' AUM - CAGR from the previous model for 2025 and 2035 targets

**Dec 31st, 2023, interim climate exposure includes updated public markets and infrastructure climate solutions; private equity, OFI, and real estate climate solutions are based on Jun 30th, 2023 reporting.*

CLIMATE SOLUTIONS INVESTMENTS

2030 TARGETS

	Climate Exposure ($) Dec 2023 (interim)	Climate Exposure as % of AUM Dec 2023 (interim)	Current Climate Target ($) FY2025	Older/ Unpublished Climate Exposure Projection ($) FY2030	Proposed Climate Exposure Target ($) FY2030	Proposed Climate Target as % of Projected AUM FY2030	2035 Climate Solutions Goal ($)	2035 Climate Solutions Goal as % of AUM
TRS	$4.4 billion	4.4%	$4.2 billion	$8.4 billion	$10.5 billion	7.2%	$19 billion	10.5%
All 5 Systems Combined	$11.4 billion	4.4%	$11 billion	$22 billion	$27 billion	7.4%	$50 billion	11.4%

CLIMATE MEMBERSHIP RECOMMENDATIONS

Net Zero Asset Owners Alliance (NZAOA)
• 88 Global Asset Owners with AUM of $9.5 trillion • Foster collaboration, especially on asset manager engagement • Endorse high-level goals, which fit well with System's Net Zero Implementation Plans • Annual cost of 20,000€, split among the Systems. • Systems will have to consider adopting a position on midstream and downstream oil and gas within 12 months or provide an explanation for not adopting such a position.

Institutional Investors Group on Climate Change (IIGCC)

- Membership of over 400 asset owners based in Europe with over $65 trillion AUM
- Provides technical support, research and advocacy
- Areas of focus are investor practices, corporate engagement and policies to help the System achieve its net zero goals
- IIGCC co-convenes Climate Action 100+ and should help our portfolio company engagement especially outside North America
- No reporting requirements
- Cost is £12,220 to be split among the Systems

GRESB (FKA Global Real Estate Sustainability Benchmark)

- Sustainability reporting platform for real assets (real estate and infrastructure).
- GRESB collects and benchmarks sustainability info from fund managers. Currently 21% of the System's real estate funds by count report to GRESB.
- BAM would ask fund managers to report their data to GRESB on behalf of the Systems. We are not recommending making GRESB reporting mandatory.
- Cost is $15,000 annually, to be split among Systems.