



New York State
Teachers'
Retirement
System

OCTOBER 2024

Investment Policy Manual



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

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I. Introduction

The New York State Teachers' Retirement System ("System") exists for the exclusive purpose of providing retirement, disability and survivor benefits to System members and their beneficiaries, as prescribed by the laws of New York and its governing statutes and rules and regulations, and to cover reasonable expenses incurred to provide such benefits.

The System was established in 1921 by an act of the New York State Legislature pursuant to Chapter 503 of the Laws of 1920 which was subsequently recodified by Chapter 820 of the Laws of 1947 as Article 11 of the Education Law. The principal statutory authority for the investment of System funds is contained in Section 508 of the Education Law and Section 177 of the Retirement and Social Security Law.

This Investment Policy Manual ("Manual") incorporates the laws, documents, principles and standards that guide the management of the System's investments. The Executive Director and Chief Investment Officer shall administer this Manual pursuant to law and the investment policies adopted by the Retirement Board. This document is intended to be binding upon all persons with authority over the System's assets, including external investment managers/advisors, custodians, consultants, brokers-dealers and staff.

The Manual is the result of the System's careful and prudent study. The Manual includes the System's Statement of Investment Policy ("Policy") and sub-policies, which taken together present the Retirement Board's conclusions as to the most suitable combination of investments, within the legal requirements, which will satisfy the System's ongoing obligations to members and their beneficiaries.

II. Purpose of This Manual

The purpose of this Manual is to:

- A. Set forth the investment policies, objectives and guidelines the Retirement Board determines to be appropriate, prudent and, in consideration of the System's needs, to comply with current laws and to direct the System's investment activities.
- B. Establish criteria to evaluate the System's investment performance.
- C. Communicate investment policies, objectives, guidelines and performance criteria to the staff, external investment managers/advisors, consultants, custodians and all other interested parties.
- D. Serve as a review document to guide ongoing oversight of the System's investments for compliance with the laws of New York State and applicable federal laws.



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- E. Demonstrate the Retirement Board's fulfillment of its responsibilities to manage the investments of the System solely in the interest of members and their beneficiaries.
- F. Document the Retirement Board's fulfillment of its overall fiduciary responsibilities with respect to the investment of System assets.

III. Responsible Parties and Their Duties

- A. The System was established by an act of the New York State Legislature. The Legislature may modify the System's structures through amendment of the laws from time to time. The laws also specify requirements for the System's investments.
- B. The Retirement Board is vested under section 504 of the New York Education Law with the responsibility for the general administration and operation of the System. Members of the Retirement Board are fiduciaries and their responsibilities with respect to the System's assets include completing each of the duties below as a prudent expert:
 - 1. Set the policies, objectives and guidelines for investment of the System's assets and evaluate compliance with investment policy and the laws of New York.
 - 2. Study thoroughly each issue affecting the System's investments to make educated and prudent decisions.
 - 3. Select qualified professionals to assist in implementing the investment policies.
 - 4. Evaluate total fund performance as well as all of its distinct components.
 - 5. Oversee risk management for all aspects of the System.
- C. Pursuant to §136-1.6(c) of Title 11 of the New York Codes, Rules and Regulations (the Regulations of the New York State Department of Financial Services), the Retirement Board, may, consistent with its fiduciary duties, delegate its investment authority to a committee or agent within well-defined guidelines, subject to review by the Retirement Board.
- D. The duty of System staff is to administer the System consistent with the policies and decisions of the Retirement Board and the provisions of the laws of New York State and to provide input for the Retirement Board so issues can be studied fully prior to any Retirement Board decision. In addition, staff is responsible for interacting with and managing the System's relationships with outside professionals and other constituencies.



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The System's management is responsible for the accuracy of published information, as well as for the maintenance of appropriate internal controls needed to safeguard assets and facilitate the efficient operation of the System.

The responsibilities of executives, managers and internal committees that are involved in the investment process are briefly described below:

1. The Executive Director and Chief Investment Officer shall allocate the available funds to the various investment classes and coordinate the activities of the Managing Director of Fixed Income; Managing Director of Public Equities; Managing Director of Private Equity; and the Managing Director of Real Estate through periodic meetings of the Internal Investment Committee.
2. The Managing Director of Public Equities, with the assistance of investment consultants as the Managing Director deems necessary, shall oversee the selection of external public equity investment managers and monitor those external investment equity managers. The Managing Director of Public Equities shall manage the System's internal public equity portfolios and will manage the disposition of private equity stock distributions with the intent of achieving an orderly liquidation of the securities received.
3. The Managing Director of Private Equity, with the assistance of investment consultants as the Managing Director deems necessary, shall oversee the selection, monitoring and disposition of external private equity and private debt investments.
4. The Managing Director of Real Estate, with the assistance of investment advisors and/or consultants as the Managing Director deems necessary, shall manage the System's investment in direct and commingled equity real estate investments, publicly traded equity real estate securities, commercial mortgages, publicly traded commercial mortgage-backed securities, real estate mezzanine funds and other real estate related investments as required by the Executive Director and Chief Investment Officer.
5. The Managing Director of Fixed Income shall manage the System's internal long-term bond portfolios and shall oversee the short-term bond portfolio to ensure short-term cash is invested to meet the System's operating cash needs. The Managing Director of Fixed Income, with the assistance of investment consultants as the Managing Director deems necessary, shall oversee the selection of external fixed income investment managers and monitor those external fixed income managers. The Managing Director of Fixed Income shall also oversee the purchase or sale of foreign currencies executed as the result of investment capital calls or distributions and shall



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monitor the performance of agent securities lenders, with a focus on the lenders' investment of securities lending cash collateral.

6. The Chief Risk Officer shall provide a centralized, coordinating point to facilitate enterprise risk management, which is a comprehensive program to identify, evaluate and address risks to the System's property, interests, investments, customers and employees. The Chief Risk Officer works with other executives and managers in establishing effective risk management in their areas of responsibility, monitors progress and assists in reporting relevant risk information throughout the System.
7. The Chief Financial Officer shall maintain the official general ledger of the System, which is supported by various investment sub-ledgers and provide the System's financial statements. In coordination with the Custodial Bank, the Chief Financial Officer shall maintain the official investment accounting book of record for securities portfolios and provide investment related reports and shall be responsible for all rates of return and related performance data for all individual investment portfolios and at the Total Fund level.
8. The General Counsel shall provide legal advice regarding compliance with legal investment criteria including System policy together with governing statutes, rules and regulations and other legal issues and, together with the Managing Directors, and the assistance of outside counsel as warranted, review and approve investment contracts.
9. The Director of Internal Audit shall provide broad audit coverage of investment areas to provide management with information about the adequacy and effectiveness of internal controls and the quality of performance.
10. The Senior Advisor to the Executive Director and Chief Investment Officer - Stewardship, will provide advice and guidance, with the assistance of consultants as the Senior Advisor deems necessary, on managing the Retirement System's investments consistent with the Responsible Stewardship Policy. In collaboration with General Counsel and the Executive Director and Chief Investment Officer, manage the Retirement System's Corporate Governance program consistent with adopted Policies and Procedures.
11. The Internal Investment Committee is an advisory committee to the Executive Director and Chief Investment Officer. The committee members include: the Executive Director and Chief Investment Officer; Managing Director of Private Equity; Managing Director of Fixed Income; Managing Director of Public Equities; and Managing Director of Real Estate.



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The Committee reviews and recommends the following: investment proposals, annual Asset Allocation report, annual Private Equity and Private Debt reviews, and the annual Real Estate Debt and Equity Strategic plans. The Committee receives updates and presentations from, and consults as prudent and applicable with, internal investment staff, external investment managers and external consultants. The Committee reviews monthly, or more frequently as needed, System cash flow projections, planned investment funding and asset allocation status.

12. The Investment Valuation Committee reviews and/or determines the valuation methods to be used to determine the fair value of the System's investments for financial reporting. The Committee is comprised of a representative from the following non-investment departments: Finance, Investment Operations, Risk Management and Legal (non-voting member). Additionally, subject matter experts (internal or external to the System) may advise the Committee depending on the investment being reviewed but will not be voting members.
- E. The Investment and Real Estate Advisory Committees are made up of industry professionals with appropriate experience and background and are appointed by the Retirement Board to provide advice to the Retirement Board on investment matters.
 - F. An External Investment Manager/Advisor is a third-party entity or firm retained to manage a portion of the System's assets under specified guidelines. An external manager may be engaged to invest funds directly or may be engaged to hire other external investment managers operating as a fund-of-funds or manager of managers. Securities investment managers must be registered as Investment Advisors under the Investment Advisors Act of 1940, unless exempted from registration. External investment managers/advisors may have discretion and authority within the parameters established by the Retirement Board and staff for determining and implementing investment strategy.
 - G. Broker-Dealers are firms that act as intermediaries in the purchase or sale of securities for internally or externally managed portfolios. As brokers, such firms facilitate trades by bringing together buyers and sellers of securities (in an agency capacity). As dealers, they act as the actual buyer or seller on the other side of the trade (in a principal capacity).
 - H. The Statutory Custodian is head of the Division of the Treasury in the Department of Taxation and Finance and is designated by law as the Custodian of the System's assets except for loans to System members. All disbursements of System funds must be authorized by the Statutory Custodian or such person as they may authorize.



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- I. The Custodial Bank is responsible for the safekeeping of all public securities and shall be the official accounting book of record for securities portfolios as designated by the System. The Custodial Bank is also responsible for all investment rate of return calculations.

- J. Consultants are persons or firms who are retained by the System to provide professional advice. In particular, the System retains investment consultants for the following purposes:
 - 1. Make recommendations regarding changes in the current asset allocation policy, including recommending asset allocation targets, ranges, benchmarks and additional investment classes
 - 2. Assist in strategic planning for various asset classes
 - 3. Assist in performing investment manager searches and recommend potential firms
 - 4. Provide a qualitative and quantitative review of proposed investment opportunities
 - 5. Provide a qualitative and quantitative review of the performance of the external managers and make retention recommendations
 - 6. Provide educational assistance regarding investment matters and fiduciary duties

IV. Controlling Statutes and Regulations

The Banking Law (§235), the Education Law (Article 11, §508), the Retirement and Social Security Law (Article 4-A, §§176 - 179), and such other laws which from time to time may be enacted, authorize or control investments by public retirement systems. Under such laws, the System may invest in issues of the United States Treasury and instrumentalities of the United States Government; high-grade corporate bonds; mortgage-backed securities; municipal securities of New York State and its political subdivisions or authorities; bonds of the Commonwealth of Canada and its political subdivisions or authorities; preferred shares; common stocks; deposits in savings banks; equity real estate; mortgage loans; foreign equities; and other permitted investments itemized in the laws of New York State. These parameters, among other things, may specify limitations on the percentage of assets which may be invested by the System in various classes of assets.

In recent years, rules and policies were modified to enable writing of covered call options, venture capital investing, securities lending and purchase of securities not



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registered under the Securities Act of 1933, provided such transactions are consistent with fiduciary responsibilities and requirements of the laws under which the System operates. Furthermore, the policies permit investment in limited partnerships, joint ventures, real estate investment trusts, real estate operating companies, group trusts, common trust funds, collective investment funds, investment companies (as defined under the Investment Company Act of 1940), life insurance separate accounts and other vehicles established primarily for the purpose of investing in capital assets. Additionally, the policies contained in this Manual permit the use of derivatives including those described below under VIII. Use of Derivatives.

Under §177(9) of the Retirement and Social Security Law, and subject to guidelines adopted by the Retirement Board, up to thirty-five percent (35%) of assets may be invested in types of assets not otherwise specifically authorized, provided the Retirement Board is satisfied such investments are in accordance with the “prudent expert” rule. Additionally, Education Law §508(18) permits the Retirement Board to delegate its authority to invest to external investment managers/advisors.

All assets will be valued at fair value to determine compliance with legal limits. Descriptions of the legal limits applied to each asset class are included in the sub-policy for those investments.

Pursuant to §508(3) of the Education Law, no member or employee of the Retirement Board may have any interest, direct or indirect, in the gains or profits of the System’s investment portfolio, nor may any such person receive, directly or indirectly, any pay or emolument (except, of course, for his/her normal salary) for any services rendered in connection with any of the System’s investments.

Additionally, pursuant to §136-1.6 of the New York Codes, Rules and Regulations, the Retirement Board, as “administrative head” of the System, is a fiduciary. The Retirement Board shall act solely in the interests of the members and beneficiaries of the System and shall perform its responsibilities in a manner consistent with those of a reasonably prudent person exercising care, skill and caution.

The Retirement Board and staff are subject to a Code of Ethics adopted by the System. The System’s Code of Ethics policy states “System person in a policy-making or investment-related position” shall mean any member of the System’s Retirement Board and any System employee who either participates in the Manager/Executive Plan or participates in the negotiating unit in a Grade 18 or higher title (including trainee titles, for which the target title is Grade 18 or higher) in but not limited to the Procurement Office, Real Estate, Investment Operations, Risk Management or Investment Departments are required to submit an annual disclosure statement.

Designated staff is also subject to the *Personal Monitoring and Trading Procedures* (“Personal Trading Procedures”) and *Material Non-Public Information Procedures*



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("MNPI Procedures"). The Personal Trading Procedures contain provisions reasonably necessary to detect and prevent covered employees and their related persons from engaging in personal trading in violation of applicable law, including the general antifraud rules under federal and state securities laws and fiduciary duties owed to the System.

V. Objectives

All investment transactions undertaken on behalf of the System will be for the sole benefit of the members and their beneficiaries, for the exclusive purpose of providing benefits and defraying reasonable administrative expenses.

The System's long-term objective is to earn an average rate of return greater than the rate of return of representative indices for individual asset classes but no less than the actuarial assumption rate (currently 6.95% per annum). The indices are identified in Section VI - Asset Allocation Policy. Rates of return are net of fees and other expenses. Volatility of returns, or risk, for the System, as measured by standard deviation of investment returns, should be commensurate with the level of returns expected to be achieved over a long period of time.

VI. Asset Allocation Policy

The System's asset allocation and underlying asset class policy benchmarks are reviewed and recommended by the Executive Director and Chief Investment Officer to the Retirement Board for approval annually. Asset allocation is the definition of allowable asset classes and the distribution of assets among those asset classes. As fiduciaries, the Retirement Board has a duty to diversify the investments of the fund to reduce risk, while maximizing the investment return. The System believes that the most significant contributor to a fund's long-term investment performance is asset allocation. Accordingly, asset allocation is one of the most important fiduciary decisions.

The recommended targets and rebalancing ranges listed below have been approved by the Retirement Board. Target allocations may not be attained at any specific point in time as actual asset allocation will be dictated by current and anticipated market conditions as well as independent actions of the Retirement Board. Asset classes will not be considered 'Out of Bounds' during established transition periods; e.g. due to changes in asset allocation policy. Progress toward transition shall be reported to the Board quarterly.



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Asset Allocation: Recommended Targets and Rebalancing Ranges

<u>Asset Class</u>	<u>Range</u>	<u>Target</u>
Domestic Equity	29 - 37%	33%
International Equity	11 - 19%	15%
Global Equity	0 – 8%	4%
Domestic Fixed Income	12 - 20%	16%
Real Estate Equity	6 - 16%	11%
Real Estate Debt	2 - 10%	6%
Private Equity	4 - 14%	9%
Private Debt	0.5 - 5%	2%
Global Bonds	0 - 4%	2%
High Yield Bonds	0 - 3%	1%
Short Term Investments (Cash Equivalents)	0 - 4%	1%
		----- 100%

Policy Benchmarks

Policy benchmarks set the standard against which the performance of the System's Asset Classes are measured. Differences in portfolio management strategies, composition of holdings and other factors will result in differences between the benchmark and the System's actual results. Policy level benchmarks are proposed by the Managing Director of the applicable asset class with guidance from the general investment consultant. Policy Level benchmarks and any subsequent changes are approved by the Investment Committee of the Retirement Board.



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<u>Asset Class</u>	<u>Policy Benchmark</u>
Domestic Equity	S&P Composite 1500 Index
International Equity	MSCI ACWI Ex-U.S. Index
Global Equity	MSCI ACWI Index
Domestic Fixed	Bloomberg U.S. Aggregate Float Adjusted Bond Index
Global Bonds	Bloomberg Global Aggregate Float Adjusted Ex-CNY Bond Index (hedged to USD)
High Yield Bonds	ICE BofA BB-B US High Yield Constrained Index
Real Estate Equity	NCREIF-ODCE Index
Real Estate Debt	Giliberto-Levy Custom Index
Private Equity	S&P 500 Index (Plus 5%)
Private Debt	Morningstar LSTA US Leveraged Loan Index (Plus 3%)
Short Term Investments (Cash Equivalents)	iMoneyNet Money Fund Average™ /All Taxable

A. **Domestic Equity:** The System's benchmark for domestic equity portfolios, taken as a whole, is the S&P Composite 1500 Index. Within the domestic equity asset class, funds may be internally or externally managed. Internally managed funds may be passively managed to the applicable benchmark or may follow enhanced strategies. Passive management is designed to achieve a minimal tracking error in matching performance of the index fund with the appropriate benchmark for that portfolio; enhanced strategies are typically designed to deliver a tracking error of up to 125 basis points, with the expectation of investment returns in excess of the benchmark. External managers are engaged in a variety of investment styles to diversify sources of investment return and to provide returns commensurate with risk taken. The strategic target allocation for the domestic equity portfolio is approximately eighty-five percent (85%) passively managed and fifteen percent (15%) in enhanced and/or active strategies.

B. **International Equity:** Within the international equity asset class, seventy-five percent (75%) is targeted to be passively managed and twenty-five percent (25%) actively managed to the MSCI ACWI Ex-U.S. Index. Funds may be



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internally or externally managed. Passive managers passively manage country, currency and security selection to simulate the returns and characteristics of the MSCI ACWI Ex-U.S. Index. Active core managers actively manage country, currency and security selection with the objective of outperforming the MSCI ACWI Ex-U.S. Index (or relevant benchmark e.g. MSCI EAFE, MSCI EM), generally over a market cycle.

- C. Global Equity: Within the global equity asset class, one hundred percent (100%) is actively managed to the MSCI ACWI Index. Active managers actively manage country, currency and security selection with the objective of outperforming the MSCI ACWI (or other appropriate benchmark) generally over a market cycle.
- D. Other Assets: All other assets are actively managed.
- E. Reporting: A quarterly report showing the current asset allocation status within the major asset classes is submitted quarterly to the Retirement Board by the Investment Operations Department.
- F. Annual Review: The Retirement Board annually reviews the asset allocation relative to recent and historical investment experience and considers new developments. This includes a review and revision, where appropriate, of the long-term capital market assumptions regarding expected investment returns, standard deviations, and correlations.
- G. Fund Liquidity: The Executive Director and Chief Investment Officer, in consultation with the Internal Investment Committee, is responsible for allocating cash to planned program investments and targeted asset allocations while taking into account the operational cash needs of the System.
- H. Rebalancing: The Executive Director and Chief Investment Officer, in consultation with the Internal Investment Committee, is responsible for periodic and orderly rebalancing of the portfolios so that asset classes remain within asset allocation rebalancing ranges and for establishing an orderly rebalancing plan should one or more asset classes fall outside the established range.

VII. Asset Valuation

Assets are valued at fair value. Fair value is the amount at which an investment could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.



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- A. Publicly traded assets shall be valued based upon a quoted market price from an independent source. The custodial bank will provide current market prices for assets held in custody as documented in the custodial contract and in custody policies and procedures.
- B. Real Estate Equity Investments shall be valued in accordance with Section 3 of the Equity Real Estate Investments Policy
- C. Timberland Investments shall be valued in accordance with Exhibit 1 of the Timberland Investments Policy.
- D. Mortgages shall be valued by a third-party valuation service. The market price will recognize a spread over the like-term treasury and other collateral or credit factors as appropriate.
- E. Private Equity and Private Debt Investments are valued using methodologies consistent with FASB ASC 820. Non-US investments which are not subject to US Generally Accepted Accounting Principles follow similar fair valuation standards acceptable in their jurisdiction.

VIII. Use of Derivatives

At the total portfolio level, derivatives may only be used to implement asset allocation changes in a cost-effective manner, prudently implement investment strategies in a risk-controlled manner, or reduce transaction costs or taxes. Derivatives may not be used at the total portfolio level to create explicit leverage (borrowing).

A. Internally Managed Portfolios: The use of derivatives is currently limited to the following:

- (1) Public Equities: The Covered Call Option Program and Futures-Based Rebalancing. These programs are used in the System's internally managed domestic equity portfolios. The purpose of the Covered Call Option Program is to modestly supplement System income by writing calls when appropriate. The purpose of the Futures-Based Rebalancing program is to minimize asset allocation risk and reduce transaction costs relative to cash market trading. See the Domestic Equity Securities sub-policy Appendix A for Covered Call Option Guidelines and Appendix B for Futures-Based Rebalancing Guidelines.

And

- (2) Internally Managed Fixed Income Portfolios:
 - (a) use interest rate futures to manage portfolio duration



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- (b) trade forward-settling securities in the To-Be-Announced (TBA) market
- (c) use currency forwards for the purposes of trade settlement or managing currency risk

- B. Externally Managed Portfolios: Some of the System's external managers currently have authorization for a broader use of derivatives.

Contracts with separate account managers will identify the types of derivatives that may be used, consistent with this sub-policy and prudent discretion. Managers must notify the System of modifications in the types of derivatives used and obtain System approval of such modifications.

Investments in commingled funds are open to other investors; therefore, it is not possible for the System to insist that the managers of such funds abide by System policy regarding the use of derivatives. Where applicable, Managing Directors of public security asset classes will review a manager's use of derivatives within their respective asset class on an ongoing basis to determine whether continued investment in a fund is prudent.

IX. Use of Commingled Funds

External investment managers/advisors for public securities retained by the Retirement Board may invest System assets in commingled funds, provided:

- A. Such investments in commingled funds (including bank collective investment trusts) are consistent with the guidelines established herein
- B. Assets held in commingled funds are permissible investments for the System
- C. Notification is given to the System describing the commingled vehicles utilized

X. Guidelines for Custodians

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

- A. Provide complete custody, depository and accounting service for the designated accounts
- B. Implement in a timely and effective manner the investment actions as directed by the staff and external investment manager(s)/advisors



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- C. Collect all income and principal and properly report on the periodic statements
- D. Provide periodic statements of holdings including all transactions and daily activity reports for the System
- E. Provide daily reporting on cash activity and balances
- F. Provide staff assistance in the completion of activities such as the annual audit and transaction verification
- G. Indemnify the System for non-market losses of stocks and securities held on behalf of the System
- H. Provide investment performance for designated portfolios and Total Fund return

XI. Other

A. Performance Reporting

The performance of the System's internally and externally managed portfolios relative to the appropriate benchmarks and the objectives of the overall System portfolio will be provided to the Retirement Board on a quarterly basis. See Investment Rate of Return Policy for information on calculation methodology.

B. Review and Modification of Policy

The Executive Director and Chief Investment Officer shall administer this Manual pursuant to the investment policies of the Retirement Board and shall review the Manual periodically to determine if modifications are necessary or desirable. Modifications shall be promptly communicated to all external investment managers/advisors and other responsible parties, as appropriate.

XII. Glossary of Common Investment Types

Investment in any instrument or security remains subject to applicable law and circumstances then prevailing. The most common investments are cited below:

- A. American Depositary Receipts (ADRs) are receipts for the shares of a foreign-based corporation held in the vault of a U.S. bank and entitling the shareholder to all dividends and capital gains. These are traded on various U.S.-based exchanges and are available for hundreds of stocks from numerous countries.



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- B. Commercial Mortgage Backed Securities (CMBS) Securities that are backed by a pool of commercial mortgages on income-producing property or large single mortgage.
- C. Commercial Mortgage Lending investments are notes and bonds secured by a mortgage or deed of trust providing a first lien on real estate.
- D. Derivatives are financial instruments such as forwards, futures, options, swaps or other instruments whose values are “derived” from another financial instrument.
- E. Domestic Equity Securities for System purposes typically consist of corporate common stock. Generally, these stocks must be (i) registered on a national securities exchange, or (ii) otherwise registered under the Securities Exchange Act of 1934 with price quotations furnished through a nationwide automated quotations system (see RSSL s. 177(2)(d) for legal requirements). Domestic Equity Securities also include stock in corporate real estate investment trusts (REITs), which are traded on a national exchange and acquired as part of an internally managed index fund or by one of the System’s domestic equity managers.
- F. Domestic Fixed Income Securities are U.S. Treasury or Government agency obligations; asset backed securities (i.e. equipment trust certificates); corporate bonds including financial, industrial, and/or utility bonds; U.S. dollar denominated Euro or Yankee bonds, including Canadian obligations payable in U.S. dollars; residential and commercial mortgage-backed securities; and pass-through certificates. For System purposes, domestic fixed income securities primarily consist of instruments with maturities in excess of twelve (12) months at time of purchase.
- G. Emerging Market Equities are common or preferred corporate stocks and investment shares which are registered on recognized exchanges outside the U.S. Emerging market countries are the developing international countries that have a relatively low per capita Gross National Product. There is wide variety of economic, regulatory and market development among the emerging countries.
- H. Equity Real Estate Investments are any investments in real property, either made directly or through the use of pooled vehicles such as limited partnerships, open or closed-end commingled funds, publicly traded real estate securities and private Real Estate Operating Companies (REOCs).
- I. Global Bonds include domestic fixed income securities (see F. above) as well as treasury, government related, corporate and securitized bonds denominated in currencies other than the U.S. dollar that are issued and traded outside the United States.



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- J. Global Equities are a combination of domestic and international equities. (see E. and K. in this section for description of domestic and international equities)
- K. International Equity Securities are common or preferred corporate stocks and investment trust shares. Only stocks registered on recognized exchanges outside the U.S. are to be considered International Equity Securities.
- L. Private Equity investments are a variety of direct and indirect equity investments made through commingled funds, Separately Managed Accounts (SMAs) or funds of one, such as limited partnerships that fall outside the core portfolios of stocks, bonds, mortgages, and real estate.
- M. Private Debt investments are a variety of direct or indirect debt investments made through commingled funds, Separately Managed Accounts (SMAs) or funds of one such as limited partnerships that fall outside the core portfolios of stocks, bonds, mortgages, and real estate.
- N. Real Estate Mezzanine Investments are investments either made directly or through commingled funds or partnerships in subordinate loans secured by real estate or borrower interests in real estate.
- O. Repurchase Agreements are agreements between a seller and a buyer, whereby the seller agrees to repurchase the securities at an agreed upon price and, usually, at a stated time.
- P. Securities Lending is the act of loaning a security to a borrower for cash or non-cash collateral pursuant to an agreement to return the collateral for an identical security in the future.
- Q. Short-Term Investments (Cash Equivalents) include, but are not limited to, interest bearing or discount instruments such as money market funds; U.S. Treasury Bills; U.S. Government Agency Discount Notes; corporate-issued commercial paper; bank-issued Certificates of Deposit; bankers' acceptances; and fully collateralized repurchase agreements. For System purposes, short-term investments consist primarily of instruments maturing in twelve (12) months or less at time of purchase.
- R. Emerging Market Bonds are bonds issued by sovereigns, quasi-sovereigns, and corporations in developing countries.



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- S. High Yield Bonds are bonds that are rated non-investment grade (below Baa3/BBB-) by the credit rating agencies and can also be referred to as speculative-grade bonds or junk bonds.
- T. Leveraged Loans are commercial loans extended to a non-investment grade (high yield) corporation by a group of lenders and sold (or syndicated) to other banks or institutional investors.

XIII. Glossary of Indices Used by the Retirement System

Domestic Equity

The S&P Composite 1500 Index measures the total return of 1,500 actively traded U.S. companies. The index is a combination of the S&P 500, S&P Midcap 400 and the S&P Smallcap 600 indices. The index is capitalization weighted and its members are U.S. companies.

The Russell 3000 Index measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market.

The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. The index includes approximately 800 of the smallest companies in the Russell 1000 Index based on market capitalization and index membership.

The S&P 100 Index is a subset of the S&P 500 Index and measures the performance of large cap companies in the US. The index is comprised of 100 major, blue chip companies across multiple industry groups and is capitalization weighted.

The S&P 500 Index measures the total return of 500 large capitalization companies. The index tracks technology, communications, industrial, transportation, financial, real estate, consumer related, energy and utility stocks and is capitalization weighted.

The S&P SmallCap 600 Index measures the total return of 600 actively traded U.S. companies in the small cap segment of the U.S. equity market. The index covers approximately 3% of the U.S. equity market and is capitalization weighted.

The S&P MidCap 400 Index measures the total return of 400 mid-sized U.S. companies. The index covers approximately 7% of the U.S. equity market and is capitalization weighted.

International Equity

The MSCI ACWI ex-US (All Country World Index ex US) Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market



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performance of developed and emerging markets excluding the United States. The MSCI ACWI ex-US consists of over 45 country indices comprising developed and emerging markets. The Index captures approximately 85% of the opportunity set outside the US and holds over 2,000 securities. The term “free float” refers to the number of shares of stock publicly owned and available for trading.

The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. The MSCI Emerging Markets Index covers over 1,000 securities in more than 20 emerging market countries.

The MSCI EAFE Index is an equity index with large and midcap representation across more than 20 developed market countries around the world, excluding the US and Canada. The MSCI EAFE Index contains around 900 constituents and covers approximately 85% of the free float-adjusted market capitalization in each member country.

The MSCI Canada Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of Canada. The index contains approximately 100 large and mid-capitalization securities representing approximately 85% of the total market.

The MSCI India IMI Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of India. The index contains over 400 stocks of large, mid and small cap Indian stocks representing approximately 99% of the total market.

Global Equities

The MSCI ACWI (All Country World Index) Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of both developed and emerging markets including the United States. The MSCI ACWI consists of over 45 country indices comprising developed and emerging markets. The Index captures approximately 85% of the opportunity set globally and holds over 2,700 securities. The term “free float” refers to the number of shares of stock publicly owned and available for trading.

Short Term Cash Equivalents

The iMoneyNet Money Fund Average TM/All Taxable measures the total return of all major taxable money market funds and includes government, institutional and special purpose funds.



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Domestic Fixed Income

The Bloomberg U.S. Aggregate Float Adjusted Bond Index measures the total return of publicly issued and investment grade, taxable, nonconvertible, U.S. dollar-denominated debt of the U.S. Government or any agency thereof, corporate securities, agency mortgage pass-through securities, Yankees, commercial mortgage backed securities and asset-backed securities. To be eligible for inclusion, securities must possess certain traits including but not limited to: be fully taxable; fixed rate; investment grade and have at least 1 year until final maturity. Index returns are reported at full market value weight. The U.S. Aggregate Bond Index was created in 1986 with history built back to January 1976. With an inception date of July 1, 2009, the U.S. Aggregate Float-Adjusted has the same number of issuers as the U.S. Aggregate Bond Index, however, it is a subset as it excludes published net holdings of U.S. Treasuries, U.S. Agencies, and fixed rate MBS pass-throughs held in Federal Reserve System Open Market Account (SOMA) accounts.

High Yield Bonds

The ICE BofA U.S. High Yield Constrained Index was inceptioned in December 1996 and contains all securities in the ICE BofA U.S. High Yield Index (inceptioned August 1986), but caps individual issuer exposure at 2%. In the event there are fewer than 50 issuers in the index, each is equally weighted. To be included in the index, securities must have a below investment grade rating, have at least 18 months to final maturity at the time of issuance, have at least one year remaining term to final maturity, possess a fixed coupon and individual issues should have a minimum size of \$250 million. Permitted security types include original issue zero coupon bonds, 144a securities, pay in kind (PIK) securities and callable perpetual securities that are at least one year from the first call date.

The ICE BofA BB-B U.S. High Yield Constrained Index contains all securities in the ICE BofA U.S. High Yield Index that are rated Ba1 through B3 with issuer exposure capped at 2%. The index has the same final maturity, remaining maturity, coupon, minimum size, and security type restrictions as the ICE BofA U.S. High Yield Constrained Index described above.

The Bloomberg U.S. High Yield 1% Issuer Capped Index is an issuer constrained version of the U.S. Corporate High Yield Index that covers non-investment grade, fixed rate, taxable corporate bond market. It limits issuer exposures to a maximum 1% and redistributes the excess market value index wide on a pro rata basis. Securities must be rated below investment grade (Ba 1 /BB+/ or below) using the middle rating of Moody's, S&P, and Fitch, and have at least one year until final maturity.



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Global Bonds

The Bloomberg Global Aggregate Float Adjusted Bond Index Ex CNY (hedged to USD) provides a broad-based measure of the global investment grade fixed rate debt from developed and emerging local currency markets and consists of four main components: the U.S. Aggregate; the Pan-European Aggregate, the Asian-Pacific Aggregate Index and the Canadian Aggregate Indices. The index is comprised of securities from developed and emerging market issuers in the following primary sectors: Global Treasury, Government Related, Corporate, and Securitized. To be eligible for inclusion, securities must possess certain traits including but not limited to: be fully taxable; fixed rate; investment grade; and have at least 1 year until final maturity. The Global Aggregate Bond Index was created in 1999 with an index history that was backfilled to 1990. With an inception date of July 1, 2009, the Global Aggregate Float Adjusted Index has the same number of issuers as the Global Aggregate Bond Index, however, it is a subset as it excludes published net holdings of securities purchased and held by central banks as a result of quantitative easing (e.g. treasury securities purchased and held by the Federal Reserve System Open Market Account (SOMA) as well as Sterling Gilts and Japanese government bonds held by the Bank of England and the Bank of Japan, respectively. This index excludes Chinese local currency (CNY) denominated bonds.

The Bloomberg Global Aggregate Corporate Bond Index (hedged to USD) is a component of the Bloomberg Global Aggregate Bond Index that includes only corporate bonds. The inclusion rules are the same as noted above for the Bloomberg Global Aggregate Float Adjusted Bond Index Ex CNY (hedged to USD) benchmark and also excludes CNY-denominated corporate bonds.

The Bloomberg Emerging Markets USD Aggregate Investment Grade 10% Country Capped Bond Index includes U.S. dollar denominated bonds issued by emerging market issuers. The index is comprised of securities from sovereign, quasi-sovereign, and corporate issuers. To be eligible for inclusion, securities must possess certain traits including, but not limited to, being fully taxable, investment grade rated, and having at least 1 year until final maturity.

Real Estate Private Equity

The National Council of Real Estate Investment Fiduciaries Open-End Diversified Core Equity Fund Index (NFI-ODCE) is a capitalization-weighted, gross and net of fee, time-weighted return index with an inception date of December 31, 1977. Open-end Funds are generally defined as infinite-life vehicles consisting of multiple investors who have the ability to enter or exit the fund on a periodic basis, thereby providing a degree of potential investment liquidity. The term "Diversified Core Equity" is a style that typically reflects lower risk investment strategies utilizing low leverage and generally



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represented by equity ownership positions in stable U.S. operating properties. The index includes property investments at ownership share, cash balances, and leverage.

Real Estate Public Equity

The Wilshire U.S. REIT Index measures the total return of a portfolio of publicly traded U.S. Real Estate Investment Trusts (REITs). The index is weighted by the float-adjusted market capitalization.

The FTSE EPRA/NAREIT Developed Global Index (unhedged in USD) measures the performance of listed real estate companies and real estate investment trusts (REITS) worldwide. The index is a market capitalization weighted index, based on the last trade prices of shares of all eligible companies.

The FTSE NAREIT U.S. Real Estate Index measures the industry-wide performance of U.S. real estate investment trusts (REITs) and listed real estate companies. The index is weighted by equity market capitalization. All tax-qualified REITS with common shares traded on the NYSE, AMEX, or NASDAQ will be eligible, subject to minimum size, liquidity, and free-float adjustment criteria.

The FTSE NAREIT Preferred Stock Index measures the performance of all publicly tradable, non-convertible, perpetual preferred stocks that meet a minimum size requirement of \$550 million in face value, issued by companies that are members of the FTSE NAREIT all REITs Index. The index is calculated on a market capitalization weighted basis with capping to avoid single-issuer concentration.

ICE BofA US REIT Debt Index is a subset of ICE BofA US Corporate Index including all securities of REIT issuers. ICE BofA Corporate Master Index (Credit quality: A-) tracks the performance of U.S. dollar-denominated investment-grade corporate debt publicly issued in the U.S. domestic market.

Real Estate Private Debt

The Gilberto-Levy Custom Index measures the investment performance of fixed-rate, fixed-term senior loans that are made by and held in the investment portfolios of institutional lenders such as life insurance companies and pension funds. First produced in 1993, the index has been in continuous publication for more than 30 years and provides historical standard time-weighted returns. Underlying collateral comprises domestic commercial real estate spanning the four major property types as well as other property sectors such as lodging and mixed use. The Index can also be viewed in three tranches based on the loan to value of the marked to market debt. The custom index is customized specifically for NYSTRS. It includes the Investment Grade Tranche only, excludes "other" property type category and has a minimum loan size of \$40 million for Office and \$25 million for Retail, Industrial and Multi-Family.



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The Giliberto-Levy Crossover Index is a subset of the first mortgage positions in the Giliberto-Levy Custom Index whose LTV is between 70.1% and 85.0%

Real Estate Public Debt

The Bloomberg Non-Agency Investment Grade CMBS Index measures the market of conduit and fusion CMBS deals with a minimum deal size of \$500 million at issuance with at least \$300 million currently outstanding. The index was launched in 1997 and includes SEC registered securities with a rating of (Baa3/BBB-/BBB/) or higher with a fixed rate coupon and remaining average life of at least one year. As of July 1, 2014, the US Investment Grade CMBS Index began to include Agency CMBS transactions. The Private Label sub-index excludes these agency multi-family CMBS transactions.

The Bloomberg US CMBS 2.0 Index measures the market of investment-grade CMBS and fusion deals issued since the beginning of 2010. While many of the CMBS 2.0 deals are already eligible for the broader US Investment Grade CMBS Index, this new index captures additional securities with a broader set of eligibility criteria including lower minimum deal size of \$250 million.

The Bloomberg US CMBS Non-Agency Investment Grade BBB Index measures the BBB-rated market of US Non-Agency conduit and fusion CMBS deals with a minimum current deal size of \$300 million.

Private Equity

The S&P 500 Index returns plus 5% is the benchmark for the System's private equity investments. The S&P 500 measures the total return of 500 large capitalization companies. The index tracks technology, communications, industrial, transportation, financial, real estate, consumer related, energy and utility stocks and is capitalization weighted.

Private Debt

The Morningstar/LSTA Leveraged Loan Total Return Index returns plus 3% is the benchmark for the System's private debt investments. The Morningstar/LSTA Leverage Loan Total Return Index is a market capitalization weighted index that tracks the institutional loan market. Prices are determined through dealer bid/ask quotes. Constituents are senior secured institutional loans with a minimum initial spread of 125 basis points and a term of at least 1 year. Constituents are removed from the index when no bid has been posted for 12 consecutive weeks or the loan is repaid.



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XIV. Glossary of Acronyms and Other Terms

A. Acronyms:

BL: Banking Law

EL: Education Law

ERISA: Employee Retirement Income Security Act of 1974

NASD: National Association of Securities Dealers

NYCRR: New York Codes, Rules, and Regulations

PIK: payment in kind security pays interest or dividends in the form of additional securities in lieu of cash

REAC: Real Estate Advisory Committee

RFP: Request for Proposal

RSSL: Retirement and Social Security Law

SEC: Securities and Exchange Commission

STIF: Short-Term Investment Fund

USD: US Dollar

144a: SEC rule issued in 1990 that permits institutional investors to trade privately placed or "144a" securities

B. Brokerage Terms:

1. Directed Brokerage: refers to an arrangement where a certain dollar amount or percentage of trades is directed to designated broker-dealers. Negotiated brokerage, external commission recapture, and soft dollar arrangements are all forms of directed brokerage.
 - a. Negotiated Brokerage: refers to trades that are charged a negotiated commission rate resulting in lower up-front trading costs.
 - b. External Commission Recapture: an arrangement between the System, broker(s), and external manager(s), whereby, the manager(s) agree to direct a portion of commissions paid to broker(s) designated by the



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System, who agree to refund a portion of the commissions they receive from trading directly to the System. Receipt of these refunds can improve overall System returns through reduced costs.

- c. Soft Dollar Arrangements: brokers establish an account for the Plan sponsor or its managers and pay certain Plan expenses or buy research services for the Plan or its manager directly from the commission activity in this account. This allows the Plan or its manager access to services and lowers direct cash expense since the Plan or its manager does not actually pay the service providers directly.

- 2. Recapture Rate: percentage of each commission dollar in a recapture program which is returned to the System. For a 1.5:1 recapture rate, the percentage of commission returned to the System would be sixty-seven percent (67%).

C. Covered Call Option Terms:

- 1. Covered Call Option: A contract allowing, but not requiring, the option holder to buy from the System a given number of shares of stock at a given price on or before a specific date. Once an option is written by the System, the underlying securities will be placed in an escrow account to "cover" the transaction. As evident by this definition, a particular call option will be characterized by two features:
 - a. Underlying Security: The stock which the option holder may buy.
 - b. Contract: Each contract allows the option holder to buy one hundred (100) shares of the underlying security.
- 2. Exercise Price: The price at which the stock can be purchased by the option holder at any time up to the option's expiration date (sometimes referred to as strike price).
- 3. Expiration Date: The last day an option can be exercised. Contracts are usually traded in three, six, or nine-month contracts and expire on the first Saturday after the third Friday of its expiration month.
- 4. Intrinsic Value: The amount by which the stock price exceeds the strike price.
- 5. Premium: Value of the option or the market price that a buyer of an option pays the writer for rights conveyed by the option. The writer is entitled to retain this amount whether or not the buyer exercises the option. The premium is composed of two values, the intrinsic value and the time value.



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6. Time Value: The excess of the option premium over the intrinsic value.

D. Futures Terms:

1. Exchange Traded Index Futures: Standardized contracts traded on an organized exchange that is based on an Index (i.e. S&P 500, Russell 2000, etc.). Counterparty risk is substantially reduced and transparency is increased due to the use of a central clearinghouse.
2. FCM Broker: Futures Commission Merchants (FCMs) are those authorized firms that clear Commodity Futures and Option trades.
3. Initial Margin: The amount a trader must deposit before trading any futures.
4. Maintenance Margin: The minimum amount of equity that must be maintained in a margin account.
5. Margin Account: An account maintained with the FCM Broker to cover the daily mark-to-market transaction.
6. Margin Call: A broker's demand on an investor using margin to deposit additional money or securities so that the margin account is brought up to the minimum maintenance margin.
7. Notional Value: The total face value of the futures or options contract. This term is commonly used in the options, futures, and currency markets because a very small amount of invested money can control a large position (and have a large consequence for the trader). For example, one S&P 500 Index futures contract obligates the buyer to 250 units of the S&P 500 Index. If the index is trading at \$1,000, then the single futures contract is similar to investing \$250,000 (250 x \$1,000). Therefore, \$250,000 is the notional value underlying the futures contract.
8. Interest rate futures are derivatives instruments for the purchase and sale of underlying bonds on a specified date at a predetermined price. U.S. Treasury futures are standardized contracts for the purchase and sale of U.S. government notes or bonds for future delivery. Treasury futures can be used as an efficient tool for hedging interest rate risk and managing portfolio duration.

E. Risk Types:

1. Counterparty Credit Risk: The risk of default of any party owing cash or securities to the System as the result of a transaction. These parties may



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include, but are not limited to, the counterparty and the issuer. Counterparty credit risk is negligible to the System for transactions cleared on a delivery versus payment (DVP) basis.

2. Liquidity Risk: There are two types of liquidity risk: market liquidity risk and funding liquidity risk. Market liquidity risk is the risk of being unable to purchase or liquidate a security quickly enough (or in requisite quantities) at a fair price. Market liquidity risk differs from market risk. Market liquidity risk only reflects realized price changes, while market risk reflects both realized and unrealized price changes. Funding liquidity risk relates to the relative ease of the organization to meet its cash flow needs as they come due.
3. Market Risk: The risk of unexpected change in market price (amount or direction). Price changes in securities can result from movements in equity markets, interest rates, credit spreads and currency exchange rates. Market risk incorporates both realized and unrealized price changes.
4. Operational Risk: The risk of inadequate controls against fraud, incorrect market valuation, failure to record or settle a deal, settlement with the wrong counterparty, failure to collect amounts due, failure of the computer system, or enforceability of contracts. The implications of operational risk include both financial loss and loss of reputation.
5. Geo-Political Risk: The risk of the occurrence of an unanticipated international and/or domestic incident such as war, assassination, terrorism, pandemic or energy shock that adversely affects global and capital markets resulting in the re-pricing of securities.
6. Political Risk: The risk of nationalization or other unfavorable government action.
7. Idiosyncratic Risk: Firm specific risk or the risk of the change in a price of a security due to the unique circumstances of that security.
8. Basis Risk: The risk resulting from pricing differences between the derivatives instrument and the underlying security. For example, the risk that cash vs. futures spread will widen or narrow between the times a hedge position is established and closed.
9. Credit Risk: The financial risk that an obligation will not be paid resulting in a loss.
10. Asset Allocation Risk: The risk associated with being outside the asset class bounds or diverging from the target allocation.



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Delegation of Investment Authority

I. Introduction

This section of the NYSTRS Investment Policy Manual sets forth the investment discretion duly delegated by the Retirement Board to the Investment Committee of the Retirement Board and to the Executive Director and Chief Investment Officer, and his designees, as applicable.

Pursuant to § 136-1.6(c) of Title 11 of the New York Codes, Rules and Regulations of the New York State Department of Financial Services, the Retirement Board, may, consistent with its fiduciary duties, delegate its powers of investment to a committee, System staff or agents within well-defined guidelines, subject to review by the Retirement Board.

The Retirement Board shall review and renew the investment discretion delegated to the Executive Director and Chief Investment Officer annually, at the regular meeting of the Retirement Board in July of each calendar year.

II. Investment Discretion Delegated to the Investment Committee of the Retirement Board

The Investment Committee of the Retirement Board, by unanimous vote, is authorized, between meetings of the Retirement Board, to invest in or otherwise sell or dispose of any System investment, without regard to amount, when (a) the subject transaction is recommended by the Executive Director and Chief Investment Officer, (b) the subject transaction exceeds the limits on investment discretion delegated to the Executive Director and Chief Investment Officer described in Section III below, and (c) the closing of such transaction, in the judgment of the Executive Director and Chief Investment Officer, does not allow for the consideration of such investment at a regular meeting of the Board.

III. Investment Discretion Delegated to the Executive Director and Chief Investment Officer

Under the System's Bylaws, the Executive Director and Chief Investment Officer is authorized to "invest the funds of the System committed to the management of System staff in accordance with the directions, policies and procedures established by the Board..." The Executive Director and Chief Investment Officer, as well as such System staff as he may authorize, is responsible to exercise the delegated investment discretion powers to administer the System consistent with the policies and decisions adopted by the Retirement Board, the applicable laws of New York and the policies contained in the Investment Policy Manual, as follows:



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A. Cash Management

The Executive Director and Chief Investment Officer, in consultation with the Internal Investment Committee, is authorized to: manage the assets of the System so as to assure sufficient cash is available at all times to pay the System's benefit and other obligations as they come due; assure that the System's asset allocation as approved by the Retirement Board is achieved and maintained; and assure sufficient funds are available for the funding of such investments as have duly been authorized by the Retirement Board, the Investment Committee of the Retirement Board and the Executive Director and Chief Investment Officer, as applicable, and to take all such actions as he may deem necessary or required in his discretion to achieve the foregoing objectives.

B. Selection of Brokers and Dealers

The Executive Director and Chief Investment Officer, or his designees managing internal fixed income and public equity portfolios, has discretion to select among brokers and dealers to execute a transaction to the best advantage of the System in accordance with the applicable policies in the Investment Policy Manual.

C. Cash Investments

The Executive Director and Chief Investment Officer, or his designees, has full investment discretion to invest the System's cash in short-term fixed income securities in accordance with the short-term investment (cash equivalents) and asset allocation policies, so as to provide liquidity, enhance System income and provide for temporary investment of System funds.

D. Public Markets Portfolios

For purposes of this section of the policy, "public markets" portfolios of the System include any Public Equities, Fixed Income or Real Estate public markets portfolios, including but not limited to Domestic Equity, International Equity, Global Equity, Domestic Fixed income, Global Fixed Income, High Yield Fixed Income, REIT and CMBS.

Provided that sufficient cash is available to meet obligations, and asset classes remain within the asset allocation ranges as approved annually by the Retirement Board, the Executive Director and Chief Investment Officer, or his designees, is authorized to exercise the investment discretion delegated below with respect to public markets portfolios:

Existing Managers. The Executive Director and Chief Investment Officer, or his designees, is authorized to reallocate among existing public markets portfolios,



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whether internally or externally managed, and whether actively or passively managed, and reallocate to and from cash, without regard to amount.

New Managers. (a) Up to \$1 Billion. The Executive Director and Chief Investment Officer, upon recommendation of the Internal Investment Committee, has the authority to engage any new investment manager for any public markets portfolio for an initial investment of up to \$1 billion in accordance with the following procedure.

Prior to any such engagement, the Executive Director and Chief Investment Officer shall notify the Investment Committee of the Retirement Board that an engagement is being authorized. Upon notification by the Executive Director and Chief Investment Officer, the Investment Committee of the Retirement Board may require that a meeting of the Retirement Board be held to authorize the engagement of the new investment manager. The following language shall be included in the Executive Director and Chief Investment Officer's transmittal to the Investment Committee of the Retirement Board:

Place engagement on the Investment Committee of the Retirement Board meeting agenda: Yes ___ No ___

The Executive Director and Chief Investment Officer shall exercise his/her authority to engage the new investment manager if all members of the Investment Committee of the Retirement Board vote "No".

(b) Over \$1 Billion. No new investment manager for which initial investment exceeds \$1 billion shall be engaged without Retirement Board authorization.

Termination of Managers.

(a) Termination under Non-Exigent Circumstances. In the absence of exigent circumstances (as described in paragraph (b) below), the Executive Director and Chief Investment Officer has the authority to terminate any existing investment manager in accordance with the following procedure.

Prior to any such termination, the Executive Director and Chief Investment Officer shall notify the Investment Committee of the Retirement Board that a termination is being authorized. Upon notification by the Executive Director and Chief



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Investment Officer, the Investment Committee of the Retirement Board may require that a meeting of the Retirement Board be held to authorize the termination of the existing investment manager. The following language shall be included in the Executive Director and Chief Investment Officer's transmittal to the Investment Committee of the Retirement Board:

Place termination on the Investment Committee of the Retirement Board meeting agenda: Yes___ No___

The Executive Director and Chief Investment Officer shall exercise his/her authority to terminate the existing investment manager if all members of the Investment Committee of the Retirement Board vote "No".

(b) Termination under Exigent Circumstances. The Executive Director and Chief Investment Officer has the authority to terminate any existing investment manager under exigent circumstances that include, without limitation, departure of key persons, regulatory events, bankruptcy or insolvency, fraud or other bad acts, in each case, as determined by the Executive Director and Chief Investment Officer exercising reasonable judgment. Such termination under exigent circumstances is authorized without the need to follow the procedure set forth in paragraph (a) above.

E. Private Markets Portfolios

The Executive Director and Chief Investment Officer, upon recommendation of the Internal Investment Committee, or his designees, is authorized to invest in or sell or dispose of any of the following types of investment, subject to the following limitations:

Type	Investment Discretion	Disposition Discretion
Private Equity funds, Private Debt funds, and Real Estate Debt or Equity funds	Up to \$300 million ⁽¹⁾	Without regard to amount
Real Estate Direct Debt transactions	Up to \$300 million ⁽²⁾ (with REAC approval)	Up to \$300 million ⁽³⁾ (with REAC approval)
Real Estate Direct Equity transactions	Up to \$300 million ⁽⁴⁾ (with REAC approval)	Up to \$300 million ⁽⁴⁾ (with REAC approval)



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(1) Investments in “funds” include, without limitation, commingled funds, funds-of-one, funds-of-funds, closed-end funds or open-end funds. Such investments may be made through, without limitation, new funds, successor funds, additions to existing funds or secondary purchases. Multiple, contemporaneous investments into the same fund intended as part of a single overall investment shall, in the aggregate, be subject to the \$300 million limitation without duplication.

(2) Investments in Real Estate Direct Debt include, without limitation, new loans, refinancings or additional financings. Multiple, contemporaneous loans that are intended as part of a single overall investment (for example, where multiple assets are involved) shall, in the aggregate, be subject to the \$300 million limitation without duplication.

(3) For dispositions of Real Estate Direct Debt, the \$300 million limitation refers to the aggregate outstanding principal balance and accrued interest, without regard to sale price. The disposition of a package of loans that are intended as part of a single overall disposition (for example, where multiple assets are involved) shall, in the aggregate, be subject to the \$300 million limitation without duplication.

(4) For investments in Real Estate Direct Equity, the \$300 million limitation refers to the amount allocable to NYSTRS' share of the equity investment (not the overall transaction value). For dispositions of Real Estate Direct Equity, the \$300 million limitation refers to the portion of the sale price or consideration allocable to NYSTRS' share of the equity investment (not the overall transaction value).

F. Derivatives

The Executive Director and Chief Investment Officer or designees, is authorized to:

1. Internally Managed Public Equities Portfolios:
 - a. sell covered calls
 - b. use futures with a notional value of up to \$2 billion, for the purposes of minimizing asset allocation risk and reducing trading costs.
2. Internally Managed Fixed Income Portfolios:
 - a. use interest rate futures to manage portfolio duration
 - b. trade forward-settling securities in the To-Be-Announced (TBA) market
 - c. use currency forwards for the purposes of trade settlement or managing currency risk



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G. Securities Lending

The Executive Director and Chief Investment Officer is authorized to implement a securities lending program in accordance with the securities lending policy, provided the market value of securities loaned shall not exceed 20% of the market value of System invested assets.

H. Limited Waiver of Credit Ratings Requirements for U.S. Government Obligations

The Executive Director and Chief Investment Officer, upon recommendation of the Internal Investment Committee, or his designees, is authorized to waive the credit ratings requirements for U.S. Government Obligations (hereinafter defined) within the following IPM sections:

- Securities Lending—VI. Risk Management—B. Market Risk—2. The STIF—
a.(1)
- Domestic Fixed Income Securities—VI. Risk Management—A. Market Risk—2. Credit Rating Restrictions
- Short-Term Investments (Cash Equivalents)—VI. Risk Management—A. Market Risk—2. Credit Rating Restrictions

In exigent circumstances which make it impractical to delay action, in the event of credit ratings downgrade or default status of U.S. Government Obligations resulting from the failure of the U.S. government to raise, suspend or otherwise address the federal debt ceiling (also known as the debt limit or statutory debt limit) in a timely manner.

As used above, "U.S. Government Obligations" means: (a) direct obligations of the United States; (b) direct obligations of any agency or instrumentality of the United States which obligations are expressly backed by the full faith and credit of the United States; (c) obligations the timely payment of principal and interest on which is fully and expressly guaranteed by the United States; or (d) obligations the timely payment of principal and interest on which is fully and expressly guaranteed by any agency or instrumentality of the United States the obligations of which are expressly backed by the full faith and credit of the United States.



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Placement Agent Policy

I. INTRODUCTION

This policy implements certain System decisions and policies to guard against improper benefits accruing to System Retirement Board members, employees, consultants and advisors. The goal is to assure that funds and managers are made aware of and do not engage in conduct that violate these policies.

II. LEGAL AUTHORITY

Section 508(3) of the Education Law expressly provides that no Retirement Board member or employee of the System shall have any interest direct or indirect in the gains or profits of any investment made by the System or receive directly, or indirectly, any pay or emolument for his or her services. Regulations of the Department of Financial Services (11 CRR-NY §136-1.6) bar System Retirement Board members, employees, agents and consultants from acting in any capacity in any transaction involving the System on behalf of a party whose interests are adverse to the System or its members, or from receiving any consideration from any party in connection with a transaction involving the System's funds or its assets.

III. BAN ON PLACEMENT AGENT CONTACTS

In order to preclude the possibility of any monies or other consideration being paid to or for the benefit of any System Retirement Board member, employee, consultant or advisor in the guise of placement, finders or similar fees, the System has determined to ban System contact with placement agents, finders and similar intermediaries for the purpose of introducing a fund or external investment manager to the System or securing an investment by the System. Banning such contact will highlight to funds and external investment managers that there are no gatekeepers controlling access to the System or consideration of their product by System staff.

A. General Rule

As a matter of policy, the System will not invest in any new fund or engage any investment manager in any new assignment where the fund or manager uses a placement agent or other intermediary for the purpose of interacting or communicating with the System to obtain an introduction of the fund or manager to the System, or to obtain the System's investment in the fund or engagement of the manager.

The System will also not invest in any new fund or engage any investment manager in any new assignment where any fees (including any portion of any management fee), bonuses or other compensation of any type has been paid,



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or given, or will be paid, or given, by or on behalf of any general partner party or investment manager party to any placement agent, finder or other similar intermediary other than the officers and employees of the fund, general partner or investment manager in connection with the System's commitment to purchase an interest in the fund or in connection with the System's funding of the investment account.

B. Implementation

Whenever System investment staff is considering investing in a new private equity or real estate fund or engaging an external investment manager for a new investment assignment, staff will communicate directly with general partners and/or principals of the fund or manager interested in doing business with the System.

Placement agents, finders, or other similar intermediaries attempting to solicit business from the System on behalf of a fund or external investment manager will be advised that the System will only communicate with the fund or external investment manager.

IV. CONTRACT PROVISIONS

In order to assure transparency and accountability on the part of private equity and real estate funds and external investment managers, the following contract provisions will be included and/or incorporated into the applicable contractual documents when the System is investing in a private equity or real estate fund or engaging an external investment manager. Typically, in the case of fund investments, the provisions will be included/incorporated in a side letter executed by the System and the fund.

The System's Office of the General Counsel has prepared model language for inclusion/incorporation in fund side letters and investment manager contracts (Appendix A) and model disclosure and certification (Appendix B). Disclosures and certifications shall be made by the fund or external investment manager to the Managing Director of the investment department responsible for the investment, the System's General Counsel and the System's Chief Risk Officer and a final executed form acceptable to the System must be submitted as part of the completion of business due diligence and before the System closes on an investment fund or investment management agreement.

A. Placement Agent Disclosures

Funds and external investment managers will be required to disclose whether any fee, bonus or other compensation was or will be paid to a placement agent,



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finder or other similar intermediary in connection with the System's investment or external manager assignment.

The System's ban on contacts with placement agents in Part III does not necessarily preclude funds and managers from employing the services of placement agents to provide legitimate assistance to their marketing activities and preparation of private placement memoranda, provided such services do not involve contact with System Retirement Board members and staff.

B. Certification That No Compensation Will Be Paid to System Retirement Board Members, Staff, Advisors or Consultants

Funds and external investment managers will be required to certify compliance with current law and this policy that no fee, bonus or other compensation of any kind has been or will be paid or given to any NYSTRS advisor or consultant, Retirement Board member or employee for the purpose of obtaining an introduction to NYSTRS or a favorable investment recommendation or providing any other assistance to the fund or external investment manager in connection with a NYSTRS investment.

If a fund or external investment manager has used a placement agent, finder, or other similar intermediary, they will be required to identify same in their certification and the placement agent, finder, or other similar intermediary will also be required to certify and represent, warrant, and covenant that no fee, bonus or other compensation of any kind has been or will be paid or given by or on behalf of General Partner Party/Investment Manager Party to them in connection with NYSTRS' commitment to purchase an interest in the fund/partnership or funding of the investment account. The placement agent, finder or other similar intermediary will also further be required to represent, warrant and covenant that no fee, bonus or other compensation of any kind including those paid by or on behalf of the general partner or external investment manager to or for the benefit of the placement agent, finder or other similar intermediary has been or will be paid or given by or on behalf of any placement agent party to or for the benefit of any NYSTRS Retirement Board member or employee or a member of the immediate family of any such person, or to any of its consultant or advisor (including their affiliates) for the purpose (or with the effect) of obtaining an introduction to NYSTRS or a favorable investment recommendation or providing any other assistance to the firm in connection with a NYSTRS investment.

C. Compliance with System's Prohibition Against Gifts

Funds and external investment managers will be required to adhere to existing System policy barring the receipt by any NYSTRS Retirement Board member



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or employee of any gift having more than a nominal value under circumstances where it can be reasonably inferred that the gift was intended to influence the person in the performance of the person's official duties or to reward the person for any official action on the person's part.

Should a fund or external investment manager have a question regarding the applicability of System's policy to specific circumstances, the manager of the investment department responsible for the investment shall consult with the System's Chief Risk Officer and the System's General Counsel or their respective designees.

D. Compliance with System's No Revolving Door Certification

Funds and external investment managers will be required to abide by existing System policy not to employ or compensate, in any way, any System Board Member or employee for two (2) years after termination of the person's relationship with the System unless the person will have no contact with or will not provide any services to NYSTRS during the two-year period.

V. IMPLEMENTING PROCEDURES

- A. Applicable System investment staff shall be responsible for furnishing funds and external investment manager candidates with a copy of this policy. Additionally, applicable System investment staff shall, as part of their due diligence, ascertain whether the fund or external investment manager is ready, willing and able to comply with the requirements of this policy and how they will answer the certifications required by this policy.
- B. Outside attorneys representing the System in any applicable transaction or agreement shall be furnished with a copy of this policy.
- C. The agreement of the fund or external investment manager, as applicable, to the contract provisions and disclosures and certifications required by Part IV of this policy shall be a condition precedent to the System's investment in the fund or engagement of the external investment manager.

VI. EFFECTIVE DATE

This policy became effective as of May 21, 2009 and, along with incorporated updates and amendments to date, continues to apply to investment commitments to all private equity and real estate funds and to all external investment manager agreements authorized by the System on or after that date. Nothing herein, however, is intended to suggest or imply that the statute, regulation and policies applicable to System Retirement Board members, employees, consultants and



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advisors referred to herein were not in full force at any time prior to the effective date of this policy.

For the purposes of post May 21, 2009 transition to and implementation of the policy, Part III will apply only to contacts with placement agents, finders and similar intermediaries on or after May 21, 2009. System staff has and will also seek agreement from existing pre-May 21, 2009 external investment managers to the contract provisions of Part IV at the time their assignments are renewed.



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VII. RESPONSIBILITIES AND CONTROLS

Responsible Party	Action
System Investment Managing Directors	<ol style="list-style-type: none">1. Ensure funds, investment managers and outside attorneys are made aware of System policy regarding placement agents.2. Communicate directly with general partners and/or principals of fund or investment manager.3. In concert with Legal, ensure side letter provisions incorporated as Appendix A are included in each contract with newly engaged Funds or investment manager.
Funds and External Managers	<ol style="list-style-type: none">4. Must comply with Placement Agent Disclosure requirements in connection with soliciting business from the System.5. Must certify that no compensation has been or will be paid to System Retirement Board, Staff, Consultants or Advisors.6. Must comply with System prohibition against gifts.7. Must comply with policy not to employ or compensate any System employee for two (2) years after termination, unless the person will have no contact with or provide any services to the System during the two-year period.8. Provide all required certifications and disclosures by separate and direct correspondence to System Investment Managing Director, System General Counsel and Chief Risk Officer.
Office of the General Counsel	<ol style="list-style-type: none">9. With outside attorneys as necessary, create and approve certifications and disclosure language required of funds and/or investment managers.



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	<p>10. Directly receive, review, and approve in concert with Risk Management the sufficiency of certifications and disclosure documents from fund and/or investment manager as part of the completion of business due diligence and prior to closing.</p> <p>11. In concert with System Investment Managing Directors, ensure side letter provisions incorporated as Appendix A are included in each contract with newly engaged Funds or investment manager.</p>
Risk Management	<p>12. Directly receive, review, and approve in concert with Office of the General Counsel the sufficiency of certifications and disclosure documents from fund and/or investment manager as part of the completion of business due diligence and prior to closing.</p>
Investment Department Initiating the contract with Investment Manager	<p>13. Maintain an official copy of executed contract which includes certifications and disclosure documents.</p>



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APPENDIX A – MODEL SIDE LETTER PROVISIONS

Transparency and Accountability Provision – Fund Investment and Management Contracts

- (a) The General Partner or external Investment Manager, as applicable, which for purposes of this provision, shall include the General Partner/Investment Manager, each affiliate of the General Partner/Investment Manager and the directors, partners, members, officers, agents, employees, and shareholders of the General Partner/Investment Manager and such affiliates (“General Partner Party” or “Investment Manager Party” as applicable), acknowledges that the Investor has provided it a copy of its written Placement Agent Policy.
- (b) Pursuant to Investor’s Placement Agent Policy, the General Partner/Investment Manager has executed and delivered a Disclosure and Certification dated (__/__/__), inclusive of Certification/s of Placement Agent (if any), acceptable to Investor, and the same is reiterated and incorporated as if fully set forth herein.



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APPENDIX B – MODEL DISCLOSURE AND CERTIFICATION

Placement Agent Fee Disclosure and Certification – Fund Investment and Management Contracts

- (a) The undersigned General Partner or external Investment Manager, as applicable, acknowledges that NYSTRS (“Investor”) has an investment policy that requires this Placement Agent Fee Disclosure and Certification (“Disclosure and Certification”). For purposes hereof, “General Partner Party/Investment Manager Party” shall mean and include the General Partner/external Investment Manager, each affiliate of the General Partner/external Investment Manager, and the directors, partners, member, officers, agents, employees, and shareholders of the General Partner/Investment Manager and such affiliates.

“Placement Agent” shall mean and include any placement agent, finder, or other similar intermediary used in connection with raising capital for the fund or account, marketing the fund or the account to investors, or conducting any such similar activities. Placement Agents shall include both individuals and entities acting in such capacity.

The General Partner/Investment Manager may omit from this Disclosure and Certification fees and expenses paid to its counsels and accountants in connection with the organization of the Partnership and the offering of limited partnership interests therein, or in connection with the formation of the external investment account and the funding of the investments therein, as applicable, provided that such counsels and accountants have not also represented the Investor in connection with the formation of the Partnership or external investment account and have not been involved in any form of solicitation relating to the Investor.

The General Partner or external Investment Manager, as applicable, represents, warrants, covenants, and certifies that:

- (i) no fees (including any portion of any management fee), bonuses, or other compensation of any type has been paid, or given, or will be paid, or given, by or on behalf of any General Partner Party/Investment Manager Party to any Placement Agent in connection with the Investor’s commitment to purchase an interest in the Partnership or in connection with the Investor’s funding of the Investment Account; and
- (ii) no fee, bonus, or other compensation of any kind or value has been paid, or given, or will be paid, or given, by or on behalf of any General Partner Party/Investment Manager Party to any of the Investor’s Board members or employees, or to any consultant or advisor of the Investor (including those listed on Exhibit 1 attached hereto and their Affiliates) for the purposes (or



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with the effect) of obtaining (1) an introduction to the Investor or any officer or employee of the Investor, or (2) a favorable recommendation or any other assistance with respect to the making of the subject investment.

- (b) The General Partner or external Investment Manager, as applicable, further represents, warrants, and certifies that:
- (i) Schedule 1 provides a complete list of Placement Agents engaged by the General Partner/Investment Manager to provide assistance to the General Partner/Investment Manager including in its marketing activities and preparation of private placement memoranda; and
 - (ii) each Placement Agent, if any, was instructed not to contact any of Investor's Retirement Board members or employees for the purpose (or with the effect) of obtaining an introduction to the Investor or a favorable recommendation or any other assistance with respect to the Investor's investment in the Partnership or funding of the Account as applicable.
- (c) The General Partner or external Investment Manager, as applicable, represents and warrants that, to the best of its knowledge, all information contained herein, is true, correct, and complete in all material respects and that it shall, immediately upon learning or discovering that this Disclosure and Certification has become untrue or misleading in any material respect, amend, correct and/or supplement the same so as to state the true and complete facts.

If the Investor determines that the Disclosure and Certification contains a material inaccuracy or omission, the Investor may notify the General Partner or external Investment Manager, as applicable, in writing of such inaccuracy or omission, and the General Partner/Investment Manager shall have the opportunity to cure such inaccuracy or omission within ten (10) days after receipt of notice from the Investor or two (2) Business Days before the first Capital Contribution or Funding Commitment is due, whichever is earlier.

If the General Partner/Investment Manager does not cure the material inaccuracy or omission within the time period provided above, or the Investor determines that the Disclosure and Certification contains a material inaccuracy or omission after the Investor has made its first Capital Contribution or Funding Commitment, the Investor shall have the option, in its sole discretion and without liability to General Partner/Investment Manager, any Partner or any third party, to withdraw where permitted by the Partnership Agreement or Investment Management Agreement without penalty or discount, or to cease making further Capital Contributions to the Partnership, or Funding Commitment to the Investment Account (without being deemed to be a Defaulting Limited Partner under the Partnership Agreement, or a Defaulting Investor under the Investment Management Agreement, as applicable) and



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to pursue all remedies that may be available to the Investor under the Side Letter, the Partnership Agreement or Investment Management Agreement, and applicable law.

- (d) Attached hereto as Schedule 2 is a Certification from each Placement Agent, if any and as applicable. The General Partner or external Investment Manager, as applicable, represents and warrants that it has no actual knowledge of (i) any material inaccuracy in any of the attached Certification/s of Placement Agent or (ii) any omission in any such Certification/s which would render the same untrue or misleading in any material respect. The General Partner/Investment Manager shall, immediately upon learning of the same, notify the Investor of any such matter.
- (e) The Partnership or Investment Account, as applicable, shall not pay any Placement Agent fees (including expenses) unless such fees are fully offset by a reduction in management fees or fees otherwise payable to the General Partner or Investment Manager under the Partnership Agreement or Investment Management Agreement. In no event shall Investor be charged or required to contribute to any such fees or expenses, or portions thereof, that are not fully offset as provided herein.
- (f) The General Partner or external Investment Manager, as applicable, shall make no gift to any of Investor's Retirement Board member or employee having more than a nominal value under circumstances where it can be reasonably inferred that the gift was intended to influence the person in the performance of the person's official duties or to reward the person for any official action on the person's part.
- (g) The General Partner or external Investment Manager, as applicable, shall not employ or compensate in any way any of Investor's Retirement Board members or employees for two (2) years after termination of the person's relationship with the Investor unless the person will have no contact with or will not provide any services to Investor during that two-year period.
- (h) The General Partner or external Investment Manager, as applicable, shall provide a new/updated Disclosure and Certification inclusive of the Certification/s of Placement Agent (if any) upon any increase or addition of funding or commitment to Investor's investment.
- (i) Notwithstanding anything to the contrary contained in the Partnership Agreement, Side Letter, or Investment Management Agreement, the General Partner or external Investment Manager, as applicable, agrees that the Investor may disclose the information contained in the Disclosure and Certification, including the Certification/s of Placement Agent (if any) to the public.
- (j) Pursuant to Investor's Placement Agent Policy, this Disclosure and Certification shall be attached to the Investor's Side Letter/Agreement relating to the Fund/Account, and



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all of the provisions of this Disclosure and Certification shall be incorporated by reference into such side letter/agreement as if fully set forth therein.

Fund/Management Account (please print)

General Partner/Investment Manager:

(please print full legal entity name)

By: _____

Name:

Title:

(please print name & title of signatory)

Date: _____



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Exhibit 1

A list of the Investor's consultant(s) and advisor(s).

Schedule 1

(a) The name/s of the Placement Agent/s engaged by General Partner or Investment Manager, if any. If none, please state "None".



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Schedule 2

Certification of Placement Agent

The undersigned represents, warrants and covenants with New York State Teachers' Retirement System (the "Investor") that:

- i. No fees (including any portion of any management fee), bonuses, or other compensation of any type has been paid, or given, or will be paid, or given, by or on behalf of any General Partner Party/Investment Manager Party to the undersigned in connection with the Investor's commitment to purchase an interest in the Partnership or in connection with the Investor's funding of the Investment Account; and
- ii. No fee, bonus, or other compensation of any kind or value including those paid by or on behalf of the General Partner or external Investment Manager, as applicable, to or for the benefit of the undersigned/Placement Agent has been paid or given, or will be paid or given, by or on behalf of any Placement Agent Party (as defined below) to or for the benefit of any of the Investor's Board members or employees or a member of the immediate family of such persons, or to any consultant or advisor of the Investor (including their Affiliates) for the purposes (or with the effect) of obtaining (i) an introduction of the Investor or any officer or employee of the Investor, or (ii) a favorable recommendation or any other assistance with respect to the Investor's Investment in [Name of Fund/Account].

For purposes hereof, "Placement Agent Party" shall mean and include the undersigned Placement Agent, each affiliate of the Placement Agent, each director, partner, member, officer, agent, employee, and shareholder of the undersigned Placement Agent and such affiliates.

Attached as Exhibit I is a list of the Investor's consultant(s) and advisor(s).

Placement Agent:

(please print full legal entity name)

By: _____

Name:

Title:

(please print name & title of signatory)

Date: _____



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Exhibit I to Schedule 2

A list of the Investor's consultant(s) and advisor(s).



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Independence of Consultants

NYSTRS Policy Regarding Independence of Consultants Providing Investment Advisory Services

I. General Policy

To discharge the fiduciary duty of the Retirement Board, as Trustees of the New York State Teachers' Retirement System (NYSTRS), to NYSTRS' members, retirees and beneficiaries, NYSTRS must be able to use best in class consultants as advisors and to invest assets with best-in-class investment managers.

NYSTRS has several contracts with consultants who provide investment advice, both with general consultants and with asset class level consultants. In the future, NYSTRS may also have contracts and relationships with other consultants and advisors, including contracts with a "pool" of consultants available to provide such consulting services on a project basis. Persons and entities in all of the above relationships are referred to herein as "consultants". Some of these consultants or their affiliates also offer investment management services.

It is not uncommon in the investment industry for a firm that offers investment consulting services to also offer investment management services, often through an affiliate. However, this can present a potential for or the appearance of a conflict where a firm providing investment consulting services to a client approaches the same client seeking to also manage money for that client.

To balance the potentially competing goals of consultant independence and obtaining the best investment consulting services as well as the most attractive investment opportunities, it is the policy of NYSTRS that consultants providing investment advisory services to NYSTRS cannot seek to manage assets for NYSTRS, either directly or through their affiliates, during the term of the consulting services contract, unless specifically requested to do so by the Executive Director and Chief Investment Officer, and subject to certain procedures set out herein to manage potential conflicts in such situations.

This policy will apply to current and future consultants that provide investment advisory services to NYSTRS. Accordingly, after the effective date of this policy, NYSTRS will not consider any new investment opportunity with such a consultant or its affiliate, except as provided herein. Language implementing this policy will be included in future contracts with consultants to provide investment advisory services to NYSTRS. For the avoidance of doubt, separate account advisors/managers are not considered consultants for purposes of this policy.



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Independence of Consultants

II. Disclosure of Other Lines of Business (RFP, RFI)

Any request for proposals (RFP), request for information (RFI) or similar solicitation of proposals from consultants to provide investment advice to NYSTRS shall include, without limitation, the following or similar questions or requests for information:

1. Whether the proposer is an SEC registered investment advisor.
2. Proposer's other lines of business and approximate percentage of total revenue.
3. Proposer's investment allocation process among clients.
4. Potential conflicts, including economic or financial interests, fee or other compensation arrangements the proposer, its employees or affiliates have with sponsors (or affiliates) of private investment funds, other investment advisors, investment companies, broker dealers, municipal securities dealers and any other person or entity that could, or could be reasonably perceived to conflict with the proposer's ability to provide unbiased and objective investment advice to NYSTRS, and proposer's policies and procedures to manage and mitigate such conflicts.

III. Fiduciary Duty and Potential Conflicts

In all contracts for investment consulting services, the contracting party shall represent that it (i) does not have any conflict of interest not previously disclosed to NYSTRS in writing that could reasonably be expected to impair its ability to provide unbiased and objective investment advice or decisions, (ii) will promptly disclose in writing to NYSTRS any such conflict that it may have hereafter, and (iii) will annually file a conflicts questionnaire as described in Section V below.

IV. Obligation to Protect Confidential Information

All contracts with consultants to provide investment advisory services to NYSTRS will include language obligating the consultant to protect confidential information pertaining to NYSTRS and to establish adequate internal control procedures to ensure that such confidentiality obligation is fulfilled.

V. Annual Conflicts Questionnaire

All contracts with consultants to provide investment advisory services to NYSTRS will include language requiring that they complete NYSTRS' annual conflicts questionnaire. The questionnaire will include questions to elicit information about potential conflicts with the interests of NYSTRS and how any such potential conflict is being managed.



Independence of Consultants

VI. Restrictions on Seeking Investments

All contracts with consultants to provide investment advisory services to NYSTRS will include language providing that the consultant shall not (a) for so long as the agreement remains in effect, seek any investment by or from NYSTRS with respect to any transaction with the consultant or any affiliate thereof unless specifically requested to do so by the Executive Director and Chief Investment Officer, or (b) use nonpublic information obtained from the provision of services under the consulting services contract in the execution of a particular private equity, private debt, real estate or other applicable transaction. In addition, the consultant shall agree to establish appropriate internal compliance and monitoring procedures to prevent the occurrence of any of the foregoing.

VII. Where an Exception Applies - Process

In the event the Executive Director and Chief Investment Officer requests that a consultant providing investment advisory services to NYSTRS present for consideration by NYSTRS an investment opportunity with a person or entity affiliated with the consultant, the following procedures will apply:

- (a) Before asking any consultant or an affiliate thereof to present an investment opportunity to NYSTRS, staff will make a written request to the Executive Director and Chief Investment Officer for approval to do so, detailing why such a presentation would be in the best interests of NYSTRS.
- (b) The staff request, the approval of the Executive Director and Chief Investment Officer, and the basis of the determination that it is in the best interests of NYSTRS will be documented in writing, and included in the staff investment recommendation.
- (c) Consultant personnel who provide consulting services to NYSTRS will not also provide investment services to NYSTRS, and must protect confidential information obtained in the course of providing consulting services.
- (d) A qualified consultant that is independent of the transaction ("Independent Consultant") will conduct the requisite due diligence and recommendation to NYSTRS regarding the potential investment. The Independent Consultant may be another existing consultant who provides investment advice to NYSTRS, including any one of NYSTRS' general investment consultants or asset class-level investment consultants.
- (e) In the context of the review of any transaction requiring REAC approval that may ultimately result from a presentation made under this exception, staff will report to REAC, that, at the request of the Executive Director and Chief Investment Officer,



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Independence of Consultants

a person or entity affiliated with a NYSTRS consultant presented the investment to NYSTRS, detailing how the potential conflict is being managed and explaining why this exception to NYSTRS' general policy precluding that circumstance is in the best interests of NYSTRS. With respect to other transactions that may result from a presentation made under this exception, staff will report the same information to the Internal Investment Committee (IIC) at the time such a proposed transaction is reviewed by IIC and to the Retirement Board for its information after the transaction is concluded.

For the avoidance of doubt, the foregoing process is not applicable or required when a consultant presents to NYSTRS for consideration an investment opportunity with an unaffiliated third party (a "Sponsor") and the consultant also utilizes such Sponsor in some of the consultant's own investment services or products offered to its investment management clients, including but not limited to multi-manager separate account platforms (collectively, "Consultant Products"), so long as:

- (A) The consultant and the Sponsor are not affiliated with each other through ownership or control;
- (B) NYSTRS' investment with the Sponsor is separate from the Consultant Products, and NYSTRS is not investing in any of the Consultant Products;
- (C) The consultant does not derive any direct or indirect economic benefit from the Sponsor as a result of NYSTRS investing with the Sponsor; and
- (D) All potential conflicts are disclosed by the consultant to NYSTRS as required under this Policy.

If the above conditions are met, then an independent consultant will not be required to conduct the requisite due diligence and recommendation to NYSTRS regarding the potential investment, and consultant personnel who work on the Consultant Products are not precluded from conducting the requisite due diligence and recommendation to NYSTRS regarding the potential investment.



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**NYSTRS' Internal Asset Management
Code of Professional Conduct**

This Internal Asset Management Code of Professional Conduct outlines NYSTRS' ethical and professional responsibilities in managing System assets. This policy supplements the NYSTRS Code of Ethics, Conflict of Interest, Outside Affiliations and Gift policies.

(Adapted from the CFA Institute Asset Manager Code of Professional Conduct)

GENERAL PRINCIPLES OF CONDUCT

Staff has the following responsibilities when managing System assets:

1. Act in a professional and ethical manner at all times.
2. Act for the benefit of the System.
3. Act with independence and objectivity.
4. Act with skill, competence, and diligence.
5. Communicate in a timely and accurate manner.
6. Uphold the applicable rules governing capital markets.

NYSTRS' INTERNAL ASSET MANAGEMENT CODE OF PROFESSIONAL CONDUCT

Investment Staff Shall:

A. LOYALTY

1. Place System interests before their own.
2. Preserve the confidentiality of information communicated in the scope of their employment.
3. Refuse to participate in any business relationship or accept any gift that would create a real or perceived conflict of interest with the proper discharge or official duties or could reasonably be expected to affect their independence, objectivity or loyalty to the System.

B. INVESTMENT PROCESS AND ACTIONS

1. Use reasonable care and prudent judgment when managing System assets.
2. Not engage in practices designed to distort prices or artificially inflate trading volume with the intent to mislead market participants.
3. Deal fairly and objectively when providing investment information, making investment recommendations or taking investment actions.
4. Have a reasonable and adequate basis for investment decisions.



**NYSTRS' Internal Asset Management
Code of Professional Conduct**

5. Make best efforts to negotiate the most favorable investment terms available on behalf of the System.
6. When managing a portfolio or pooled fund according to a specific mandate, strategy or style:
 - a. Take only investment actions that are consistent with the stated objectives and constraints of that portfolio or fund.
 - b. Provide adequate disclosures and information to ensure those responsible for overseeing the portfolio or fund can consider whether any proposed changes in the investment style or strategy meets the System's investment needs.
7. When managing separate accounts and before providing investment advice or taking investment action on behalf of the System:
 - a. Evaluate and understand the System's investment objectives, tolerance for risk, time horizon, liquidity needs, financial constraints, any unique circumstances and any other relevant information that would affect investment policy.
 - b. Determine that an investment is suitable for the System given its financial situation.

C. TRADING

1. Not act or cause others to act on material non-public information that could affect the value of a publicly traded investment.
2. Give priority to investments made on behalf of the System over those that benefit the Staff's own interests.
3. Not use soft dollar arrangements for internally managed portfolios.
4. Maximize the System's portfolio value by seeking best execution for all System transactions.
5. Establish policies to ensure fair and equitable trade allocation among System portfolios.

NYSTRS SHALL:

A. RISK MANAGEMENT, COMPLIANCE AND SUPPORT

1. Develop and maintain policies and procedures to ensure that NYSTRS' activities comply with the provisions of this Code of Conduct and the NYSTRS' Code of Ethics, Conflicts of Interest, Outside Affiliations and Gift policies, as well as all applicable legal and regulatory requirements.



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2. Appoint individuals responsible for administering the policies and procedures. The General Counsel shall be responsible for investigating complaints regarding the conduct of NYSTRS or its personnel.
3. Ensure that portfolio information provided by NYSTRS is accurate and complete and arrange for independent third-party confirmation or review of such information.
4. Maintain records for an appropriate period of time in an easily accessible format.
5. Employ qualified staff and sufficient human and technological resources to thoroughly investigate, analyze, implement and monitor investment decisions and actions.
6. Establish a business continuity plan to address disaster recovery or periodic disruptions of the financial markets.
7. Establish an enterprise-wide risk management process that identifies, measures, and manages the risk position of the System and its investments, including the sources, nature and degree of risk exposure.

B. PERFORMANCE AND VALUATION

1. Present performance information that is fair, accurate, relevant, timely and complete. NYSTRS shall not misrepresent the performance of individual portfolios or of the System.
2. Use fair-market prices to value holdings and apply, in good faith, methods to determine the fair value of any securities for which no independent, third-party market quotation is readily available.

C. COMMUNICATION WITH RETIREMENT BOARD

1. Communicate with the Retirement Board (NYSTRS' governing body) on an ongoing and timely basis and provide Board members with access to System investment information as requested.
2. Ensure that disclosures to the Board are truthful, accurate, complete and understandable and are presented in a format that communicates the information effectively.
3. Include any material facts when making disclosures or providing information to the Board regarding NYSTRS, its personnel, investments or the investment process.
4. Disclose the following:
 - a. Conflicts of interests generated by any relationships with brokers or other



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- entities, other accounts, fee structures or other matters.
- b. Regulatory or disciplinary action taken against NYSTRS or its personnel related to professional conduct.
 - c. The investment process, including information regarding lock-up periods, strategies, risk factors and use of derivatives and leverage.
 - d. Investment expenses paid in order to manage the portfolios or funds.
 - e. The performance of System investments on a regular and timely basis.
 - f. Valuation methods used to make investment decisions and value holdings.
 - g. Shareholder voting policies.
 - h. Trade allocation policies.
 - i. Results of the review or audit of the portfolios or funds.
 - j. Significant personnel or organizational changes that have occurred at NYSTRS.
 - k. Risk management processes.



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

Investment Rates of Return

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NEW YORK STATE TEACHERS' RETIREMENT SYSTEM INVESTMENT POLICY MANUAL

Investment Rates of Return

I. Introduction

The Investment Operations Department (IOD) verifies, calculates and reports investment rates of return and other related information the System requires.

II. Purpose

The purpose of this policy is to outline the policies and procedures used to determine investment rates of return for System investments.

III. Objective

To provide information regarding the investment rates of return for the funds managed by the System in relationship to the investment objectives outlined in Section V of the Statement of Investment Policy. Investment rates of return are reported on the total fund as well as underlying portfolios.

Total Fund investment rates of return are reported using a time-weighted, Modified Dietz (DVA/ABAL) methodology. The calculation frequency depends upon the frequency of portfolio cash flows and upon the availability of underlying data. Calculations are made daily for public market portfolios where market valuations are available daily. Private market returns are calculated by using a Modified Dietz methodology. Private market calculations are made quarterly for private market portfolios because market valuations are only available quarterly on a lagged basis. Investment rate of return reporting for private market assets or other purposes may be supplemented with additional calculations using a money-weighted methodology (Internal Rate of Return).

Investment rates of return are reported net of fees.

IV. Management Structure

The custodian is responsible for the investment rate of return calculations. The System will independently verify this information for accuracy.

The custodian calculates the investment rate of return for all investments. These assets include public market assets directly held within master custody as well as commingled funds. The custodian also calculates the aggregate quarterly time-weighted returns for the Private Equity, Private Debt, Real Estate Equity and Real Estate Debt portfolios using data aggregated by IOD. Effective July 1, 2018, the custodian calculates the investment rate of return for the System as a whole. IOD is responsible for verifying these investment calculations.

IOD is also responsible for the investment rate of return calculations for assets where the System is responsible for the ABOR.



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Investment Rates of Return

V. Risk Management

The Communications and Responsibilities & Controls sections delineate the measures implemented to control operational risks.

VI. Communications

A. Retirement Board Reporting:

1. IOD will report, quarterly, to the Retirement Board the investment rates of return for the total fund and underlying component portfolios, net of external management fees (if applicable). Portfolio rates of return will be compared with their respective benchmark indices in the quarterly board report.
2. IOD will provide any other reports the Board may request or require as needed.

B. Ad Hoc Reporting:

1. IOD will provide ad hoc reports to NYSTRS personnel as needed with respect to investment rates of return or other related information.

VII. Responsibilities & Controls

Responsible Party	Action
Custodial Bank (Accounting) and IOD	<ol style="list-style-type: none">1. Maintain individual portfolio accounting book of record (ABOR):<ul style="list-style-type: none">- Provide reconciled holdings and transaction information.- Verify trades have settled correctly.- Provide accounting and reporting with appropriate accounting controls.



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Investment Rates of Return

Custodial Bank	<ol style="list-style-type: none">2. Calculate the investment rate of return for the System's total fund and for individual public security investment portfolios.3. Calculate the aggregate quarterly time-weighted returns for the Private Equity, Private Debt, Real Estate Equity and Real Estate Debt portfolios.
IOD	<ol style="list-style-type: none">4. Provide private market data to the custodian quarterly for the custodian to use to calculate investment returns.5. Review investment rate of return calculations for all asset classes and investment portfolios for reasonableness.6. Report rate of return information to the Executive Director & CIO and managing directors.7. Provide quarterly reports to the Retirement Board of the investment rates of return for the total fund and underlying asset classes.8. Update and maintain private equity and private debt performance data (market values and cash flows).



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Investment Rates of Return

Real Estate Department	<p>9. Coordinate collection of investment manager performance data (market values, cash flows, income and appreciation).</p> <p>10. Review property/fund rates of return quarterly as calculated by IOD in conjunction with reports supplied by portfolio managers.</p>
Private Equity Department	<p>11. Review Private Equity and Private Debt portfolio rates of return quarterly as calculated by the IOD.</p>
Public Equity and Fixed Income Departments	<p>12. Review portfolio rates of return monthly provided by the IOD.</p>
Custodial Bank and IOD	<p>13. For portfolios maintained on Custodian ABOR:</p> <ul style="list-style-type: none">- Coordinate/reconcile rates of return data with accounting data.- Provide benchmark and analytic data for portfolios.- Provide daily time-weighted investment rates of return for portfolios and composites.- Compare calculated monthly returns with external managers for consistency. Resolve any discrepancies if necessary. <p>14. Effective July 1, 2018, calculate the Total Fund investment rate of return net of fees.</p>



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Investment Rates of Return

IOD	<p>15. Verify rate of return calculations made by the custodial bank for consistency and reasonableness.</p> <p>16. Provide monthly rates of return to Public Equity and Fixed Income Managing Directors.</p> <p>17. Publish investment rates of return monthly for NYSTRS management.</p> <p>18. Provide quarterly rates of return to Private Equity and Real Estate managing directors.</p> <p>19. Provide investment rate of return reports for quarterly Board meetings.</p>
Portfolio Managers (Internally and Externally managed Public Markets)	<p>20. Provide investment manager calculated monthly rates of return to custodian for comparison purposes.</p>
Retirement Board	<p>21. Review investment rates of return pursuant to the Statement of Investment Policy Section versus objectives.</p>



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

Responsible Stewardship Policy

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Responsible Stewardship Policy

I. Introduction

NYSTRS' Retirement Board developed Investment Beliefs to provide a consistent and transparent framework to guide NYSTRS' investment decision-making processes.

As fiduciaries, NYSTRS must be responsible and thoughtful stewards of the Fund, acting for the exclusive benefit of NYSTRS' members and beneficiaries.

This document serves as an outline of the priorities and process for effective stewardship of the fund. It articulates NYSTRS' belief on stewardship, the character of the fund, and offers guidelines for assessing and responding to risk in the fund.

II. Stewardship Belief

Responsible stewardship includes:

- Making prudent investment choices, consistent with our fiduciary duties under a disciplined risk-controlled strategy.
- Promoting responsible corporate governance, consistent with our Duty of Loyalty to act for the exclusive benefit of NYSTRS' members and beneficiaries.
- Being active owners of public and private companies, including but not limited to:
 - Voting proxies.
 - Participating on Limited Partner Advisory Committees.
 - Capitalizing on the System's assets to achieve investment goals and objectives in a responsible manner.
- Collaborating with other institutional investors to harness collective influence in engagement efforts.
- Actively participating with external organizations to help shape future rules and regulations related to sustainable investing. (e.g., The International Financial Reporting Standards Foundation efforts to advocate for uniform reporting and disclosure templates)

NYSTRS also believes that the most significant contributor to a fund's long-term investment performance is asset allocation. As part of the asset allocation decision, NYSTRS is a universal owner of the global public markets, with a highly diversified, long-term portfolio. NYSTRS holds the following convictions about the capital markets:



Responsible Stewardship Policy

- Markets are generally efficient.
- Passive management provides broad, diversified exposure, while active management can yield benefits when the investment manager has an informational, technical or operational advantage.
- Alternative investments allow the System to expand the opportunity set beyond public markets and can be used as a return enhancer and risk diversifier.

III. Stewardship Policy

This policy sets forth the guidelines for identifying, assessing and addressing material risks through proxy voting and engagement with the companies, and, when all other reasonable options have been exhausted, divestment. These guidelines are consistent with NYSTRS' Investment Beliefs and memorialized in NYSTRS' Board Governance Manual.

The scope of this policy applies to the following categories:

- Public market investments where NYSTRS assets are internally managed, or held in a separately managed account and NYSTRS controls the investment guidelines
- Private market investments held in a separate account or partnership fund structure for which NYSTRS may exercise any negotiated opt-out rights for future relevant investments to protect against the types of financial risks identified in this policy

This policy generally excludes public market securities held in a commingled structure where NYSTRS does not control investment guidelines, or private market partnership fund structures where NYSTRS does not have opt-out rights.

a. Risk Identification

From time to time, the NYSTRS Board of Trustees will be asked to assess whether there are risks to the portfolio that should be addressed through engagement or potential divestment action, with a particular focus on risks for which NYSTRS does not reasonably expect to be compensated over the long term. In order for a risk to be considered at the Board level, NYSTRS' staff must have determined that the risk has quantifiable and material current and/or long-term financial impact on the Fund. Stakeholder issues brought to NYSTRS' attention also may be considered through this lens.

b. Analysis and Recommendation

NYSTRS' staff shall provide a comprehensive and balanced analysis of the risks for consideration by the Board's Investment Committee along with a recommendation regarding engagement and/or divestment. The analysis should evaluate the impact of any action on the System's investment portfolio, including transaction costs and potential for increased tracking error, consistent with fiduciary duty and NYSTRS' investment policies and objectives. The parameters of the analysis will include identifying the companies that may be subject to action, based on clearly established criteria.



Responsible Stewardship Policy

Recommendations approved by the Investment Committee shall be submitted to the Retirement Board for consideration and appropriate action.

c. Proxy Voting, Engagement and Divestment Process

NYSTRS staff will establish key performance indicators (KPI) that characterize an asset's risk exposure to the Fund. These KPIs will form the basis for evaluation of company performance to address and mitigate the risk. NYSTRS may address this risk in the following ways:

1. NYSTRS may restrict further investment in any company identified as having material exposure to the risk.
2. NYSTRS will vote proxies to promote responsible corporate policies and activities which enhance a corporation's financial prospects and to address the risks identified through the KPIs, and in accordance with Appendix A: Stock Proxy Voting.
3. NYSTRS may seek to directly engage with the company and/or file a shareholder proposal, including taking the following actions:
 - a. NYSTRS may send a letter to the senior management and/or the Board of Directors of the identified company that outlines NYSTRS' concerns regarding the risk and related KPIs, and which seeks a written response outlining the company's strategy to address the risk.
 - b. NYSTRS may request a meeting with corporate senior management to address and more fully understand the corporate strategy to address the risk.
 - c. NYSTRS may file a shareholder proposal with the company, seeking action by the company to address the risk in a timely manner.
 - d. NYSTRS may collaborate with other institutional investors in engagement efforts. This may include participation in sign-on statements, letter writing campaigns, dialogue with companies, co-filing shareholder proposals and building votes for proposals that support NYSTRS' stewardship objectives.
4. NYSTRS may consider for divestment any company that continues to fail to address the identified risk after engagement steps have been taken, or when engagement has not resulted in a meaningful risk mitigation plan.
5. NYSTRS may consider for divestment any company that it determines, based on thorough due diligence, has a quantifiable and material current and/or potential negative financial impact on the Fund that cannot be resolved through engagement.



Responsible Stewardship Policy

IV. Divestment

A decision to divest is at the discretion of the Board, consistent with applicable fiduciary standards and statutory and regulatory requirements. In general, any company considered for divestment will be evaluated on the basis of the Board's overriding fiduciary responsibilities and with consideration for the economic risks presented to the System. If the Board determines engagement would be futile or the Board believes it has exhausted all practicable engagement options without achieving satisfactory progress or resolution, the Board may consider divestment. Evaluation of a divestment decision will be based on information provided by Staff, investment consultants, investment managers and/or other third parties such as market research services. The Board shall also obtain advice from outside fiduciary counsel and/or its general counsel on whether a divestment initiative is consistent with fiduciary standards.

Analysis may include:

- The investment impact of divestment on characteristics such as return and risk, including portfolio standard deviation and tracking error;
- The investment impact of divestment on portfolio characteristics using holdings-based analysis, including security-level diversification, sector-level diversification, investment style exposures, and factor exposures;
- The anticipated transaction costs and timeline required for prudent divestment;
- The ability to maintain sufficient diversification on an ex-post basis, including where the proceeds of divested securities may be invested to maintain comparable or equivalent risk-return characteristics;
- Whether divestment is consistent with the System's investment policy and objectives.

NYSTRS Staff, in consultation with System investment managers and investment consultants, will evaluate whether custom or substitute benchmarks should be instituted at the total fund, asset class, sub-asset class, and/or manager level to reflect the reduced opportunity set resulting from the divestment. Any use of custom or substitute benchmarks shall require Board approval.

V. Divestment Execution

A final Board resolution approving a divestment initiative shall describe the scope and conditions of the divestment, including the investment criteria upon which the divestment decision was made, and may include specifications regarding the projected divestment timeline, the duration of the divestment period, the asset class(es) and investment strategies impacted, and where assets may be reinvested in the near and long-term, depending on the scope of the divestment.

Staff will communicate restrictions and/or divestment decisions to external managers and monitor the investment managers' compliance.



Responsible Stewardship Policy

Staff will report back to the Board once divestment has been completed.

VI. Ongoing Monitoring

Staff will provide a status update regarding engagement efforts and a current list of approved divestments to the Board annually, which may include relevant risk and return performance impacts resulting from the divestment and any developments indicating that such risks have been or are being mitigated.

Staff may provide interim updates more frequently, upon request from the Board. Staff also may recommend to the Board changes in any divestment action to reflect a change in circumstances affecting the divested company.



Responsible Stewardship Policy

VII. Responsibilities and Controls

Responsible Party	Action
Chief Risk Officer	<ul style="list-style-type: none">• Quantify systemwide exposure to identified risk• Maintain and periodically update internal list of companies that fall under restriction and/or divestment criteria• Contribute to analysis of potential impact of identified risk on NYSTRS' investment portfolio• Participate in engagement efforts• Monitor compliance with divestment and/or restriction criteria
System Investment Managing Directors	<ul style="list-style-type: none">• Analyze and report on potential impact of identified risk• Implement divestment and/or restriction criteria• Communicate with external managers on divestment and/or restriction criteria• Monitor compliance with divestment and/or restriction criteria• Report on performance impact from divestment and/or restriction criteria• Participate in engagement efforts
Investment Operations Department	<ul style="list-style-type: none">• Monitor compliance with divestment and/or restriction criteria• Contribute proxy voting data for engagement efforts and reporting• Ensure proxies are voted in line with the stock proxy voting policy and engagement efforts• Participate in engagement efforts

**Responsible Stewardship Policy**

Office of the General Counsel	<ul style="list-style-type: none">• Act as liaison with outside attorneys as necessary• Act as liaison with Legislative stakeholders as necessary• Participate in and provide legal advice on engagement efforts and other stewardship initiatives as necessary
Senior Advisor to the Executive Director and Chief Investment Officer - Stewardship	<ul style="list-style-type: none">• Develop, document and implement procedures and processes related to the Systems' Responsible Stewardship program• Contribute to development and maintenance of divestment and/or restricted criteria• Coordinate all engagement and divestment efforts• Participate in engagement efforts• Ensure proxies are voted in line with the stock proxy voting policy and engagement efforts• Periodically provide reports to the Retirement Board on the System's Responsible Stewardship program
Executive Director and Chief Investment Officer	<ul style="list-style-type: none">• Provide recommendation to the Board on divestment



Responsible Stewardship Policy

Appendix A: Stock Proxy Voting

I. Introduction

Proxy voting is one facet of NYSTRS' investment stewardship program.

II. Purpose

The System's Stock Proxy Voting policy has been established to protect the System's long-term investment interests and to promote responsible corporate policies and activities which enhance a corporation's financial prospects.

III. Management Structure

The Stock Proxy Voting policy is administered internally by the Investment Operations Department in accordance with these guidelines.

When voting proxies for companies in the U.S. and Canada, NYSTRS will generally vote in accordance with the Proxy Voting Guidelines in Section IV below. When voting proxies for companies in other countries, NYSTRS will generally vote in accordance with the benchmark policy recommendations of NYSTRS' independent proxy advisor. Notwithstanding the foregoing, complex issues which require additional consideration or those which do not fall within the relevant guidelines may be submitted to the System's Executive Director and Chief Investment Officer, or designee, who is authorized to exercise best judgment in voting such issues.

NYSTRS engages an independent proxy advisor to provide vote execution services, proxy research, analysis, and recommendations, and automation of NYSTRS voting policy to the extent possible.

NYSTRS may confer with the company, other investors, or obtain additional research as needed when casting votes.

IV. Proxy Voting Guidelines/Definitions

A proxy is a written power of attorney given by a shareholder of a corporation authorizing a specific vote on its behalf at corporate meetings. A proxy will normally pertain to election of members of the corporation's board of directors or to various resolutions submitted for shareholder approval.

When voting proxies, the System generally supports corporate management if management's position appears reasonable, is not detrimental to the long-range economic prospects of the company and does not tend to diminish or truncate the rights or prerogatives of shareholders.



Responsible Stewardship Policy

NYSTRS will withhold support from proposals when:

1. The underlying factors are not reasonably deemed material to the company or its operations
2. The company already substantially complies with the resolution
3. The cost outweighs the benefit, or the request is otherwise not reasonable

Proxy proposals are divided into the following general categories: management issues, executive compensation, shareholder rights, anti-takeover measures, environmental, and social issues.

A. **Management Issues:** Management issues which involve routine corporate operational and administrative issues are generally voted with management.

1. **Auditors:** Companies are not legally required to allow shareholders to ratify the selection of auditors. However, even if not required, many companies seek shareholder ratification of auditors. The most important issue relating to auditor selection is the independence of the auditing process. The auditor's independence from the firm being audited reduces the potential for abuse. The SEC has defined "independent" as an accountant's ability to exercise "objective and impartial judgment on all issues encompassed within the accountant's engagement." The System will not ratify an auditor if independence has been impaired or any of the following conditions exist:
 - a. Non-audit fees exceed audit fees
 - b. There was a previous failure to detect a material internal control weakness
 - c. The contract between the company and the auditor has provisions that would fully prevent or otherwise limit the company's ability to seek relief for damages by any means permissible by law
2. **Annual Meetings:** Issues relative to the general logistics of annual meetings such as location, time, frequency, selection of firms to count ballots, etc., are reviewed on a case-by-case basis.
3. **Corporate Contributions:** The System supports the concept of corporate philanthropy, when such philanthropy is in the best interests of the corporation and general public.
4. **Board Related Matters:**



Responsible Stewardship Policy

Boards are responsible for oversight and management of material risks faced by the company; significant risks and controversies and the company's efforts to address them should be disclosed.

Boards should respond meaningfully to shareholder concerns supported by a simple majority of shareholder votes cast and should be willing to engage with shareholders on significant issues.

Boards should oversee and disclose the company's political and charitable contributions and its lobbying activity and ensure alignment with the company's stated policies and objectives.

Requirements for Board membership are, within reason, considered a management prerogative and the System generally supports management's candidates for Board membership. The System believes an independent and diverse Board of Directors with members selected outside of management is beneficial to the overall effectiveness of corporate operations and supports proposals calling for outside directors.

The System generally votes for shareholder proposals asking that the Chairman of the Board and CEO positions be separate unless the company has a strong countervailing governance structure, such as a designated lead director elected by and from the independent Board members with clearly delineated duties that provides oversight of the CEO.

Votes should be withheld from directors that fail to adequately fulfill assigned duties, including the general responsibilities of the Board as outlined above, as well as those directors that:

- a. Attend less than seventy-five percent (75%) of the board and committee meetings without a valid excuse for the absences
- b. Implement or renew a poison pill without shareholder approval
- c. Have failed to act on takeover offers when the majority of shares have been tendered
- d. Are not independent and sit on the audit, compensation, stock option, nominating or other committee which should be comprised solely of independent directors
- e. Engage in significant related-party transactions with the company or have interlocking relationships which appear to affect their objectivity
- f. Serve on more than four (4) other public company boards or serve on two (2) other public company boards while serving as a chief executive at a public company



Responsible Stewardship Policy

- g. Serve as chair of the nominating or governance committee and:
 - i. Diversity is not considered when nominating directors
 - ii. There are no women or diverse candidates on the company's board and no timetable provided to address the issue
 - iii. Board demographic data has been requested but not disclosed
 - iv. There is no independent chair or assigned independent lead director and countervailing governance structure
 - v. Nominate directors to the audit, compensation or nominating committee that are not independent
- h. Serve as chair of the audit committee when there were material misstatements, material weaknesses or restated financials due to lack of controls
- i. Serve as chair of the compensation committee during a time of executive pay practices receiving a poor grade for performance from the System's independent advisory service

While the System does not feel ownership of stock in a corporation is necessary for Board membership, the System does support reasonable stock ownership plans for directors.

- 5. Stakeholder Proposals: Stakeholder proposals permit directors, when taking action, to weigh the interest of constituencies other than shareholders in the process of corporate decision making. These proposals allow directors to consider nearly any factor they deem relevant in discharging their duties.

The System does not support "stakeholder proposals" which give corporations broad discretion when considering business propositions. "Stakeholder proposals" can easily result in the replacement of shareholder rights by the interests of other constituencies and the System believes the interests of the shareholder should retain primacy.

- 6. Preemptive Rights: The System generally does not favor the maintenance or restoration of preemptive rights. Preemptive rights require a corporation to offer rights to existing shareholders when new shares are issued, allowing these shareholders to retain the same ownership percentage. The System feels, in an era of high capitalization, little purpose is served by preemptive rights and providing such rights is costly to the companies.



Responsible Stewardship Policy

7. Linked or Bundled Proposals: The System does not support proposals which link unrelated issues or bundle multiple issues in one proposal. These proposals often link or bundle proposals that benefit the shareholder with proposals that do not.
 8. Limiting of Liability and Increasing Indemnification: The System favors management's right to limit the liability of, and to increase indemnification for, its directors.
 9. Increased Authorized Common Stock: The System will support authorization for additional common stock when required for financing or other legitimate corporate purposes. Generally, the System opposes increases of more than one hundred percent (100%) of the authorized shares.
- B. Executive Compensation: The System generally supports management's right to provide compensation plans intended to motivate management unless a shareholder resolution is submitted to correct an obvious abuse in executive compensation.

Under provisions of Dodd-Frank implemented in 2011, shareholders now have non-binding advisory votes related to both the amount of executive compensation (Say-On-Pay) and the frequency of intervals of such voting (Say-On-Frequency). The System supports Say-On-Pay votes which occur at one-year intervals.

1. Performance Measures: The System supports reasonable compensation programs which are tied to objective performance measures.
 - a. To be considered reasonable, the compensation package must not be excessive in terms of incentives for superior performance on an absolute basis or relative to industry peers.
 - b. The measure should include relevant sustainability performance objectives; these objectives and the rationale for selecting them should be disclosed.
 - c. The System will vote against executive pay proposals that are given a poor grade for performance by the System's independent advisory service.
2. Stock Option Plans: The System believes stock option plans should be used solely for the purpose of motivating corporate personnel. The following are various types of stock option plans and the System's position on each.
 - a. The System generally supports reasonable incentive stock option plans predicated on individual performance.
 - b. The System supports reasonable stock options to outside directors.

**Responsible Stewardship Policy**

- c. The System generally supports employee stock option plans available to all employees offered at no less than eighty-five percent (85%) of market price.
 - d. A plan with a four percent (4%) shareholder dilution, or less, is usually supported. Shareholder dilution in excess of 4% is not supported except in cases where dilution is capped and consideration given to extenuating factors such as company size, performance and executives' compensation.
 - e. The System does not support option plans to key personnel offered at below market price.
 - f. The System does not support corporate loans to key personnel to purchase stock options.
 - g. The System does not support providing broad authority to a company's Compensation Committee to grant incentive programs. This broad authority usually bypasses shareholder approval.
 - h. The System supports certain stock option plans which offer stock appreciation rights. Those plans allow individuals to receive the difference between the option and the market price without acquiring ownership of the stock.
 - i. The System does not support stock options which allow pyramiding. Pyramiding is a form of cashless exercise, similar to stock appreciation rights. It involves repeated simultaneous exchanges of an individual's existing appreciated shares for a larger number of new shares under the option plan.
 - j. The System does not support a compensation plan that permits the repricing of underwater stock options without seeking shareholder approval.
3. Change of Control Payments (Golden Parachutes): Change of Control Payments are compensation arrangements that pay corporate managers after they leave their positions. The System opposes unusually favorable compensation structures established in advance of the sale of a company.
4. Golden Coffins: A Golden Coffin is a death-benefit package awarded to the heirs of high-ranking executives who die while still employed with a company. The System opposes Golden Coffins and other payment structures not tied to actual service to the Company.
- C. **Shareholder Rights**: The System does not support management proposals which tend to limit or diminish the System's rights as a shareholder.
- 1. Confidential Voting: The System supports shareholder resolutions calling for secret ballots.



Responsible Stewardship Policy

2. Cumulative Voting: The System votes for shareholder resolutions to establish cumulative voting for directors and against management proposals to end existing cumulative voting plans. Most corporations provide that shareholders are entitled to cast one (1) vote for each director for each share owned, the so-called "one share, one vote" standard. Cumulative voting for directors permits shareholders to distribute the total number of votes in any manner when electing directors.
3. Unequal Voting Rights Plan: The System opposes any proposal to establish unequal voting rights plans since they tend to reduce the voting power of public shareholders and enhance the control of management.
4. Bylaw Amendments: Generally, shareholders have the right to propose amendments to a company's bylaws unless prohibited by the charter. Some companies have adopted provisions to limit or eliminate the right of shareholders to propose bylaw amendments. The System opposes any proposal to limit or eliminate shareholder rights to propose bylaw amendments.
5. Charter/Certificate of Incorporation: The System does not support proposals by management to change the state of incorporation in order to take advantage of laws more favorable to management interests as opposed to shareholder interests.
6. Access to Management's Proxy: The System generally supports proposals which ask management to allow large shareholders equal access to management's proxy in order to discuss and evaluate management's director nominees and/or nominate and discuss shareholders nominees to the board. The System is generally in favor of resolutions that reform access, provide disclosures to identify sponsors of shareholder resolutions and especially efforts on behalf of shareholders with the SEC to achieve access to management proxies.
7. Special Meetings and Written Consent: Shareholders should be able to call special meetings or act by written consent.

D. Anti-Takeover Measures:

1. Classified Boards: A classified board is one in which the directors are divided into separate classes, with one class of directors elected each year, thus providing for staggered terms. The only real motive for board classification is to make it more difficult to change control of the board.

The System opposes the creation of staggered or classified boards and votes against management efforts to create them and in favor of shareholder proposals to abolish them.



Responsible Stewardship Policy

2. Fair Price Provisions: Fair price provisions prevent two-tier offers in which a buyer offers a premium price for only enough shares to obtain a controlling interest of a company. The common requirement of a “fair price” is to pay minority shareholders at least as much per share as the offeror paid to gain a controlling position of the company.

The System supports fair price provisions provided no other anti-takeover provision is included. Quite often, fair price provisions require a supermajority vote to circumvent the pricing guidelines. The System will vote against the provisions with supermajorities proposed by management and for shareholder resolutions to reduce supermajority percentages.

3. Greenmail: When a company's management buys back a block of the company's stock held by a shareholder deemed to be a “threat” to the company (or to management's tenure), the transaction is often called the payment of greenmail. The System opposes the payment of greenmail and supports shareholder resolutions to end this practice.
4. Poison Pills (Shareholder Rights Plans): Poison pills are a wide variety of provisions adopted by boards, without shareholder approval, to make it financially unattractive for a shareholder to purchase more than a small percentage of the company's stock. The System:
 - a. Supports shareholder resolutions calling for corporations to submit Poison Pills to shareholder votes
 - b. Generally supports shareholder resolutions calling for corporations to rescind Poison Pills
 - c. Opposes management proposals to create Poison Pills when submitted to a vote
 - d. Will review company proposals to determine if they might benefit shareholders over the long run, especially for chewable pills. A chewable pill is a poison pill defense clause that gives common stock shareholders the right to revoke the pill in the face of a bona fide takeover offer, or which automatically nullifies the pill if the offer meets certain predefined criteria.
5. Stock Authorization Increasing Authorized Common or Preferred Shares: The System does not support such increases when the increased stock is issued in a private placement as an anti-takeover measure. The System also opposes any type of increase in blank check preferred stock.

E. Environmental Issues:

1. Companies should disclose the environmental sustainability policies and practices most closely tied to the company's ability to create long-term value for investors.



Responsible Stewardship Policy

2. Significant risks and opportunities related to climate change and other environmental factors should be disclosed, as well as how the company identifies, measures and manages these risks and opportunities. These risks should include relevant physical and transition risks and opportunities.
3. Companies with significant GHG emissions or other negative environmental impacts should disclose plans for transitioning to a more sustainable business model, including GHG emissions and explicit reduction targets where such emissions are material.

F. Social Issues:

1. Animal Testing: The System votes on a case-by-case basis on proposals to restrict the use of animals in product testing.
2. Economic Conversion: The System does not support shareholder resolutions asking companies to report on plans to diversify or convert to the production of civilian goods and services in lieu of military production. We believe this should be a management decision.
3. Human Rights and Human Capital Management:
 - a. The System supports reasonable requests for corporate accountability related to human rights and human capital management.
 - b. Companies should disclose their diversity, equity and inclusion policies, efforts to promote a diverse, equitable and inclusive culture, and workforce demographics.
 - c. Significant risks and opportunities related to human capital management and human rights factors, and the impact on its operations and products should be disclosed, as well as how the company identifies, measures and manages these risks and opportunities.

V. Risk Management

NYSTRS engages an external proxy advisor to provide, among other things, analysis and recommendations on proxy matters and automation of the policy to ensure votes are cast consistently with these guidelines.

VI. Communications

The Investment Operations Department will provide a report to the Retirement Board annually showing the number of proxies voted by category and how the System voted (for or against).



Responsible Stewardship Policy

VII. Responsibilities & Controls

Responsible Party	Action
Investment Operations Department	<ol style="list-style-type: none">1. Receive Proxy Statement from company and proxy materials from proxy advisory service2. Review proxy materials3. Request guidance from the System's Executive Director and Chief Investment Officer or designee, for complex issues which require additional consideration or those which do not fall within these guidelines4. Vote proxies according to guidelines5. Prepare proxy report for the Board annually6. Semi-annually, disclose the System's proxy voting record for domestic and Canadian portfolios.
Retirement Board	<ol style="list-style-type: none">7. Review proxy voting guidelines annually8. Review annual proxy report received from the Investment Operations Department9. Provide oversight to ensure alignment of proxy voting policy with NYSTRS' investment beliefs
Executive Director and Chief Investment Officer or designee	<ol style="list-style-type: none">10. Provide guidance to the Investment Operations Department on complex issues that require additional consideration or are not clearly defined in the proxy guidelines



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Securities Lending

I. Introduction

This policy governs the lending of securities directly owned by the System. It does not address securities lent from commingled investments (see Selection, Monitoring, and Termination of External Investment Managers for Publicly Traded Securities policy regarding the monitoring of securities lending administered by commingled fund managers).

Securities lending occurs when the System transfers a security to a borrower, such as a broker-dealer or bank, for collateral in the form of cash or non-cash collateral (i.e. securities) pursuant to an agreement to return the identical security in the future. Securities are borrowed for a variety of reasons, including: settlement of short sales and to cover hedges, options, arbitrage positions, and settlement fails. Consequently, the borrower receives custody of the transferred security and has the right to resell it. The borrower, however, is obligated to return the exact same security at the end of the loan period and make the System whole for dividends, interest and other distributions as if the security remained in the System's portfolio. Further, securities on loan may be recalled at any time at the discretion of the System.

II. Purpose

To prudently supplement the income received from investments.

III. Performance Objective

To provide the System with incremental income by obtaining market level fees for non-cash loans and investing cash collateral in a risk controlled separate account with a yield exceeding the rebate rate paid to borrowers.

IV. Management Structure

Under the purview of the Managing Director of Fixed Income, securities lending is conducted pursuant to a written agreement with the System's agent lender(s). The agent lender(s) reviews and selects the borrowers, negotiates the lending terms and collects all cash and non-cash collateral and loan premiums. Additionally, the agent lender(s) invests the cash collateral pursuant to System approved investment guidelines and may act as custodian of the System's cash collateral short-term investment fund (STIF). If applicable, a portion of the interest earned on the STIF is paid to the borrower as a result of a negotiated rebate. When pledging non-cash collateral, the borrower pays the System a fee for borrowing the security.

V. Legally Permissible Security Loan Agreements

Subject to approval by the Executive Director and Chief Investment Officer upon the recommendation of the Internal Investment Committee (IIC), the System is authorized by Retirement and Social Security Law (RSSL) §177-d to enter into



Securities Lending

written security loan agreements for the purpose of prudently supplementing the income normally received from investments. Agreements to lend a security must be with a broker-dealer or with New York State or nationally chartered banks [RSSL §177-d(1)] and must not exceed a period of one (1) year [RSSL §177-d(3)].

Additionally, the System may lend only those securities that are freely traded on recognized exchanges or marketplaces [RSSL §177-d(3),(4)], which may include U.S. and non-U.S. bonds and equities. The following provisions also apply to all System security loan agreements:

- A. The System must retain the right to collect from the borrower all dividends, interest, premiums, rights and any other distributions to which the System otherwise would have been entitled [RSSL §177-d(3)(a)]
- B. The System must retain the right to terminate the contract upon not more than five (5) business days' notice [RSSL §177-d(3)(c)]
- C. The borrower must provide collateral to the System in the form of cash, bonds or performance letters of credit drawn on a bank with capital, surplus and undivided earnings in excess of \$100 million or other interest-bearing notes and obligations of the U.S. or federal instrumentalities eligible for investment by the System [RSSL §177-d(3)(d)]
- D. The security loan agreement must provide for payment of additional collateral on a daily basis or at such time as the value of the loaned marketable securities increases to agreed-upon ratios [RSSL §177-d(3)(e)]
- E. The market value of the loaned securities must be monitored daily. The value of the collateral posted must remain at or above the market value of the loaned securities [RSSL §177-d(2)]
- F. The System may waive the right to vote the securities during the term of the loan [RSSL §177-d(3)(b)]

Asset allocation does not apply to this investment activity; however, the market value of securities loaned by the System shall not exceed twenty percent (20%) of the market value of the System's invested assets.

VI. Risk Management

- A. Borrower Counter-Party Credit Risk: Credit risk is controlled by the following measures:
 - 1. The agent lender shall lend securities to borrowers that have been approved by the agent lender's counter-party credit operations and the System's Fixed Income Department.



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2. The agent lender shall collect all cash and non-cash collateral from the borrower
 3. The agent lender shall provide safekeeping for any non-cash collateral received
 4. The agent lender shall indemnify the System for any losses resulting from borrower default on return of securities as well as dividends, interest or other distributions resulting from a default by the borrower
 5. The agent lender shall return securities to the System in the event the System decides to recall a loan. This should occur within the normal settlement period for that security class
 6. The agent lender shall collect all distributions to which the System would otherwise have been entitled to and remit same to the System as if no security loan occurred
- B. Market Risk: Controlling market risk in the System's securities lending program is addressed in two categories: the overall program and the STIF.
1. The overall program:
 - a. The agent lender shall ensure initial collateral received is at least 102% of the market value of U.S. securities loaned or 105% of the market value of non-U.S. securities loaned, plus accrued interest, if applicable.
 - b. The agent lender shall mark-to-market the securities on loan each business day and adjust the collateral required from borrowers using the target of 102% for U.S. securities on loan and 105% for non-U.S. securities on loan
 2. The STIF:

The agent lender shall invest any cash collateral in the STIF pursuant to investment guidelines approved by the System's Fixed Income Department that contain, at a minimum, the following provisions:

 - a. The guidelines must contain specific credit quality standards, as follows:
 - 1) At the time of purchase, the issuer and/or instrument must meet the following minimum credit ratings issued by two of the three nationally recognized statistical rating organizations ("NRSRO"): Standard and Poor's (S&P), Moody's Investors Service (Moody's), and Fitch Investors Services, Inc. (Fitch): issuer must have a short-term debt rating not lower than A-1 / P-1 / F1 and/or the issuer must have a long-term debt rating not lower than A / A2 / A



Securities Lending

2) At the time of purchase, asset backed securities shall have a minimum rating of AAA by S&P or Aaa by Moody's

b. Maturities must fall within specific timeframes to assure liquidity. The STIF guidelines specify maximum maturity periods for individual investments and weighted averages for portfolio duration and maturity

c. STIF investments must be diversified by issuer

d. Eligible investments must be identified in the STIF guidelines

C. Operational Risk:

1. A written contract, reviewed by the System's Fixed Income, Investment Operations and Legal Departments shall govern the relationship between the System and the agent lender(s), as well as any necessary operating agreements between the System, custodian and agent lender(s)

2. The agent lender(s) shall utilize written contracts (i.e., security lending agreements) to govern relationships with the borrowers on behalf of the System

3. The Communications and Responsibilities & Controls sections will delineate the measures implemented to control operational risks

VII. Communications

A. Retirement Board Reporting:

The Investment Operations Department (IOD) will provide a quarterly report for inclusion in the meeting materials provided to the Investment Committee of the Retirement Board showing the market value of securities on loan with the percent of total invested assets, fair value of collateral held by the custodian and year-to-date lending income.

B. Agent Lender Reporting:

1. The Investment Operations and Fixed Income Departments will receive daily exposure reports showing loan level characteristics, the level of collateral held for each borrower, STIF investment reports showing the portfolio composition and pertinent ratios such as overnight liquidity, maturity, issuer exposure, credit quality and other information as required.

2. The Investment Operations and Fixed Income Departments will receive monthly performance packages containing detailed earnings attribution, key portfolio metrics and trader/portfolio manager commentary.



Securities Lending

3. The Investment Operations Department will receive program accounting performance including monthly earnings reports, attribution of income and actual to estimated revenue comparison showing how the lending program generated the monthly earnings in detail.



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VIII. Responsibilities & Controls

Responsible Party	Action
Agent Lender	1. As fiduciary for the System, and in compliance with the Retirement and Social Security Law, System policies, and STIF guidelines, manage the program on a day-to-day basis. This includes negotiating all loan terms, approving borrowers and issuers for investment in the STIF based upon credit analysis and pursuant to STIF guidelines, managing the STIF, maintaining collateral, and collecting income.
Investment Operations Department	<div>2. Perform all investment-related accounting and reporting, applying appropriate accounting controls.</div> <div>3. Review exposure report daily for adequate collateral.</div> <div>4. Monitor borrower defaults and the System's coverage of collateral shortages.</div> <div>5. Review reconciliations of outstanding loans per agent lender to custodial positions.</div> <div>6. Review monthly earnings statement for reasonability. Verify calculation of lending fee split and assure timely collection of lending income.</div> <div>7. Together with Fixed Income, participate in a monthly review of program performance of each agent lender.</div> <div>8. Together with Fixed Income and Legal, negotiate contracts with agent lender(s) and custodial bank governing securities lending. Serve as the primary relationship liaison with agent lenders.</div> <div>9. Assure timely recall of securities on loan, collection of income due, monitor buy-ins and facilitate partial calls and timely corporate action communication for securities on loan.</div> <div>10. Prepare summary report for the Investment Committee of the Retirement Board quarterly.</div>



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Fixed Income Department	<ol style="list-style-type: none">11. Receive the STIF reports from the agent lender daily, reviewing recent investment activity, duration, earnings yield, program spread and liquidity.12. On a weekly basis, perform a detailed documented review of STIF accounts for compliance with the qualitative and quantitative investment guideline requirements, such as liquidity, credit quality, eligible investments, performance, issuer exposure limits and maturity.13. Meet with the Investment Operations Department as needed, to discuss their respective reviews and issues of concern with the lending program.14. Converse at least monthly with the STIF portfolio manager(s) regarding the composition and fund status and resolve issues of concern.15. Determine, approve, and revise (as necessary) cash collateral investment guidelines to be adhered to by agent lender(s).16. Together with the Investment Operations Department, communicate lending program activities, issues, and concerns to the Internal Investment Committee on a periodic basis.
Legal Department	<ol style="list-style-type: none">17. Review contracts with agent lender and custodial bank governing securities lending and engage outside legal counsel as applicable.

FIXED INCOME





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Domestic Fixed Income Securities

I. Introduction

The System's domestic fixed income portfolio invests primarily in instruments having a maturity greater than twelve (12) months at time of purchase. A fixed income security normally pays a fixed rate of return over a defined period of time. The System's fixed income portfolio is intended to invest in those fixed income securities which will provide predictable long-term cash flows from interest payments and maturities.

II. Purpose

- A. To obtain maximum investment return while protecting capital.
- B. To make investments that will support the retired liability of the System, consistent with current economic and market conditions.

III. Performance Objective

- A. Internally Managed Portfolio: The portfolio is to earn, over one (1) or more market cycles, an average annual total rate of return that meets or exceeds that of the Bloomberg U.S. Aggregate Float Adjusted Bond Index.

IV. Management Structure

- A. Internally Managed Portfolio: The core domestic fixed income portfolio is managed internally. At Internal Investment Committee meetings, the Executive Director and Chief Investment Officer, the Managing Directors and Managers from Real Estate, External Public Equities, Private Equity, Public Equities, Fixed Income, Risk Management, Finance and Investment Operations shall discuss, on a regular basis, portfolio characteristics and concerns (e.g. distressed issues), market conditions, central bank actions, levels of nominal interest rates, real rates of return, shape of the yield curve, relative value of various fixed income sub-market sectors and credit spreads, issuance of new debt, secondary market supply and long-term retired liability cash flow requirements, along with other variables, in an effort to determine the most beneficial strategy for committing funds consistent with this policy.

Custodial Relationship

- A. All domestic fixed income securities are maintained in the custody and safekeeping of the System's custodial bank. This is accomplished pursuant to a contractual agreement between the Custodian and the System.
- B. Pursuant to said agreement, settlement instructions are communicated by the System to the bank custodian for execution.



Domestic Fixed Income Securities

V. Legally Permissible Investments

The following investments are statutorily permissible and may be considered for the System's funds:

- A. Obligations payable in U.S. funds which at the time of investment are rated investment grade by two (2) nationally recognized rating services or by one (1) nationally recognized rating service in the event that only one such service rates such obligations, provided that the aggregate amount invested in the obligations of any single issuer may not exceed two percent (2%) of the System's assets or five percent (5%) of the direct liabilities of the issuer unless the obligations are issued by the U.S. or are those for which the faith of the U.S. is pledged to provide payment of the interest and principal. [Retirement and Social Security Law (RSSL) §177(1-a)]
- B. Notwithstanding the two percent (2%) limitation stated above, the System may not invest more than two and one-half percent (2.5%) of its assets in the obligations of any one (1) railroad or industrial corporation, or any one (1) corporation engaged directly and primarily in the production, transportation, distribution or sale of electricity or gas or the operations of telephone and telegraph systems or waterworks or in some combination thereof. [RSSL §177(1)(e)]
- C. In no event, may more than thirty percent (30%) of the System's assets be invested in bonds of electric and gas corporations, as defined in §235(13) of the Banking Law (BL). [RSSL §177(1)(f)]
- D. Equipment trust certificates, subject to the provisions of the Banking Law, and not to exceed five percent (5%) of the assets of the System. [RSSL §177(1)(d)]
- E. Obligations of the Dominion of Canada, of any province of the Dominion of Canada, and of any city of the Dominion of Canada, payable in U.S. funds, provided that the aggregate unpaid principal amount of all such obligations at any time held by the System shall not exceed five percent (5%) of the System's assets. [RSSL §177(1)(c)]
- F. Obligations of the United States and New York State without limitation. Zero coupon bonds, which are the direct and sole obligations of the United States of America and enforceable by the holder thereof against the United States, are also legal investments. [BL §235(1)&(2)]
- G. Bonds of the Savings and Loan Bank of the State of New York, Federal Land Bank, Federal Intermediate Credit Banks and Banks for Cooperatives. [BL §235(10)&(11)]



Domestic Fixed Income Securities

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- H. Bonds of the Freddie Mac, Federal Home Loan Banks, Tennessee Valley Authority, Fannie Mae and the United States Postal Service. [BL §235(15)]
 - I. Obligations issued or guaranteed by the International Bank for Reconstruction and Development, provided the aggregate unpaid principal amount of such obligations at any time held by the System shall not exceed five percent (5%) of the System's assets. [BL §235(24); RSSL §177(1)(b)]
 - J. Obligations issued or guaranteed by the Inter-American Development Bank, the Asian Development Bank, the African Development Bank and obligations guaranteed by the Youth Facilities Project Guarantee Fund and participations therein. [BL §235 (24-a), (24-b), (24-c) & (24-d)]
 - K. Bonds and notes of any bank, trust company, savings bank or savings and loan association organized under the laws of New York State having a net worth of at least \$10 million, which are validly secured at all times to the extent of one-hundred ten percent (110%) of the unpaid principal amount of such bonds and notes by mortgages upon real estate insured by the federal housing administrator or any of his successors in office and guaranteed by the United States under the provisions of the National Housing Act, as amended or supplemented, and to the extent of one-hundred thirty-three and one-third percent (133 1/3%) of the unpaid principal amount of such bonds and notes by conventional mortgages, the valuation of which must be based upon the unpaid principal amount thereof upon the date of the pledge, assignment, or transfer thereof to the System or its trustee or trustees as security for such bonds and notes, such bonds and notes to be amortized in substantially equal annual or semiannual payments of principal and interest over a period not in excess of twenty-five (25) years, provided the aggregate unpaid principal amount of bonds and notes secured by conventional mortgages shall not exceed five percent (5%) of the assets of the System. [RSSL §177(4)]
 - L. Mortgage pass-through certificates, provided the certificates evidence ownership of undivided interests in pools or mortgage loans secured by first mortgages on real property located in New York State improved by one-to-four family residential dwellings and, provided further, that (i) such mortgage loans are originated on or after January 1, 1980, by any bank, trust company, national banking association, savings bank, federal mutual savings bank, savings and loan association, federal savings and loan association, credit union, or federal credit union authorized to do business in New York State or by any lender approved by the Secretary of Housing and Urban Development for participation in any mortgage insurance program under the National Housing Act; (ii) such mortgage loans are assigned to a bank, trust company, federal mutual savings bank, or federal savings and loan association as trustee for the benefit of the holders of such certificates; and (iii) such certificates are rated within the three (3) highest grades by an independent rating service designated by the banking board. The aggregate unpaid principal on conventional mortgages securing



Domestic Fixed Income Securities

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- mortgage pass-through certificates cannot exceed ten percent (10%) of the assets of the System nor can the total unpaid principal on any single pool of conventional mortgages securing mortgage pass-through certificates exceed one percent (1%) of the assets of the System. [RSSL §177-c]
- M. Collateralized Mortgage Obligations (CMOs) which meet the requirements of Subparagraph A herein.
- N. All other domestic fixed income securities, including but not limited to any debt obligation issued by a foreign entity which is traded in the United States and denominated in U.S. dollars, not otherwise provided for may be purchased under the Leeway Clause, RSSL §177(9). In addition, the use of interest rate futures is permitted under the Leeway Clause, RSSL §177(9).

VI. Risk Management

A. Market Risk:

1. Diversification: The domestic fixed income portfolio contributes to the diversification of the overall System portfolio. The asset allocation target is 16% with an allowable range of 12-20%. Within the domestic fixed income sector, diversification is achieved by:
 - a. Exposure to various sectors of the domestic fixed income market including, but not limited to: U.S. Treasury and agency obligations, corporate bonds and securitized securities.
 - b. Selection of securities taking into consideration the sector, maturity, yield, quality, call protection, liquidity, relative value and effect on the diversification of the portfolio.
 2. Credit Rating Restrictions: The System may only invest in securities rated investment grade at the time of purchase by two (2) nationally recognized rating services (or by one (1) nationally recognized rating service in the event only one such service rates such obligations).
- B. Funding Liquidity Risk: Funding liquidity risk is controlled by monitoring the degree to which cash flows generated by the portfolio match the retired liability schedule. Matching considerations are incorporated into portfolio management to the extent possible without compromising performance relative to the benchmark.
- C. Counterparty Credit Risk:



Domestic Fixed Income Securities

1. All domestic fixed income security transactions are settled on a delivery versus payment basis with approved counterparties in accordance with the Selection and Evaluation of Fixed Income Broker-Dealer Counterparties policy.
 2. Custody of the securities is strictly maintained by the custodial bank. Counterparty custodial risk is mitigated as external investment managers do not have physical possession of System securities.
- D. Operational Risk: The Communications and Responsibilities & Controls sections delineate the measures implemented to control operational risks.

VII. Communications

A. Retirement Board Reporting:

1. The Investment Operations Department will provide a quarterly report of market value, credit quality, sector distribution, yield and duration for inclusion in the materials of the Investment Committee of the Retirement Board.
2. Quarterly, the Performance & Analytics team at the Custodian provides a summary of investment rates of return which is reviewed and published by the System's Investment Operations Department.

VIII. Responsibilities & Controls

Responsible Party	Action
Actuarial Department	1. Prepare long-term retired lives liability projection.
Investment Operations Department	2. Prepare a twelve (12) month cash flow forecast for the Internal Investment Committee on a monthly basis or more frequently as needed. This forecast brings together cash available to invest with planned asset class investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources and uses of cash the Internal Investment Committee assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and/or targets.



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Fixed Income Department	<ol style="list-style-type: none">3. Review the cash flow forecast in conjunction with asset allocation to determine whether the asset class will conduct any net buying or selling. This analysis is coordinated with the Internal Investment Committee.4. Continuously assess goals for portfolio characteristics taking into consideration the following: the benchmark; the duration of the retired lives; interest rate and spread duration; distribution of maturity, yield, quality, call protection; diversification among sectors; the yield curve; and compliance with law, policy and System needs.5. Execute trades designed to accomplish strategic and asset allocation goals.6. Approve and allocate all transactions in the order management system.7. Verify transactions and holdings information in order management and reporting systems.
Investment Operations Department	<ol style="list-style-type: none">8. For the internally managed portfolio: Ensure trade information is communicated to custodian bank; verify correct securities or moneys were received or delivered; resolve any discrepancies; and prepare warrant and associated backup. Warrants are automatically posted to the General Ledger and retained electronically. Ensure required margin collateral is posted and received.9. Perform all investment accounting and reporting, applying appropriate accounting controls required to maintain the System's Investment Book of Record (IBOR).
Custodian	<ol style="list-style-type: none">10. Perform all investment accounting and reporting, applying appropriate accounting controls required to maintain the System's Accounting Book of Record (ABOR).
Authorized Signatory	<ol style="list-style-type: none">11. Authorize warrant to disburse funds.



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Custodian Bank	12. Settle trades and pay or receive funds versus delivery of security. Payment of funds will only be made against actual receipt of securities purchased. Settle maturities and credit account at maturity.
Investment Operations Department	13. On a monthly basis, reconcile System long-term bond holdings and accounting information per the System's IBOR to master custodian ABOR.
Custodian	14. Calculate investment rates of return at periodic intervals (i.e., daily; monthly). 15. Monthly, provide a summary of investment rates of return on fixed income portfolios. 16. Quarterly, provide a summary report to NYS Treasury that reconciles to the financial statements.
Investment Operations Department	17. Together with Fixed Income, review investment rates of return summary for reasonableness and determine and resolve any differences. 18. Publish investment rates of return monthly for the System's management and quarterly for the System's Board. 19. Review reported information for accuracy (e.g. interest, fees and ending balances).



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Fixed Income Addendum
Selection and Evaluation of
Fixed Income Broker-Dealers/Counterparties

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INVESTMENT POLICY MANUAL
Fixed Income Addendum
Selection and Evaluation of
Fixed Income Broker-Dealers/Counterparties

I. PURPOSE

The broker-dealer/counterparty selection and evaluation policy documents the principles and standards that guide the selection, evaluation and monitoring of the broker-dealers/counterparties with whom the Fixed Income staff transacts for the purchase or sale of fixed income securities for the System's internally managed portfolios and foreign currency in support of other System investment areas. The policy does not apply to transactions in exchange-traded interest rate futures. This policy is intended to be binding on all relevant persons who have responsibilities and authority with respect to management of these portfolios.

The purpose of this policy is to:

- A. State the objectives the System determines to be appropriate and prudent for the selection of broker-dealers/counterparties with whom the Fixed Income Department executes trades
- B. Establish procedures and criteria that are considered reasonable and prudent for the System, along with establishing the process for periodic evaluation and monitoring of broker-dealers/counterparties with whom the Fixed Income Department executes trades
- C. Provide a resource for all interested parties including the Retirement Board, staff, broker-dealers, counterparties, consultants and custodians for the System's process for the selection and evaluation of broker-dealers/counterparties specific to the Fixed Income Department
- D. Operate as a review document.

II. OBJECTIVES

Principal objectives for establishing guidelines for the selection, evaluation and monitoring of broker-dealers/counterparties with whom the System executes trades for the internally managed fixed income portfolios are:

- A. To state objective criteria for the selection of fixed income broker-dealers/counterparties
- B. To state procedures for the periodic evaluation of fixed income broker-dealers/counterparties



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III. PROCEDURES AND CRITERIA

All broker-dealers/counterparties approved to trade with the System's Fixed Income Department shall meet the requirements set forth below:

A. Procedures for broker-dealer/counterparty selection:

1. Broker-dealers/counterparties interested in trading with the System's Fixed Income Department and based upon System needs, must complete a questionnaire regarding their organizational structure, experience, resources, services, trading, professional conduct, compliance and client servicing capabilities.
 - A. The completed questionnaire is evaluated by the Investment Operations Department (IOD) and a written assessment is provided to Fixed Income
 - B. Fixed Income reviews the IOD prepared assessment, follows up on any outstanding items that were identified and makes a determination as to whether or not a relationship should be established with the prospective broker-dealer/counterparty
 - C. Broker-dealer/counterparty contact information will be maintained by Fixed Income staff and updated and reviewed periodically. The questionnaire will be reissued to and collected from all existing relationships at least every five (5) years. For each intervening year, a broker attestation form with criteria outlined in Item 2 of "Criteria for Approval" will be issued and collected by the Risk Management Department
2. Fixed Income will maintain an approved list of broker-dealers/counterparties who meet the criteria stated herein. IOD will maintain control over the set-up of approved brokers in the System's order management system independent of Fixed Income.
3. In order to permit the System to meet the objectives of the internally managed portfolios, such as liquidity and asset allocation, broker-dealer/counterparty selection shall be consistent with the procedures and criteria herein. Satisfaction of all criteria below does not ensure a relationship will be established and/or maintained, nor will the failure to meet one or more of the "Other Factors for Consideration" criteria preclude a relationship from being established or maintained.
4. Minority/Women/Disabled/Veteran-owned broker-dealers/counterparties are encouraged to apply for consideration.



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5. Fixed Income retains discretion to select among approved broker-dealers/counterparties at the time of transaction and will take into consideration the following when soliciting bids or offers to sell or purchase securities:
 - A. Whether the broker-dealer/counterparty is a lead underwriter in the security to be transacted in
 - B. Whether the broker-dealer/counterparty makes a market in the security to be transacted in
 - C. Whether the broker-dealer/counterparty has a presence and/or maintains an inventory of securities in the fixed income sub-asset class that will be traded (e.g. agency mortgage pass-throughs)
 - D. Whether the broker-dealer/counterparty has the financial capability to transact the security in the size required
 - E. Whether the broker-dealer/counterparty actively participates on fixed income electronic trading platforms.
6. Fixed Income shall periodically review and modify, as warranted, the approved list of broker-dealers/counterparties who meet the criteria stated herein. Broker-dealers/counterparties who no longer meet the standards of performance or conduct as described in the evaluation and review procedures of this policy may be suspended or eliminated from the approved list.
7. Fixed Income shall not initiate orders directed to a specific unapproved dealer through an approved broker/dealer. Execution of trades through approved fixed income electronic trading platforms which permit Fixed Income to trade with counterparties on an anonymous basis will not be affected.

B. Criteria for Approval

Broker-dealers/counterparties must meet the following minimum qualifications:

1. Maintain good financial standing
2. Demonstrate appropriate regulatory controls and business practices that are consistent with SEC and other applicable laws. Gross negligence, proven criminal activities or sanctions and fines issued by a regulatory agency to the broker-dealer/counterparty will result in review and possible suspension of the counterparty relationship and may result in permanent exclusion from business with the System.



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3. Maintain acceptable standards of record-keeping to include timely and accurate confirmation and settlement and/or payment of trades
4. Possess transactional experience in the types of fixed income securities to be traded

Other Factors for Consideration:

1. Whether the broker-dealer/counterparty is a Primary Dealer, a firm that trades in U.S. Government Securities with the Federal Reserve Bank of New York
2. Whether the broker-dealer/counterparty has a dealer relationship with a U.S. Government Agency (e.g. a Discount Note Dealer Group or Auction Dealer Group)
3. Whether the broker-dealer/counterparty is a participant on an electronic trading platform that facilitates transacting of fixed income securities through a competitive process
4. Whether the broker-dealer/counterparty fills a niche (e.g. trading of mortgage-backed securities) or meets a need of the System that is not currently being addressed by existing relationships

IV. EVALUATION AND REVIEW PROCEDURES

The following steps shall be taken by staff:

- A. Periodic Reports: Obtain and review periodic reports which supply critical information, such as the amount of transaction activity and estimated commission amounts with respective broker-dealers/counterparties
- B. Trading Activity: Periodically and upon request, review with the Retirement Board the aggregate trading activity of the fixed income portfolio(s) managed by staff
- C. Meetings and Reports: Broker-dealers/counterparties which transact significant volume with the System are expected to be available to meet with staff periodically to review fixed income transaction activity as it relates to the needs of the System



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- D. Review and Modification: Modifications to this policy shall be promptly communicated to broker-dealers/counterparties, consultants and other relevant parties
- E. Significant Events: Broker-dealers/counterparties shall advise staff immediately and staff shall review the impact on the relationship with the System, if any of the following events occur within their organization:
1. Any event which will have a material impact on the management, professionalism, integrity or financial position of the broker-dealer/counterparty
 2. A loss of one or more key people that have a direct impact on the relationship between the broker-dealer/counterparty and the System
 3. A new sales representative(s) on the System's account
 4. A discontinuation from transacting in one or more fixed income lines of business and/or products or asset types
 5. A change in ownership or control (whether through acquisition, disposition, spin-off, merger, consolidation or otherwise) of the broker-dealer/counterparty
 6. All instances of enforcement proceedings by the SEC, Financial Industry Regulatory Authority (FINRA), Office of Foreign Assets Control of the US Department of the Treasury (OFAC) or other regulatory bodies against the broker-dealer/counterparty

V. Responsibilities & Controls

Responsible Party	Action
Managing Director of Fixed Income or designee	<ol style="list-style-type: none">1. Proactively oversee the selection, evaluation and monitoring of broker-dealers/counterparties that trade fixed income securities with the System's internally managed portfolios in accordance with policy goals and objectives.2. Fixed Income and IOD maintain documentation supporting compliance with policy and periodic due diligence updates.



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Global Bonds – Externally Managed

I. Introduction

The System's global bond allocation consists of actively managed portfolios that are both internally and externally managed. The externally managed global bond portfolios are at a minimum 90% hedged to the U.S. dollar to mitigate currency risk.

II. Purpose

- A. To obtain maximum investment return commensurate with the risk taken while protecting capital
- B. Expand the fixed income opportunity set and provide additional diversification benefits to the System's overall investment portfolio

III. Performance Objective

The System's externally managed active global bond portfolios are measured against (i) the Bloomberg Global Aggregate Float Adjusted Ex CNY Index (hedged to USD), or (ii) the Bloomberg Global Aggregate Corporate Bond Index (hedged to USD), as applicable (the "Benchmarks"). The portfolios are to earn, net of fees and over one (1) or more market cycles, an average total rate of return that exceeds that of the applicable Benchmarks.

IV. Management Structure

The Executive Director and Chief Investment Officer or his designee is authorized to take certain actions as described in the "Delegation of Investment Authority" section of the Investment Policy Manual, which, among other things, sets forth the investment discretion duly delegated by the Retirement Board to the Executive Director and Chief Investment Officer or his designees.

The Managing Director of Fixed Income and staff, with the assistance of investment consultants as the Managing Director deems necessary, shall oversee the System's externally managed global bond portfolios.

One or more of the following may be applicable to an externally managed global bond portfolio:

1. External managers actively manage country, duration (interest rate sensitivity), sector, credit quality, currency and issuer exposure.
2. The System's externally managed global bond portfolios may be structured in separate and/or commingled accounts.
3. The System may engage in securities lending or invest in commingled accounts that lend securities on a prudent basis.

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4. Separate accounts are maintained for each portfolio in the custody and safekeeping of the System's custodial bank, whereas commingled accounts are maintained in the custody and safekeeping of the commingled accounts' custodial banks, which may appoint one or more foreign entities as their agent to hold and register foreign securities.

V. Legally Permissible Investments

Investment in global bond securities are permitted under Retirement and Social Security Law (RSSL) §177.

VI. Risk Management

A. Market Risk:

1. Diversification: The global bond portfolios contribute to the diversification of the overall System portfolio. The total asset allocation target of externally and internally managed global bonds is 2% with an allowable range of 0 to 4%. Within the externally managed global bond fixed income allocation, diversification is achieved by:
 - a. Investing in broad market indices, such as the Benchmarks, which provide a large universe of countries, currencies (when applicable), fixed income security types, issuers, bond issues, sectors and maturities.
2. External Asset Manager Selection and Monitoring: Careful selection of external investment managers, including consultation with an investment consultant as necessary to provide advice regarding the impact of various changes at the external global bond managers' firms. (See IPM section: Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities.)

B. Currency Risk: The System's global bond external managers actively manage portfolio currency exposure and risk using derivatives which include, but are not limited to, currency forwards, to maintain portfolios predominantly hedged to U.S. dollars.

C. Political Risk: The System is exposed to the risk of nationalization or other unfavorable government action in the foreign countries in which it invests. This degree of risk is mitigated to the extent possible by maintaining a well-diversified country exposure as well as by the fundamental sovereign risk analyses performed by the appointed global bond managers.

D. Operational Risk: The Communications and Responsibilities & Controls sections of this policy will delineate the measures implemented to control operational risks.



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VII. Communications

A. Retirement Board Reporting:

1. The Investment Operations Department (IOD) will provide a summary of Global Bond investment performance quarterly.
2. The Fixed Income Department shall monitor investment performance.

B. External Investment Manager Reporting:

1. External investment managers shall provide monthly reports detailing the System's holdings/participation units, security market values, income, quantitative comparisons vs. the Benchmarks, attribution, credit quality, monthly transaction history, yield curve exposure, derivative exposure, currency exposure, country exposure and counterparty exposure.
2. External investment managers will report to the Retirement Board, Internal Investment Committee and/or Investment Advisory Committee upon request.

VIII. Responsibilities & Controls

Responsible Party	Action
<u>PROGRAM FUNDING:</u> Investment Operations Department (IOD)	1. Prepare a twelve (12) month cash flow forecast for the IIC on a monthly basis or more frequently as needed. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources and uses of cash, the IIC assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and/or targets.
Managing Director of Fixed Income or designee	2. Review the cash flow forecast and the asset allocation to determine whether rebalancing is required that includes either additional funding or a reduction in global bond invested assets. This analysis is coordinated with the Executive Director and Chief Investment Officer and the IIC. 3. Instruct the IOD to disburse or receive funds to/from external investment managers as authorized.



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Responsible Party	Action
Authorized Signatory	4. Authorize warrant to disburse funds. Warrants are automatically posted to the General Ledger and retained electronically.
<u>INVESTMENT PROCESS:</u> <u>(External Portfolio Management)</u> External Investment Managers	5. As fiduciaries for the System, and in compliance with System policies and governing agreements, manage the global fixed income portfolios on a day-to-day basis according to the terms of the investment management agreement and the specified portfolio guidelines contained therein. This includes, but is not limited to, analyzing and selecting countries, sectors and securities; executing trades with broker-dealers, conducting counter-party due diligence and hedging currencies.
Managing Director of Fixed Income or designee	6. Act as a liaison between global fixed income managers and the System.
<u>MONITORING:</u> Managing Director of Fixed Income or designee	7. Oversee and review the qualitative and quantitative aspects of the program such as strategy, process, compliance with investment guidelines and performance (See Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities). 8. Document reviews, maintain reports and correspondence files.



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Responsible Party	Action
Investment Operations Department <u>(External Portfolio Management)</u>	<p>9. Determine that portfolio holdings comply with statutory limitations.</p> <p>10. Maintain and review reconciliations between the external investment manager and custodian.</p> <p>11. Perform all investment related accounting and reporting, applying appropriate accounting controls.</p> <p>12. In conjunction with custodial bank, ensure all required documentation is completed and filed to reduce or eliminate the amount of foreign taxes withheld and to enable the System to reclaim the maximum amount allowable when taxes are withheld.</p>
Investment Operations Department	<p>13. On a monthly basis, review the investment performance as computed by the System's custodial bank.</p> <p>14. Publish investment rates of return monthly for the System's management and quarterly for the System's Board.</p>
Legal Department	<p>15. In conjunction with Fixed Income Department, review (a) contracts with external managers and advisors (b) trading agreements and derivatives documentation with external counterparties as needed and (c) any other relevant legal documentation.</p> <p>16. Render advice on various legal questions and engage outside legal counsel, as needed.</p>



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Global Bonds – Internally Managed

I. Introduction

The System's global bond allocation consists of actively managed portfolios that are both internally and externally managed. The internally managed emerging market debt hard currency portfolio contains only USD-denominated securities.

II. Purpose

- A. To obtain maximum investment return commensurate with the risk taken while protecting capital
- B. Expand the fixed income opportunity set and provide additional diversification benefits to the System's overall investment portfolio

III. Performance Objective

The System's internally managed active emerging market debt USD denominated portfolio is measured against the Bloomberg Emerging Markets USD Aggregate Investment Grade 10% Country Capped Bond custom index. The portfolio is to earn, over one (1) or more market cycles, an average annual total rate of return that meets or exceeds that of the benchmark.

IV. Management Structure

Internally Managed Portfolio: The US Dollar Emerging Market Debt fixed income portfolio is managed internally. At Internal Investment Committee meetings, the Executive Director and Chief Investment Officer, the Managing Directors and Managers from Real Estate, External Public Equities, Private Equity, Public Equities, Fixed Income, Risk Management, Finance and Investment Operations shall discuss, on a regular basis, portfolio characteristics and concerns (e.g. distressed issues), market conditions, central bank actions, levels of nominal interest rates, real rates of return, shape of the yield curve, relative value of various fixed income sub-market sectors and credit spreads, issuance of new debt, secondary market supply and long-term retired liability cash flow requirements, along with other variables, in an effort to determine the most beneficial strategy for committing funds consistent with this policy.

Custodial Relationship

- A. All internally managed global bond securities are maintained in the custody and safekeeping of the System's custodial bank. This is accomplished pursuant to a contractual agreement between the Custodian and the System.



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- B. Pursuant to said agreement, settlement instructions are communicated by the System to the bank custodian for execution.

V. Legally Permissible Investments

Investment in U.S. dollar emerging market debt is permitted under Retirement and Social Security Law (RSSL) §177.

VI. Risk Management

A. Market Risk:

- 1. Diversification: The global bond portfolios contribute to the diversification of the overall System portfolio. The total asset allocation target of externally and internally managed global bonds is 2% with an allowable range of 0 to 4%. Within the internally managed global bond allocation, diversification is achieved by:

- a. Investing in broad market indices, such as the Benchmark, which provides a large universe of countries, currencies (when applicable), fixed income security types, issuers, bond issues, sectors and maturities.
- b. Selection of securities taking into consideration the sector, maturity, yield, quality, call protection, liquidity, relative value and effect on the diversification of the portfolio.

- B. Currency Risk: The internally managed U.S. dollar denominated emerging market debt portfolio will not require hedging.
- C. Political Risk: The System is exposed to the risk of nationalization or other unfavorable government action in the foreign countries in which it invests. This degree of risk is mitigated to the extent possible by maintaining a well-diversified country exposure as well as by the fundamental sovereign risk analyses performed by fixed income investment staff.
- D. Operational Risk: The Communications and Responsibilities & Controls sections of this policy will delineate the measures implemented to control operational risks.

VII. Communications

- A. Retirement Board Reporting:



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1. The Investment Operations Department will provide a quarterly report of market value, credit quality, sector distribution, yield, duration and foreign holdings for inclusion in the materials of the Investment Committee of the Retirement Board.
2. Quarterly, the Performance & Analytics team at the Custodian provides a summary of investment rates of return which is reviewed and published by the System's Investment Operations Department.

VIII. Responsibilities & Controls

Responsible Party	Action
<u>PROGRAM FUNDING:</u> Investment Operations Department (IOD)	1. Prepare a twelve (12) month cash flow forecast for the IIC on a monthly basis or more frequently as needed. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources and uses of cash, the IIC assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and/or targets.
Managing Director of Fixed Income or designee	2. Review the cash flow forecast and the asset allocation to determine whether rebalancing is required that includes either additional funding or a reduction in global bond invested assets. This analysis is coordinated with the Executive Director and Chief Investment Officer and the IIC.
Fixed Income Department	1. Continuously assess goals for portfolio characteristics taking into consideration the following: the benchmark; interest rate and spread duration; distribution of maturity, yield, quality, call protection; diversification among sectors and countries; the yield curve; and compliance with law, policy and System needs. 2. Execute trades designed to accomplish strategic and asset allocation goals. 3. Approve and allocate all transactions in the order management system.



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Responsible Party	Action
	4. Verify transactions and holdings information in order management and reporting systems.
Investment Operations Department	<p>5. Ensure trade information is communicated to custodian bank; verify correct securities or moneys were received or delivered; resolve any discrepancies; and prepare warrant and associated backup. Warrants are automatically posted to the General Ledger and retained electronically.</p> <p>6. Perform all investment accounting and reporting, applying appropriate accounting controls required to maintain the System's Investment Book of Record (IBOR).</p> <p>7. In conjunction with custodial bank, ensure all required documentation is completed and filed to reduce or eliminate the amount of foreign taxes withheld and to enable the System to reclaim the maximum amount allowable when taxes are withheld.</p>
Custodian	8. Perform all investment accounting and reporting, applying appropriate accounting controls required to maintain the System's Accounting Book of Record (ABOR).
Authorized Signatory	9. Authorize warrant to disburse funds.
Custodian Bank	10. Settle trades and pay or receive funds versus delivery of security. Payment of funds will only be made against actual receipt of securities purchased. Settle maturities and credit account at maturity.
Investment Operations Department	11. On a monthly basis, reconcile System holdings and accounting information per the System's IBOR to master custodian ABOR.
Custodian	<p>12. Calculate investment rates of return at periodic intervals (i.e., daily; monthly).</p> <p>13. Monthly, provide a summary of investment rates of return on fixed income portfolios.</p>



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Responsible Party	Action
	14. Quarterly, provide a summary report to NYS Treasury that reconciles to the financial statements.
Investment Operations Department	15. Together with Fixed Income, review investment rates of return summary for reasonableness and determine and resolve any differences. 16. Publish investment rates of return monthly for the System's management and quarterly for the System's Board. 17. Review reported information for accuracy (e.g. interest, fees and ending balances).



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U.S. High Yield Bonds

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U.S. High Yield Bonds

I. Introduction

The System's U.S. high yield bond allocation consists of actively managed portfolios that are externally managed. Managers use their skill to invest primarily in non-investment grade fixed income securities while managing credit risk.

II. Purpose

- A. To obtain maximum investment return commensurate with the risk taken while protecting capital
- B. Expand the fixed income opportunity set and provide additional diversification and return benefits to the System's overall investment portfolio

III. Performance Objective

The System's externally managed active U.S. high yield bond portfolios are measured against (i) the ICE BofA BB-B US High Yield Constrained Index, (ii) the ICE BofA US High Yield Constrained Index, or (iii) the Bloomberg US High Yield 1% Issuer Capped Index, as applicable (the "Benchmarks"). The portfolios are to earn, net of fees and over one (1) or more market cycles, an average total rate of return that exceeds that of the applicable Benchmarks.

IV. Management Structure

The Executive Director and Chief Investment Officer or his designee is authorized to take certain actions as described in the "Delegation of Investment Authority" section of the Investment Policy Manual, which, among other things, sets forth the investment discretion duly delegated by the Retirement Board to the Executive Director and Chief Investment Officer or his designees.

The Managing Director of Fixed Income and staff, with the assistance of investment consultants as the Managing Director deems necessary, shall oversee the System's externally managed U.S. high yield bond portfolios.

One or more of the following may be applicable to an externally managed U.S. high yield bond portfolio:

1. External managers actively manage issuer exposure, position in the capital structure, sector/industry, credit quality and duration (interest rate sensitivity).
2. The System's externally managed U.S. high yield bond portfolios may be structured in separate and/or commingled accounts.
3. The System may engage in securities lending or invest in commingled accounts that lend securities on a prudent basis.

U.S. High Yield Bonds

4. Separate accounts are maintained for each portfolio in the custody and safekeeping of the System's custodial bank whereas commingled accounts are maintained in the custody and safekeeping of the commingled account's custodial banks.

V. Legally Permissible Investments

Investment in U.S. high yield bond securities is permitted under Retirement and Social Security Law (RSSL) §177.

VI. Risk Management

A. Market Risk:

1. Diversification: The U.S. high yield bond portfolios contribute to the diversification of the System's overall portfolio. The asset allocation target is 1% with an allowable range of 0 to 3%. Within the U.S. high yield bond fixed income allocation, diversification is achieved by:
 - a. Investing in broad market indexes, such as the Benchmarks, which provide a large universe of issuers, sectors, fixed income security types, positions in an issuer's capital structure and maturities.
2. Selection and Monitoring: Prudent selection of external investment managers, including consultation with an investment consultant as necessary to provide advice regarding the impact of any new developments at the external U.S. high yield bond manager's firm (See IPM section: Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities.)

B. Credit Risk: The System is exposed to the risk of loss of principal and/or interest stemming from a bond issuer failing to make a payment on coupon and/or principal when due. The degree of risk is mitigated to the extent possible by maintaining well-diversified issuer exposures as well as by the fundamental credit risk and covenant analyses performed by the appointed U.S. high yield bond managers.

C. Operational Risk: The Communications and Responsibilities & Controls sections of this policy will delineate the measures implemented to control operational risks.

VII. Communications

A. Retirement Board Reporting:

1. The Investment Operations Department (IOD) will provide a summary of High Yield Bond investment performance quarterly.



U.S. High Yield Bonds

2. The Fixed Income Department shall monitor investment performance.

B. External Investment Manager Reporting:

1. External investment managers shall provide monthly reports detailing the System's holdings/participation units, security market values, attribution, income, quantitative comparisons versus the Benchmarks, credit quality, monthly transaction history, yield curve exposure and sector exposure.
2. External investment managers will report to the Retirement Board, Internal Investment Committee and/or Investment Advisory Committee upon request.

VIII. Responsibilities & Controls

Responsible Party	Action
<u>PROGRAM FUNDING:</u> Investment Operations Department (IOD)	1. Prepare a twelve (12) month cash flow forecast for the IIC on a monthly basis or more frequently as needed. This forecast brings together cash available to invest with planned asset class investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources and uses of cash, the IIC assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and/or targets.
Managing Director of Fixed Income or designee	2. Review the cash flow forecast and the asset allocation to determine whether rebalancing is required that includes either additional funding or a reduction in U.S. high yield bond invested assets. This analysis is coordinated with the Executive Director and Chief Investment Officer and IIC. 3. Instruct the IOD to disburse or receive funds to / from external investment managers as authorized.
Authorized Signatory	4. Authorize warrants to disburse funds. Warrants are automatically posted to the General Ledger and retained electronically.

U.S. High Yield Bonds

Responsible Party	Action
<u>INVESTMENT PROCESS:</u> <u>(External Portfolio Management)</u> External Investment Managers	5. As fiduciaries for the System, and in compliance with System policies and governing agreements, manage the U.S. high yield bond portfolios on a day-to-day basis according to the terms of the investment management agreement and the specified portfolio guidelines contained therein. This includes, but is not limited to, analyzing and selecting sectors and securities, executing trades with broker-dealers and conducting counter-party due diligence.
Managing Director of Fixed Income or designee	6. Act as a liaison between U.S. high yield bond managers and the System.
<u>MONITORING:</u> Managing Director of Fixed Income or designee	7. Oversee and review the qualitative and quantitative aspects of the program such as strategy, process and performance (See Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities). 8. Document reviews and maintain reports and correspondence files.
Investment Operations Department <u>(External Portfolio Management)</u>	9. Determine that portfolio holdings comply with statutory limitations. 10. Maintain and review reconciliations between the external investment manager and custodian. 11. Perform all investment related accounting and reporting, applying appropriate accounting controls. 12. On a monthly basis, review the investment performance as computed by the System's custodian bank. 13. Publish investment rates of return monthly for the System's management and quarterly for the System's Board.
Legal Department	14. In conjunction with Fixed Income Department, review (a) contracts with external managers and



U.S. High Yield Bonds

Responsible Party	Action
	advisors (b) trading agreements and derivatives documents with external counterparties as needed and (c) any other relevant legal documentation.
	15. Render advice on various legal questions and engage outside legal counsel, as needed.



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Short-Term Investments (Cash Equivalents)

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Short-Term Investments (Cash Equivalents)

I. Introduction

The short-term portfolio provides for the temporary investment of the System's cash flow and consists primarily of instruments maturing in twelve (12) months or less at the time of purchase.

II. Purpose

- A. To provide liquidity for the timely payment of retirement benefits and/or fees and expenses
- B. To enhance the System's income
- C. To provide for the temporary investment of System funds until allocation into other targeted asset classes is made

III. Performance Objective

The objective of the management of the short-term investment portfolio is to maximize yield consistent with the safety of principal and maintenance of liquidity. The benchmark is the iMoneyNet™ Average/All Taxable index.

IV. Management Structure

Strategic liquidity planning over a twelve-month horizon is done monthly or more frequently as needed, in coordination with the Executive Director and Chief Investment Officer and the Internal Investment Committee. A cash flow projection prepared by the Investment Operations Department estimates the major sources and uses of cash and projected beginning/ending monthly cash balances after consideration of annuitant payroll and planned cash flows targeted to asset allocation goals.

The Fixed Income Department is responsible for ensuring short-term liquidity (cash) is available to meet the obligations of the System, making investments in other asset classes and assuring optimal investment of cash balances over the period within the guidelines described herein.

Management of short-term liquidity requires planning, communication and coordination across all asset classes. The Investment Operations Department's cash desk receives notification of all investment cash flows and projects the three-day cash receipts and disbursements with the net balance available to invest. The Fixed Income Department uses this information in conjunction with the cash flow projection to ensure monies are available on a daily basis and to project the System's cash needs as far into the future as possible.



Short-Term Investments (Cash Equivalents)

Custodial Relationship

- A. With the exception of shares in money market funds, all short-term investments are maintained in the custody and safekeeping of the System's custodian.
- B. Pursuant to said Agreement, trade instructions are communicated by the System to the custodian for settlement.

V. Legally Permissible Investments

The following investments are statutorily permissible and may be considered for the System's funds:

- A. Obligations of the U.S. or those for which the faith of the United States is pledged to provide for the payment of the interest and principal. [Banking Law (BL) 235(1)]
- B. Obligations of any federal home loan bank or banks, or of the Tennessee Valley Authority, and obligations of, or instruments issued by or fully guaranteed as to principal and interest by, Fannie Mae, or Freddie Mac, and notes, bonds, debentures, mortgages, and other evidences of indebtedness of the United States Postal Service. [BL 235(15)]
- C. N.Y.S. obligations, issued pursuant to the authority of any law of the state, or those for which the faith of this state is pledged to provide for the payment of the interest and principal. [BL 235(2)]
- D. Obligations of or those for which the faith of any city, county, town, village, school district, water district, sewer district, or fire district in this state is pledged to provide for the payment of principal and interest, provided that they were issued pursuant to law and the faith and credit of the issuing municipal corporation or district is pledged for their payment. [BL 235(4)]
- E. Bonds and debentures or other obligations of any public authority or commission or similar body created or approved by the State of New York having assets of not less than \$50 million. [BL 235(4)]
- F. Certificates of deposit issued by a bank, trust company or national bank whose principal office is located in this state or a banking corporation organized under the laws of the U.S. or of any state thereof whose deposits are insured by an agency of the U.S., or an agency or branch located within the U.S. of a foreign banking corporation with total worldwide bank assets in excess of \$1 billion, subject to such regulations as the banking board may impose. Additionally, certificates must be payable in U.S. dollars at an office of a banking institution located in the U.S. [BL 235(12-a); 3 Codes, Rules and Regulations of the State of New York (NYCRR) Part 72]



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- G. Bankers' acceptances which are eligible for purchase in the open market by federal reserve banks and which have been accepted by a bank, a trust company, a private banker, or an investment company or by a banking corporation which is organized under the laws of the U.S. or of any state thereof and which is a member of the federal reserve system. The aggregate investment for acceptances shall not exceed five percent (5%) of the System's assets. [BL 235(12)]
- H. Commercial paper, including short-term obligations of industrial companies, finance companies, insurance companies, utilities and banks which meet the legal investment standards for these individual instruments.
- I. Obligations payable in U.S. funds which at the time of investment are rated investment grade by two (2) nationally recognized rating services or by one (1) nationally recognized rating service in the event that only one such service rates such obligations, provided that the aggregate amount invested in the obligations of any single issuer may not exceed two percent (2%) of the assets of the System or five percent (5%) of the direct liabilities of the issuer unless the obligations are issued by the U.S. or are those for which the faith of the U.S. is pledged to provide payment of the interest and principal. [Retirement and Social Security Law (RSSL) §177(1-a)]
- J. Agreements for the repurchase of securities and commitments to invest System funds, provided the underlying securities are eligible investments and the custodian requirements of RSSL §178-a are satisfied.

VI. Risk Management

A. Market Risk:

- 1. **Diversification:** The short-term portfolio is expected to contribute to the diversification of the overall portfolio in a limited manner, since its asset allocation target is one percent (1%) with an allowable range of one to four percent (0-4%). Within the short-term portfolio diversification is ensured by:
 - a. At the time of investment, limiting the total holdings, exclusive of US Treasury, US Agency, Supranational debt, and Government Money Market Funds, in any one issuer of Certificates of Deposits (CDs), Bankers Acceptances, Commercial Paper, Notes, Asset Backed Securities, and Money Market Fund Shares to no more than five percent (5%) of the short-term portfolio or \$50 million, whichever is greater.
 - b. Laddering maturities.



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Short-Term Investments (Cash Equivalents)

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2. Credit Rating Restrictions: The following investment restrictions are imposed to safeguard principal from undue risk and require investment only in instruments containing the following rating standards at the time of investment:
 - a. Any short-term obligation acquired for the short-term portfolio shall be rated no lower than A-1 by Standard & Poor's or P-1 by Moody's Investor Service.
 - b. The long-term senior debt of the issuer, if any, shall be rated no lower than A by Standard & Poor's or A2 by Moody's Investor Service.
 3. Maximum Maturity: The maximum maturity of any short-term obligation shall not exceed thirteen (13) months (unless floating rate securities are purchased, in which case their maximum final maturity shall be two (2) years with a three (3) month maximum reset period).
- B. Liquidity Risk:
1. Funding liquidity risk is controlled by laddering maturities within the short-term portfolio as well as maintaining close communication across asset classes to understand any immediate or future cash needs.
 2. Market liquidity risk is controlled by the techniques addressed above under Market Risk.
- C. Credit Risk:
1. All short-term securities are settled on a delivery versus payment basis.
 2. Repurchase Agreements with any one counterparty may not exceed ten percent (10%) of the short-term portfolio or \$200 million, whichever is greater.
 3. Credit rating restrictions (as described under the Market Risk section) are intended to reduce the likelihood of issuer default.
- D. Operational Risk:
1. Investments in Repurchase Agreements shall be made pursuant to agreements (i.e. Master Repurchase Agreement) between the System and an approved counterparty. Such agreements must be reviewed and approved by both the Fixed Income and Legal Departments. Appropriate restrictions on the type of collateral, pricing, substitution, and monitoring value will be imposed on these investments.



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2. Short-term investment execution is subject to the same policy found in the Addendum: Fixed Income Broker-Dealer Selection and Evaluation. This addendum documents the principles and standards that guide the selection, evaluation and monitoring of firms transacted with for the purchase or sale of securities by staff for the System's internally managed fixed income portfolios.
 3. The Communications and Responsibilities & Controls sections delineate the measures implemented to control operational risks.
- E. Additional risk control techniques may be considered for other securities meeting the legal investment criteria.

VII. Communications

Retirement Board Reporting:

- A. The Investment Operations Department provides a summary report of the short-term investment portfolio at the end of each quarter, for inclusion in the materials of the Investment Committee of the Retirement Board.
- B. Each quarter end, the Custodian provides a summary of performance which is reviewed for reasonableness by the System's Investment Operations Department. Contingent that performance is within tolerance thresholds, the Investment Operations Department publishes the performance.

VIII. Responsibilities & Controls

Responsible Party	Action
Investment Operations Department Cash Desk	1. Inform Fixed Income Department, each business day, of the dollar amount of funds available for short-term investing as determined in conjunction with the cash team at the custodian. Monitor additional cash receipts and provide the amount(s) to Fixed Income for investment purposes or purchase government money market fund shares, subject to the availability of investment opportunities.
Fixed Income Department	2. Determine liquidity requirements. 3. Using market data and information, identify investments and execute trades that comply with law and policy and meet current System needs with approved brokers/dealers.



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	<p>4. Approve and allocate all transactions in the order management system.</p> <p>5. Verify transactions and holdings information in the order management and reporting systems.</p>
Investment Operations Department	<p>6. Ensure trade information is communicated to custodian. Verify correct securities were received and/or delivered; resolve any discrepancies.</p> <p>7. Prepare warrant. Warrants are automatically posted to the General Ledger and retained electronically.</p> <p>8. Perform all investment accounting and reporting, applying appropriate accounting controls required to maintain the System's Investment Book of Record (IBOR).</p>
Custodian	<p>9. Perform all investment accounting and reporting, applying appropriate accounting controls required to maintain the System's Accounting Book of Record (ABOR).</p>
Authorized Signatory	<p>10. Authorize warrants to disburse funds.</p>
Custodian	<p>11. Settle trades and pay or receive funds versus delivery of security. Payment of funds will only be made against actual receipt of securities purchased. Settle maturities and credit account at maturity.</p>
Investment Operations Department	<p>12. Monthly, reconcile System's short-term bond holdings and accounting information per the System's IBOR to custodian ABOR.</p>
Custodian	<p>13. Calculate short-term investment rate of return (performance) on a monthly basis.</p>
Investment Operations Department	<p>14. Review performance summary with Fixed Income for reasonableness and determine and resolve any differences.</p> <p>15. Publish performance for short-term investments monthly for internal management and quarterly for the Retirement Board.</p>

PRIVATE EQUITY





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Private Equity Investments

I. Introduction

The System's private equity investments may include a variety of direct and indirect equity investments that fall outside the core portfolios of stocks, bonds, mortgages, and real estate that are managed by System staff and external investment managers.

The types of private equity include, but are not limited to, investments in buyout funds, growth equity, venture capital, turnaround funds and direct co-investment with these funds. Other private equity investments may include public securities received as distributions from venture capital or buyout funds, as well as the initial public offering (IPO) of equity securities.

Private equity investments offer the benefits of diversification and the expectation of long-term returns higher than those expected for marketable securities. Participation in this asset class, however, involves significant trade-offs including: lack of liquidity; initial periods of minimal, if any, return with the expectation of higher returns later in the investment cycle; higher management and operation costs; extensive due diligence; and complex contractual structures.

Since the potential for distress in private equity investments exists, there must be appropriate due diligence at every stage of the investment process. The portfolio should be designed through diversification to control, to the greatest extent possible, the potential of one investment having a negative impact on the overall portfolio.

To date, the System's experience has been investing in limited partnerships or other investment vehicles. Other types of private equity investments may be available and may be utilized upon the approval of the Retirement Board.

II. Purpose

To achieve higher long-term returns than are normally available through marketable securities; investment duration and performance objectives typically involve periods of ten (10) years or more.

III. Performance Objective

Over the long term, to exceed the benchmark return of the S&P 500 Stock Index plus five percent (5.0%). Performance objectives are net of fees and expenses.

IV. Management Structure

The Executive Director and Chief Investment Officer or his designee is authorized to take certain actions as described in the "Delegation of Investment Authority" section of the Investment Policy Manual, which, among other things, sets forth the



Private Equity Investments

investment discretion duly delegated by the Retirement Board to the Executive Director and Chief Investment Officer or his designee.

The Managing Director of Private Equity, with the retention and assistance of investment consultants as the Managing Director deems necessary, shall oversee the selection and oversight of external private equity investment managers.

The utilization of various structures offers the potential to diversify and reduce risk. The type of structure used by the System will be selected considering: the form of the proposed investment; the System's objectives and time horizon; the System's ability to evaluate and monitor complex legal structures and the actual operations under these structures; and the cost of each operation.

Private equity investments may be divided into four common investment structures:

- A. Direct investments. The System may directly invest in the equity of a company. This may be done either as a co-investment with the general partner of a limited partnership that we currently participate in or by holding securities that were distributed by a limited partnership of which the System is part or through purchase in an IPO.
- B. Limited Partnership Interest. In a limited partnership, the general partner oversees investing and managing the partnership's assets. Initially, the partnership's assets consist of cash contributed by the investors, both as limited partners and from the general partner. Legally, unless the partnership is a fund of funds, the relationship between the general partner and limited partners is not primarily one of client/manager, but rather that of partners in an investment venture, although certain fiduciary duties are owed by the general partner to the limited partners. As used herein, however, the term investment manager shall be construed broadly to include the general partner in a limited partnership.
- C. Fund of Funds. The structure is the same as a limited partnership except the general partner invests in other limited partnerships rather than individual companies.
- D. Funds-of-One (Separately Managed Accounts). The structure is similar to that of a limited partnership except the general partner invests on behalf of the System as the sole limited partner.

The System may encounter other structures as it continues investing in private equity investments.

v. Legally Permissible Investments

Generally, private equity investments would be made pursuant to the Leeway Clause [§177(9) of the Retirement and Social Security Law].



Private Equity Investments

VI. Risk Management

NYSTRS' Board understands the long-term nature of the asset class and that private equity investments are intended as a permanent component of the portfolio. Private equity investments have been incorporated into the portfolio to provide both enhanced returns and risk diversification over market cycles. While private equity investments may have a higher risk profile than more traditional asset classes, e.g., fixed income and public stocks, the Board recognizes that the primary risk of private equity investments within a well-diversified portfolio is illiquidity, particularly in the investment phase of each partnership's life cycle. That risk/return trade-off is acceptable to the Board given the enhanced returns relative to other asset classes and the relatively low correlation between private equity investments and the more traditional asset classes. In addition, NYSTRS' liquidity needs are such that having a component of the portfolio with a longer duration to liquidity is not a problem within the context of the portfolio as a whole.

- A. Diversification: Private equity investments contribute to the diversification of the overall portfolio. The asset allocation target for Private Equity, overseen by the System's Managing Director of Private Equity, is nine percent (9%) with an allowable range of 4-14%. Within the private equity asset class:
1. Consideration may be given to differing forms of private equity investments, provided the risk level is fully understood and such level of risk is appropriate to the System's Investment Policy.
 2. The diversification of private equity investments should be generally consistent with each investment type's portion of the total market of private equity investments.
 3. The System's interest in a fund generally may not exceed the following limits:
 - A. Commingled funds –20%
 - B. Funds-of-One (SMAs) –100%
 - C. Other structures – to be determined by the Managing Director of Private Equity on a case-by-case basis

The foregoing limits are further subject to any legal, tax or regulatory constraints as may be determined by the Legal department in consultation with external counsel.

4. New types of private equity investments or emerging segments of the market will be considered by the System only after they are sufficiently large enough to allow the System to invest a meaningful amount consistent with item 3 above.



Private Equity Investments

5. Unless specifically approved by the Retirement Board, the following types of alternative investments are excluded from investment:
 - a. Hard assets: precious metals, stamps, coins, antiques and art
 - b. Hedge funds
 - c. Commodity funds
- B. Due Diligence: Before an investment manager is retained, System staff, in conjunction with the System's current Private Equity Consultant, as applicable, must undertake the necessary due diligence to ensure that such manager is experienced, trustworthy, and otherwise qualified to manage a portion of the System's assets. Due diligence should include, but is not limited to:
 1. Sourcing and tracking potential investment opportunities. Staff, in conjunction with the Consultant, as applicable, tracks and reviews all potential private equity opportunities to assess strategic fit in the context of the Private Equity portfolio.
 2. Preliminary Screening. Staff, with the assistance of the Consultant, as applicable, will complete a preliminary screening of potential investment opportunities. Initial screening will include an initial review of the Manager's historical track record, strategic fit with the portfolio, team composition, strategy and other high-level diligence items, as applicable. Opportunities meeting the strategic objectives of the portfolio will be further evaluated.
 3. Comprehensive due diligence. Staff, in conjunction with the Consultant, as applicable, will ascertain the financial, educational and experiential background of key personnel and otherwise examine the track record of the investment manager under consideration. Data reviewed generally includes, but is not limited to:
 - A. Biographies of key investment professionals
 - B. Quarterly and annual reports of prior funds
 - C. Portfolio company financial metrics
 - D. Investment committee memos and deal-specific case studies
 - E. Firm valuation policy
 - F. Private placement memorandum
 - G. Limited Partnership agreement
 4. On-Site or Virtual Due Diligence. Conducting due diligence at the offices of the investment manager or general partner, with the assistance of the Consultant, as needed, to interview key personnel. The Managing Director of Private Equity can determine if a virtual due diligence meeting is appropriate in the event of unusual or unforeseen circumstances. Examples include, but are not limited to,



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government restrictions on travel due to a pandemic or any other situation where the risks of travel outweigh the benefits.

5. References. Contacting past and current clients, portfolio company management teams and service providers or third parties to ascertain their level of satisfaction with the manager. With the assistance of the Consultant, as needed, staff will contact:
 - A. Current and/or former investors
 - B. Current and/or former portfolio company and/or management teams
 - C. Current and/or former employees of the firm
 - D. Current and/or former service providers or third parties familiar with the operations, performance, team and/or the firm
 6. Examining any SEC forms, other similar agency reports or prospectuses which may be readily available.
 7. Consulting any services/publications which may rate or otherwise offer pertinent information regarding the prospective manager.
 8. Whenever System investment staff is considering investing in a new investment fund or engaging an investment manager, staff will communicate directly with general partners and/or principals of the fund or manager interested in doing business with the System, to assure transparency and accountability on the part of private equity funds and external investment managers.
 9. Taking such other measures as, under the circumstances, may be appropriate, with the assistance of the Consultant, as needed.
- C. Legal and Business Considerations: Private equity investments may involve complex, non-standard business and legal relationships and contract documentation may be both highly complex and specialized. Due to the non-standard nature of private equity investments, the System will seldom be able to use in-house, off-the-shelf contract documentation, with the result being that the investment manager's form of agreement is used as a base for negotiations. These agreements, such as limited partnership agreements, are often drafted with comprehensive protections built in for the investment manager. Serious consideration shall always be given to obtaining special counsel and other advisors qualified to represent the System's legal and business interests.
- D. The actions of the investment manager should be consistent with the following:
1. Diversification: To the extent reasonably possible, and taking into account the size, strategy and nature of a particular private equity investment portfolio, as



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well as market conditions, the investment manager is to diversify the portfolio's assets in order to minimize risk of loss.

2. Acquisition/Sale of Private Equity Investments: Each manager is expected to complete all necessary due diligence including legal, financial, technical and/or investment-specific review necessary to determine the potential opportunities and risks for each private equity investment considered.
 3. Advisers Act: General partners of funds, or investment managers to funds, as applicable, must be registered under the Investment Advisers Act of 1940, unless exempted from registration.
 4. Discretion: Subject to the guidelines in this section and the policies documented herein, each investment manager will have full discretionary authority over the assets represented by the System's capital contribution.
 5. Conflicts of Interest: An investment manager must fully disclose potential conflicts of interest to the partnership's advisory board, or other appropriate entity, pursuant to the partnership agreement.
- E. Distributions: Given a choice, the System prefers cash distributions. Stock distributions will be processed internally by the NYSTRS' Public Equities department with the intent of achieving an orderly liquidation of the securities.
- F. Monitoring and Control: System staff will pursue membership on limited partner advisory boards when appropriate to maximize the communication with the general partner and to strengthen the oversight of these investments.

VII. Communications

- A. Retirement Board Reporting: The Private Equity Department produces a quarterly report which provides an overview of the private equity portfolio activities, performance and portfolio exposures to the Investment Committee of the Retirement Board.
- B. External Investment Manager Reporting: The external investment manager shall:
 1. Provide quarterly or semi-annual interim financial reports and annual audited financial statements prepared by an independent certified public accountant.
 2. Immediately report all instances of default on the partnership agreement to the staff and provide recommendations regarding options for curing the default, withdrawing from the investment or other appropriate actions.



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3. Effective May 21, 2009, investment managers must comply with NYSTRS' Placement Agent Disclosure requirements to assure Private Equity Fund and External Investment Manager Transparency and Accountability, which is contained within this Investment Policy Manual.
4. Effective July 23, 2014, investment managers must comply with the AML/OFAC requirements as detailed in the NYSTRS' OFAC Policy, contained within this Policy Manual, to ensure System assets are not used, invested or commingled by investment funds, managers or borrowers in transactions or accounts in violation of applicable AML and OFAC laws and regulations.

VIII. Responsibilities & Controls

Responsible Party	Action
Investment Operations Department	1. Prepare a twelve (12) month cash flow forecast for the Internal Investment Committee (IIC) on a monthly basis or as required by the IIC. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources and uses of cash, the Internal Investment Committee assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and/or targets.
<u>SELECTION:</u> Managing Director of Private Equity	<ol style="list-style-type: none">2. Recommend investments within guidelines in conjunction with the Internal Investment Committee, the Executive Director and Chief Investment Officer and/or the NYSTRS Retirement Board. This process is opportunity-driven rather than asset allocation-driven. It involves a thorough analysis, can be time-consuming and may require expertise beyond in-house capabilities. For these reasons, a consultant(s) may be hired to assist in the process.3. Oversee due diligence, which includes communications with general partners and/or principals of the fund or manager interested in doing business with the System, to assure transparency and accountability on the part of private equity funds.4. Work with the Legal Department in negotiating any legal documentation and drafting required terms. Other parties may be called upon for assistance in this



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	process including outside counsel, Finance and other departments as needed.
Legal Department	<p>5. Select outside counsel sufficiently experienced and expert in the form of the private equity investment under consideration.</p> <p>6. Work with outside counsel in negotiating the final form of any contract which may be required.</p>
Investment Operations Department in conjunction with Private Equity Department	<p>7. Receive, review, and process all notices (or requests) for funding received by the investment manager. Approval of funding notices is the responsibility of the Private Equity department per the signatory authority list.</p> <p>8. Receive, review, and approve all notices of distributions of funds to the System by the investment manager.</p> <p>9. Receive, review and approve all quarterly and annual valuations.</p> <p>10. In a timely manner, instruct the Investment Operations Department to disburse or receive funds to/from the investment manager.</p> <p>11. Prepare warrant. Warrants are automatically posted to the general ledger and retained electronically.</p>
Authorized Signatory	12. Authorize warrant to disburse funds.
Investment Manager	13. In compliance with System policies and contract, manage the private equity investment portfolios on a day-to-day basis using full discretion. This includes, but is not limited to, selecting and valuing investments as well as deciding when to exit investments.



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<u>MONITORING:</u> Private Equity Department	14. Maintain ongoing relationship with investment manager(s) and/or consultant(s). 15. Attend annual and advisory board meetings and other one on one meetings with managers as needed. 16. Maintain reports and correspondence files. 17. Act as a liaison between the Investment Operations Department and the investment manager on reconciliation issues.
Public Equities Department	18. Manage the disposition of stock distributions with the intent of achieving an orderly liquidation of the securities.
Investment Operations Department	19. Perform investment-related accounting and reporting, applying appropriate accounting controls. 20. Follow up on outstanding reconciling items to ensure resolution.
Investment Operations Department in conjunction with Private Equity Department	21. Ensure compliance with the Private Equity program as deemed appropriate, which may include reconciling to external financial statements and verifying income allocations, fees, carried interest, contributions, and distributions. 22. Ensure investment managers are valuing investments in accordance with their valuation policies.
Legal Department	23. Assist staff and render legal advice regarding any developments occurring during the life of the investment. Engage outside legal counsel as needed.



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Private Debt Investments

I. Introduction

The System's private debt investments may include a variety of direct and indirect debt investments that fall outside the core portfolios of stocks, bonds, mortgages and real estate that are managed by System staff and external investment managers.

The types of private debt include, but are not limited to, investments in direct lending, mezzanine, distressed debt, special situation funds and direct co-investment with these funds.

Private debt investments offer the benefits of diversification and the expectation of long-term returns higher than those expected for marketable securities. Participation in this asset class, however, involves significant trade-offs including: lack of liquidity; initial periods of minimal, if any, return with the expectation of higher returns later in the investment cycle; higher management and operation costs; extensive due diligence; and complex contractual structures.

Since the potential for distress in private debt investments exists, there must be appropriate due diligence at every stage of the investment process. The portfolio should be designed through diversification to control, to the greatest extent possible, the potential of one investment having a negative impact on the overall portfolio.

To date, the System's experience has been investing in limited partnerships or other investment vehicles. Other types of private debt investments may be available and may be utilized upon the approval of the Retirement Board.

II. Purpose

To achieve higher long-term returns than are normally available through marketable securities; investment duration and performance objectives typically involve periods of between five (5) and ten (10) years.

III. Performance Objective

Over the long term, to exceed the Morningstar LSTA US Leveraged Loan Index plus three percent (3.0%). Performance objectives are net of fees and expenses.

IV. Management Structure

The Executive Director and Chief Investment Officer or his designee is authorized to take certain actions as described in the "Delegation of Investment Authority" section of the Investment Policy Manual, which, among other things, sets forth the investment discretion duly delegated by the Retirement Board to the Executive Director and Chief Investment Officer or his designee.

Private Debt Investments

The Managing Director of Private Equity, with the retention and assistance of investment consultants as the Managing Director deems necessary, shall oversee the selection and oversight of external private debt investment managers.

The utilization of various structures offers the potential to diversify and reduce risk. The type of structure used by the System will be selected considering: the form of the proposed investment; the System's objectives and time horizon; the System's ability to evaluate and monitor complex legal structures and the actual operations under these structures; and the cost of each operation.

Private debt investments may be divided into four common investment structures:

- A. **Direct investments.** The System may directly invest in the debt of a company. This may be done as a co-investment with the general partner of a limited partnership that the System currently participates in.
- B. **Limited Partnership Interest.** In a limited partnership, the general partner oversees investing and managing the partnership's assets. Initially, the partnership's assets consist of cash contributed by the investors, both as limited partners and from the general partner. Legally, unless the partnership is a fund of funds, the relationship between the general partner and limited partners is not primarily one of client/manager, but rather that of partners in an investment venture, although certain fiduciary duties are owed by the general partner to the limited partners. As used herein, however, the term investment manager shall be construed broadly to include the general partner in a limited partnership.
- C. **Fund of Funds.** The structure is the same as a limited partnership, except the general partner invests in other limited partnerships rather than individual companies.
- D. **Funds-of-One (Separately Managed Accounts).** The structure is similar to that of a limited partnership, except the general partner invests on behalf of the System as the sole limited partner.

The System may encounter other structures as it continues investing in private debt investments.

V. Legally Permissible Investments

Generally, private debt investments would be made pursuant to the Leeway Clause [§177(9) of the Retirement and Social Security Law].



Private Debt Investments

VI. Risk Management

NYSTRS' Board understands the long-term nature of the asset class and that private debt investments are intended as a permanent component of the portfolio. Private debt investments have been incorporated into the portfolio to provide both enhanced returns and risk diversification over market cycles. While private debt investments may have a higher risk profile than more traditional asset classes, e.g., fixed income and public stocks, the Board recognizes that the primary risk of private debt investments within a well-diversified portfolio is illiquidity, particularly in the investment phase of each partnership's life cycle. That risk/return trade-off is acceptable to the Board given the enhanced returns relative to other asset classes and the relatively low correlation between private debt investments and the more traditional asset classes. In addition, NYSTRS' liquidity needs are such that having a component of the portfolio with a longer duration to liquidity is not a problem within the context of the portfolio as a whole.

- A. Diversification: Private debt investments contribute to the diversification of the overall portfolio. The asset allocation target for Private Debt, overseen by the System's Managing Director of Private Equity, is two percent (2%) with an allowable range of 0.5-5%. Within the private debt class:
 - 1. Consideration may be given to differing forms of private debt investments, provided the risk level is fully understood and such level of risk is appropriate to the System's Investment Policy.
 - 2. The diversification of private debt investments should be generally consistent with each investment type's portion of the total market of private debt investments.
 - 3. The System's interest in a fund generally may not exceed the following limits:
 - A. Commingled funds –20%
 - B. Funds-of-One (SMAs) –100%
 - C. Other structures – to be determined by the Managing Director of Private Equity on a case-by-case basis
- B. The foregoing limits are further subject to any legal, tax or regulatory constraints as may be determined by the Legal Department in consultation with external counsel.
- C. New types of private debt investments or emerging segments of the market will be considered by the System only after they are sufficiently large enough to allow the System to invest a meaningful amount consistent with item 3 above.
- D. Unless specifically approved by the Retirement Board, the following types of alternative investments are excluded from investment:



Private Debt Investments

- a. Hard assets: precious metals, stamps, coins, antiques and art
 - b. Hedge funds
 - c. Commodity funds
- E. Due Diligence: Before an investment manager is retained, System staff, in conjunction with the System's current Private Debt Consultant, as applicable, must undertake the necessary due diligence to ensure that such manager is experienced, trustworthy and otherwise qualified to manage a portion of the System's assets. Due diligence should include, but is not limited to:
- 1. Sourcing and tracking potential investment opportunities. Staff, in conjunction with the Consultant, as applicable, tracks and reviews all potential private debt opportunities to assess strategic fit in the context of the Private Debt portfolio.
 - 2. Preliminary Screening. Staff, with the assistance of the Consultant, as applicable, will complete a preliminary screening of potential investment opportunities. Initial screening will include an initial review of the Manager's historical track record, strategic fit with the portfolio, team composition, strategy and other high-level diligence items, as applicable. Opportunities meeting the strategic objectives of the portfolio will be further evaluated.
 - 3. Comprehensive due diligence. Staff, in conjunction with the Consultant, as applicable, will ascertain the financial, educational, and experiential background of key personnel and otherwise examine the track record of the investment manager under consideration. Data reviewed generally includes, but is not limited to:
 - A. Biographies of key investment professionals
 - B. Quarterly and annual reports of prior funds
 - C. Investment financial metrics and current valuations
 - D. Investment committee memos and deal-specific case studies
 - E. Firm valuation policy
 - F. Private placement memorandum
 - G. Limited Partnership agreement
 - 4. On-Site or Virtual Due Diligence. Conducting due diligence at the offices of the investment manager or general partner, with the assistance of the Consultant, as needed, to interview key personnel. The Managing Director of Private Equity can determine if a virtual diligence meeting is appropriate in the event of unusual or unforeseen circumstances. Examples include, but are not limited to, government restrictions on travel due to a pandemic or any other situation where the risks of travel outweigh the benefits.



Private Debt Investments

5. References. Contacting past and current clients, portfolio company management teams and service providers or third parties to ascertain their level of satisfaction with the manager. With the assistance of the Consultant, as needed, staff will contact:
 - A. Current and/or former investors
 - B. Current and/or former portfolio company management teams
 - C. Current and/or former employees of the firm
 - D. Current and/or former service providers or third parties familiar with the operations, performance, team and/or the firm
 6. Examining any SEC forms, other similar agency reports or prospectuses which may be readily available.
 7. Consulting any services/publications which may rate or otherwise offer pertinent information regarding the prospective manager.
 8. Whenever System investment staff is considering investing in a new investment fund or engaging an investment manager, staff will communicate directly with general partners and/or principals of the fund or manager interested in doing business with the System, to assure transparency and accountability on the part of private debt funds and external investment managers.
 9. Taking such other measures as, under the circumstances, may be appropriate, with the assistance of the Consultant, as needed.
- F. Legal and Business Considerations: Private debt investments may involve complex, non-standard business and legal relationships and contract documentation may be both highly complex and specialized. Due to the non-standard nature of private debt investments, the System will seldom be able to use in-house, off-the-shelf contract documentation, with the result being that the investment manager's form of agreement is used as a base for negotiations. These agreements, such as limited partnership agreements, are often drafted with comprehensive protections built in for the investment manager. Serious consideration shall always be given to obtaining special counsel and other advisors qualified to represent the System's legal and business interests.
- G. The actions of the investment manager should be consistent with the following:
1. Diversification: To the extent reasonably possible, and taking into account the size, strategy and nature of a particular private debt investment portfolio, as well as market conditions, the investment manager is to diversify the portfolio's assets in order to minimize risk of loss.



Private Debt Investments

2. Acquisition/Sale of Private Debt Investments: Each manager is expected to complete all necessary due diligence including legal, financial, technical and/or investment-specific review necessary to determine the potential opportunities and risks for each private debt investment considered.
 3. Advisers Act: General partners of funds, or investment managers to funds, as applicable, must be registered under the Investment Advisers Act of 1940, unless exempted from registration.
 4. Discretion: Subject to the guidelines in this section and the policies documented herein, each investment manager will have full discretionary authority over the assets represented by the System's capital contribution.
 5. Conflicts of Interest: An investment manager must fully disclose potential conflicts of interest to the partnership's advisory board, or other appropriate entity, pursuant to the partnership agreement.
- H. Distributions: Given a choice, the System prefers cash distributions. Stock distributions will be processed internally by the NYSTRS' Public Equities department with the intent of achieving an orderly liquidation of the securities.
- I. Monitoring and Control: System staff will pursue membership on limited partner advisory boards when appropriate to maximize the communication with the general partner and to strengthen the oversight of these investments.

VII. Communications

- A. Retirement Board Reporting: The Private Equity Department produces a quarterly report which provides an overview of the private debt portfolio activities, performance, and portfolio exposures to the Investment Committee of the Retirement Board.
- B. External Investment Manager Reporting: The external investment manager shall:
1. Provide quarterly or semi-annual interim financial reports and annual audited financial statements prepared by an independent certified public accountant.
 2. Immediately report all instances of default on the partnership agreement to the staff and provide recommendations regarding options for curing the default, withdrawing from the investment, or other appropriate actions.
 3. Effective May 21, 2009, investment managers must comply with NYSTRS' Placement Agent Disclosure requirements to assure Private Debt Fund and External Investment Manager Transparency and Accountability, which is contained within this Investment Policy Manual.



Private Debt Investments

- Effective October 30, 2014, investment managers must comply with the AML/OFAC requirements as detailed in the NYSTRS' OFAC Policy, contained within this Policy Manual, to ensure System assets are not used, invested, or commingled by investment funds, managers or borrowers in transactions or accounts in violation of applicable AML and OFAC laws and regulations.

VIII. Responsibilities & Controls

Responsible Party	Action
Investment Operations Department	1. Prepare a twelve (12) month cash flow forecast for the Internal Investment Committee (IIC) on a monthly basis or as required by the IIC. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources and uses of cash, the Internal Investment Committee assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and/or targets.
<u>SELECTION:</u> Managing Director of Private Equity	<ol style="list-style-type: none">2. Recommend investments within guidelines in conjunction with the Internal Investment Committee, the Executive Director and Chief Investment Officer and/or the NYSTRS Retirement Board. This process is opportunity-driven rather than asset allocation-driven. It involves a thorough analysis, can be time-consuming, and may require expertise beyond in-house capabilities. For these reasons, a consultant(s) may be hired to assist in the process.3. Oversee due diligence, which includes communications with general partners and/or principals of the fund or manager interested in doing business with the System to assure transparency and accountability on the part of private debt funds.4. Work with the Legal Department in negotiating any legal documentation and drafting required terms. Other parties may be called upon for assistance in this process including outside counsel, Finance and other departments as needed.



Private Debt Investments

Legal Department	<p>5. Select outside counsel sufficiently experienced and expert in the form of the private debt investment under consideration.</p> <p>6. Work with outside counsel in negotiating the final form of any contract which may be required.</p>
Investment Operations Department in conjunction with Private Equity Department	<p>7. Receive, review, and process all notices (or requests) for funding received by the investment manager. Approval of funding notices is the responsibility of the Private Equity department per the signatory authority list.</p> <p>8. Receive, review, and approve all notices of distributions of funds to the System by the investment manager.</p> <p>9. Receive, review and approve all quarterly and annual valuations.</p> <p>10. In a timely manner, instruct the Investment Operations Department to disburse or receive funds to/from the investment manager.</p> <p>11. Prepare warrant. Warrants are automatically posted to the general ledger and retained electronically.</p>
Authorized Signatory	<p>12. Authorize warrant to disburse funds.</p>
Investment Manager	<p>13. In compliance with System policies and contract, manage the private debt investment portfolios on a day-to-day basis using full discretion. This includes, but is not limited to, selecting and valuing investments as well as deciding when to exit investments.</p>
<u>MONITORING:</u> Private Equity Department	<p>14. Maintain ongoing relationship with investment manager(s) and/or consultant(s).</p> <p>15. Attend annual and advisory board meetings and other one on one meetings with managers as needed.</p> <p>16. Maintain reports and correspondence files.</p> <p>17. Act as a liaison between the Investment Operations Department and the investment manager on reconciliation issues.</p>



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Private Debt Investments

Public Equities Department	18. Manage the disposition of stock distributions with the intent of achieving an orderly liquidation of the securities.
Investment Operations Department	19. Perform investment-related accounting and reporting, applying appropriate accounting controls. 20. Follow up on outstanding reconciling items to ensure resolution.
Investment Operations Department in conjunction with Private Equity Department	21. Ensure compliance with the Private Debt program as deemed appropriate, which may include reconciling to external financial statements and verifying income allocations, fees, carried interest, contributions and distributions. 22. Ensure investment managers are valuing investments in accordance with their valuation policies.
Legal Department	23. Assist staff and render legal advice regarding any developments occurring during the life of the investment. Engage outside legal counsel as needed.

PUBLIC EQUITIES





NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL
Selection and Evaluation of Brokers
Executing Equity Transactions for Internally Managed Portfolios

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**Selection and Evaluation of Brokers
Executing Equity Transactions for Internally Managed Portfolios**

I. PURPOSE

This statement of broker selection and evaluation policy documents the principles and standards that guide the selection, evaluation, and monitoring of brokerage firms in the trading of equity securities for the internally managed portfolios at the System. This policy is intended to be binding on all relevant persons who have responsibilities and authority with respect to management of these portfolios.

The purpose of this policy is to:

- A. State the objectives the Retirement Board judges to be appropriate and prudent for the selection of brokerage firms for trading securities for the System.
- B. Establish procedures and criteria that may be considered reasonable and prudent for the System.
- C. State the process for periodic evaluation and monitoring of brokerage firms utilized by the System for the trading of securities.
- D. Communicate these policies, objectives and criteria to all interested parties including staff, brokers, consultants and custodians.
- E. Operate as a review document.

II. OBJECTIVES

Principal objectives for establishing guidelines for the selection, evaluation and monitoring of brokerage firms in the trading of equity securities of the System's internally managed portfolios have been formulated with respect to the following considerations:

- A. To state criteria that can be used objectively for the selection of brokerage firms.
- B. To state procedures for evaluating brokerage firms periodically.

III. PROCEDURES AND CRITERIA

All brokerage firms selected and instructed to trade for the System's internally managed equity portfolios shall meet the requirements set forth below:

- A. Procedures for brokerage firm selection:



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Executing Equity Transactions for Internally Managed Portfolios**

1. Brokerage firms wishing to trade equity securities for the System on a regular basis must complete a questionnaire regarding their organizational structure, experience, resources, services, trading, level of compliance with the Broker-Dealer Protection Principles (Appendix A) and client servicing capabilities. The information will be maintained by staff and updated and reviewed periodically. An abbreviated survey ascertaining compliance with criteria outlined in Item 2 of Section III B herein ("Criteria for Approval") will be issued and collected annually.
2. NYSTRS' Investment Operations Department ("IOD") team will conduct a high-level objective analysis of the initial questionnaire and supplementary documentation to assist the Public Equity team in determining the eligibility of a Broker Dealer as a service provider. IOD will also determine the extent of any follow-up investigation that might be necessary and will present their findings to the Public Equity team.

If appropriate, a conference call between the Broker and Public Equity team will be held to gain insight or clarification on any regulatory issues that were identified.

3. The Public Equity team will use IOD's findings and review each questionnaire and issue a final approval decision. The Public Equity team will be responsible for maintaining a list of approved brokers. If the approved list contains a broker whom IOD indicates as not having met all or any of the minimum qualifications as described in the criteria for approval, the Public Equity team shall document their business rationale for the inclusion of that broker to the approved list.
4. Women/minority/disabled-owned brokerage firms are encouraged to apply for consideration.
5. Staff will have discretion to select among approved brokerage firms at the time of transaction.
6. The approved list of brokerage firms which meet the criteria stated herein will be periodically reviewed and modified by staff. Brokerage firms not meeting standards of performance or conduct as described in the evaluation and review procedures of this policy herein may be suspended or be eliminated from the approved list.

B. Criteria for Approval

Brokerage firms must meet the following minimum qualifications:

1. Maintain good financial standing.



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2. Demonstrate appropriate regulatory controls over trades and business practices that are consistent with SEC and other applicable laws and level of compliance with the Broker-Dealer Protection Principles (Appendix A). Gross negligence, proven criminal activities or sanctions and fines issued by a regulatory agency to the brokerage firm will result in review and possible suspension of trading activity, removal from the approved list, and/or permanent exclusion from conducting trades with the System.
3. Maintain acceptable standards of record-keeping to include timely and accurate confirmation of trades and proper use of the institutional delivery system of the Depository Trust Company.
4. Maintain acceptable record of timely delivery and payment on trades.
5. Possess trading experience for the types of securities to be traded.

IV. EVALUATION AND REVIEW PROCEDURES

The following steps shall be taken by staff:

- A. Periodic Reports: Staff will obtain periodic reports which supply critical information such as the amount of trading activity per broker, market impact, commission rates and commission amounts. The reports will be examined to ascertain whether brokers are delivering best execution and competitive fees.
- B. Meetings and Reports: Brokerage firms which transact significant volume on behalf of the System and consultant(s) are expected to be available to meet with staff as required to review equity trading activity.
- C. Review and Modification: Modifications to this policy shall be promptly communicated to brokers, consultants, and other relevant parties.
- D. Significant Events: Brokerage firms shall advise staff immediately if any of the following events occur within their organization:
 1. Any event which will have a material impact on the management, professionalism, integrity, or financial position of the brokerage firm.
 2. A loss of one or more key people.
 3. A new trader(s) or client service representative(s) on the System's account.



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Selection and Evaluation of Brokers
Executing Equity Transactions for Internally Managed Portfolios

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4. A change in ownership or control (whether through acquisition, disposition, spin-off, merger, consolidation, or otherwise) of the brokerage firm.
 5. All instances of enforcement proceedings by the SEC, Financial Industry Regulatory Authority (FINRA) or other regulatory bodies against the brokerage firm.

V. RESPONSIBILITIES & CONTROLS

Responsible Party	Action
Managing Director of Public Equities or designee	<ol style="list-style-type: none">1. Proactively monitors the selection, evaluation, and monitoring of brokerage firms in the trading of equity securities of the System's internally managed portfolios in accordance with policy goals and objectives.2. Maintains documentation supporting compliance with policy and periodic due diligence updates.



APPENDIX A

Broker-Dealer Protection Principles

Broker-dealers retained or utilized by the New York State Teachers' Retirement System (NYSTRS) should adopt the Broker-Dealer Protection Principles as summarized below. In retaining and evaluating any such financial organization, NYSTRS will give significant consideration to whether such organization has adopted the Protection Principles.

The Broker-Dealer Protection Principles are:

1. There should not be a link between compensation for analysts and investment banking.
2. The investment banking side of the business entity, if one exists, should not have input into analyst compensation.
3. A person or committee, in addition to the research analyst recommending the security, should review all research recommendations.
4. In the normal course of business, upon discontinuation of research coverage of a company, the termination of coverage and rationale for such termination should be disclosed.
5. For covered companies, the firm must disclose if the firm has knowledge of any material conflict of interest or has received, or is entitled to receive, any compensation from such company over the past twelve months.
6. There should be a monitoring process to ensure compliance with the principles, and provide details of compliance, as requested.



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Directed Brokerage

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Directed Brokerage

I. Introduction

A Directed Broker Arrangement is an arrangement whereby investment manager trading is executed through a specific broker (or a list of participating brokers) for the benefit of the System. In exchange for investment managers directing trades to a specific broker, the System receives a benefit in addition to execution services. Forms of directed brokerage may include commission recapture, soft dollar, and commission sharing arrangements. The benefit the System receives from its arrangement is recaptured commissions. The System does not permit the use of soft dollar or commission sharing arrangements for use in the internally managed equity portfolios. However, these arrangements are permitted for use by external investment managers so long as such use is in accordance with Section 28(e) of the Securities Exchange Act of 1934 ("Act") which provides a safe harbor for persons who exercise investment discretion over beneficiaries' or clients' accounts to pay for research and brokerage services with commission dollars generated by account transactions.

II. Purpose

The purpose of this policy is to allow for the use of certain forms of directed brokerage as a way of minimizing commission costs without adversely affecting execution.

III. Objectives

All public equity trading will be placed with the goal of obtaining best execution.

IV. Management Structure

Managing Director of Public Equities or designee shall oversee the directed brokerage program:

- A. Commission levels for internally managed domestic equity portfolios are negotiated by staff.
- B. Soft dollar arrangements are not used for internally managed equity portfolios.
- C. Soft dollar and commission sharing arrangements used by external managers shall comply with the safe harbor provision of the Securities Exchange Act of 1934. Arrangements falling outside the safe harbor provision are prohibited.



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Directed Brokerage

- D. A commission recapture program for select externally managed domestic equity portfolios is overseen by staff. Staff negotiates the targeted percentage of commissions to be subject to the program with external managers and negotiates the recapture rate with the brokers. Actual broker payments may differ from the negotiated targets.
- E. Investment managers/advisors shall use professional judgment in the selection of broker-dealers, and in evaluating the amount of commissions paid for trade execution or other services provided by broker-dealers to the managers for the benefit of the System and its beneficiaries.
- F. Investment managers are required as necessary to provide evidence that their trades are being executed at the appropriate commission level.

V. Relevant Legal Guidance

Although NYSTRS is not subject to Title I of ERISA, Employee Retirement Income Security Act of 1974 (ERISA) Technical Release No. 86-1 addresses the use of commission dollars by ERISA plans and supports the implementation of a directed brokerage program by pension plan fiduciaries.

VI. Risk Management

A. Execution Risk

Execution risk is the risk that negotiated commissions and/or commission recapture will adversely impact execution. This risk is controlled by periodically comparing transaction costs by manager and/or broker with similar industry trades.

B. Operational Risk

The Communications and Responsibilities & Controls sections delineate the measures implemented to control operational risks.

VII. Communications

A. Retirement Board Reporting

The Investment Operations Department will provide an annual report of recaptured commissions, if applicable.



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B. External Investment Manager/Broker Reporting

Each investment manager and broker participating in the commission recapture program will provide the Investment Operations Department with a monthly summary of commission recapture activity.

VIII. Responsibilities & Controls

Responsible Party	Action
<u>Negotiated Commissions</u> Managing Director of Public Equities or designee	1. Periodically negotiate commissions for internally managed portfolios with brokers.
<u>Commission Recapture</u> Managing Director of Public Equities or designee	2. Determine the mix of brokers utilized by select external investment managers. Negotiate the percentage of commissions to be subject to the program and the recapture rate.
Participating External Investment Managers	3. Direct trades to participating brokers. 4. Report monthly on directed trades.
Participating Brokers	5. Report monthly on directed trades. 6. Remit monthly recapture amount.
Investment Operations Department	7. Prepare monthly reports showing trades by participating managers and brokers. Reconcile reports with the reports from the managers and brokers. Investigate any exceptions. 8. Calculate the percentage of directed trades by broker and the percentage of recaptured commissions.



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Managing Director of Public Equities or designee	9. Contact managers if recapture percentage targets are not satisfied.
<u>Soft Dollar and Commission Sharing Arrangements</u> Managing Director of Public Equities or designee	10. Request confirmation from external managers that all arrangements are in compliance with the safe harbor provision of the Act. 11. Confirm that these Arrangements are not used for internally managed portfolios.
Investment Operations Department	12. Post amounts due, process payments from brokers, and follow-up on any past-due amounts. 13. Prepare quarterly summary of commission recapture activity. 14. Provide an annual summary of commissions recaptured to the Board for the year ended June 30.
Legal	15. Assist in review and negotiation of commission recapture agreements and provide legal advice and engage outside legal counsel as needed.



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Domestic Equity Securities

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I. Introduction

- A. Domestic equities, for System purposes typically consist of corporate common stock investments and may be internally or externally managed. The Retirement Board has authorized limited writing of covered call options with the internally managed portfolios. External domestic equity investment managers are not authorized to trade in options. The use of exchange traded equity index futures has also been authorized to minimize asset allocation risk, minimize implementation costs and improve efficiencies when rebalancing the domestic equity portfolio.

II. Purpose

To maximize long-term total return within acceptable risk parameters while diversifying the overall System portfolio.

III. Performance Objectives

- A. Internally Managed Portfolios: The System currently maintains eight (8) internally managed portfolios representing passive or enhanced/active strategies. The objective of the NYSTRS S&P 1500 Index Portfolio is to match, as closely as possible, the performance of the S&P 1500 Stock Index with a similar level of risk. The NYSTRS S&P 1500 Value Tilt Portfolio follows the S&P 1500 Stock Index, while tilting the portfolio toward value related stocks. The S&P 1500 Growth Tilt Portfolio follows the S&P 1500 Index, while tilting towards growth related stocks. The objective of the NYSTRS S&P 500 Portfolio is to match, as closely as possible, the performance of the S&P 500 Index with a similar level of risk. The S&P 100 Index Portfolio is to match, as closely as possible, the performance of the S&P 100 Stock Index with a similar level of risk. The S&P 600 Index Portfolio is to match, as closely as possible, the performance of the S&P 600 Stock Index with a similar level of risk. The S&P 400 Index Portfolio is to match, as closely as possible, the performance of the S&P 400 Stock Index with a similar level of risk. NYSTRS All-Cap Disciplined Equity Portfolio is a quantitative strategy designed to generate excess returns over a full market cycle, at low tracking error relative to the S&P 1500 Index, by exploiting equity market anomalies through disciplined portfolio construction and low-cost trading.
- B. Externally Managed Portfolios: The objective of active externally managed portfolios is to outperform their respective benchmarks, in consideration of the style for which they were hired, and commensurate with risk taken.



IV. Management Structure

The Executive Director and Chief Investment Officer or his designee is authorized to take certain actions as described in the "Delegation of Investment Authority" section of the Investment Policy Manual, which, among other things, sets forth the investment discretion duly delegated by the Retirement Board to the Executive Director and Chief Investment Officer or his designees.

The Managing Director of Public Equities, with the assistance of investment consultants as the Managing Director deems necessary, shall oversee the internally managed Domestic Equity Portfolios and the external investment managers who have been retained to manage domestic equity portfolios. The System shall use reasonable efforts to maintain the target allocation for domestic equities at approximately Passive 85%, Active 15%.

- A. Up to one hundred percent (100%) of the System's domestic equities can be internally managed in passive or active portfolios.
- B. External investment managers may be engaged, including those operating as a manager of managers to hire other external investment managers.

C. Internal Portfolios:

1. The System currently uses the MSCI Barra and Northfield Risk Models in managing its internal portfolios. Essentially, this technique is used to achieve a minimal tracking error in matching performance of the portfolio with the appropriate benchmark, while maintaining transaction and other costs and risk at an acceptable level. Due to transaction costs, the System generally does not attempt to maintain an exact replica of the indices. Rather, a sampling of each of the aforementioned portfolios is acquired and then optimized to track the respective indices using the models as stated above. The objective of the NYSTRS 1500 Value and Growth Tilt Portfolios is to enhance returns by including additional value and growth stocks. All-Cap Disciplined Equity utilizes a quantitative model developed by staff to select stocks based on factors computed on the IHS Markit (now part of S&P Global) research platform, a leading global provider of financial information services.
2. Covered Call Options: Covered call options may be written on securities which are earmarked to be sold as part of rebalancing the portfolio or to enhance portfolio yield. Any such options must be traded on one of the national exchanges. (See section V.C. and Covered Call Option Guidelines attached hereto as Appendix A)



3. Futures: Exchange traded equity index futures may be bought/sold as part of the asset allocation rebalancing (See Futures-Based Rebalancing Guidelines attached hereto as Appendix B)

D. Custodial Relationship

1. Domestic equities, whether internally or externally managed separate accounts, are maintained in the custody and safekeeping of the System's custodian bank. This is accomplished pursuant to a contractual agreement between the custodian bank and the System.

V. Legally Permissible Investments

- A. The System may invest in domestic equity securities and interest-bearing obligations payable in U.S. funds which are convertible into equity securities of any corporation created or existing under the laws of the U.S., any state of the U.S., District of Columbia, and Commonwealth of Puerto Rico, or any investment company, as defined by, and which is registered under, an act of Congress of the United States, entitled the "Investment Company Act of 1940", approved August twenty-second, nineteen hundred forty (August 22, 1940), as amended. [Retirement and Social Security Law (RSSL) §177(2)]
- B. Each of the foregoing investments is subject to the following limitations:
 1. The equity securities must be registered on a national securities exchange or otherwise registered pursuant to the Securities Exchange Act of 1934 and, if so otherwise registered, price quotations for such equity securities are furnished through a nationwide automated quotations system [RSSL §177(2)(d)].
 2. The maximum invested by the System in such equity securities shall not exceed: (a) in any one (1) year fifteen percent (15%) of the assets of the System; or (b) seventy percent (70%) in the aggregate (domestic equities must share the fifteen percent (15%) and seventy percent (70%) limitations with foreign equities acquired pursuant to RSSL §177(8)); (c) provided, further, however, that more than fifteen percent (15%) of such domestic equities, but not more than twenty percent (20%) thereof, may be so invested in any one (1) year but only to the extent that the per centum of such investments over all prior years from July 1991, when added to the per centum of such investments during that year, does not exceed an average of fifteen percent (15%) of the assets of the System over all prior years and the year in which the investment is being made [RSSL §177(2)(a)]



3. Not more than two percent (2%) of the assets of the System shall be invested in the equity securities of any one corporation and subsidiary or subsidiaries thereof [RSSL §177(2)(b)]
 4. Not more than five percent (5%) of the total issued and outstanding equity securities of any one corporation shall be owned by the System. [RSSL §177(2)(c)]
 5. Pursuant to RSSL §178-a, the statutory custodian (NYS Treasurer) has authorized domestic equities to be maintained in the custody of the System's custodian.
 6. Notwithstanding the foregoing percentage limitations, the leeway clause [RSSL §177(9)] may be utilized to legally exceed the foregoing percentages, so long as such assets are prudent investments, and fall within the percentage limitation currently applicable to the leeway clause.
- C. In addition, the System is authorized to write covered call options traded on a national exchange pursuant to the Covered Call Option Guidelines (see section IV.C.2, and Appendix A). The Banking Department (part of the Department of Financial services since October 2011) has issued a determination that a prudently maintained covered call option program is permissible under Banking Law (BL) §235 as long as the options are traded on a national exchange.
- D. In addition, the System is authorized to buy/sell exchange traded equity index futures pursuant to the Futures Guidelines (see Appendix B). Assets covering the notional value should be identified before the futures position is established and would be considered investments pursuant to the leeway clause [RSSL §177(9)]

VI. Risk Management

A. Market Risk:

- **Diversification:** The domestic equity portfolios contribute to the diversification of the overall portfolio. The asset allocation target is thirty-three percent (33%) with an allowable range of 29 to 37%. Within the domestic equity sector, diversification is achieved by:
 1. Use of the internally managed portfolios, to help to ensure broad diversity among a large universe of stocks and industries.
 2. Careful selection of external investment managers with varying investment objectives. Managers' objectives may differ by style,



capitalization, risk profile etc. For example, external investment managers should not deviate from the style for which they were hired. An investment consultant shall be retained to assist Staff in monitoring the managers' adherence to the stated objectives. Significant deviation may result in termination of the management contract. (See the Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities policy.)

- B. Operational Risk: The Communications and Responsibilities & Controls sections will delineate the measures implemented to control operational risks.

VII. Communications

A. Retirement Board Reporting:

1. The Investment Operations Department provides a report, as warranted by program use, of covered call option activity for inclusion in the meeting materials of the Investment Committee of the Retirement Board.
2. The Investment Operations Department and master custodian (currently State Street Bank) provides a summary of performance.

B. External Investment Manager Reporting:

1. External investment managers provide monthly reports of their holdings and market values which are reconciled to custodial and/or System records.
2. External investment managers report to the Investment Advisory Committee, Retirement Board, Internal Investment Committee and/or Managing Director of Public Equities or designee upon request.



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VIII. Responsibilities & Controls

Responsible Party	Action
Investment Operations Department	1. Prepare a twelve (12) month cash flow forecast for the Internal Investment Committee on a monthly basis. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources or uses of cash the Internal Investment Committee assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and targets.
Managing Director of Public Equities or designee	2. Review the cash flow forecast and coordinate it with asset allocation analysis to determine whether the rebalancing program will incorporate a buy, sell or status quo program. This analysis is coordinated with Internal Investment Committee and the Executive Director and Chief Investment Officer. 3. Develop the optimal rebalancing program. The result of this process is a recommended buy and sell list. 4. Collaborate with the Risk Management and Legal Departments on legal, regulatory and policy compliance matters that affect the portfolio. 5. Place buy, sell and option orders with brokers. 6. Communicate trade details and forward inter-portfolio trades to the Investment Operations Department. 7. Oversees qualitative aspects of the program such as strategy and process.
External Investment Managers	8. Based on stated objectives and within the exercise of full investment discretion, execute trades with brokers and report trades to the custodian bank.



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Managing Director of Public Equities, or designee	9. Act as liaison between external equity managers and the System.
Investment Operations Department	10. Communicate trade information to Depository Trust Company (DTC) or custodian bank. Prepare warrants and assure settlement and funding of trades. Warrants are automatically posted to the General Ledger and retained electronically. 11. Perform all investment related accounting and reporting, applying appropriate accounting controls.
Authorized Signatory	12. Authorize warrants to disburse funds.
Investment Operations Department	13. Verify trades have been settled correctly and resolve any discrepancies. 14. Reconcile internally managed equity portfolio holdings to custodian bank position monthly. Review reconciliation of externally managed portfolios to custodian records monthly. 15. Determine that equity holdings comply with statutory limitations. 16. Maintain reports, reconciliations and related correspondence.
Custodian Bank	17. Settle trades and pay or receive funds in accordance with the customary or established securities trading or securities processing practices and procedures in the jurisdiction or market in which the trade occurs. Maintain the official accounting book of record for all domestic equity portfolios. 18. Calculate investment rates of return, monthly.



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	<p>19. Monthly, provide a summary of investment rates of return on domestic equity portfolios.</p> <p>20. Quarterly, provide a summary report to NYS Treasurer that reconciles to the financial statements.</p>
Investment Operations Department	<p>21. Together with Public Equities, review investment rates of return summary for reasonableness and determine and resolve any differences.</p> <p>22. Publish investment rates of return monthly for the System's management and quarterly for the System's Board.</p> <p>23. Review reported information for accuracy (e.g. fees and ending balances).</p>
Legal Department	<p>24. With the assistance of outside counsel as needed, review and negotiate contracts and ancillary documents with external managers and advisors.</p> <p>25. Provide legal advice regarding compliance with legal investment criteria and other legal issues.</p>



APPENDIX A

Covered Call Option Guidelines

1. Covered call options (options) may be written on issues to manage the internally managed portfolios.
2. Options may be written when the annualized rate of return (excluding dividends) is greater than one percent (1%) above the current 90-day Treasury Bill rate. The annualized rate of return for this purpose is defined as follows:

% Annualized Rate of Return =

$$\frac{\text{Minimum of Stock Price or Strike Price}-1}{\text{(Market Price of Stock at Time of Writing - Premium Received from Option)}} \times \frac{360}{\text{No. of Days Remaining}}$$

3. An open option may be closed out (i.e., repurchased) when the premium for such call has dropped to a level making the repurchase appropriate.
4. The underlying market value of stocks covered by outstanding options shall not exceed \$1 billion at any one time.
5. Options on an individual issue shall not exceed the maximum position limit prescribed by the Options Clearing Corporation.



APPENDIX B

Futures-Based Rebalancing Guidelines

1. Exchange traded equity index futures may be used to minimize asset allocation risk, minimize implementation costs and improve efficiencies when rebalancing the domestic equity portfolio.
2. The Executive Director and Chief Investment Officer, or designee, is authorized to buy/sell up to \$2 billion in notional exposure at the time the futures position is established.
3. Assets covering the notional value should be identified before the futures position is established.
4. Futures positions are generally closed out (purchased/sold) as the identified assets are purchased /sold.



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Selection, Monitoring, and Termination of External Investment Managers for Publicly Traded Securities

I. Introduction

In 1982, the Education Law was amended to authorize the Retirement Board to delegate the investment of System funds to external investment managers. Since that time, the Retirement Board has designated a portion of the System's funds and assets to be managed externally, including by investment managers specializing in equities, bonds and other publicly traded securities. An external investment manager for publicly traded securities is hired with the expectation that the manager will, over a market cycle, add value relative to an appropriate benchmark to the assets under management and help diversify the System's portfolio, or, in the case of passive management assignment, match the risk and return profile of the benchmark. External investment managers are screened and must undergo business and legal due diligence to identify those managers who are the most appropriate, based upon established criteria.

An external securities investment manager may be engaged to invest funds directly or may be engaged to further hire other external securities investment managers operating as a fund-of-funds or as a manager of managers.

The Managing Director of Public Equities, with the assistance of the general investment consultant, shall oversee the selection of external public equity investment managers and monitor those managers.

The Managing Director of Fixed Income, with the assistance of the general investment consultant, shall oversee the selection of external fixed income investment managers and monitor those managers.

The Managing Director of Real Estate, with the assistance of its investment consultant as well as the System's general investment consultant as the Managing Director deems necessary, shall oversee the selection of external managers for publicly traded real estate securities and external managers for commercial mortgage-backed securities (CMBS) and monitor those external managers as specified in the Real Estate Investment policies.

II. Selection

Whenever System investment staff is considering engaging an external investment manager (or manager of managers – see Appendix B) for a new investment assignment, staff will communicate directly with the principals of the investment manager candidate, to assure transparency and accountability and compliance with the System's Placement Agent Policy on the part of the external investment managers.

The selection process for external publicly traded securities managers will typically involve consultation with the System's general investment consultant. The investment consultant independently monitors investment managers including assessment of the external managers' organization, investment products, teams and performance.

The selection process continues as follows:



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A. Determination of Screening Criteria

Screening criteria may include, but is not limited to: investment processes; relevance of investment products; dollar value and composition of assets under management; historical performance; key persons and the team's years of experience; stability of firm; other client relationships (including experience with large public funds); ownership; the number and experience of investment professionals; research capabilities; structure of the proposed investment (separate account, commingled account, etc.); compliance with the Chartered Financial Analyst Institute Code of Ethics and Standards of Professional Conduct or equivalent; Global Investment Performance Standards (GIPS) certification or other verifiable performance record; and contract provisions. Other criteria may be added for any given search.

B. Preliminary Screening

1. Staff and/or the investment consultant identify a preliminary list of firms which meet the initial set of screening criteria.
2. Staff and/or the investment consultant contact each firm on the preliminary list to obtain the most current information and any additional information, as required. Follow-up telephone calls, interviews or on-site visits are made as necessary.
3. Based upon the established criteria, staff and/or the investment consultant narrows the preliminary list to a candidate pool.

C. Candidate Pool

1. Staff and/or the investment consultant conduct a more in-depth interview with each candidate. The interview allows for the interaction with and evaluation of the person or persons who will actually be investing the System's assets. Interview topics include:
 - a. Investment process
 - b. Qualifications of the firm's representatives, including the portfolio management team
 - c. Communication with the firm
 - d. Employee compensation
 - e. Availability of the contact person and portfolio manager to meet with the Retirement Board and staff and responsiveness to Board and staff concerns
 - f. Validation of performance and continuation of key individuals who will be responsible for fulfilling assignment



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- g. Accommodation of the System's priorities
 - h. Potential areas of conflict (Retirement Board policy, statutory, custodial, etc.)
 - i. Fee discussions
2. Quantitative analyses are conducted in addition to the qualitative analyses above. For instance, in the case of public equity assignments, the Public Equities Department performs a quantitative analysis of the proposed equity security portfolio(s) strategy. This analysis will include performance and risk attribution.
 3. Subsequent to the interviews and the quantitative analysis of the portfolio(s), System staff, in collaboration with the investment consultant when necessary, will make a recommendation for candidates they wish to advance for further consideration.

The remaining steps of the new manager approval process are described in part III, section D of the "Delegation of Investment Authority" policy (see the "New Managers" section).

III. Contract Review

Once an external securities investment manager is approved, and after the completion of any additional due diligence, an investment management agreement is negotiated and executed appointing the manager. Staff may retain outside counsel to assist in the contract process. Investor protection provisions are incorporated into the investment management agreement and ancillary contract documents as appropriate.

IV. Monitoring

Staff monitors each external securities investment manager to ensure System investment policy guidelines are being met. Moreover, Staff monitor investment manager performance and other criteria to determine whether the investment manager, using the stated style, in the case of an actively managed portfolio, adds value against an appropriate benchmark for the assets under management.

The objective criteria for monitoring the external securities investment manager are agreed upon at hire and may be specified in the contract between the external securities investment manager and the System. The criteria may include investment performance, adherence to the stated investment style and thesis, diversification ratios, industry mix, credit quality and interest rate sensitivity of fixed income assets, if applicable, as well as various subjective criteria, such as the impact of key resignations or firm acquisitions/mergers.



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The System may engage an investment consultant to aid in the review of external securities investment managers. If so engaged, the consultant shall submit periodic reports and provide advice regarding the impact of various changes at the external securities investment manager's firm.

A. Monthly Performance Review

1. External managers of publicly traded securities are responsible for submitting monthly portfolio appraisals, including positions and valuations to the System.
2. Portfolios of public securities of investment managers who are managing System assets in separate accounts are held at the System's custodian bank. Investment manager holdings are updated daily by the custodian bank based upon trade activity submitted from the investment manager. Investment managers reconcile the portfolio values monthly to the custodian bank. The portfolio holdings and custodial reconciliations are reviewed by the System.
3. Portfolio investment performance is calculated by the custodian bank and is compared to investment performance calculated by the investment manager. These comparisons are reviewed by the System's Investment Operations Department.

B. Quarterly Review

1. Staff communicates with each investment manager on a quarterly basis either by telephone, videoconference or in person to review portfolio performance and to discuss any changes to process, staffing, organization or any other items as warranted.
2. For those investment managers that participate in commingled securities lending programs, staff receives reports describing changes to the lending parameters if any, the average market value of the securities on loan, the collateralization percentage and the credit quality and liquidity of the reinvestment pool.
3. A fund-of-funds manager(s) or manager of managers reports on the investment activity and performance for the managers within the fund.

C. Periodic Review

External securities investment managers are expected to meet with the Retirement Board, Investment Advisory Committee, Real Estate Advisory Committee or staff, as applicable, upon request. Minutes of the Retirement Board, Investment Advisory Committee or Real Estate Advisory Committee will reflect the investment matters reviewed.

D. Annual Contract Renewal



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As applicable, the investment consultant submits a formal recommendation regarding the renewal of the investment manager's contract. Staff reviews the recommendation and presents it to the Retirement Board.

E. Special Review as Needed

Staff and the investment consultant(s) review information as it becomes available and meet with the external securities investment manager as required. Unless prohibited by law and regulations that govern the disclosure of material non-public information, each external investment manager has the responsibility to inform the System, quickly and accurately, about any event that may adversely impact to a significant degree the management, professionalism, integrity or financial position of the external investment manager, such as:

1. Personnel changes:
 - a. Loss of one or more key professionals at the firm-wide or portfolio team level
 - b. Changes in responsibility, including the addition of key professionals firm-wide or at the portfolio team level
 - c. Significant changes at the firm, whether or not they impact the team assigned to the System's portfolio
2. Changes in ownership, control or organizational structure, whether through acquisition, disposition, spin-off, merger, consolidation or otherwise
3. Substantial changes in the assets under management that can negatively impact the manager's organization or investment performance
4. Any material change in the investment process or philosophy
5. Concerns about the securities lending portfolios, for those managers that participate in a commingled securities lending program
6. Other developments having a significant impact such as litigation or regulatory inquiries

The investment consultant may serve as an additional source for this information.



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V. Watch List

The System maintains a Watch List of those managers for whom the Retirement Board has concerns about their ability to add value to assets under management. The managers on the Watch List are subject to additional review based on the particular circumstances of the investment manager and the reason(s) the investment manager was placed on the Watch List.

The Retirement Board may place an external investment manager on the Watch List as a result of any of the following concerns:

- A. Significant or persistent underperformance compared to the investment manager's mandate
- B. Indication that the manager is assuming more risk than appropriate in an attempt to achieve a higher short-term return
- C. Key personnel or structural changes that may impact the manager's ability to manage the portfolio effectively
- D. Material changes in a manager's investment style or risk exposures that might indicate a departure from the manager's investment process, such that the portfolio's fit within the overall asset allocation is negatively impacted.
- E. Any other circumstances creating a concern over the external securities investment manager's ability to perform as hired

The Retirement Board may remove an external investment manager from the Watch List at any time if the concerns have been resolved and the Retirement Board has confidence the external investment manager will add value to the assets under management.

VI. Termination of External Investment Managers

External investment managers serve at the sole discretion of the Retirement Board. The Retirement Board retains the right to dismiss a manager in accordance with the terms of the investment management agreement. The Retirement Board evaluates the performance of the external investment manager annually or more frequently when necessary. The Executive Director and Chief Investment Officer is authorized to terminate an investment manager without Retirement Board approval under exigent circumstances as described in part III, section D of the "Delegation of Investment Authority" policy (see the "Termination of Managers" section).

A. Annual Evaluation

The decision to retain or terminate an external investment manager is part of the annual contract renewal process. As part of this process, the System's investment



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consultant will make a formal recommendation, including the rationale upon which the recommendation is made. The recommendation is reviewed by staff and presented to the Retirement Board. The recommendation will be part of the permanent record.

B. Special Evaluation

A dramatic loss of confidence during the contract year could result in a contract termination by the Retirement Board.

VII. Responsibilities & Controls

Responsible Party	Action
<u>MANAGER SELECTION:</u> Retirement Board	1. The Executive Director and Chief Investment Officer in consultation with the Retirement Board determine an investment manager search is warranted
Managing Director of Public Equities, Managing Director of Fixed Income, Managing Director of Real Estate or designees and/or the Investment Consultant	2. Develop screening criteria; consult with Investment Consultants as needed 3. Designate staff to perform preliminary screening of investment firms 4. Review results of the preliminary screen. Direct the Investment Consultant to follow-up on open questions as necessary or perform this process internally 5. Select candidates based on the results of the preliminary screening and the Investment Consultant's recommendation 6. Perform due diligence, including a quantitative analysis of the strategy
Designated Staff and/or Investment Consultant	7. Conduct in-depth interviews with each finalist, allowing for interaction with and evaluation of the person or persons who will be investing System assets 8. Select investment managers to be interviewed and reviewed by the Internal Investment Committee (IIC)



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	9. Contingent upon the approval of the IIC, present investment managers for consideration by the Retirement Board
Executive Director and Chief Investment Officer and Retirement Board	10. Approve or reject hiring of new investment managers as described in part III, section D, of the "Delegation of Investment Authority" policy
Administrative Assistant to the Executive Director and Chief Investment Officer	11. Document, in the Board minutes, approval to hire the investment manager as appropriate
Managing Director of Public Equities, Managing Director of Fixed Income, Managing Director of Real Estate or designees with Legal	12. Ensure contract with investment manager includes key elements, such as: a product description, investment guidelines, key terms, fee structure, deliverables and reporting criteria. Consult and seek assistance of internal and external counsel as necessary.
<u>MONITORING:</u> Manager of External Public Equities, Managing Director of Fixed Income, Managing Director of Real Estate or designees	13. Receive reports from investment managers on a quarterly basis, including holdings, performance attribution and affirmation of compliance with investment guidelines 14. Review monthly, quarterly and since inception performance as prepared by the Investment Operations Department and/or the System's custodian bank's analytics group. Meet, either by telephone, videoconference or in person with investment managers on a quarterly basis, or more frequently as necessary, to discuss portfolio performance, any changes to process, staffing or the manager's organization or any other items as warranted. Communicate any significant concerns to Executive Director and Chief Investment Officer. 15. Document meetings and other monitoring activities by filing meeting materials and any notes in paper form or electronically 16. Concerns will be shared with Retirement Board as appropriate



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	<p>17. Staff reviews and presents a formal recommendation from the General Investment Consultant regarding the annual renewal of the investment manager's contract.</p> <p>18. If warranted, recommend, together with the General Investment Consultant, that the manager be placed on the Watch List. Reason(s) for recommendation shall be documented</p>
Retirement Board	19. Based on recommendations of the General Investment Consultant and/or the Managing Director of Public Equities, Managing Director of Fixed Income or Managing Director of Real Estate, as applicable, or designee, renew the investment manager's contract or, when applicable, determine whether investment manager should be placed on the Watch List
Administrative Assistant to the Executive Director and Chief Investment Officer	20. Document, in Board minutes, the manager has been renewed or, when applicable, the placement of investment manager on the Watch List
Managing Director Public Equities, Managing Director of Fixed Income, Managing Director of Real Estate or designees	21. Inform investment manager, by verbal or written communication, that investment manager has been renewed or, when applicable, placed on the Watch List and reason for this action
Executive Director and Chief Investment Officer	22. When necessary, inform investment manager, in writing, that investment manager has been placed on the Watch List and reason for this action
Managing Director Public Equities, Managing Director of Fixed Income, Managing Director of Real Estate or designees	23. If concerns are resolved, recommend, together with General Investment Consultant, that investment manager be removed from the Watch List. Reason(s) for recommendation shall be documented
Retirement Board	24. Based on recommendations of the General Investment Consultant and/or the applicable Managing Director of Public Equities, Managing Director of Fixed Income or Managing Director of Real Estate, or designee determine whether



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	investment manager should be removed from the Watch List
Administrative Assistant to the Executive Director and Chief Investment Officer	25. Document, in Board minutes, removal of investment manager from the Watch List



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Managing Director Public Equities, Managing Director of Fixed Income, Managing Director of Real Estate or designees	26. Inform investment manager, verbally, that investment manager has been removed from the Watch List
Executive Director and Chief Investment Officer	27. When necessary, inform investment manager, in writing, that investment manager has been removed from the Watch List
MANAGER TERMINATION: Retirement Board	28. Based on recommendations from the General Investment Consultant and the applicable Managing Director, or designee, determine that investment manager should be terminated
Administrative Assistant to the Executive Director and Chief Investment Officer	29. Document, in Board minutes, termination of investment manager
Managing Director Public Equities, Managing Director of Fixed Income, Managing Director of Real Estate or designees	30. Inform investment manager, by verbal or written communication, that investment manager has been terminated and reason(s) for this action
Executive Director and Chief Investment Officer	31. When necessary, inform investment manager, in writing, that investment manager has been terminated and reason(s) for this action. When necessary, terminate an investment manager without Retirement Board approval under exigent circumstances as described in part III, section D of the "Delegation of Investment Authority" policy (see the "Termination of Managers" section).
Managing Director of Public Equities, Managing Director of Fixed Income, Managing Director of Real Estate or designees	32. When applicable, work with a System contracted transition manager to manage the assets from the terminated manager while a successor manager is selected



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APPENDIX A

Money Manager Protection Principles

The System will give consideration in retaining, evaluating and renewing investment managers as to whether such managers, to the extent reasonably possible and where applicable, substantially conform to the following:

The Money Manager Protection Principles are:

1. Money management firms must disclose any client relationship, including management of corporate 401(k) plans, where the money manager could invest NYSTRS' assets in the securities of the client. Disclosure should be made in such a way as to not violate any confidentiality agreement.
2. Money management firms must disclose annually the manner in which their portfolio managers and research analysts are compensated and have safeguards in place to ensure that such compensation programs do not influence investment decisions.
3. Money management firms shall report annually the percentage of commissions paid or level of transaction activity, relating to the System's assets, to/with broker-dealers that have adopted the Broker-Dealer Protection Principles.
4. Money management firms affiliated with banks, investment banks, insurance companies or other financial service corporations shall have safeguards in place to ensure that the client relationships of any affiliate company do not influence investment decisions of the money management firm, provide the System with a copy of the safeguard plan, and certify annually that such plan is being fully enforced.
5. In making active investment decisions, money management firms must consider the quality and integrity of the accounting and financial data and the corporate governance policies and practices of the subject company, as well as whether the company's outside auditor also provides consulting or other services to the company.



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APPENDIX B

**Requirements for Investment Sub Managers Retained
By External Equity Manager of Managers**

1. Key professionals are majority owners of the firm
2. Key professionals have relevant experience (analysts, portfolio managers)
3. Key professionals have at least five (5) years industry experience and have worked together for at least three (3) years
4. Low client/professional ratio
5. Limited number of individual clients based on discretionary assets under management
6. In general, each firm should have more than \$10 million and less than \$5 billion or less of assets under management. Firms with \$5 billion or more of assets under management may be considered on a case-by-case basis at the discretion of the Managing Director of Public Equities and may include managers with up to \$10 billion in assets under management at time of hire
7. The System's allocation will not represent more than fifty percent (50%) of each firm's total assets under management



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Global Equity Securities

I. Introduction

The System's global equity portfolio consists of actively managed strategies that may be structured as separate or commingled accounts, or a combination of the two.

II. Purpose

To maximize long-term total return within acceptable risk parameters while diversifying the overall System portfolio.

III. Performance Objective

A. Externally managed portfolios

The System's externally managed global equity portfolios are measured against the un-hedged MSCI All Country World Index ("MSCI ACWI") and are expected to exceed the return of the benchmark over a full market cycle.

B. Internally managed portfolios

The System currently has no internally managed global equity portfolios.

IV. Management Structure

The Executive Director and Chief Investment Officer or his designee is authorized to take certain actions as described in the "Delegation of Investment Authority" section of the Investment Policy Manual, which, among other things, sets forth the investment discretion duly delegated by the Retirement Board to the Executive Director and Chief Investment Officer or his designees.

The Managing Director of Public Equities, with the assistance of investment consultants as the Managing Director deems necessary, shall oversee the System's global public equity portfolios.

Pursuant to the Retirement Board's direction (based upon the investment consultant's recommendation) the allocation to global equities is intended to be 100% active.

1. Active managers actively manage country, currency, industry and security selection. If permitted by their investment guidelines, managers may use currency forwards, index futures, and exchange traded funds to actively manage country and currency exposures.
2. External investment managers may be engaged to operate as a manager of managers, hiring other external investment managers.



Global Equity Securities

3. The System's externally managed global equity portfolios may be managed in separate or commingled vehicles.
4. The System may engage in securities lending or invest in commingled funds that lend securities.
5. Commingled vehicles are maintained in the custody and safekeeping of the commingled funds' custodian banks, which may appoint one or more foreign entities as their agent to hold and register foreign securities.
6. Separate accounts are maintained in the custody and safekeeping of NYSTRS' custodian.

V. Legally Permissible Investments

The System's global equity portfolios may invest in both domestic and international securities and are, therefore, generally subject to the same legal criteria described in this Investment Policy Manual for domestic and international securities: See "Domestic Equity Securities-Legally Permissible Investments" and "International Equity Securities-Legally Permissible Investments."

VI. Risk Management

A. Market Risk:

1. Diversification: The System's global equity strategies contribute to the diversification of the overall System portfolio. The asset allocation target is 4% with an allowable range of 0 to 8%. Investing relative to the global equity policy benchmark (MSCI ACWI) helps diversify among a large universe of countries, currencies, stocks and industries. In addition, the System may invest in funds, or other approved investment vehicles, that use derivatives such as currency forwards and index futures to manage currency and country exposures, in accordance with their respective investment guidelines.
2. Careful selection of external investment managers, including consultation with an investment consultant as necessary to provide advice regarding the impact of various changes at the global equity manager's firm. (See Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities.)

- B. Political Risk:** The System is exposed to the risk of nationalization or other unfavorable government action in the foreign countries in which it invests. This risk is mitigated to the extent possible by maintaining a well-diversified country exposure.



Global Equity Securities

- C. Operational Risk: The Communications and Responsibilities & Controls sections will delineate the measures implemented to control operational risks.

VII. Communications

A. Retirement Board Reporting:

1. The Investment Operations Department and master custodian (currently State Street Bank) provides a summary of performance.
2. The Public Equities investment team shall take such steps as are necessary to monitor investment performance.

B. External Investment Manager Reporting:

1. External investment managers shall provide monthly reports about the System's holdings/participation units, market values, income and performance.
2. External investment managers will report to the Investment Advisory Committee and/or the Retirement Board upon request.



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VIII. Responsibilities & Controls

Responsible Party	Action
<u>PROGRAM FUNDING:</u> Investment Operations Department	1. Prepare a twelve (12) month cash flow forecast for the Internal Investment Committee on a monthly basis. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources or uses of cash, the Internal Investment Committee assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and targets.
Managing Director of Public Equities or designee	2. Review the cash flow forecast and coordinate with asset allocation analysis to determine whether the rebalancing program will incorporate further funding, status quo, or a sell program. This analysis is coordinated with the Executive Director and Chief Investment Officer. 3. Instruct the Investment Operations Department via warrant to disburse funds to external investment managers as authorized. Warrants are automatically posted to the General Ledger and retained electronically.
Authorized Signatory	4. Authorize warrants to disburse funds.
<u>INVESTMENT PROCESS:</u> <u>(External Management)</u> External Investment Managers	5. As fiduciaries for the System and in compliance with System policies and governing agreements, manage the global equity portfolios on a day-to-day basis according to the terms of the investment management agreement. This includes, but is not limited to, selecting securities, executing trades with brokers, and trading currencies.
Managing Director of Public Equities or designee	6. Act as a liaison between global equity managers and the System.
<u>MONITORING:</u> Managing Director of Public Equities or designee	7. Oversee qualitative aspects of the program such as strategy and process. (See Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities) 8. Maintain reports and correspondence files.



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Responsible Party	Action
Investment Operations Department <u>(External Management)</u>	<p>9. Receive commingled fund audited financial statements annually and ensure audited statements reconcile to external manager financial reports used to record the System's portion of investment holdings.</p> <p>10. Determine that portfolio holdings comply with statutory limitations.</p> <p>11. Maintain reports, reconciliations and related correspondence.</p> <p>12. Perform all investment related accounting and reporting, applying appropriate accounting controls. In conjunction with custodian bank, ensure all required documentation is completed and filed to reduce or eliminate the amount of foreign taxes withheld and to enable the System to reclaim the maximum allowable when taxes are withheld.</p>
Custodian	<p>13. Perform all investment accounting and reporting, applying appropriate accounting controls required to maintain the official Accounting Book of Record (ABOR) for each investment portfolio.</p> <p>14. Calculate investment rates of return, monthly.</p>
Investment Operations Department	<p>15. Reviews investment rates of return summary for reasonableness and determines and resolves any differences. Publishes investment rates of return monthly for NYSTRS management and quarterly for NYSTRS Board.</p>
Legal Department	<p>16. With the assistance of outside counsel as needed, review and negotiate contracts with external managers and advisors. Review derivatives trading agreements as needed.</p> <p>17. Render advice on various legal questions and engage outside legal counsel, as needed.</p>



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INVESTMENT POLICY MANUAL

International Equity Securities

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International Equity Securities

I. Introduction

The System's international equity portfolio consists of passively and actively managed strategies that may be structured as separate or commingled accounts or a combination of the two and may be managed internally or externally.

II. Purpose

To maximize long-term total return within acceptable risk parameters while diversifying the overall System portfolio.

III. Performance Objective

A. Externally managed portfolios

The System's externally managed international equity portfolios are measured against the un-hedged MSCI ACWI (All Country World Index) Ex-U.S., MSCI EAFE (Europe, Australasia and the Far East) Stock Index and the MSCI EM (Emerging Markets) Index. New actively managed portfolios will be measured against the MSCI ACWI Ex-U.S., EAFE, EM, India IMI or another international equity benchmark as appropriate. Passive portfolios are expected to achieve minimal tracking error against the benchmark and active portfolios are expected to exceed the return of the benchmark over a full market cycle.

B. Internally managed portfolios

The System currently manages one international equity portfolio internally. The Canadian Equity portfolio is passively managed and is therefore expected to perform with minimal tracking error relative to its benchmark, the MSCI Canada Index.

IV. Management Structure

The Executive Director and Chief Investment Officer or his designee is authorized to take certain actions as described in the "Delegation of Investment Authority" section of the Investment Policy Manual, which, among other things, sets forth the investment discretion duly delegated by the Retirement Board to the Executive Director and Chief Investment Officer or his designees.

The Managing Director of Public Equities, with the assistance of investment consultants as the Managing Director deems necessary, shall oversee the System's internally and externally managed international public equity portfolios.

Pursuant to the Retirement Board's direction (based upon the investment consultant's recommendation) the target allocations for international equities are: Passive 75%, Active 25%.



International Equity Securities

1. Passive: Managers passively manage country, currency, industry and security selection. If permitted by their guidelines, they may use currency forwards, index futures and exchange traded funds.
2. Active: Managers actively manage country, currency, industry and security selection. If permitted by their guidelines, external managers may also use currency forwards, index futures, and exchange traded funds to actively manage country and currency exposures.
3. External investment managers may be engaged to operate as a manager of managers, hiring other external investment managers.
4. The System's externally managed international equity portfolios may be managed in separate or commingled vehicles.
5. The System may engage in securities lending or invest in commingled funds that lend securities.
6. Commingled vehicles are maintained in the custody and safekeeping of the commingled funds' custodian banks, which may appoint one or more foreign entities as their agent to hold and register foreign securities.
7. Separate accounts are maintained in the custody and safekeeping of NYSTRS' custodian.

V. Legally Permissible Investments

Investment in international equity securities is permitted under Retirement and Social Security Law (RSSL) §177(8).

- A. Pursuant to RSSL §177(8), no more than ten percent (10%) of the System's assets may be invested in international equity securities, including emerging market equity securities. Investments in international equities must be included with the System's domestic equities for the purpose of the seventy percent (70%) overall limitation and the fifteen percent (15%) per year limitation contained in RSSL §177(2). In addition, under RSSL §177(8), an international equity may only be acquired if:

1. The security is registered:
 - a. On a national exchange under the Securities and Exchange Act of 1934 or otherwise registered pursuant to said act, and, if the security is so otherwise registered, price quotations must be furnished through a nationwide quotation system (see RSSL s. 177(8)(a) for legal requirements); or



International Equity Securities

- b. On a foreign exchange organized and regulated under the jurisdiction of such exchange
- B. The issuing corporation shall have (a) averaged at least \$1 billion in annual sales for the three consecutive years preceding the year in which the investment is made, or (b) a market capitalization of at least \$1 billion at the time of investment.
- C. Otherwise, the security may be acquired under the Leeway Clause (RSSL §177(9)) if prudent.

VI. Risk Management

A. Market Risk:

- 1. Diversification: The international equity portfolios contribute to the diversification of the overall portfolio. The asset allocation target is 15% with an allowable range of 11 to 19%. Within the international equity sector, diversification is achieved by:
 - a. Investing in broad market indices such as the MSCI ACWI Ex-U.S., MSCI EAFE and the MSCI EM helps diversify among a large universe of countries, currencies, stocks and industries.
 - b. The System may invest in funds or other approved investment vehicles that use derivatives like currency forwards and index futures to manage currency and country exposures in accordance with their respective investment guidelines.
 - c. Use of internally managed portfolios.
- 2. Careful selection of external investment managers, including consultation with an investment consultant as necessary to provide advice regarding the impact of various changes at the external international equity manager's firm. (See Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities.)
- B. Political Risk: The System is exposed to the risk of nationalization or other unfavorable government action in the foreign countries in which it invests. This risk is mitigated to the extent possible by maintaining a well-diversified country exposure.
- C. Operational Risk: The Communications and Responsibilities & Controls sections will delineate the measures implemented to control operational risks.



VII. Communications

A. Retirement Board Reporting:

1. The Investment Operations Department and master custodian (currently State Street Bank) provides a summary of performance.
2. The Public Equities investment team shall take such steps as are necessary to monitor investment performance.

B. External Investment Manager Reporting:

1. External investment managers shall provide monthly reports about the System's holdings/participation units, market values, income and performance.
2. External investment managers will report to the Investment Advisory Committee and/or the Retirement Board upon request.



International Equity Securities

VIII. Responsibilities & Controls

Responsible Party	Action
<u>PROGRAM FUNDING:</u> Investment Operations Department	1. Prepare a twelve (12) month cash flow forecast for the Internal Investment Committee on a monthly basis. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources or uses of cash, the Internal Investment Committee assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and targets.
Managing Director of Public Equities or designee	2. Review the cash flow forecast and coordinate with asset allocation analysis to determine whether the rebalancing program will incorporate further funding, status quo, or a sell program. This analysis is coordinated with the Executive Director and Chief Investment Officer. 3. Instruct the Investment Operations Department via warrant to disburse funds to external investment managers as authorized. Warrants are automatically posted to the General Ledger and retained electronically.
Authorized Signatory	4. Authorize warrants to disburse funds.
<u>INVESTMENT PROCESS:</u> <u>(External Management)</u> External Investment Managers	5. As fiduciaries for the System and in compliance with System policies and governing agreements, manage the international equity portfolios on a day-to-day basis according to the terms of the investment management agreement. This includes, but is not limited to, selecting securities, executing trades with brokers, and trading currencies.
Managing Director of Public Equities or designee	6. Act as a liaison between international equity managers and the System.
<u>INVESTMENT PROCESS:</u> <u>(Internal Management)</u>	7. Develop the optimal rebalancing program. The result of this process is a recommended buy and sell list. 8. Review overall trade recommendations.



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Responsible Party	Action
Managing Director of Public Equities or designee	<ul style="list-style-type: none">9. Place buy and sell orders with brokers.10. Communicate trade details to the Investment Operations Department11. Oversee qualitative aspects of the program such as strategy and process.12. Manage cash balances and execute foreign exchange transactions to facilitate settlement of equity trades for internally managed equity portfolios.
Investment Operations Department	<ul style="list-style-type: none">13. For internally managed portfolios, communicate trade information to securities clearing house and/or custodian bank. Prepare warrants and assure settlement and funding of trades. Warrants are posted to the General Ledger and retained electronically.14. Verify internally managed trades have been settled correctly and resolve any discrepancies.15. Ensure accurate holdings for the internally managed Canadian Equity portfolio and resolve discrepancies with the Custodian.
Custodian Bank	<ul style="list-style-type: none">16. Settle equity and foreign exchange trades and pay or receive funds in accordance with the customary or established securities trading or securities processing practices and procedures in the jurisdiction or market in which the trade occurs.
<u>MONITORING:</u> Managing Director of Public Equities or designee	<ul style="list-style-type: none">17. Oversee qualitative aspects of the program such as strategy and process. (See Selection, Monitoring and Termination of External Investment Managers for Publicly Traded Securities)18. Maintain reports and correspondence files.



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Responsible Party	Action
Investment Operations Department <u>(External Management)</u>	<p>19. Receive commingled fund audited financial statements annually and ensure audited statements reconcile to external manager financial reports used to record the System's portion of investment holdings.</p> <p>20. Determine that portfolio holdings comply with statutory limitations.</p> <p>21. Maintain reports, reconciliations and related correspondence.</p> <p>22. Perform all investment related accounting and reporting, applying appropriate accounting controls. In conjunction with custodian bank, ensure all required documentation is completed and filed to reduce or eliminate the amount of foreign taxes withheld and to enable the System to reclaim the maximum allowable when taxes are withheld.</p>
Custodian	23. Perform all investment accounting and reporting, applying appropriate accounting controls required to maintain the official Accounting Book of Record (ABOR) for each investment portfolio.
Custodian	24. Calculate investment rates of return, monthly.
Investment Operations Department	25. Reviews investment rates of return summary for reasonableness and determines and resolves any differences. Publishes investment rates of return monthly for NYSTRS management and quarterly for NYSTRS Board.
Legal Department	<p>26. With the assistance of outside counsel as needed, review and negotiate contracts with external managers and advisors. Review derivatives agreements as needed.</p> <p>27. Render advice on various legal questions, as needed.</p>



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Domestic Equity
Trade Allocation Policy for Internally Managed Portfolios

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Domestic Equity
Trade Allocation Policy for Internally Managed Portfolios

I. Purpose

This trade allocation policy documents the principles and standards that guide the allocation of equity trades to internally managed portfolios.

The purpose of this policy is to:

- A. Establish trade allocation procedures and criteria that may be considered reasonable and prudent for the System.
- B. State the process for periodic review of allocation methods that are considered exceptions to the general rule of pro rata.
- C. Communicate this trade allocation policy to all interested parties including the Retirement Board, staff, brokers, consultants, and custodians.

II. Objective

The principal objective for establishing guidelines for the allocation of equity trades in the System's internally managed portfolios has been formulated with respect to the following considerations:

- A. To state the procedures that can be used as a guideline for the allocation of equity trades to internally managed portfolios.
- B. To state procedures for the documentation and review of trade allocation methods that fall outside of the general rule of pro rata.

III. Policy Procedures and Exceptions

As a general rule, equity trades in the same security for multiple internally managed portfolios are aggregated, executed, and allocated to each portfolio on a pro rata basis at the average price obtained during the trading day. Pro rata is based on the number of shares to be traded in each security for each portfolio as a percentage of the entire order for that same security. However, there are certain exceptions when the portfolio management team will need to apply discretion and allocate trades in a manner other than in accordance with the general rule (pro rata). When trades are not allocated in accordance with the general rule, the portfolio management team will take steps to ensure that no portfolio will be disadvantaged by the methods employed. In such cases, the aggregation and allocation methodology will be determined in advance of trade execution and a senior member of the portfolio management team will review to ensure that trades are allocated in an appropriate and fair manner.



Domestic Equity
Trade Allocation Policy for Internally Managed Portfolios

Although not all inclusive, the following are some examples of when discretion is necessary, and the general rule is not followed. Occasionally, portfolio characteristics and partial execution of orders may warrant an allocation practice other than pro rata. In these cases, modified pro rata allocation is applied and, in some cases, orders are not aggregated. For example:

- A. Different investment strategies such as replicated passive, optimized passive, and active strategies may require a different trading approach in the same security. Transactions in orders for replicated passive portfolios attempt to mirror an index precisely and the trade is usually benchmarked to the closing price on trade date. Transactions in the same security for actively managed portfolios and optimized passive portfolios might employ a different trading strategy and may be benchmarked against the price at the time the order was entered. In these cases, discretion is exercised, orders are not aggregated, each order is executed against its specific benchmark and shares are allocated to each portfolio accordingly.
- B. The timing of when orders are placed for execution may also warrant modified pro rata allocation. If orders in the same security for Portfolios A and B were entered for execution at 9:30 a.m. and changing market conditions caused an order in that same security to be placed for Portfolio C at 12:30 p.m., all transactions executed prior to the addition of Portfolio C will be allocated pro rata to Portfolios A and B. The remaining shares for Portfolios A and B will then be aggregated with the shares for Portfolio C, and upon execution, the shares will be allocated to each portfolio pro rata at the average price. However, if orders for all portfolios were intended to be placed for execution simultaneously, but for reasonable cause there is some delay for one or more portfolios, orders will be aggregated as they are received by the trading desk, and transactions will be allocated pro rata regardless of the time the order was received.
- C. Where appropriate, there may be crossing opportunities among internally managed portfolios. Crossing occurs when portfolio trading decisions dictate that a security to be sold by one portfolio can be supplied to fill the demand for the same security in another portfolio. Crossing opportunities ensure that the portfolios on both sides of the trade benefit by not incurring transaction costs. Crossing is done at the closing price on the day of the transaction and does not favor one portfolio over others.



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IV. Exception Reporting and Transparency

The allocation practices employed by NYSTRS' investment management team ensure that each portfolio is treated in a fair and equitable manner. It is impossible to identify and list all possible exceptions to pro rata allocation, but in cases where internal portfolio managers exercise discretion and decide that pro rata allocation might not be prudent for a particular portfolio, the proposed allocation, and the rationale for it, will be reviewed by the Managing Director of Public Equities or designee, and documented by the trading team.

V. Pro Rata Exception Reporting Template

Date	Trade r	Symbol	Portfolios Traded		Portfolios Receiving Exception		Reason for Exception Allocation Method
7-21-14	DT	ABCD	Index	x	Index		Closing price benchmark. SP500 and 100 portfolios fully allocated.
			SP 500	x	SP500	x	
			SP 100	x	SP100	x	
			SmallCap2		SmallCap2		
			VT2		VT2		
			GT2		GT2		
					ACDE		
7-30-14	DT	XYZ	Index	x	Index		Order added to blotter late. Modified pro rata.
			SP 500	x	SP500		
			SP 100		SP100		
			SmallCap2		SmallCap2		
			VT2	x	VT2	x	
			GT2		GT2		
9-21-14	DT	Qrtly Rebal	Index	x	Index		Quarterly rebalance. SP500 and 100 given full allocation and benchmarked to the closing price.
			SP 500	x	SP500	x	
			SP 100	x	SP100	x	
			SmallCap2	x	SmallCap2		
			VT2	x	VT2		
			GT2	x	GT2		



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Trade Allocation Policy for Internally Managed Portfolios

VI. Responsibilities & Controls

Responsible Party	Action
NYSTRS' Public Equities Portfolio Management Team	Provide allocation methodology and rationale for all exceptions to pro rata.
NYSTRS' Public Equities Trading Desk	Traders will aggregate orders and allocate transactions including crossing opportunities in Aladdin. Traders will record and maintain documentation supporting compliance with the policy.
Managing Director of Public Equities or designee	Proactively monitors the allocation methods employed by the public equity investment team for the System's internally managed portfolios in accordance with policy goals and objectives.

REAL ESTATE





NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

Equity Real Estate Investments

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Equity Real Estate Investments

I. STATEMENT OF PURPOSE

The purpose of the New York State Teachers' Retirement System's (NYSTRS or the System) Equity Real Estate Policy (Policy) is to provide general guidelines and specific requirements which will allow the Investment Committee of the Retirement Board, the Real Estate Advisory Committee (REAC) and NYSTRS' staff and external real estate professionals to fulfill the goals and objectives set forth herein for NYSTRS' real estate investment program.

II. DEFINITIONS

The following definitions for frequently used terms in this Policy are provided in order to clarify their usage in the formulation and implementation of the real estate investment program for NYSTRS. Definitions for terms used less frequently and specific to one section of the Policy are provided at the beginning of that section.

The term *Manager* (i.e., Discretionary Manager) shall be deemed to mean any company or entity which, by contractual agreement, assumes discretion over a specified amount of NYSTRS' real estate capital, invests the capital in numerous properties via the separate account or commingled fund investment structure, provides asset management services and periodically reports to NYSTRS. By virtue of the contractual agreement, NYSTRS shall not retain ultimate investment authority as to the buying, holding, financing, or selling of the individual property investments of the separate account or commingled fund.

The term *Advisor* shall be deemed to mean any company or individual which, by contractual agreement, recommends property investment opportunities to NYSTRS, provides property asset management services to NYSTRS or provides and recommends a combination of the foregoing to NYSTRS on a non-discretionary basis. Unless otherwise stipulated, NYSTRS will retain ultimate investment authority as to the buying, holding, financing, or selling of the individual property investments generated and/or managed by such company or individuals.

The term *Asset Manager* shall be deemed to mean any company or individual that may be retained by NYSTRS to recommend, implement and supervise NYSTRS' asset management policies and procedures for either all or a specified number of NYSTRS' individual real estate property investments. Discretionary Managers and Advisors may also serve in the capacity as an Asset Manager.

The term *Consultant* shall be deemed to mean any company or individual that provides any of the following services to NYSTRS: (1) definition, modification and monitoring of real estate investment policy and program; (2) individual property review; (3) recommendations that relate to establishment or termination of relationships with Discretionary Managers, Advisors, Asset Managers and/or other



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business partners; and (4) monitoring of and reporting on real estate investment performance and portfolio composition characteristics.

III. REAL ESTATE GOALS AND OBJECTIVES

The underlying goal of the real estate program is to invest in real property in a prudent manner. This program is designed to create a real estate portfolio of high-quality property assets that will enhance long-term investment performance, diversify the asset base and reduce the volatility of returns for the entire NYSTRS investment portfolio. Ultimate objectives are to preserve capital, increase cash returns and increase portfolio value.

Meeting these objectives requires a flexible investment strategy so that as real estate and capital market conditions change, NYSTRS may take advantage of emerging opportunities. The System's investment approach is one of active participation in the investment decision process, and NYSTRS will retain certain levels of control over major investment and management decisions. This approach provides for the involvement of System staff while accessing third-party professional real estate expertise.

A. DIVERSIFICATION

An objective of the real estate investment program is to prudently diversify NYSTRS' real estate portfolio by investment structure, investment method, property type, property life cycle stage and economic region in order to avoid undue concentration in any category. In addition, consideration will be given to minimizing the potential impact of cyclical changes in the economy, financial and/or real estate markets.

Staff and the Consultant will prepare, and periodically update, a Strategic Plan for the Equity Real Estate Portfolio (and separately for the Real Estate Debt portfolio) outlining the proposed diversification targets for NYSTRS' real estate portfolio. This strategic plan should be used as a guide when considering new investment opportunities and their impact on the aggregate real estate portfolio.

B. LEGALLY PERMISSIBLE INVESTMENTS

The value of all real property held by the System shall not exceed ten percent (10%) of System assets and the cost of each parcel of real property shall not exceed two percent (2%) of the System's assets. [Retirement and Social Security Law (RSSL) §177(6)(e)]

For these purposes of this subdivision six, an investment in an entity that invests or proposes to invest, directly or indirectly through one or more other entities, at least a majority of its assets in (1) any interest in real property of any



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kind or character as an investment for the production of income (including capital appreciation), or (2) debt instruments secured by any interest in real estate may be considered an investment in real estate. RSSL §177(6)(f).

See RSSL §177(6) for additional restrictions on real estate investments.

Some of the investments addressed in this sub-policy may fall under other legal limitations, such as Domestic Equities for publicly traded real estate securities, and the basket clause (RSSL §177(9)) for investments which do not qualify under or are not otherwise permitted by any other subdivision of RSSL §177.

C. RISK MANAGEMENT

Risk is managed by the creation of internal and external managerial, advisory, asset management and consulting relationships that will provide an information flow to NYSTRS which enables staff to effectively analyze market conditions, investment opportunities and asset management techniques. A major component of risk management is the monitoring of portfolio performance and composition so that active strategies may be implemented from time to time to improve the overall risk-adjusted performance of the portfolio.

D. ASSET MANAGEMENT

NYSTRS will generally retain Asset Managers to manage its investments and will direct Asset Managers to prepare detailed business plans for each property investment. These plans will be updated on an annual basis with the objective of maximizing risk-adjusted returns.

E. CORE PORTFOLIO

An objective of NYSTRS' real estate investment program is to maintain a "core" portfolio that limits undue risk, includes diversification, and provides relatively predictable initial yields and internal rates of return. This component of the portfolio will consist primarily of completed and substantially leased, multi-tenant properties with an established performance history. These core property types will generally consist of office, retail, industrial and multi-family residential.

NYSTRS may also invest in "non-core" assets as a supplement to the core investment program. The non-core assets may include non-traditional property types and/or properties that involve development, redevelopment or leasing risks and may require specialized acquisition or management expertise to enhance the value of the investment. The holding period for the non-core investments will generally be less than that of the core portfolio and each non-core investment must include a thorough and well-defined exit strategy, which



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may include completing the work necessary to convert the investment to a core asset.

F. ASSET ALLOCATION

The System's allocation to equity real estate investments is eleven percent (11%) with a range of 6to 16% (as measured by net asset value). This target may be adjusted by NYSTRS' Board in response to changing capital markets. The actual time frame for achievement of the allocation target will depend on the ability to access high-quality investment opportunities meeting the requirements of this Policy.

G. RETURN GUIDELINES

Underlying considerations for NYSTRS' identification of acceptable yields and internal rates of return are as follows:

1. NYSTRS' real estate capital will be invested only in institutional property, commingled funds and other real estate investment opportunities which arise.
2. For core investments, current cash-on-cash yields will typically be more heavily weighted than the potential for appreciation. Weightings may be modified for investments which are made outside of the core portfolio strategy.
3. Internal rate of return projections will generally be based on five (5) to ten (10) year anticipated holding periods. The expected holding periods will be used to calculate potential returns but will not determine actual disposition dates. Shorter or longer holding periods may be used as appropriate.
4. Approved internal rate of return ranges assume adoption of disposition strategies for each property asset so that any asset may be sold when its investment value has peaked and/or when such a sale is justified based on maximizing overall return to the NYSTRS real estate portfolio. Each annual business plan will include a hold/sell analysis.
5. The overall return objective for the equity real estate portfolio is to exceed the NCREIF ODCE benchmark. Return objectives for individual investments within the portfolio will be commensurate with the risk profile of those investments.



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Equity Real Estate Investments

IV. REAL ESTATE INVESTMENT CRITERIA

A. INTRODUCTION

Real estate investment criteria provide investment guidelines and identify types of equity real estate investments that will be considered by NYSTRS. While the investment criteria specified herein apply most directly to specified individual property investments, it will also be used by the System and its Consultant(s) to review and evaluate the underlying characteristics and strategies of commingled funds to which NYSTRS may allocate capital.

Each section of the Real Estate Investment Criteria will be used in conjunction with all other sections so that any potential investment meets a wide range of requirements in order to qualify for consideration by NYSTRS.

B. DISCRETION

Under the System's Bylaws, the Executive Director and Chief Investment Officer is authorized to "invest the funds of the System in accordance with the directions, policies and procedures established by the Board..." The Executive Director and Chief Investment Officer, as well as such System staff as he may designate, is bestowed with the authority and discretion to invest and administer System funds consistent with the policies and decisions adopted by the Retirement Board, applicable laws of the State of New York and the policies contained in this Investment Policy Manual.

The Real Estate Department General Authorization section identifies the types of activities and transactions that require Board approval and those which have been delegated to the Executive Director and Chief Investment Officer or his designees. The general real estate investment authority and discretion of the Executive Director and Chief Investment Officer or his designee is provided and set forth in the Delegation of Investment Authority section of this Investment Policy Manual.

NYSTRS will retain discretion over the decision to invest after detailed analysis of the original due diligence and underwriting of the Investment Proposal Source and/or Advisor and will retain discretion, in direct proportion to its ownership interest, over the adoption and maintenance of individual property management and operating policies. NYSTRS' Board may delegate discretion to staff and/or Advisors as deemed appropriate and necessary for certain investment programs.

C. INVESTMENT STRUCTURES



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For private market real estate investments, NYSTRS will focus on investing in transactions where it can obtain a controlling interest. Exceptions may involve cases of larger transactions or where justified by a more attractive expected risk-adjusted return or where the market opportunity is available through a partner such as a REIT or REOC.

D. OWNERSHIP STRUCTURES

NYSTRS may utilize the following ownership structures in its equity real estate program:

1. Unleveraged Acquisitions

Since emphasis is placed on the degree of equity orientation and minimization of financial risk, NYSTRS has a preference for acquiring properties not encumbered by debt.

2. Leveraged Acquisitions

NYSTRS may only make such leveraged acquisitions as are permitted by statute. It will typically not acquire a property on a leveraged basis unless the property is encumbered by well-margined, traditional debt providing positive leverage or the pricing on above-market debt is reflected in a reduction of the property's purchase price.

3. Equity-Oriented Debt

Properly structured participating or participating/convertible debt investments may be considered. Mortgage financing will normally be senior to all other debt or lease on any property. Loan structuring features shall typically include a pay rate equal to the contract interest rate, or a partial interest accrual, acceptable debt service coverage by actual cash flow from the property, satisfactory participation levels in annual and residual income, a proper conversion option, and creditworthy borrowers.

4. Equity/Debt Combinations

Equity/debt combination investment opportunities will principally be underwritten according to NYSTRS' requirements for both ownership and loan investments. Emphasis will typically be placed on equity/debt combination transactions involving the purchase of the ground beneath an income-producing property and the granting of a participating leasehold loan on the improvements.

5. Joint Venture/Partnerships



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NYSTRS may consider joint venture or partnership investments defined as any asset of which less than one hundred percent (100%) is owned by NYSTRS. The underwriting of such an investment will include an analysis of the joint venture partner(s) in addition to the normal underwriting of the underlying assets.

6. Real Estate Investment Trusts (REITS) and Real Estate Operating Companies (REOCs)

REITs and REOCs are two types of real estate securities that may be considered for investment by both NYSTRS' real estate securities fund managers as part of a diversified, actively managed portfolio and NYSTRS directly, as concentrated strategic investments. Investment criteria for real estate securities investments are described in Appendix C. In addition, REITs and REOCs (both public and private) are two forms of ownership structures that may be utilized from time to time for separate account investments for strategic or tactical reasons.

E. PROPERTY STATUS

NYSTRS may invest in the following stages of a property's investment life cycle:

1. Stabilized

Investments will generally focus on operating properties. Stabilized properties have a physical and financial record and are eighty percent (80%) or more leased. Such properties have typically experienced at least one (1) full leasing cycle and have a relatively mature tenant mix.

2. Leasing

NYSTRS may consider properties in the leasing stage of the investment life cycle. Properties in the leasing stage are defined as being fully completed and ready for occupancy but less than eighty percent (80%) leased. Acceptance of a relative degree of risk inherent in these properties should be offset by overall yield potential and fulfillment of other portfolio objectives.

3. Developmental

NYSTRS may consider developmental properties, defined as those under construction or in a pre-construction phase. Appropriate structures will be required to avoid or minimize development and/or leasing risk.

4. Re-Developments



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NYSTRS may consider rehabilitative or redevelopment properties, defined as those typically having functional and/or economic obsolescence to the extent that correction of these conditions can create a meaningful economic improvement to the property.

5. Opportunistic

Appropriate for inclusion in NYSTRS' investment criteria are opportunistic properties which may not fall into the foregoing property status categories. Such properties are defined as those whose current financial condition and value may be substantially enhanced by innovative asset management and/or financial structuring techniques.

For developmental, re-development and opportunistic properties, NYSTRS may consider the issuance of forward purchase or funding letters. Such commitment letters may be subject to stringent completion and occupancy requirements and require funding within a specific time period (typically one (1) year) from the date of the issuance of the commitment letter.

F. TENANT MIX

A reasonable mix of national credit tenants, regional or local credit tenants and other local tenants is considered desirable for all property types except multi-family residential, lodging and land.

Investment in single-tenant properties may be considered (especially for well located industrial properties); however, such properties must generate competitive cash yields. Emphasis will be placed on properties with a design and location conducive to conversion to multiple tenant use at the time of lease expiration.

G. PROPERTY LOCATIONS

NYSTRS' real estate investments will be diversified across geographic and economic regions to allow for competitive portfolio performance in the event of a temporary weakness in any one region and to allow for differing urban and suburban market trends within any region.

Primary market selection factors include:

1. Broad-based local economy with growth potential
2. Supply constraints for the subject property type
3. Proven demand for the subject property type
4. Proximity to complementary, synergistic land uses and commuting corridors



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5. Availability of necessary infrastructure

H. PROPERTY TYPES

NYSTRS may invest in the following property types:

1. Office

Acceptable office properties include garden or low-rise buildings, business/technological parks, mid-rise and high-rise properties. Acceptable subtypes within the office property type include medical office and life science. Necessary office building design and physical characteristics must be considered on a property-by-property basis within the context of individual location, site, plottage, intended use and tenant mix. NYSTRS shall primarily pursue office properties located in central business districts, suburbs of major urban areas and infill sites.

2. Retail

Shopping centers acceptable for investment include regional malls, power centers, community centers, neighborhood centers and lifestyle centers.

3. Industrial

Industrial properties acceptable for investment include industrial parks and individual buildings or groups of buildings located in an industrial park. Freestanding buildings will be selectively considered. Uses may include: distribution, warehouse, light manufacturing, industrial outdoor storage, research and development, cold storage, incubator space and showroom.

4. Residential

Residential properties acceptable for investment include garden-style, mid-rise and high-rise apartment properties. Acceptable subtypes include student housing and senior housing. Specific characteristics of each property will vary by market and ability to meet the needs of its targeted tenant population.

5. Land

Two primary categories of land are included in NYSTRS' investment criteria. Of first priority is land under existing, income-producing improvements. NYSTRS prefers ground leases which call for participation in the income of the improvements. Preference will also be given to situations where the owner of the leasehold is required to repurchase the fee (land) in the event of non-performance or other circumstances at some



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point in the future, or, alternatively, where NYSTRS reserves an option or first right of refusal to purchase the improvements.

The second category of acceptable land is land in the pre-development stage, but only under a stringent set of conditions:

- a. Zoned to its current highest and best use or potential for rezoning to a higher use in the future
- b. In the path of economic growth
- c. Access to major transportation arteries
- d. Proximity to complementary and synergistic land uses

6. Mixed-use

Mixed-use properties will use a combination of property sectors. Their uses are generally complementary and of greater overall value in combination than individually. An example would be an office tower with a hotel that caters to the business traveler or multifamily adjacent to or above retail. The underwriting of these properties will incorporate the investment criteria set out in this Policy for each component, with proper consideration given to the synergy and increased value created by the mixed-use nature of the investment.

7. Other

Examples of additional property types that NYSTRS may invest in include self-storage, data centers and parking as well as other property types that do not specifically fit into one of the above detailed primary property types.

I. TRANSACTION SIZE

1. Specified Property Investments

Individually committed, specified properties shall generally be at least \$10 million in investment size. Due to the smaller size of multi-family and industrial properties, exceptions may be made for these property types. In the event portfolios are acquired, individual property sizes shall generally be a minimum size of \$5 million, but may, however, be smaller if all of the properties are located at the same site.

No individual investment shall typically exceed one percent (1%) of the total NYSTRS' investment portfolio.

2. Commingled Fund Investments



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The acceptable transaction size for each fund will depend on the asset size or contributed capital of the fund and the investment orientation of the Discretionary Manager. NYSTRS' investments in commingled funds shall generally not exceed twenty percent (20%) of fund commitments. However, with appropriate legal structuring, NYSTRS may commit an amount that exceeds twenty percent (20%) of fund commitments.

J. ENVIRONMENTAL HAZARDS

NYSTRS seeks investments in properties that comply fully with all local, state and federal government regulations regarding environmental hazards. NYSTRS may consider properties that are affected by environmental hazards, but only after a satisfactory, systematic evaluation of the risks of such environmental hazards by qualified professionals. Major pre-investment considerations include the potential risks, liabilities and costs associated with the presence and management of the environmental hazards. Quantification of the potential liability must be made prior to investment.

V. REAL ESTATE TRANSACTION REVIEW AND CLOSING PROCESS

A. DEFINITIONS

The term "Investment Proposal Source" means any entity which submits a real estate investment proposal to NYSTRS. The Investment Proposal Source will typically be one of NYSTRS' Advisors. In this section, Investment Proposal Source and Advisor are used interchangeably. The term "Transaction Reviewer" means any NYSTRS' staff member responsible for the review and/or closing activities of an investment opportunity.

B. SPECIFIED PROPERTY INVESTMENTS

1. Registration Process

Investment proposals will come primarily from NYSTRS' Advisors who are under contract with the System, although other sources may be considered. All valid written proposals submitted to NYSTRS will be entered into an Activity Log ("Log") maintained in System offices. No verbal proposal will be entered into the Log. A transaction is eligible for review by a Transaction Reviewer once it is entered into the Log.

In order to register a potential transaction, Advisors must prepare information on the proposed transaction in a format acceptable to NYSTRS. Additional information may be provided at the Advisor's discretion. The information should be provided to NYSTRS and, as determined by NYSTRS, to its Real Estate Consultant.



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2. Review Process

NYSTRS will review the proposed transaction and, upon specific request, a Consultant will assist with the review.

Whenever requested by NYSTRS, following the registration of a proposed transaction, the Advisor will provide NYSTRS (and its consultant, as appropriate) with a written update identifying each transaction that the Advisor is recommending and a brief statement as to its status. NYSTRS reserves the right, at its sole discretion, to cancel a registration at any time up to the point the Advisor presents a letter of intent executed by the seller and, in summary form, its analysis supporting the terms embodied in the letter of intent.

Whenever requested by NYSTRS, the Advisor will provide NYSTRS with evidence (e.g., cash flow projections or written proposals/communications to the seller) sufficient to demonstrate that the Advisor is making a good faith effort to acquire the property.

Upon completion of its review of the investment, the Advisor should provide NYSTRS (and its Consultant, as appropriate) with a formal investment analysis on the proposed investment.

The investment analysis shall contain as many of the general categories of information found in NYSTRS' Standard Investment Package Checklist (Checklist) as are available to the Advisor at this stage of the review and are deemed appropriate by NYSTRS.

Upon preliminary approval of the transaction, the property and its market area shall be inspected by senior management of the Investment Proposal Source and, as deemed appropriate, by NYSTRS and/or the Consultant.

In the event that the Advisor has executed a Letter of Intent on behalf of NYSTRS, a copy should be sent to NYSTRS as soon as possible. The Letter of Intent will state that NYSTRS' commitment is contingent upon its approval of the completed investment analysis. The Letter of Intent shall generally describe NYSTRS' due diligence, approval and closing processes and expected timing of the transaction.

After the Letter of Intent has been signed, the Transaction Reviewer will devise a time schedule for receipt, review and action by NYSTRS of all required documentation, including an estimated closing date. In general, the timing of the submission must allow NYSTRS a minimum of twenty (20) working days for review prior to its distribution to the Real Estate Advisory



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Committee (REAC). The Advisor will identify potential conflicts of interest in the investment analysis.

3. Environmental Hazard Review

Of primary importance to the proper assessment and management of environmental risks is a documented, detailed level of inquiry during the investment analysis process to detect any potential hazard (including those from hazardous waste, toxic waste, radon, asbestos, mold or unknown origin). A Phase I environmental review of direct property investment pursued by NYSTRS will be required to include, as applicable:

- a. Assessment of all applicable federal, state and local environmental regulations
- b. A physical inspection of the property and its site to determine if any environmental hazards (including asbestos and mold) are present
- c. A survey of the property, its site, and adjacent properties and sites to identify any materials or wastes which may be present as surface or subsurface contamination, including sources of potential contamination
- d. A review of the property lease agreements to ascertain the actual or potential use of environmental hazards by tenants and tenant and landlord responsibilities regarding same

Studies conducted during the investment analysis stage are designed to enable NYSTRS to quantify the extent of environmental hazard liabilities of a prospective property investment and to identify, if applicable, alternative methods for addressing such liabilities. If any environmental hazards are found, such quantification by NYSTRS includes:

- a. The establishment of an operations and management program for controlling or abating any environmental hazard
- b. Negotiation of a purchase or investment agreement to account for the costs involved in the operation and management program and/or to provide for recourse against the seller (or borrower) for any present or future environmental hazard liabilities
- c. The review and re-negotiation of lease agreements, including indemnification clauses, to transfer the responsibility and liability for the disposal or treatment of hazardous substances to a property's tenants

The intent of the foregoing requirements of this Policy is to enable NYSTRS to understand, quantify and control environmental hazard liabilities associated with real estate investments and to allow NYSTRS the ability to consider investment in properties so affected.



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No acquisition of a property shall be consummated by NYSTRS without proper legal advice regarding quantification and possible mitigation of legal liability issues associated with material environmental issues affecting the property, which may include but not be limited to asbestos or potential asbestos hazardous situations. The rendering of such legal opinions shall include the responsibilities, as appropriate on a case-by-case basis, of a property seller or borrower and NYSTRS to tenants, workers, employees, lenders and potential buyers. Internal or external legal advice to NYSTRS shall include potential NYSTRS liability and remedies of the above personnel classifications from NYSTRS.

NYSTRS shall require, to the extent possible, that a property seller or borrower and other entities appearing in a property's chain of title, warrant to NYSTRS that the property is not in violation of any federal, state, or local law, ordinance, regulation or order relating to industrial hygiene or to environmental conditions on or related to the property. For each potential property acquisition so affected, NYSTRS, through assistance of its Advisors and Consultants, shall explore the potential for insuring against and mitigating any environmental issues.

4. Approval Process

Investment proposals are presented to NYSTRS' senior real estate staff for review, analysis, discussion and approval. Upon concurrence of the validity of the equity investment opportunity by the Managing Director of Real Estate and other designated NYSTRS staff, proposed investments will be presented to NYSTRS' Real Estate Advisory Committee for approval. If approved, the proposed investment will be presented for approval, pursuant to the Real Estate General Authorization section of the Investment Policy Manual.

5. Closing Process

Upon approval by staff, the Internal Investment Committee, REAC and the Investment Committee of the Retirement Board or Executive Director and Chief Investment Officer (as appropriate), the Advisor and designated NYSTRS staff will schedule the closing process and prepare a Closing Checklist. The Closing Checklist shall indicate responsible parties for approving each checklist item (Advisor, legal counsel, staff, Managing Director of Real Estate, etc.). Along with this Closing Checklist will be a budget for cost items to be incurred during the closing process with specification as to who is to incur each cost.



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Compliance with all Closing Checklist items is the responsibility of the Advisor. The Advisor shall hire outside professionals (civil engineers, structural engineers, architects, appraisers, etc.) necessary to provide proper due diligence on behalf of NYSTRS for each property transaction. The hiring and scope of work of such professionals is subject to NYSTRS' consent. In addition, NYSTRS, at its sole option, may choose to directly hire such professionals.

After consultation with the General Counsel, outside counsel shall be selected and will typically be required to review and/or prepare as necessary the investment contracts and any other pertinent documents related to the transaction for compliance with state statutes and other matters related to the transaction.

At the time the Closing Checklist is prepared, the Advisor will specify an anticipated closing date. This date, the funding requirements, and the amount of funds required at closing will be specified so that the appropriate funds may be set aside for the acquisition and bank accounts can be opened. A time and place of closing will also be specified.

After the due diligence review and upon completion, review, and approval of the Closing Checklist items, a final recommendation shall be issued by the Advisor. The recommendation shall include an attestation to the sufficiency of all Closing Checklist items stating the following:

- a. All conditions to Closing Checklist items have been met (or list all outstanding items and their status)
- b. To the best of the Advisor's knowledge, verification that there have been no material changes since the Advisor's initial review of the investment opportunity of any physical property, market area or economic factors that would cause the investment to be of lower quality than that which has been reviewed by the Advisor

Prior to closing, the Advisor will submit to NYSTRS (and its consultant, as appropriate) the written recommendation and a full, complete investment package in a format specified by NYSTRS.

No closing will occur without the formal sign-off of the closing report by the Managing Director of Real Estate or designee (and NYSTRS' Consultant, as appropriate).

As soon as practicable after the closing (generally within thirty (30) working days), the Advisor will provide NYSTRS with a Closing Binder. The Closing Binder will hold all pertinent original documentation pertaining to the transaction review, approval, closing processes, approved initial business



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plan and various exhibits demonstrating performance and operational monitoring and reporting systems. An additional copy of the Closing Binder shall be provided in electronic form to the extent possible.

Based upon agreements made during the closing process, NYSTRS may accept certified copies of certain documents in lieu of originals. In this event, NYSTRS must approve the location of original documents and the holder of the original documents shall be required to obtain written approval from NYSTRS before moving these documents from the NYSTRS approved location.

Immediately after the closing, the Advisor must prepare and submit to the Managing Director of Real Estate a reconciliation detailing the specific use of all amounts funded by NYSTRS. Any excess funds should be returned to NYSTRS immediately and the reconciliation must explain the intended use of any funds which were not returned.

C. COMMINGLED FUND INVESTMENTS

1. Review Process

NYSTRS staff will regularly review commingled fund investment opportunities which are accepting new or additional real estate capital. These investments will be reviewed based on the investment criteria defined in this Policy. Those which satisfy these criteria will be further evaluated. The evaluation will include, but not be limited to, the following critical review areas:

I. Fund Structure

A. Type

1. Closed-end
2. Open-end
3. Other including REITs and specified property pools

B. Asset Size

1. Closed-end: Minimum/Maximum subscription level
2. Open-end: Current total asset size
3. Other: Projected offering size/total capitalization and percentage of capital held in non-real estate assets

C. Term

1. Closed-end: Targeted closing date for new subscriptions; and anticipated termination
2. Open-end: In perpetuity
3. Other: Finite/infinite

D. Investor Rights and Remedies

1. Compliance with applicable statutes



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- 2. Withdrawal provisions
- E. Legal Form
 - 1. Compatibility of Fund documents with NYSTRS' tax-exempt status
 - 2. Allowance of appropriate degree of NYSTRS' influence or control
- II. Potential Orientation
 - A. Investment strategy and structure
 - B. Property Status
 - C. Property Locations
 - D. Property Types
 - E. Individual Transaction Sizes
 - F. Property Life Cycle Stages
 - G. First mortgage and subordinated debt
- III. Qualifications of Manager
 - A. Historical Performance (nominal/real, gross/net, and risk adjusted)
 - B. Investment Orientation and Strategy
- IV. Stability/Strength of Manager
 - A. Organizational Structure
 - 1. Acquisitions
 - 2. Asset/property management
 - 3. Dispositions
 - B. Consistency of Key Professionals
 - C. Asset/Property Management Policies and Procedures
 - D. Reporting Capabilities
- 2. Approval Process

Based on an evaluation in conformance with the above described criteria, the Consultant may submit a written recommendation for investment in a commingled fund to NYSTRS. In the case of follow-on investments with existing fund sponsors/general partners, the review may be completed by NYSTRS' staff for approval by the Managing Director of Real Estate. With the approval by the Managing Director of Real Estate, the investment will be presented to NYSTRS' Internal Investment Committee. If approved, the commingled fund investment will either require Investment Committee of the Retirement Board approval or approval of the Executive Director and Chief Investment Officer as delegated by the Board. In addition, approvals may be obtained via mail canvas of the Investment Committee of the Retirement Board as approved by the Executive Director and Chief



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Investment Officer pursuant to the Real Estate General Authorization section of the Investment Policy Manual.

3. Closing Process

Upon approval, a designated staff member or the Consultant shall request the Sponsor of the commingled fund investment to submit its fund documents to NYSTRS. NYSTRS will have assigned counsel review the fund documents, and may have the Consultant review it for compliance with the terms upon which it was approved.

Following execution of the relevant fund documents by NYSTRS, a designated staff member will file all pertinent original documentation, including the contract, offering memorandum, recommendations of the Managing Director of Real Estate and Consultant, as applicable, and the approval of the Investment Committee of the Retirement Board or approval of the Executive Director and Chief Investment Officer as delegated by the Board.

VI. ASSET MANAGEMENT POLICIES AND PROCEDURES

A. INTRODUCTION

The term "asset management" as it pertains to NYSTRS' real estate investment program encompasses all activities relating to the operations of the real estate investments in commingled funds and specified properties owned by NYSTRS and the timely and accurate reporting of the results of those operations.

While the asset management policies and procedures may not conform in all aspects to NYSTRS' commingled fund investments, the Discretionary Managers of the funds shall be required to have well defined asset management policies and procedures in substantial conformance with the requirements of this section.

B. RESPONSIBILITY

Asset Managers shall:

1. Recommend annual operating and capital budgets for property assets
2. Execute property-level contracts with service providers
3. Recommend or select special project professionals such as environmental, engineering, appraisers and property managers
4. Negotiate proper insurance coverage and submit to NYSTRS' insurance consultant for review and approval



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5. Ensure that all property-level taxes and assessments are paid and, when appropriate, grieved on a timely basis
6. Approve and execute contracts for capital improvements on any property which are in accordance with a budget previously approved by NYSTRS
7. Approve and execute leases that are consistent with the leasing guidelines contained in the annual business plan
8. Recommend property disposition strategies and opportunities for properties under their management
9. Provide property-level operational and economic information as required by NYSTRS to facilitate appraisal, audit and reporting practices
10. Protect and defend NYSTRS' interests in any property as may be warranted by any event of an emergency or extenuating nature
11. Approve contracts for capital improvements on properties under their management, as negotiated, in amounts not in excess of five percent (5%) of the market value of each asset, unless previously approved by NYSTRS in the annual operating and capital budget
12. Attend partnership meetings and/or represent NYSTRS at all meetings relating to the asset management policies and procedures for the assets under their management, unless otherwise specified by the Managing Director of Real Estate or designee
13. Provide prompt notification to the Managing Director of Real Estate or designee of any pending legal action or any material fact which may adversely affect the operations of the property

With respect to all real property assets either owned outright, owned as an interest therein, or as a security interest therein such as a deed of trust or mortgage, NYSTRS shall either have final authority for or in the case of co-investments, the investment instruments shall provide parameters controlling: (1) the sale or refinancing of all or any fractional ownership interest and (2) substantive changes to ownership or security interests.

For investments which are solely owned by NYSTRS as well as co-investments, to the extent deemed necessary to protect NYSTRS' interests, the Managing Director of Real Estate or designee shall:

1. Review and authorize annual operating and capital budgets for all property assets within parameters specified in the Permanent Policies and Procedures subsection
2. Approve expenditures for capital improvements, including lease-related tenant improvements, as negotiated and recommended by the Asset Managers



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3. Approve for execution all management agreements, changes, authorizations and amendments with approval of legal counsel, if applicable
4. Select special professionals such as engineers and appraisers or approve same as may be recommended by NYSTRS' external real estate professionals
5. As deemed appropriate, attend and represent NYSTRS at meetings pertaining to asset management policies and procedures for the assets managed by Asset Managers
6. Take all other reasonable actions necessary for preservation of the assets
7. Report to the Real Estate Advisory Committee and/or Investment Committee of the Retirement Board on actions taken under these and other delegations of authority which have a significant effect on the value of any real estate asset and/or the real estate portfolio
8. Monitor the execution of the delegations of authority granted to the Asset Managers
9. Ensure that appropriate types and levels of insurance are in force at all properties including, but not be limited to: multi-peril, general liability and rental income recovery; that Asset Managers have in force appropriate levels of Errors and Omissions Insurance; and that all property managers have in force reasonable levels of liability insurance evidenced by a certificate of coverage on file in the appropriate asset management files maintained with the Asset Manager
10. Recommend property disposition strategies and disposition opportunities
11. Ensure that all property level taxes and assessments are paid and, when appropriate, grieved on a timely basis on each property investment, with copies of payment receipts on file in the appropriate asset management files maintained with the Asset Manager

C. PRELIMINARY ASSET MANAGEMENT POLICY AND PROCEDURES

Advisors shall prepare preliminary asset management policy statements during the transaction review and closing process for approval by NYSTRS prior to funding.

A preliminary asset management policy and procedures statement will include, when applicable:

1. Identification of property managers and leasing agents
2. Initial leasing goals and objectives and lease structures
3. Environmental risk management plan



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4. Market positioning related to competitive properties and other market influences
5. Reporting timing procedures and methodology
6. Preliminary disposition strategies

D. PERMANENT ASSET MANAGEMENT POLICIES AND PROCEDURES

Permanent asset management policies and procedures shall be defined and adopted in accordance with the following requirements:

1. Annual Business Plan

a. Purpose

The purpose of the annual business plan is to describe the operating plan for the property over the short and long term. The annual business plan also defines the limits within which the Asset Manager can operate.

b. Timing

An initial business plan will be submitted by the Asset Manager for approval by the Managing Director of Real Estate no later than forty-five (45) days after the funding of the investment. The plan must be updated by the Asset Manager and submitted to NYSTRS thirty (30) days before the beginning of the fiscal year. NYSTRS will schedule annual meetings with the Asset Managers to review the plan.

In subsequent years, the annual business plan will be prepared and submitted to NYSTRS no later than thirty (30) days prior to the beginning of the fiscal year.

c. Information Requirements

Asset managers shall prepare initial and subsequent business plans that satisfy the information requirements as specified by NYSTRS. The Managing Director of Real Estate or designee is responsible for reviewing and authorizing each business plan, and when required, prepare the corporate resolution adopting the plan.

2. Reporting

a. Annual Business Plans

The requirements and timing for the annual business plans are discussed in the preceding subsection 1 "Annual Business Plan".



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b. Quarterly Reports

Each calendar quarter, the Asset Managers shall prepare, on a fair market value basis, an operating and status report. This report will contain individual property information as well as consolidated information for all properties the Asset Manager manages for NYSTRS. Required quarterly reports shall be delivered to NYSTRS within forty-five (45) working days after the end of each calendar quarter. The report shall contain information as specified by NYSTRS, including, but not limited to: financial results including actual compared to budget and reasons for variances; current vacancy and status of current lease expirations/negotiations as well as new leases executed or in negotiation; status of capital improvement programs including comparison to budgets (in terms of both time and dollars); gross market value of the property and debt including source of valuation, assumptions, and cause of any changes from prior quarter; market information including demographics, employment, current supply and demand impacting the specific property type, and status of competitive properties; any other issues occurring at the property. Any specific issues occurring at the property related to leasing, operations, or financials may be reported by the Advisor immediately by e-mail or phone call between routine quarterly reports. The Managing Director of Real Estate or designee shall maintain all quarterly reports in the NYSTRS' real estate program filing system.

3. Valuations

a. Independent Third-Party Appraisals

Independent third-party appraisals shall be conducted on NYSTRS' direct real estate assets every three (3) years. The scope (full appraisal versus appraisal update) and timing of interim appraisals will be determined by NYSTRS based upon known market changes and recommendations from the Advisors. NYSTRS has the right to request an interim appraisal for any asset at any time.

NYSTRS shall maintain a listing of several MAI (Member of the Appraisal Institute) or equivalently qualified appraisers and will engage one (1) or more to conduct the scheduled or required appraisals on the individual property assets. The selection process shall be the responsibility of the Managing Director of Real Estate or designee. The screening process includes the following: (1) a request for information; (2) an interview with the appropriate parties; (3) submission of a sample report(s) and a review of said report(s) by NYSTRS; and (4) a minimum of three (3) references, preferably from institutional investors



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comparable to NYSTRS. The list shall be regularly monitored by the Managing Director of Real Estate or designee. The Asset Managers may submit a list of recommended appraisers to NYSTRS for consideration. However, NYSTRS has final authority regarding the selection of appraisers.

For property investments wholly owned by NYSTRS, appraisers will be engaged directly by NYSTRS. NYSTRS will be responsible for coordination of the appraisal process and review of appraisal reports, although the Advisor or other third parties may assist with these activities at NYSTRS' discretion. All appraisals shall comply with the uniform standards of the Professional Appraisal Foundation and the Appraisal Institute. Original copies of the appraisal reports (either hard copies or electronic files) shall become part of the permanent files maintained by NYSTRS for each property.

The cost of the appraisals undertaken shall be borne by NYSTRS.

b. Internal Valuations

In addition, the Asset Manager will on a quarterly basis value each property consistent with the best practices prevailing within the real estate appraisal and real estate investment management industries including NCREIF/PREA's Reporting Standards. The Asset Manager will provide NYSTRS with a summary of the key assumptions used and reasons for any significant change in value from the prior valuation.

c. Market Valuations

When both an internal valuation and third-party appraisal are completed, NYSTRS requires the two values to be reconciled to ensure they represent a reasonable range of values which is used by NYSTRS to establish the concluded estimate of fair value.

4. Property Management and Leasing

Annual property management and leasing guidelines shall be identified by Asset Managers and recommended for approval by the Managing Director of Real Estate or designee in the initial business plan and updated in subsequent business plans. These guidelines shall consist of the following: lease provisions and terms, rent levels (specifying gross, net, and net effective rents), marketing strategies and property management and leasing contract conditions (including compensation for Property Managers and Leasing Agents).

a. Selection of a Property Manager and Leasing Agent



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Asset Managers shall recommend a Property Manager and Leasing Agent for each property asset to NYSTRS for approval. The property management and leasing functions may or may not be performed by the same company.

Asset Managers shall interview and perform due diligence on several potential Property Managers and Leasing Agents for any property prior to making said recommendation. Included for consideration shall be the level of fees, the track records of the companies, the companies' familiarity with the subject property asset or assets, and the specification of named employees to be involved with NYSTRS' property. Potential Property Managers and Leasing Agents shall be required to divulge any conflicts of interest, including existing or potential business relationships with any existing or potential contractor for any NYSTRS property.

Any Asset Manager may recommend itself as the Property Manager and/or Leasing Agent if it is willing to compete on a competitive basis (in terms of fees, capabilities and familiarity with the subject property) to provide such services for any asset. After approval by the Managing Director of Real Estate or designee, the Asset Manager may engage the Property Manager and Leasing Agent.

b. Duties and Responsibilities of Property Managers and Leasing Agents

Property Managers and Leasing Agents will typically be required to have an on-site office at each property asset which will be open and staffed during normal business hours and will have a visible, specified address and phone number. At the discretion of the Managing Director of Real Estate, smaller properties and properties which are fully leased and occupied may require less than full-time presence by on-site personnel. The Property Manager and Leasing Agent shall provide personnel and systems at the levels necessary to support the property and comply with adopted management practices.

Personnel of Property Managers and Leasing Agents responsible for the handling of cash or who are signatories on any property-related bank account shall be sufficiently bonded. Written evidence of such bonding shall be provided to NYSTRS, as requested. Property Managers shall perform their duties in accordance with the terms of a Property Management Agreement approved by NYSTRS.

Asset Managers may exercise discretion as to the information and documentation requirements that Property Managers must follow. However, any such delegation of work product shall not remove the



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Asset Manager from the responsibility of providing said product in approved form and detail to NYSTRS.

The Property Manager shall be specifically required to provide and oversee the following:

1. Employment and payment of specified, named employees sufficient to manage the property assets
2. Coverage of its own overhead
3. Maintenance of accounting records in compliance with NYSTRS' requirements
4. Collection of all rents and miscellaneous sources of income
5. Appeal, if so directed by NYSTRS, concerning reassessments related to property taxes
6. Payment of all bills and settlement of all claims, not to exceed an amount established by the Asset Manager
7. Keeping of all buildings and other improvements in good order, repair and condition
8. Immediate provision of emergency repairs and services to the property
9. Operation and maintenance of the property in accordance with all statutes, laws and regulations of all appropriate governmental agencies
10. Negotiation of contracts for utilities and the provision of all required utility services to the property
11. Distribution to NYSTRS of all required cash at the specified time periods
12. Prompt notification to the Asset Manager of any condition of the property or its operations which fails to meet the requirements of adopted Asset Management Policies and Procedures, any pending legal action, or any fact or condition whatsoever which may adversely affect the operations of the property in any material way
13. Provision of Workmen's Compensation and other insurance which may be deemed required by NYSTRS
14. Comply with any other requirements of NYSTRS or the Asset Manager

Leasing Agents shall perform their duties in accordance with the terms of a Leasing Agreement approved by the Asset Manager and NYSTRS.



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Asset Managers shall be responsible for the implementation by the Leasing Agent of approved leasing practices and the supervision of individual property leasing activity. In addition to the definition of appropriate rent levels and lease structures, Asset Managers shall designate marketing strategies which consider the necessity for tenant concessions, tenant improvement costs, market surveys and advertising programs and expenses.

c. Leasing Policies and Procedures

Asset Managers shall be required to obtain the approval of the NYSTRS Managing Director of Real Estate or designee for any change in leasing policy or any proposed lease which falls outside the approved leasing guidelines. To the extent possible, all new leases for any property asset shall be on a standardized form.

To the extent necessary, NYSTRS shall be provided with lease abstracts by the Asset Manager immediately upon the funding of any wholly owned property and for any new leases consummated thereafter.

Property Managers and Leasing Agents shall report to the Asset Managers in accordance with the Reporting sub-section.

5. Property Inspection

In addition to requiring regular feedback from the on-site Property Manager regarding the physical condition of any property, competitive factors and specific market area trends affecting the property, an Asset Manager shall be required to physically inspect the property, its neighborhood and its general market area at least once quarterly, unless otherwise provided for in the permanent business plan for the property.

The physical premises shall be inspected for the purpose of maintaining conformance with tenant improvement and other capital expenditure budget items and to designate specific procedures to avoid incurrence of unwarranted future capital expenditures either through continued deferred maintenance or functional obsolescence.

The Asset Manager shall also personally inspect the property's neighborhood and general market area to determine the status of competitive properties, to ascertain the level of rents being charged and tenant concessions being granted and other area features, such as changing road patterns, rezoning activity and local developments which may in any way affect the current or future operations and valuation of any NYSTRS property.



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The information derived from the property inspection shall be communicated to NYSTRS in the quarterly report (unless something is noted warranting immediate notification) and used as a basis for modifications to the annual business plan. NYSTRS' staff shall inspect each property as frequently as staffing levels permit and property conditions require, but not less than once every three (3) years. Larger operating company investments are not subject to the individual property inspection requirements.

6. Audits

NYSTRS requires an annual audit of all direct equity, joint venture and discretionary fund assets. The audit should be performed by an independent certified public accountant. For wholly owned properties, the Director of Internal Audit or designee will engage an independent certified public accountant who shall provide all audit reports and findings directly to the Director of Internal Audit or designee. All audit reports shall be provided to NYSTRS within one-hundred eighty (180) days of the holding entity's year-end.

7. Accounting

For specified property investments, the accounting systems employed by the Property Manager, Asset Manager and internally by NYSTRS are on a fair value basis. The Property Manager and Asset Manager will be responsible for the proper reporting of free rent, capitalization of acquisition fees, tenant improvements, tenant allowances, leasing commissions, leasehold improvements, building improvements and overall valuation of the assets. Discretionary Manager and Advisor fees will be expensed on NYSTRS books.

The accounting for all activity for each property asset shall be established at the property level by the Asset Manager and Property Manager and at the portfolio level by NYSTRS in substantial conformity with generally accepted accounting principles.

A cash management system with the proper level of internal controls by the Property Manager and the Asset Manager over all cash receipt and cash disbursement items is critical to NYSTRS. In accordance with the previously specified duties and responsibilities of the Leasing Agents, Property Managers and Asset Managers, rents and miscellaneous sources of income shall be collected, and expenses paid at the property level. All property operating bank accounts shall have as signatories appropriate personnel of the Property and Asset Manager. The Asset Manager will



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submit the name(s) of bank(s) and account number(s) for NYSTRS' approval.

Excess funds held in bank accounts by the Property Manager or Asset Manager should be sufficient to cover anticipated expenses up to two (2) months. Funds that are held in bank accounts as compensating balances to reduce fees and/or charges by the Property Manager and/or Asset Manager shall be communicated to NYSTRS' Real Estate Department. In addition, funds that are held in anticipation of a capital need shall be communicated to NYSTRS' Real Estate Department.

Unless NYSTRS provides prior approval for a different schedule, the frequency of excess cash distributions to NYSTRS should be at least monthly. The Asset Manager should submit a letter monthly indicating whether a cash distribution will be made for the period. The dates of the distributions should be consistent from month to month based on the collection of rents and payment of expenses. The Asset Manager will be responsible to provide NYSTRS' Investment Operations and Real Estate Departments with prior notification of the amounts and expected delivery dates of the transfers, to monitor the timely transfers of funds to NYSTRS' account, and to ensure that confirmations of the transfers are immediately provided to the Managing Director of Real Estate. The wired funds will include a description on the wire as to the property name and what the distribution is for such as mortgage payment and/or cash flow distributions. Within three (3) days prior to the transfer of funds to the NYSTRS account, the Asset Manager shall make certain that a reconciliation statement is sent to NYSTRS' Managing Director of Real Estate and to the Investment Operations Department showing the following:

- a. The date of the distribution
- b. The source and amount of wired funds by subsidiary corporation or joint venture
- c. The category of wired capital (operating distribution, capital distribution, interest earned, mortgage payment, etc.)
- d. Any appropriate explanatory notes

The Asset Managers will typically be paid their asset management fee in arrears. The asset management fees should not be deducted from monthly distributions. NYSTRS will pay authorized asset management fees via warrant.

8. Environmental Policy



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For all real property assets with any defined or potential environmental hazard, NYSTRS will adopt an environmental hazard management plan as a part of its permanent asset management policies and procedures as defined in the business plan. No property investment should be consummated without full compliance with all requirements enumerated in the section entitled Environmental Hazard Review of this Real Estate Policy.

The basic objective of a property-specific environmental hazard management plan is to manage risk by providing awareness of any potential hazard (including those from hazardous waste, toxic waste, radon, asbestos, toxic mold, or unknown origin) to any person in occupancy at any property, facilitate abatement or cleanup of any hazard, reduce to the extent possible future adverse effects from the existence of any hazard, continually monitor the effect on a property and its tenants from any hazard, and minimize the potential liability of NYSTRS.

Since asbestos is a common hazard, NYSTRS has developed guidelines for addressing asbestos issues. Asbestos risk management programs may include:

- a. Removal of all Asbestos Containing Material (ACMs) at one time
- b. Removal of ACMs over an identified time period
- c. Encapsulation of all problem areas, either at one time or over a scheduled period
- d. If undisturbed, with little potential for future disturbance, it may be left in place

Where NYSTRS elects to remove ACMs, as specified in an approved asbestos management/maintenance program, specifications for such removal will be prepared by a qualified consultant. Such specifications will detail the extent of the asbestos removal and abatement and control procedures needed to complete the removal. Identification of a property's specific building codes or other local, regional or federal governmental regulations will be included in the specifications designed by the consultant. The consultant will assist in selection of a contractor to perform the work and will monitor all work undertaken. Such monitoring activities will include industrial hygiene air monitoring to determine the levels of airborne concentrations of fiber. Sampling will be conducted in accordance with Occupational Health and Safety Administration (OSHA) guidelines.

The Advisor shall be responsible for rescheduling inspection and surveillance of each property for which any asbestos testing has revealed the presence, or possible presence, of ACMs. Follow-up reports will be



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made a part of the NYSTRS asset management policies and procedures plan for the specified property asset. No less often than annually, the Advisor shall include in its reports to NYSTRS (and NYSTRS' Consultant, as applicable) updated information regarding asbestos surveillance activities.

VII. DISPOSITION PROCEDURES

A. DISPOSITION PLAN

Asset Managers are required to conduct a formal hold/sell analysis for all of NYSTRS' real estate investments as part of the annual business planning process. As dictated by market conditions and other events, the Asset Manager may also propose a sale at other times. In the event an Asset Manager determines that an asset should be sold, the Asset Manager shall provide the Managing Director of Real Estate or designee (via the business plan, quarterly report, or on an as needed basis) with the following:

1. Specific reasons for the recommendation
2. Structure of disposition (outright sale, partial sale, etc.)
3. Potential gross disposition price and basis for said price assumption
4. Identification of potential buyers
5. Process for implementing any disposition decisions (need for brokers, appraisers, engineers, other professionals)
6. Anticipated disposition period and closing date
7. Estimated costs of sale
8. Estimated net disposition proceeds
9. Estimated cash received from sale by NYSTRS
10. Estimated NYSTRS' internal rate of return for the asset's holding period
11. Conflict of Interest clearance form executed by the Advisor in the format specified by NYSTRS
12. Any existing legal limitations with respect to the sale (e.g. right of first offer, right of first refusal, lockout periods, any other options, etc.)
13. A summary of any trailing liability issues (if any) that NYSTRS would have to consider related to the sale

In the event NYSTRS approves the disposition of the investment, pursuant to the Real Estate General Authorization section of the Investment Policy Manual,



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the Managing Director of Real Estate may retain outside professionals to implement the disposition decision.

B. PROCEDURES FOR OFFERS TO PURCHASE

Any offer made to an Asset Manager or solicited by NYSTRS or an Asset Manager for the acquisition of any asset or investment position shall be presented to NYSTRS by the Asset Manager. The presentation shall include:

1. Gross offering price, disposition costs and net disposition proceeds
2. Disposition proceeds, disbursement schedule, including Asset Manager, Advisor or Joint Venture Partner sharing in such proceeds and the share of proceeds to be retained by NYSTRS
3. The anticipated closing date
4. For recommended offers, an estimate of NYSTRS' net internal rate of return as of the anticipated closing date
5. List of conditions precedent to closing
6. Summary of any competitive offers
7. Statement of buyer's ability to close
8. Written recommendation from the Asset Manager regarding the proposed sale
9. A summary of any trailing liability issues (if any) that NYSTRS would have to consider subsequent to the sale

Upon approval of the offer by NYSTRS, pursuant to the Real Estate General Authorization section of the Investment Policy Manual, the Asset Manager will formally accept the offer on behalf of NYSTRS and shall immediately schedule the activity required to satisfy all conditions precedent to closing. In the event that a change in conditions of closing or a buyer's willingness or ability to close would result in a material decline in net disposition proceeds to NYSTRS or a substantial decline in the projected internal rate of return from the levels on which NYSTRS based its approval of the transaction, the transaction shall not close without re-approval by NYSTRS.

The Asset Manager shall be responsible for the transmission of NYSTRS' disposition proceeds via Federal Funds Wire (Fed Wire) directly to the NYSTRS' controlled holding company bank account or directly to NYSTRS' custodial account. NYSTRS' Investment Operations Department shall be notified in advance of any scheduled sale distributions prior to deposit or transfer to NYSTRS' custodial account.



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APPENDIX A

**Publicly Traded Real Estate Securities
INVESTMENT GUIDELINES AND PROCEDURES**

NYSTRS may invest in publicly traded real estate securities through: (1) a broadly diversified actively managed account; or (2) more concentrated positions in single securities. Concentrated positions may be acquired for tactical or strategic reasons, through direct purchases or private placements, through conversion of private assets to interests in public companies or through in-kind distributions from fund investments. Managers will be retained to manage broadly diversified accounts within agreed upon guidelines. Concentrated positions in a single security may be acquired and/or managed through a manager or directly by NYSTRS.

Both domestic and global public real estate securities managers will be evaluated relative to appropriate benchmark indices and the performance of NYSTRS' other public real estate securities managers.

For concentrated positions in a single security, staff will monitor whether the security is held in NYSTRS' diversified portfolios and regularly solicit input from NYSTRS' public real estate securities managers on their buy/hold/sell rankings. Based on this input, staff will make a determination as to whether the security should continue to be held or should be liquidated at a target price.

Additionally, the guidelines may allow some managers to invest in debt issued by publicly traded Real Estate Companies as market opportunities arise.



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Responsibilities & Controls

Responsible Party	Action
<u>PROGRAM FUNDING:</u> Investment Operations Department	1. Prepare a twelve (12) month cash flow forecast for the Internal Investment Committee at least on a monthly basis. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources or uses of cash the Internal Investment Committee assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and/or targets.
Real Estate Department	2. Oversee qualitative aspects of the program such as strategy and process. (See Selection, Monitoring, and Terminations of External Investment Managers for Publicly Traded Securities policy.) 3. Work with the Legal Department in negotiating any legal documentation and drafting required terms. Other parties may be called upon for assistance in this process including outside counsel, Finance and other departments as needed.
Real Estate and Legal Departments	4. Work with outside counsel, if retained, in negotiating the final form of any contract which may be required.
Investment Operations Dept and Custodian Bank	5. Work with Real Estate Department and external investment managers to open accounts in all foreign markets in which custodian, or its sub-custodians(s), operate. Will provide all required account opening documents and manage the process (global).
<u>INVESTMENT PROCESS:</u> External Investment Managers	6. In compliance with System policies and investment contract, and using full fiduciary investment discretion, execute trades with brokers and report trades to the custodian bank.
Managing Director of Real Estate or designees	7. Recommend investments within guidelines. This process is opportunity-driven rather than asset-allocation driven. It involves a thorough analysis and may require expertise



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	<p>beyond in-house capabilities. For these reasons, a consultant(s) may be hired to assist in the process.</p> <p>8. Maintain ongoing relationship with external investment managers and act as liaison between external equity managers and the System.</p> <p>9. Maintain reports and correspondence files.</p> <p>10. Prepare warrant and instruct Investment Operations Department to disburse funds to investment manager. Warrants are automatically posted to the General Ledger and retained electronically.</p>
Custodian Bank	<p>11. Work directly with external investment managers in the receipt and processing of trade instructions, settlement of trades and accounting for investment activity on the custodial book of record</p>
Investment Operations Department and/or Custodian Bank	<p>12. Perform all investment related accounting and reporting, applying appropriate accounting controls.</p>
Authorized Signatory	<p>13. Authorize warrants to disburse funds.</p>
<p><u>MONITORING:</u></p> <p>Investment Operations Department</p>	<p><u>Global and Domestic:</u></p> <p>14. Determine that portfolio holdings comply with statutory limitations.</p> <p>15. Maintain reports, reconciliations and related correspondence.</p> <p>16. Prepare monthly journal entries to record portfolio activity as reported to the System by custodian bank.</p> <p>17. Prepare monthly schedules to report net asset value of all portfolios as reported to the System by custodian bank.</p> <p>18. Monitor custodian bank and external investment manager's reconciliations of net asset value monthly and their resolution of variances.</p>



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Custodian Bank	<p><u>Global and Domestic:</u></p> <p>19. Maintain records and provide monthly reports on individual portfolios and/or composite basis.</p> <p>20. Settles trades and pay or receive funds in accordance with the customary or established securities trading or securities processing practices and procedures in the jurisdiction or market in which the trade occurs.</p> <p>21. Determine market value of holdings in publicly traded portfolios.</p> <p>22. Work directly with external investment managers to identify and process corporate actions affecting global portfolio holdings.</p> <p>23. Seek collection of any reclaimable foreign taxes withheld on System holdings, provide the System with monthly reports on outstanding receivables.</p> <p>24. Coordinate and process class action filings in domestic and international opt-out markets.</p> <p>25. Coordinate with external managers to complete monthly reconciliation of portfolio net asset value.</p> <p>26. Calculate and report performance by portfolio and in aggregate using agreed upon formula and benchmark.</p>
Investment Operations Department	<p>27. Review and publish real estate performance for the System.</p>
Real Estate Department	<p>28. Monitor the performance of the public real estate security portfolios vs. investment managers with similar mandates and the stated benchmarks.</p> <p>29. Access the Custodian's website to review performance and the underlying securities held by the managers.</p> <p>30. Ensure that the Investment Guidelines as outlined in the Investment Management Agreements are adhered to.</p>



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	31. Annually prepare recommendation to Retirement Board for renewal or non-renewal of manager asset management agreement
Retirement Board	32. Review performance of investments quarterly. 33. Annually approve or disapprove renewal of manager asset management agreement.
<u>EXITING:</u> Legal Department	34. Assist staff with the retention of outside counsel and render legal advice regarding any developments occurring during the life of the investment.



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Commercial Real Estate Debt Investments

I. Introduction

Commercial Real Estate Debt Investments include conventional (non-insured) mortgages, construction loans, Commercial Mortgage Backed Securities (CMBS) and junior loans. Junior loans would include second mortgages and Mezzanine Loans. Real Estate Mezzanine Loans are not secured by a lien on the real estate and therefore are not technically a mortgage. The security for a Mezzanine Loan is the pledge of the ownership interest in the real estate asset. Mortgage Servicing encompasses all activities relating to monitoring of commercial mortgage investments including billing, asset monitoring, credit analysis, workouts and satisfaction of private debt.

The policy of the System is to make mortgage loans secured by a first lien on real estate improved by income-producing property or Mezzanine Loans secured by an owner's interest in real estate. These investments are either originated directly by the System or by another lender acceptable to NYSTRS. Underwriting responsibility remains with the System. Construction loans are made much in the same fashion. CMBS and the bulk of the Mezzanine investments are primarily made through outside fiduciaries and involve diversified portfolios within commingled funds or separate accounts.

Generally, subordinate financing shall be conditioned upon: (i) there being sufficient cash flow to provide acceptable debt service coverage for the total financing; (ii) the loan-to-value ratio for the total financing being no greater than seventy-five percent (75%) of the appraised value of the security; (iii) the subordinate financing having a maturity date which is co-terminus with, or earlier than, the maturity date of the senior financing; and (iv) the subordinate financing being due and payable upon the sale of the property securing the financing or the prepayment of the senior financing. If subordinate financing is done within a fund or separate account, one or more of these conditions may be waived.

II. Purpose

The purpose of the Commercial Real Estate Debt portfolio is to:

- A. Make investments which will support the member payroll liability of the System, consistent with current economic and market conditions
- B. Provide diversification to the System's overall investment program within the parameters of the fund's asset allocation level
- C. Provide a stable and predictable income stream
- D. Maximize investment return while focusing on preservation of capital



III. Performance Objective

Fixed mortgage interest rates are priced by adding a market derived spread to the U.S. Treasury rate for a maturity similar to the proposed mortgage. Floating rate loans are determined by adding a market derived spread to the thirty (30) day SOFR (Secured Overnight Financing Rate) rate. This mortgage interest rate is then compared to portfolio-wide return requirements as established by the System from time to time for suitability. The direct mortgage portfolio performance will be compared with a customized subset of the Giliberto-Levy Commercial Mortgage Performance Index. The performance of the CMBS component will be compared with appropriate benchmarks (as listed in the Statement of Investment Policy). Mezzanine Debt Investments and Commingled Debt Funds will be priced to reflect risk adjusted returns and performance will be compared with appropriate benchmarks (as listed in the Statement of Investment Policy).

IV. Management Structure

Investment authorization is required pursuant to the real estate general authorization section.

The Commercial Debt Portfolio (other than CMBS investments, Separate Accounts and Commingled Debt Funds) is managed internally within the Real Estate Department and is overseen by the Managing Director of Real Estate or designee. Under the direction of the Executive Director and Chief Investment Officer and the Internal Investment Committee, the Managing Director of Real Estate is responsible for the formulation and implementation of the mortgage investment program.

The Mortgage Servicing program for internally originated debt is managed by the Real Estate Department which is responsible for timely and accurate reporting of the results of commercial mortgage investment operations. Mortgage Servicing also includes responding, on a timely basis, to the needs or issues the Borrower may have in relation to the loan. Other institutions that serve as lead lenders and third-party correspondent servicers engaged by the Real Estate Department must have policies in place to perform their servicing obligations under their respective Co-Investment, Intercreditor and Servicing Agreements.

V. Legally Permissible Investments

The System may invest in conventional mortgages constituting a first lien upon real property located in the U.S. pursuant to Retirement and Social Security Law (RSSL) §§176(2), 177, 177-a, and 178, and Banking Law (BL) §235. Some of the major provisions are:

- A. Direct mortgages must be no more than seventy-five percent (75%) of the appraised value of property improved by a building or buildings, the major portion of which is used or, in the case of a building under construction, to be



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- used for residential, business, manufacturing or agricultural purposes [RSSL §177(1)(a)(i)].
- B. The aggregate unpaid principal amount for all conventional mortgages shall not exceed thirty percent (30%) of the System's assets [RSSL §177(1)(a)(i)].
 - C. Not more than five percent (5%) of the System's assets can be invested in any one (1) conventional mortgage [RSSL §177(1)(a)(i)].
 - D. The minimum dollar amount for conventional mortgages is \$250,000 [RSSL §178].
 - E. The System may invest in conventional mortgages guaranteed by a state bank or trust company having a net worth in excess of \$500 million, provided however, that no more than ten percent (10%) of the System's assets shall be invested in any mortgage so guaranteed [RSSL §177(3)].
 - F. The System may participate or co-invest in any conventional mortgage or insured mortgage or in any whole or part interest in any such mortgage which mortgage is held for the benefit of the holder or holders of a whole interest or part interests therein, subject to the limitations set forth in (A) (B) (C) and (D) above [RSSL §177(5)].
 - G. The System may make or acquire a mortgage loan on a leasehold estate, provided that such leasehold estate has an unexpired term of not less than twenty-one (21) years at the time of the loan. Additionally, no mortgage loan upon a leasehold estate may be made or acquired unless the terms thereof shall provide for payments to be made by the borrower on the principal thereof at least once in each year in an amount which would be sufficient to completely amortize a loan whose period extended for four-fifths of the unexpired term of the lease. For these purposes, the unexpired term shall include any period covered under an option to renew the ground lease which can be exercised at the unilateral discretion of the System. The limitations set forth in (A) above apply to System investments in leasehold mortgages [BL §235(6)(i)].
 - H. The System may invest in any mortgage insured by the federal housing commissioner, or for which a commitment to insure has been made by the federal housing commissioner [BL §235(20)(a)].
 - I. Obligations payable in U.S. funds which at the time of investment are rated investment grade by two (2) nationally recognized rating services or by one (1) nationally recognized rating service in the event that there are limited agencies that have rated the securitization/obligation, provided that the aggregate amount invested in the obligations of any single issuer may not exceed two percent (2%) of the assets of the System or five percent (5%) of the direct liabilities of the issuer unless the obligations are issued by the U.S. or are those for which the



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faith of the U.S. is pledged to provide payment of the interest and principal. [(RSSL) §177(1-a)].

- J. Any other debt investments not listed in or exceeding the percentage limitations stated in the above categories may be acquired under the Leeway Clause [RSSL §177(9)].

VI. Risk Management

- A. The Retirement Board has adopted a target allocation of 6% for investment of System assets in Real Estate Debt, with an allowable range of 2% to 10%.
- B. Risk management is accomplished through the investment underwriting process and by portfolio diversification. In the underwriting process, System staff and a team of “due diligence” professionals (including lawyers, appraisers, engineers and environmental specialists) coordinated by the System, evaluate the factors likely to influence the performance of the asset pledged as collateral. The parameters of the financing are then styled to deal with any items of material concern. Risk to investment performance caused by broader economic phenomena which may influence a regional economy, or an industry sector, is mitigated by diversifying the mortgage portfolio both geographically and by property type. After an investment is made, long term investment performance is enhanced by an active mortgage servicing program which includes regular review of project financial statements and property inspections and provides an early warning system that enables the System to deal with controllable issues proactively.
- C. Risk is also managed through the investment approval process as outlined in the real estate general authorization section. Risk is further managed by statute which, among other things, places limits on maximum loan-to-value ratios and loan amount and by other policies and procedures established for the operation of the Real Estate Department and the System.
- D. The selection of appraisers will follow the guidelines established in the Equity Real Estate Investments section.
- E. In the event of sub-standard performance of a mortgage loan, Mortgage Servicing would include an evaluation of the loan in question and formulation and implementation of an appropriate plan to protect the interests of the System.
- F. The following two sections titled “Communications” and “Responsibilities & Controls” will delineate the measures implemented to control operational risks.



VII. Communications

Retirement Board Reporting:

- A. The following mortgage investment activity is reported quarterly to the Investment Committee of the Retirement Board by the Real Estate Department: mortgage commitments signed; mortgages acquired; mortgages assigned, discharged, or satisfied; and mortgages in default
- B. Financial parameters of the mortgage portfolio, including size and performance are reported quarterly to the Retirement Board by the Real Estate Department
- C. Each quarter on a lag basis, the Investment Operations Department coordinates and reports on performance



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VIII. Responsibilities & Controls

Responsible Party	Action
Retirement Board or Investment Committee of the Retirement Board/ Executive Director and Chief Investment Officer	1. Approve mortgage investment programs and conventional mortgage investments originated by the System pursuant to the real estate general authorization section.
Investment Operations Department	2. Prepare a twelve (12) month cash flow forecast for the Internal Investment Committee on a monthly basis. This forecast brings together cash available to invest with planned program investments and targeted asset allocations while contemplating the benefit payment and operational cash needs of the System. By focusing on significant sources or uses of cash, the Internal Investment Committee assures coordination of investment strategies, funding of annuitant benefits and adherence to asset allocation ranges and/or targets.
Real Estate Department	<ul style="list-style-type: none">3. Identify and develop sources of potential mortgage investments.4. Underwrite, negotiate and close mortgage investments pursuant to statutory and other legal requirements.5. Secure the necessary investment approvals pursuant to the real estate general authorization section.6. Report investment activity to Board as required.7. Service mortgage investments to maximize System return.8. Instruct the Investment Operations Department to disburse funds to the borrower.



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Responsibilities & Controls (continued)

Responsible Party	Action
Real Estate Department	<p>9. Prepare warrant. Warrants are automatically posted to the General Ledger and retained electronically.</p> <p>10. On a monthly basis, review custodian bank's CMBS compliance report to established investment guidelines for each manager. If necessary, review with Investment Operations Department and external manager.</p> <p>11. On a quarterly basis, review external manager invoice for management fees for accuracy and payment.</p> <p>12. Monitor managers' overall return and key portfolio statistics to the benchmark statistics to identify significant variances.</p> <p>13. Annually prepare recommendation to Retirement Board for renewal or non-renewal of manager asset management agreement.</p>
Authorized Signatory	<p>14. Authorize warrants to disburse funds.</p>



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Commercial Real Estate Debt Investments

Responsibilities & Controls (continued)

Investment Operations Department	<p>15. Send wire to disburse funds per warrant instructions.</p> <p>16. Each business day receive and post mortgage financial activity and adjustments to mortgage receivable files.</p> <p>17. Communicate funding authorization to System's bank for new fundings.</p> <p>18. Perform all investment related accounting and reporting for internally managed debt.</p> <p>19. Coordinate and report performance, quarterly (lagged).</p>
Legal Department	<p>20. Render legal advice and engage outside legal counsel as needed.</p>
Custodian	<p>21. Work directly with external investment managers in the receipt and processing of trade instructions, settlement of trades and accounting for investment activity on the custodial book of record.</p> <p>22. Price CMBS portfolio based on established external pricing sources and agreed upon methodology.</p>
External Investment Manager (CMBS)	<p>23. Based on stated style and full investment discretion, execute trades with broker-dealers and report to the Custodian Bank as directed by NYSTRS.</p> <p>24. Reconcile portfolio activity and holdings with Custodian Bank.</p>



APPENDIX A

COMMINGLED FUND INVESTMENTS

1. Review Process

NYSTRS staff will regularly review commingled fund investment opportunities which are accepting new or additional real estate capital. These investments will be reviewed based on the investment criteria defined in this Policy. Those which satisfy these criteria will be further evaluated. The evaluation will include, but not be limited to, the following critical review areas:

- I. Fund Structure
 - A. Type
 - 1. Closed-end
 - 2. Open-end
 - B. Asset Size
 - 1. Closed-end: Minimum/Maximum subscription level
 - 2. Open-end: Current total asset size
 - 3. Other: Projected offering size/total capitalization and percentage of capital held in non-real estate assets
 - C. Term
 - 1. Open-end: In perpetuity
 - 2. Closed-end: Targeted closing date for new subscriptions; and anticipated termination
 - 3. Other: Finite/infinite
 - D. Investor Rights and Remedies
 - 1. Compliance with applicable statutes
 - 2. Withdrawal provisions
 - E. Legal Form
 - 1. Compatibility of Fund documents with NYSTRS' tax-exempt status
 - 2. Allowance of appropriate degree of NYSTRS' influence or control
- II. Potential Orientation
 - A. Investment Strategy & Structures
 - B. Property Status
 - C. Property Locations
 - D. Property Types
 - E. Individual Transaction Sizes
 - F. Property Life Cycle Stages
 - G. First mortgage and subordinated debt
- III. Qualifications of Manager
 - A. Historical Performance (nominal/real, gross/net and risk adjusted)
 - B. Investment Orientation and Strategy



Commercial Real Estate Debt Investments

IV. Stability/Strength of Manager

- A. Organizational Structure**
 - 1. Acquisitions
 - 2. Asset/property management
 - 3. Dispositions
- B. Consistency of Key Professionals**
- C. Asset/Property Management Policies and Procedures**
- D. Reporting Capabilities**

2. Approval Process

Based on an evaluation in conformance with the above-described criteria, a NYSTRS approved outside Real Estate Consultant may submit a written recommendation for investment in a commingled fund to NYSTRS.

3. Closing Process

Upon approval, a designated staff member or the Consultant shall request the Sponsor of the commingled fund investment to submit the fund documents to NYSTRS. NYSTRS will work with assigned counsel to review the fund documents and may have the Consultant review it for compliance with the terms upon which it was approved.

Following execution of the relevant fund documents by NYSTRS, a designated staff member will file all pertinent original documentation, including the contract, offering memorandum, recommendations of the Managing Director of Real Estate and Consultant, as applicable, and the approval of the Investment Committee of the Retirement Board or approval of the Executive Director and Chief Investment Officer as delegated by the Board.



APPENDIX B

COMMERCIAL MORTGAGE BACKED SECURITIES ("CMBS")

NYSTRS may invest in Commercial Mortgage Backed Securities ("CMBS") through: (1) a broadly diversified actively managed "conduit" securities; or (2) more concentrated positions in the debt of single/small pool - /single asset single borrower (SASB) securities in an actively managed account. Investment Managers will be retained to manage accounts within agreed upon guidelines. The investment guidelines will also allow the managers to invest in U.S. Treasuries and Agencies to manage the portfolio's duration. Finally, the guidelines may allow managers to invest a portion of the System's separate account in below investment grade rated securities as well as non-CMBS subordinate debt positions such as B-Notes and/or mezzanine loans.

CMBS managers will be evaluated relative to peer set and appropriate benchmark indices.



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Selection, Monitoring and Termination of Real Estate Advisors

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Selection, Monitoring and Termination of Real Estate Advisors

I. Introduction

The goals and objectives contained in the Equity Real Estate Investments sub-policy outline an investment approach which is one of active participation by the System in the investment decision process while accessing third-party professional real estate expertise. An external real estate Advisor is hired with the expectation that it will, over the long term, add value to the assets under management. Potential Advisors must pass an extremely rigorous selection process designed to select those which are the most appropriate, based upon established criteria. This policy shall apply to the selection of new Advisors only and is not applicable to the allocation of additional business to an existing Advisor.

II. Selection

The procedure for selecting an Advisor begins with a decision by staff to hire a fiduciary, typically to pursue a specific investment strategy so as to further diversify the System's portfolio.

Whenever System investment staff is considering engaging a separate account Advisor, staff will communicate directly with principals of the Advisor interested in doing business with the System, in order to assure transparency and accountability. Please see the System's Placement Agent Policy.

At the time staff decides to begin the selection process, it may utilize the existing real estate consultant to assist in the selection. The consultant maintains a database which contains information regarding the organization, investment products and investment performance of potential Advisors.

The selection process continues as follows:

A. Determination of Screening Criteria

Screening criteria includes, but is not necessarily limited to: investment products; assets under management; historical performance; growth of the firm; other client relationships; ownership; the number and depth of investment professionals; research capabilities and internal controls.

B. Preliminary Screening



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1. If utilized, the consultant conducts a search of its database and identifies a preliminary list of Advisors which meet an initial set of criteria. Included in this search are any firms which have been suggested by the System and its staff, as potentially meeting the established criteria.

Initial screening criteria may involve those items outlined in Section II A.

2. Based upon the established criteria, staff and the consultant, if utilized, select the most qualified for further analysis, which may include issuing a Request for Proposal (RFP).

C. Second Stage

1. The staff reviews the material submitted by respondents and selects the most qualified respondents for interviews.

D. Third Stage

1. An in-depth interview is conducted with each of the finalists. The interview allows for interaction with and evaluation of the person(s) who will be recommending actions regarding the System's assets. Topics include responses to specific questions in the Request for Proposal (RFP), as well as the following:
 - a. Process for identifying, selecting and managing real estate investments
 - b. Deal by deal and overall performance track record in the proposed strategy
 - c. Knowledge of the firm's representative(s)
 - d. Communication with the firm
 - e. Availability of the contact person and portfolio manager to meet with the Retirement Board and staff
 - f. Accommodation of System priorities
 - g. Potential areas of conflict



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2. Subsequent to the interviews, System staff selects the firm it determines to be most qualified to perform the desired function.

E. Final Selection

1. Staff and, if necessary, the consultant, will make a presentation of the finalist's credentials to the Internal Investment Committee (IIC) and Real Estate Advisory Committee (REAC) for review. The finalist may be asked to appear before the IIC and REAC to make a presentation.
2. The REAC will make a recommendation to the Investment Committee of the Retirement Board if it is satisfied with staff selection of an Advisor.

III. Monitoring

Staff monitors the Advisor with respect to specific objective criteria, such as investment performance, as well as various subjective criteria including the impact of key personnel moves or structural changes. The general focus of the review is to determine if the System is confident with the Advisor's consistent and continuing ability, using the stated style, to add value to the investments under management.

The System may utilize its real estate consultant to aid in the review of the Advisor. This consultant submits reports as necessary and provides advice regarding the impact of various changes at the Advisor's firm.

The review consists of the following:

A. Performance Review

The Advisor is responsible for submitting quarterly reports as specified in the Equity Real Estate investments sub-policy.

B. Special Review as Needed

Staff reviews information as it becomes available and meets with the Advisor and the System's consultant as required. Each Advisor has the responsibility to inform the System quickly and accurately about any information which impacts its relationship with the System. The consultant serves as an additional source for this information.

C. Meetings and Reports



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Advisors are expected to meet with the Retirement Board (or the Real Estate Advisory Committee) and staff, upon request. Minutes of official/formal meetings with the Retirement Board and Real Estate Advisory Committee, reflecting the investment matters reviewed, will be kept.

IV. Watchlist

The System maintains a Watchlist which includes those Advisors about whom the Retirement Board or staff has concerns with regard to their ability to add value to assets under management. Advisors on the Watchlist are subject to more intense scrutiny.

An Advisor may be placed on the Watchlist as a result of any of the following concerns:

- A. Underperformance compared to the Advisor's mandate
- B. Indication the Advisor is assuming more risk than appropriate in an attempt to achieve a higher short-term return
- C. Key personnel or structural changes that may impact the Advisor's ability to perform effectively
- D. Illegal activity
- E. Any other circumstances creating a concern over the Advisor's ability to perform as hired

The Retirement Board may remove an Advisor from the Watchlist at any time if concerns have been resolved and the Retirement Board has confidence that the Advisor will add value to the assets under management.

V. Termination

Advisors serve at the pleasure of the Retirement Board. The Retirement Board retains the right to dismiss an Advisor with thirty (30) days written notice, or as contractually agreed.



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NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
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Real Estate Department General Authorization

I. Introduction

The General Authorization for the operation of the Real Estate Department is set forth herein. This document identifies the types of activities performed by the Real Estate Department which need Board approval and those which have been delegated to the Executive Director and Chief Investment Officer or his designees pursuant to the limitations set forth in the Delegation of Investment Authority policy.

II. Real Estate Transactions requiring Internal Investment Committee Approval and Execution of Documents Related Thereto:

The Executive Director and Chief Investment Officer or his designee is authorized to take certain actions as described in the "Delegation of Investment Authority" section of the Investment Policy Manual, which, among other things, sets forth the investment discretion duly delegated by the Retirement Board to the Executive Director and Chief Investment Officer or his designees.

III. Actions Which May Be Taken By Either The Executive Director and Chief Investment Officer Or His Designees And Execution Of Documents Related Thereto:

The Executive Director and Chief Investment Officer, or his designees, is authorized to take the following actions:

A. Term of Commitments or Authorizations

To permit the time for the consummation of mortgage loan authorizations and commitments to be extended to a date not more than twelve (12) months following the date of the authorization or the date stipulated in the commitment letter (whichever is later). There may be any number of extensions for any period of time as long as the total period of extension does not exceed twelve (12) months.

B. Releases, Consents, and Subordinations

In regard to mortgage loans and the property securing those loans with or without consideration:

1. Consent to the owner's sale or transfer (including mortgages where there is a due on sale provision) of such property or any interest therein, subject to the System's lien



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2. Release the original or any succeeding obligor or guarantor of any loan from obligation on the loan if such obligation is assumed by a new owner of the property
 3. Consent to a modification of or approval of all leases on property on which the System holds a mortgage
 4. Consent to the substitution of one lessee for another provided the substitute lessee has the ability to pay the rent and satisfy the other obligations of the lease
 5. Subordinate (whether by subordination, recognition or other instrument) liens to, and consent to the grant by the owner of the project subject thereto of: easements, permits, licenses and rights of way for utilities, pipelines, mains, sewers, drainage and irrigation projects, boundary line agreements, projections or encroachments of walls; easements and rights of way in driveways, alleys, streets, and highways, for either public or private purposes; and leases or subleases of all or part of the property; and, in connection with any of the foregoing to require or abstain from requiring the consideration, if any, received by the owner shall be applied to the prepayment of the loan
 6. Consent to the removal and sale of sand, stone, earth, gravel, timber or other natural resources from property subject to a lien of the System provided the amount so removed shall not materially reduce the value of the security for the loan
 7. Release a part of the security from the System's lien, or to consent to the demolition, removal, or sale of improvements including salvage, provided such release or consent shall not materially reduce the value of the security (taking into consideration proceeds received in reduction of the mortgage principal, if any). In the case of government insured loans, no such release or consent shall be given which would end the government insurance or guaranty

C. Postponement of Payments, Modifications and Foreclosure

With respect to any mortgage loan:

1. Postpone (defer) (i) the date or dates for one or more payments of or on account of interest for not more than an aggregate of eighteen (18) months, (ii) the date or dates for one or more payments of or on account of principal for not more than an aggregate of thirty-six (36) months and to final maturity the payment of amounts due or to become due on account of principal over a period of not more than three (3) years and/or extend the maturity of the loan for a period not to exceed thirty-six (36) months



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2. Upon the occurrence of any default, to institute foreclosure proceedings or to refrain from accelerating the unpaid loan balance and to defer foreclosure proceedings for not more than an aggregate of eighteen (18) months following the occurrence of such default unless adequate additional security is furnished the System and not in any event beyond the date when any mortgaged leasehold may be terminated by reason of such default or when any taxing authority may sell the mortgaged property by reason of any unpaid tax, assessment or other imposition
3. Exercise any option to accelerate its maturity under a call or other provision contained therein, whether because of the passage of time, transfer or encumbrance of the security, default, or other reason

D. Prepayments and Assignments

Permit prepayment of mortgage loans, in whole and in part, with or without charge, and to waive provisions requiring notice of intent to prepay and the payment of charges expressly required as a condition to such prepayment; provided in cases where prepayment of mortgage loans, in whole or in part, is subject to the discretion of the System, a comparable or higher quality investment providing an equal or higher yield is available to the System.

Affect assignments, satisfactions, discharges, or releases of liens upon receipt of the entire principal and interest owing to the System.

E. Waiver, Modification and Amendment of Covenants

Provided the value of the security for the loan is not materially reduced to waive, modify and amend covenants and other terms of mortgage loans (including the terms of leases and any other documents relating to or constituting security and to consent to modifications, amendments and terminations thereof by others) and to change payment due dates and frequency thereof or waive any default in the observance of performance thereof; but in no event shall a reduction in the rate of interest payable on a loan be made hereunder, except (i) interest in excess of the regular contract rate which may be payable following a default and (ii) in the case of government insured loans, when necessary to reflect market conditions in order to retain such investments in the System's mortgage portfolio.

F. Government Insured Loans

1. In the case of government insured loans, to assign to the appropriate governmental agency or instrumentality or an officer thereof the note and



mortgage in exchange for the consideration provided for in the government program, insurance or guaranty

2. To bid on, commit for, or otherwise acquire whole loans or partial interest in pools or packages of government insured loans
3. To amend the interest rate to reflect current market conditions when necessary in order to keep government insured investments in the System's mortgage portfolio

G. Return of Fees and Deposits

Affect the repayment in whole or in part of commitment and standby fees and application and good faith deposits received by the System in connection with applications for or commitments relating to mortgage loans or the purchase or sale of real estate equities.

H. Servicing Mortgage Loans

1. With respect to any loan in which the System holds or may hold a participation, to enter into agreements with other participant(s) under which the System and/or any other participant(s) services such loans whether or not compensated, and therefore to modify and terminate such agreements
2. Enter into agreements under which others service loans held by the System and to modify, terminate, and consent to the assignment of such agreements

I. Trustee's Action

With respect to any loan the security for which is held in whole or in part by a trustee, including a real estate bond issue, to take, or authorize the trustee's taking, any action which could otherwise be taken by the Executive Director and Chief Investment Officer or his designees, if the security for the loan were held directly by the System.

J. Acquisition of Properties

Prior to the purchase of property previously authorized by the unanimous vote of the Investment Committee of the Retirement Board or by majority vote of the Retirement Board, to increase by not more than five percent (5%) the purchase price to be paid for the property, provided an appraisal or feasibility report shall be obtained which shows the value of the property is at least equal to the increased purchase price. A report of each action taken under this paragraph shall be made to the Investment Committee of the Retirement Board or the Retirement Board.



K. Management and Operation of Properties

Manage and operate, either directly or through a management agent (including asset managers), receivers and/or trustees, court or otherwise appointed or independent contractor, owned properties and interests therein, including for the purpose of this and other paragraphs of this section properties and interests acquired or about to be acquired by or in lieu of foreclosure or held subject to redemption after foreclosure, such management and operation to include, without limiting the scope hereof, authority to:

1. Make, modify and terminate leases and subleases and consent to assignments and subleases by others, covering all or part of such property (and in connection with new leases, to assume and adjust the new lessee's lease obligations at its former location), provided the expenditures, if any, incurred in connection therewith may not exceed the limitations on expenditures which may be incurred without Investment Committee of the Retirement Board or Retirement Board approval as set forth in Clause 9 below
2. Charge off or cancel all or part of accruals of rent or accruals of claims for use and occupancy deemed to be uncollectible or deemed not to justify the estimated cost of probable recovery
3. Affect repairs, whether for extraordinary damage or ordinary maintenance and whether or not the obligation of the System (thus covering foreclosures and receiverships), provided the expenditures, if any incurred in connection therewith may not exceed the limitations on expenditures which may be incurred without Investment Committee of the Retirement Board or Retirement Board approval as set forth in Clause 9 below
4. Change the use or function of such properties or the structures located thereon, affect improvements, additions and replacements, add additional structures, purchase or rent equipment or furnishings, demolish and dispose of structures, chattels and salvage no longer used or deemed useful and purchase additional adjacent land in implementation of any of the foregoing, provided the expenditures, if any incurred in connection therewith may not exceed the limitations on expenditures which may be incurred without Investment Committee of the Retirement Board or Retirement Board approval as set forth in Clause 9 below
5. Sell or dispose of surplus miscellaneous material, furnishings and equipment
6. Purchase fuel and supplies, materials for repairs, maintenance, fencing, construction, and surfacing and water, electric and sewer lines, heating,



refrigerating, incinerating, elevator and escalator and/or other building service equipment

7. Recognize subleases notwithstanding the termination of a paramount lease covering all or part of such a property or interest therein
8. Designate, use and invest in appropriate accounts as repositories for funds held by managing agents, asset managers, etc. pending their distribution to the System or their use for payment of operating expenses and the drawing of checks, drafts or orders thereon
9. Leverage properties with a prudent amount of mortgage financing (not to exceed seventy-five percent (75%) of appraised value) to take advantage of positive leverage and refinance existing mortgage loans to take advantage of favorable interest rate environments or to deal with impending maturities.
10. Enter into commitments for the cost of a single program of real estate capital improvements or leasing costs for real estate owned by the System (other than for real estate over which an outside investment manager has full discretion, as in the case of a commingled fund) where such capital improvement costs do not exceed five percent (5%) of, or such leasing costs do not exceed five percent (5%) per annum of, the gross market value of the property (excluding any debt) and such costs cannot be funded out of the property's cash flow. Market value will be based upon the most recent valuation.

L. Sale of Properties

Prior to completion of the sale of a property previously authorized by the unanimous vote of the Investment Committee of the Retirement Board or by majority vote of the Retirement Board to decrease by not more than five percent (5%) the sales price of all or any part of any property owned by the System, regardless of any other terms of such sale. A report of each action taken under this paragraph shall be made to the Investment Committee of the Retirement Board or the Retirement Board.

M. Joint Ventures

Enter into partnership, joint venture or like arrangements, to carry out projects authorized hereunder or otherwise authorized by the unanimous vote of the Investment Committee of the Retirement Board or by the Retirement Board with authority to act with respect to partnership, joint venture or like arrangement properties to the same extent as herein authorized for the



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System-owned properties and in addition to exercise the following authority with respect to partnership, joint venture or like arrangement projects:

1. Execute such other agreements or instruments deemed necessary or desirable to carry out the purposes of the project and to consent to the taking of action by the partnership, joint venture or like arrangements pursuant to any such agreements or instruments
2. Provide for, or to establish procedures to provide for, the control of the business and affairs of the partnership, joint venture or like arrangements within the scope approved by the Investment Committee of the Retirement Board or the Retirement Board

Term of Authorizations

Permit the time for the consummation of property acquisitions, sales, and commingled fund commitments to be extended to a date not more than twelve (12) months following the date of authorization or the date stipulated in the sale or acquisition contract (whichever is later). There may be any number of extensions for any period of time as long as each period of extension does not exceed twelve (12) months.

N. Consultants, Insurance, Expenditures and Miscellaneous Actions

Pursuant to guidelines established by the System with respect to any transaction being conducted by the Real Estate Department, including but not limited to the acquisition, sale or ownership of any real estate equity, commingled real estate fund or mortgage loan:

1. Employ or obtain the services of consultants, including but not limited to, architects, appraisers, environmental specialists, engineers, attorneys, agents and brokers, landscape architects and other property specialists and affect payment therefore
2. Obtain documentation and reports, including but not limited to, tax, title, environmental, engineering, architectural, legal, appraisal and land use and affect payment therefore
3. Determine and obtain appropriate amounts, types and sources of insurance and determine, subject only to limitations of law and the documentation, the disposition of any proceeds of fire, extended coverage or other hazard insurance
4. Pay or prepay any tax, rent (including land rent), insurance, repair, mechanic's lien, maintenance charge, advance to a receiver, assessment, water and/or sewer charge, utility charge (electric, gas, telephone, etc.),



sums necessary to cure lease defaults or any other charge or expense deemed necessary for the protection of or in furtherance of the System's interests and to commence actions relating thereto

5. Obtain services and materials and make expenditures for repairs deemed necessary for the protection of or in furtherance of the System's interests
6. Enter into contracts necessary for the operation of the property including, but not limited to, elevators, HVAC, security, water treatment, rubbish removal, pest control, landscaping, etc. and to effect payment therefore
7. Consent to zoning and redevelopment plans, irrigation projects, ordinances and condominium documents, grant easements, rights of way, and other rights affecting such properties, enter into agreements with adjoining owners covering encroachments, party walls, boundary lines and similar matters, provide for the cutting and/or sale of standing timber and the removal and/or sale of stone, earth and gravel and enter into agreements and leases with respect to mineral and oil exploration and production

O. Commingled Funds, Limited Partnerships and Other Investment Entities

Invest in limited partnerships, joint venture and other investment entities, as authorized hereunder or otherwise authorized by the unanimous vote of the Investment Committee of the Retirement Board or by the Retirement Board and to exercise the following authority with respect to such partnerships, joint ventures and other investment entities:

1. Execute such agreements, documents and instruments as may be necessary or desirable to implement the System's participation in the commingled fund, limited partnership, or other investment entity or to carry out the purposes or objectives of such fund, partnership or entity.
2. Take such actions as may be necessary or appropriate to implement or further the System's oversight of such investments.
 2. Take such actions as may be necessary or appropriate to protect or preserve the System's investment in extraordinary circumstances, including the incurring of necessary or appropriate expenditures without Investment Committee of the Retirement Board or Retirement Board approval, provided such expenditures may not exceed an amount equal to five percent (5%) of the amount authorized by the Investment Committee of the Retirement Board or the Retirement Board for investment in the project.



P. Documents

The list of documents enumerated below is not intended to be all-inclusive, but illustrative of those which must be executed to operate in both the mortgage and real estate equity programs of the System. Except as otherwise specifically provided above, the Executive Director and Chief Investment Officer and/or his designees, who may include all the staff listed in the Office of the General Counsel and Real Estate Department, are given authority to execute these documents and all others necessary to effectively administer the mortgage and real estate equity programs.

Acknowledgments

Affidavits

- In Support of Summary Judgments
- Pertaining to Appointment of Receivers
- Referee's Hearings and Related Instruments
- Verifying Information in Complaints
- Other

Affirmations

Agreements

- Assumption
- Attornment
- Bid
- Brokerage
- Buy-Sell
- Commission
- Commitment Fee
- Completion
- Condemnation and Appropriation
- Encroachment
- Escrow
- Good Faith Deposit
- Guaranty
- Indemnity
- Joint Venture and Related
- Lease Buy-Out
- Management
- Non-Disturbance
- Partnership and Related
- Performance Guaranty
- Sale Leaseback
- Security and Security Assignment
- Servicing
- Spreading
- Subordination
- Termination Tri-Party



Other
Allonges
Appointments
 Trustees and Substitute Trustees
 Other
Assignments
 Agreements
 Bonds
 Income, Rents, Leases, and Collateral
 Assignments thereof
 Mortgages and Chattel Mortgages
 Notes
 Profits
 Other
Bills of Sale
Binders
Bonds
Budgets
Cancellations
Chattel Mortgages
Checks, Drafts, and Negotiable Instruments
Commitments
Consents
Consolidations
Contracts (see also Agreements)
 Construction
 Purchase
 Sales
 Service
 Management
 Operating
 Other
Deeds
 Bargain and Sale
 In Lieu of Foreclosure
 Of Trust
 Quit Claim
 Warranty
 Other
Deficiency Judgments
Discharges
Easements
Estoppels
Extensions
Eviction Notices
Financial Statements



Financial Documents
Incorporation Documents and Related Instruments
(including Directors' and Other Resolutions)
Injunctions
Interrogatories Intercreditor agreement
Leases (including land)
Lease Modifications
Letters of Intent
Lis Pendens
Loss Drafts
Mechanic's Liens
Memorandums of Sale
Modifications
Mortgages
Notes
Notice and Demand Letters
Notices
Options
Plans and Specifications
Proof of Loss Documents
Real Property Transfer Tax Returns
Reconveyances
Releases
Satisfactions
Stipulations
Subleases
Tax Appeals (Certiorari)
Tax Settlement and Refund Documents
Treasury Authorizations
Warrants
Work Orders/Tenant Improvements, Building Improvements, or Repairs



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Timberland Investments

I. Introduction

Timberland is classified within the Real Estate investment asset class. Acceptable investment properties should include good quality, professionally managed timber that is in close proximity to established timber infrastructure and is of a sufficient size to allow efficient harvesting techniques and operation. Timberland investments may include properties in various stages of the timber production life cycle.

II. Portfolio Guidelines

- A. *Objective.* The objective of the portfolio will be timber production for maximum long-term return, with current cash flow as a secondary objective.
- B. *Rate of Return.* The portfolio will consist of properties that as a group are expected to yield a rate of return of five percent (5%) or more above inflation over the long term.
- C. *Geographic Area.* Investments will be made principally in the Continental United States and Alaska. Investments in Hawaii and in foreign countries must be specifically approved by NYSTRS.
- D. *Geographic Diversification.* The portfolio will be diversified among regional timber markets within the defined geographic area.
- E. *Age Diversification.* The portfolio will be diversified by timber age.
- F. *Leverage.* Leverage will not be used in the portfolio except with prior written approval by NYSTRS following consideration with the Advisor of any unrelated business taxable income (as defined in Section 512 of the IRS Code) issues.
- G. *Participation Limitation.* Investments will not be made with any type of financial or operational partner except with prior written approval by NYSTRS following consideration between NYSTRS and the Advisor of any tax or other legal impact of such participation.

III. Property Guidelines

- A. *Minimum Investment Size.* The minimum investment (purchase price) per property will be \$1 million, except that smaller investments may be made in properties which adjoin or are in the vicinity of existing Portfolio



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Property.

- B. *Maximum Investment Size.* The maximum investment (purchase price) per property will be twenty-five percent (25%) of the current fair market value of the timberland portfolio including uninvested allocations.
- C. *Acquisition/Sale Limitation.* All acquisitions and sales of property will be made from or to entities or persons who are not affiliated with the Advisor.
- D. *Quality.* Acquisitions will be high quality timberland properties that are generally characterized by:
 - 1. Site index (productivity rating) in the high 70s or greater on a fifty (50) year basis (Site index 80 on a fifty (50) year basis means that trees on that site generally will grow to a height of 80 feet in fifty (50) years).
 - 2. Strong timber markets with multiple wood-using plants within timber hauling distance.
 - 3. Legal access to public roads.

IV. Real Estate Transaction Review and Closing Process

A. Definitions

The term "Investment Source" means any entity which submits a real estate investment to NYSTRS. The Investment Source will typically be one of NYSTRS' contractual Advisors. In this section "Investment Source" and "Advisor" are used interchangeably.

B. Specified Property Investments

1. Registration Process

Investments will come primarily from NYSTRS' contractual Advisors. All valid written potential transactions submitted to NYSTRS will be entered/registered into an Activity Log (Log) which will be maintained in NYSTRS' office. No verbal proposal will be entered into the Log.

In order to register a potential transaction, Advisors must prepare



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information on the proposed transaction in a format acceptable to NYSTRS. This information must include the property name, location, and size. Additional information may be provided to NYSTRS at the Advisor's discretion. The registration notice should be accompanied by another copy which will be returned to the Advisor with a line for NYSTRS to acknowledge receipt of the notice.

2. Preliminary and Pre-Closing Procedures

Within thirty (30) days after Registration, the Advisor must provide Preliminary Information on the proposed transaction. This information should include property name, location, size, timber type, age range, estimated purchase price, estimated closing date, seller, estimated returns and any other pertinent information available at the time. At monthly intervals, following the registration of a proposed transaction, the Advisor will provide NYSTRS with a written update, identifying each transaction that the Advisor is pursuing and a brief statement as to its status. NYSTRS reserves the right, at its sole discretion, to cancel a registration at any time up to the point the Advisor presents a Letter of Intent or Purchase Agreement executed by the seller and, in summary form, its analysis supporting the terms embodied in the Letter of Intent or Purchase Agreement.

Upon completion of its review of the investment, the Advisor should provide NYSTRS with certain Pre-Closing Information. This Pre-Closing Information should include the full Environmental Site Assessment, the Original Appraisal, a Summary of the Timber Cruise, a Budget with updated return estimates, a Copy of the Purchase & Sale Agreement and a Closing Checklist. The Closing Checklist shall indicate responsible parties for approving each checklist item (Advisor, legal counsel, etc.). Attached to this Closing Checklist will be a budget for all cost items to be incurred during the closing process with specification as to who is to incur each cost.

The Pre-Closing Information should be submitted by the Advisor to NYSTRS at least fourteen (14) days prior to closing. It should be accompanied by a cover letter from the Advisor confirming the investment opportunity is still available on the original terms specified.

3. Environmental Hazard Review



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NYSTRS gives first priority to investments in properties which comply fully with all local, state and federal government regulations, including, but not limited to, the Federal Water Pollution Control Act and the Endangered Species Act, regarding environmental hazards. NYSTRS may consider properties that are affected by environmental hazards, but only after a satisfactory, systematic evaluation by qualified professionals. Major pre-investment considerations include the potential risks, liabilities and costs associated with the presence and management of the environmental hazards. Quantification of the potential liability must be made prior to investment.

Of primary importance to the proper assessment and management of environmental risks is a documented, detailed level of inquiry during the investment analysis process to detect any potential hazard (including those from hazardous waste, toxic waste, radon, asbestos or unknown origin). If, in the opinion of the Advisor, there is a possibility of the presence of a hazard or potential hazard, a thorough analysis of the situation should be conducted as follows:

- Assessment of all applicable environmental statutes
- A physical inspection and engineering analysis of the property and its site to determine if any environmental hazards are present
- A survey of the property and adjacent properties and sites to identify any materials or wastes which may be present as surface or subsurface contamination, including sources of potential contamination
- A review of property lease agreements, if any, to ascertain the actual or potential use of environmental hazards by tenants and tenant and landlord responsibilities regarding same

The outcome of studies conducted during the investment analysis stage is intended to enable NYSTRS to quantify the extent of environmental hazard liabilities of a prospective property investment and to identify alternative means for addressing such liabilities. If any environmental hazards are found, such quantification by NYSTRS includes:

- The establishment of an operation and management program for



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controlling or abating any environmental hazard

- Negotiation of a purchase or investment agreement to account for the costs involved for the operation and management program and/or to provide for recourse against the seller (or borrower) for any present or future environmental hazard liabilities
- Where appropriate, the review and re-negotiation of lease agreements, including indemnification clauses, to transfer the responsibility and liability for the disposal or treatment of hazardous substances to a property's tenants

The intent of the foregoing requirements of this Policy is to enable NYSTRS to understand and control environmental hazard liabilities associated with real estate investments and to allow NYSTRS the ability to consider investment in properties so affected.

4. Approval Process

The Advisor will have authority on a discretionary basis to invest and reinvest NYSTRS funds in timberland and timberland related assets.

5. Closing Process

The Advisor will schedule the closing process and comply with all Closing Checklist items. The Advisor shall hire outside professionals (civil engineers, foresters, appraisers, etc.) necessary to provide proper due diligence on behalf of NYSTRS for each property transaction. Outside professionals will be selected by means of a bid process, inviting at least three (3) bids for each job from a list of approved, qualified vendors provided by NYSTRS to the Advisor. Absent unique circumstances, the job is to be awarded to the lowest qualified bidder.

The Advisor shall request that NYSTRS' General Counsel select the outside counsel who will typically be required to review and/or prepare as necessary the investment contracts and any other pertinent documents related to the transaction for compliance with state statutes and other matters related to the transaction.

At the time the Closing Checklist is prepared, the Advisor will specify an anticipated closing date. On this date, the funding requirements



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and the amount of funds required at closing will be specified so that the appropriate funds may be set aside for the acquisition and bank accounts can be opened. A time and place of closing will also be specified.

Upon completion of the generation and review of all closing checklist items, and at least five (5) business days prior to closing, the Advisor shall send a letter to NYSTRS stating the following:

- All conditions for closing have been met (or list all outstanding items and their status)
- To the best of the Advisor's knowledge, there have been no changes since the time of Advisor's Investment Committee approval of any physical property, market area or economic factors that would cause the investment to be of lower quality than that which was approved

As soon as practical, but no later than sixty (60) days after the closing, the Advisor will provide NYSTRS with a Closing Binder. The Closing Binder will hold all pertinent original documentation pertaining to the property including, but not limited to, location, size, Purchase & Sale Agreement, Assignment from the Advisor to Client (if applicable), Closing Statement, Deeds, Owners Affidavit and Title Insurance Policy.

NYSTRS will typically retain all original documents; however, based on agreements made during the closing process, NYSTRS may accept certified copies of certain documents in lieu of originals. In this event, NYSTRS must approve the location of original documents and the holder of the original documents shall be required to obtain written approval from NYSTRS before moving these documents.

Immediately after closing, the Advisor must prepare and submit to NYSTRS a reconciliation detailing the specific use of all amounts funded by NYSTRS. Any excess funds should be returned to NYSTRS immediately and the reconciliation must explain the intended use of any funds which were not returned.

V. Asset Management Policies and Procedures

A. Introduction



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Asset management of timberland assets is designed to add value to the investment by enhancing the overall quality of the assets. This includes the application of state-of-the-art silvicultural systems, harvest schedule optimization and realization of economies of scale in forest operations. A wide range of forest management techniques are incorporated on each property to ensure responsible land stewardship, sustainable land productivity and protection from natural hazards. These techniques, including planting genetically improved seedlings, controlling competing vegetation, alleviating forest nutrient deficiencies, enhancing timber quality and growth through thinning, and controlling natural hazards like fire and insects, optimize timberland investment value by providing long-term returns and portfolio stability.

The term “asset management” as it pertains to NYSTRS’ real estate investment program encompasses all activities relating to the operations of the real estate investments in commingled funds and specified properties owned by NYSTRS and the timely and accurate reporting of the results of those operations.

The term “Asset Manager” shall mean any member of the Advisor’s staff who performs asset management.

B. Responsibilities

Asset Managers shall:

1. Provide and recommend the adoption of annual operating and capital budgets for property assets
2. Execute property level contracts with service providers
3. Select special project professionals such as engineers, appraisers and property managers
4. Assure proper insurance coverage as appropriate
5. Ensure that all property level taxes and assessments are paid on a timely basis
6. Approve and execute contracts for capital improvements on any property



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7. Approve and execute leases that are consistent with the leasing guidelines contained in the property management plan
 8. Undertake property disposition strategies and opportunities for properties under their management
 9. Provide property level operational and economic information as required by NYSTRS to facilitate appraisal, audit and reporting practices
 10. Protect and defend NYSTRS' interests in any property as may be warranted by any event of an emergency or extenuating nature
 11. Attend partnership meetings and/or represent NYSTRS at all meetings relating to the asset management policies and procedures for the assets under their management, unless otherwise specified by NYSTRS

With respect to all real property assets either owned outright, owned as an interest therein, or as a security interest therein such as a deed of trust or mortgage, NYSTRS shall either have final authority for or, in the case of co-investments, the investment instruments shall provide parameters controlling: (1) the financing or refinancing of all or any fractional ownership interest and (2) substantive changes to ownership or security interests. Notwithstanding the above, the Advisor retains full discretion to sell all or part of all timberland assets.

Due to the special nature of timberland, the asset manager will also act as property manager and therefore be required to provide and oversee the following:

1. Employment and payment of specified, named employees sufficient to manage the property assets
2. Coverage of its own overhead
3. Maintenance of accounting records in compliance with NYSTRS' requirements
4. Collection of all miscellaneous sources of income
5. Appeal, if so directed by NYSTRS, reassessments of property taxes



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6. Payment of all bills and settlement of all claims
 7. Keeping of all buildings and other improvements in good order, repair and condition
 8. Immediate provision of emergency repairs and services to the property
 9. Operation and maintenance of the property in accordance with all applicable statutes
 10. If appropriate, negotiation of contracts for utilities and the provision of all required utility services to the property
 11. Distribution to NYSTRS of all required cash at the specified time periods
 12. Prompt notification to NYSTRS of any condition of the property or its operations which fails to meet the requirements of adopted Asset Management Policies and Procedures, any pending legal action, or any fact which may adversely affect the operations of the property
 13. Provision of Workmen's Compensation and other insurance which may be identified in writing as required by NYSTRS
 14. Any other requirements of NYSTRS identified in writing to the Advisor

Personnel of Asset Managers responsible for the handling of cash or who are signatories on any property related bank account shall be sufficiently bonded. Written evidence of such bonding shall be provided to the satisfaction of NYSTRS, as requested.

The Managing Director of Real Estate or designee shall:

1. Review annual operating and capital budgets for all property assets within parameters specified in the Permanent Policies and Procedures subsection
2. Be responsible for all property management activities undertaken by the Advisor
3. Attend and represent NYSTRS at all meetings pertaining to asset



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management policies and procedures for the assets managed by Asset Managers

4. Take all other reasonable actions necessary for the proper operation of the properties and preservation of the assets
5. Report to the Real Estate Advisory Committee and/or Investment Committee of the Retirement Board on actions taken under these and other delegations of authority which have a significant effect on the value of any real estate asset and/or the real estate Portfolio
6. Monitor the execution of the delegations of authority granted the Asset Managers
 - a. Ensure that appropriate types and levels of insurance are in force at all properties and that Asset Managers have in force reasonable levels of liability insurance
 - b. Ensure that all property level taxes and assessments are paid on a timely basis on each property investment

C. Preliminary Policies and Procedures

Advisors shall prepare preliminary asset management policy statements for approval by NYSTRS prior to funding. A preliminary asset management policy and procedures statement will include, if applicable:

1. Identification of local forestry consultants
2. Initial management plans
3. Environmental risk management plan, if necessary
4. Market positioning related to competitive properties and other market influences
5. Reporting timing procedures and methodology
6. Preliminary disposition strategies

D. Permanent Policies and Procedures

Permanent asset management policies and procedures shall be defined



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and adopted in accordance with the following requirements:

1. Property Management Plan

a. Purpose

The purpose of the property management plan is to describe the operating plan for the property over the short and long term. It will include the current year budget summary and detail by tract, as well as budget summaries for the following four (4) years in lesser detail.

b. Timing

An initial property management plan will be submitted by the Asset Manager to the Managing Director of Real Estate no later than six (6) months after closing. The plan must be updated by the Asset Manager and submitted to NYSTRS annually. NYSTRS will schedule meetings with the Asset Managers to review the plan.

In subsequent years, the property management plan will be prepared and submitted to NYSTRS no later than thirty (30) days before the beginning of the fiscal year.

c. Information Requirements

Asset managers shall prepare initial and subsequent property management plans that satisfy the information requirements as specified by NYSTRS.

2. Reporting

a. Property Management Plans

The requirements and timing for the property management plans are discussed in the subsection Property Management Plan.

b. Quarterly Reports

Each calendar quarter, the Asset Managers shall prepare on a fair market value basis an operating and status report, a balance



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sheet, and an income statement. This report will contain individual property information as well as consolidated information for all properties the Asset Manager manages for NYSTRS. The report shall be submitted to the Managing Director of Real Estate. Required quarterly reports shall be delivered to NYSTRS within forty-five (45) working days after the end of each calendar quarter.

3. Valuations

a. Independent Third Party Appraisals

Independent third party appraisals shall be conducted on all NYSTRS real estate assets prior to closing and every three (3) years thereafter. The scope (full appraisal versus appraisal update) and timing of interim appraisals will be determined by NYSTRS based upon known market changes and recommendations from the Advisors. Appraisal methodology will be as set forth in Exhibit 1, attached hereto. NYSTRS has the right to request an interim appraisal for any asset at any time. No two (2) successive appraisals of any property may be performed by the same appraiser or appraisal company.

The Advisor shall maintain a list of qualified appraisers and engage one (1) or more to conduct the scheduled or required appraisals on the individual property assets. NYSTRS will be notified prior to such engagement and will have the right to disapprove any appraisal assignment. The credentials/qualifications outlined on Exhibit 2 shall be utilized when determining whether an appraiser should be included on the list.

Appraisers will be engaged directly by the Advisor. The Advisor will be responsible for coordination of the appraisal process and review of appraisal reports. Original copies of the appraisal reports shall become part of the permanent files maintained by NYSTRS for each property.

The cost of the appraisal shall be borne by NYSTRS.

b. Quarterly Valuation Process

At the end of the first quarter during which a property is



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purchased, it will be valued on the quarterly financial statement at cost. The following quarter and every quarter thereafter (as of the last day of each calendar quarter), the property will be valued by its component parts of land, merchantable timber, and pre-merchantable timber, as set forth in Exhibit 1. Land will be valued at purchase price for the first year following acquisition. Thereafter, it will be adjusted on an annual basis as set forth in Exhibit 1. The Asset Manager will report the results of the internal valuation of each property as set forth in this Timberland Investment Policy.

4. Property Management and Leasing

a. Property management policies and procedures

Annual property management guidelines shall be identified by Asset Managers and presented to the Managing Director of Real Estate or designee in the initial property management plan and updated in subsequent plans. The guidelines shall include marketing strategies, property management and leasing contract conditions, and in-depth management necessary for long-term timber production, including, but not limited to:

- Surveillance and protection of properties
- Conducting sales of all timber from properties
- Conducting sales of all mineral rights, land leases, etc.
- Assisting in reviewing of independent appraisals of each property
- Managing and implementing all stewardship projects
- Hiring qualified contractors and overseeing all contractor activities, including:
 - site preparation and planting
 - road, bridge, gate and culvert construction and maintenance
 - plowing and maintenance of firebreaks
 - property boundary line maintenance (marking) and surveys
 - vegetation management, chemical or mechanical
 - insect and disease control
 - slash burning and fire suppression
 - fertilization
 - stocking control



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- animal control
- individual tree marking for harvest operations
- surveying for threatened and endangered species
- archeological or other specialized surveys outside the scope of services customarily provided by professional timberland managers in the area in question.

While there will be no specific current cash flow requirements, property management policies should include provisions to generate, to the extent possible, sufficient cash flow to cover expenses of property management, taxes and the Advisor's fees. Five-year management budgets will be prepared and included in the initial property management plan and updated annually for each property. Practices will be scheduled that increase property values and optimize cash flow in order to maximize returns. Each timber stand's economic maturity will be analyzed using computer-based growth and yield models to develop long-term harvest schedules. Timber sales will be planned using the long-term harvest schedule as a guide.

b. Leasing Policies and Procedures

To the extent possible, all lease forms and existing and new leases for any property asset shall be standardized as soon as practicable after funding or closing.

5. Property Inspection

The Asset Manager shall maintain current information regarding the physical condition of any property as well as the competitive factors and specific market area trends affecting the property. In addition, the Asset Manager shall be required to physically inspect the property and its general market area at least once quarterly, unless otherwise provided for in the permanent Property Management Plan for the property, for the purpose of maintaining conformance with the Plan.

The information derived from the property inspection shall be communicated to NYSTRS in the quarterly report where appropriate and used as a basis for modifications to the annual plan.

6. Audits



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NYSTRS requires an annual audit of all timber investments. The audit should be performed by an independent certified public accountant. For wholly-owned properties, the Managing Director of Real Estate or designee will engage the independent certified public accountant and all audit reports and findings as a result of the audit will be directly communicated to the Managing Director of Real Estate or designee. All audit reports should be provided to NYSTRS within one hundred eighty (180) days of the holding entity's year-end.

7. Accounting

For specified property investments, the accounting systems employed by the Asset Manager and internally by NYSTRS are on a fair market value basis of accounting. Advisor fees will be expensed on NYSTRS' books.

The accounting for all activities for each property asset shall be established at the property level by the Asset Manager and at the portfolio level by NYSTRS in substantial conformity with generally accepted accounting principles (GAAP).

A cash management system with the proper level of internal controls by the Asset Manager over all cash receipt and cash disbursement items is critical to NYSTRS. In accordance with the previously specified duties and responsibilities of the Asset Managers, rents and miscellaneous sources of income shall be collected and expenses paid at the property level. All property operating bank accounts shall have as signatories appropriate personnel of the Asset Manager. The Asset Manager will submit the name(s) of bank(s) and account number(s) for NYSTRS' approval. The Asset Manager policy manual for short-term cash investments and criteria used by the Asset Manager in selection of the bank(s) should be submitted to NYSTRS for review.

Excess funds held in bank accounts by the Asset Manager should be kept to a minimum. An operating reserve sufficient to cover three (3) months of anticipated expenses shall be maintained by the Asset Manager. Funds that are held in bank accounts as compensating balances to reduce fees and/or charges by the Asset Manager should be communicated to NYSTRS' Real Estate and Investment Operations Departments.



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Unless NYSTRS provides prior approval for a different schedule, the frequency of distributions to NYSTRS should be at least quarterly. The Asset Manager will be responsible for providing NYSTRS' Investment Operations Department with prior notification of the amounts and expected delivery dates of the transfers, monitor the timely transfers of funds to NYSTRS' account, and ensure that confirmations of the transfers are immediately provided to the Managing Director of Real Estate or designee. The wired funds will include a description on the wire as to the property name and what the distribution is for, such as land sales and/or operating cash flow distributions. Within three (3) days prior to the transfer of funds to the NYSTRS' account, the Asset Manager shall make certain that a reconciliation statement is sent to the NYSTRS' Managing Director of Real Estate and to the Investment Operations Department showing the following:

- a. The source and amount of wired capital by property
- b. The category of wired capital (excess monthly cash flow, preferred returns, interest earned, mortgage payment, etc.)
- c. The net amount wired
- d. Any appropriate explanatory notes
- e. Supporting documentation for expenses deducted from monthly distribution

8. Environmental Policy

For all real property assets with any defined or potential environmental hazard, NYSTRS will adopt an environmental hazard management plan as a part of its permanent asset management policies and procedures as defined in the business plan. No property investment should be consummated without full compliance with all requirements enumerated in Section IV.B.3 entitled Environmental Hazard Review of the Equity Real Estate Investment sub-policy of the Investment Policy Manual.

The basic objective of a property-specific environmental hazard management plan is to manage risk by providing awareness of any potential hazard (including those from hazardous waste, toxic waste,



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radon, asbestos, or unknown origin) to any person in occupancy at any property, facilitate abatement or cleanup of any hazard, reduce to the extent possible future adverse effects from the existence of any hazard, continually monitor the effect on a property and its tenants from any hazard and minimize the potential liability of NYSTRS.

VI. Disposition Procedures

A. Disposition Plan

Timber will be sold when it is economically mature or when dictated by biological conditions such as the need for thinning or insect control. Market conditions will influence the exact timing of timber sales. As to land sales, timberland tracts generally will be held for long-term investment; however, the Advisor will monitor local markets for occasional land sale opportunities. Property will be sold when the sale price is greater than the estimated net present value of the tract's future cash flows if held for timber production. Properties will be sold either directly by the Advisor or, when market conditions or other circumstances dictate, by a local broker selected by the Advisor.

Asset Managers are required to conduct a formal hold/sell analysis for all NYSTRS' real estate investments as part of the annual property management planning process. As dictated by market conditions and other events, the Asset Manager may also make a sale at other times. In the event an Asset Manager determines that an asset should be sold, the Asset Manager shall provide the Managing Director of Real Estate or designee (via the management plan, quarterly report, or on an as needed basis) with the following:

1. Specific reasons for the sale
2. Structure of disposition (outright sale, partial sale, etc.)
3. Potential gross disposition price and basis for said price assumption
4. Identification of potential buyers
5. Process for implementing any disposition decisions (need for brokers, appraisers, engineers, and other professionals)
6. Anticipated disposition period and closing date



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7. Estimated costs of sale
8. Estimated net disposition proceeds
9. Estimated cash received from sale by NYSTRS
10. Estimated NYSTRS' internal rate of return for the asset's holding period
11. A summary of any trailing liability issues (if any) that NYSTRS would have to consider related to the sale

The foregoing informational requirements for property dispositions shall not apply to dispositions arising from routine thinning harvests, the grant of utility easements, or dispositions of timberland consisting of fewer than ten (10) acres where the disposition is a result of taking by eminent domain.

The Advisor retains full discretion in making the decision to sell timber or land.

The Asset Manager shall be responsible for the transmission of NYSTRS' disposition proceeds, net of costs of sale, directly to NYSTRS custodial account or to the account of the title-holding entity, as appropriate.



Exhibit 1 - Valuation of Assets

- A. Valuation. The Advisor will determine the market value of the assets of NYSTRS as of the last day of each calendar quarter. Any such date is referred to as a valuation date. The results of such valuations of the Account will be reported to NYSTRS in the quarterly reports as required in Section V.D.2 of the Timberland Investment Policy.
- B. Method of Valuation. The Advisor will use the following methods in the valuation of the assets of the Account:
1. Timber will be valued based on its latest inventory (which shall be updated not less frequently than every six (6) years), adjusted for estimated timber growth (based on the Advisor's best reasonably available information and modified to reflect interim cuttings, new plantings or significant reproduction and other relevant factors). The resulting inventory will be valued based on publicly quoted timber prices for the relevant geographic area. In connection with such valuation, the Advisor may use information from licensed foresters performing timber cruises or appraisals from real property appraisers.
 2. In determining the market value of any real property interest in land, the Advisor may use any professional appraisal made within three (3) years prior to the valuation date, provided that NYSTRS may, at its option, require a professional appraisal to be done more frequently. The appraisal used will be updated annually by the Advisor based on its assessment of land values in the area, the state of the market for similar land and such other factors as it deems relevant.
 3. All properties shall be re-appraised not less frequently than every three (3) years by an outside independent appraiser or appraising company selected by the Advisor in accordance with Section V.D.3 of the Timberland Investment Policy, provided that, should NYSTRS object to the appraiser or appraisal company so selected, the Advisor will select an alternate appraiser or appraisal company satisfactory to NYSTRS.
 4. Assets other than debt and equity interests in timber and land will be valued at market value based on data obtained from sources considered by the Advisor to be best qualified. The Advisor may rely on the market value of similar investments for which a market value is readily ascertainable or retain, with prior written approval of NYSTRS, at such intervals as it deems necessary, a qualified



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appraiser or appraisers for such purpose.

5. Each calendar quarter the Advisor shall provide NYSTRS, as part of its quarterly report, a valuation summary for each property in the Account. The summary shall include merchantable timber volume, value per unit of merchantable timber volume, acres by age of pre-merchantable timber, value per acre of pre-merchantable timber, total acres of land, and value per acre of land. Significant market and industry factors which have materially affected the valuation during the quarter will be described in a narrative report in the quarterly report.



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Exhibit 2 - Qualifications for Appraisal Firms

Appraisers and appraisal firms will be selected with care and diligence. The selection will include a review of each candidate's education, experience, references, and recent sample reports. The following credentials and qualifications should also be considered:

- A. The firm must be well established with a solid reputation for honesty, integrity and adherence to professional appraisal standards and shall generally be registered foresters. This must be verified by obtaining and contacting references for all candidate firms.
- B. The firm's appraisers must have professional training and expertise in forestry as well as appraisal methodology and practice. This is documented by sample appraisals and résumés of key personnel and staff appraisers obtained from candidate firms, which are reviewed and maintained on file at the Advisor's office.
- C. The candidate firm must be large enough or have established working relationships with other firms to provide the human and technical resources needed to conduct large-scale timber inventories, which may be part of the appraisal assignment.
- D. The candidate firm must be properly licensed and/or certified to do appraisal work in the state in which the subject property is located.
- E. Where possible, appraisers with the Member Appraisal Institute (MAI) designation combined with appropriate forestry training and timberland appraisal experience will be utilized.
- F. Candidate firms shall have no direct or indirect economic interest in the Advisor.
- G. The Advisor will show preference to candidate firms with whom they have had prior experience.

RISK MANAGEMENT





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Investment Compliance

I. Introduction

NYSTRS must comply with numerous laws, policies and standards. Many of these are set at the state and federal level, others emerge from professional organizations or are policies resulting from NYSTRS' internal governance structure. NYSTRS shall align its compliance policies and procedures with applicable laws, policies and standards and assign responsibilities for these practices at appropriate levels within the organization.

II. Objectives

The objectives of this policy as they relate to NYSTRS' investments are to:

- Identify applicable laws, policies and standards applicable to NYSTRS
- Ensure internal processes support compliance with applicable laws, policies and standards
- Provide assurance to the Retirement Board and staff that the System is in compliance with such applicable laws, policies and standards

III. Compliance Framework

- A. The Executive Director and Chief Investment Officer ensures an effective system of internal control is in place for financial reporting and investment compliance. The Executive Director and Chief Investment Officer shall periodically provide reports to the Retirement Board on the System's compliance program and shall keep the Retirement Board apprised of significant issues in a timely manner.
- B. Primary compliance responsibility rests with Managing Directors who are responsible for program compliance and for implementing mitigating or corrective actions to address process and control deficiencies and are considered the first line of defense in the investment compliance framework.¹
 - 1. Management of individual Asset Classes and compliance with policies as documented in the Investment Policy Manual ("IPM") is the responsibility of the Managing Directors. Compliance shall include:
 - a. Monitoring adherence to portfolio guidelines for internally and externally managed portfolios within their asset class and taking corrective action as necessary
 - b. Monitoring adherence to contract provisions with external investment managers and advisors

¹ Source: IIA Position Paper: The Three Lines of Defense in Effective Risk Management and Control – January 2013.



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Investment Compliance

- c. Adhering to policy provisions as documented in this IPM
 - d. Adhering to the laws, rules and regulations governing the capital markets
 - e. Ensuring effective internal controls are in place for internally managed investment programs and activities
 - f. Supervising staff to ensure compliance with laws, rules, regulations and policy
 - g. Taking necessary corrective actions to resolve identified instances of non-compliance and, with input from Risk Management, developing and implementing process and/or procedural adjustments to prevent occurrences of non-compliance
- C. Risk Management serves as the second line of defense and has the following responsibilities:
 - 1. Develop, document and implement procedures, processes and controls related to compliance oversight and monitoring
 - 2. Conduct compliance reviews of program activities and communicate results to staff
 - 3. Meet regularly with investment staff to coordinate program compliance oversight efforts
 - 4. Properly escalate compliance reporting based on the type and severity of the issue. While not all inclusive, the following list provides guidance on escalation:
 - a. Guideline compliance at the portfolio level shall be discussed with the Managing Director of the asset class.
 - b. Compliance at the asset class level shall be discussed with the Managing Director of the asset class and periodically reported to the Internal Investment Committee.
 - c. Material non-compliance at the asset class level shall be discussed with the Managing Director of the asset class and the Executive Director and Chief Investment Officer and reported to the Internal Investment Committee and Internal Audit.
 - d. Regulatory breaches shall be discussed with the General Counsel and Executive Director and Chief Investment Officer and reported to the Director of Internal Audit.



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Investment Compliance

5. Confer with the General Counsel, as necessary, to keep abreast of laws, rules and regulations applicable to NYSTRS and interpretation of those laws, rules and regulations. In all cases, NYSTRS will comply with regulatory reporting requirements.
- D. The Investment Operations Department ("IOD") also acts as a compliance check and balance, providing independent compliance monitoring over investment transaction activity, ensuring investment assets are properly custodied and accounted for and that NYSTRS is complying with regulatory filings as required by the SEC and various market regulators in its role as the liaison with NYSTRS' custodian. Specifically, the IOD provides investment compliance reporting as follows:
1. Performs or reviews reconciliations of investment portfolios between investment manager and custodian to ensure an accounting for all transaction activity and assets held are properly custodied and fairly valued
 2. Assists the Managing Directors in monitoring compliance with portfolio guidelines by reviewing compliance reports generated by the System's Custodian and/or portfolio management system, and either resolving issues or referring issues to the Managing Director, or designee, as appropriate
 3. Prepares and distributes the "Leeway" report showing status of invested assets outside of the specifically listed statutory limits but which are in compliance with the Leeway Clause, RSSL §177(9)
 4. Prepares various regulatory filings as required by market regulators
- E. As the third line of defense in the organization, Internal Audit provides the Retirement Board and senior management with reasonable assurance on investment compliance. Internal Audit provides assurance on the effectiveness of governance, risk management and internal controls, including the manner in which the first and second lines of defense achieve risk management and control objectives. The Internal Audit Department has the highest level of independence and objectivity within the organization based on a functional reporting line directly to the Retirement Board through the Audit Committee as well as having limited to no operational responsibilities. This level of independence is not present in the second line of defense.
- F. The General Counsel and Legal Department staff shall act as a resource to NYSTRS' Board and staff in identifying and interpreting the laws, rules and regulations applicable to NYSTRS. The General Counsel shall be responsible for investigating compliance complaints regarding the conduct of NYSTRS or its personnel.



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IV. Responsibilities & Controls

Responsible Party	Action
General Counsel and Legal Department	1. Act as a resource to NYSTRS' Board and staff in identifying and interpreting the laws, rules and regulations applicable to NYSTRS. Engage outside legal counsel as needed.
Managing Directors	2. Maintain program compliance and implement corrective actions to address process and control deficiencies.
Investment Operations Department	3. Review compliance reports generated by the System's Custodian and/or portfolio management system, and either resolve issue or refer issue to the Managing Directors, or designees, as appropriate. 4. Prepare and distribute the quarterly report on Leeway Clause compliance.
Risk Management	5. Develop, document, and implement procedures, processes and controls related to compliance oversight and monitoring. 6. Conduct compliance reviews of program activities and communicate results to divisions. 7. Meet regularly with investment staff to coordinate program compliance oversight efforts. 8. Properly escalate compliance reporting based on the type and severity of the issue. 9. Confer with the General Counsel, as necessary, to keep abreast of laws, rules, and regulations applicable to NYSTRS and the interpretation of those laws, rules and regulations.
Executive Director and Chief Investment Officer	10. Periodically provide reports to the Retirement Board on the System's compliance program.



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Investment Risk Management

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Investment Risk Management

I. Introduction

NYSTRS recognizes risk is inherent in all investments and must be prudently managed. Therefore, NYSTRS shall align its risk management practices with its strategic objectives and assign responsibilities for these practices at appropriate levels within the organization.

II. Objectives

The objectives of this policy as they relate to NYSTRS' investments are:

- To identify, assess and address significant risks that may adversely affect NYSTRS' ability to effectively manage System assets, meet liquidity requirements and maintain an appropriate funding level
- To support the establishment and implementation of risk mitigation procedures
- To ensure that risk appetite levels are considered in the strategic decision-making process
- To determine the System's risk appetite at the total Fund level and provide a framework for reporting risk levels at the total Fund and strategy level, as appropriate
- To measure and communicate risks related to risk-reward objectives

III. Risk Framework

A. General Responsibilities

Executive Director and Chief Investment Officer

The Executive Director and Chief Investment Officer ensures an effective system of internal control is in place for financial reporting and risk management, ensures that a business continuity plan is in place for continuity of critical business processes and maintenance of System assets and to ensure System objectives are met.¹ The Executive Director and Chief Investment Officer shall periodically provide reports to the Retirement Board on the System's risk management program.

NYSTRS' Management Team and Designees

As the first line of defense, operational managers own and manage risks. They are responsible for identifying risks and implementing corrective actions to address process and control deficiencies.²

¹ Source: NYSTRS Board Governance Manual – February 2019



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Investment Risk Management

Risk Management

The risk management function facilitates and monitors the implementation of effective risk management practices by operational management and assists risk owners in identifying risks, defining the target risk exposure and reporting adequate risk-related information throughout the organization. This is considered to be the second line of defense in effective risk management and control.²

Internal Audit

As the third line of defense, Internal Audit provides the governing body and senior management with reasonable assurance based on the highest level of independence and objectivity within the organization - a functional reporting line directly to the Retirement Board through the Audit Committee. This level of independence is not present in the second line of defense. Internal Audit provides reasonable assurance on the effectiveness of governance, risk management and internal controls, including the manner in which the first and second lines of defense achieve risk management and control objectives.²

B. Risk Appetite

1. Risk appetite at the total Fund level is incorporated into a periodic asset/liability study and the annual asset allocation process which includes discussions between the System's general investment consultant (GIC) and Internal Investment Committee and results in a recommendation from the GIC to the Retirement Board to retain or revise the Fund's asset allocation.
2. Managing Directors are responsible for the management of the asset classes and selection or development of individual portfolios/strategies for each asset class within policy constraints as documented in this Investment Policy Manual.
3. Managing Directors shall ensure that investment recommendations at the asset class and individual portfolio level include a discussion of the risks and rewards of the proposal relevant at the total Fund, asset class and individual portfolio levels when presenting the proposal for consideration as part of NYSTRS' established approval processes. (e.g., by the Internal Investment Committee, Advisory Committee and/or the Retirement Board.)

² Source: IIA Position Paper: The Three Lines of Defense in Effective Risk Management and Control – January 2013



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Investment Risk Management

C. Reporting

Risk reporting at the total Fund level is provided to the Board on a quarterly basis and is informed by NYSTRS' multi-asset class investment risk management system, along with other sources of information, such as internally produced cash flow projections. These risk reports are designed to provide relevant information on NYSTRS' investment risk posture. Reporting includes:

1. Total Fund volatility, liquidity, and concentrations across geography and industry.
2. Measurement of risk on an absolute basis and compared to established benchmarks.
3. Significant contributors to risk.
4. Results of stress testing and scenario analysis.
5. Other reports as may be determined over time to be relevant in managing the System's risk posture.



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Investment Risk Management

IV. Responsibilities & Controls

Responsible Party	Action
General Investment Consultant	<ol style="list-style-type: none">1. Prepare asset/liability analysis periodically and review NYSTRS' asset allocation relative to recent and historical investment experience, market developments and NYSTRS' long-term objectives annually.2. Recommend changes to the asset allocation as necessary.
Retirement Board	<ol style="list-style-type: none">3. Review asset/liability analysis and annual consultant recommendation to maintain or revise asset allocation.4. Review quarterly investment risk reporting.
Managing Directors	<ol style="list-style-type: none">5. Manage asset classes within constraints as described in NYSTRS' Investment Policy Manual.6. Ensure that investment recommendations at the asset class and individual portfolio level include a discussion of the risks and rewards of the proposal relevant at the total Fund, asset class and individual portfolio level when presenting the proposal for consideration as part of established approval processes. (e.g., by the Internal Investment Committee, Advisory Committee and/or the Retirement Board)



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Investment Risk Management

Risk Management	<p>7. Report on and monitor NYSTRS' risk posture.</p> <p>8. Reports shall include volatility, liquidity, concentrations, significant contributors to risk, as well as the results of stress testing and scenario analysis and other relevant reports as requested.</p> <p>9. Monitoring activity shall include apprising the Executive Director and Chief Investment Officer and Managing Directors of NYSTRS' risk posture compared to established guidelines quarterly as well as significant contributors to risk. More frequent reporting and discussions will take place as warranted.</p>
Executive Director and Chief Investment Officer	<p>10. Provide reports to the Retirement Board on the System's risk management program on a quarterly basis.</p>



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AML/OFAC COMPLIANCE POLICY

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AML/OFAC COMPLIANCE POLICY

I. INTRODUCTION

This policy addresses, implements and ensures System compliance with state and federal law and the avoidance of transactions in violation of applicable sanctions or anti-money laundering ("AML") legislation, rule, regulation or order administered or promulgated by the US Department of the Treasury, including through the Office of Foreign Assets Control ("OFAC"), Office of Investment Security, or the Financial Crimes Enforcement Network. The goal of this policy is to ensure that System assets are not used, invested or commingled by investment funds, managers or borrowers in transactions or accounts in violation of applicable AML and OFAC laws and regulations.

II. LEGAL AUTHORITY

- OFAC operates under the Executive Branch national emergency powers as well as authority granted by specific legislation including, but not limited to, the Trading With the Enemy Act, the International Emergency Economic Powers Act and the Antiterrorism and Effective Death Penalty Act to impose controls, prohibit transactions and trigger obligations upon US persons to block (freeze) assets under US jurisdiction. All US persons including all US citizens and permanent resident aliens regardless of location, all persons and entities within the US and all US incorporated entities and their foreign branches must comply with OFAC regulations. With certain OFAC sanction programs, all foreign subsidiaries owned or controlled by US companies must also comply.
- Related statutes such as the Bank Secrecy Act, the USA PATRIOT Act and the Foreign Corrupt Practices Act, along with various executive orders, provide the Department of the Treasury and federal regulators with additional authority to detect, deter, and disrupt prohibited transactions that violate applicable AML and OFAC laws and regulations.
- The New York State Department of Financial Services ("DFS"), as the System's State regulator under New York State Insurance Law, possesses the authority to oversee and examine the adequacy of the System's process, procedure and policy for compliance with AML and OFAC laws and regulations.



AML/OFAC COMPLIANCE POLICY

III. AML/OFAC COMPLIANCE PROCEDURES

In order to ensure compliance with US Department of the Treasury requirements and preclude the possibility of System funds and assets being invested in or commingled by investment funds, managers and borrowers in transactions or accounts in violation of applicable AML and OFAC laws and regulations, the System has determined to ban investments in, or transactions with, investment funds, managers and borrowers that do not comply with applicable AML and OFAC laws and regulations. Banning such investments will highlight to investment funds, managers, and borrowers that the System will not knowingly permit its funds and assets to be used in any manner that violates applicable AML and OFAC laws and regulations.

A. General Rule

As a matter of policy, the System will not invest in any fund, engage any investment manager or transact with any borrower where the fund, manager, or borrower does not comply with applicable AML and OFAC laws and regulations and who does not provide a certification of same as per Appendix B or Appendix C, as applicable.

B. Implementation

1. The System shall conduct an annual risk assessment specific to AML/OFAC compliance and, where warranted, amend and/or supplement this policy commensurate with the resulting risk profile.
2. Whenever System investment staff is considering investing in a private equity or real estate fund, engaging an external investment manager for a new investment opportunity, or transacting with a borrower, the above-referenced certification shall be required for the completion of staff due diligence and shall be a condition precedent for the investment and disbursement of System funds and assets. Thereafter, such certification/s and/or other evidence reaffirming AML/OFAC compliance shall be required to the extent necessary for compliance with any legal requirement or any other requirement of any Governmental Authority, or as may be reasonably determined by the System.



AML/OFAC COMPLIANCE POLICY

IV. CONTRACT AND CERTIFICATION PROVISIONS

In order to ensure System compliance with applicable AML and OFAC laws and regulations when investing with a private equity or real estate fund, external investment manager, or transacting with a borrower, the applicable contractual documents for such investments and transactions shall contain a contract provision providing for the funds, managers, and borrowers to conduct their duties in compliance with law and applicable AML and OFAC regulations. Typically, in the case of fund investments, the provisions will be included in a side letter executed by the fund and the System.

The System's Legal Department has prepared model language for inclusion in fund side letters, investment manager contracts, and real estate mortgage documents as applicable (Appendix A) along with requisite certification language for fund investment and management contracts (Appendix B) and real estate mortgages (Appendix C).

Certifications shall be made by the investment fund, external investment manager, or borrower (or a borrower party applicant where borrower entity has yet to be formed, with additional certification from borrower once formed) to the System's Chief Risk Officer and the final executed form acceptable to the System must be submitted before or contemporaneous with the completion of business due diligence and prior to the commencement of legal due diligence and the negotiation of contract terms.

The investment fund, investment manager, or borrower (as applicable) shall be required to promptly notify the System's Chief Risk Officer upon any occurrence, change or development causing any component of the certification to become untrue, and the investment fund, investment manager, or borrower to be in noncompliance with this policy.

V. IMPLEMENTING PROCEDURES

- System investment staff shall be responsible for furnishing the investment funds, external investment manager candidates, and prospective borrowers with a copy of this policy. Additionally, System investment staff, as part of their due diligence, shall ascertain whether the investment fund, external investment manager candidate, or prospective borrower is ready, willing, and able to comply with the requirements of this policy and thereafter obtain the requisite certification.



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- Outside counsel representing the System in any applicable transaction or agreement shall be furnished with a copy of this policy.
- The agreement of the investment fund, external investment manager candidate, or prospective borrower to comply with applicable AML and OFAC laws and regulations, provide the contract provisions set forth in Appendix A and submission of an executed certification as per Appendix B or C (as applicable) and acceptable to the System shall be conditions precedent for the System's investment and engagement.

VI. APPLICABILITY

This policy applies to all private equity/private debt and real estate fund investment commitments, external investment manager agreements, and real estate mortgages authorized by the System. Nothing herein, however, is intended to suggest or imply that any statute, regulation, or policy applicable to the System and/or referred to herein were not in full force at any time prior to introduction of this policy.



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VII. RESPONSIBILITIES AND CONTROLS

Responsible Party	Action
Managing Directors of Each Asset Class	<ol style="list-style-type: none">1. Ensure funds, investment managers, prospective borrowers, and outside counsels are made aware of System policy regarding AML and OFAC compliance.2. Verify during due diligence that funds, investment managers, prospective borrowers, and their respective principals and 20% or more owners do not appear on the OFAC list of Specially Designated Nationals ("SDN").3. In concert with the Office of the General Counsel, ensure applicable side letter provisions set forth in Appendix A are included in each contract with newly engaged funds, investment managers, or borrowers.4. Maintain an official copy of executed mortgages, loans, contracts, side letters, and subscription agreements with applicable AML and OFAC provisions and certifications.
Funds, External Managers, and Borrowers	<ol style="list-style-type: none">5. Comply with applicable AML and OFAC laws, regulations and requirements.6. Provide certification/s and contract provisions as required by this policy.7. Promptly notify the System's Chief Risk Officer upon any occurrence, change, or development causing any component of the certification to become untrue and the investment fund, investment manager, and borrower to be in non-compliance with this policy.



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Office of the General Counsel	<ol style="list-style-type: none">8. Draft (with outside counsel/s as necessary) and approve contract/side letter provisions required of investment funds, investment managers, and borrowers as applicable.9. In concert with Office of the Chief Risk Officer, receive, review, and approve the sufficiency of certifications from investment funds, investment managers, and borrowers prior to commencement of legal due diligence and negotiation of contract or mortgage terms.
Chief Risk Officer	<ol style="list-style-type: none">10. Maintain an official copy of acceptable and executed certifications.11. Coordinate and conduct annual risk assessments of the System's AML and OFAC exposure and susceptibility.12. To the extent necessary for compliance with legal or regulatory requirements or as reasonably determined necessary by the System, obtain and maintain re-certifications and/or other evidence reaffirming AML/OFAC compliance from active and on-going funds, investment managers, and borrowers with whom the System has invested or transacted.13. File reports with OFAC and contemporaneously notify the System's Retirement Board of any known violation of applicable AML and OFAC laws and regulations involving System funds and assets.14. In concert with the Office of the General Counsel, receive, review, and approve the sufficiency of certifications from investment funds, investment managers, or borrowers.



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Finance Department and Investment Operations Department	15. Upon direction from the Risk Management Department and in consultation with the Office of the General Counsel, instruct the System's Custodian or depository institution to freeze, block, segregate, permit OFAC-authorized debits, report, and/or take other appropriate action with respect to the affected assets to comply with AML and OFAC laws and regulations.
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APPENDIX A - MODEL SIDE LETTER PROVISIONS
AML/OFAC COMPLIANCE

- a. The General Partner, external Investment Manager, or Borrower (as applicable) acknowledges that the Investor has provided it a copy of its written AML/OFAC compliance policy.
- b. The General Partner, external Investment Manager, or Borrower (as applicable), represents, warrants, and covenants that it shall conduct its duties and obligations hereunder in compliance with all applicable laws, rules, and regulations.
- c. Model Side Letter/Fund Investment and Manager Contracts: Pursuant to Investor's AML/OFAC compliance policy, the General Partner or Manager has executed and delivered a certification dated (___/___/___) acceptable to Investor, and the same is reiterated and incorporated as if fully set forth herein.
- d. Model Side Letter/Real Estate Mortgage Documents: None of Borrower, Guarantor, any other Constituent Borrower Parties, or, to their respective knowledge, any of their respective director, officer, employee, agent, or affiliate is an individual or entity ("Person") that is, or is owned or controlled by Persons that are: (i) the subject of any sanctions administered or enforced by the U.S. Department of the Treasury's Office of Foreign Asset Controls ("OFAC"), or the U.S. Department of State (collectively, "**Sanctions**"), or (ii) located, organized or resident in a country or territory that is, or whose government is, the subject of Sanctions..

The Borrower, Guarantor, and any other Constituent Borrower Parties and, to their respective knowledge, their respective directors, officers, employees and agents are in compliance with all applicable Sanctions and with the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "FCPA") and any other applicable anti-corruption law, in all material respects.

The Borrower, Guarantor, and any other Constituent Borrower Parties will maintain in effect policies and procedures designed to promote compliance by them and their affiliates and their respective directors, officers, employees, and agents with applicable Sanctions and with the FCPA and any other applicable anti-corruption laws.

The Borrower, Guarantor, and any other Constituent Borrower Parties will not directly or indirectly, use the Loan proceeds, or lend, contribute, or otherwise make available such proceeds to any affiliate, partner entity, or other Person, (i) in furtherance of an offer, payment, promise to pay, or authorization of payment or giving of money, or anything else of value, to any Person in violation of any other applicable anti-



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corruption law, or (ii) (A) to fund any activities or business of or with any Person, or in any country or territory, that, at the time of such funding, is, or whose government is, the subject of Sanctions, or (B) in any other manner that would result in a violation of Sanctions by any Person (including any Person participating in the transaction in any capacity, including but not limited to Lender).

The Lender to the extent subject to the PATRIOT ACT hereby notifies the Borrower, Guarantor, and any Constituent Borrower Parties that, pursuant to the requirements of the PATRIOT ACT, it may be required to obtain, verify and record information that identifies them, which information includes their name and addresses and other information that will allow such Lender to identify them in accordance with the PATRIOT Act.

Lender will not transfer any funds to, and will not accept any amounts from, a prospective Borrower, Guarantor, or any other Constituent Borrower Parties if such parties cannot make the foregoing representations and warranties or comply with the foregoing covenants or if Lender has reasonable basis for belief that any of such representations and warranties are not true or Borrower has breached any of the foregoing covenants. Borrower agrees to promptly notify Lender should Borrower become aware of any change in the information set forth in these representations and warranties. The foregoing representations and warranties must also be true and restated by Borrower as of the Closing Date and must remain true throughout the term of the Loan.

To the extent it is necessary for the Lender's compliance with any legal requirement or any other requirement of any Governmental Authority, or Lender's established compliance policy, Borrower further covenants and agrees to re-certify and deliver to Lender any such certification and/or other evidence as may be reasonably requested by Lender in Lender's reasonable discretion, reaffirming the above compliance.

e. The certification shall be addressed to:

[Name]
Chief Risk Officer
New York State Teachers' Retirement System
10 Corporate Woods Drive
Albany, NY 12211-2395
E-mail:



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APPENDIX B – SAMPLE CERTIFICATION

AML/OFAC Compliance Certification – Fund Investment and Management Contracts

[Investment Company Name and Fund]
[Investment Company Address]

Chief Risk Officer
New York State Teachers' Retirement System
10 Corporate Woods Drive
Albany, NY 12211-2395
E-mail: nystsrcompliance@nystsr.org

- (a) The undersigned General Partner or external Investment Manager, as applicable, acknowledges the Investor has an established policy requiring AML/OFAC compliance and for General Partner or external Investment Manager, as applicable, to provide this certification of compliance. For purposes hereof, "General Partner/Investment Manager" shall mean and include the General Partner/external Investment Manager, their control persons and executive officers, and each affiliate, director, partner, member, officer, agent, employee, and shareholder who possesses or exercises management or investment authority and discretion with respect to the Fund/Account to which Investor may make a commitment of its funds or assets.
- (b) The General Partner/Investment Manager, as applicable, represents, warrants, covenants that it shall conduct its duties and obligations in compliance with applicable law, rules, and regulations, and further certifies that it shall cause the Partnership/Account to avoid transactions, including investments in the Fund/Account, that are:
- 1) in violation of any applicable sanctions or anti-money laundering legislation, rule, regulation, or order administered by the US Department of the Treasury, including through the Office of Foreign Assets Control ("OFAC"), Office of Investment Security, or the Financial Crimes Enforcement Network, including Subtitle B, Chapters V and X of Title 31 of the U.S. Code of Federal Regulations, in each case as amended from time to time, or
 - 2) (i) with any person or entity appearing on the Specially Designated Nationals and Blocked Persons List of the OFAC as amended from time to time, (ii) with any person or entity known by the Partnership/Manager (after reasonable inquiry) to



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be owned or controlled by any person or entity described in the foregoing item (i) with ownership of 20% or more of outstanding voting securities being presumptively a control position, or (iii) directly or indirectly with a country or region against which the U.S. maintains comprehensive economic sanctions, or with any person or entity having its principal place of business located in said country or region. For purposes of the foregoing, the Partnership/Manager's reliance on a representation or warranty made by a counterparty at or prior to the time of the investment or transaction and compliance with the General Partner's/Manager's internal AML and OFAC compliance policy will constitute reasonable inquiry.

- (c) The General Partner/external Investment Manager confirms the term "person or entity" includes governments, territories, and other political entities.
- (d) To the extent necessary for compliance with any legal requirement or any other requirement of any Governmental Authority or regulators, or NYSTRS'/Investor's established compliance policy, General Partner/Manager covenants and agrees to re-certify and deliver to NYSTRS/Investor any such certification and/or other evidence as may be reasonably requested reaffirming the above compliance.
- (e) General Partner/Manager further covenants and agrees to promptly notify NYSTRS'/Investor's Chief Risk Officer upon any occurrence, change, or development causing any component of this certification or any other certification referred to in clause (d) above to become untrue.
- (f) Pursuant to Investor's AML/OFAC compliance policy, this certificate shall be attached to Investor's side letter/agreement relating to the Fund/Account, and all of the provisions of this certificate shall be incorporated by reference into such side letter/agreement as if fully set forth therein.



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Fund:

General Partner:

By: _____

Name:

Title:

Date:

Investment Manager to Fund:

By: _____

Name:

Title:

Date:



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APPENDIX C – SAMPLE CERTIFICATION

OFAC Compliance Certification – Real Estate Mortgages

Chief Risk Officer
New York State Teachers' Retirement System
10 Corporate Woods Drive
Albany, NY 12211-2395
E-mail: nystsrcompliance@nystsr.org

(a) The undersigned Borrower/Applicant acknowledges the New York State Teachers' Retirement System ("NYSTRS") has an established policy requiring AML/OFAC compliance and for Borrower/Applicant to provide this certification of compliance with respect to Borrower, Guarantor, any other Constituent Borrower Parties, or any of their respective Affiliates. As used herein, "Constituent Borrower Parties" means (i) any person or entity who has a twenty percent (20%) greater direct or indirect legal, beneficial, or other ownership interest in Borrower, or the direct or indirect control or power to vote twenty percent (20%) or more of the outstanding shares or voting interests of the Borrower, (ii) any general partner, manager, managing member, trustee or person or entity exercising similar functions with respect to the Borrower, and (iii) any officer, director, executive employees, or other person or entity with the power to exercise, directly or indirectly, control over the management, policy, or activities of Borrower or major decisions regarding the operations and management of Borrower.

(b) The Borrower/Applicant represents and further certifies that none of Borrower, Guarantor, the Constituent Borrower Parties, or to their respective knowledge, any director, officer, employee, agent, or affiliate of the Borrower/Applicant is an individual or entity ("Person") that is, or is owned or controlled by Persons that are: (i) the subject of any sanctions administered or enforced by the United States Department of the Treasury's Office of Foreign Assets Control ("**OFAC**") , or the U.S. (collectively "**Sanctions**"); or (ii) located, organized or resident in a country or territory that is, or whose government is the subject of Sanctions.

The Borrower/Applicant, the Constituent Borrower Parties and their respective directors, officers, and employees and, to their respective knowledge, their agents are in compliance with all applicable Sanctions and with the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "FCPA") and any other applicable anti-corruption law, in all material respects. The Borrower/Applicant will maintain in effect policies and procedures designed to promote compliance by them and their respective directors, officers, employees, and agents with applicable Sanctions and with the FCPA and any other anti-corruption laws. The Borrower/Applicant will not, directly or indirectly, use the investment or loan proceeds,



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

AML/OFAC COMPLIANCE POLICY

or lend, contribute, or otherwise make available such proceeds or other amounts advanced under any of the Loan Documents to any affiliate, joint venture partner, or other Person (i) in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any Person in violation of the FCRA or any other applicable anti-corruption law, or (ii) (A) fund any activities or business of or with any Person, or in any country or territory, that, at the time of such funding, is, or whose government is, the subject of Sanctions, or (B) in any other manner that would result in a violation of Sanctions by any Person (including any Person participating in the transaction in any capacity, including but not limited to Lender.)

The Lender to the extent subject to the PATRIOT ACT hereby notifies the Borrower/Applicant that, pursuant to the requirements of the PATRIOT Act, it may be required to obtain, verify and record information that identifies them, which information includes their name and address and other information that will allow such Lender to identify them in accordance with the PATRIOT ACT.

(c) The undersigned [Borrower/Applicant] further covenants and agrees to promptly notify NYSTRS' Chief Risk Officer upon any occurrence, change, or development causing any component of this certification or any other certification referred to clause (b) above to become untrue.

Pursuant to Investor's AML/OFAC compliance policy, this certificate shall, in Investor's sole discretion, be attached to the loan agreement, and all of the provisions of this certificate shall be incorporated by reference into such loan agreement as if fully set forth therein.

Borrowing Entity (please print)

Borrower/Applicant (please print)

Signature of Borrower/Applicant

Print Name

Date



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

The Investment Policy Manual (IPM) is updated annually and approved by the Board at its October meeting. This is a chronological summary of the significant changes to the investment policies over the course of time.

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CHRONOLOGY: Summary of Significant Changes

DELEGATION OF INVESTMENT AUTHORITY (INVESTMENT DISCRETION)

2024

- Clarified the processes to terminate a manager under exigent and non-exigent circumstances

2023

- Addition of "Limited Waiver of Credit Ratings Requirements for U.S. Government Obligations" section (July 26, 2023 Board meeting)

2020

- Update ED&CIO discretion – upon recommendation of IIC, ED&CIO has authority to engage any new investment manager for any public markets portfolio for an initial investment up to \$1billion; private equity/debt funds and Real Estate debt or equity funds can invest up to \$300 million and can sell or dispose without regard to amount; Real Estate direct debt transactions can invest and sell up to \$300 million with REAC approval; Real Estate direct equity transactions can invest or sell up to \$300 million with REAC approval (January 30, 2020 Board meeting)

2018

- Addition of "Reallocation of Assets to Manage Risk and Within Allowable Asset Allocation Ranges" section (August 1, 2018 Board meeting)

2017

- Updated ED&CIO authority to \$200 million in any private equity or real estate successor funds and \$100 million in any other private equity or real estate fund, limited partnership or other collective investment vehicle (April 27, 2017 Board meeting – Investment Discretion)
- Updated Investment Committee of the Retirement Board authority to invest up to \$300 million by mail vote in any private equity or real estate asset, fund, limited partnership or other collective investment vehicle when in the judgment of the ED & CIO there isn't time to bring the investment to a regular meeting of the Board (April 27, 2017 Board meeting – Investment Discretion)

2014

- Updated ED&CIO authority to sell or dispose of any mortgage or a package of mortgages where the aggregate outstanding balance and interest does not exceed \$100 million and of any equity real estate where the aggregate price does not exceed \$100 million (July 23, 2014 Board meeting – Investment Discretion)

2013

- The Executive Director&CIO is authorized to reallocate up to \$150 million per actively managed global fixed income portfolio to or from cash (July 24, 2013 Board meeting – Investment Discretion)

2012

- New section added to the IPM: a summary of investment discretion granted to the Retirement Board's Investment Committee and System staff (October 25, 2012 Board meeting – IPM)

DISCLOSURE (PLACEMENT AGENT POLICY)

2009

- New section added to IPM: Transparency & Accountability Policy (October 29, 2009 Board meeting – IPM)

DOMESTIC EQUITY

2018



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

-
- Asset allocation range went from 31-39% with target range of 35% to 29-37% with target range of 33% (to fund new asset class Global Equity) (April 26, 2018 Board meeting – Asset Allocation)

2016

- Asset allocation range went from 32-42% with a target of 37% to a range of 31-39% with a target of 35% (August 3, 2016 Board meeting – Asset Allocation)

2011

- New Appendix C – Use of Exchange Traded Equity Futures (October 27, 2011 Board meeting – IPM)
- Board no longer ratifies trades by System staff (October 28, 2010 Board meeting; not updated in IPM until 10/27/2011)

2010

- Addition of Russell Mid Cap benchmark for midcap managers

2006

- Remove reference to authorization to manage exposure to tobacco exposure in System internally managed portfolios
- Removed 20% style tilt target for passively managed equities and 10% limit of System equities managed by external managers 2006

DOMESTIC EQUITY TRADE ALLOCATION POLICY FOR INTERNALLY MANAGED PORTFOLIOS

2014

- Codified the principles and standards that guide the allocation of equity trades to internally managed portfolios. (October 30, 2014 Board meeting – IPM)

2010

- ED authorized to reallocate up to \$150 million per quarter in assets from System's actively managed domestic equity portfolios to System's passively managed domestic equity portfolios and/or to cash flow; reallocated amounts not to exceed 25% of assets under management (July 26, 2010 Board meeting)

EQUITY REAL ESTATE

2016

- Asset allocation range went from 6-14% with a target of 10% to a range of 6-16% with a target of 11% (August 3, 2016 Board meeting – Asset Allocation)

2011

- Legislative change increased the limit of equity real estate assets allowed from 5% to 10% of fund assets (October 27, 2011 Board meeting – IPM)

2008

- Updated allocation to 10% target; 6-14% range
- Managing Director of Real Estate responsible for overseeing Equity Real Estate investments

2007

- Updated policy to reflect investment in Global REITS
- Approval required by Board Finance Committee or Executive Director as described per policy



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

FIXED INCOME

2016

- Asset allocation range went from 13-22% with a target of 17% to a range of 12-20% with a target of 16% (August 3, 2016 Board meeting – Asset Allocation)
- Benchmark name change from Barclays US Aggregate Float Adjusted Bond Index to Bloomberg Barclays US Aggregate Float Adjusted Index (October 26, 2016 Board meeting – IPM)

2010

- Benchmark changed from the Barclays Capital U.S. Aggregate to Barclays Capital U.S. Aggregate Float Adjusted Bond Index

2007

- Per Board resolution, certain CMBS managers may invest up to 20% of their allocation in investment grade rated debt of REITs as market opportunities arise

GLOBAL BONDS

2024

- New Global Bonds-Internal section added as a result of Board approved internally managed emerging market debt portfolio (July 31, 2024 Board Meeting) 2023
- Updated to reflect a benchmark addition: the Bloomberg Global Aggregate Corporate Bond Index in USD hedged to USD (April 27, 2023 Board Meeting – IPM)

2021

- Asset allocation range changed from 0-3% to 0-4% (Board Meeting July 28 2021)

2016

- Benchmark name change from Barclays Global Aggregate Float Adjusted Index to Bloomberg Barclays Global Aggregate Float Adjusted Index (October 26, 2016 Board meeting – IPM)

2013

- New policy due to funded allocation to this asset class. Target 2% Range 0-3% (July 24, 2013 Board meeting – Asset Allocation)

GLOBAL EQUITIES

2018

- New section added 2018 as a result of Board approved asset allocation change – approved at the April 26, 2018 Board meeting. NYSTRS will adopt a target allocation to Global Equity of 4% (and range of 0-8%) to be funded from the existing US and Non-US equity allocations (decrease US equity by 2% and Non-US equity by 2%)

HIGH YIELD BONDS

2022

- Updated to reflect benchmark additions: ICE BofA US High Yield Constrained Index and Bloomberg U.S. High Yield 1% Issuer Capped Index (October 27, 2022 and August 3, 2022 Board Meetings – IPM)



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

2016

- Board approved this asset class with a range of 0-3% and a target range of 1% (August 3, 2016 Board meeting – Asset Allocation)

INDEPENDENCE OF CONSULTANTS

2019

- New section added October 2019 to provide policy regarding independence of consultants that offer investment consulting services and also offer investment management services, often through an affiliate (January 30, 2020 – IPM)

INTERNAL ASSET MANAGEMENT PROFESSIONAL CODE OF CONDUCT

2014

- Adopted CFA Institute's code of professional conduct for asset management (October 30, 2014 Board meeting – IPM)

INTERNATIONAL EQUITY

2022

- Asset allocation change from 12-20% with 6% target to 11-19% with 5% target (August 3 2022 Board meeting)
- Addition of The MSCI India IMI Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of India.

2018

- Asset allocation range went from 14-22% with target of 18% to 12-20% with target of 16% (to fund new asset class Global Equity) (April 26, 2018 Board meeting – Asset Allocation)

2012

- Removed the MSCI EAFE benchmark for international equity portfolios. NYSTRS uses the MSCI ACWI-ex-US index (October 25, 2012 Board meeting – IPM)
- Updated to reflect the addition of an internally managed Canadian Equity portfolio (October 25, 2012 Board meeting – IPM)
- Updated to reflect Foreign Exchange for internally managed international equity will be handled by the Fixed Income Department (October 25, 2012 Board meeting – IPM)

2011

- ACWI ex-US replaces EAFE ex-US as benchmark Index for International Equity (July 27, 2011 Board meeting)
- Eliminated reference to S&P ADR Index Fund as this is no longer part of International Equity portfolio (October 27, 2011 Board meeting – IPM)

2010

- ADR fund is scheduled to be eliminated and assets transitioned into a new externally managed international equity strategy
- Managing Director of Public Equities is responsible overseeing for International Equity investments



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

2009

- Addition of MSCI EAFE and MSCI ACWI EX-US Index (October 29, 2009 Board meeting – IPM)
- Updated target strategy allocations for international equity to 75% Passive 25% Active (October 29, 2009 Board meeting – IPM)

INVESTMENT COMPLIANCE POLICY

2014

- Codified framework of responsibility for investment compliance (October 30, 2014 Board meeting – IPM)

INVESTMENT RATES OF RETURN

2016

- Section formerly known as Investment Analytics Support, renamed 2016 and refocused on methodology for determining total fund investment rate of return (October 26, 2016 Board meeting – IPM)
- The Investment Analytics Support Department was merged with the Investment Operations Department (October 26, 2016 Board meeting – IPM)

2014

- Codified responsibility for calculation and publication of investment rates of return and asset allocation percentages for individual investment portfolios and for System as a whole (October 30, 2014 Board meeting – IPM)

INVESTMENT RISK MANAGEMENT POLICY

2015

- Risk reporting at the total fund level will begin quarterly during the 2015-16 fiscal year

2014

- Codified framework of responsibility for investment risk management (October 30, 2014 Board meeting – IPM)

OFAC COMPLIANCE POLICY

2014

- Codified framework of responsibility for compliance with anti-money laundering laws, regulations and promulgations by the Office of Foreign Assets (OFAC) investment compliance (October 30, 2014 Board meeting – IPM)

PRIVATE EQUITY

2022

- Asset allocation range change from 3-13% with a 8% target to 4-14% with a 9% target (August 3 2022 Board meeting)



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

2016

- Asset allocation range went from 4-12% with a target of 7% to 3-13% with a target of 8% (August 3, 2016 Board meeting – Asset Allocation)

2011

- Section name change from Alternative Investments to Private Equity (October 27, 2011 Board meeting – IPM)
- Eliminate reference to real estate alternative investments (Timberland) as this is covered in a separate policy (October 27, 2011 Board meeting – IPM)
- Policy no longer includes real estate partnership investments as these are covered in Real Estate Investment Policy (October 27, 2011 Board meeting – IPM)

2010

- Managing Director of Private Equity is responsible for Private Equity investments
- Managing Director of Real Estate is responsible for Private Equity real estate investments

2009

- Included transparency and accountability language (October 29, 2009 Board meeting – IPM)

2007

- Policy limit on private equity investment to the greater of \$50 million or 20% of the investment fund if only a small number of limited partners

PRIVATE DEBT

2021

- Asset allocation range changed from 0-5%, target 1% to range 0.5-5%, target 2% (Board Meeting July 28 2021)

2017

- New Section added in 2017 due to asset allocation change to include this asset class with a range of 0-5% and target of 1% (August 2, 2017 Board meeting – Asset Allocation)

REAL ESTATE AUTHORIZATION (GENERAL)

2014

- Increase CIO discretion on commitment to dispositions of Mortgage Loans up to \$100 million (October 30, 2014 Board meeting – IPM)
- Increased CIO discretion on commitments for Real Estate Equity Sales up to \$100 million (October 30, 2014 Board meeting – IPM)

REAL ESTATE DEBT

2021

- Asset allocation range changed from 3-11%, target 7% to range 2-10%, target 6% (Board Meeting July 28 2021)



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

2017

- Asset allocation change to 3-11% range with a 7% target. Had previously been a 4-12% range with an 8% target (August 2, 2017 Board meeting – Asset Allocation)

2016

- Renamed Mortgages as Real Estate Debt which includes all approved classes of real estate debt (publicly traded and private) (October 26, 2016 Board meeting – IPM)
- Added Appendices A –Commingled Fund Investments and B – CMBS Investments (October 26, 2016 Board meeting – IPM)

2014

- Mortgage portfolio performance will be compared with the MSCI/IPD Giliberto/Levy Index (October 30, 2014 Board meeting – IPM)
- Mortgage valuation reporting will be done on a one quarter lag. (October 30, 2014 Board meeting – IPM)

2009

- Included Board authorization of Executive Director to invest in mortgage loans up to \$75 million (October 29, 2009 Board meeting – IPM)

2008

- Managing Director of Real Estate is responsible for overseeing commercial mortgage investments

2007

- Updated to include responsibilities and structure of System's commercial mortgage servicing program
- Real Estate Advisory Committee recommendation and Executive Director or Board approval is required authorization for mortgage investments

2006

- Allowed mortgage origination by other lenders acceptable to NYSTRS

RESPONSIBLE STEWARDSHIP

2022

- New policy approved by Board and added to Investment Policy Manual (October 27, 2022 Board meeting-IPM)

SECURITIES LENDING

2007

- Revised required collateral percentage to 105% for non US securities loaned
- Revised credit quality standards to no less than P-1 by Moody's or A-1 by S&P or F1 by Fitch

2006

- Allow use of multiple agent lenders
- Change management structure to Fixed Income Department oversight of cash collateral investment and Investment Information Department oversees program performance and accounting



CHRONOLOGY: Summary of Significant Changes

SELECTION & EVALUATION OF FIXED INCOME BROKER-DEALER COUNTERPARTIES

2011

- Addition of policy entitled "Selection and Evaluation of Fixed Income Broker-Dealer Counterparties for Internally Managed Portfolios" (October 27, 2011 Board meeting – IPM)

SELECTION, MONITORING & TERMINATION OF EXTERNAL SECURITIES MANAGERS

2011

- Public Equities performs a quantitative analysis of the manager's strategy prior to recommendation to Internal Investment Committee (October 27, 2011 Board meeting – IPM)
- Internal Investment Committee interviews proposed external managers and decides whether to recommend to Investment or Real Estate Advisory Committee of Retirement Board (October 27, 2011 Board meeting – IPM)

2010

- Managing Director of Public Equities is responsible for oversight of external equity investment managers

2009

- Included transparency and accountability language (October 29, 2009 Board meeting – IPM)
- Updated selection process including more criteria, involvement by Quantitative Strategies/ Risk Mgt dept, and Internal Investment Committee (October 29, 2009 Board meeting – IPM)
- Clarified and expanded on System monitoring of external managers (October 29, 2009 Board meeting – IPM)

2006

- Added illegal activity to list of reasons a manager may be included on watch list

SELECTION, MONITORING & TERMINATION OF REAL ESTATE ADVISORS

2009

- Included transparency and accountability language (October 29, 2009 Board meeting – IPM)

SHORT TERM INVESTMENTS (CASH)

2022

- Asset allocation change from 1-4% to 0-4% (August 3 2022 Board meeting)

2021

- Asset allocation range changed from 0-4% to 1-4% (Board meeting July 28 2021)

2008

- Managing Director of Fixed Income is responsible for overseeing short term investments

2007

- Repurchase agreement limit applied to counter-party rather than dealer



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

STATEMENT OF INVESTMENT POLICY

2023

- Updated Controlling Statutes and Regulations -- §177(9) of the Retirement and Social Security Law amended to increase percentage of assets that may be invested in types of assets not otherwise specifically authorized from 25% to 35%
- Added roles and responsibilities for Senior Advisor to the Executive Director and Chief Investment Officer - Stewardship

2022

- International Equity- change current target of 16% to 15% and target range from 12-20% to 11-19%
- Private Equity-change current target of 8% to 9% and target range from 3-13% to 4-14%
- Short Term (cash)-change current range of 1-4% to 0-4%
- High Yield Bonds – new policy benchmark additions: ICE BofA High Yield Constrained Index and Bloomberg U.S. High Yield 1% Issuer Capped Index
- Addition, to glossary of indices, of the MSCI India IMI Index - a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of India

2021

- Update 'Director of Risk Management' with 'Chief Risk Officer'
- Asset allocation updated: Real Estate Debt changed from range 3-11%, target 7% to range of 2-10%, target of 6%. Private Debt range changed from 0-5%, target 1% to 0.5-5%, target of 2%. Global Bonds changed range 0-3% to 0-4%. Short Term Investments (Cash) changed range from 0-4% to 1-4%. (Board Meeting July 28 2021)
- Remove 'Barclays' from benchmark names

2020

- System's actuarial assumption rate updated to 7.10%, from 7.25%. Change was approved at the October 31, 2019 Board meeting (updated in IPM in 2020)
- Added language to Asset Allocation section regarding rebalancing and policy benchmarks that put out current practices into writing

2019

- The Real Estate Equity benchmark was changed to the NCREIF ODCE Index
- The Real Estate Debt benchmark was changed to the Giliberto-Levy Custom Index

2018

- Update asset allocation range and target changes (by Board approval April 26 2018)
- Addition of new asset class – Global Equity (by Board approval April 26 2018)
- Add Benchmark index for new asset class – Global Equity (November 1, 2018 Board Meeting – IPM)
- Clarify role of Internal Investment Committee by adding words “reviews and recommends” and removing the word “approves” (November 1, 2018 – Board Meeting – IPM)

2017

- Updated asset allocation range and target changes (by Board approval August 2, 2017 - Asset Allocation)
- Benchmark indices updated to include the index for Private Debt (new asset class 2017) (October 26, 2017 Board Meeting – IPM)

2016

- Update asset allocation range and target changes (by Board approval August 3, 2016)
- Revise Investment Analytics Support Department to read Investment Operations Department (October 26, 2016 Board Meeting – IPM)
- Add description of new NYSTRS Valuation Committee (October 26, 2016 Board Meeting – IPM)
- Actuarial assumption rate change from 8% per annum to 7.50% per annum (by Board approval on October 29, 2015)
- Update benchmark changes for Domestic Fixed, Global Bonds and Mortgages (October 26, 2016 Board Meeting – IPM)



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

-
- 2015
- Add High Yield Bonds as an asset class (August 3, 2016 Board Meeting – Asset Allocation)
- Policy changes:
- Deletion of “Investment Advisor” from the Internal Investment Committee member list
- 2014
- Policy changes:
- Added:
- Asset Valuation Policy
 - Director of Risk Management position (October 30, 2014 Board Meeting – IPM)
- Updated:
- Definitions of representative benchmarks and indices
 - Benchmark and index for Real Estate mortgage portfolio
- 2013
- Asset Allocation Changes to: (July 24, 2013 Board Meeting – Asset Allocation)
 - Fixed income target 17%; range 13-22%
 - Short Term Cash target 1%; range 0-4%
 - Updated for establishing an Enterprise Risk Department and Investment Analytics Support Department
 - Updated for name change from Investment Information Department to Investment Operations Department
- 2012
- Updated to reflect changes to benchmark indices in the table of asset allocation targets (October 25, 2012 Board Meeting – IPM)
 - Updated to reflect the custodian bank as the official accounting book of record for non-US securities portfolios designated by the System (October 25, 2012 Board Meeting – IPM)
- 2011
- Asset Allocation changes to: (July 27, 2011 Board Meeting – Asset Allocation)
 - Domestic Equity target 37% range 32-42%
 - International equity target 18% range 14-22%
 - Global Bonds target 2% range 0-3%
 - Board authorized exchange traded futures having a notional exposure of up to \$2 billion, for the sole purposes of minimizing asset allocation risk (October 27, 2011 Board Meeting – IPM)
 - Updated for title change from Executive Director to Executive Director/Chief Investment Officer (October 27, 2011 Board Meeting – IPM)
- 2010
- A number of title and/or responsibility changes as follows:
- Title change from Managing Director of Quantitative Strategies/Risk Management to Managing Director of Public Equities
 - Delete Managing Director of External Asset Management/Corporate Governance/ Private Equity
 - Add Managing Director of Private Equity
 - Managing Director of Public Equities is responsible for External Asset Management
 - General Counsel is responsible for Proxy Voting
 - Title change from Manager of External Asset Management/Corporate Governance to Manager of External Asset Management who reports to Managing Director of Public Equities
-



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

- Change in benchmark from National Council of Real Estate Investment Fiduciaries Properties Index to National Council of Real Estate Investment Fiduciaries Open-End Diversified Core Equity Fund Index
- Name change: Finance Committee of the Retirement Board now known as Investment Committee of the Retirement Board

2009

- Addition of ACWI EX-US Stock Index to benchmark list (October 29, 2009 Board Meeting – IPM)
 - Asset Allocation changes to: (October 29, 2009 Board Meeting – IPM)
 - Domestic Equity target 42%; range 35-49%
 - International Equity target 15%; range 11-19%
 - Domestic Fixed target 18%; range 13-23%
 - Real Estate target 10% range 6-14%
 - Updated for change in investment management structure with Managing Directors over each asset class (Public Equities, Fixed Income, Private Equity and Real Estate - debit & equity)
 - Updated definition and responsibilities of the Internal Investment Committee

2008

- “AIMR” deleted from Glossary of Acronyms and other terms

2007

Asset Allocation changes to:

- Domestic Equity target 46%; range 36-56%
- International Equity target 15%; range 11-19%
- Real Estate target 8%; range 4%-12%
- Alternative Investment target 5%; range 2-10%
- Public real estate securities benchmarks now include FTSE/EPRA/NAREIT and BBB CMBS index for externally managed CMBS portfolios

2006

- Updated percentage of assets that may be invested in assets not otherwise specifically authorized to 25% from 15% of net assets

STOCK PROXY VOTING

2022

- As of October 2022 – Stock Proxy policy now incorporated into new Responsible Stewardship policy as an appendix. Will no longer be a stand-alone policy (October 27, 2022 Board meeting-IPM)
- Updated to better align with the Board's investment belief on stewardship and provide additional voting guidance for proposals regarding board-related matters, shareholder rights, compensation, environmental issues, human capital management and human rights (updates to policy approved by the Board at the January 27, 2022 Board Meeting)



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
INVESTMENT POLICY MANUAL

CHRONOLOGY: Summary of Significant Changes

2013

- Updated to reflect responsibility for this function moved to the Investment Operations Department (October 31, 2013 Board Meeting – IPM)

2010

- General Counsel and his staff are responsible for Stock Proxy Voting

2009

- Board Matters – changes provide additional guidance for withholding votes from directors who fail to fulfill their assigned duties or who engage in related party transactions
- Executive Compensation – changes provide additional guidance on unearned payments such as golden coffins and explicitly supporting say-on-pay proposals

2008

- Managing Director of External Asset Management/Corporate Governance is responsible for Stock Proxy Voting

2006

- Added support for proxy proposals relating to victims in Sudan region consistent with the System's fiduciary responsibilities