

Chicago Teachers' Pension Fund



Investment Policy Statement

Approved by the Board of Trustees September 21, 2017

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Section I. Purpose

Purpose of the Investment Policy and Guidelines

This document specifically outlines the investment philosophy and practices of Chicago Teachers' Pension Fund ("CTPF" or "Fund") and has been developed to serve as a reference point for the management of the Fund's assets. The Board adopts this long-term plan for the Fund to maintain and enhance its assets through prudent investments.

The CTPF investment philosophy has been developed with careful consideration of its primary purpose, fiduciary obligations, statutory requirements, liquidity needs, income sources, benefit obligations, and other general business conditions. The investment philosophy embraces the following:

- Strategic asset allocation is the most significant factor affecting the long-term total return of the Fund. Diversification is the primary risk control element. Commitments to asset allocation targets and ranges will be maintained through a disciplined rebalancing program.
- The Fund's liabilities are long-term and, therefore, the strategic investment horizon will reflect a long-term investment horizon. Strategic decisions will prevail in determining asset allocation, rather than tactical or short-term market timing decisions.
- Active management may be utilized to add value beyond broad market benchmarks by exploiting market inefficiencies.
- Passive investment vehicles consisting of index funds will be utilized to complement actively managed portfolios as an efficient way to provide benchmark return, adjust risk within the overall funds, and provide a liquid and low-cost pool to facilitate timely fund rebalancing, especially in highly efficient markets.
- Due diligence and monitoring of the investment managers are critical elements integral to safeguarding the Fund's assets.

The purpose of this Investment Policy Statement ("IPS") is to formalize the Board's investment objectives, policies and procedures, and to define the duties and responsibilities of the various entities involved in the investment process. The Guidelines incorporated into the Fund's Investment Management Agreements, and the Fund's Investment Department's Policies/Procedures/Directions are to be considered extensions of this IPS, both individually and in total. No provision of this IPS shall be construed in contravention of the Illinois Pension Code.

This Policy is intended to be a guideline for the fiduciaries of the Fund and to provide a foundation to oversee the management of the investments of the Fund. This document does not supersede any investment guidelines and/or contractual agreements made between the Fund and its investment managers.

Section II: Roles and Responsibilities

A: The Board of Trustees and Responsibilities

The members of the Board are responsible, as Trustees and fiduciaries, for the proper oversight of CTPF assets. The Board has the responsibility of establishing and maintaining broad policies and objectives for all aspects of the Fund’s operation. The Board of Trustees is also responsible for the following investment-related activities:

- Provide strategic guidance to the Fund’s staff and investment managers by setting the policies, objectives, and guidelines for investment of the Fund’s assets;
- Oversee compliance with this IPS and applicable laws;
- Analyze the material issues affecting the Fund’s investments to make educated and prudent decisions;
- Oversee the procurement process for investment managers and consultants, and other investment-related professionals, in accordance with Fund rules and applicable laws;
- Select qualified professionals to assist in implementing investment policies and thereafter to evaluate and monitor their services;
- Consider Investment staff’s and investment consultant’s recommendations for selecting or terminating investment managers;
- Evaluate total Fund performance, including, but not limited to, performance of all investment managers; and
- Allocate duties among themselves and designate others as fiduciaries to carry out specific fiduciary activities.

The Board recognizes that even though the Fund’s investments are subject to short-term volatility, the Board intends to maintain a long-term investment focus. This prevents ad-hoc revisions to the Fund’s investment philosophy and policies in reaction to either speculation or short-term market fluctuations. In order to preserve this long-term view, the Board has adopted the following formal review schedule:

Formal Review Item	Formal Review Schedule
Asset Allocation	Every 3-5 years
Investment Policy Statement (Goals)	Every 3-5 years
Investment Guidelines	Annually (Revisions As Needed)
Investment Managers’ Performance	Annually
Investment Consultant’s Performance	Annually
Total Portfolio Performance	Quarterly

Code of Ethics

In order to maintain the highest ethical standards, the Board of Trustees, the Executive Director/Deputy Executive Director, Investment staff, and all other Fund staff are expected to abide by the CTPF Code of Ethics Policy as adopted and incorporated by reference into this IPS and made available on the Fund's website.

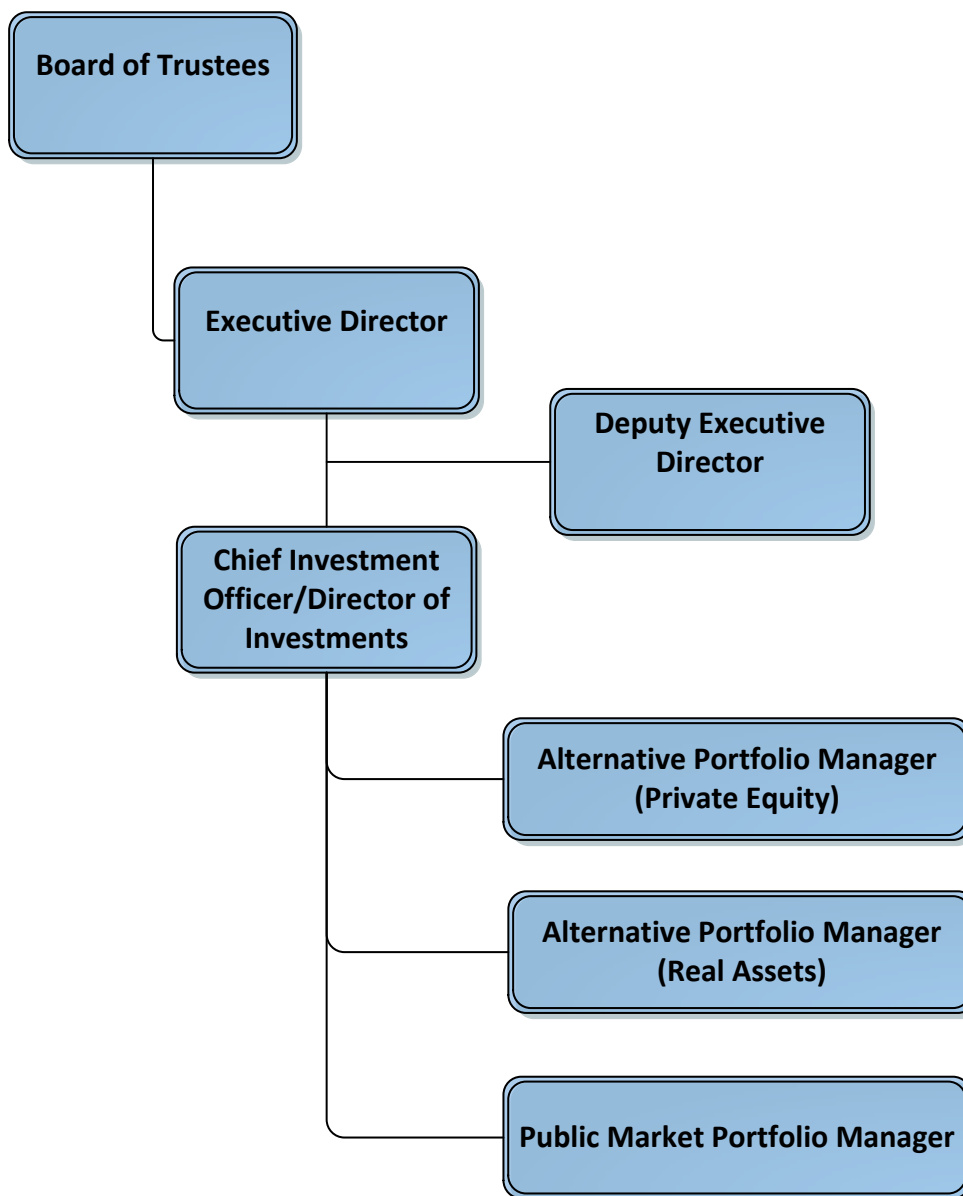
B: Role of the Executive Director/Deputy Executive Director

The Executive Director is hired by the Board and is a fiduciary to the Fund. The Executive Director's primary responsibility is to supervise and direct the operations of the Fund in accordance with the Illinois Pension Code and the Board's rules, orders and resolutions. In accordance with this task, the Executive Director shall perform and/or oversee the following tasks on behalf of the Fund:

- Receive and deposit payments made to the Fund;
- Oversee the execution of investment transactions according to the Board policies;
- Keep all records, books, files, papers and documents belonging to the Fund, other than those in the possession or under the control of the City Treasurer, custodial bank, investment managers and other consultants of the Fund;
- Implement rebalancing directives, in concert with the master custodian, Investment staff and affected investment manager(s); and
- Manage and monitor net cash flow so that the sum of income, contributions and sale of securities is sufficient to provide for current payment of pension obligations (along with the Investment department).

C: Investment Department

In order to manage the assets of the Fund, the Fund will employ Investment staff to assist in overseeing the Fund's investment portfolio. The investment department is overseen by the Fund's Chief Investment Officer ("CIO")/Director of Investments ("DOI").



All Investment staff is expected to abide by the policies and procedures set forth in the Administrative Rules, the Investment Policy Statement, and all Investment Staff Policies and Procedures.

Role of the Chief Investment Officer/Director of Investments

The Fund's CIO/DOI is hired by the Executive Director, with notice to and the consent of the Board of Trustees. The CIO/DOI is a fiduciary to the Fund. The CIO/DOI's primary responsibility is to supervise and direct the operations of the Fund's investments in accordance with the Illinois Pension Code, the

Board's Rules, orders and resolutions, and all applicable laws. In accordance with this responsibility, the CIO/DOI shall perform or delegate to staff the following tasks on behalf of the Fund:

- Take the leadership role regarding the Fund's investment portfolio and coordinate all investment activities and matters involving the Fund's assets;
- Advise and inform the Board of Trustees and Investment Committee on any investment matters that would reasonably warrant the Board's attention;
- Work collaboratively with subordinate staff and outside investment consultants to establish and implement investment policies;
- Establish and implement appropriate processes and guidelines for monitoring CTPF's investment portfolio and service providers;
- Render such assistance to Board Committees as necessary;
- Oversee the execution of investment transactions according to the Illinois Pension Code and the Board's policies;
- Evaluate the Investment staff's capabilities and performance;
- Work in conjunction with Investment staff and Investment consultant to prepare and present research and recommendations for the Board's consideration on matters affecting the Fund's investments;
- Conduct searches for investment-related service providers, identify investment managers, and make recommendations to the Board, in accordance with the Fund's Contract Administration and Procurement Policy;
- Supervise all necessary due diligence relating to the selection of investment managers and consultants;
- Assist with negotiating contracts and guidelines for each investment manager and consultant in accordance with the CTPF's Contract Administration and Procurement Policy;
- Review and analyze the Fund's assets and recommend adjustments which are appropriate to take optimum advantage of new conditions and strategies as they arise in the marketplace;
- Oversee all investment activities required to implement this Policy and the Fund's Asset Allocation Policy;
- Oversee the Investment staff and investment-related service providers to ensure the Fund's best interests are served;
- Monitor net cash flow, so that the sum of income, contributions, and sale of securities is sufficient to provide for the current payment of pension obligations;
- Implement rebalancing directives approved by the Board and manage cash flows, in concert with the master custodian, Investment staff, investment consultant(s), and affected investment managers to pay benefits and expenses and/or to fund Board-approved investments;
- Provide advice on investment policy, implementation and control issues, as requested by the Board;
- Working with the Communications department, respond to inquiries from the state legislature, the membership, the press, other governmental representatives, and the public concerning the Fund's investments; and

- Direct staff in monitoring and reporting to the Board of Trustees on programs and policies related to asset allocation, manager diversity, MWDBE Brokerage utilization, proxy voting, manager watch list, and securities litigation. These policies are adopted and incorporated by reference as applicable to this IPS and are available on the Fund’s website.

Role of the Fund’s Alternative Investment Portfolio Managers

The Alternative Investment Portfolio Managers’ primary responsibility is to monitor the Fund’s real estate, private equity, and infrastructure investments. In accordance with this responsibility, the Alternative Investment Portfolio Managers shall perform the following tasks on behalf of the Fund:

- Implement the decisions of the Board of Trustees regarding funding modifications, hiring, and termination of all alternative investment managers;
- Complete all necessary due diligence relating to the selection of investment managers and consultants;
- Monitor alternative investment managers, including regular conference calls with managers and conducting on-site due diligence visits to ensure alternative investment managers meet expectations and conform to policies and guidelines;
- Review and analyze the philosophies, policies, and strategies employed by the Fund’s alternative investment managers, taking an in-depth look at their decision-making process and investment style in relation to present and projected investment horizons, and to ensure that the goals and objectives of the Fund are being met and accomplished;
- Provide monthly, quarterly, and annual reports to the CIO/DOI with regard to the Fund’s alternative investment managers’ performance and the Fund’s assets;
- Serve as a liaison between the CIO/DOI and the Fund’s alternative investment managers;
- Provide reports, as needed, to the CIO/DOI regarding the health and stability of the Fund’s alternative investments;
- Collaborate with the Fund’s investment consultants and the CIO/DOI to develop and implement asset allocations and portfolio modifications;
- Ensure compliance with investment policies and procedures established by the Board of Trustees; and
- Coordinate communications between master custodian, investment managers, brokers, consultants, securities lending provider, and proxy voting fiduciaries.

Role of the Fund’s Public Markets Investments Portfolio Manager

The Public Markets Investment Portfolio Manager’s primary responsibility is to monitor the Fund’s public equity and fixed income investments. In accordance with this responsibility, the Public Markets Portfolio Manager shall perform the following tasks on behalf of the Fund:

- Implement the decisions of the Board of Trustees regarding funding modifications, hiring, and termination of all public markets investment managers;
- Complete all necessary due diligence relating to the selection of investment managers and consultants;
- Monitor public markets investment managers, including regular conference calls with managers and conducting on-site due diligence visits to ensure public markets investment managers meet expectations and conform to policies and guidelines;
- Review and analyze the philosophies, policies, and strategies employed by the Fund’s public markets investment managers, taking an in-depth look at their decision-making process and investment style in relation to present and projected investment horizons, and to ensure that the goals and objectives of the Fund are being met and accomplished;
- Provide daily, monthly, quarterly and annual reports to the CIO/DOI with regards to the Fund’s public markets investment managers’ performance and assets;
- Serve as a liaison between the CIO/DOI and the Fund’s public markets investment managers;
- Provide reports, as needed, to the CIO/DOI regarding the health and stability of the Fund’s public markets investments;
- Collaborate with the Fund’s investment consultant(s) and the CIO/DOI to develop and implement asset allocations and portfolio modifications; and
- Ensure compliance with investment policies and procedures established by the Board of Trustees;
- Coordinate communications between master custodian, investment managers, brokers, consultants, securities lending provider, and proxy voting fiduciaries.

Role of the Investment Portfolio Analyst

The Investment Portfolio Analyst’s primary responsibility is to assist in monitoring the Fund’s public equity, fixed income, private real estate assets, private equity and infrastructure investments. In accordance with this responsibility, the Investment Portfolio Analyst shall perform the following tasks on behalf of the Fund:

- Assist Portfolio Manager(s) with portfolio analysis, due diligence process, quarterly reports and quarterly investment manager meetings to ascertain investment manager performance, compliance to investment guidelines, and to mitigate risk;
- Reconcile the assets of the investment managers against the reports of the master custodian and investment consultants on a routine basis;
- Upon approval of the CIO/DOI, initiate monthly liquidations of securities to meet pension obligations;
- Upon approval of the CIO/DOI, initiate funding transactions to execute investment/asset allocations, as directed;

- Serve as a liaison to the accounting department to provide investment data for the annual external audit and annual CAFR;
- Maintain records for the Fund’s financial transactions with regard to each investment manager’s funding, capital calls, distributions, and all other cash in/outflows;
- Monitor each investment manager’s compliance with investment guidelines;
- Manage proxy voting processes and report results to the Board of Trustees;
- Assist with the request for proposal process and manager selection;
- Coordinate and prepare materials for Board of Trustees, the Investment Committee, and First Friday Meetings;
- Oversee the payment of all investment-related invoices and income-deducted payments, including each investment managers and consultant’s fees; and
- Assist with the completion of the annual Illinois Economic Report, Senate Questionnaire, and Governor’s Report.

Section III: Investment Service Providers

All of CTPF’s assets are managed by external investment managers. Outside service providers, including investment consultants and the master custodian, may be hired, upon the Board’s approval, to assist the Fund’s staff in monitoring and safeguarding the Fund’s assets.

A: Role of the General/Specialized Investment Consultant

The Board may retain a General and/or Specialized Consultant (“Consultants”). The Consultant serves at the pleasure of the Board. The Consultant acts as a fiduciary and adviser to the Board. The Consultant is responsible for providing the Fund with ongoing performance evaluation and due diligence of all investment managers. In accordance with this responsibility, the Consultant shall:

- Work directly with CIO/DOI to review asset allocations, investment strategies, strategic planning, performance, and to make recommendations to the Board as appropriate;
- Work with the Board and staff in the management of the investment process, including attendance at regular meetings with the Board and its Committees, and to provide an independent perspective on the Fund's goals, structure, performance and investment managers;
- Assist the CIO/DOI and the Board with external investment manager selection;
- Recommend new investment opportunities, as appropriate, based on pacing expectations;
- Promptly inform the Board and staff and discuss the impact of material changes taking place within any current investment manager's organization or investment process;
- Measure and monitor investment performance and evaluate the investment managers’ and the Fund’s overall investment program on an ongoing basis;

- Work directly with the CIO/DOI to advise the Board on investment-related matters and to recommend modifications to the investment program, policies, objectives, and guidelines, as appropriate;
- Provide quarterly performance evaluations (net and gross returns) for each investment manager;
- Upon request, negotiate fee arrangements and other investment guideline terms with the investment managers on behalf of CTPF;
- Provide education to the Board of Trustees and Investment staff, including, but not limited to, analyzing and summarizing relevant publications, discussions, meetings, and research on current investment-related topics; and
- Have no conflict of interest in making recommendations and providing investment advice to CTPF; general/specialized consultants cannot cause the Fund to make an investment from which the general/specialized consultant will derive an economic benefit. Any cross-ownership or conflict of interest must be immediately disclosed to the Executive Director, Deputy Executive Director, CIO/DOI, and the Board of Trustees.

B: Role of a Proxy Voting Fiduciary

The Board shall retain Proxy Voting Fiduciaries. The Voting Fiduciaries shall mean any investment manager who is signatory to an Investment Management Agreement (“IMA”) to acquire, manage, or dispose of Fund assets, and who is responsible for the voting of common stock, or any fiduciary consultant retained to vote proxies for domestic equity assets. Voting Fiduciaries are expected to follow the CTPF Proxy Voting policy and guidelines in making voting decisions. This Proxy Voting policy is adopted and incorporated by reference into this Investment Policy Statement and is available on the Fund’s website.

C. Role of the Master Custodian

The Board shall engage a Master Custodian (“Custodian”). The Custodian serves at the pleasure of the Board, subject to the terms of the Agreement between the Fund and the Custodian. The Custodian shall be a major investment-centered bank and shall act as a fiduciary to the Fund, to the extent provided under the Illinois Pension Code and the Agreement between the Fund and the Custodian.

D. Role of the Investment Manager

In accordance with the Illinois Pension Code and CTPF’s Administration Rules and Regulations, the Board shall conduct a search and retain an external investment manager(s) to invest a portion of the assets of the Fund. Investment Managers, also known as Investment Advisers, have the power to invest Fund assets in accordance with the Investment Manager’s specific guidelines and objectives. Investment Managers must acknowledge in writing that they are a fiduciary and shall act in accordance with the IMA, or other

operating agreement, in effect between the Fund and the Investment Manager. The duties of Investment Managers include, but are not limited to:

- All Investment Managers will construct and manage investment portfolios that are consistent with CTPF’s investment guidelines and this IPS. The Investment Manager will identify, buy, and sell specific securities or investments within the parameters specified in its IMA. Discretion is delegated to the Investment Manager to carry out these investments;
- All Investment Managers will provide reporting to Investment staff, the Custodian, and the Investment Consultant(s) in writing, and at intervals specified by the IMA or by the Investment staff, regarding: composition and relative performance (gross and net returns) of the investments in their designated portfolio(s); economic and investment outlook for the near- and long-term; market values and significant changes in the portfolio under their management during the quarter; and reasons for any significant differences between the performance of their portfolio and the appropriate market indices or other performance benchmarks established by the Fund and the Investment Managers; and the use of minority-, women-, and persons with disability-owned (“MWDBE”) brokerage firms (if applicable);
- All Investment Managers shall utilize investment strategies designed to ensure that all securities transactions are executed in such a manner that the total explicit and implicit costs and the total proceeds in every transaction are the most favorable to the Fund under the circumstances and in accordance with the IMA;
- All Investment Managers shall vote proxies on behalf of the Fund in accordance with the Proxy Voting Policy (if applicable); and
- All Investment Managers shall have no conflicts of interest in making recommendations and providing investment advice to CTPF. Any cross-ownership or conflict of interest must be immediately disclosed to the Executive Director, the CIO/DOI, and the Board of Trustees.

Specific operational information for each Investment Manager will be addressed at length in the individual Investment Manager guidelines.

Section IV: Investment Objectives and Goals

The Fund invests assets for the benefit of the Fund’s Members. CTPF’s assets are managed in a fashion that reflects the unique liabilities, funding resources, and portfolio size. It is the Fund’s position that asset allocation is the key determinant of return and that commitments to asset allocation ranges should be maintained through a disciplined rebalancing program. Diversification, both by and within asset classes, is a primary risk control element. Because assets are invested to achieve long-term returns, short-term results will not be the determining factor in the Fund’s decision to revise an asset allocation or to terminate an investment manager with the exception of extreme cases. Passive and actively managed portfolios are both acceptable options for the Fund.

A: Investment Objectives

Working in conjunction with its Investment consultants and staff, the Board of Trustees will develop a strategic asset allocation framework.

The Fund's overall investment objective is to obtain competitive investment returns for all investments while maintaining prudent levels of risk. The Fund's annualized return over full market cycles should exceed the Policy Benchmark. Performance will be evaluated over the various time periods contained within this policy.

The following issues will be considered during the development of the Fund's investment objectives:

- Current benefits structure and long-term goals regarding benefit securities;
- Current and prospective funding sources, levels, and liability structure;
- Actuarial methods and assumptions;
- Historical and prospective risk and return characteristics associated with various assets and investment management styles;
- Correlation of asset classes;
- Impact of changes in asset value on funding status and benefit security;
- Liquidity of Investments in order to meet benefit payments and expenses.

B. Diversity Policies

CTPF is firmly committed to diversity and inclusion and ensuring on a broad basis that investment firms owned by minorities, women, and persons with disabilities have access to the many opportunities to conduct business with CTPF. In addition, CTPF continues to encourage diversity and equality among its employees, vendors, and investment professionals.

C. Investment Businesses in Chicago and Illinois

The Board recognizes that investments made in businesses operating in Chicago and in Illinois and in real estate and other assets located in the City and State will contribute to a positive and an improved economic climate in the City and the State. Therefore, CTPF will make every effort to consider qualified local firms in the selection of Investment Managers and brokers, provided they meet the conditions and criteria set forth in this Policy.

Section V: Asset Allocation

A. Asset Allocation Targets and Ranges

The Fund's liabilities are long term in nature and the investment strategy will therefore be long term with due consideration of the use of short-term investment to meet cash flow requirements. Investment staff working in conjunction with the Investment Consultant(s) and subject to the approval of the Board of Trustees will build an asset allocation framework that has the highest likelihood of achieving the Fund's investment objectives with a prudent level of risk.

The Investment staff and Consultant(s) shall conduct an asset liability study every three to five years and present the results to the Board. The study will consider the asset class mix, future benefit payments, liabilities, required funding, the actuary's recommended interest rate assumption, and the prospective funded status of liabilities. Through quantitative asset/liability modeling and qualitative evaluation, an appropriate strategic asset allocation mix will be selected.

The Investment staff and the Consultant(s) will prepare an asset allocation review annually. The asset allocation review will include capital market expectations (10-year horizon and longer), risk/return expectations for major asset classes, correlation expectations for major asset classes, appropriate benchmarks, asset class and style targets, and diversification. In addition to achieving diversification by asset class, careful attention shall be paid to diversification within each asset class and sub-allocation and manager concentration at a total Fund level.

The table below shows the target asset allocation, including a range for each asset class with the exception of cash equivalents.

Asset Class	Asset Allocation Targets	Asset Class Ranges	Policy Benchmark Index
Domestic Equity	30.5%	27% - 34%	Russell 3000 Index
Global ex-US Equity	30.5%	27% - 34%	MSCI ACWI ex-US Index IMI
Private Equity	5%	3% - 7%	Russell 3000 Index + 3%
U.S. Fixed Income	23%	20% - 26%	Barclays Capital Aggregate Index
Real Estate	9%	6% - 12%	NFI-ODCE Value Weight Net Index
Infrastructure	2%	0% - 4%	FTSE Core Developed Infrastructure 50/50 Index

In addition to asset allocation, at the recommendation of the CIO/DOI, the Investment staff, and the Consultant(s), the Board may periodically authorize or adopt strategic policies. “Strategic Policies”, as defined by this IPS, are actions by the Board to allow investment in asset types that have not been singled out as “asset classes” in the asset allocation process, to overweight a particular sector within an asset class, or to employ particular strategies in the investment of the Fund’s assets. The purposes of these specific actions are either to increase the return above the expected return or to reduce risk. Any such Strategic Policy would include consideration of the change in risk and the change in return.

B. Benchmarks

The Board seeks to achieve for the total Fund a rate of return in excess of the Total Fund Benchmark. The Total Fund Benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset class indicated below.

- 30.5% Russell 3000 Index
- 30.5% MSCI ACWI ex-US Index IMI Index
- 5% Russell 3000 Index + 3%
- 23% Barclays Capital Aggregate Index
- 9% NFI-ODCE Value Weight Net Index
- 2% FTSE Core Developed Infrastructure 50/50 Index

C. Rebalancing

The Board shall establish the asset allocation target and ranges and review them periodically. To ensure that the allocations meet the risk/return objectives of the Fund, the target allocations will be reviewed annually for reasonableness relative to significant economic market changes or changes to long-term goals and objectives. Proper implementation of this guideline may require that a periodic adjustment or rebalancing of assets be made to conform to the approved asset allocation policy targets. Rebalancing requirements shall be reviewed on a continual basis. Cash flows will be taken into consideration to rebalance the portfolio, as appropriate. Portfolio rebalancing will occur periodically and priority will be given to asset classes that fall outside permissible ranges. Rebalancing, when required, shall occur as soon as practical.

Portfolio rebalancing will occur to ensure compliance with the target asset allocation percentages at a reasonable cost, recognizing that overly-precise administration of targets can result in transaction and market impact costs that are not necessarily fiscally justified. Rebalancing will occur periodically to ensure that funds are readily available to pay pension benefits and to fund private investments, as well as to ensure that asset classes remain within their approved asset allocation ranges. In recognizing the complexity of

achieving this result with a portfolio the size and complexity of CTPF, as well as the unpredictability of transacting in investment markets, the Board delegates rebalancing actions to the CIO/DOI and the consultant(s), acting with the approval of the Executive Director. The CIO/DOI shall provide the Investment Committee Chair and the Board President with written notice of each rebalancing.

Section VI: Investment Managers' Asset Categories

Based on the analysis used by the Board to develop the asset allocation principles set forth in this IPS, the Board has identified performance benchmarks for each investment option and the separate mandates within each asset class. The relevant benchmarks for each Investment Manager are provided in the chart below:

Asset Category and Investment Manager	Market Index	Style Group
Total Domestic Equity	Russell 3000 Index	Total Public Fund Equity Database
S&P 500 Index	S&P 500 Index	Large Cap Core Equity
Russell 1000 Index	Russell 1000 Index	Large Cap Core Equity
Large Cap Core	Russell 1000 Index	Large Cap Core Equity
Large Cap Growth	Russell 1000 Growth Index	Large Cap Growth Equity
All Cap Growth Equity	Russell 3000 Growth Index	All Cap Growth Equity
All Cap Value Equity	Russell 3000 Value Index	All Cap Value Equity
Large Cap Value Equity	Russell 1000 Value Index	Large Cap Value Equity
Small Cap Core Equity	Russell 2000 Index	Small Cap Core Equity
Small Cap Value Equity	Russell 2000 Value Index	Small Cap Value Equity
Small Cap Growth Equity	Russell 2000 Growth Index	Small Cap Growth Equity
Total Non-US Equity	MSCI ACWI ex-US Index	Total Public Fund Non-US Equity
International Large Cap Equity – Developed Only	MSCI EAFE Index	Non-US Equity
International Large Cap Equity – All Country	MSCI ACWI ex-US Index	Non-US Equity
International Large Cap Growth Equity – All Country	MSCI ACWI ex-US IMI Growth Index	Core Plus Growth International Equity
International Small Cap Equity	MSCI ACWI ex-US Small Cap Growth Index	International Small Cap Equity

DFA International Small Cap Value	MSCI World Small Cap ex-US Index	International Small Cap Equity
Emerging Markets Equity	MSCI Emerging Markets Index	Emerging Markets Equity
Fixed Income	BB Aggregate Index	Public Fund Fixed Income Database
Government/Credit Index	BB Barclays Government/Credit Index	Core Bond
Core Bond	BB Barclays Aggregate Index	Core Bond
Core Plus Fixed Income	BB Barclays Aggregate Index	Core Plus Bond

Section VI-A: Domestic Equities

CTPF invests in the domestic equity market to earn an equity risk premium to enhance the Fund's long-term returns. This asset class includes the broad market of publicly traded U.S. equities with varying characteristics related to market capitalization and investment style.

Section VI-B: International Equities

CTPF invests in international equities to earn an equity risk premium and to diversify the equity exposure within the Fund. The investment objective is to achieve in international equities a total return that exceeds the total return of the Morgan Stanley Capital International All Country World Index ex-US IMI (MSCI ACWI ex-US IMI). The international equities asset class includes both developed and emerging equity markets.

Section VI-C: Fixed Income

CTPF invests in fixed income to diversify the Fund's equity exposure. The fixed income asset class includes both core, core plus and high yield/opportunistic fixed income. The investment objective is to achieve in fixed income securities a total return that exceeds the Barclays' Aggregate Bond Index over a rolling 5-year period.

Section VI-D: Private Real Estate

CTPF invests in real estate to enhance the investment portfolio return through long-term capital appreciation and income. The real estate asset class includes investments in private and public real estate assets, equity-oriented, debt investments, and real asset investments, including timberland and farmland. Direct investments by CTPF in individual real estate assets are subject to Board approval.

The allocation to real estate is expected to have the following benefits:

- Enhance the diversification of CTPF’s overall investment portfolio due to real estate’s low correlation with stocks and bonds;
- Provide high, current income and a rate of return that falls between stocks and bonds;
- Lower the volatility of the total investment portfolio, considering real estate returns have historically exhibited lower volatility than other equity asset classes; and
- Provide a hedge against unanticipated inflation.

Major considerations impacting the structure of the real estate portfolio include:

- Liquidity
- Staffing
- Investment decision-making process
- Objective to control investment management costs and to operate the portfolio efficiently

Return Objective for Real Estate

CTPF seeks to achieve total net returns equivalent to the net returns of the National Council of Real Estate Investment Fiduciaries Fund Index Open-End Diversified Core Equity Index Value Weight (“NFI-ODCE” or “ODCE”) as a minimum return for the total portfolio over rolling five-year periods.

Portfolio Structure

The portfolio will be oriented to equity investment in private market real estate, although investment in publicly-traded real estate securities and real estate debt investments may be considered. Core strategies will comprise at least 75% of the allocation with no more than 25% invested in Non-Core strategies. Core and Non-Core style groups are defined by their respective market risk and return characteristics.

	Strategy	Leverage
Core	<p>Operating and substantially leased (greater than 80%) Core quality properties.</p> <p>Typically concentrated in the four main property types: office, apartment, retail, and industrial. May include self-storage and hotels.</p> <p>Total return from income and appreciation with income accounting for at least 50% of the return.</p>	Low to no leverage (typically 50% or less)
Non-Core Value Added	<p>Institutional quality properties with improvement needs or opportunities.</p> <p>Includes office, apartment, retail, and</p>	May include the use of leverage up to 65% Loan-to-Value

	<p>industrial, as well as more specialized property types such as mixed-use properties, hotels, senior housing, self-storage, and student housing, among others</p> <p>Return from appreciation with some income that grows over time as value-add strategy is implemented.</p>	
Non-Core Opportunistic	<p>Properties, property portfolios, or real estate companies offering recapitalization, turnaround, development, market arbitrage opportunities or other specialized approaches</p> <p>Return primarily from appreciation.</p>	<p>Leverage is utilized and often is not limited; Strategies with a leverage limitation of 80% or less are preferred for the CTPF</p>

Investment Structures

This Policy authorizes the use of various investment structures that provide legal protections to the CTPF commensurate with the investment opportunity, subject to legal review. Investments in real estate will be made through collective investment vehicles and, to a lesser extent, separate accounts for manager of manager programs.

Collective investment vehicles, also known as commingled funds, are generally categorized into two sub-structures: Open-end and Closed-end. Open-end commingled funds are infinite life vehicles which provide liquidity by allowing the investor to contribute capital contributions or to redeem capital, typically on a quarterly basis. Closed-end funds are finite life vehicles where the timing of capital contribution and distributions is at the discretion of the manager, subject to the terms of the operating documents.

Risk Management

Controlling risk in the real estate program is as important as obtaining the targeted returns. The primary risks associated with equity real estate investments are property market risk, property type risk, investment manager risk, timing risk, asset and portfolio management risk, leverage risk, loss of principal, and liquidity risks. A primary objective of the real estate program is to be well diversified to mitigate the risk of losses and to ensure participation in the broad real estate asset class. CTPF will seek to diversify its real estate portfolio by manager, property type, property location, investment strategy, and investment size.

A. Portfolio Composition

The allocation between Core and Non-Core is a primary mechanism to manage risk.

B. Manager-Specific Risk

Diversification by manager will be used to limit manager concentration risk. To control manager exposure, the allocation to a single real estate manager is limited to no more than 35% of the real estate portfolio. Generally, the upper limit will only be considered for managers with substantial assets under management and multiple product strategies (e.g. core, REITs, non-core). Lower amounts will be appropriate for managers with single product strategies and lower assets under management. Manager concentration will be calculated by aggregating the total real estate assets invested by CTPF across all real estate strategies managed by a single manager.

C. Liquidity

To partially mitigate illiquidity risk in real estate and to provide portfolio rebalancing tools, CTPF will focus its investment in open-end funds for the real estate allocation.

D. Single Investment Risk

To mitigate the failure of a single investment on real estate performance, CTPF will limit its investment in any open-end fund to a maximum of 30% of the total real estate allocation and its commitment amount to any single closed-end fund to a maximum of 10% of the total real estate allocation.

E. Vintage Year Risk

The non-core portfolio will be diversified by vintage year.

F. Property Type and Geographical Risk

Real estate investments will be diversified by property type and by location according to the property types and regions defined by NCREIF. The Fund will have an Investment goal of not exceeding more than 45% or less than 10% for any property type. NCREIF Property Types are defined as office, retail, industrial, apartments, and other.

The Fund will have an Investment goal of not exceeding more than 45% or less than 10% for any region. NCREIF Regions are defined as East, South, West, and Midwest. A maximum allocation of 25% to all non-US real estate investments, regardless of investment vehicle, will apply.

G. Currency Risk

CTPF accepts the currency risks consistent with the geographic exposures. Real estate managers may or may not hedge currency risk but the real estate portfolio will not implement

currency hedges. When possible, the CTPF will make investments and receive distributions in US dollars.

H. Leverage

CTPF allows its managers to use leverage in order to enhance overall risk-adjusted returns. Leverage will have a target of forty percent (40%) of the CTPF's aggregate real estate portfolio with a maximum of fifty percent (50%).

At the underlying investment level, leverage will be limited to the levels set within the investment's governing documents. In the event that either the portfolio level and/or style level leverage constraint is breached due to a contraction in market values, the Investment staff and Consultant(s) will notify the Board and make a recommendation for action or exception.

Valuation

Investments in real estate vehicles will be valued using the methodology approved with the selection of the particular investment.

Section VI-E: Private Equity

CTPF invests in private equity to enhance the investment portfolio return through long-term capital appreciation. Private equity investments are highly illiquid, and CTPF seeks to be compensated for such illiquidity by earning returns substantially greater than those available from publicly-traded securities. CTPF's private equity managers have the following guidelines:

- Private equity investments should be made primarily through closed-end commingled limited partnerships or separately-managed accounts;
- Adequate diversification by private equity subclass (venture capital, buyout, mezzanine, distressed debt, special situation, natural resources, secondary, co-investment, non-U.S. and emerging markets) should be maintained;
- New investments in private equity funds should not exceed 10% of the normal policy allocation to private equity;
- Managers will invest according to all executed documents including, but not limited to, private equity limited partnership agreements, private equity limited partnership subscriptions agreements, private equity side letters, and private equity separate agreements, and amendments to all such agreements;

- **Eligible Vehicles:** Private equity investments should be made primarily through closed-end private equity fund-of-funds, direct private equity partnerships, or separately-managed accounts. Direct investments by CTPF in individual companies are subject to Board approval.
- **Diversification:** Adequate diversification by private equity strategy (e.g., venture capital, buyout, special situations, debt, distressed debt, secondary, co-investment, non-U.S. and emerging markets) should be maintained. The portfolio will also be monitored by other diversification measures including: manager, industry, geography, and vintage year;
- **Commitment Pacing:** To maintain an appropriate funded status on a net asset value basis, CTPF will be required to make periodic commitments to additional eligible vehicles in order to maintain our asset allocation percentages and vintage year diversification. CTPF's staff will work with the Consultant(s) and the Investment Managers to determine appropriate commitment timing and amounts, and will present annually a recommended plan to the Board.

- **Program Management:**

Fund-of-Funds: The fund-of-funds managers will select and monitor underlying private equity fund partnerships, each of which will be responsible for investing in and managing portfolio companies, and execute for CTPF any and all documents pertaining to private equity limited partnership investments. The fund-of-funds managers will provide quarterly reports on their vehicles and other information requested by CTPF.

Separately-Managed Accounts: The fund-of-funds managers will develop a portfolio of private equity fund partnerships solely on the investor's behalf. The managers will provide quarterly reports on the vehicle and other information requested by CTPF.

Fund-of-One: The most common form of a separate account is a fund-of-one vehicle whereby the fund-of-funds manager, as a general partner, creates a limited partnership vehicle with the investor owning the entirety of the limited partners' interest. The fund-of-one vehicle, in turn, owns the portfolio of underlying private equity fund partnerships to which the limited partner enjoys the economic rights. The manager will provide quarterly reports on the vehicle and other information requested by CTPF.

Direct Partnerships: The Direct Partnership investments will select and directly invest in portfolio companies. They will execute any and all documents pertaining to private equity limited partnership investments. The Board will approve eligible vehicles and staff will monitor all direct partnerships. The direct partnership managers will provide quarterly reports on their vehicles and other information requested by CTPF.

Private equity managers' performance criteria are:

Horizon	Index	Universe
One market cycle (rolling 12-15 years)	Russell 3000 Index plus 3% annualized rate of return	Rank in the upper half of the peer universe of private equity managers

Section VI-F: Infrastructure

CTPF invests in infrastructure to enhance the investment portfolio return through long-term capital appreciation. Due to the long-term nature of most infrastructure investments, the fund structures that accommodate infrastructure investments are highly illiquid. CTPF seeks to achieve total net returns equivalent to the net returns of the FTSE Core Developed 50/50 Index as a minimum return for the total portfolio over a full market cycle in order to be compensated for such illiquidity. CTPF infrastructure managers have the following guidelines:

- The portfolio should maintain adequate diversification across Investments.
- Some managers will invest in both U.S. and non-U.S. Infrastructure assets with at least 50% of their investments being in the U.S. and some managers will invest in Infrastructure assets in specific geographic areas outside of the U.S. as disclosed and agreed upon in the limited partnership agreement.

Infrastructure managers' performance criteria are:

Horizon	Index
One market cycle (Rolling 5-7 years)	FTSE Core Developed 50/50 Index Net Return

Section VI-G: Cash

Cash, for the purpose of applying the asset allocation weights and ranges, is limited to funds available prior to distribution to investment managers and the amount reserved to pay near-term benefits and administrative costs. Cash investments have the following guidelines:

- Eligible investments shall be limited to units of the Collective Short-term Investment Fund, the Collective Short-term Extendible Portfolio, and the Collective Short to Intermediate Bond Fund, each of which is a collective trust fund maintained by the Fund's custodian. The investment guidelines governing these funds have been reviewed by the Investment staff, Investment Consultant and accepted by the Trustees.
- Cash will be invested in the commingled short-term investment fund managed by the Custodian consistent with Office of the Comptroller of the Currency ("OCC") Regulation 9 and/or SEC Rule 2a-7 under the Investment Company Act of 1940.

Section VII-A: Commingled Vehicles

CTPF may choose to invest in commingled vehicles or mutual funds, in addition to separate accounts. All investment managers are expected to abide by the investment policies/guidelines and any agreement with the Fund.

Section VII-B: Soft Dollars

Soft Dollars are a means of paying brokerage firms for their services through commission revenue. As a fiduciary to the Fund, Investment Managers shall use best efforts and use Soft Dollars for only research purposes on behalf of the Fund. Soft Dollars shall be governed by SEC Rules, Section 28(e). Investment Managers shall disclose the use of Soft Dollars to the Fund annually.

Section VIII-A: Investment Manager Requirements

All assets of the Fund are managed externally. All investment managers are expected to comply with the IMA and/or any other agreement between the Fund and the Investment Manager.

All Investment Managers shall promptly inform the Board and/or their designated agents (the Executive Director, Deputy Executive Director, CIO/DOJ, and the appropriate Investment consultant(s)) of any significant matters pertaining to the investment of Fund assets. This includes, at a minimum, the following:

- Quarterly portfolio asset and transactions statements.
- Substantive changes in investment strategy and portfolio structure.
- Changes in ownership, organizational structure, financial condition, or professional staffing.
- Quarterly reports, detailing all trading activity and specific broker utilization.
- Annual reports, detailing all proxy voting activity.

Section VIII-B: Investment Manager Search and Selection Process

Each manager is selected to meet specific investment objectives and/or performance of the Fund. The Board encourages the use of MWDBE/Emerging Investment Managers whenever possible. Pursuant to IL Public Act 96-006 (40 ILCS 5/1-109.1), if a MWDBE/Emerging Investment Manager meets the qualifications and criteria for a specific search, the MWDBE/Emerging Investment Manager will receive an invitation to present the firm for final consideration.

Selection of Investment Managers shall be governed by the Contract Administration and Procurement Policy as it applies to Investment Managers/Advisers. These policies are adopted and incorporated by reference into this IPS and are available on the Fund's website.

All investment managers who are seeking to invest or are currently investing the Fund's assets must meet the following qualifications and requirements:

- Registered as a bank, insurance company, investment management company, or investment adviser as defined by the Registered Investment Advisers Act of 1940 (15 U.S.C. 80b-1 et seq.);
- Provide a written certification that the firm will act as a fiduciary to the Fund;
- Provide historical quarterly performance numbers calculated on a time-weighted basis, based on a composite of all fully-discretionary accounts of similar investment style, and reported net and gross of fees;
- Provide track records and the appropriate net of fee IRRs for closed-end or private funds;
- Provide performance evaluation reports prepared by an objective third party that illustrate the risk/return profile of the manager, relative to other managers of like investment style;
- Provide detailed information on the history of the firm, key personnel, key clients, fee schedule, and support personnel and demonstrate financial and professional staff stability. This information can be a copy of a recent Request for Proposal ("RFP") completed by the manager;
- Clearly articulate the investment strategy that will be followed and document that the strategy has been successfully adhered to over time;
- Selected firms shall have no outstanding legal judgments or past judgments which may reflect negatively upon the Fund;
- Provide immediately any changes to the above in writing to the Executive Director, Deputy Executive Director, and CIO/DOI; and
- The Fund's investments will make up no more than 20% of a firms' total Assets Under Management ("AUM"). Any Fund investment greater than 20% of a firms' total AUM will be subject to Board approval.

Section VIII-C: Transition Manager

Transition managers are hired to liquidate and/or reallocate the Fund's assets once direction from the Board has been received. Transition managers are fiduciaries of the Fund and are expected to abide by all guidelines and policies (including brokerage requirements). At all times the Fund will maintain a list of approved transition managers. When the Fund finds the need to use the services of a transition manager, all approved transition managers will be invited to bid on the project. The transition managers that submit the best proposal, based on (1) cost and (2) feasibility of the transition plan and strategy (risk management, operational, and trading considerations) will be asked to discuss their proposal via a conference call with Fund staff and Consultant(s). After conference calls have been completed, a recommendation by Investment staff will be submitted to the Executive Director for approval.