Commonwealth of Pennsylvania
Public School Employees' Retirement System

DATE: November 19, 2012

SUBJECT: Proposed Revisions to the Investment Objectives and Guidelines

TO: Members of the Board

FROM: Joseph W. Sheva, CPA
Portfolio Manager

At the December Finance Committee meeting, we will ask the Committee to adopt the changes to Exhibit C of the Investment Policy Statement, Objectives and Guidelines (IPS). In addition, Addendum G (Internally-Managed Optimal Liquid Beta) has been created to address a sub-portfolio addition to the Risk Parity Allocation.

IPS

In Exhibit C in the IPS we are proposing an update to the risk parity benchmark to make it more representative of the strategy.

NEW ADDENDUM

Addendum G (Internally Managed Optimal Liquid Beta Portfolio):

The following represents a summary of this new guideline. Note that this guideline is part of the Risk Parity mandate, which allocates exposures based on asset class risk rather than capital. As such, the initial internally-managed portfolio will consist of four asset classes that are structurally unrelated and whose concentration to, and leverage within, each individually will be determined based on risk measures in the context of the entire portfolio. Therefore the guidelines are broken into two sections, the first being the 'Portfolio-Level' guidelines in which concentration, leverage and liquidity risks are viewed in the context of equally balancing risk allocation across the four economic environments: Rising Growth, Falling Growth, Rising Inflation and Falling Inflation. The second section of the guidelines relates to the individual asset classes and control risks by limiting the types of investments to the following:

- Equities – Limited to swaps, futures and ETFs to gain exposure to the ACWI Local Standard Index.
- Commodities – Limited to swaps of commodity indices.

- Nominal Bonds – Limited to Treasury bills, notes and bonds and U.S. Treasury Futures or Options on U.S. Treasury Futures and swaps on U.S. Treasury securities.
- Inflation-linked Bonds – Limited to U.S. Treasury Inflation Protected securities or swaps on U.S. Treasury Inflation Protected Securities indexes.

Blacklined and clean copies of the changes to the IPS have been included in the package for your review.

If you have any questions or comments, please contact me at 717-720-4632.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
INTERNALLY MANAGED OPTIMAL LIQUID BETA PORTFOLIO

ADDENDUM G

I. OBJECTIVES

This internally managed Optimal Liquid Beta portfolio may consist of positions in stocks, nominal bonds, inflation-linked bonds, commodities and cash equivalents. The objectives of this portfolio are:

1. to establish a risk balanced portfolio within the four economic environments: Rising Growth, Falling Growth, Rising Inflation and Falling Inflation, relative to expectations;
2. to target a long-term Volatility of 14% with a Sharpe Ratio of 0.50; and,
3. to achieve the returns of the Volatility-adjusted Board-approved Risk Parity custom benchmark over the long-term.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that each portfolio be managed within the spirit of a multi-asset balanced risk mandate. Within that framework the manager has discretion to make portfolio changes to accomplish the stated objectives with the following limitations:

PORTFOLIO-LEVEL:

A. Concentration Risk

Portfolio will target equal amount of risk in each of the four economic environments: Rising Growth, Falling Growth, Rising Inflation and Falling Inflation, relative to expectations. No individual environment will be weighted at greater than 30%, or less than 20%, of total portfolio risk.

B. Leverage Risk

Leverage will be only used to construct a portfolio to equally balance risk among four economic environments: Rising Growth, Falling Growth, Rising Inflation and Falling Inflation, relative to expectations. The portfolio is permitted to leverage using permitted asset class investments up to 3:1.

C. Liquidity Risk

Liquidity risk is controlled by limiting the investment tools within each sub-portfolio to specific, liquid, investments, as defined in each section below. All cash collateral must be invested in the Fund's STIF account or any Board-approved short-term investment pools.

D. Derivative Counterparty Risk

1. The commercial and investment banks used for swaps, approved OTC futures, or approved OTC options, must be rated A3 or better by Moody's Counterparty Ratings, (if not rated by Moody's, then rated A- or better by Standard and Poor's Counterparty Ratings or rated B or better by Fitch's Bank Individual Ratings).
2. Net forward/spot contracts, futures contracts, and option exposures to any counterparty will not exceed 20% of the market value of the portfolio. Exposure is measured in net U.S. dollar equivalent terms (offsetting contracts will be netted for this purpose).
3. Counterparty limits will not be applied to listed futures and options.

ASSET CLASSES:

Equities:

A. Concentration, Currency and Sovereign Risks will be managed using the ACWI Local Standard index with weights of various developed and emerging markets determined using a blended market capitalization and GDP weights. Swaps, Futures and ETFs are permitted to gain exposure to these markets.

B. Leverage and Derivative Counterparty Risks are managed at the Portfolio-level.

Commodities:

A. The portfolio manager has discretion regarding selection and use of commodity swaps to gain exposure to commodities. The portfolio manager may select actively managed and/or passively managed commodity swaps.

B. Leverage and Derivative Counterparty Risks are managed at the Portfolio-level.

Nominal Bonds:

A. Spread, Credit, Currency, and Sovereign Risks are not permitted. Only U.S. cash equivalents, Treasury bills, notes and bonds and U.S. Treasury Futures or Options on U.S. Treasury Futures and swaps on U.S. Treasury securities are permitted.

B. Concentration and Liquidity Risks are managed with allowance of only U.S. cash equivalents, Treasury bills, notes and bonds and U.S. Treasury Futures or Options on U.S. Treasury Futures and swaps on U.S. Treasury securities as permitted exposures.

C. Leverage and Derivative Counterparty Risks are managed at the Portfolio-level.

Inflation-linked Bonds:

A. Spread, Credit, Currency, and Sovereign Risks are not permitted. Only U.S. Treasury Inflation Protected Securities or swaps on U.S. Treasury Inflation Protected Securities Indexes are permissible.

B. Concentration and Liquidity Risks are managed with allowance of only U.S. Treasury Inflation Protected Securities or swaps on U.S. Treasury Inflation Protected Securities Indexes as permitted exposures.

C. Leverage and Derivative Counterparty Risks are managed at the Portfolio-level.

III. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO) should be made if the manager believes that these portfolio risk constraints significantly limit the ability of the manager to achieve the objectives of the portfolio. A written amendment will be issued from the CIO, or the DCIO in the CIO's absence, if the request is approved.