Commonwealth of Pennsylvania
Public School Employees' Retirement System

DATE: June 6, 2012

SUBJECT: Proposed Revisions to the Investment Objectives and Guidelines

TO: Members of the Board

FROM: Joseph W. Sheva, CPA
Senior Investment Professional

At the June Finance Committee meeting, we will ask the Committee to adopt the changes to Exhibits B, C and D of the Investment Policy Statement, Objectives and Guidelines (IPS), as well as changes to Addenda B, I, K, K1, L, Q, Q1, Y, Y1, Y2 and the Internally-Managed Premium Assistance Program Portfolio. In addition, Addendum Y3 (Ultra-short High Yield) has been created to address a sub-portfolio proposal to add to the LIBOR Plus Fund.

IPS

Exhibits B and C in the IPS were updated to move the measurement date of the asset allocation from July 1, 2012 to October 1, 2012. The change will allow the implementation of the changes in the asset classes, and weightings, to occur over a more measured time period, which is deemed necessary due to macro investment uncertainties. Exhibit D was updated to allow for up to 1.5% of the Total Fund to be in one MLP manager. This will allow for appreciation in individual managers as the previous individual manager maximum of 1.0% was deemed to be constraining should the manager's market value appreciate significantly versus the total fund.

ADDENDA CHANGES

The most substantive changes made to the IPS addenda, broken into two categories, U.S. Master Limited Partnership guidelines (Addendum B) and Fixed Income and High Yield Guidelines, are as follows:

Addendum B, U.S. Master Limited Partnership Portfolio Guidelines

These guidelines were changed to reflect the evolution in the MLP space from an enhanced index to an active management mandate. This required removing the words "Enhanced" and "Index" from the name of the mandate, changing the objectives to active management mandate objectives and increasing the allowable concentration in individual securities in the S&P MLP Index from the greater of 120% of each securities' Index weighting or 7% of the portfolio at market value to the greater of 150% of each securities Index weighting or 10% of the portfolio at market value. It is anticipated that the managers hired for this mandate will run highly concentrated, less than 30 holdings, portfolios.

Fixed Income and High Yield Guidelines: (Addenda B, I, K, K1, L, Q, Q1, Y, Y1, Y2 and the Internally-Managed Premium Assistance Program Portfolio)

Interest Rate Risk and Spread Risk

- Changed duration and spread duration limitations to account for allowable leverage within the Addendum L (Treasury Inflation Protection Securities) guidelines.

Credit Risk

- Changed acceptable Commercial Paper ratings to be consistent with other security restriction language. For example, the guidelines for Addendum Y (Short-term Investment Pool) allowed for the purchase of corporate debt rated A3/A-, but the CP of the same company might not have been a permissible holding using the previous guidelines. Changes were made to Addenda Y (Short-term Investment Pool), Y1 (LIBOR-Plus Short-term Investment Pools) and the Premium Assistance Program.

Concentration Risk

- Replaced an overall 25% concentration limit for asset backed securities with a concentration limit of 5% for asset backed securities rated below A3/A- for Addendum I (U.S. Core Fixed Income) and AA3/AA- for Addendums Y (Short-term Investment Pool) and the Premium Assistance Program. This change was made due to our internal Fixed Income Team identifying that highly rated asset backed securities represent less of a risk than other types of debt issuance.

- Increased the allowable percentage of the portfolio at market value invested in RMBS securities of any one issuing trust from 5% to 10% in Addendum Y2 (Short Duration Non-Agency RMBS). The change was made due to the single manager in this mandate identifying, and clearing, opportunities to our Managing Director of Fixed Income in this space.

Sovereign Risk

- Allowed for countries in the index to be excluded from the limiting threshold in Addendum Q1 (Emerging Markets Fixed Income).

No Changes

There were no notable changes to Addenda K (U.S. High Yield Fixed Income) and Q (Non-U.S. Developed Markets Fixed Income).

Addendum K1 (Non-Agency Residential Mortgage Backed Securities)

Changes were made to this guideline to clearly present the strategy guidelines of the single manager currently managing to this mandate. The objectives were changed to identify the focus on non-agency residential mortgage backed securities (RMBS). The Interest Rate and Spread Risk sections eliminated the option adjusted language and the Credit Risk section clarified the focus on the then senior or super-senior portion of the capital structure, including subordinates, by limiting the investment in non-agency RMBS below this focus to 20%. In addition, language was added, to limit to 15% of the portfolio at market value, investment in interest-only and principal-only STRIPS, including credit IOs.

NEW ADDENDUM

Addendum Y3 (Ultra-short High Yield):

The following represents a summary of this new guideline. Note that this guideline was established for Radcliffe Capital Management LP to manage an ultra-short high yield portfolio. More information can be found regarding this mandate in their presentation materials.

- **Objectives:** NOF returns greater than 6-month LIBOR plus 25bps with an information ratio of .30 or greater.
- **Interest Rate Risk:** Maximum term to maturity (or put date) of any single bond will not exceed 2.5 years, and the weighted average term to maturity (or to the put/call/tender date if applicable) will not exceed 1.25 years.
- **Spread Risk:** Spread duration from zero to 1.25 years.
- **Credit Risk:**
    - Weighted-average credit rating B or better, excluding non-rated securities.
    - No more than 30% in non-rated securities.
- **Currency Risk:** securities denominated in foreign currencies not permitted.
- **Sovereign Risk:** Limit to 20% exposure in dollar-denominated non-U.S. government securities and dollar-denominated bonds issued by non-U.S. domiciled entities.
- **Concentration Risk:** Limit of 6% to any issuer
- **Liquidity Risk:** Prohibit positions unable to be liquidated promptly without severe market impact.

Blacklined copies of the changes to each guideline have been included in the package for your review.

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

Proposed Revisions to the Investment Policy Statement and Investment Objectives and Guidelines

Joseph W. Sheva, CPA
Senior Investment Professional
June 6, 2012

Investment Policy Statement

- Exhibit B and C
  - Measurement date moved from July 1, 2012 to October 1, 2012
- Exhibit D
  - Increase MLP individual manager threshold

Investment Objectives and Guidelines

- Addendum B – U.S. Master Limited Partnership Portfolios
  - Replaced tracking error objective with an excess return objective
  - Increased Information Ratio objective
  - Increased individual security weight allowance

Investment Objectives and Guidelines

<u>Fixed Income and High Yield Guidelines:</u>

- Interest Rate Risk and Spread Risk
  - Account for allowable leverage within guidelines in the duration and spread duration limitations.
    - Addendum L (Treasury Inflation Protection Securities)
- Credit Risk
  - Changed Commercial Paper acceptable ratings to be consistent with other security rating limits.
    - Addenda Y (Short-term Investment Pool), Y1 (LIBOR-Plus Short-term Investment Pools) and Premium Assistance Program

Investment Objectives and Guidelines

<u>Fixed Income and High Yield Guidelines (cont.):</u>

- Concentration Risk
  - Replaced overall 25% limit for asset-backed securities with 5% limit on asset-backed securities rated below credit rating noted below.
    - A3/A- for Addendum I (U.S. Core Plus Fixed Income)
    - AA3/AA- for Addenda Y (Short-term Investment Pool) and Premium Assistance Program
  - Increase allowable percentage holding of one issuing trust from 5% to 10% for Addendum Y2 (Short Duration Non-Agency RMBS)

Investment Objectives and Guidelines

<u>Fixed Income and High Yield Guidelines (cont.):</u>

- Sovereign Risk
  - Allowed for countries in the index to be excluded from the limiting threshold
    - Addendum Q1 (Emerging Markets Fixed Income)
- No notable changes were made to the following Addenda
  - K (U.S. High Yield Fixed Income)
  - Q (Non-U.S. Developed Markets Fixed Income)

Investment Objectives and Guidelines

<u>Fixed Income and High Yield Guidelines (cont.):</u>

- Addendum K1 (Non-Agency Residential Mortgage Backed Securities)
  - Focused guidelines on non-agency residential mortgage asset backed securities

Investment Objectives and Guidelines

New Addendum

- Y3 (Ultra-short High Yield)
  - Objectives: NOF returns greater than 6-month LIBOR plus 25bps with an information ratio of .30 or greater.
  - Interest Rate Risk: Maximum term to maturity (or put date) of any single bond will not exceed 2.5 years, and the weighted average term to maturity (or to the put/call/tender date if applicable) will not exceed 1.25 years.
  - Spread Risk: Spread duration from zero to 1.25 years.
  - Credit Risk:
    - Weighted-average credit rating B or better, excluding non-rated securities.
    - No more than 30% in non-rated securities.

Investment Objectives and Guidelines

- Y3 (Ultra-short High Yield) (cont.)
  - Currency Risk: securities denominated in foreign currencies not permitted.
  - Sovereign Risk: Limit to 20% exposure in dollar-denominated non-U.S. government securities and dollar-denominated bonds issued by non-U.S. domiciled entities.
  - Concentration Risk: Limit of 6% to any issuer
  - Liquidity Risk: Prohibit positions unable to be liquidated promptly without severe market impact.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
~~ENHANCED~~ U.S. MASTER LIMITED PARTNERSHIP ~~INDEX~~ PORTFOLIOS

ADDENDUM B

I. OBJECTIVES

This ~~enhanced~~ actively managed U.S. master limited partnership ~~index~~ portfolio will consist primarily of U.S. master limited partnerships, publicly traded limited liability companies, midstream energy C-corporartions and in natural resource transportation and operating company securities associated with MLPs or with MLP-able assets and cash equivalents. The objectives of this portfolio are:

~~1. to be invested in securities in, or eligible to be in, the S&P MLP Index.~~

~~2.~~1. To generate positive risk-adjusted excess returns of 200 bps or more annually versus the S&P MLP Index (Index)~~to track with a tracking error that does not exceed 1.0%, and where possible exceed, the S&P MLP Total Return Index (Index)~~; and,

~~3.~~2. to generate those excess returns with an Information Ratio of 0.30~~25~~ or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of an actively managed ~~n enhanced~~ U.S. Master Limited Partnership ~~Index~~ mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Concentration Risk

1. The portfolio may not hold more than 5% of the sum total of all classes of outstanding shares of any one corporation.

2. The portfolio may not hold more than the greater of ~~120~~150% of each security's S&P MLP Index weighting or ~~7~~10% of the portfolio at market value invested in the securities of any corporation (which includes the total of common, convertible, preferred, and cash equivalents).

3. The portfolio may not hold rights or warrants unless they were received as part of a corporate distribution, IPO, new issue, or if the result of another holding.

4. No more than 5% of the portfolio at market value may be invested in preferred issues.

5. No more than 5% of the portfolio at market value may be invested in ~~convertible bonds~~MLP debt instruments.

6. No more than 7% of the portfolio at market value may be invested in cash.

B. Liquidity Risk

1. The portfolio manager is permitted to purchase U.S. master limited partnership units issued in PIPE (private investment in public equity) transactions. Investments in stocks obtained through PIPE transactions that are not yet registered are limited to 20% of the portfolio at market value. Investments in stocks obtained through PIPE transactions that are registered are permissible without limitation.

2. To achieve the quality and liquidity levels desirable, at least 80% of the U.S. equity securities owned in the portfolio must be listed on the New York, American, and/or NASDAQ Stock Exchanges. Convertible bonds, convertible into common stock listed on any of the above-mentioned exchanges, will be considered a listed equity security for this purpose.

3. Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

C. Derivative Counterparty Risk

1. The commercial and investment banks used for approved OTC futures, approved OTC options, or forward/spot currency transactions 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.

III. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and ~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
U.S. CORE PLUS FIXED INCOME PORTFOLIOS

ADDENDUM I

I. OBJECTIVES

This actively managed U.S. fixed income portfolio will consist primarily of fixed income securities and cash equivalents. The objectives of this portfolio are:

1. to generate positive risk-adjusted excess returns of 50 bps or more annually versus the Barclays Capital U.S. Aggregate Index (Index); and,
2. to generate those excess returns with an Information Ratio of 0.40 or greater.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a U.S. Core Plus Fixed Income mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The effective or option-adjusted duration of the portfolio must range from zero to no more than 2.0 years in excess of the Index.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must range from zero to no more than 1.5 years in excess of the Index.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be A2/A or better.

Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.

2. Non-rated debt securities are not permissible.

D. Currency Risk

1. No more than 35% of the portfolio may be in non-U.S. currencies. Outright currency exposure and hedging is permitted through the use of futures, options, or forward contracts subject to Derivative Counterparty Risk restrictions documented in G. below.
2. No more than 10% of the portfolio may be invested in any single non-U.S. currency other than the Euro, U.K. Pound, Japanese Yen, and Canadian Dollar.

E. Sovereign Risk

1. No more than 35% of the portfolio may be invested in non-U.S. government securities and bonds issued by non-U.S. domiciled entities.
2. No more than 10% of the portfolio may be invested in securities and bonds from any individual non-U.S. country other than the U.K., Japan, Canada, Germany, or France.

F. Concentration Risk

1. No more than 7% of the portfolio at market value may be invested in the securities of any investment grade (ratings Baa3/BBB- or higher) issuer (excluding issues or issuers fully guaranteed by the U.S. Government and its agencies rated Aaa/AAA and securities issued by non-US. Governments).
2. No more than 2% of the portfolio at market value may be invested in the securities of any non-investment grade (rating Ba1/BB+ or lower) issuer or any non-convertible preferred stock.
3. No more than 15% of the portfolio at market value may be invested in non-investment grade securities.
4. No more than 10% of the portfolio at market value may be invested in non-convertible preferred stock and convertible bonds (bonds convertible into common stock) that are trading at 110% of par value or less.
5. No more than ~~2~~5% of the portfolio at market value may be invested in asset backed securities (defined as financial instruments collateralized by one or more types of assets including mortgages, receivables, loan paper, etc.) rated below A3/A-. This limit does not apply to U.S. or U.S. agency guaranteed asset backed securities.

G. Derivative Counterparty Risk

1. The commercial and investment banks used for approved OTC futures, approved OTC options, or forward/spot currency transactions 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.

H. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

III. DERIVATIVES

The portfolio is permitted to establish and maintain long and short positions in:

1. Listed options on currencies;
2. Listed options on fixed income and currency futures;
3. Fixed income forward commitments, including mortgage dollar rolls;
4. Currency forward commitments;
5. Listed fixed income futures contracts; and
6. Listed currency futures contracts.

Fixed income derivatives may only be used to manage interest rate risk.

IV. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
U.S. HIGH YIELD FIXED INCOME PORTFOLIOS

ADDENDUM K

I. OBJECTIVES

This actively managed U.S. high yield fixed income portfolio will consist primarily of fixed income securities and cash equivalents. The objectives of this portfolio are:

1. to generated positive excess returns of 30 bps or more annually versus the Barclays Capital U.S. High Yield Index (Index); and,
2. to generate those excess returns with an Information Ratio of 0.30 or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a U.S. High Yield Fixed Income mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The effective or option-adjusted duration of the portfolio must range from zero to no more than 2.0 years in excess of the Index.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must range from zero to no more than 1.5 years in excess of the Index.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be B-/B3 or better.
2. No more than 20% of the portfolio at market value may be invested in non-rated debt securities.

Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P

rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.

D. Currency Risk

1. No more than 35% of the portfolio may be in non-U.S. currencies. Outright currency exposure and hedging is permitted through the use of futures, options, or forward contracts subject to Derivative Counterparty Risk restrictions documented in G. below.
2. No more than 10% of the portfolio may be invested in any single non-U.S. currency other than the Euro, U.K. Pound, Japanese Yen, and Canadian Dollar.

E. Sovereign Risk

1. No more than 35% of the portfolio may be invested in non-U.S. government securities and bonds issued by non-U.S. domiciled entities.
2. No more than 10% of the portfolio may be invested in securities and bonds from any individual non-U.S. country other than the U.K., Japan, Canada, Germany, or France.

F. Concentration Risk

1. No more than 7% of the portfolio at market value may be invested in the securities of any issuer.
2. No more than 10% of the portfolio at market value may be invested in non-convertible preferred stock and convertible bonds (bonds convertible into common stock) that are trading at 110% of par value or less.
3. No more than 20% of the portfolio at market value may be invested in asset backed securities (defined as financial instruments collateralized by one or more types of assets including mortgages, receivables, loan paper, etc.). This limit does not apply to U.S. or U.S. agency guaranteed asset backed securities.
4. No more than 5% of the portfolio's assets, at market value, invested in common stock, convertible preferred stock, rights, and warrants provided, however, that their inclusion in the portfolio is the result of another fixed income security holding (unit deal) or as part of a restructuring of an existing portfolio holding.

G. Derivative Counterparty Risk

1. The commercial and investment banks used for approved OTC futures, approved OTC options, or forward/spot currency transactions 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.

H. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

III. DERIVATIVES

The portfolio is permitted to establish and maintain long and short positions in:

1. Listed options on currencies;
2. Listed options on fixed income and currency futures;
3. Fixed income forward commitments, including mortgage dollar rolls;
4. Currency forward commitments;
5. Listed fixed income futures contracts; and
6. Listed currency futures contracts.

Fixed income derivatives may only be used to manage interest rate risk.

IV. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
NON-AGENCY RESIDENTIAL MORTGAGE ~~AND ASSET~~ BACKED SECURITIES PORTFOLIOS

ADDENDUM K1

I. OBJECTIVES

This actively managed mortgage ~~and asset~~ backed securities portfolio will consist primarily of ~~MBS/ABS/CMBS securities and loans and cash equivalents~~non-agency residential mortgage backed securities (RMBS). The objectives of this portfolio are:

1. to generate positive absolute performance of 10% or more annually; and,
2. to generate those excess returns with an Information Ratio of 0.30 or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a Non-Agency Residential Mortgage ~~and Asset~~ Backed Securities mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The ~~effective or option adjusted~~ duration of the portfolio must range from zero to no more than 2.0 years in excess of the Barclays Capital U.S. Mortgage Backed Securities Index (Index).

B. Spread Risk

The ~~effective or option-adjusted~~ spread duration of the portfolio must range from zero to no more than 1.5 years in excess of the Index.

C. Credit Risk

1. This portfolio will not be constrained by credit rating designations on securities.
2. There is no credit rating restriction for the portfolio in total.
3. No more than 20% of the portfolio at market value is permitted to be invested in non-agency RMBS that is below the then senior or super-senior portion of the capital structure, including subordinates.

~~1. The weighted-average credit rating of the portfolio must be B-/B3 or better.~~
~~2. No more than 60% of the portfolio at market value may be invested in securities with ratings below Baa3/BBB- (including unrated securities).~~
~~3. No more than 20% of the portfolio at market value may be invested in non-rated debt securities.~~

~~Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.~~

~~The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.~~

D. Currency Risk

1. At no time may the manager's portfolio invest in securities denominated in foreign currencies.

E. Sovereign Risk

1. No more than 5% of the portfolio may be invested in U.S. denominated securities backed by a credit linked note referencing U.S. mortgage collateral, held in a trust domiciled in the Cayman Islands.

F. Concentration Risk

1. No more than 40% of the portfolio at market value to any single RMBS~~/ABS~~ Servicer in the portfolio ~~(there is no concentration limit for CMBS Servicers)~~.
2. No more than 5% of the portfolio at market value invested in RMBS~~/ABS~~ securities of any one issuing trust.
~~3. No more than 7% of the portfolio at market value invested in the CMBS securities of any one issuing trust.~~

~~4.~~3. ~~No more than 25% of the portfolio at market value in collateralized debt obligations (CDOs) and collateralized loan obligations (CLOs).~~No more than 15% of the portfolio at market value is permitted to be invested in interest-only and principal-only STRIPS, including credit IOs.

G. Derivative Counterparty Risk

1. The commercial and investment banks used for approved OTC futures and 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. 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.

H. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities, B-Notes, and Mezzanine Loans), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

III. DERIVATIVES

The portfolio is permitted to establish and maintain long and short positions in:

1. Listed options on fixed income futures;
2. Fixed income forward commitments, including mortgage dollar rolls; and
3. Listed fixed income futures contracts.

Fixed income derivatives may only be used to manage interest rate risk.

IV. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
INTERNALLY-MANAGED TREASURY INFLATION PROTECTION SECURITIES PORTFOLIOS

ADDENDUM L

I. OBJECTIVES

This actively managed Treasury Inflation Protection Securities (TIPS) portfolio will consist primarily of fixed income securities and cash equivalents. The objectives of this portfolio are:

1. to generate positive excess returns of 30 bps or more annually versus the Barclays Capital U.S. TIPS Index (Series L) (Index); and,
2. to generate those excess returns with an Information Ratio of 0.30 or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a Treasury Inflation Protection Securities mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The effective or option-adjusted duration of the portfolio must range from zero to no more than 0.50 years in excess of the Index, as adjusted for allowable leverage.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must be not greater than 0.75 years, as adjusted for allowable leverage.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be Aa2/AA or better.

2. Only securities rated Baa3/BBB- or better are acceptable.

   Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating

Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.

D. Currency Risk

1. At no time may the manager's portfolio invest in securities denominated in foreign currencies.

E. Sovereign Risk

1. No more than 20% of the portfolio may be invested in dollar-denominated non-U.S. government securities and dollar-denominated bonds issued by non-U.S. domiciled entities.
2. No more than 10% of the portfolio may be invested in dollar-denominated securities and bonds from any individual non-U.S. country other than the U.K., Japan, Canada, Germany, or France.
3. Only investments in countries with a sovereign rating of Aa/AA or better are acceptable

F. Concentration Risk

1. No more than 7% of the portfolio at market value may be invested in the securities of any issuer (excluding issues or issuers fully guaranteed by the U.S. Government and its agencies rated Aaa/AAA and securities issued by non-US. Governments or supranational issuers).
2. No more than 30% of the portfolio at market value may be invested in nominal bonds.
3. No more than 20% of the portfolio at market value may be invested in corporate bonds.
4. Non-convertible preferred stock and convertible bonds (bonds convertible into common stock) are prohibited.
5. No more than 20% of the portfolio at market value may be invested in asset backed securities (defined as financial instruments collateralized by one or more types of assets including mortgages, receivables, loan paper, etc.). This limit does not apply to U.S. or U.S. agency guaranteed asset backed securities.

G. 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.

H. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

III. DERIVATIVES

1. The portfolio is permitted to establish and maintain long and short positions in:
    a. Listed options on fixed income futures;
    b. Fixed income forward commitments, including mortgage dollar rolls; and
    c. Listed fixed income futures contracts.

2. The portfolio is permitted to use TIPS total return swaps for an amount of up to 40% of the total market value of the portfolio provided that an amount equal to or greater than the swap's first leg (number of index units * price) is held in PSERS' Internally-managed Short-Term Investment Pool or a LIBOR-Plus short-term investment pool sub-account.

Fixed income derivatives may only be used to manage interest rate risk.

IV. LEVERAGE

The manager is permitted to leverage the portfolio using TIPS total return swaps up to 3:1. Swaps held for the purpose of leveraging the portfolio shall be held in a separate sub-account of the manager to allow for measurement of the performance of the primary, unleveraged portfolio.

V. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
NON-U.S. DEVELOPED MARKETS FIXED INCOME PORTFOLIOS

ADDENDUM Q

I. OBJECTIVES

This actively managed Non-U.S. Developed Markets fixed income portfolio will consist primarily of fixed income securities and cash equivalents. The objectives of this portfolio are:

1. to generate positive excess returns of 50 bps or more annually versus the Barclays Capital Global Aggregate GDP-weighted Developed Market ex-U.S. (Unhedged) Index (Index); and,
2. to generate those excess returns with an Information Ratio of 0.40 or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a Non-U.S. Developed Markets Fixed Income mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The effective or option-adjusted duration of the portfolio must range from zero to no more than 2.0 years in excess of the Index.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must range from zero to no more than 1.5 years in excess of the Index.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be A2/A or better.

2. Non-rated debt securities are not permissible.

Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating

Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.

D. Currency Risk

1. In addition to holdings in securities denominated in non-U.S. currencies, outright long and short currency exposure is permitted through the use of futures, options, or forward contracts subject to Derivative Counterparty Risk restrictions documented in G. below.
2. Net exposure to any benchmark currency is limited to + / - 20% of the currency's Index weight.
3. Net exposure to any non-benchmark currency, excluding the U.S. dollar, is limited to + / - 15%.
4. Net exposure to the U.S. dollar is limited to + / - 25%.

E. Sovereign Risk

1. No more than 10% of the portfolio may be invested in securities and bonds from non-U.S. countries with a Sovereign Rating below Baa3/BBB-.
2. No more than 3% of the portfolio may be invested in securities and bonds from any individual non-U.S. country with a Sovereign Rating below Baa3/BBB-.
3. No more than 25% of the portfolio may be invested in U.S. dollar denominated securities.

F. Concentration Risk

1. No more than 7% of the portfolio at market value may be invested in the securities of any investment grade (ratings Baa3/BBB- or higher) issuer (excluding issues or issuers fully guaranteed by the U.S. Government and its agencies rated Aaa/AAA and securities issued by non-US. Governments or supranational issuers).
2. No more than 2% of the portfolio at market value may be invested in the securities of any non-investment grade (rating Ba1/BB+ or lower) issuer or any non-convertible preferred stock.

3. No more than 15% of the portfolio at market value may be invested in non-investment grade securities.
4. No more than 10% of the portfolio at market value may be invested in non-convertible preferred stock and convertible bonds (bonds convertible into common stock) that are trading at 110% of par value or less.
5. No more than 25% of the portfolio at market value may be invested in asset backed securities (defined as financial instruments collateralized by one or more types of assets including mortgages, receivables, loan paper, etc.). This limit does not apply to U.S. or U.S. agency guaranteed asset backed securities.

G. Derivative Counterparty Risk

1. The commercial and investment banks used for approved OTC futures, approved OTC options, or forward/spot currency transactions 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.

H. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

III. DERIVATIVES

The portfolio is permitted to establish and maintain long and short positions in:

1. Listed options on currencies;
2. Listed options on fixed income and currency futures;
3. Fixed income forward commitments, including mortgage dollar rolls;
4. Currency forward commitments;
5. Listed fixed income futures contracts; and
6. Listed currency futures contracts.

Fixed income derivatives may only be used to manage currency and interest rate risk.

IV. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
EMERGING MARKETS FIXED INCOME PORTFOLIOS

ADDENDUM Q1

I. OBJECTIVES

This actively managed emerging markets fixed income portfolio will consist primarily of fixed income securities and cash equivalents. The objectives of this portfolio are:

1. to generate positive excess returns of 50 bps or more annually versus the Barclays Capital EM Local Currency – Government – MV Weighted (Unhedged) – 10% Country Cap Index (Index); and,
2. to generate those excess returns with an Information Ratio of 0.40 or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of an Emerging Markets Fixed Income mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The effective or option-adjusted duration of the portfolio must range from zero to no more than 2.0 years in excess of the Index.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must range from zero to no more than 1.5 years in excess of the Index.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be Ba3/BB- or better.

2. Non-rated debt securities and issuers limited to no more than 10% of the portfolio at market value.

Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.

Derivative securities, including credit-linked notes (CLNs), are permitted and will be deemed to have the rating of the underlying issuer or security.

D. Currency Risk

1. In addition to holdings in securities denominated in non-U.S. currencies, outright currency exposure and hedging is permitted through the use of futures, options, or forward contracts subject to Derivative Counterparty Risk restrictions documented in G. below.

E. Sovereign Risk

1. No more than 50% of the portfolio may be invested in issuers from non-U.S. countries with a Sovereign Rating below Baa3/BBB-.
2. No more than 10% of the portfolio may be invested in securities and bonds from any individual non-U.S. country with a Sovereign Rating below Baa3/BBB-, excluding countries in the Index.~~.~~

F. Concentration Risk

1. No more than 7% of the portfolio at market value may be invested in the securities of any investment grade (ratings Baa3/BBB- or higher) issuer (excluding issues or issuers fully guaranteed by the U.S. Government, and its agencies rated Aaa/AAA and securities issued by non-US. Governments (or derivatives of the same, including CLNs) or supranational issuers).
2. No more than 2% of the portfolio at market value may be invested in the securities of any non-investment grade (rating Ba1/BB+ or lower) issuer or any non-convertible preferred stock (excluding issues or issuers fully guaranteed by the U.S. Government, and its agencies rated Aaa/AAA and securities issued by non-US. Governments (or derivatives of the same, including CLNs) or supranational issuers).
3. No more than 50% of the portfolio at market value may be invested in non-investment grade securities.

4. No more than 10% of the portfolio at market value may be invested in non-convertible preferred stock and convertible bonds (bonds convertible into common stock) that are trading at 110% of par value or less.
5. No more than 15% of the portfolio at market value may be invested in asset backed securities (defined as financial instruments collateralized by one or more types of assets including mortgages, receivables, loan paper, etc.). This limit does not apply to U.S. or U.S. agency guaranteed asset backed securities.

G. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

H. Derivative Counterparty Risk

1. The commercial and investment banks used for CLNs, approved OTC futures, approved OTC options, or forward/spot currency transactions 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.

III. DERIVATIVES

The portfolio is permitted to establish and maintain long and short positions in:

1. Listed options on currencies;
2. Listed options on fixed income and currency futures;
3. Fixed income forward commitments, including mortgage dollar rolls;
4. Currency forward commitments;
5. Listed fixed income futures contracts; and
6. Listed currency futures contracts.

Fixed income derivatives may only be used to manage interest rate risk.

IV. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
INTERNALLY-MANAGED SHORT-TERM INVESTMENT POOL

ADDENDUM Y

I. OBJECTIVES

This short-term investment pool will consist primarily of fixed income securities and cash equivalents. The objectives of this portfolio, in order of importance, are:

1. to preserve capital;
2. to maintain the Net Asset Value at $1 per share;
3. to maintain volatility relative to the 0-3 month Treasury Bill Index of no greater than 1.0%;
4. to generate positive annual returns in excess of the 0-3 month Treasury Bill Index; and
5. to maintain an information ratio of 0.00 or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a short-term investment pool mandate and be convertible to cash within 72 hours. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The effective or option-adjusted duration of the portfolio must range from zero to 0.50 year.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must range from zero to 0.50 year.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be Aa2/AA or better.
2. Commercial paper issuers and negotiable certificates of deposits rated P-1/A-1 or better are acceptable. Commercial paper rated P-2/A-2 is acceptable provided the long term rating is at least A3/A-.~~Only commercial paper issuers and negotiable certificates of deposits rated P-1/A-1 or better are acceptable.~~

3. Securities other than commercial paper issuers and negotiable certificates of deposits must be rated A3/A- or better.
4. Money market funds that are not registered with the Securities and Exchange Commission are prohibited.
5. Repurchase agreements will have terms no greater than 90 days and will be secured by at least 102% of Federal Obligations collateral.

Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

D. Currency Risk

1. At no time may the manager's portfolio invest in securities denominated in foreign currencies.

E. Sovereign Risk

1. No more than 20% of the portfolio may be invested in dollar-denominated non-U.S. government securities and dollar-denominated bonds issued by non-U.S. domiciled entities. Non-U.S. exposure will be determined based on the issuer of the underlying instrument.

F. Concentration Risk

1. No more than 7% of the portfolio at market value may be invested in the securities of any issuer (excluding issues or issuers fully guaranteed by the U.S. Government and its agencies rated Aaa/AAA and securities issued by non-US. Governments).
2. Non-convertible preferred stock and convertible bonds (bonds convertible into common stock) are prohibited.
3. No more than ~~25~~5% of the portfolio at market value may be invested in asset backed securities (defined as financial instruments collateralized by one or more types of assets including mortgages, receivables, loan paper, etc.) rated below AA3/AA-. This limit does not apply to U.S. or U.S. agency guaranteed asset backed securities.

4. No more than 10% of the market value of the portfolio invested in municipal securities.
5. No more than 15% in any one sponsor of money market funds.
6. Reverse repurchase agreements are prohibited.

G. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

H. Counterparty Risk

1. Counterparties to repurchase agreements must be members of the Federal Reserve System and insured by the FDIC.
2. Exposures to any counterparty will not exceed 20% of the market value of the portfolio.

III. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
LIBOR-PLUS SHORT-TERM INVESTMENT POOLS
ADDENDUM Y1

I. OBJECTIVES

This actively managed LIBOR-Plus short-term investment pool will consist of fixed income investments and cash equivalents. The objectives of this portfolio are:

1. to preserve capital;
2. to maintain low price volatility;
3. to generate positive annual returns in excess of the implied financing costs of derivative positions (3-month LIBOR); and,
4. to generate those excess returns with an Information Ratio of 0.30 or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a LIBOR-Plus short-term investment pool mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The effective or option-adjusted duration of the portfolio must range from zero to 0.75 year.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must range from zero to 1.0 year.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be Aa3/AA- or better.
2. ~~Only c~~Commercial paper issuers and negotiable certificates of deposit rated P-2/A-2 or better are acceptable. Commercial paper rated P-3/A-3 is acceptable provided the long-term rating is at least Baa3/BBB-.
3. Securities other than commercial paper issuers and negotiable CDs must be rated Baa3/BBB- or better.

Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.

D. Currency Risk

1. At no time may the manager's portfolio invest in securities denominated in foreign currencies.

E. Sovereign Risk

1. No more than 20% of the portfolio may be invested in dollar-denominated non-U.S. government securities and dollar-denominated bonds issued by non-U.S. domiciled entities. Non-U.S. exposure will be determined based on the issuer of the underlying instrument.

F. Concentration Risk

1. No more than 7% of the portfolio at market value may be invested in the securities of any issuer (excluding issues or issuers fully guaranteed by the U.S. Government and its agencies rated Aaa/AAA and securities issued by non-US. Governments).
2. Non-convertible preferred stock and convertible bonds (bonds convertible into common stock) are prohibited. The portfolio may hold up to 5% of the portfolio at market value in convertible bonds (bonds convertible into common stock) that are trading at 105% of par value or less. When convertible bonds are trading at more than 105% of par value, the manager must sell within 60 days or receive written permission from the CIO to continue to hold the security.
3. No more than ~~25~~5% of the portfolio at market value may be invested in asset backed securities (defined as financial instruments collateralized by one or more types of assets including mortgages, receivables, loan paper, etc.) rated below A3/A-. This

limit does not apply to U.S. or U.S. agency guaranteed asset backed securities.

4. No more than 10% of the market value of the portfolio invested in municipal securities.

G. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

H. Derivative Counterparty Risk

1. The commercial and investment banks used for 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 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.

III. DERIVATIVES

The portfolio is permitted to establish and maintain long and short positions in:

1. Listed options on fixed income futures; and,
2. Fixed income forward commitments, including mortgage dollar rolls; and,
3. Listed fixed income futures contracts.

Fixed income derivatives may only be used to manage interest rate risk.

IV. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and ~~Managing Director of External Public Markets, Risk & Compliance (DEPM~~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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
SHORT DURATION NON-AGENCY RMBS PORTFOLIOS

ADDENDUM Y2

I. OBJECTIVES

This actively managed mortgage and asset backed securities portfolio will consist exclusively of non-agency RMBS securities and cash equivalents. The objectives of this portfolio are:

1. to generate positive absolute net of fee performance of one-month LIBOR plus 2.00% or more annually; and,
2. to generate those excess returns with an Information Ratio of 0.30 or greater over a rolling 3-year period (hurdle rate for this calculation will be one-month LIBOR).

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a short duration non-agency Residential Mortgage Backed Securities mandate. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

1. The effective or option-adjusted duration of the portfolio must range from zero to no more than 1.0 years.
2. No more than 40% of the portfolio at market value may be invested in securities with a fixed rate coupon.

B. ~~Credit~~ Spread Risk

The effective or option-adjusted spread duration of the portfolio must be less than 3.5 years.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be Baa1/BBB+ or better.
2. No more than 33% of the portfolio at market value may be invested in securities with ratings below Baa3/BBB- (including non-rated securities).

3. No more than 20% of the portfolio at market value may be invested in non-rated debt securities.
4. No more than 25% of the portfolio is permitted to be invested in non-agency RMBS that is below the senior or super-senior portion of the capital structure.

Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.

D. Currency Risk

1. At no time may the manager's portfolio invest in securities denominated in foreign currencies.

E. Sovereign Risk

1. None of the portfolio may be invested in non-U.S. securities.

F. Concentration Risk

1. No more than 40% of the portfolio at market value to any single RMBS Servicer in the portfolio.
2. No more than ~~5~~10% of the portfolio at market value invested in RMBS securities of any one issuing trust.

G. Derivative Counterparty Risk

1. The commercial and investment banks used for approved OTC futures and 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. 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.

H. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities, B-Notes, and Mezzanine Loans), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

III. DERIVATIVES

The portfolio is permitted to establish and maintain long and short positions in:

1. Listed options on fixed income futures;
2. Fixed income forward commitments, including mortgage dollar rolls; and
3. Listed fixed income futures contracts.

Fixed income derivatives may only be used to manage interest rate risk.

IV. AMENDMENTS

A written request to the Chief Investment Officer (CIO) and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
ULTRA-SHORT HIGH YIELD PORTFOLIOS
ADDENDUM Y3

I. OBJECTIVES

This actively managed ultra-short duration portfolio will consist of convertible and corporate debt securities and cash equivalents. The objectives of this portfolio are:

1. to generate positive absolute net of fee performance of six-month LIBOR plus 0.25% or more annually and,
2. to generate those excess returns with an Information Ratio of 0.30 or greater over a rolling 3-year period.

II. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a ultra-short high yield portfolio. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The maximum term to maturity (or put date) of any single bond will not exceed 2.5 years, and the weighted average term to maturity (or to the put/call/tender date if applicable) will not exceed 1.25 years.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must range from zero to 1.25 years.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be B or better, excluding non-rated securities.
2. No more than 30% of the portfolio at market value may be invested in non-rated securities.

D. Currency Risk

At no time may the manager's portfolio invest in securities denominated in foreign currencies.

E. Sovereign Risk

No more than 20% of the portfolio may be invested in dollar-denominated non-U.S. government securities and dollar-denominated bonds issued by non-U.S. domiciled entities. Non-U.S. exposure will be determined based on the issuer of the underlying instrument.

F. Concentration Risk

No more than 6% of the portfolio at market value may be invested in the securities of any issuer (excluding issues or issuers fully guaranteed by the U.S. Government and its agencies rated Aaa/AAA and securities issued by non-US. Governments).

G. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

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.

PENNSYLVANIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT OBJECTIVES AND GUIDELINES
INTERNALLY-MANAGED PREMIUM ASSISTANCE PROGRAM PORTFOLIO

I. GENERAL

The Public School Employees' Retirement Board (the Board) is responsible for formulation of investment policy for the Health Insurance Premium Assistance Program (Program). The Program is a medical assistance program offered by the Board and the custodian of the Program's assets is the State Treasurer of the Commonwealth of Pennsylvania. The Board, as trustee for the Program, has exclusive investment control of the Program, and shall invest the moneys in the Fund as authorized by the laws of the Commonwealth of Pennsylvania. Part of this responsibility includes development of investment policy, informed selection and retention of investment advisors, and ongoing monitoring of investment results.

II. OBJECTIVES

This actively managed U.S. fixed income portfolio will consist primarily of fixed income investments and cash equivalents. The objectives of this portfolio are:

1. to preserve capital;
2. to maintain low price volatility relative to the Merrill Lynch 3-Month Treasury Bill Index (Index):
3. to generate positive annual returns in excess of the Index; and
4. to maintain an information ratio of 0.00 or greater per year over a rolling 3-year period.

The investment manager is expected to adhere to the investment philosophy and style that was presented to the Board, Investment Office Staff, and Investment Consultant at the time of its hiring and as set forth in his employment with the Board.

Quarterly performance shall be evaluated to monitor progress toward attainment of these goals. It is understood that there are likely to be short-term periods during which performance deviates from the I~~i~~ndex.

III. PORTFOLIO RISK MANAGEMENT

The Board's expectations are that this portfolio be actively managed within the spirit of a short-term investment pool mandate and be convertible to cash within 72 hours. Within this framework, the following are the portfolio risk constraints under which the manager is required to operate:

A. Interest Rate Risk

The effective or option-adjusted duration of the portfolio must range from zero to plus 0.50 year in excess of the Index.

B. Spread Risk

The effective or option-adjusted spread duration of the portfolio must range from zero to 0.75 year.

C. Credit Risk

1. The weighted-average credit rating of the portfolio must be Aa2/AA or better.
2. Commercial paper issuers and negotiable certificates of deposits rated P-1/A-1 or better are acceptable. Commercial paper rated P-2/A-2 is acceptable provided the long term rating is at least A3/A-. ~~Only commercial paper issuers and negotiable certificates of deposits rated P-1/A-1 or better are acceptable.~~
3. Securities other than commercial paper issuers and negotiable certificates of deposits must be rated A3/A- or better.
4. Money market funds that are not registered with the Securities and Exchange Commission are prohibited.
5. Repurchase agreements will have terms no greater than 90 days and will be secured by at least 102% of Federal Obligations collateral.

Note: Credit ratings shall include ratings issued by Moody's, Standard & Poor's, and Fitch Investor Service (hereafter referred to as the "Credit Rating Agencies"). If each of the Credit Rating Agencies assigns a credit rating, the credit rating will be the middle of the three ratings (for example, if Moody's rates a security Baa2, S&P rates a security BB+, and Fitch rates a security BBB-, the middle credit rating would be considered BBB- by Fitch). If only two of the three Credit Rating Agencies assign a credit rating, the credit rating will be the lower of the two. If only one of the Credit Rating Agencies assigns a credit rating, that credit rating will apply.

The rating for the internally-managed PSERS Short-Term Investment Pool is considered Aaa/AAA for credit rating purposes.

D. Currency Risk

1. At no time may the manager's portfolio invest in securities denominated in foreign currencies.

E. Sovereign Risk

1. No more than 15% of the portfolio may be invested in dollar-denominated non-U.S. government securities and dollar-denominated bonds issued by non-U.S. domiciled entities. Non-U.S. exposure will be determined based on the issuer of the underlying instrument.

F. Concentration Risk

1. No more than 7% of the portfolio at market value may be invested in the securities of any issuer (excluding issues or issuers fully guaranteed by the U.S. Government and its agencies rated Aaa/AAA and securities issued by non-US. Governments).
2. Non-convertible preferred stock and convertible bonds (bonds convertible into common stock) are prohibited.
3. No more than ~~25~~5% of the portfolio at market value may be invested in asset backed securities (defined as financial instruments collateralized by one or more types of assets including mortgages, receivables, loan paper, etc.), rated below AA3/AA-. This limit does not apply to U.S. or U.S. agency guaranteed asset backed securities.
4. No more than 10% of the market value of the portfolio invested in municipal securities.
5. No more than 15% in any one sponsor of money market funds.
6. Reverse repurchase agreements are prohibited.

G. Liquidity Risk

Positions in letter stock, private placements (excluding 144A securities), physical real estate, physical commodities, and any other positions unable to be liquidated promptly without severe market impact are prohibited.

H. Counterparty Risk

1. Counterparties to repurchase agreements must be members of the Federal Reserve System and insured by the FDIC.
2. Exposures to any counterparty will not exceed 20% of the market value of the portfolio.

IV. GENERAL

A. Derivatives

Unless written permission is obtained from the Chief Investment Officer (CIO) or unless otherwise specified in these guidelines, derivative investments, including but not limited to, forwards, futures, interest only and principal only strips, options, swaps, structured notes, swaps, etc. are prohibited.

B. Commissions

Best efforts shall be used to execute trades and all new issue designations with the System's Commission Recapture Agent. National Association of Securities Dealers' rule 2740, "Selling Concessions, Discounts, and Other Allowances," regarding new issue designations preclude the remittance of selling concessions recaptured to be remitted to the System. Those selling concessions, however, may be used to pay for qualified investment research.

C. Mutual/Commingled Funds and Unit Investment Trusts

Mutual funds (both closed and open-ended), Commingled Funds, Unit Investment Trusts, ETFs, or any equivalent fund type funds are prohibited investment vehicles without the written permission of the CIO.

D. Market-Driven Breaches

PSERS recognizes that the portfolio will always be subject to fluctuations in market value. Market-driven breaches of the guidelines (breaches that occur due to market fluctuations) shall not be considered a violation of the guidelines as long as the Investment Manager corrects these breaches within 10 business days of the breach (unless an extended period of time is granted elsewhere in the guidelines and/or written permission is received from the CIO providing an extended period of time). Active breaches (breaches that occur due to purchase and sale activity) shall be considered a violation of the guidelines and must be corrected as soon as prudently possible. Consistent patterns of active breaches may be cause for termination.

V. AMENDMENTS

A written request to the CIO and Deputy Chief Investment Officer (DCIO)~~Managing Director of External Public Markets, Risk & Compliance (DEPM)~~ 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 ~~DEPM~~ DCIO in the CIO's absence, if the request is approved.

VI. COMMUNICATIONS

The Board requires continual awareness of the System's activity and position, both absolute and relative. To accomplish this, the following shall be provided by the public market investment manager:

A. Promptly -

1. When requested by the Staff - a complete listing of all holdings, pending trades, transaction history and any additional related information.

2. Notification to the CIO, the ~~DEPM~~DCIO, and the Compliance Officer of any compliance exceptions as they relate to these policies and applicable amendments.

3. Notification to the CIO, ~~DEPM~~DCIO, and the Compliance Officer of any material personnel or organizational changes that could affect the management of the System's portfolio.

B. Daily - To the Custodian Bank, Investment Accounting (IA), and the Investment Accounting Application Service Provider (IAASP):

1. On a daily basis all trades, including foreign currency exchange transactions, must be sent via e-mail to IA and IAASP in a Microsoft Excel-readable formatted file. The trade file should include, but not be limited to, the following: Custodian Account Number, Buy/Sell indicator, Broker Identification Code, Broker Name, Trade Date, Settle Date, Ticker, CUSIP, Security Description, Shares, Price, Principal, Commission, Fees, and Net Amount (all monetary amounts to be provided in base and local currency).

C. On an as needed basis - information for the State Treasurer's staff to perform their pre-audit function.

D. Monthly - To the Investment Consultant, CIO, ~~DEPM~~DCIO, Compliance Officer, and IA:

1. End of month valuations in accordance with the System's requested format or, if PSERS does not request a specific format, the Investment Manager's usual format, containing cost and market valuations by security (including FX forward and spot positions), holdings by sector segmentation, transaction summary register (purchases, sales, dividends/interest, other distributions/receipts), and holdings by country, with cost and market valuation in local currency and in U.S. dollar terms. These reports shall be in

electronic form (i.e. Microsoft Excel, Adobe Acrobat files, etc.) and shall be sent via e-mail to the System and the System's general or designated Investment Consultant unless written permission is received from the CIO to send reports other than by e-mail.

E. Monthly - To the ~~DEPM~~DCIO, Compliance Officer, and IA:

1. Performance reports for the month, quarter-to-date, year-to-date, rolling one-year, rolling three-year, and portfolio-to-date (since inception) as well as the benchmark performance figures for each of those periods. Information is to be sent via e-mail to a designated Internet address within five business days from the end of each month.

F. Monthly - To Custodian Bank, IA, and IAASP:

1. Each Investment Manager is required to complete a month-end reconciliation of its account balance to the balance per the Custodian Bank. A reconciliation template in the form of a Microsoft Excel spreadsheet shall be sent via e-mail from the Custodian Bank not later than the seventh business day of the following month. The Investment Manager is required to transmit its reconciliation via e-mail to the Custodian Bank and IA by the third business day (not later than the tenth business day of the following month) following receipt of the reconciliation template. The Custodian Bank in those cases where there are variances between the Investment Manager and the Custodian Bank above a certain threshold and the Custodian Bank is deemed to be incorrect will issue a letter restating the month-end net asset value of the account. Restated net asset values will be used for performance and billing purposes.

2. The final or closed account holdings and amounts, including cash and pending trades, must be sent via e-mail to IA and IAASP in a Microsoft Excel-readable formatted file. The holdings spreadsheet should include at least the following headings and information: custodian account number, CUSIP, security description, shares, base cost, local cost, base market value, and local market value.

G. Quarterly - To the ~~DEPM~~ DCIO and Compliance Officer:

1. Provide written confirmation of adherence to these Investment Objectives and Guidelines in the format provided by the System within 30 days after the end of each calendar quarter. Consistent patterns of failing to complete the compliance certifications within 30 days after the end of each calendar quarter may be cause for termination.

2. Provide a detailed attribution of returns for the portfolio for the previous quarter and year versus the established benchmark for the portfolio within 30 days after the end of each calendar quarter.

H. Other - To the Investment Consultant, CIO, and ~~DEPM~~DCIO:

Immediate telephone and/or letter advice should be forthcoming from the Investment Manager when information of an important nature, such as a change in ownership of the advisor, a change in the portfolio manager(s) managing the System's portfolio, or unusual market activity (oil embargo, monetary crisis, etc.) that is causing, or may cause, material impact on the System.

If at any time the Investment Manager feels that the objectives cannot be met, or the guidelines constrict performance, the CIO should be notified in writing. The Investment Manager shall be encouraged to suggest changes in these guidelines as necessary. By signature the Investment Manager agrees to these Investment Objectives and Guidelines and shall perform in accordance therewith.

Pennsylvania Public School
Employees' Retirement System

Portfolio Manager Signature	Chief Investment Officer
Portfolio Manager Name	
Date Accepted	Date Proposed