

**KENTUCKY RETIREMENT SYSTEMS  
INVESTMENT MANAGEMENT AGREEMENT**

THIS INVESTMENT MANAGEMENT AGREEMENT (the "Agreement" or "Contract") is entered into as of January 1, 2015 by and between Nuveen Asset Management, LLC ("Manager") and Kentucky Retirement Systems ("KRS" or "Systems").

**WITNESSETH:**

WHEREAS, KRS desires to appoint Nuveen Asset Management, LLC as investment manager with authority to manage and control a portion of KRS' assets held from time to time (the "Account") pursuant to this Contract;

NOW, THEREFORE, in consideration of the foregoing and subject to the terms and conditions set forth herein, the parties hereby agree as follows:

1. **Designation of Manager; Prudent Person.** Subject to the terms and conditions contained in this Agreement, KRS hereby appoints Manager as investment manager of the Account with full power and discretion to manage such assets of the Account as KRS designates, such assets not otherwise being subject to the management or control of another investment manager specifically appointed by KRS. Manager hereby accepts appointment as investment manager of the Account pursuant to the terms of this Agreement. Manager shall discharge its duties under this Agreement solely in the interest of KRS with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent investment manager acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims. In addition, Manager is a "fiduciary" of KRS, as that term is defined in Section 3(21) of the U.S. Employee Retirement Income Security Act of 1974, as amended ("ERISA"), with respect to the investment and management of the assets in the Account.

2. **Custody of Account Assets.** KRS has established or will establish one or more investment accounts at a custodian of KRS's choice (the "Custodian"). Title to all Systems' Account assets shall at all times be registered in the name of Systems or the name of the Systems' Master Custodian or its nominee for the account of Systems, and the indicia of ownership of all Systems' Account assets shall at all times be maintained in trust by the Systems' Master Custodian. The Manager shall at no time have the right to physically possess or to have the securities making up the Account registered in its own name or that of its nominee, nor shall the Manager in any manner acquire or become possessed of any income or proceeds distributable by reason of selling, holding or controlling the Account. KRS shall instruct the Custodian to provide the Manager with written statements of the Account, at least monthly, and such other information as Manager may reasonably request from time to time.

3. **Investment Policy and Procedures.** The Manager hereby agrees to provide the services enumerated in Item 1 and Item 2 above in accordance with the Statement of Investment Policy and Procedures (the "Investment Policy") as issued by Systems, which is attached hereto as Attachment I and incorporated herein by this reference, and the Portfolio Guidelines for the Manager (the

"Guidelines"), which are attached hereto as Attachment II and incorporated herein by this reference. Manager shall exercise its power and authority with respect to the Account in accordance with the Investment Policy. The Investment Policy and Guidelines shall remain in effect until such time as KRS approves (in writing) a modification to the Investment Policy or Guidelines. Notwithstanding anything to the contrary contained herein, in the event the terms of the Guidelines conflict with those of the Investment Policy, the terms of the Investment Policy shall control.

4. **Brokerage.** Manager will arrange for the execution of transactions for the Account through brokers or dealers that Manager reasonably believes will provide best execution. In selecting brokers or dealers, the Manager may consider, among other things, the fact that a broker or dealer has furnished, or has agreed to furnish in the future, statistical, research or other information or services. Subject to its overall duty of best execution, Manager may cause the Account to pay brokers a commission greater than another qualified broker might charge to effect the same transaction where Manager determines in good faith that the research and services are eligible brokerage and research under Section 28(e) of the Securities Exchange Act of 1934, as amended, and the amount of such commission is reasonable in relation to the value of the brokerage and research services provided. If Manager accepts or receives such information or services from a broker or dealer, then Manager shall report to KRS in accordance with section 18(c)(iii) of this Agreement.

Notwithstanding the foregoing, the Manager shall not place orders with any broker/dealer who: (a) KRS has by written notice to the Manager deemed unsuitable for Account trades, or (b) is affiliated with the Manager. The Manager agrees to be bound by any changes to such broker/dealer list upon receipt of written notice from KRS. In addition, the Manager shall not engage in transactions that involve a broker acting as a principal where the broker is also the investment manager, without KRS's advance written consent.

5. **Performance Objectives.** The Manager acknowledges that KRS has established performance objectives for the assets in the Account as are set forth in Attachment II attached hereto (the "Performance Objectives"), as the same may be amended from time to time by KRS in writing, and that failure to consistently meet such performance standards may result in termination of this Agreement. The Manager hereby acknowledges that it has reviewed and is familiar with the Performance Objectives, however, it is understood that Manager does not guarantee the future performance of the Account or any specific level of performance. KRS may amend the Performance Objectives by providing written notice to Manager.

6. **Fees and Terms of Payment.** As consideration for the services rendered pursuant to this Agreement, the Manager shall receive a management fee, payable quarterly, and calculated as outlined in Attachment III. If the fees are not paid by KRS, KRS shall cause the Custodian to compensate Manager for its services under this Agreement from the assets of the Account. Except as provided in Attachment III, the Manager shall not be entitled to receive any additional fees or reimbursements for travel expenses, meals, production materials, or any other service or product provided in connection with this Agreement.



8. **Placement Agents.** The Manager agrees that it will remain in compliance with System's Statement of Disclosure and Placement Agent policy, which is attached hereto as Attachment IV. The Manager warrants that no person or selling agency has been employed or retained to solicit and secure this Agreement upon an agreement or understanding for commission, percentage, brokerage or contingency; excepting bona fide employees or selling agents maintained by the Manager for the purpose of securing business unless disclosed in writing, prior to the engagement. The Manager has not paid any placement fees, finder's fees, or gratuities (including gifts and entertainment) to any fiduciary, trustee or employee of KRS. The Manager has not made any contributions that would result in Manager being disqualified from collecting performance fees under rule 206(4)-5 of the Investment Advisers Act of 1940, as amended (the "Advisers Act").

9. **Authorization.** In accordance with this Contract and all Attachments hereto, Manager is hereby authorized, without prior consultation with, or approval of, KRS, to:

- a) use its sole judgment and discretion in the acquisition, placement, maintenance, transfer, swap, sale, or other disposition of any and all Account assets;
- b) bind or commit KRS to any contract(s) or agreement(s) necessary to accomplish its duties and obligations set forth in this Agreement;
- c) direct the Custodian with respect to all powers subject to such direction under this Agreement including, but not limited to, buying and selling securities, signing contracts or other agreements; and
- d) combine orders on behalf of the Account with orders on behalf of the Manager or its affiliates or of other clients of the Manager.

10. **Trading Procedures.** All transactions authorized by this Agreement shall be settled through the Custodian, who shall retain sole possession of and have complete custodial responsibility for the assets. The Manager shall notify and instruct the Custodian on (a) orders which the Manager places for the sale or purchase of assets and the management or disposition of such assets, and (b) the purchase or acquisition of other securities or property for the Account. The Manager shall provide the Custodian with such trade information as the Custodian may require to effect settlement, within the time frames as the Custodian may designate. In its sole discretion, KRS may (by giving notice to either the Manager or the Custodian) amend, limit or revoke Manager's above-described authority to direct the Custodian.

11. **Manager Not Acting as Principal.** The Manager shall not act as a principal in sales and/or purchases of the assets, unless the Manager shall have received prior written approval from an Authorized Person (defined below) for such transaction. The Manager shall also not engage in prohibited transactions to the extent set forth in section 406(b) of ERISA.

12. **Trade Confirmation and Settlement.** Where a transaction is eligible for settlement through the Depository Trust Company's Institutional Delivery System, the Manager shall use such system for trade confirmation and settlement. The Manager shall cooperate with KRS' Custodian and other parties to the trade to promptly resolve any trade settlement discrepancies or disputes.

13. **Discretionary Rights and Powers Affecting the Assets.** The Manager may receive information from the Custodian concerning the assets held in the Account, including without limitation, conversion rights, subscription rights, warrants, options, pendency of calls, maturities of securities, expirations of rights, tender and exchange offers, and any other right or power requiring a discretionary decision by the Manager. The Manager shall be responsible for timely directing the Custodian as to the exercise of such rights and/or powers where the Manager has actual knowledge of same, whether by written notice or otherwise.

14. **Acting on Illegal Information.** The Manager shall not place orders to purchase and/or sell any assets on the basis of any material information obtained, or utilized, by the Manager in violation of the securities laws of the United States, or any other country in which the Manager transacts business on the Account's behalf.

15. **Account Reconciliation.** The Manager shall cooperate with the Custodian to reconcile the Account each month. The Manager shall review all performance and other reports provided to it by the Custodian with respect to the Account assets, and notify KRS in writing of any material errors or discrepancies that are not reconciled.

16. **Notification of Tax Liabilities.** If the Manager becomes aware of a tax liability with respect to unrelated business income earned on Account assets, it will make best efforts to notify KRS. Such notification is not intended to replace KRS' custodial account statements as records for official or tax reporting purposes. The Manager is under no obligation to make such notification and shall not be liable to KRS for any penalties or interest assessed due to any failure by the Manager to notify KRS of any tax matters.

17. **Manager Representations.** Manager hereby represents and acknowledges to KRS that:

- a) Manager is duly organized, validly existing and in good standing under the laws of the state of its organization and has complete authority to carry out its business as it has been conducted.
- b) The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby are within the power of the Manager and have been duly authorized by all necessary corporate action. The Manager has duly executed and delivered this Agreement, and this Agreement constitutes the legal, valid and binding agreement and obligation of the Manager, enforceable against the Manager in accordance with its terms, except insofar as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar limitations on creditors' rights generally and general principles of equity.
- c) Neither the execution and delivery of this Agreement nor the consummation of the transactions provided herein will violate any agreement to which the Manager is a party or by which it is bound, any law, regulation, order, or any provision of the charter documents of the Manager.
- d) Manager is registered as an investment adviser under the Advisers Act, and therefore is eligible to act as an investment manager under ERISA; is registered or is exempt from



registration in accordance with applicable state laws; and is not subject to any of the disqualifications set forth in Section 411 of ERISA.

- e) Manager has completed, obtained, and performed all registrations, filings, approvals, authorizations, consents, or examinations required by any government or governmental authority for acts as contemplated by this Agreement.
- f) Manager will maintain the following insurance coverage for the duration of the Agreement plus sixty months after expiration or termination of the Agreement. Proof of the existence of such policies shall be provided to KRS annually with the Compliance Certificate in Attachment V:
  - i) A fidelity bond in the minimum amount of \$10,000,000 with a maximum deductible of \$1,000,000. The bond shall cover at a minimum, losses due to dishonest or fraudulent acts or omissions by the Manager; and
  - ii) An errors and omissions policy in the minimum amount of \$25,000,000 with a maximum deductible of \$2,500,000 per claim. The policy shall cover, at a minimum, losses caused by errors, omissions, or negligent acts of the Manager.
- g) Manager will immediately notify KRS by telephone (at the telephone number set forth below), upon the receipt of information indicating seizure, loss, or loss of use of Account assets. Such telephonic notice shall be followed by written notice to KRS within twenty-four hours.
- h) Manager has disclosed to KRS information concerning any material litigation pending, and will notify KRS of all future material actions brought against the Manager that are related to the performance of its duties as an investment adviser. Manager also has disclosed and will in the future promptly disclose to KRS information concerning any material investigation of the Manager by the Securities and Exchange Commission ("SEC") or any other regulatory authority related to the Manager's performance of its duties under this Agreement.
- i) The Manager will make all required filings with all applicable regulatory agencies within all prescribed deadlines on behalf of its investment of the assets in the Account.
- j) The Manager shall annually file with KRS a compliance certificate, executed by a responsible officer of the Manager's firm, in the form attached hereto as Attachment V, within thirty (30) days after each June 30.

18. **Reporting Requirements.** Manager shall furnish the following reports in the format specified by KRS upon its reasonable request.

- a) The Manager shall provide the following reports monthly (either in hard copy or by electronic access) within ten (10) business days of month-end:
  - i) Reports describing in detail the previous month's portfolio activities, including: GIPS compliant performance tabulations gross and net of fees for the 1-month, 3-

month, calendar YTD, fiscal YTD, 1-year, 3-year, 5-year, 10-year, and since inception time periods as appropriate; a summary of purchases and sales made for the Account by the Manager; and sector weights and other appropriate Account characteristics (e.g. convexity and effective duration, P/E ratio, etc.) for both the benchmark and the Account; and

- ii) Reports tracking units, original cost, amortized cost, market value, and gain/loss of each holding.
- b) The Manager shall provide the following quarterly reports (either in hard copy or by electronic access) within thirty (30) calendar days of calendar quarter-end:
- i) Reports reviewing Account performance (as above) and the Manager's current investment strategy and outlook;
  - ii) A summary of the proxy votes for the quarter;
  - iii) An attribution breakdown for the current quarter and 1-year periods;
  - iv) Reports tracking the Manager's utilization of brokers/dealers, including the identification of the brokers/dealers utilized and the commissions paid;
  - v) A synopsis of the key investment decisions made by the manager, his or her underlying rationale, and how those decisions could affect future results;
  - vi) A commentary on investment results in light of the appropriate standards of performance; and
- c) The Manager shall provide annually, after the close of the calendar year:
- i) A copy of SEC Form ADV – Part II and any amendments thereto as available;
  - ii) A Compliance Certificate provided in Attachment V;
  - iii) A report on the Manager's use of soft dollars earned and expended resulting from its duties under this Agreement. Otherwise, the Manager shall indicate in writing that soft dollar information is not applicable to this Account.
- d) The Manager shall provide the following information periodically as requested:
- i) Information relating to industries, businesses, corporations or securities as requested by KRS;
  - ii) Reports containing the Manager's and its affiliates' conflict of interest policies; and
  - iii) Any other such reports regarding the Account as KRS or the Custodian may reasonably request.

19. **Meetings.** On a periodic basis mutually convenient to Manager and KRS, Manager shall meet with KRS to review the Account investments and to discuss current holdings and future placements and acquisitions. Additionally, the individual or individuals assigned by the Manager to the Systems account must be generally accessible by telephone to Systems on a daily basis during regular business hours.

20. **Change in Status.** Manager shall promptly notify KRS in writing of any material change in Manager's business which may effect Manager's ability to perform its duties and responsibilities under this Agreement, including, but not limited to, any change in Manager's status as a registered investment adviser, any material litigation brought against Manager, any materially adverse changes to the Manager's financial or organizational status or any material change in its senior professional personnel, and any change in a portfolio manager of the Account. It shall promptly notify KRS of any conflicts of interest between KRS and Manager arising from Manager's relationship with any entity of which it has knowledge. If, at the sole discretion of KRS, it is determined that any relationship would be considered a potential or actual conflict of interest, KRS may require Manager to cease dealing with such entity on behalf of KRS.

21. **KRS Representations.** KRS hereby represents to Manager that the execution and performance of this Agreement and the making of investments for the Account in accordance with this Agreement will not violate any provision of the governing documents of KRS, require KRS to obtain any consent or any waiver that has not heretofore been obtained, violate any contract or other agreement to which KRS is a party or by which it or its assets (including the Account) may be bound, or violate any statute, rule, regulation or order of any governmental body.

22. **Authorized Parties; Directions to the Manager.** KRS may appoint or designate any person or committee to act on its behalf concerning this Agreement and its operation, as it deems appropriate. KRS has furnished to the Manager a list of authorized persons, in Attachment VI ("Authorized Persons"), which it will update from time to time as necessary and until written notice of changes is received by the Manager, the Manager may conclusively rely upon the authority of the Authorized Persons to act on behalf of KRS. All directions to the Manager by or on behalf of KRS shall be in writing and signed by one or more Authorized Persons and the Manager shall be fully protected in relying on such directions.

23. **Assignment.** The Manager may not assign, convey, or otherwise transfer any of its rights, obligations, or interests herein without the prior express written consent of KRS.

24. **Audit or Examination of Records.** The Manager agrees that any authorized representative of KRS shall have access to and the right to examine, audit, excerpt and transcribe, any directly pertinent books, documents, papers, and records of the Manager relating to this Agreement upon reasonable advance notice and during the Managers normal business hours. The Manager shall retain all records relating to this Agreement for five (5) years following the date of final payment or completion of any required audit, whichever is later.

25. **Reliance on Representations.** KRS and the Manager each acknowledge that the other will be relying, and shall be entitled to rely, on the representations, undertakings and acknowledgments of the other set forth in this Agreement. KRS and the Manager each agree to notify the other promptly if

any of its representations, undertakings, or acknowledgments set forth in this Agreement ceases to be true.

26. **Notice.** All notices, instructions and advice with respect to securities transactions or other matters contemplated by this Contract shall be deemed duly given when delivered to and received by the respective parties as follows (a facsimile transmission is acceptable only for purposes of amending this Contract and only if the receipt of such facsimile is confirmed by the recipient. Electronic mail transmissions are acceptable only for purposes of providing notice or instructions with respect to securities transactions or cash flows. Electronic mail transmissions may not be used to terminate or amend this Contract):

The Manager at: Nuveen Asset Management, LLC  
Head of Institutional Sales and Client Service  
901 Marquette Ave, Suite 2900  
Minneapolis, MN 55402  
Facsimile: 612-303-4210

KRS at: David Peden  
Chief Investment Officer  
1260 Louisville Rd  
Frankfort KY, 40601  
facsimile: 502.696.8805

With a copy to: Brian Thomas  
General Counsel  
1260 Louisville Rd  
Frankfort KY, 40601

Custodian at: The Bank of New York Mellon  
Attn: Ms. Nina Caruso, Vice President  
BNY Mellon Center, Suite 0410  
Pittsburgh, PA 15258  
facsimile: 412.236.1928

27. **Controlling Law; Jurisdiction and Venue; Waiver.** All questions as to the execution, validity, interpretation, construction, and performance of this agreement shall be construed in accordance with the laws of the Commonwealth of Kentucky, without regard to conflict of laws principles thereof. The Manager hereby consents to the jurisdiction of the courts of the Commonwealth of Kentucky and further consents that venue shall lie in the Franklin Circuit Court located in Franklin County, Kentucky. To the extent that in any jurisdiction Manager may now or hereafter be entitled to claim for itself or its assets immunity from suit, execution, attachment (before or after judgment) or other legal process, Manager, to the extent it may effectively do so, irrevocably agrees not to claim, and it hereby waives, same.

28. **Confidentiality.**

- a) The Manager shall protect the financial privacy of all information relating to the Account and recognizes that the information is confidential in nature. The Manager's employees and agents shall be allowed access to the information only as needed for their duties related to the Agreement and in accordance with the rules established by the custodian of the records. The Manager shall preserve the confidentiality of the information except where otherwise required by law or requested by an appropriate regulator, and shall maintain positive policies and procedures for safeguarding the confidentiality of such information. The Manager recognizes that it may be liable for the negligent, wanton, or willful release of such information.
- b) KRS agrees not to release or make available to the public information regarding Account holdings or other related security, transaction, and attribution analysis related to the Account ("Portfolio Information") until thirty (30) days after the end of the quarter to which the Portfolio Information relates. KRS may release the Portfolio Information to its Trustees, and to any related or affiliated party, including those parties doing analysis of the Portfolio Information on behalf of KRS. KRS may also discuss the Portfolio Information in general terms, without identifying the securities held, with unrelated or unaffiliated parties in the ordinary course of fulfilling KRS's fiduciary responsibilities.
- c) Manager acknowledges that KRS is subject to the Kentucky Open Records Act (Kentucky Revised Statutes 61.870 *et seq.*, as amended, the "Open Records Act"). The Open Records Act contains numerous exceptions to required disclosure, which KRS invokes on a regular basis, as it respects the confidential information of its counterparties to investment contracts. The primary exception to required disclosure that KRS invokes is 61.878(c)(1) – information that would provide a competitive advantage to competitors. KRS interprets this to mean that it is not required to disclose select business terms or portions of agreements, which include, but are not limited to, negotiated economic terms (i.e. management fees, incentive fees, expenses, etc.) of the investment manager or fund as an individual entity. Manager also acknowledges that a party requesting information that is unable to obtain such information directly from KRS may bring legal action (either in a court of law, or by appealing to the attorney general) to compel disclosure of the information.

29. **Remedies.** In addition to the right to terminate this Agreement, KRS may also file suit against the Manager for breach of duty and/or confidentiality, without limitation. Should KRS obtain a judgment against the Manager as a result of a breach of contract, the Manager consents to such judgment being set-off against any monies owed by KRS to the Manager under this or other contracts. This section shall not be interpreted to limit KRS's remedies as provided for by law.

30. **Securities Lending** The Manager understands that KRS may engage in a "Securities lending program". Manager shall have no responsibility and shall not be held liable for any trade settlement delays or any additional costs incurred by KRS' engagement in a securities lending program.

31. **Duration of Contract.** The period in which subject services are to be performed is December 1, 2014, through June 30, 2018. However, termination or cancellation may be effected at any time by either party as provided below. At the expiration of its term, this agreement may, at the option of the parties hereto, be extended by negotiation for additional periods.

32. **Termination.** KRS and Manager reserve the right to terminate this Agreement without penalty under any one of the following circumstances:

- a) At KRS's discretion, with or without cause, after five (5) business days written notice to the Manager or at Manager's discretion upon thirty (30) calendar days written notice. Manager shall cooperate with KRS and follow KRS's written directions in connection with the termination of this Agreement to effect the orderly transfer of securities; or
- b) At KRS's discretion, immediately, if a result of the Manager's default or breach of contract.

Following termination notification, Manager shall not take any action with respect to the Account, unless specifically authorized to do so by KRS. In the event of termination of the Agreement, the exclusive, sole and complete remedy of the Manager shall be payment for services rendered prior to termination.

33. **Withdrawal of Assets from Management.** KRS may withdraw from and decrease the Account assets in its sole discretion, with or without prior notice. Any such notice shall set forth the amount of any such withdrawal or identify the investment assets and amount of cash to be withdrawn, the date as of which such withdrawal shall be effective and such other information that KRS deems necessary or appropriate. On and after the effective date of such withdrawal and decrease and, except as may otherwise be set forth in such notice, the Manager shall cease to be responsible for future investment of the assets and/or cash withdrawn.

34. **Amendments.** Except as otherwise provided herein, written modifications, amendments or additions to this Contract shall be effective only when signed by both parties.

35. **Conflicts of Laws.** Manager hereby certifies Manager is legally entitled to enter into the subject contract with the Commonwealth of Kentucky and certifies that Manager is not and will not be violating any conflict of interest statute (Kentucky Revised Statute 121.056 or any other applicable statute) or principle by the performance of this Contract. The Manager shall not engage directly or indirectly in any financial or other transaction with a trustee or employee of Systems which would violate standards of the Executive Branch Ethics provisions, as set forth in Kentucky Revised Statute Chapter 11A.

36. **Purchasing by the Commonwealth of Kentucky.** The Manager hereby certifies that it will not attempt in any way to influence any purchasing of services, commodities or equipment by the Commonwealth of Kentucky.

37. **Severability.** In case one or more of the provisions contained in this Agreement shall be found to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

38. Miscellaneous. Both parties reserve the right to refuse to renew this Agreement in their sole discretion and for any reason. All section headings in this Agreement are for convenience of reference only, do not form part of this Agreement, and will not affect in any way the meaning or interpretation of this Agreement.

No term or provision of this Agreement may be waived except in writing signed by the party against whom such waiver is sought to be enforced. A party's failure to insist at any time on strict compliance with this Agreement or with any of the terms of the Agreement or any continued course of such conduct on its part will not constitute or be considered a waiver by such party of any of its rights or privileges. Manager is an independent contractor, and nothing in this Agreement may be interpreted or construed to create any employment, partnership, joint venture or other relationship between Manager and KRS. This Agreement contains the entire understanding between KRS and Manager concerning the subject matter of this Agreement, and supersedes all prior agreements, arrangements and understandings, written or oral, between the parties.

39. Voting of Proxies. The Manager shall exercise voting rights with respect to securities under its management. Manager is authorized and directed to vote all proxies and affect any corporate actions in accordance with Manager's Proxy Voting Policy. If Manager does not have a Proxy Voting policy, the Manager is authorized and directed to vote all proxies and affect any corporate actions in accordance with KRS's Investment Proxy Voting Policy attached hereto as Attachment VII. The Manager shall maintain detailed records of its performance of this duty and shall provide those records to KRS quarterly.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the date first above written.

Kentucky Retirement Systems

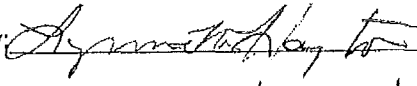
By: 

Name: Chris Schelling

Title: Deputy CIO

Date: 12/4/2014

Nuveen Asset Management, LLC

By: 

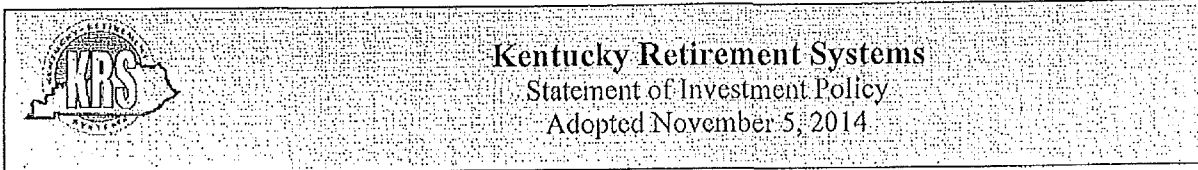
Name: Lynne M. Harrington

Title: Head of Institutional Sales & Client Service

Date: 12/9/2014

## ATTACHMENT I

### Investment Policy and Procedures



This statement of investment policy is issued by the Board of Trustees of the Kentucky Retirement Systems (Systems) in connection with investing the pension and insurance funds of the Kentucky Employees Retirement System, the County Employees Retirement System and the State Police Retirement System. This document supersedes all prior documents entitled Statement of Investment Policy.

#### I. The Board of Trustees

The Kentucky Retirement Systems is a "Qualified Pension Plan" under Section 401 of the Internal Revenue Code and is administered by a board of nine trustees.

KRS 61.701 establishes the "Kentucky Retirement Systems Insurance Fund" as a separate fund to provide fringe benefits to recipients of the Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement System. KRS 61.702 provides that all amounts necessary to provide for insurance benefits shall be paid to the insurance fund. The Board shall administer the fund in the same manner as the retirement funds.

Six trustees are appointed by the Governor of the Commonwealth of Kentucky (two of which must be filled by persons with specific experience as required in Section 61.645.1.e.2), two trustees are elected by the membership of the Kentucky Employees Retirement System, three trustees are elected by the membership of the County Employees Retirement System, and one trustee is elected by the membership of the State Police Retirement System. The Secretary of the Personnel Cabinet is an ex-officio trustee.

The Board of Trustees authorizes and directs the appointment of an Investment Committee with full power to act for the board in the acquisition, sale and management of the securities and funds of the Systems in accordance with the provisions of the Statutes and Investment Policy of the Board. The Board shall review the actions of the Investment Committee at each quarterly Board meeting.

#### II. The Investment Committee

The Investment Committee consists of five members of the Board of Trustees. Three members of the committee are appointed by the chairperson of the Board of Trustees. In accordance with statute, two positions are filled by the Trustees that were appointed to the board as persons with specific experience (Section 61.645.1.e.2). The committee acts on behalf of the board on investment related matters.



The Investment Committee has the following oversight responsibilities:

- A. Assure compliance with this policy and all applicable laws and regulations.
- B. Approve the selection and termination of service providers.
- C. Meet quarterly to evaluate whether this policy, the investment activities and management controls and processes continue to be consistent with meeting the Systems' goals. Mandate actions necessary to maintain the overall effectiveness of the program.
- D. Review assessment of investment program management processes and procedures, and this policy relative to meeting stated goals.

### III. Staff Responsibilities

The Chief Investment Officer is responsible for administration of investment assets of the Systems consistent with the policies, guidelines and limits established by the law, this Statement of Investment Policy and the Investment Committee.

The Chief Investment Officer receives direction from and reports to the Investment Committee and the Executive Director of the Systems on all investment matters, including but not limited to the following:

- A. Maintaining the diversification and risk exposure of the funds consistent with policies and guidelines.
- B. Monitoring and assessing service providers, including annual onsite visits, to assure that they meet expectations and conform to policies and guidelines.
- C. Assess and report on the performance and risk exposure of the overall investment program relative to goals, objectives, policies and guidelines.
- D. Recommend changes to service providers, statutes, policies or guidelines as needed to maintain a productive relationship between the investment program and its goals; act as liaison on all investment related matters.
- E. Communicating with the mass media and other agencies, entities or institutions regarding investment related issues.
- F. Identify issues for consideration by the Investment Committee and prepare recommendations regarding such matters.

The Chief Investment Officer or designee is authorized to execute trades on fixed income and equity securities (including ETF's) and to execute proxies for the Board consistent with this Policy.

To carry out this Policy and investment related decisions of the Board, the Chief Investment Officer or designee is authorized to execute agreements and other necessary or proper documents pertaining to investment managers, consultants, investment related transactions or other investment functions.

### IV. Service Providers

#### A. Investment Managers

In instances where the Investment Committee has determined it is desirable to employ the services of an external Investment Manager, the following shall be applicable:

1. Investment Managers shall be qualified and agree to serve as a fiduciary to the Systems and shall generally have been in the business of investment management for large United States institutional investors for at least three to five years.
2. Investment Managers shall manage assets in accordance with this Policy and any additional guidelines established by contract, as may be modified in writing from time to time.

#### B. Custody Bank

The Board shall hire custodians and other agents who will be fiduciaries to the Systems and who will assume responsibility for the safekeeping and accounting of all assets held on behalf of the Systems and other duties as agreed to by contract.

#### C. Investment Consultants

Qualified independent investment consultants may be retained by the Systems for asset allocation studies, asset allocation recommendations, performance reviews, manager searches and other investment related consulting functions and duties as set forth by contract.

#### D. Selection

Qualified investment managers, custody banks, investment consultants and other service providers shall be selected by the Investment Committee or Chief Investment Officer as required. The selection shall be based upon the demonstrated ability of the professional(s) to provide the required expertise or assistance. In order to create an efficient and effective process, the Investment Committee or Chief Investment Officer may, in their sole discretion, utilize RFI, RFP, third party proprietary software or database, review of existing service provider capabilities or any combination of these or other methods to select a service provider. Relevant criteria for the selection of investment managers are contained in the Transactions Procedures statement.

All contact and communication with service providers seeking a business relationship with the Systems shall be directed to the Division Director for that specific asset class. However, this rule is not applicable to existing service providers if the contact or communication is in response to an information request from the Investment Committee or if it is incidental contact not related to specific Systems business.

### Investment Philosophy

The Trustees of the Kentucky Retirement Systems recognize their fiduciary duty not only to invest the Systems' funds in formal compliance with the Prudent Person Rule but also to manage those funds in continued recognition of the basic long term nature of those systems. The Trustees interpret this to mean, in addition to the specific guidelines and restrictions set forth in this document, that the assets of the three systems shall be proactively managed -- that is, investment decisions regarding the particular asset classes, strategies, and securities to be purchased or sold shall be the result of the conscious exercise of discretion.

The Trustees recognize that, commensurate with their overall objective of maximizing long-range return while maintaining a high standard of portfolio quality and consistency of return, it is necessary that proper diversification of assets be maintained both across and within the classes of securities held to minimize/mitigate overall portfolio risk. Consistent with carrying out their Fiduciary Responsibilities and the concept of Modern Portfolio Theory, the Trustees will not systematically exclude any investments in companies, industries, countries, or geographic areas unless required to do so by statute. Within this context of proactive management and the necessity for adherence to proper diversification, the Trustees rely upon appropriate professional advice from multiple service providers.

The Trustees and other fiduciaries shall discharge their duties with respect to the Systems: (1) solely in the interest of the participants and beneficiaries; (2) for the exclusive purpose of providing benefits to participants and beneficiaries; (3) with the care, skill and caution under the circumstances then prevailing which a prudent person acting in a like capacity and familiar with those matters would use in the conduct of an activity of like character and purpose; (4) impartially; (5) incurring and paying appropriate and reasonable expenses of administration and (6) in accordance with a good faith interpretation of the laws, regulations and other instruments governing the Systems.

Additionally, the Trustees and other fiduciaries shall not engage in any transaction which results in a substantial diversion of the Systems income or assets without adequate security and reasonable rate of return to a disqualified person or in any other prohibited transaction described in Internal Revenue Code Section 503(b).

#### VI. Investment Objectives

The Board of Trustees realizes that prudent investment management is a duty. In fulfillment of this duty, the Board of Trustees recognizes that while long-term objectives are important, it is also necessary that short-term benchmarks be used to assess the periodic performance of the investment program.

Accordingly, the Board of Trustees has established the following investment objectives:

- Long-Term:
  - The total assets of the Systems should achieve a return which exceeds the actuarially required rate of return of 7.75%.
  - In addition to exceeding the actuarially required rate of return, the total fund return should exceed the return achieved by its blended performance benchmark.
- Short-Term:
  - The returns of the particular asset classes of the System, measured on a rolling basis, should seek to exceed the returns achieved by comparable passive market indices as described in the appropriate Addendum of this statement.

#### VII. Derivative Securities and Leveraging

**Definition:**

A derivative is broadly defined as a financial instrument whose value, usefulness, and marketability is derived from or linked to the value of an underlying security.

Definitions and examples in the investment universe include:

**Forward Contracts** - a forward contract is a non-standardized, Over-the-Counter (OTC) contract between two parties, governed by ISDA agreements, to buy or sell an asset at a specified future time at a price agreed to today. This is in contrast to a spot contract, which is an agreement to buy or sell an asset at a set price today. It costs nothing to enter a forward contract. The party agreeing to buy the underlying asset in the future assumes a long position, and the party agreeing to sell the asset in the future assumes a short position. The price agreed upon is called the delivery price, which is equal to the forward price at the time the contract is entered into. An example of a forward contract is a currency forward contract. Currency forward contracts are commonly used to hedge foreign currency risk, which is an inherent risk of investing in international assets.

**Futures Contracts** - a futures contract is a standardized, exchange traded contract between two parties to buy or sell a specified asset of standardized quantity and quality at a specified future date at a price agreed to today (the futures price). Futures contracts are not "direct" securities like stocks, bonds, rights or warrants. The party agreeing to buy the underlying asset in the future assumes a long position and the party agreeing to sell the asset in the future assumes a short position. Futures may be settled in cash or physically settled depending on the characteristics of the underlying asset and the specifications of the contract. If futures are physically settled the buyer must make arrangements for taking physical delivery. An example of a futures contract is the S&P 500 Futures contract which is traded at the Chicago Mercantile Exchange. The S&P 500 futures contract is commonly used for equitization of cash held in the equity portfolio of a fund so as to keep un-invested cash levels at a minimum. Futures contracts have many other uses for portfolio managers and are considered a valuable tool for adding flexibility and cost effectiveness to the management of a portfolio.

**Options** - Options are derivative financial instruments that may be standardized, exchange traded, or OTC contracts that specify a contract between two parties for a future transaction on an asset at a reference price. The buyer of the option gains the right, but not the obligation, to engage in that transaction, while the seller incurs the corresponding obligation to fulfill the transaction. The price of an option is derived from the difference between the reference price and the value of the underlying asset (commonly a stock, a bond, a currency or a futures contract) plus a premium based on the time to maturity, expected volatility, and the interest rate environment. Other types of options exist, and options can in principle be created for any type of valuable asset.

An option which conveys the right to buy an asset is called a call; an option which conveys the right to sell an asset is called a put. The reference price at which the underlying asset may be traded is called the strike price or exercise price. The process of activating an option and thereby trading the underlying asset is referred to as exercising it. While there are several styles of option contracts the two most common are American-style contracts and European-style contracts. American-style options contracts may be exercised at or before expiration while European-style options may only be exercised at expiration. Most options have an expiration date while others have strike reset points. If the option is not exercised by the expiration date, it becomes void and worthless.

In return for assuming the obligation, called writing the option, the originator of the option collects a payment, a premium, from the buyer. The writer of an option must make good on delivering (or receiving) the underlying asset or its cash equivalent, if the option is exercised.

An example of an option contract is an S&P 500 put contract. These contracts may be used by a portfolio manager to purchase downside portfolio protection or may be combined with other options contracts to temper volatility in the portfolio, thus reducing risk.

**Swaps and Swaptions** – Swaps are derivative financial instruments in which counterparties exchange certain benefits of one party's financial instrument for those of the other party's financial instrument. (Swaptions are simply options on swaps) Most swaps are non-standardized, OTC contracts between two parties and are governed by ISDA agreements. Some types of swaps are also exchanged on public markets such as the Chicago Mercantile Exchange, the Chicago Board Options Exchange, Intercontinental Exchange and Frankfurt-based Eurex AG. The benefits of a swap depend on the type of financial instruments involved. At the initiation of a swap contract, two counterparties agree to exchange one stream of cash flows against another stream. These streams are called the legs of the swap. The swap agreement defines the dates when the cash flows are to be paid and the way they are calculated. Usually at the time when the contract is initiated, at least one of these series of cash flows is determined by a reference point such as an interest rate, foreign exchange rate, equity price or commodity price. The cash flows are calculated on a notional principal amount, which is usually not exchanged between counterparties. Value transfers can be made with cash or collateral depending on contract terms.

An example of a swap contract is an interest rate swap. An interest rate swap is an agreement to exchange a series of cash flows on periodic settlement dates over a certain time period. The duration properties of interest rate swaps are the primary reason for their popularity as an effective portfolio management tool for fixed income managers. If a fixed income manager agrees to pay a floating rate and receive a fixed rate in a swap, s/he will be increasing duration in her/his portfolio.

**Warrants** - a warrant is a type of derivative security that entitles the holder to buy or sell the underlying stock of the issuing company at a fixed exercise price until the expiry date. Warrants may be either exchange traded or OTC in nature. OTC Warrants are typically long term in nature.

Warrants are frequently attached to bonds (to reduce interest rates for the issuer) or preferred stock (to reduce dividend payments) as a sweetener. Warrants can also be used in private equity deals. Frequently, these warrants are detachable, and can be sold independently of the bond or stock. (Typically traded OTC)

*This list is not intended to be an all encompassing list of derivative contracts available for use in in the portfolios, but rather, to display a sample of the most common types of contracts and describe the spirit of their intended use in the portfolios.*

#### **Derivatives Permitted Use:**

KRS permits external managers and Investment Division (Staff) to invest in derivative securities, or strategies which make use of derivative investments, for exposure, cost efficiency and risk management purposes, if such investments do not cause the portfolio to be leveraged beyond a 100% invested position. Any derivative security shall be sufficiently liquid that it can be expected to be sold at, or near, its most recently quoted market price. Typical uses of derivatives in the portfolio are broadly defined below:

#### **Exposure:**

Derivatives are an effective way for a portfolio manager to gain exposure to a security that the manager does not want to purchase in the cash market. Reasons for gaining exposure to a security through the use of derivatives may include cheaper transactions costs, liquidity/lack of supply in the underlying market, and the flexibility to implement investment views with minimum portfolio disruption. An example is a cash equitization program.

**Cost Efficiency:**

Derivatives are often used due to the cost efficiency associated with the contract properties. Given the fact that derivatives can be used as a form of insurance, upfront trading costs must be sufficiently low for investors to purchase the contract and insure their portfolios efficiently. Furthermore, due to properties associated with derivatives and cash outlay characteristics (minimal cash outlay at inception of the contract) derivatives are generally a vehicle of gaining cost efficient exposure. An example is the cost (zero) to purchase a futures contract.

**Risk Management:**

Derivatives can be used for mitigating risk in the portfolio. When used as a risk management tool, derivatives can significantly reduce an identified financial risk or involuntary risk from investment areas by providing changes in fair values or cash flows that substantially offset the changes in fair values or cash flows of the associated item being hedged. An example is the use of currency forwards to offset periods of dollar strength when international equity markets increase in value, thereby protecting foreign asset gains in the portfolio.

**Derivatives Restricted Use:**

**Settlement:**

Investments in futures contracts are to be cash settled unless physically settled and stored by external managers. At no time shall KRS agree to take physical delivery on a futures contract.

**Position Limits:**

Futures and options positions entered into by KRS, or on its behalf, will comply with all position and aggregate limits established by the local governing authorities within each jurisdiction.

**Investment:**

Investments in securities such as collateralized mortgage obligation (CMO), planned amortization class (PAC) issues, interest only (IO), principal only (PO), inverse floater, or structured note securities are prohibited unless specifically allowed in a manager's contract and delineated in the manager's guidelines. They will only be allowed if, in the judgment of the investment manager, they are not expected to be subject to large or unanticipated changes in duration or cash flows. IO, PO, inverse floaters, and structured note securities are not allowed for use in cash or core fixed income portfolios.

**Over-the-Counter (OTC):**

Investments in securities not traded on public exchanges that are deemed Over-the-Counter (OTC) in nature are allowed provided that a counterparty risk monitoring component is delineated in the manager's guideline section of the manager's contract. All counterparties must have a short-term credit rating of at least A- (Standard and Poor's or Fitch) or A3 (Moody's).

All OTC derivative transactions, including those managed through Agency Agreements, must be subject to established International Swaps and Derivatives Association, Inc. (ISDA) Master Agreements and have full documentation of all legal obligations of KRS under the transactions. All ISDA Master Agreements entered into by or on behalf of KRS by the Investment Division (Staff) and external manager pursuant to an Agency Agreement shall provide that Netting applies. (Netting allows the parties to an ISDA Master Agreement to aggregate the amounts owed by each of them under all of the transactions outstanding under that ISDA Master Agreement and replace them with a single net amount payable by one party to the other.) The Investment Division (Staff) and external managers may also use collateral arrangements to mitigate counterparty credit or performance risk. If an external manager utilizes a collateral arrangement to mitigate counterparty credit or performance risk the arrangement shall be delineated in the manager's guideline section of the manager's contract.

**Derivatives Applications Not Permitted:****Speculation:**

Except for investments in alternative, absolute return investments, and real return investments, derivatives may not be used for any activity for which the primary purpose is speculation or to profit while materially increasing risk to KRS. Derivatives are considered speculative if their uses have no material relation to objectives and strategies specified by KRS IPS or applicable to the portfolio. Derivatives may not be used for circumventing any limitations or restrictions imposed by the KRS IPS or applicable regulatory requirements.

**Leverage:**

Leverage is inherent in derivative contracts since only a small cash deposit is required to establish a much larger economic impact position. Thus, relative to the cash markets, where in most cases the cash outlay is equal to the asset acquired, derivative investments offer the possibility of establishing substantially larger market risk exposures with the same amount of cash as a traditional cash market portfolio. Therefore, risk management and control processes must focus on the total risk assumed in a derivative investment. Leveraging for purposes of enhancing yield or total return is expressly prohibited except for investments in alternative and absolute return investments, and real return investments. Furthermore, the use of leveraged ETF's as a means to circumvent derivatives applications not permitted is expressly forbidden. Investment managers in alternative, absolute return investments, and real return investments strategies are granted the authority to engage in positive leverage to the extent authorized in their offering memorandum and delineated in the manager's guideline section of the manager's contract.

*The above is not intended to limit KRS from borrowing to cover short-term cash flow needs nor prohibit KRS from loaning securities in accordance with a securities lending agreement.*

#### VIII. Asset Allocation Guidelines

In establishing asset allocation guidelines the Board recognizes that each system has its own capacity to tolerate investment volatility, or risk. Therefore, each system has been studied and asset allocation guidelines have been established on a system by system basis. The Board will cause the asset allocation guidelines of each system to be reviewed annually. The Board will also undertake an asset liability study every three to five years as determined by program needs.

The intent of the Board of Trustees in allocating funds to the investment managers is for the investment managers to fully invest the funds. However, the Board of Trustees is aware that from time to time the investment manager will require a portion of the allocated funds to be held in cash provided the cash holdings do not exceed three percent (3%) of the manager's allocation for any given quarter, unless such cash holdings are an integral part of a fixed income manager's investment strategy.

The individual plan level asset allocations of the each Pension and Insurance Fund constituent will be reviewed monthly by staff relative to its target asset class allocation. Staff shall reallocate the assets when the actual asset class allocation is within one percentage point of the allowable range boundary, but may also opportunistically reallocate when the actual asset class allocation exceeds the target asset class allocation by a margin of +/- 1 percentage points. See Appendix A and B for current asset allocation targets.

In keeping with its responsibility as trustee and wherever consistent with its fiduciary responsibility, the board encourages the investment of the fund's assets in investments, funds, and securities of corporations which provide a positive contribution to the economy of the Commonwealth of Kentucky. However, where any security is not a prohibited investment under the governing laws and policies, discretion will be granted to the appointed investment managers in the selection of such securities and timing of transactions consistent with the following guidelines and restrictions.

##### A. Domestic Equity Investments

Investment may be made in common stock, securities convertible into common stock, preferred stock of publicly traded companies on stock markets, asset class relevant ETF's or any other type of security contained in a manager's benchmark. Each individual domestic equity account shall have a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions and standards of performance for the account.

The internally managed equity index funds are intended, consistent with the governing plan documents, to gain exposure to a broad asset sector to replicate the characteristics of the asset class, to minimize administrative expenses and to help achieve overall portfolio objectives. These objectives can be achieved through several management techniques, including but not limited to, portfolio optimization, non-reinvestment of index dividends and other management techniques intended to help achieve the objectives of the entire pension fund.



## B. International Equity Investments

Investments may be made in common stock, securities convertible into common stock, preferred stock of publicly traded companies on stock markets, asset class relevant ETF's or any other type of security contained in a manager's benchmark. Each individual international equity account shall have a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions and standards of performance for the account.

The internally managed equity index funds are intended, consistent with the governing plan documents, to gain exposure to a broad asset sector to replicate the characteristics of the asset class, to minimize administrative expenses and to help achieve overall portfolio objectives. These objectives can be achieved through several management techniques, including but not limited to, portfolio optimization, non-reinvestment of index dividends and other management techniques intended to help achieve the objectives of the entire pension fund.

## C. Fixed Income Investments

Fixed Income investments will be similar in type to those securities found in the KRS fixed income benchmarks and the characteristics of the KRS fixed income portfolio will be similar to the KRS fixed income benchmarks. The fixed income accounts may include, but are not limited to the following fixed income securities: U.S. Government and Agency bonds, investment grade U.S. corporate credit, investment grade non-U.S. corporate credit, non-investment grade U.S. corporate credit including both bonds and bank loans, non-investment grade non U.S. corporate credit including bonds and bank loans, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities, and whole loans, asset-backed securities, and emerging market debt including both sovereign EMD and corporate EMD and asset class relevant ETF's.

Each individual fixed income account shall have a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions, risk parameters, and standards of performance for the account.

## D. Private Equity Investments

Subject to specific approval of the Investment Committee of the Board of Trustees, investments may be made for the purpose of creating a diversified portfolio of alternative investments.

*Private equity investments are expected to achieve attractive risk-adjusted returns and, by definition, possess a higher degree of risk with a higher return potential than traditional investments. Accordingly, total rates of return from private equity investments are expected to be greater than those that might be obtained from conventional public equity or debt investments. They have low correlation to other investment classes and therefore can contribute to reducing the risk and enhancing the returns of a total portfolio, as well as providing portfolio diversification.* Examples of such investments include, but are not limited to, venture capital partnerships, private equity, leveraged buyouts and funds, private debt, timberland, oil and gas partnerships, commodities and private placements. While it is expected that the majority of these

assets will be invested within the United States, a portion has been allocated to non-US investments. These non-U.S. investments are not restricted by geography.

### **Guidelines for Private Equity**

The private equity market is highly sophisticated and specialized with respect to variety and types of investment structures. There exist major competition for deal flow on the part of both investor and general partners. To a great extent, market forces drive the bargaining of economic terms. Most investment vehicles are structured as commingled vehicles and often blind pool investment partnerships. The most common offering forms are equity private placements where the governing laws of the partnership impose a passive role of the limited partner investor. These contractual arrangements are long-term in nature and provide the general partner or sponsors a reasonable time horizon to wisely invest capital, add value through intensive operational management, then realize the proceeds of such an investment. Moreover, terms of the partnership are proposed by the general partner are critical to the economic incentives and ultimate net performance of the partnership.

Over the long term, KRS will use a specified index plus risk premium approach.

### **Investment Strategy and Plan Guidelines**

To strengthen the diversification of the investments, several guidelines will be utilized in Staff's formulation and recommended annual investment strategy and plan. These guidelines encompass annual commitment levels to the asset class, types of investment vehicles that can be utilized, controlling financing stage risks, industry, manager and geography concentration/diversification limits, acceptable contact negotiations, appropriate sizes for investments, and the preferred alignment of interests.

**Investment Vehicles:** KRS will gain exposure to private equity investments by hiring external investment managers either directly or through participation in secondary private equity markets. Typically, the Fund will subscribe as a Limited Partner to limited partnership vehicles sponsored by such specialty external investment managers. KRS may also gain exposure by utilizing the following vehicles: limited liability companies and co-investments alongside the Fund's existing or potential limited partnerships.

**Investment Timing Risks:** Staff should limit the potential for any one investment to negatively impact the long-term results of the portfolio by investing across business cycles. Moreover, the portfolio must gain exposure to the array of financing stages by opportunistically exploiting the best investments at different stages of the business cycle. Staff may also consider purchasing secondary partnership interests to shorten the effective life of the partnership interest and therefore positively impacting the current and long term net return of the portfolio. In addition, mindful of vintage year diversification, KRS should seek to identify attractive commitments annually, further ensuring the portfolio invests across business cycles.

**General Partner Diversification:** Staff will seek to work with a variety of general partners due to their specialized expertise in particular segments of the private equity market and source of their

deal flow. No more than fifteen (15) percent of the Fund's total allocation to private equity investments may be committed to any one partnership, without the approval of the Board.

Geographical Diversification: To ensure geographical diversification, the target range for total commitments outside of the United States will be 15-45% through commitments to funds located and or investing both in and outside of the United States.

Industry/Sector Concentration: As fallout of diversified commitments outlined above, it is expected that the portfolio will be generally diversified by sector/industry. KRS will maintain diversification by ensuring:

*No more than 35% of total net assets of the private equity portfolio may be invested in a single sector of the domestic economy.*

*No more than 50% of total net assets of the private equity portfolio may be invested in a single industry within a particular sector.*

*No more than 10% of total net assets of the private equity portfolio may be invested in any single equity or debt related assets.*

#### Subcategory Strategy

The private equity portfolio includes strategic subcategory classifications including venture capital, buyouts and debt-related. The target percentages set forth below for each category are based on invested capital. For specific plan allocations to Private Equity, Please refer to Appendix A for the Pension funds and Appendix B for the Insurance funds. All plans will have a policy range of 5% and KRS staff shall periodically review policy ranges targets.

The following sub-asset target allocations are based on market value and will have a range of +/- 10%:

<u>Sub-Category</u>	<u>Target Allocations</u>	<u>Ranges</u>
Venture Capital	20.0%	10-30%
Buyouts	60.0%	50-70%
Debt-Related	20.0%	10-30%

#### E. Real Estate Investments

Subject to specific approval of the Investment Committee of the Board of Trustees, Investments may be made in equity and debt real estate for the purpose of achieving the highest total rate of return possible consistent with a prudent level of risk. Allowable real estate investments include open-end and closed-end commingled real estate funds, joint venture investments, public and private REITs (real estate investment trusts), public real estate operating companies, and real estate related debt.

Private real estate investments are unique and can be illiquid and long term in nature. Given that this may lead to large short term performance discrepancies versus public benchmarks, KRS more appropriately measures its real estate investments based on both relative return and absolute return methodologies:

*Relative Return:* The real estate portfolio is expected to generate returns, net of all fees and expenses, in excess of the National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity Index (“NCREIF ODCE”) lagged 1 month.

*Absolute Return:* The long term real return objective (returns adjusted for inflation) for the KRS real estate portfolio is five percent (5%), net of investment management fees. This return shall be calculated on a time-weighted basis using industry standard reporting methodologies.

KRS has determined that the primary role of the real estate asset class is to provide for the following:

- Attractive risk adjusted returns through active management and ability to access managers with the expertise and capabilities to exploit market inefficiencies in the asset class.

The illiquid nature of real estate investments combined with the complexity of investments makes it difficult for casual investors to effectively access the asset class effectively.

It is the belief that through active management and by investing in top tier managers with interests aligned through co-investment and incentive based compensation, KRS can maximize its risk adjusted returns.

This active management approach will be pursued.

- Diversification benefits through low correlations with other asset classes, primarily the U.S. equity markets.
- Provide a hedge against unanticipated inflation, which real estate has historically provided due to lease structures and the increases in material and labor costs during inflationary periods.
- Permit KRS to invest in unique opportunities that arise due to dislocations in markets that occur from time to time.

#### Allocation to Real Estate Asset Class

KRS divides the real estate investment universe into core, value-add, opportunistic and public securities sectors, with descriptive attributes of each listed below. It should be noted that targeted returns for each sector denoted in the descriptions below are based on industry guidelines and may vary based on different points in market cycles and changes in general inflation levels.

##### A. Core Properties

- Operating, substantially leased office, retail, industrial or apartment properties. Several alternative property types may be included in Core such as self-storage, medical office, ground leases, senior housing and triple net leased properties to the extent they exhibit similar risk and return attributes to the traditional Core property types.
- Generally have institutional qualities for size, physical attributes and location.
- Target total returns of 7%-9% per year (net of fees and promoted interest), with a high proportion of the total return to be generated from current income and a small proportion of the total return generated from appreciation.
- Leverage for core properties is moderate with an upper limit of 50% loan to value.

#### B. Value Added Properties

- Office, retail, industrial or apartment properties that have moderate risk associated with their investment. Several alternative property types may be included in Value-Added such as self-storage, medical office, senior housing and triple net leased properties to the extent they exhibit similar risk and return attributes for Value-Added investments.
- Value-Added investments are targeted to capitalize on defects with specific properties that can be identifiable and correctable through leasing, re-development, management and/or recapitalization.
- Target returns for value added investments are 9% to 12% per year (net of fees and promoted interest).
- Leverage for value added investments is generally limited to approximately 65% loan to value.

#### C. Opportunistic Investments

- Opportunistic investments can be comprised of any property sector. Opportunistic investments can include office, retail, industrial and apartments with high-risk attributes. In addition, hotels, operating companies, development, land and distressed properties are all examples of opportunistic investments
- Leverage for opportunistic investments can be 75% loan to value or higher in certain cases.
- Opportunistic investments will target returns in excess of 12% (net of fees and promoted interest) in order to compensate for the additional risk commensurate with the increased risk compared to core property investments.

#### D. Public Securities

- Public Real Estate securities ("Public Securities") do not allow for control over the assets or management. Examples of public securities may include REITs and CMBS, among others. Investment strategies using public securities may be classified as core, value-add, or opportunistic strategies based on the characteristics of those specific investments and are reviewed on a case by case basis. Real estate strategies utilizing public securities that provide daily liquidity to KRS shall be required to be classified as "Public Securities" under the Investment Policy Statement.
- Public Securities generally have higher risk and return characteristics than Core properties due to higher leverage and operating company risks. In addition, the daily pricing of securities result in additional reported volatility of returns.
- Daily pricing and public market trading provide liquidity. However, due to small float and limited market capitalization of Public Securities, improved liquidity may come at a price.
- The emergence of the international Public Securities market has broadened the universe to include Asia, European, Australian and North American property companies.
- Expected returns are approximately 9%-11% (net of fees) over a 10-year period and 11-13% (net of fees) for non-U.S. Public Securities.

#### Diversification and Risk Management Guidelines

The policy ranges for the real estate portfolio sectors have been set with reasonably wide ranges in order to allow KRS to capitalize on market inefficiencies and attractive opportunities, while also maintaining a certain level of low risk stability to the portfolio. Since many of the real estate investments will be private market investments in commingled funds, KRS will not have precise control over the actual real estate exposure. Funding, de-funding and rebalancing the portfolio may be protracted (like private equity) due to the asset classes illiquid characteristics.

#### A. Sector Diversification

KRS will seek to limit investments using the following diversification limits:

	Target	Range
Core:	70%	50% to 90%
Value Added:	20%	10% to 30%
Opportunistic:	10%	0% to 20%
Public Securities:	0%	0% to 20%

#### B. Investment Vehicles

Due to the size of KRS's portfolio, the preferred investment structure is commingled funds. Exceptions may be for public equity accounts which may be efficiently invested through a separate account or single property investments. Single property investments shall be limited to no more than 5% of the total real estate allocation.

KRS may also consider co-investment opportunities in cases where discounted fees and appropriate diversification can be achieved for a particular investment opportunity.

#### C. Diversification

KRS will seek to control risk in its real estate investment program by diversifying its investments by investment manager, property type and location diversification.

#### D. Investment Manager

KRS will limit the amount committed to any one investment manager to the larger of twenty percent (20%) of the total allocation for real estate investments or 1% of the total funds value at the time of commitment.

#### E. Property Type Diversification

KRS will seek to limit investments by property type diversification using the following limits:

Office:	0% to 40% of the total allocation
Retail:	0% to 40% of the total allocation
Apartment:	0% to 40% of the total allocation
Industrial:	0% to 40% of the total allocation
F. Other:	0% to 40% of the total allocation (other includes hotels, self-storage, parking, etc.)

Geographic Diversification  
The KRS real estate portfolio shall seek to include investments diversified across various locations with different economic concentrations. The portfolio shall be at least 80% invested in U.S. markets.

Diversification will be monitored with respect to major regional areas; e.g. Pacific, Mountain, Southwest, Southeast, Mideast, Northeast, East North Central, West North Central. International monitoring will be carried out in a similar fashion as that used domestically.

#### G. Total Leverage

KRS recognizes that leverage is an inherent component of real estate investments and use of leverage can be an effective means to increase overall returns from time to time on a risk-adjusted basis. There will be a limit of 65% of the total portfolio placed on the use of leverage.

All portfolio leverage will be secured through the individual fund investments. There will be no recourse debt permitted.

#### H. Vintage Year Risks

KRS will seek to avoid any concentrated vintage year risks.

#### F. Real Return Investments

The purpose of the Real Return Portfolio is to identify strategies that provide both favorable stand alone risk-adjusted returns as well as the benefit of hedging inflation for the broader plans. Real return strategies are not necessarily a separate asset class but may include real assets, such as infrastructure, real estate, commodities, and natural resources among others, as well as financial assets that have a positive correlation to inflation. This can include "real" bonds such as TIPs (and other inflation linkers) or "real" stocks such as REITs, MLPs, and oil & gas stocks. Additionally, real return managers may attempt to add value by tactically allocating to various asset classes according to how each asset class performs across an economic cycle and the manager's perception of where we are in the cycle. The goal is to invest in inflation sensitive assets during inflationary periods, and avoid those assets in deflationary periods, thus providing a positive real return across the cycle.



The real return opportunity set may include numerous vehicles to access a wide variety of investment styles and strategies. These investment vehicles may include mutual funds, ETFs, separately managed accounts as well as hedge funds (open-end limited partnerships) and private equity (close-end limited partnerships). The list of strategies that the KRS Real Return Portfolio may use includes, but is not limited to, the following:

- GTAA (Global Tactical Asset Allocation)/ Global Macro: GTAA or macro strategies are those that make directional bets on major markets or asset classes instead of individual securities. GTAA and macro strategies typically invest in all major assets classes including equity markets, credit and debt instruments, currencies/interest rates, and commodities. These strategies tend to focus on economic factors that would suggest an opportune time to invest in a given asset class, and will change their allocations actively over time. Within a real return portfolio, these strategies may use inflation as the economic factor to gain exposure to and will target a real rate of return over time.
- Inflation Linked Securities are securities that directly tie coupon payments or principal increases to an inflation index, such as CPI. These strategies could include not only US TIPs, but also global sovereign inflation linked bonds, corporate or infrastructure inflation linked bonds, and possibly short duration floating rate bonds.
- Inflation Sensitive Equities include publicly traded equity and equity related securities in companies which have a high sensitivity to inflation in their profit margins via the nature of their operating assets, such as energy companies, basic materials and miners, natural resource stocks, and listed infrastructure. This category can also include REITs, MLPs as well as ETFs and index products on REITs, MLPs, natural resource stocks, etc.
- Commodities: Commodities are the raw materials that are physical inputs into the production process. Managers that invest in liquid commodity strategies using exchange traded futures can span from simple indexing (matching a long-only commodities index), to enhanced indexing or active long (selecting positions that vary from the index but within fairly tight ranges), as well as unconstrained long-short managers.
- Private Property: For the purposes of this policy, private property refers to the ownership of an idiosyncratic, physical asset that is predominately fixed and/or permanent or at least substantially long-lived. This includes real estate, such as land and any improvements to or on the land, as well as timberland and farmland. Timberland investing involves the institutional ownership of forest for the purpose of growing and harvesting the timber. The timber may be used for furniture, housing lumber, flooring, pulp for paper, woodchips, and charcoal, among other things. Farmland investing entails ownership of land used primarily if not exclusively for agricultural production both for crops, including row crops and permanent crops, as well as livestock. Private property can also include infrastructure investing, which refers to financing the manufacture or development of the underlying fundamental assets and basic systems that are necessary for an economy whereby such assets are largely fixed and long-lived. These tend to be high cost, capital intensive investments that are vital to a society's prosperity and facilitate the transfer, distribution, or production of basic goods and services.

- **Natural Resources:** Natural resources can include investing in the financing, development, extraction, and production of minerals, basic materials, petroleum products, and water as well as renewable resources such as agricultural commodities and solar energy. As opposed to property, the returns generated in these investment strategies come more from the actual production of the resource itself. Further, these are depleting and/or consumable assets that are also portable and fungible and which in the aggregate comprise a majority of the inputs into most measurements of inflation.
- **Private Assets:** Private assets can include tangible or intangible assets that are not easily sold in the regular course of a business's operations for cash, and which are held for their role in contributing directly to the business's ability to generate profit. As the useful life of the asset tends to extend across many years and the assets tend to be capital intensive as well, they have some similarity to private infrastructure. Further, given that the assets contribute directly to the production process as well as often retaining intrinsic value, there is a fundamental link to inflation somewhat similar to natural resources.
- **Other (Opportunistic Inflation Hedge):** Other/opportunistic strategies include those that have a propensity to provide a positive real return or positive correlation with inflation over time. Liquid strategies such as inflation swaps, diversified inflation hedging mutual funds, or nominal bonds backed by inflation sensitive assets may be included in this allocation, while other illiquid strategies that may provide the same real profile can include private equity in inflation sensitive companies, hard asset-backed private credit, and structured inflation-linked products among others.

The Real Return allocation shall seek to achieve the following:

- 1) **Short-term benchmark:** For periods less than five years or a full market cycle, the allocation should achieve an annual rate of return that exceeds the appropriate benchmark (the weighted average return of the underlying investment benchmarks) annually over a complete market cycle, net of all investment management fees.
- 2) **Strategic objective:** For periods greater than five years or a full market cycle, the allocation should not only outperform the short-term benchmark, but also achieve a rate of return that exceeds (CPI + 300 basis points) as well.

#### **Portfolio Guidelines**

No more than 35% of the total net assets of the Real Return portfolio may be invested in any one registered investment vehicle, mutual fund, or separately managed account.

No more than 15% of the total net assets of the Real Return portfolio may be invested in any single closed-end or open-end limited partnership or other unregistered investment vehicle.

No investment in any commingled open-ended limited partnership may account for more than 20% of the net assets in that limited partnership.

No investment with any one single manager may account for more than 25% of that manager's total assets under management.

Policy allocations and ranges for strategies in the Real Return portfolio as a whole are as below.

The liquid real assets portfolio will be diversified according to the following strategy allocations:

<b>Liquid Real Assets Portfolio</b>	<b>Allocation Targets</b>	<b>Range</b>
GTAA/Global Macro	35.0%	15% to 40%
Inflation Linked Securities	30.0%	15% to 40%
Natural Resource Equities	20.0%	5% to 30%
Commodities	15.0%	0% to 25%
Opportunistic Liquid	0.0%	0% to 10%

The illiquid real assets portfolio will be diversified according to the following strategy allocations:

<b>Illiquid Real Assets Portfolio</b>	<b>Allocation Targets</b>	<b>Range</b>
Property	20.0%	0% to 35%
Natural Resources	45.0%	15% to 65%
Private Assets	25.0%	0% to 35%
Opportunistic illiquid	10.0%	0% to 20%

The relative allocations to the liquid and illiquid portfolios will be determined according to each individual plan's liquidity needs, funding status, and allocation targets on an investment by investment basis. However, no plan shall invest more than 50% of the Real Assets Allocation into the Illiquid Real Assets Portfolio.

Further, in order to ensure sufficient diversification by investment style, the Illiquid Real Asset Portfolio as a whole will be diversified according to style allocations below:

<b>Style Allocations</b>	<b>Allocation Targets</b>	<b>Range</b>
Core	40.0%	25% to 50%
Value Add	30.0%	20% to 40%
Opportunistic	30.0%	20% to 40%

### G. Cash Equivalent Securities

Selection of particular short-term instruments, whether viewed as liquidity reserves or as investment vehicles, should be determined primarily by the safety and liquidity of the investment and only secondarily by the available yield. The following short-term investment vehicles are considered acceptable:

Publicly traded investment grade corporate bonds, variable rate demand notes, government and agency bonds, mortgages, municipal bonds, and collective STIFs, money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper) and repurchase agreements relating to the above instruments. Instruments may be selected from among those having an investment grade rating at the time of purchase by at least one recognized bond rating service. In cases where the instrument has a split rating, the lower of the two ratings shall prevail. All instruments shall have a maturity at the time of purchase that does not exceed two years. Repurchase agreements shall be deemed to have a maturity equal to the period remaining until the date on which the repurchase of the underlying securities is scheduled to occur. Variable rate securities shall be deemed to have a maturity equal to the time left until the next interest rate reset occurs, but in no case will any security have a stated final maturity of more than three years.

The Systems' fixed income managers that utilize cash equivalent securities as an integral part of their investment strategy are exempt from the permissible investments contained in the preceding paragraph. Permissible short-term investments for fixed income managers shall be included in the investment manager's investment guidelines.

### H. Absolute Return Strategies

The purpose of the Absolute Return Portfolio is to identify strategies that provide both favorable stand-alone risk-adjusted returns as well as the benefit of diversification for the overall plan. Absolute return strategies, by definition, are not necessarily a separate asset class, but broaden the opportunity set within existing asset classes such as stocks, bonds, currencies and commodities by going both long and short, employing derivatives and leverage, shortening and extending investment horizons, and moving across public and private markets, amongst others. By focusing on the idiosyncratic risks of security selection and often attempting to minimize systematic market risks through hedging activities, absolute return managers can make investment decisions unconstrained by restrictive relative benchmarks such as the S&P 500 or Barclay's Aggregate Bond Index, and add value to portfolios by achieving favorable risk-adjusted returns in most market environments while also reducing overall plan volatility.

The absolute return opportunity set is generally considered to include hedge funds and other strategies attempting to achieve positive returns without heavy reliance on the assumption of traditional systematic risk factors. Investment vehicles used to access this opportunity set can include limited partnerships, but also mutual funds, ETFs, and separately managed accounts, amongst others. Absolute return strategies are extremely heterogeneous, as managers have both greater variability within a strategy and the flexibility to evolve across styles and asset classes. This is a key benefit of absolute return; however, it also makes strategy classifications less meaningful and manager selection significantly more important.

It also necessitates relatively broader allowable strategy ranges than in other more traditional asset classes.

The list of strategies that the KRS Absolute Return Portfolio may utilize includes, but is not limited to:

- **Equity Strategies:** Equity based hedge funds are those which primarily purchase listed stocks, long and short, using no to substantial leverage. These strategies may differ across multiple styles such as broad or sector based mandates, geographically focused or global, concentrated versus diversified, long biased or market neutral, or short term trading versus longer term fundamental. Sub-strategies in this category would include fundamental long/short equity, short bias, tactical trading, and equity market neutral.
- **Event Driven:** Event driven strategies also invest in the securities of corporate issuers, including stocks and corporate bonds. However, these strategies will invest based upon specific corporate actions that will change the value of these securities including mergers, spin-offs, tender and exchange offers and bankruptcy or restructuring. These strategies can be flexible across equity/credit, long/short as well as other style characteristics noted earlier. Another critical differentiator among event driven strategies is whether they pursue primarily hard versus soft catalysts. Examples of sub-strategies in this category include merger arbitrage, shareholder activism, multi-strategy event, special situations, and opportunistic value/soft catalyst.
- **Credit Strategies:** Credit strategies are those which focus on the debt side of the capital structure. They may have equity exposure, but the vast majority of the portfolio is invested in credit securities. Similarly, these strategies may be long biased or more hedged, may be more fundamentally based or more quantitative, focus on paying versus non-performing, and shorter term trading versus longer term focused. However, some funds may be focused on structured credit markets, including RMBS and CMBS, and others may move opportunistically across various credit segments. Sub-strategies may include long/short corporate credit, structured credit, and distressed securities.
- **Relative Value:** Relative Value strategies are those that do not invest in the intrinsic value of any individual security, but rather research the historical and/or mechanical relationships between related securities and invest in the spread. For example, they may bet on one bond being overvalued relative to another bond from the same issuer. These strategies are almost always market neutral, but may vary from moderately to highly leveraged, concentrated versus diversified, or from HFT (high frequency trading) to a longer term investment horizon. Examples of sub-strategies in this category include fixed income arbitrage, convertible arbitrage, and statistical arbitrage.
- **Multi-Strategies:** Multi-Strategy hedge funds are those which will actively employ several of the other major hedge fund categories. Typically, hedge funds may do more than one thing, but to be a true multi-strategy, a hedge fund must have meaningful allocations of capital to at least 3 of the other four major categories: equity, credit/event, relative value, and macro/CTA. A true multi-strategy hedge fund should not have 50% to 70% of NAV invested in one strategy or 50% to 70% of the historical return attribution from one strategy. Finally, most multi-strategy hedge funds have their roots in one specific style and have evolved into multi-strategies over time.

- Global Macro: Macro strategies are those that make directional bets on major markets or asset classes instead of individual securities. Global macro funds are typically diversified across 3 of the 4 major liquid markets: equity indices, credit/debt, currencies/rates, and commodities. These strategies are often quantitative or discretionary, or shorter term/market timing versus longer term/macroeconomic focused. Finally, some traders may focus largely on certain markets, such as rates or currencies, trading on fundamental economic signals.
- CTA/Commodity/Currency: Managed Futures or CTAs will trade the same markets as global macro funds (i.e. equity indices, debt markets, currencies, and commodities) but will focus heavily on price or other technical signals, instead of fundamental or economic data. CTAs tend to be purely systematic (black-box) or discretionary, shorter to longer term and will employ either trend following/momentum strategies or counter-trend/ mean reversion. Similar to macro funds, some CTAs focus purely on certain markets, such as commodities or currencies.
- Other: Strategies in this category, sometimes referred to as alternatives to alternatives, tend to be the most highly uncorrelated strategies. These may not be true "alpha" generators, as they often are simply accessing extremely unique and non-competitive markets, looking to harvest systemic risk premia found in these markets. However, the "betas" they are accessing are truly idiosyncratic. These strategies are much smaller and tend to have a bit higher illiquidity than other hedge funds. Examples of sub-strategies that fall in this category would be intellectual property, weather risk, and insurance strategies.

The Absolute Return allocation shall seek to achieve the following.

- 1) Short-term benchmark: For periods less than five years or a full market cycle, the allocation should achieve an annual rate of return that exceeds the appropriate benchmark (HFRI Diversified Fund of Fund Composite), net of all investment management fees, with similar risk relative to the benchmark.
- 2) Strategic benchmark: For periods greater than five years or a full market cycle, the allocation should not only outperform the short-term benchmark, but also achieve a rate of return that exceeds the appropriate long-term benchmark (1 Year Treasury Bill Rate + 500 basis points) as well.

#### Portfolio Guidelines

No more than 10% of the total net assets of the Absolute Return portfolio may be invested in any one single manager hedge fund. No more than 15% of the total net assets of the Absolute Return portfolio may be invested in any one single separately managed account, mutual fund, or other registered investment vehicle.

No more than 15% of the total net assets of the Absolute Return portfolio allocation may be invested with any one single hedge fund manager (excluding Funds of Funds). No more than 25% of the net assets of the Absolute Return portfolio allocation may be invested with any one single investment manager (excluding Funds of Funds).

No investment in any commingled open-ended limited partnership may account for more than 20% of the net assets in that limited partnership.

No investment with any one single manager may account for more than 25% of that manager's total assets under management (including Funds of Funds).

Policy allocations and ranges for the strategies in the Absolute Return allocation as a whole are:

	Allocation Targets	Range
Equity Strategies	15.0%	5.0% to 35.0%
Event Driven Strategies	15.0%	5.0% to 35.0%
Credit Strategies	15.0%	5.0% to 35.0%
Relative Value Strategies	15.0%	5.0% to 35.0%
Multi-Strategies	10.0%	5.0% to 35.0%
Global Macro	15.0%	3.5% to 30.0%
CTA/Commodity/Currency	10.0%	1.5% to 20.0%
Other	5.0%	0% to 15%

As the Absolute Return allocation can invest in various investment vehicles and strategies with differing liquidity profiles, it is important to consider liquidity as a separate risk spectrum. In order to manage the portfolio and provide the system liquidity as necessary, but remain flexible enough to capture returns available in moderately illiquid opportunities, the Absolute Return allocation will adhere to the following liquidity targets:

At all times, at least 25.0% of the Absolute Return portfolio as a whole is to be available in quarterly or better liquidity vehicles.

At all times, no more than 50.0% of the Absolute Return portfolio as a whole is to be committed to vehicles that provide liquidity on a greater than annual basis.

No investments to vehicles with a greater than 3 year lock-up are permitted in the Absolute Return portfolio.

**IX Standards of Measurement**

## Performance Measurement

The Kentucky Retirement Systems ("KRS") overall fund performance is measured relative to the KRS Pension or Insurance Total Fund Benchmark. The benchmark is calculated by means of a weighted average methodology. This method is consistent with industry-wide standards and the practices utilized by the CFA Institute. It is the product of the various component weights (i.e., asset classes' percentages) by their respective performance (returns). Due to market fluctuations and acceptable divergence, the asset classes' weights (percentages) are often not equivalent to the benchmark's weights. Therefore, the performance may indicate that the Funds have outperformed (underperformed) relative to their respective benchmarks, even when the preponderance of lesser weighted categories have underperformed (outperformed) their indices.

KRS measures its asset classes, sub-asset classes, sectors, strategies, portfolios, and instruments (investment) performance with indexes that are recognized and published (e.g., S&P 500 & Barclays Aggregate Bond Index). These indices are determined to be appropriate measures of investments and composites of investments with identical or similar investments profiles, characteristics, and strategies. The benchmarks and indexes are intended to be objective, investable, replicable, representative and measurable of the investment mandate and, developed from publicly available information that is acceptable to KRS and the investment manager/advisor as the neutral position consistent with the underlying investor status. KRS' investment consultant and staff recommend the benchmarks and indexes. These measures shall be subject to the annual review and approval of the KRS Investment Committee and ratification of the Kentucky Retirement Systems' Board of Trustees.

The KRS Total Fund Benchmarks and sub-components, indexes, are described in Appendix A and B of this document.

The following descriptions represent general standards of measurement that will be used as guidelines for the various classes of investments and managers of the Kentucky Retirement Systems. They are to be computed and expressed on a time-weighted total return basis:

### Total Public Asset Class Allocations

#### Short-term

- For periods less than five years or a full market cycle, the Asset Class Allocation should exceed the returns of the appropriate Index.

#### Intermediate & Long-term

- For periods greater than five years or one market cycle, the Asset Class Allocation should exceed the appropriate Index, compare favorably on a risk-adjusted basis, and generate returns that rank above the median return of a relevant peer group. Volatility, as measured by the standard deviation of monthly returns, should be comparable to the Index.

Individual Public Security Portfolios: Individual portfolios shall be assigned a market goal or benchmark that is representative of the style or market capitalization of the assignment. Individual accounts should be monitored using the following Standards:

#### Short-term



- For periods less than five years or a full market cycle, individual portfolios should exceed the returns of their market goal or benchmark.

Intermediate & Long-term

- For periods greater than five years or one market cycle, individual portfolios should exceed the return of their market goal or benchmark, compare favorably on a risk-adjusted basis, and generate returns that rank above the median return of a relevant peer group. Volatility, as measured by the standard deviation of monthly returns, should be comparable to the benchmark.

Alternative Assets:

In addition to exceeding the appropriate benchmark listed in Appendix A and B, the Alternative portfolio should also seek to achieve the following:

Short-term

- Alternative investments should earn a Net IRR that place the investment above the median Net IRR of other similar funds, of the same vintage year, as reported by Venture Economics.

Intermediate & Long-term

- The private equity portfolio should earn a return that meets or exceeds the KRS Private Equity Index. Individual private equity investments should earn a Net IRR above the median Net IRR of other similar funds, of the same vintage year, as reported by Venture Economics.

## Real Estate

The Total Real Estate allocation of the fund shall be benchmarked to the appropriate benchmark and are listed in Appendix A and B.

In addition, target returns for value added investments should be 9% to 12% per year (net of fees and promoted interest). Target returns for Opportunistic investments should be in excess of 12% (net of fees and promoted interest) in order to compensate for the additional risk commensurate with the increased risk compared to core property investments.

## Real Return

The total Real Return allocation shall seek to :

- (1) Achieve a rate of return that exceeds the appropriate benchmark annually over a complete market cycle (historically 3-5 years), net of all investment management fees.
- (2) Achieve a rate of return that exceeds the appropriate real return composite index over a complete market cycle (historically 3-5 years), net of all investment management fees.
- (3) Achieve a positive risk/reward trade-off when compared to similar style real return Investment Managers.

## Absolute Returns

The total Absolute Return allocation shall seek to :

- (1) Achieve a rate of return that exceeds the appropriate benchmark annually over a complete market cycle (historically 3-5 years), net of all investment management fees.
- (2) Achieve a positive risk/reward trade-off when compared to similar style FOF return Investment Managers.

## Investment Performance Review Procedures

On a timely basis, but not less than quarterly, the Investment Committee, on behalf of the Board of Trustees, will review the performance of the portfolio for determination of compliance with this Statement of Investment Policy. On an annual basis, a comprehensive review of each asset class and underlying portfolios shall be conducted by the staff and presented to the Investment Committee. The review shall consist of an organizational, performance and compliance assessment.

The Compliance Officer shall perform tests each month to assure compliance with the restrictions imposed by this policy. These tests shall be performed at the asset class and total fund level. Quarterly, the Compliance Officer shall prepare a report to the Investment Committee detailing the restrictions tested, exceptions, the cause of the exception and the subsequent resolution. The Investment Committee shall report the findings to the Board of Trustees at the next regularly scheduled meeting. The following restrictions shall be tested monthly:

- ▶ The amount of stock in the domestic or international equity allocation in any single corporation shall not exceed 5% of the aggregate market value of the Systems' assets.
- ▶ The amount of stock held in the domestic or international equity allocation shall not exceed 3% of the outstanding shares of any single corporation.
- ▶ The amount of stock in any one industry in the domestic equity allocation shall not exceed 10% of the aggregate market value of the Systems' assets.
- ▶ Investment in "frontier" markets (those countries not included in the MSCI EM Index) shall not exceed 5% of the System's international equity assets.
- ▶ The duration of the total fixed income portfolio shall not deviate from the KRS Fixed Income Index by more than 25%.
- ▶ The duration of the TIPS portfolio shall not deviate from the KRS TIPS benchmark by more than 10%.
- ▶ The amount invested in the debt of a single issuer shall not exceed 5% of the total market value of the Systems' assets, with the exception of U.S. Government issued, guaranteed or agency obligations (or securities collateralized by same), and derivative securities used for exposure, cost efficiency, or risk management purposes in compliance with Section VII of this policy.
- ▶ The amount invested in SEC Rule 144a securities shall not exceed 15% of the market value of the aggregate market value of the Systems' fixed income investments.

The Chief Investment Officer shall develop a comprehensive set of investment guidelines for each externally managed account. These guidelines should ensure, at the total fund and asset class level, that the restrictions set forth above are preserved. The Compliance Officer shall perform tests each month to assure compliance with the guidelines. Quarterly, the Compliance Officer shall prepare a report to the Investment Committee detailing the restrictions tested, exceptions, the cause of the exception and the subsequent resolution. The Investment Committee shall report the findings to the Board of Trustees at the next regularly scheduled meeting

### 3. Additional Items

The KRS Board recognizes that the voting of proxies is an important responsibility in assuring the overall performance of the Fund over a long time horizon. The Board has delegated the responsibility of voting all proxies to an outside Proxy Voting service provider or contracted external investment manager. The Board expects that the proxy voting service will execute all proxies in a timely fashion, and in accordance with the voting policy which has been formally adopted.

The Board has adopted the ISS U.S. Proxy Voting Guidelines as the System's approved Proxy Voting Policy for all internally voted items. This policy is updated at least annually by ISS and hereby incorporated by this reference. The policy can be found publically using the following link:

<http://www.issgovernance.com/files/2012USSummaryGuidelines1312012.pdf>

A. Brokerage Policy dated May 2011

manager. The Board expects that the proxy voting service will execute all proxies in a timely fashion, and in accordance with the voting policy which has been formally adopted.

The Board has adopted the ISS U.S. Proxy Voting Guidelines as the System's approved Proxy Voting Policy for all internally voted items. This policy is updated at least annually by ISS and hereby incorporated by this reference. The policy can be found publically using the following link:

<http://www.issgovernance.com/files/2012USSummaryGuidelines1312012.pdf>

A. Investment Brokerage Policy dated May 2011

The Investment Committee brokerage policy is hereby incorporated by reference.

B. Transactions Procedures Policy dated November 2014

The Investment Committee transaction procedures are hereby incorporated by reference.

C. Securities Litigation Policy and Procedures dated May 2011

The Investment Committee securities litigation policy and procedures are hereby incorporated by reference.

D. Investment Securities Lending Guidelines dated May 2011


The Investment Committee securities lending policy and procedures are hereby incorporated by reference.

E. Securities Trading Policy for Trustees and Employees dated February 2012

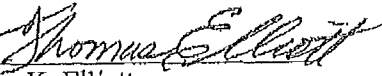
F. Manager and Placement Agent Statement of Disclosure Policy dated November 2014

#### Signatories

As Adopted by the Investment Committee  
Date: November 5, 2014

Signature:   
Dr. Daniel L. Bauer  
Chair, Investment Committee

As Adopted by the Board of Trustees  
Date: December 4, 2014

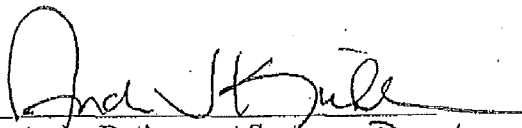
Signature:   
Mr. Thomas K. Elliott  
Chair, Board of Trustees

**Kentucky Retirement Systems**  
Real Asset Income  
Addendum to Investment Guidelines dated January 1, 2015

Effective April 1, 2016, the portfolio level benchmark shall be updated as below.

**Benchmark:**

28% S&P Global Infrastructure Index, 21% FTSE EPRA/NAREIT Developed Index, 18% Wells Fargo Hybrid and Preferred Securities REIT Index, 15% Barclays Global Capital Securities Index, 18% Barclays U.S. Corporate High Yield Index.

  
Kentucky Retirement Systems - Director

6/23/16  
Date

  
Niveen Asset Management

6/23/2016  
Date

## ATTACHMENT II

### Portfolio Guidelines

#### Kentucky Retirement Systems

#### Real Asset Income Investment Guidelines

*Pursuant to your Investment Management Agreement with Nuveen Asset Management, this statement is intended to outline the portfolio characteristics within which Nuveen Asset Management will conduct its activities. Subject to the guidelines and objectives set forth below, Nuveen Asset Management is to have full discretion with respect to individual investment management decisions.*

**OBJECTIVE:** Serve as a liquid real asset component as part of the Kentucky Retirement Systems' real asset portfolio. The long term return goal of the portfolio is Consumer Price Index plus 300 basis points.

#### ***PORTFOLIO***

#### **CHARACTERISTICS:**

The Real Asset Income Strategy will focus its investments on publicly traded equity and debt securities of infrastructure and real estate related companies.

#### **Allowable Investments:**

- Common stock
- Preferred securities
- Hybrid securities
- Convertible securities
- Real Estate Investment Trusts ("REITs")
- Exchange-traded notes ("ETNs"),
- Other investment companies (including exchange-traded funds ("ETFs"))
- Equity & Debt of Master Limited Partnerships (MLPs)
- Corporate debt obligations
- Mortgage-backed securities

#### **Expected Allocation Range over time:**

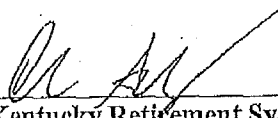
Asset Class	Minimum	Maximum
Equity	25%	100%
Preferred Securities	0%	50%
Debt	0%	40%
Cash	0%	5%

**Benchmark:**

The benchmark shall be a blend of the following; 33% S&P Global Infrastructure Index, 20% BofA ML Preferred REIT Index, 15% MSCI U.S. REIT Index, 12% BofA ML Preferred Fixed Rate Index, 20% Barclays U.S. Corporate High Yield Index

**OTHER CHARACTERISTICS, INSTRUCTIONS OR RESTRICTIONS:**

- Equity securities may be of any market capitalization, including small- and mid-capitalization companies.
- The Strategy will invest in non-U.S. securities, but will limit its exposure to emerging markets to 50% of market value at the time of purchase.
- The Strategy may utilize derivatives, including options, futures contracts, options on futures contracts, and forward foreign currency exchange contracts. The Strategy may use these derivatives to manage market or business risk, enhance the Strategy's return, or hedge against adverse movements in currency exchange rates.
- Debt and preferred securities may include securities with no rating or securities rated BB/Ba or lower

  
\_\_\_\_\_  
Kentucky Retirement Systems

12/4/2014  
Date

  
\_\_\_\_\_  
Nuveen Asset Management

12/9/2014  
Date

### ATTACHMENT III

#### Fee Schedule

Fees are paid quarterly in arrears upon submission of an invoice by Manager. Fees shall be computed on the basis of the average of the adjusted closing market value of assets as determined by the Master Custodian on the last business day of each month in the calendar quarter, in accordance with the following schedule;

The annual advisory fee for the portfolio is calculated as follows:

<u>Assets</u>	<u>Fees per annum (expressed in basis points)</u>
First \$50 million	80 bps
Next \$50 million	75 bps
Next \$150 million	65 bps
Amounts over \$250 million	60 bps

**NOTE:** For billing purposes, the assets from the Account shall be aggregated with the assets of the Kentucky Retirement Systems Insurance Trust Fund managed by the Manager pursuant to the Real Asset Income strategy in order to calculate fees. Each account will be billed a pro-rated share of the fees based on the total average market value of assets invested by each account in the strategy.

If an investment strategy utilizes a commingled, pooled fund, mutual fund, money fund, or other vehicle which has a built in management fee, these fees will be identified and reimbursed to KRS Account and the Managers Fee Schedule will be applied, or the Manager will deduct the assets already assessed a fee, from their fee calculation. (Details shown on the invoice.) Any over-billing will be reimbursed to KRS Account immediately.

#### PRO-RATION OF CONTRIBUTIONS/WITHDRAWALS

Fees are calculated at the end of each calendar quarter on the basis of the average of the closing market value of assets on the last day of each month in the calendar quarter; provided however, that the market value shall be adjusted such that contributions and disbursements made during the quarter (and which constitute greater than 1 (one) percent of the total portfolio market value) shall be billed on a pro rata basis for the amount of time under management.

The **adjusted monthly market value** = month-end asset value adjusted for contributions or withdrawals made by KRS.

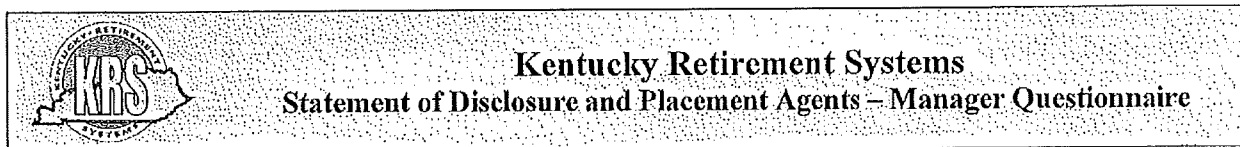
- (a) For **contributions** to the assets in the account after the first business day of a month, the adjusted ending assets will be determined by subtracting from the closing value of the account on the last business day of the month an amount equaling the product of (x) the quotient derived by dividing the amount of the contribution by the number of days in the month, and (y) the number of days from the beginning of the month to the transfer date.



- (b) For **withdrawals from** the account after the first business day of a month, the adjusted assets will be determined by adding to the closing value of the account on the last business day of the month an amount equaling the product of (x) the quotient derived by dividing the amount of the withdrawal by the number of days in the month, and (y) the number of days from the beginning of the month to the transfer date.

## ATTACHMENT IV

### Statement of Disclosure and Placement Agents



1. Did your firm use a placement agent as defined in the KRS "Statement of Disclosure and Placement Agents" policy in an effort to solicit an Investment from KRS? If yes, please continue to question 2; if no, please proceed to question 10.

No.

2. Please disclose the name of the placement agency used, the names of the individuals contracted by the placement agency (either as employees or as sub-agents) in order to solicit an investment from KRS, and the fees paid or payable to the placement agent in connection with a prospective KRS investment.

N/A.

3. Please represent that any fees paid to placement agents are the sole obligation of the investment manager and not that of KRS or the limited partnership.

N/A.

4. Please disclose the names of any current or former Kentucky elected or appointed government officials (federal, state, and local government), KRS Board of Trustees members, employees, or consultants of KRS, or any other person, if any, who suggested the retention of the placement agent.

N/A.

5. Please provide evidence of the regulatory agencies, if any, in any Federal, state or foreign jurisdiction the placement agent or any of its affiliates are registered with, such as the Securities and Exchange Commission ("SEC"), FINRA, or any similar regulatory agency.

N/A.

6. Please provide a resume for each officer, partner or principal of the Placement Agent detailing the person's education, professional designations, regulatory licenses and investment and work experience.

N/A.

7. Please describe the services to be performed by the Placement Agent.

N/A.

8. Please disclose whether the Placement Agent, or any of its affiliates, is registered as a lobbyist with any and all Kentucky state and local (county) governments.

N/A.

9. Please disclose any political contributions made by the Placement Agent, a Placement Agent principal, or their family as defined by KRS 11A.010(4) to: any Kentucky official; political party; political organization; or other political entity within the prior 2 years.

N/A.

10. Please disclose the names of any current or former Kentucky elected or appointed government officials (federal, state, and local government) KRS Board of Trustees members, employees, or consultants of KRS that are receiving any fees or compensation from the External Manager and/or placement agent. Please disclose any additional known relationships or conflicts with same.

None.

11. Please disclose any political contributions made by External Manager, its principals, or their family as defined by KRS 11A.010(4) to any Kentucky official; political party; political organization; or other political entity in the prior 2 years.

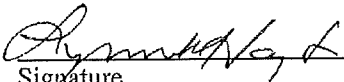
None.

12. Please disclose whether any principals of the firm are the subject of any pending litigation or have been involved in any regulatory proceedings related to the performance of their duties as an investment adviser. If so, please supply details concerning the issue.

None.

13. Please provide a statement representing and warranting the accuracy of the information provided to KRS regarding the Statement of Disclosure, and acknowledge that similar language will be included in any final written agreement with a continuing obligation to update any such information within 10 business days of any change in the information.

Nuveen Asset Management, LLC hereby represents and warrants the accuracy of the information provided to KRS included in this Statement of Disclosure; it also acknowledges that similar representations and warranties will be included in any final written agreement with KRS, and that it will have a continuing obligation to update any such information within 10 business days of any change to the information disclosed.

 12/12/2014  
Signature Date

Print Name: Lynne M. Harman

Firm Name: Nuveen Asset Management, LLC

**ATTACHMENT V**  
Compliance Certificate

As a duly authorized officer of \_\_\_\_\_ (the "Investment Manager"), I hereby certify that I am familiar with that certain Investment Management Agreement dated \_\_\_\_\_, 20\_\_ (the "Agreement") between Kentucky Retirement Systems ("KRS") and the Investment Manager relating to investment of certain KRS assets by the Investment Manager. In addition, to the best of my knowledge after diligent inquiry, I hereby certify to KRS that:

- (a) All investments of the KRS assets made by the Investment Manager during the fiscal year ending June 30, \_\_\_\_\_, were made within applicable Investment Policy and Procedures incorporated in the Agreement at the time each investment was made, except as set forth below;
- (b) All current investment holdings in the portfolio managed by the Investment Manager are in compliance with the Investment Policy and Procedures currently applicable under the Agreement, except as set forth below;
- (c) During the fiscal year ending June 30, \_\_\_\_\_, no member of the KRS Board of Trustees, or key staff of KRS, and no person claiming to represent or have influence with the Board of Trustees has contacted the Investment Manager with respect to a financial transaction or solicitation which is not solely on behalf of KRS with the Investment Manager, except as set forth below; and
- (d) The Investment Manager is in compliance with all representations, warranties and covenants in the Agreement which apply to the Investment Manager, including but not limited to any indemnity or insurance coverage requirements, except as set forth below. Current insurance coverage applicable to KRS's assets are as follows: (Please attach insurance certificates.)

Errors and Omissions dedicated to the Agreement: Date of expiration: \_\_\_\_\_

Per occurrence limit: \_\_\_\_\_

Annual aggregate: \_\_\_\_\_

Directors and officers liability: \_\_\_\_\_

Date of expiration: \_\_\_\_\_

Brokers blanket bond or similar coverage: \_\_\_\_\_

Date of expiration: \_\_\_\_\_

Other: \_\_\_\_\_

Date of expiration: \_\_\_\_\_

Exceptions: (Attach a separate sheet if necessary.)

Dated: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_



ATTACHMENT VI



Authorized Signers

Kentucky Retirement Systems' designated positions listed below are authorized to provide verbal and written instructions and notices on behalf of the Systems. Such instructions may be provided by facsimile or e-mail. PM may conclusively rely on the instructions and notices received from any one of these authorized persons unless notified to the contrary.

Chief Investment Officer  
Incumbent: David Peden  
(502) 696-8485 phone; (502) 696-8805 fax

Signature: David Peden

Director of Fixed Assets  
Incumbent: David Peden  
(502) 696-8485 phone; (502) 696-8805 fax

Signature: David Peden

Director of Private Equity  
Incumbent: Brent Aldridge  
(502) 696-8633 phone; (502) 696-8805 fax

Signature: Brent Aldridge

Deputy CIO, Director of Absolute Return  
Incumbent: Chris Schelling  
(502) 696-8642 phone; (502) 696-8805 fax

Signature: Chris Schelling

Director of Equity Assets  
Incumbent: Joe Gilbert  
(502) 696-8632 phone; (502) 696-8805 fax

Signature: Joe Gilbert

Executive Director  
Incumbent: William A. Thielon  
(502) 696-8444 phone; (502) 696-8801 fax

Signature: William A. Thielon

I hereby certify that the above individuals have been duly authorized as indicated above, and that such authorization remains in force as of this date.

Signed: Brian Thomas Dated: 11/26/14

Brian Thomas  
General Counsel  
(502) 696-8654 phone; (502) 696-8801 fax  
(502) 696-8645 phone; (502) 696-8801 fax

**ATTACHMENT VII**

**Proxy Voting Policy**

**Nuveen Asset Management, LLC**

**Proxy Voting Policies and Procedures**

Effective Date: January 1, 2011, as last amended October 27, 2014

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**I. General Principles**

*A.* Nuveen Asset Management, LLC (“NAM”) is an investment sub-adviser for certain of the Nuveen Funds (the “Funds”) and investment adviser for institutional and other separately managed accounts (collectively, with the Funds, “Accounts”). As such, Accounts may confer upon NAM complete discretion to vote proxies.<sup>1</sup>

*B.* It is NAM’s duty to vote proxies in the best interests of its clients (which may involve affirmatively deciding that voting the proxies may not be in the best interests of certain clients on certain matters). In voting proxies, NAM also seeks to enhance total investment return for its clients.

*C.* If NAM contracts with another investment adviser to act as a sub-adviser for an Account, NAM may delegate proxy voting responsibility to the sub-adviser. Where NAM has delegated proxy voting responsibility, the sub-adviser will be responsible for developing and adhering to its own proxy voting policies, subject to oversight by NAM.

*D.* NAM’s Proxy Voting Committee (“PVC”) provides oversight of NAM’s proxy voting policies and procedures, including (1) providing an administrative framework to facilitate and monitor the exercise of such proxy voting and to fulfill the obligations of reporting and recordkeeping under the federal securities laws; and (2) approving the proxy voting policies and procedures.

**II. Policies**

The PVC after reviewing and concluding that such policies are reasonably designed to vote proxies in the best interests of clients, has approved and adopted the proxy voting policies of Institutional Shareholder Services, Inc. (“ISS”), a leading national provider of proxy voting administrative and research services. As a result, such policies set forth NAM’s positions on recurring proxy issues and criteria for addressing non-recurring issues. These policies are reviewed periodically by ISS, and therefore are subject to change. Even though it has adopted ISS policies, NAM maintains the fiduciary responsibility for all proxy voting decisions.

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<sup>1</sup> NAM does not vote proxies where a client withholds proxy voting authority, and in certain non-discretionary and model programs NAM votes proxies in accordance with its policies and procedures in effect from time to time. Clients may opt to vote proxies themselves, or to have proxies voted by an independent third party or other named fiduciary or agent, at the client’s cost.

### III. Procedures

*A. Supervision of Proxy Voting.* Day-to-day administration of proxy voting may be provided internally or by a third-party service provider, depending on client type, subject to the ultimate oversight of the PVC. The PVC shall supervise the relationships with NAM's proxy voting services, ISS. ISS apprises Nuveen Global Operations ("NGO") of shareholder meeting dates, and casts the actual proxy votes. ISS also provides research on proxy proposals and voting recommendations. ISS serves as NAM's proxy voting record keepers and generate reports on how proxies were voted.

#### *B. Conflicts of Interest.*

1. The following relationships or circumstances may give rise to conflicts of interest<sup>2</sup>:
  - a. The issuer or proxy proponent (e.g., a special interest group) is TIAA-CREF, the ultimate principal owner of NAM, or any of its affiliates.
  - b. The issuer is an entity in which an executive officer of NAM or a spouse or domestic partner of any such executive officer is or was (within the past three years of the proxy vote) an executive officer or director.
  - c. The issuer is a registered or unregistered fund for which NAM or another Nuveen adviser serves as investment adviser or sub-adviser.
  - d. Any other circumstances that NAM is aware of where NAM's duty to serve its clients' interests, typically referred to as its "duty of loyalty," could be materially compromised.
2. NAM will vote proxies in the best interest of its clients regardless of such real or perceived conflicts of interest. By adopting ISS policies, NAM believes the risk related to conflicts will be minimized.
3. To further minimize this risk, Compliance will review ISS' conflict avoidance policy at least annually to ensure that it adequately addresses both the actual and perceived conflicts of interest the proxy voting service may face.

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<sup>2</sup> A conflict of interest shall not be considered material for the purposes of these Policies and Procedures with respect to a specific vote or circumstance if the matter to be voted on relates to a restructuring of the terms of existing securities or the issuance of new securities or a similar matter arising out of the holding of securities, other than common equity, in the context of a bankruptcy or threatened bankruptcy of the issuer, even if a conflict described in III.B.1.a.-d is present.



4. In the event that ISS faces a material conflict of interest with respect to a specific vote, the PVC shall direct ISS how to vote. The PVC shall receive voting direction from appropriate investment personnel. Before doing so, the PVC will consult with Legal to confirm that NAM faces no material conflicts of its own with respect to the specific proxy vote.
5. If Legal concludes that a material conflict does exist for NAM, the PVC will recommend to NAM's Compliance Committee or designee a course of action designed to address the conflict. Such actions could include, but are not limited to:
  - a. Obtaining instructions from the affected client(s) on how to vote the proxy;
  - b. Disclosing the conflict to the affected client(s) and seeking their consent to permit NAM to vote the proxy;
  - c. Voting in proportion to the other shareholders;
  - e. Recusing the individual with the actual or potential conflict of interest from all discussion or consideration of the matter, if the material conflict is due to such person's actual or potential conflict of interest; or
  - f. Following the recommendation of a different independent third party.
6. In addition to all of the above-mentioned and other conflicts, the Head of Equity Research, NGO and any member of the PVC must notify NAM's Chief Compliance Officer ("CCO") of any direct, indirect or perceived improper influence exerted by any employee, officer or director within the MDP affiliate or Fund complex with regard to how NAM should vote proxies. NAM Compliance will investigate any such allegations and will report the findings to NAM's Compliance Committee. If it is determined that improper influence was attempted, appropriate action shall be taken. Such appropriate action may include disciplinary action, notification of the appropriate senior managers within the MDP affiliate, or notification of the appropriate regulatory authorities. In all cases, NAM will not consider any improper influence in determining how to vote proxies, and will vote in the best interests of clients.

*C. Proxy Vote Override.* From time to time, a portfolio manager of an Account (a "Portfolio Manager") may initiate action to override ISS's recommendation for a particular vote. Any such override by a NAM Portfolio Manager (but not a sub-adviser Portfolio Manager) shall

be reviewed by NAM's Legal Department for material conflicts. If the Legal Department determines that no material conflicts exist, the approval of one member of the PVC shall authorize the override. If a material conflict exists, the conflict and, ultimately, the override recommendation will be addressed pursuant to the procedures described above under "Conflicts of Interest."

**D. Securities Lending.**

1. In order to generate incremental revenue, some clients may participate in a securities lending program. If a client has elected to participate in the lending program then it will not have the right to vote the proxies of any securities that are on loan as of the shareholder meeting record date. A client, or a Portfolio Manager, may place restrictions on loaning securities and/or recall a security on loan at any time. Such actions must be affected prior to the record date for a meeting if the purpose for the restriction or recall is to secure the vote.
2. Portfolio Managers and/or analysts who become aware of upcoming proxy issues relating to any securities in portfolios they manage, or issuers they follow, will consider the desirability of recalling the affected securities that are on loan or restricting the affected securities prior to the record date for the matter. If the proxy issue is determined to be material, and the determination is made prior to the shareholder meeting record date the Portfolio Manager(s) will contact the Securities Lending Agent to recall securities on loan or restrict the loaning of any security held in any portfolio they manage, if they determine that it is in the best interest of shareholders to do so.

**E. Proxy Voting for ERISA Clients.** If a proxy voting issue arises for an ERISA client, NAM is prohibited from voting shares with respect to any issue advanced by a party in interest of the ERISA client, and will rely on its ERISA clients to inform NAM of any actual or perceived client conflicts.

**F. Proxy Voting Records.** As required by Rule 204-2 of the Investment Advisers Act of 1940, NAM shall make and retain five types of records relating to proxy voting; (1) proxy voting policies and procedures; (2) proxy statements received for client and fund securities; (3) records of votes cast on behalf of clients and funds; (4) records of written requests for proxy voting information and written responses from NAM to either a written or oral request; and (5) any documents prepared by the adviser that were material to making a proxy voting decision or that memorialized the basis for the decision. NAM may rely on ISS to make and retain on NAM's behalf records pertaining to the rule.

**G. Fund of Funds Provision.** In instances where NAM provides investment advice to a fund of funds that acquires shares of affiliated funds or three percent or more of the outstanding voting securities of an unaffiliated fund, the acquiring fund shall vote the shares in

the same proportion as the vote of all other shareholders of the acquired fund. If compliance with this policy results in a vote of any shares in a manner different than the ISS recommendation, such vote will not require compliance with the Proxy Vote Override procedures set forth above.

**H. Legacy Securities.** To the extent that NAM receives proxies for securities that are transferred into an Account's portfolio that were not recommended or selected by it and are sold or expected to be sold promptly in an orderly manner ("legacy securities"), NAM will generally instruct ISS to refrain from voting such proxies. In such circumstances, since legacy securities are expected to be sold promptly, voting proxies on such securities would not further NAM's interest in maximizing the value of client investments. NAM may agree to an institutional account's special request to vote a legacy security proxy, and would instruct ISS to vote such proxy in accordance with its guidelines.

**I. Terminated Accounts.** Proxies received after the termination date of an Account generally will not be voted. An exception will be made if the record date is for a period in which an Account was under management or if a separately managed account ("SMA") custodian failed to remove the account's holdings from its aggregated voting list.

**J. Non-votes.** NGO shall be responsible for obtaining reasonable assurance that proxies are voted and submitted in a timely manner. It should not be considered a breach of this responsibility if NAM does not receive a proxy from ISS or a custodian with adequate time to analyze and direct to vote or vote a proxy by the required voting deadline.

NAM may determine not to vote proxies associated with the securities of any issuer if as a result of voting, subsequent purchases or sales of such securities would be blocked. However, NAM may decide, on an individual security basis that it is in the best interests of its clients to vote the proxy associated with such a security, taking into account the loss of liquidity. In addition, NAM may not to vote proxies where the voting would in NAM's judgment result in some other financial, legal, regulatory disability or burden to the client (such as imputing control with respect to the issuer) or subject to resolution of any conflict of interest as provided herein, to NAM.

In the case of SMAs, NAM may determine not to vote securities where voting would require the transfer of the security to another custodian designated by the issuer. Such transfer is generally outside the scope of NAM's authority and may result in significant operational limitations on NAM's ability to conduct transactions relating to the securities during the period of transfer. From time to time, situations may arise (operational or otherwise) that prevent NAM from voting proxies after reasonable attempts have been made.

**K. Review and Reports.**

1. The PVC shall maintain a review schedule. The schedule shall include reviews of the proxy voting policy (including the policies of any sub-adviser engaged by NAM), the proxy voting record, account maintenance,

and other reviews as deemed appropriate by the PVC. The PVC shall review the schedule at least annually.

2. The PVC will report to NAM's Compliance Committee with respect to all identified conflicts and how they were addressed. These reports will include all Accounts, including those that are sub-advised. NAM also shall provide the Funds that it sub-advises with information necessary for preparing Form N-PX.

*L. Vote Disclosure to Clients.* NAM's institutional and SMA clients can contact their relationship manager for more information on NAM's policies and the proxy voting record for their account. The information available includes name of issuer, ticker/CUSIP, shareholder meeting date, description of item and NAM's vote.

#### IV. Policy Owner

PVC

#### V. Responsible Parties

PVC

NGO

Compliance

Legal Department

As amended: 3/1/13

6/5/14

10/27/14



## Reference and Representative List Authorization

As used herein, "Manager" is Nuveen Asset Management, LLC and "Client" is **Kentucky Retirement Systems**.

1. From time to time, Manager is asked to provide names of current clients who are willing to provide a reference on our behalf.

Check one:

- Client **consents** to Manager's use of Client's name as a reference.
- Client **does not consent** to Manager's use of Client's name as a reference.

2. From time to time, Manager is asked to provide a representative list of clients. Such lists typically reference client name and may include investment strategy.

Check one:

- Client **consents** to Manager's use of Client's name in a representative client list.
- Client **does not consent** to Manager's use of Client's name in a representative client list.

### Kentucky Retirement Systems

By: CA AP

Date: 12/11/2014

Name: Chris Scheuring

Title: Deputy CEO

### Certification Regarding Status as Qualified Institutional Buyer

Kentucky Retirement Systems ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement.

Do the Investment Guidelines for the Account allow Manager to purchase securities offered pursuant to Rule 144A under the Securities Act of 1933, as amended (the "Securities Act")?

Yes

No

If "Yes," please complete the remainder of this certification.

If "No," the remainder of this certification is not applicable to the Account.

In order to purchase Rule 144A securities for Client's Account, Manager must represent to the seller of such securities that Client is certified as a "qualified institutional buyer," as defined in Rule 144A. Client hereby certifies that it meets Rule 144A's definition of qualified institutional buyer and is eligible to receive allocations of securities offered pursuant to Rule 144A because Client (*check the applicable box*):

1. Owns and invests on a discretionary basis, at least \$100 million in "eligible securities" (as defined below) AND Client is one of the following types of entities (*check one if applicable*):

A **corporation** (other than a domestic bank as defined in Section 3(a)(2) of the Securities Act, savings and loan association or other institution as referenced in Section 3(a)(5)(A) of the Securities Act, or any equivalent foreign institution), **partnership**, Massachusetts or similar **business trust**, or a **not-for-profit organization** described in section 501(c)(3) of the Internal Revenue Code; or

An **employee benefit plan** within the meaning of Title I of the Employee Retirement Income Security Act of 1974 ("ERISA"); or

A **plan established and maintained by a state**, its political subdivisions, or any agency or instrumentality of a state or its political subdivisions, for the benefit of its employees; or

A **trust fund** whose trustee is a bank or trust company and whose participants are exclusively plans of the types identified in the two preceding paragraphs, except trust funds that include as participants individual retirement accounts or H.R. 10 plans; or

An **insurance company** as defined in section 2(a)(13) of the Securities Act; or

A **Small Business Investment Company** licensed by the U.S. Small Business Administration under section 301(c) or (d) of the Small Business Investment Act of 1958; or

A **business development company** as defined in section 202(a)(22) of the Investment Advisers Act of 1940 ("Advisers Act"); or

- A domestic **bank** as defined in Section 3(a)(2) of the Securities Act, savings and loan association or other institution as referenced in Section 3(a)(5)(A) of the Securities Act, or any equivalent foreign institution, which has an audited net worth of at least \$25 million as demonstrated in its latest annual financial statements; or
  - An **investment adviser** registered under the Advisers Act; or
  - An **investment company** registered under the Investment Company Act of 1940 ("Investment Company Act") or any **business development company** as defined in section 2(a)(48) of the Investment Company Act.
2. If item 1 above does not apply, Client meets the definition of qualified institutional buyer because Client (*check one if applicable*):
- Is a **dealer** registered with the U.S. Securities and Exchange Commission ("SEC") and owns and invests on a discretionary basis at least \$10 million in securities of issuers that are not affiliated with Client; or
  - Is a **dealer** registered with the SEC that will only purchase Rule 144A Securities in transactions in which it acts as a riskless principal (as defined in Rule 144A) on behalf of qualified institutional buyers; or
  - Is an **investment company** registered under the Investment Company Act, which, together with one or more registered investment companies having the same or an affiliated investment advisor, owns at least \$100 million of "eligible securities"; or
  - Is an entity, all the equity owners of which are qualified institutional buyers.

Client further certifies that it will promptly advise Manager if Client ceases to be a qualified institutional buyer.

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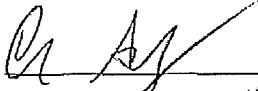
**"Eligible securities"** includes all securities within the meaning of the Securities Act, except: (i) securities of issuers that are affiliated with Client (or if Client is an investment company, are securities issued by a member of its "family of investment companies"); (ii) bank deposit notes and certificates of deposit; (iii) loan participations; (iv) repurchase agreements; (v) securities owned but subject to a repurchase agreement; and (vi) currency, interest rate and commodity swaps.

The value of "eligible securities" must be calculated based on cost (or on the basis of market value if (a) the entity reports its securities holdings in its financial statements on the basis of their market value and (b) no current information with respect to the cost of those securities has been published). Furthermore, securities owned by subsidiaries of the entity that are consolidated with the entity in its financial statements prepared in accordance with generally accepted accounting principles may be included if the investments of such subsidiaries are managed under the direction of the entity, except that, unless the entity is a reporting company under Section 13 or 15(d) of the Securities Exchange Act of 1934, securities owned by such subsidiaries may



not be included if the entity itself is a majority-owned subsidiary that would be included in the consolidated financial statements of another enterprise.

**Kentucky Retirement Systems**

By: 

Name: Chris S. Dellinger

Date: 12/11/2014

Title: Deputy CEO

**Certification for Participation in Initial Public Offerings**

Kentucky Retirement Systems ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement.

Do the Investment Guidelines for the Account allow Manager to purchase equity securities offered through initial public offerings ("IPOs")?

- Yes  
 No

If "Yes," please proceed to the next question below.

If "No," the remainder of this certification is not applicable to the Account.

Financial Industry Regulatory Authority, Inc. ("FINRA") Rule 5130 generally prohibits FINRA member firms from selling securities from IPOs to any account in which a "restricted person" has a beneficial interest, unless the member has met the conditions set forth in Rule 5130. FINRA Rule 5131 prohibits member firms, under certain conditions, from selling securities from IPOs to any account in which a "covered person" has a beneficial interest.

If you want Manager to have the ability to allocate IPO securities to your Account, please indicate below, if applicable, that (a) there are no "restricted persons" that have a beneficial interest in the Account or that the Account meets one of Rule 5130's General Exemptions, and (b) there are no "covered persons" that have a beneficial interest in the Account or that the Account meets one of Rule 5131's General Exemptions. **Schedule 1** contains a definition of "restricted person" and "covered person" and lists the General Exemptions from the prohibitions of Rule 5130 and Rule 5131 in order to assist Client in making this determination.

Does Client hereby (i) certify that the Account is eligible to purchase IPO securities and (ii) authorize Manager to purchase IPO securities in accordance with Manager's IPO allocation procedures? If "Yes," please check the box next to the appropriate representation below regarding Client's ability to purchase IPO securities. If "No," the remainder of this certification is not applicable to the Account.

- Yes  
 No

In connection with FINRA Rule 5130 and with Client's delegation to Manager of discretionary authority over the Account, Client hereby represents and warrants to Manager as follows (*check the applicable box*):

- The Account is eligible to purchase IPO securities because no "restricted person" holds a beneficial interest in the Account.
- The Account is eligible to purchase IPO securities because it meets the General Exemption described in subparagraph \_\_\_\_ in Schedule 1.
- If the Account meets the General Exemption described in subparagraph 4 in Schedule 1 because Client has implemented procedures to reduce the beneficial interests of all "restricted persons" with respect to IPO securities to – in the aggregate – below 10%, Client hereby represents that it will follow such

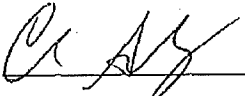
procedures in connection with the purchase by the Account of all IPO securities. The percentage interest in the Account beneficially owned by "restricted persons" is \_\_\_\_%.

In connection with FINRA Rule 5131 and with Client's delegation to Manager of discretionary authority over the Account, Client hereby represents and warrants to Manager as follows (*check the applicable box*):

- The Account is eligible to purchase IPO securities because no "covered person" holds a beneficial interest in the Account.
- The Account is eligible to purchase IPO securities because it meets the General Exemption described in subparagraph \_\_\_\_ in Schedule 1.
  - If the Account meets the General Exemption described in subparagraph 4 in Schedule 1 because Client has implemented procedures to reduce the beneficial interests of all "covered persons" with respect to IPO securities to -- in the aggregate -- below 25%, Client hereby represents that it will follow such procedures in connection with the purchase by the Account of all IPO securities. The percentage interest in the Account beneficially owned by "covered persons" is \_\_\_\_%.

Client further represents and warrants that it will promptly advise Manager if any information it provided on this Certification changes.

**Kentucky Retirement Systems**

By:   
Name: Davis Schepfling

Date: 12/11/2014  
Title: Deputy CEO

## SCHEDULE 1

### Definitions and General Exemptions

**The following are "restricted persons":**

(A) FINRA Members or other broker/dealers;

(B) Broker/Dealer Personnel

- (i) Any officer, director, general partner, associated person, or employee of a member or any other broker/dealer (other than a limited business broker/dealer);
- (ii) Any agent of a member or any other broker/dealer (other than a limited business broker/dealer) that is engaged in the investment banking or securities business; or
- (iii) An immediate family member of a person specified in subparagraph (B)(i) or (ii) if the person specified in subparagraph (B)(i) or (ii):
  - a. materially supports, or receives material support from, the immediate family member;
  - b. is employed by or associated with the member, or an affiliate of the member, selling the new issue to the immediate family member; or
  - c. has an ability to control the allocation of the new issue.

(C) Finders and Fiduciaries

- (i) With respect to the security being offered, a finder or any person acting in a fiduciary capacity to the managing underwriter, including, but not limited to, attorneys, accountants and financial consultants; and
- (ii) An immediate family member of a person specified in subparagraph (C)(i) if the person specified in subparagraph (C)(i) materially supports, or receives material support from, the immediate family member.

(D) Portfolio Managers

- (i) Any person who has authority to buy or sell securities for a bank, savings and loan institution, insurance company, investment company, investment advisor, or collective investment account.
- (ii) An immediate family member of a person specified in subparagraph (D)(i) that materially supports, or receives material support from, such person.

(E) Persons Owning a Broker/Dealer

- (i) Any person listed, or required to be listed, in Schedule A of a Form BD (other than with respect to a limited business broker/dealer), except persons identified by an ownership code of less than 10%;
- (ii) Any person listed, or required to be listed, in Schedule B of a Form BD (other than with respect to a limited business broker/dealer), except persons whose listing on Schedule B relates to an

ownership interest in a person listed on Schedule A identified by an ownership code of less than 10%;

- (iii) Any person listed, or required to be listed, in Schedule C of a Form BD that meets the criteria of subparagraphs (E)(i) and (E)(ii) above;
- (iv) Any person that directly or indirectly owns 10% or more of a public reporting company listed, or required to be listed, in Schedule A of a Form BD (other than a reporting company that is listed on a national securities exchange or other than with respect to a limited business broker/dealer);
- (v) Any person that directly or indirectly owns 25% or more of a public reporting company listed, or required to be listed, in Schedule B of a Form BD (other than a reporting company that is listed on a national securities exchange or other than with respect to a limited business broker/dealer);
- (vi) An immediate family member of a person specified in subparagraphs (E)(i)-(v) unless the person owning the broker/dealer:
  - a. does not materially support, or receive material support from, the immediate family member;
  - b. is not an owner of the member, or an affiliate of the member, selling the new issue to the immediate family member; and
  - c. has no ability to control the allocation of the new issue.

**The following are "covered persons":**

- (A) An executive officer or director of a public company or a covered non-public company, or a person materially supported by such executive officer.
  - (i) A "public company" is any company that is registered under Section 12 of the Securities Exchange Act of 1934 or files periodic reports pursuant to Section 15(d) thereof.
  - (ii) A "covered non-public company" is any non-public company satisfying the following criteria: (i) income of at least \$1 million in the last fiscal year or in two of the last three fiscal years and shareholders' equity of at least \$15 million; (ii) shareholders' equity of at least \$30 million and a two-year operating history; or (iii) total assets and total revenue of at least \$75 million in the latest fiscal year or in two of the last three fiscal years.
  - (iii) "Material support" means directly or indirectly providing more than 25% of a person's income in the prior calendar year. Persons living in the same household are deemed to be providing each other with material support.

**General Exemptions**

The general prohibitions of Rule 5130 and Rule 5131 shall not apply to sales to and purchases by the following accounts or persons, whether directly or through accounts in which such persons have a beneficial interest:

- (1) An investment company registered under the Investment Company Act of 1940;

- (2) A common trust fund or similar fund as described in Section 3(a)(12)(A)(iii) of the Securities Exchange Act of 1934, provided that:
  - (A) the fund has investments from 1,000 or more accounts; and
  - (B) the fund does not limit beneficial interests in the fund principally to trust accounts of restricted persons;
- (3) An insurance company general, separate or investment account, provided that:
  - (A) the account is funded by premiums from 1,000 or more policyholders, or, if a general account, the insurance company has 1,000 or more policyholders; and
  - (B) the insurance company does not limit the policyholders whose premiums are used to fund the account principally to restricted persons, or, if a general account, the insurance company does not limit its policyholders principally to restricted persons;
- (4) An account if the beneficial interests of:
  - (A) for purposes of Rule 5130, restricted persons do not exceed, in the aggregate, 10% of such account;
  - (B) for purposes of Rule 5131, cover persons of a particular company do not exceed, in the aggregate, 25% of such account;
- (5) A publicly traded entity (other than a broker/dealer or an affiliate of a broker/dealer where such broker/dealer is authorized to engage in the public offering of new issues either as a selling group member or underwriter) that:
  - (A) is listed on a national securities exchange; or
  - (B) is a foreign issuer whose securities meet the quantitative designation criteria for listing on a national securities exchange;
- (6) An investment company organized under the laws of a foreign jurisdiction, provided that:
  - (A) the investment company is listed on a foreign exchange or authorized for sale to the public by a foreign regulatory authority; and
  - (B) no person owning more than 5% of the shares of the investment company is a restricted person;
- (7) An ERISA benefits plan that is qualified under Section 401(a) of the Internal Revenue Code, provided that such plan is not sponsored solely by a broker/dealer;
- (8) A state or municipal government benefits plan that is subject to state and/or municipal regulation;
- (9) A tax exempt charitable organization under Section 501(c)(3) of the Internal Revenue Code; or
- (10) A church plan under Section 414(e) of the Internal Revenue Code;

**Employee Benefit Plans and Individual Retirement Accounts**

**Kentucky Retirement Systems** ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement.

Manager is a Qualified Professional Asset Manager (a "QPAM"), as defined in Prohibited Transaction Exemption 84-14, as amended ("PTE 84-14"). As such, it may engage in certain transactions with certain of Client's parties in interest on behalf of the Account.

Mindful of PTE 84-14, Client hereby provides the name of each party in interest (within the meaning of Section 3(14) of ERISA) that has, or whose "affiliate" (as defined below) has, the authority to appoint, terminate or negotiate the terms of the Agreement with Manager (attach a list with additional names if necessary):

<u>Name</u>	<u>Employed by and/or Director of</u>	<u>Position/Title</u>
1. David Peden	Kentucky Retirement Systems	CIO
2. William Thielen	"	Executive Director
3. Chris Schelling	"	Deputy CIO
4. Brent Aldridge	"	Director of PE
5. Joe Gilbert	"	Director of Equity
6.		

**Client shall promptly provide an updated list to Manager in the event that there are any changes to this list.**

For purposes of this certification, an "affiliate" of a party in interest is:

- (a) any person directly or indirectly, through one or more intermediaries, controlling, controlled by, or under common control with the party in interest;
- (b) any corporation, partnership, trust or unincorporated enterprise of which the party in interest is an officer, director, 10% or more partner or "highly compensated employee" (as defined in the Section 4975(e)(2)(H) of the Code); and
- (c) any director of the party in interest or any employee of the party in interest who is a "highly compensated employee" (as defined in Section 4975(e)(2)(H) of the Code) or who has direct or indirect authority, responsibility or control regarding the custody, management or disposition of plan assets involved in the transaction. A named fiduciary (within the meaning of Section 401(a)(2) of ERISA) of a plan with respect to the plan assets involved in the transaction and an employer any of whose employees are covered by the plan will also be considered affiliates with respect to each other if such employer or an affiliate of such employer has the authority, alone or shared with others, to appoint or terminate the named fiduciary or otherwise negotiate the terms of the named fiduciary's employment agreement.

**Kentucky Retirement Systems**

By: Chris Schelling

Date: 12/11/2014

Name: Chris Schelling

Title: Deputy CIO

**Certification for Derivatives Trading**

Kentucky Retirement Systems ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement.

Do the Investment Guidelines for the Account allow Manager to trade exchange traded and over-the-counter derivative contracts, securities and instruments, including those listed below ("Permitted Derivatives")?

- Yes. If the Investment Guidelines only permit trading in certain types of the derivatives listed below, please strike the types that are not permitted.
- No

Type of Contract	Underlying Index, Security, Commodity, Rate or Event
<b>EXCHANGE TRADED CONTRACTS</b>	
- Futures	Stocks
- Options	Fixed Income Instruments
- Other Exchange Traded Contracts	Currencies Interest Rates
<b>OVER-THE-COUNTER CONTRACTS</b>	
- Swaps (Includes, without limitation, credit default swaps and other credit derivatives)	One or more rates, currencies, commodities, equity securities or other equity instruments, debt securities or other debt instruments, economic indices or measures of economic risk or value, or other benchmarks against which payment or deliveries are to be made
- Forwards	
- Options	

If "No," the remainder of this certification is not applicable to the Account.

If "Yes," Client hereby confirms and agrees with Manager that:

1. Subject to the terms and conditions of the Agreement and the Investment Guidelines, Manager may negotiate and enter into Permitted Derivatives as agent on behalf of Client. Client shall act as the principal in any Permitted Derivative entered into by Manager for the Account, and Manager shall not assume any liability for performance of such Permitted Derivative. Manager shall provide the Custodian with proper instructions as to the execution, performance, settlement and termination of any Permitted Derivative. However, this certification shall not be construed to authorize Manager to take custody of any cash, securities, instruments or other assets received or delivered under the terms of any Permitted Derivative entered into for the Account.

2. Manager may establish a trading account for Permitted Derivatives ("Derivatives Trading Accounts") with a broker, dealer, futures commission merchant, bank or investment bank ("Brokers") entered into on Client's behalf. Such Brokers are authorized to act on instructions from



Manager, including but not limited to instructions with respect to transferring money, securities or other property to or from an account held by such Broker on behalf of the Client. Manager may further negotiate, execute and deliver, in Client's name as Client's agent or attorney-in-fact, all agreements, documents and other instruments needed to enter into Permitted Derivatives ("Derivatives Documentation"), including without limitation:

- (a) Derivatives Trading Account Applications and Agreements;
- (b) Futures Customer Agreements;
- (c) Exchange-Traded Options Agreements;
- (d) Margin and Netting Agreements;
- (e) Master Agreements, Schedules, Credit Support Agreements, Confirmations and other agreements based on forms published by the International Swap Dealers Association;
- (f) Electronic Trading Agreements; and
- (g) Give-up Agreements.

The Client understands that it will be bound by the terms of any agreement executed by the Manager on the Client's behalf in accordance with the terms of this certification to the same extent as if the Client had executed such agreement directly.

3. For the purpose of entering into Derivatives Documentation, Client hereby represents and warrants to Manager that on the date Manager enters into any Derivatives Documentation or a Permitted Derivative on Client's behalf:

- (a) Client will be duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing;
- (b) Client (i) will have the power to authorize Manager to execute and deliver any Derivatives Documentation on its behalf, (ii) will have the power to perform its obligations under any Derivatives Documentation or Permitted Derivative, and (iii) will have taken all necessary action to authorize such execution, delivery and performance;
- (c) Such execution, delivery and performance will not violate or conflict with any law applicable to Client, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any contractual restriction binding on or affecting it or any of its assets; and
- (d) All governmental and other consents that are required to have been obtained by Client with respect to any Derivatives Documentation will have been obtained and will be in full force and effect and all conditions of any such consents will have been complied with; Client's obligations under any Derivatives Documentation will constitute its legal, valid and binding obligations, enforceable in accordance with its terms (subject to applicable laws and, as to enforceability, to equitable principles of general application).

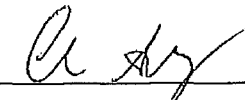
- (e) Client is an "eligible contract participant" as that term is defined in Section 1(a)(12) of the Commodity Exchange Act, as amended. Client is aware that it is exposed to losses with respect to Permitted Derivatives. Accordingly, each time Manager enters into a Permitted Derivative on behalf of Client, Client will have the financial ability to bear the economic risk of such Permitted Derivative, and adequate means to provide for its current needs and personal or other contingencies. In addition, Client is an "accredited investor" as that term is defined in Rule 501 under the Securities Act of 1933, as amended.

Client will promptly notify Manager in writing of any material change in or qualification to any of these representations.

4. Manager may provide copies of this certification to others as proof of its authority to enter into Permitted Derivatives, open Derivatives Trading Accounts, and execute and deliver Derivatives Documentation, as agent on behalf of Client. Upon request, Client will confirm the continued validity and effectiveness of this certification to any person or entity that has entered, or proposes to enter, into a Permitted Derivative with Manager for the Account. The authorizations in this certification will remain in effect until terminated by provision of written notice to Manager.

5. All capitalized terms contained herein and not otherwise defined herein shall have the meaning assigned to them in the Agreement.

**Kentucky Retirement Systems**

By: 

Name: Chris Schelting

Date: 12/11/2014

Title: Deputy CEO

## Certification for Trading Certain Agency Mortgage-Backed Securities

Kentucky Retirement Systems ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement (the "Agreement").

Do the Investment Guidelines for the Account allow Manager to trade mortgage-backed or asset-backed securities ("Permitted MBS Transactions")?

- Yes  
 No

If "No," the remainder of this certification is not applicable to the Account.

If "Yes," pursuant to recent regulatory changes governing the posting of collateral in connection with Permitted MBS Transactions<sup>1</sup>, Client hereby confirms and agrees with Manager:

1. Subject to the terms and conditions of the Agreement and the Investment Guidelines, Manager may negotiate and enter into Permitted MBS Transactions as agent on behalf of Client. Client shall act as the principal in any Permitted MBS Transaction entered into by Manager for the Account, and Manager shall not assume any liability for performance of such Permitted MBS Transaction. Manager shall provide the Custodian with proper instructions as to the execution, performance, settlement and termination of any Permitted MBS Transaction. However, this Exhibit shall not be construed to authorize Manager to take custody of any cash, securities, instruments or other assets received or delivered under the terms of any Permitted MBS Transaction entered into for the Account.

2. Manager may establish a trading account for Permitted MBS Transactions ("MBS Trading Accounts") with a broker, dealer, bank or investment bank ("Brokers") entered into on Client's behalf. Such Brokers are authorized to act on instructions from Manager, including but not limited to instructions with respect to transferring money, securities or other property to or from an account held by such Broker on behalf of the Client. Manager may further negotiate, execute and deliver, in Client's name as Client's agent or attorney-in-fact, all agreements, documents and other instruments needed to enter into Permitted MBS Transactions ("MBS Transaction Documentation"), including without limitation:

- (a) MBS Trading Account Applications and Agreements;
- (b) Margin and Netting Agreements;
- (c) Master Agreements, Schedules, Confirmations and other agreements, including a Master Securities Forward Transaction Agreement, based on forms published by the Securities Industry and Financial Markets Association;
- (d) Electronic Trading Agreements; and

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<sup>1</sup> The U.S. Treasury Market Practices Group ("TMPG") and the Financial Industry Regulatory Authority ("FINRA") have recently recommended that forward-settling agency mortgage-backed securities transactions be margined in order to manage counterparty risk. In order to comply with the new regulations, all parties to these transactions must enter into written master trading agreements that will govern the posting of collateral and other margining activity.

(e) Give-up Agreements.

The Client understands that it will be bound by the terms of any agreement executed by the Manager on the Client's behalf in accordance with the terms of this Exhibit to the same extent as if the Client had executed such agreement directly.

4. For the purpose of entering into MBS Transaction Documentation, Client hereby represents and warrants to Manager that on the date Manager enters into any MBS Transaction Documentation or a Permitted MBS Transaction on Client's behalf:

- (a) Client will be duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing;
- (b) Client (i) will have the power to authorize Manager to execute and deliver any MBS Transaction Documentation on its behalf, (ii) will have the power to perform its obligations under any MBS Transaction Documentation or Permitted MBS Transaction, and (iii) will have taken all necessary action to authorize such execution, delivery and performance;
- (c) Such execution, delivery and performance will not violate or conflict with any law applicable to Client, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any contractual restriction binding on or affecting it or any of its assets; and
- (d) All governmental and other consents that are required to have been obtained by Client with respect to any MBS Transaction Documentation will have been obtained and will be in full force and effect and all conditions of any such consents will have been complied with; Client's obligations under any MBS Transaction Documentation will constitute its legal, valid and binding obligations, enforceable in accordance with its terms (subject to applicable laws and, as to enforceability, to equitable principles of general application).
- (e) Client is aware that it is exposed to losses with respect to Permitted MBS Transactions. Accordingly, each time Manager enters into a Permitted MBS Transaction on behalf of Client, Client will have the financial ability to bear the economic risk of such Permitted MBS Transaction, and adequate means to provide for its current needs and personal or other contingencies.
- (f) Client is aware that certain MBS Transaction Documentation may contain a waiver of immunities and so authorizes Manager to enter into such MBS Transaction Documentation on its behalf that waive, to the fullest extent permitted by law, any immunity (on the basis of sovereignty or otherwise) from (i) suit; (ii) jurisdiction; (iii) relief by way of injunction, order for specific performance or for recovery of property; (iv) attachment of assets; and (v) execution or enforcement of any judgment to which Client might otherwise be entitled in any proceeding relating to such MBS Transaction Documentation.

Client will promptly notify Manager in writing of any material change in or qualification to any of these representations.

4. Manager may provide copies of this Exhibit to others as proof of its authority to enter into Permitted MBS Transactions, open MBS Trading Accounts, and execute and deliver MBS Transaction Documentation, as agent on behalf of Client. Upon request, Client will confirm the continued validity and effectiveness of this Exhibit to any person or entity that has entered, or proposes to enter, into a Permitted MBS Transaction with Manager for the Account. The authorizations in this Exhibit will remain in effect until terminated by provision of written notice to Manager.

5. All capitalized terms contained herein and not otherwise defined herein shall have the meaning assigned to them in the Agreement.

**Kentucky Retirement Systems**

By:     *CS*    

Date:     12/11/2014    

Name:     *Chris Schelling*    

Title:     *Deputy CIO*

**KENTUCKY RETIREMENT SYSTEMS INSURANCE TRUST FUND  
INVESTMENT MANAGEMENT AGREEMENT**

THIS INVESTMENT MANAGEMENT AGREEMENT (the "Agreement" or "Contract") is entered into as of January 1, 2015 by and between Nuveen Asset Management, LLC ("Manager") and Kentucky Retirement Systems Insurance Trust Fund ("KRS" or "Systems").

**WITNESSETH:**

WHEREAS, KRS desires to appoint Nuveen Asset Management, LLC as investment manager with authority to manage and control a portion of KRS' assets held from time to time (the "Account") pursuant to this Contract;

NOW, THEREFORE, in consideration of the foregoing and subject to the terms and conditions set forth herein, the parties hereby agree as follows:

1. **Designation of Manager; Prudent Person.** Subject to the terms and conditions contained in this Agreement, KRS hereby appoints Manager as investment manager of the Account with full power and discretion to manage such assets of the Account as KRS designates, such assets not otherwise being subject to the management or control of another investment manager specifically appointed by KRS. Manager hereby accepts appointment as investment manager of the Account pursuant to the terms of this Agreement. Manager shall discharge its duties under this Agreement solely in the interest of KRS with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent investment manager acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims. In addition, Manager is a "fiduciary" of KRS, as that term is defined in Section 3(21) of the U.S. Employee Retirement Income Security Act of 1974, as amended ("ERISA"), with respect to the investment and management of the assets in the Account.

2. **Custody of Account Assets.** KRS has established or will establish one or more investment accounts at a custodian of KRS's choice (the "Custodian"). Title to all Systems' Account assets shall at all times be registered in the name of Systems or the name of the Systems' Master Custodian or its nominee for the account of Systems, and the indicia of ownership of all Systems' Account assets shall at all times be maintained in trust by the Systems' Master Custodian. The Manager shall at no time have the right to physically possess or to have the securities making up the Account registered in its own name or that of its nominee, nor shall the Manager in any manner acquire or become possessed of any income or proceeds distributable by reason of selling, holding or controlling the Account. KRS shall instruct the Custodian to provide the Manager with written statements of the Account, at least monthly, and such other information as Manager may reasonably request from time to time.

3. **Investment Policy and Procedures.** The Manager hereby agrees to provide the services enumerated in Item 1 and Item 2 above in accordance with the Statement of Investment Policy and Procedures (the "Investment Policy") as issued by Systems, which is attached hereto as Attachment I and incorporated herein by this reference, and the Portfolio Guidelines for the Manager (the

"Guidelines"), which are attached hereto as Attachment II and incorporated herein by this reference. Manager shall exercise its power and authority with respect to the Account in accordance with the Investment Policy. The Investment Policy and Guidelines shall remain in effect until such time as KRS approves (in writing) a modification to the Investment Policy or Guidelines. Notwithstanding anything to the contrary contained herein, in the event the terms of the Guidelines conflict with those of the Investment Policy, the terms of the Investment Policy shall control.

4. **Brokerage.** Manager will arrange for the execution of transactions for the Account through brokers or dealers that Manager reasonably believes will provide best execution. In selecting brokers or dealers, the Manager may consider, among other things, the fact that a broker or dealer has furnished, or has agreed to furnish in the future, statistical, research or other information or services. Subject to its overall duty of best execution, Manager may cause the Account to pay brokers a commission greater than another qualified broker might charge to effect the same transaction where Manager determines in good faith that the research and services are eligible brokerage and research under Section 28(e) of the Securities Exchange Act of 1934, as amended, and the amount of such commission is reasonable in relation to the value of the brokerage and research services provided. If Manager accepts or receives such information or services from a broker or dealer, then Manager shall report to KRS in accordance with section 18(c)(iii) of this Agreement.

Notwithstanding the foregoing, the Manager shall not place orders with any broker/dealer who: (a) KRS has by written notice to the Manager deemed unsuitable for Account trades, or (b) is affiliated with the Manager. The Manager agrees to be bound by any changes to such broker/dealer list upon receipt of written notice from KRS. In addition, the Manager shall not engage in transactions that involve a broker acting as a principal where the broker is also the investment manager, without KRS's advance written consent.

5. **Performance Objectives.** The Manager acknowledges that KRS has established performance objectives for the assets in the Account as are set forth in Attachment II attached hereto (the "Performance Objectives"), as the same may be amended from time to time by KRS in writing, and that failure to consistently meet such performance standards may result in termination of this Agreement. The Manager hereby acknowledges that it has reviewed and is familiar with the Performance Objectives, however, it is understood that Manager does not guarantee the future performance of the Account or any specific level of performance. KRS may amend the Performance Objectives by providing written notice to Manager.

6. **Fees and Terms of Payment.** As consideration for the services rendered pursuant to this Agreement, the Manager shall receive a management fee, payable quarterly, and calculated as outlined in Attachment III. If the fees are not paid by KRS, KRS shall cause the Custodian to compensate Manager for its services under this Agreement from the assets of the Account. Except as provided in Attachment III, the Manager shall not be entitled to receive any additional fees or reimbursements for travel expenses, meals, production materials, or any other service or product provided in connection with this Agreement.

8. **Placement Agents.** The Manager agrees that it will remain in compliance with System's Statement of Disclosure and Placement Agent policy, which is attached hereto as Attachment IV. The Manager warrants that no person or selling agency has been employed or retained to solicit and secure this Agreement upon an agreement or understanding for commission, percentage, brokerage or contingency; excepting bona fide employees or selling agents maintained by the Manager for the purpose of securing business unless disclosed in writing, prior to the engagement. The Manager has not paid any placement fees, finder's fees, or gratuities (including gifts and entertainment) to any fiduciary, trustee or employee of KRS. The Manager has not made any contributions that would result in Manager being disqualified from collecting performance fees under rule 206(4)-5 of the Investment Advisers Act of 1940, as amended (the "Advisers Act").

9. **Authorization.** In accordance with this Contract and all Attachments hereto, Manager is hereby authorized, without prior consultation with, or approval of, KRS, to:

- a) use its sole judgment and discretion in the acquisition, placement, maintenance, transfer, swap, sale, or other disposition of any and all Account assets;
- b) bind or commit KRS to any contract(s) or agreement(s) necessary to accomplish its duties and obligations set forth in this Agreement;
- c) direct the Custodian with respect to all powers subject to such direction under this Agreement including, but not limited to, buying and selling securities, signing contracts or other agreements; and
- d) combine orders on behalf of the Account with orders on behalf of the Manager or its affiliates or of other clients of the Manager.

10. **Trading Procedures.** All transactions authorized by this Agreement shall be settled through the Custodian, who shall retain sole possession of and have complete custodial responsibility for the assets. The Manager shall notify and instruct the Custodian on (a) orders which the Manager places for the sale or purchase of assets and the management or disposition of such assets, and (b) the purchase or acquisition of other securities or property for the Account. The Manager shall provide the Custodian with such trade information as the Custodian may require to effect settlement, within the time frames as the Custodian may designate. In its sole discretion, KRS may (by giving notice to either the Manager or the Custodian) amend, limit or revoke Manager's above-described authority to direct the Custodian.

11. **Manager Not Acting as Principal.** The Manager shall not act as a principal in sales and/or purchases of the assets, unless the Manager shall have received prior written approval from an Authorized Person (defined below) for such transaction. The Manager shall also not engage in prohibited transactions to the extent set forth in section 406(b) of ERISA.

12. **Trade Confirmation and Settlement.** Where a transaction is eligible for settlement through the Depository Trust Company's Institutional Delivery System, the Manager shall use such system for trade confirmation and settlement. The Manager shall cooperate with KRS' Custodian and other parties to the trade to promptly resolve any trade settlement discrepancies or disputes.



13. **Discretionary Rights and Powers Affecting the Assets.** The Manager may receive information from the Custodian concerning the assets held in the Account, including without limitation, conversion rights, subscription rights, warrants, options, pendency of calls, maturities of securities, expirations of rights, tender and exchange offers, and any other right or power requiring a discretionary decision by the Manager. The Manager shall be responsible for timely directing the Custodian as to the exercise of such rights and/or powers where the Manager has actual knowledge of same, whether by written notice or otherwise.

14. **Acting on Illegal Information.** The Manager shall not place orders to purchase and/or sell any assets on the basis of any material information obtained, or utilized, by the Manager in violation of the securities laws of the United States, or any other country in which the Manager transacts business on the Account's behalf.

15. **Account Reconciliation.** The Manager shall cooperate with the Custodian to reconcile the Account each month. The Manager shall review all performance and other reports provided to it by the Custodian with respect to the Account assets, and notify KRS in writing of any material errors or discrepancies that are not reconciled.

16. **Notification of Tax Liabilities.** If the Manager becomes aware of a tax liability with respect to unrelated business income earned on Account assets, it will make best efforts to notify KRS. Such notification is not intended to replace KRS' custodial account statements as records for official or tax reporting purposes. The Manager is under no obligation to make such notification and shall not be liable to KRS for any penalties or interest assessed due to any failure by the Manager to notify KRS of any tax matters.

17. **Manager Representations.** Manager hereby represents and acknowledges to KRS that:

- a) Manager is duly organized, validly existing and in good standing under the laws of the state of its organization and has complete authority to carry out its business as it has been conducted.
- b) The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby are within the power of the Manager and have been duly authorized by all necessary corporate action. The Manager has duly executed and delivered this Agreement, and this Agreement constitutes the legal, valid and binding agreement and obligation of the Manager, enforceable against the Manager in accordance with its terms, except insofar as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar limitations on creditors' rights generally and general principles of equity.
- c) Neither the execution and delivery of this Agreement nor the consummation of the transactions provided herein will violate any agreement to which the Manager is a party or by which it is bound, any law, regulation, order, or any provision of the charter documents of the Manager.
- d) Manager is registered as an investment adviser under the Advisers Act, and therefore is eligible to act as an investment manager under ERISA; is registered or is exempt from

registration in accordance with applicable state laws; and is not subject to any of the disqualifications set forth in Section 411 of ERISA.

- e) Manager has completed, obtained, and performed all registrations, filings, approvals, authorizations, consents, or examinations required by any government or governmental authority for acts as contemplated by this Agreement.
- f) Manager will maintain the following insurance coverage for the duration of the Agreement plus sixty months after expiration or termination of the Agreement. Proof of the existence of such policies shall be provided to KRS annually with the Compliance Certificate in Attachment V:
  - i) A fidelity bond in the minimum amount of \$10,000,000 with a maximum deductible of \$1,000,000. The bond shall cover at a minimum, losses due to dishonest or fraudulent acts or omissions by the Manager; and
  - ii) An errors and omissions policy in the minimum amount of \$25,000,000 with a maximum deductible of \$2,500,000 per claim. The policy shall cover, at a minimum, losses caused by errors, omissions, or negligent acts of the Manager.
- g) Manager will immediately notify KRS by telephone (at the telephone number set forth below), upon the receipt of information indicating seizure, loss, or loss of use of Account assets. Such telephonic notice shall be followed by written notice to KRS within twenty-four hours.
- h) Manager has disclosed to KRS information concerning any material litigation pending, and will notify KRS of all future material actions brought against the Manager that are related to the performance of its duties as an investment adviser. Manager also has disclosed and will in the future promptly disclose to KRS information concerning any material investigation of the Manager by the Securities and Exchange Commission ("SEC") or any other regulatory authority related to the Manager's performance of its duties under this Agreement.
- i) The Manager will make all required filings with all applicable regulatory agencies within all prescribed deadlines on behalf of its investment of the assets in the Account.
- j) The Manager shall annually file with KRS a compliance certificate, executed by a responsible officer of the Manager's firm, in the form attached hereto as Attachment V, within thirty (30) days after each June 30.

18. **Reporting Requirements.** Manager shall furnish the following reports in the format specified by KRS upon its reasonable request.

- a) The Manager shall provide the following reports monthly (either in hard copy or by electronic access) within ten (10) business days of month-end:
  - i) Reports describing in detail the previous month's portfolio activities, including: GIPS compliant performance tabulations gross and net of fees for the 1-month, 3-

month, calendar YTD, fiscal YTD, 1-year, 3-year, 5-year, 10-year, and since inception time periods as appropriate; a summary of purchases and sales made for the Account by the Manager; and sector weights and other appropriate Account characteristics (e.g. convexity and effective duration, P/E ratio, etc.) for both the benchmark and the Account; and

- ii) Reports tracking units, original cost, amortized cost, market value, and gain/loss of each holding.
- b) The Manager shall provide the following quarterly reports (either in hard copy or by electronic access) within thirty (30) calendar days of calendar quarter-end:
- i) Reports reviewing Account performance (as above) and the Manager's current investment strategy and outlook;
  - ii) A summary of the proxy votes for the quarter;
  - iii) An attribution breakdown for the current quarter and 1-year periods;
  - iv) Reports tracking the Manager's utilization of brokers/dealers, including the identification of the brokers/dealers utilized and the commissions paid;
  - v) A synopsis of the key investment decisions made by the manager, his or her underlying rationale, and how those decisions could affect future results;
  - vi) A commentary on investment results in light of the appropriate standards of performance; and
- c) The Manager shall provide annually, after the close of the calendar year:
- i) A copy of SEC Form ADV – Part II and any amendments thereto as available;
  - ii) A Compliance Certificate provided in Attachment V;
  - iii) A report on the Manager's use of soft dollars earned and expended resulting from its duties under this Agreement. Otherwise, the Manager shall indicate in writing that soft dollar information is not applicable to this Account.
- d) The Manager shall provide the following information periodically as requested:
- i) Information relating to industries, businesses, corporations or securities as requested by KRS;
  - ii) Reports containing the Manager's and its affiliates' conflict of interest policies; and
  - iii) Any other such reports regarding the Account as KRS or the Custodian may reasonably request.

19. **Meetings.** On a periodic basis mutually convenient to Manager and KRS, Manager shall meet with KRS to review the Account investments and to discuss current holdings and future placements and acquisitions. Additionally, the individual or individuals assigned by the Manager to the Systems account must be generally accessible by telephone to Systems on a daily basis during regular business hours.

20. **Change in Status.** Manager shall promptly notify KRS in writing of any material change in Manager's business which may effect Manager's ability to perform its duties and responsibilities under this Agreement, including, but not limited to, any change in Manager's status as a registered investment adviser, any material litigation brought against Manager, any materially adverse changes to the Manager's financial or organizational status or any material change in its senior professional personnel, and any change in a portfolio manager of the Account. It shall promptly notify KRS of any conflicts of interest between KRS and Manager arising from Manager's relationship with any entity of which it has knowledge. If, at the sole discretion of KRS, it is determined that any relationship would be considered a potential or actual conflict of interest, KRS may require Manager to cease dealing with such entity on behalf of KRS.

21. **KRS Representations.** KRS hereby represents to Manager that the execution and performance of this Agreement and the making of investments for the Account in accordance with this Agreement will not violate any provision of the governing documents of KRS, require KRS to obtain any consent or any waiver that has not heretofore been obtained, violate any contract or other agreement to which KRS is a party or by which it or its assets (including the Account) may be bound, or violate any statute, rule, regulation or order of any governmental body.

22. **Authorized Parties; Directions to the Manager.** KRS may appoint or designate any person or committee to act on its behalf concerning this Agreement and its operation, as it deems appropriate. KRS has furnished to the Manager a list of authorized persons, in Attachment VI ("Authorized Persons"), which it will update from time to time as necessary and until written notice of changes is received by the Manager, the Manager may conclusively rely upon the authority of the Authorized Persons to act on behalf of KRS. All directions to the Manager by or on behalf of KRS shall be in writing and signed by one or more Authorized Persons and the Manager shall be fully protected in relying on such directions.

23. **Assignment.** The Manager may not assign, convey, or otherwise transfer any of its rights, obligations, or interests herein without the prior express written consent of KRS.

24. **Audit or Examination of Records.** The Manager agrees that any authorized representative of KRS shall have access to and the right to examine, audit, excerpt and transcribe, any directly pertinent books, documents, papers, and records of the Manager relating to this Agreement upon reasonable advance notice and during the Managers normal business hours. The Manager shall retain all records relating to this Agreement for five (5) years following the date of final payment or completion of any required audit, whichever is later.

25. **Reliance on Representations.** KRS and the Manager each acknowledge that the other will be relying, and shall be entitled to rely, on the representations, undertakings and acknowledgments of the other set forth in this Agreement. KRS and the Manager each agree to notify the other promptly if

any of its representations, undertakings, or acknowledgments set forth in this Agreement ceases to be true.

26. **Notice.** All notices, instructions and advice with respect to securities transactions or other matters contemplated by this Contract shall be deemed duly given when delivered to and received by the respective parties as follows (a facsimile transmission is acceptable only for purposes of amending this Contract and only if the receipt of such facsimile is confirmed by the recipient. Electronic mail transmissions are acceptable only for purposes of providing notice or instructions with respect to securities transactions or cash flows. Electronic mail transmissions may not be used to terminate or amend this Contract):

The Manager at: Nuveen Asset Management, LLC  
Head of Institutional Sales and Client Service  
901 Marquette Ave, Suite 2900  
Minneapolis, MN 55402  
Facsimile: 612-303-4210

KRS at: David Peden  
Chief Investment Officer  
1260 Louisville Rd  
Frankfort KY, 40601  
facsimile: 502.696.8805

With a copy to: Brian Thomas  
General Counsel  
1260 Louisville Rd  
Frankfort KY, 40601

Custodian at: The Bank of New York Mellon  
Attn: Ms. Nina Caruso, Vice President  
BNY Mellon Center, Suite 0410  
Pittsburgh, PA 15258  
facsimile: 412.236.1928

27. **Controlling Law; Jurisdiction and Venue; Waiver.** All questions as to the execution, validity, interpretation, construction, and performance of this agreement shall be construed in accordance with the laws of the Commonwealth of Kentucky, without regard to conflict of laws principles thereof. The Manager hereby consents to the jurisdiction of the courts of the Commonwealth of Kentucky and further consents that venue shall lie in the Franklin Circuit Court located in Franklin County, Kentucky. To the extent that in any jurisdiction Manager may now or hereafter be entitled to claim for itself or its assets immunity from suit, execution, attachment (before or after judgment) or other legal process, Manager, to the extent it may effectively do so, irrevocably agrees not to claim, and it hereby waives, same.

28. **Confidentiality.**

- a) The Manager shall protect the financial privacy of all information relating to the Account and recognizes that the information is confidential in nature. The Manager's employees and agents shall be allowed access to the information only as needed for their duties related to the Agreement and in accordance with the rules established by the custodian of the records. The Manager shall preserve the confidentiality of the information except where otherwise required by law or requested by an appropriate regulator, and shall maintain positive policies and procedures for safeguarding the confidentiality of such information. The Manager recognizes that it may be liable for the negligent, wanton, or willful release of such information.
- b) KRS agrees not to release or make available to the public information regarding Account holdings or other related security, transaction, and attribution analysis related to the Account ("Portfolio Information") until thirty (30) days after the end of the quarter to which the Portfolio Information relates. KRS may release the Portfolio Information to its Trustees, and to any related or affiliated party, including those parties doing analysis of the Portfolio Information on behalf of KRS. KRS may also discuss the Portfolio Information in general terms, without identifying the securities held, with unrelated or unaffiliated parties in the ordinary course of fulfilling KRS's fiduciary responsibilities.
- c) Manager acknowledges that KRS is subject to the Kentucky Open Records Act (Kentucky Revised Statutes 61.870 *et seq.*, as amended, the "Open Records Act"). The Open Records Act contains numerous exceptions to required disclosure, which KRS invokes on a regular basis, as it respects the confidential information of its counterparties to investment contracts. The primary exception to required disclosure that KRS invokes is 61.878(c)(1) – information that would provide a competitive advantage to competitors. KRS interprets this to mean that it is not required to disclose select business terms or portions of agreements, which include, but are not limited to, negotiated economic terms (i.e. management fees, incentive fees, expenses, etc.) of the investment manager or fund as an individual entity. Manager also acknowledges that a party requesting information that is unable to obtain such information directly from KRS may bring legal action (either in a court of law, or by appealing to the attorney general) to compel disclosure of the information.

29. **Remedies.** In addition to the right to terminate this Agreement, KRS may also file suit against the Manager for breach of duty and/or confidentiality, without limitation. Should KRS obtain a judgment against the Manager as a result of a breach of contract, the Manager consents to such judgment being set-off against any monies owed by KRS to the Manager under this or other contracts. This section shall not be interpreted to limit KRS's remedies as provided for by law.

30. **Securities Lending** The Manager understands that KRS may engage in a "Securities lending program". Manager shall have no responsibility and shall not be held liable for any trade settlement delays or any additional costs incurred by KRS' engagement in a securities lending program.

31. **Duration of Contract.** The period in which subject services are to be performed is December 1, 2014, through June 30, 2018. However, termination or cancellation may be effected at any time by either party as provided below. At the expiration of its term, this agreement may, at the option of the parties hereto, be extended by negotiation for additional periods.

32. **Termination.** KRS and Manager reserve the right to terminate this Agreement without penalty under any one of the following circumstances:

- a) At KRS's discretion, with or without cause, after five (5) business days written notice to the Manager or at Manager's discretion upon thirty (30) calendar days written notice, Manager shall cooperate with KRS and follow KRS's written directions in connection with the termination of this Agreement to effect the orderly transfer of securities; or
- b) At KRS's discretion, immediately, if a result of the Manager's default or breach of contract.

Following termination notification, Manager shall not take any action with respect to the Account, unless specifically authorized to do so by KRS. In the event of termination of the Agreement, the exclusive, sole and complete remedy of the Manager shall be payment for services rendered prior to termination.

33. **Withdrawal of Assets from Management.** KRS may withdraw from and decrease the Account assets in its sole discretion, with or without prior notice. Any such notice shall set forth the amount of any such withdrawal or identify the investment assets and amount of cash to be withdrawn, the date as of which such withdrawal shall be effective and such other information that KRS deems necessary or appropriate. On and after the effective date of such withdrawal and decrease and, except as may otherwise be set forth in such notice, the Manager shall cease to be responsible for future investment of the assets and/or cash withdrawn.

34. **Amendments.** Except as otherwise provided herein, written modifications, amendments or additions to this Contract shall be effective only when signed by both parties.

35. **Conflicts of Laws.** Manager hereby certifies Manager is legally entitled to enter into the subject contract with the Commonwealth of Kentucky and certifies that Manager is not and will not be violating any conflict of interest statute (Kentucky Revised Statute 121.056 or any other applicable statute) or principle by the performance of this Contract. The Manager shall not engage directly or indirectly in any financial or other transaction with a trustee or employee of Systems which would violate standards of the Executive Branch Ethics provisions, as set forth in Kentucky Revised Statute Chapter 11A.

36. **Purchasing by the Commonwealth of Kentucky.** The Manager hereby certifies that it will not attempt in any way to influence any purchasing of services, commodities or equipment by the Commonwealth of Kentucky.

37. **Severability.** In case one or more of the provisions contained in this Agreement shall be found to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

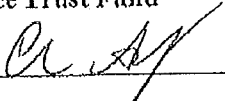
38. Miscellaneous. Both parties reserve the right to refuse to renew this Agreement in their sole discretion and for any reason. All section headings in this Agreement are for convenience of reference only, do not form part of this Agreement, and will not affect in any way the meaning or interpretation of this Agreement.

No term or provision of this Agreement may be waived except in writing signed by the party against whom such waiver is sought to be enforced. A party's failure to insist at any time on strict compliance with this Agreement or with any of the terms of the Agreement or any continued course of such conduct on its part will not constitute or be considered a waiver by such party of any of its rights or privileges. Manager is an independent contractor, and nothing in this Agreement may be interpreted or construed to create any employment, partnership, joint venture or other relationship between Manager and KRS. This Agreement contains the entire understanding between KRS and Manager concerning the subject matter of this Agreement, and supersedes all prior agreements, arrangements and understandings, written or oral, between the parties.

39. Voting of Proxies. The Manager shall exercise voting rights with respect to securities under its management. Manager is authorized and directed to vote all proxies and affect any corporate actions in accordance with Manager's Proxy Voting Policy. If Manager does not have a Proxy Voting policy, the Manager is authorized and directed to vote all proxies and affect any corporate actions in accordance with KRS's Investment Proxy Voting Policy attached hereto as Attachment VII. The Manager shall maintain detailed records of its performance of this duty and shall provide those records to KRS quarterly.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the date first above written.

Kentucky Retirement Systems  
Insurance Trust Fund

By: 

Name: Chris Schelling

Title: Deputy CIO

Date: 12/4/2014

Nuveen Asset Management, LLC

By: 

Name: Lynne M. Hannon

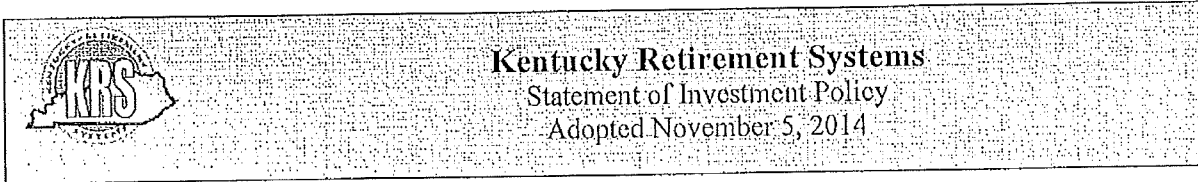
Title: President Institutional Sales  
& Client Service

Date: 12/9/2014



## ATTACHMENT I

### Investment Policy and Procedures



This statement of investment policy is issued by the Board of Trustees of the Kentucky Retirement Systems (Systems) in connection with investing the pension and insurance funds of the Kentucky Employees Retirement System, the County Employees Retirement System and the State Police Retirement System. This document supersedes all prior documents entitled Statement of Investment Policy.

#### **I. The Board of Trustees**

The Kentucky Retirement Systems is a "Qualified Pension Plan" under Section 401 of the Internal Revenue Code and is administered by a board of nine trustees.

KRS 61.701 establishes the "Kentucky Retirement Systems Insurance Fund" as a separate fund to provide fringe benefits to recipients of the Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement System. KRS 61.702 provides that all amounts necessary to provide for insurance benefits shall be paid to the insurance fund. The Board shall administer the fund in the same manner as the retirement funds.

Six trustees are appointed by the Governor of the Commonwealth of Kentucky (two of which must be filled by persons with specific experience as required in Section 61.645.1.e.2), two trustees are elected by the membership of the Kentucky Employees Retirement System, three trustees are elected by the membership of the County Employees Retirement System, and one trustee is elected by the membership of the State Police Retirement System. The Secretary of the Personnel Cabinet is an ex-officio trustee.

The Board of Trustees authorizes and directs the appointment of an Investment Committee with full power to act for the board in the acquisition, sale and management of the securities and funds of the Systems in accordance with the provisions of the Statutes and Investment Policy of the Board. The Board shall review the actions of the Investment Committee at each quarterly Board meeting.

#### **II. The Investment Committee**

The Investment Committee consists of five members of the Board of Trustees. Three members of the committee are appointed by the chairperson of the Board of Trustees. In accordance with statute, two positions are filled by the Trustees that were appointed to the board as persons with specific experience (Section 61.645.1.e.2). The committee acts on behalf of the board on investment related matters.

The Investment Committee has the following oversight responsibilities:

- A. Assure compliance with this policy and all applicable laws and regulations.
- B. Approve the selection and termination of service providers.
- C. Meet quarterly to evaluate whether this policy, the investment activities and management controls and processes continue to be consistent with meeting the Systems' goals. Mandate actions necessary to maintain the overall effectiveness of the program.
- D. Review assessment of investment program management processes and procedures, and this policy relative to meeting stated goals.

### III. Staff Responsibilities

The Chief Investment Officer is responsible for administration of investment assets of the Systems consistent with the policies, guidelines and limits established by the law, this Statement of Investment Policy and the Investment Committee.

The Chief Investment Officer receives direction from and reports to the Investment Committee and the Executive Director of the Systems on all investment matters, including but not limited to the following:

- A. Maintaining the diversification and risk exposure of the funds consistent with policies and guidelines.
- B. Monitoring and assessing service providers, including annual onsite visits, to assure that they meet expectations and conform to policies and guidelines.
- C. Assess and report on the performance and risk exposure of the overall investment program relative to goals, objectives, policies and guidelines.
- D. Recommend changes to service providers, statutes, policies or guidelines as needed to maintain a productive relationship between the investment program and its goals; act as liaison on all investment related matters.
- E. Communicating with the mass media and other agencies, entities or institutions regarding investment related issues.
- F. Identify issues for consideration by the Investment Committee and prepare recommendations regarding such matters.

The Chief Investment Officer or designee is authorized to execute trades on fixed income and equity securities (including ETF's) and to execute proxies for the Board consistent with this Policy.

To carry out this Policy and investment related decisions of the Board, the Chief Investment Officer or designee is authorized to execute agreements and other necessary or proper documents pertaining to investment managers, consultants, investment related transactions or other investment functions.

### IV. Service Providers

- A. Investment Managers

In instances where the Investment Committee has determined it is desirable to employ the services of an external Investment Manager, the following shall be applicable:

1. Investment Managers shall be qualified and agree to serve as a fiduciary to the Systems and shall generally have been in the business of investment management for large United States institutional investors for at least three to five years.
2. Investment Managers shall manage assets in accordance with this Policy and any additional guidelines established by contract, as may be modified in writing from time to time.

#### B. Custody Bank

The Board shall hire custodians and other agents who will be fiduciaries to the Systems and who will assume responsibility for the safekeeping and accounting of all assets held on behalf of the Systems and other duties as agreed to by contract.

#### C. Investment Consultants

Qualified independent investment consultants may be retained by the Systems for asset allocation studies, asset allocation recommendations, performance reviews, manager searches and other investment related consulting functions and duties as set forth by contract.

#### D. Selection

Qualified investment managers, custody banks, investment consultants and other service providers shall be selected by the Investment Committee or Chief Investment Officer as required. The selection shall be based upon the demonstrated ability of the professional(s) to provide the required expertise or assistance. In order to create an efficient and effective process, the Investment Committee or Chief Investment Officer may, in their sole discretion, utilize RFI, RFP, third party proprietary software or database, review of existing service provider capabilities or any combination of these or other methods to select a service provider. Relevant criteria for the selection of investment managers are contained in the Transactions Procedures statement.

All contact and communication with service providers seeking a business relationship with the Systems shall be directed to the Division Director for that specific asset class. However, this rule is not applicable to existing service providers if the contact or communication is in response to an information request from the Investment Committee or if it is incidental contact not related to specific Systems business.

#### V. Investment Philosophy

The Trustees of the Kentucky Retirement Systems recognize their fiduciary duty not only to invest the Systems' funds in formal compliance with the Prudent Person Rule but also to manage those funds in continued recognition of the basic long term nature of those systems. The Trustees interpret this to mean, in addition to the specific guidelines and restrictions set forth in this document, that the assets of the three systems shall be proactively managed -- that is, investment decisions regarding the particular asset classes, strategies, and securities to be purchased or sold shall be the result of the conscious exercise of discretion.

The Trustees recognize that, commensurate with their overall objective of maximizing long-range return while maintaining a high standard of portfolio quality and consistency of return, it is necessary that proper diversification of assets be maintained both across and within the classes of securities held to minimize/mitigate overall portfolio risk. Consistent with carrying out their Fiduciary Responsibilities and the concept of Modern Portfolio Theory, the Trustees will not systematically exclude any investments in companies, industries, countries, or geographic areas unless required to do so by statute. Within this context of proactive management and the necessity for adherence to proper diversification, the Trustees rely upon appropriate professional advice from multiple service providers.

The Trustees and other fiduciaries shall discharge their duties with respect to the Systems: (1) solely in the interest of the participants and beneficiaries; (2) for the exclusive purpose of providing benefits to participants and beneficiaries; (3) with the care, skill and caution under the circumstances then prevailing which a prudent person acting in a like capacity and familiar with those matters would use in the conduct of an activity of like character and purpose; (4) impartially; (5) incurring and paying appropriate and reasonable expenses of administration and (6) in accordance with a good faith interpretation of the laws, regulations and other instruments governing the Systems.

Additionally, the Trustees and other fiduciaries shall not engage in any transaction which results in a substantial diversion of the Systems income or assets without adequate security and reasonable rate of return to a disqualified person or in any other prohibited transaction described in Internal Revenue Code Section 503(b).

#### **VI. Investment Objectives**

The Board of Trustees realizes that prudent investment management is a duty. In fulfillment of this duty, the Board of Trustees recognizes that while long-term objectives are important, it is also necessary that short-term benchmarks be used to assess the periodic performance of the investment program.

Accordingly, the Board of Trustees has established the following investment objectives:

- Long-Term:
  - The total assets of the Systems should achieve a return which exceeds the actuarially required rate of return of 7.75%.
  - In addition to exceeding the actuarially required rate of return, the total fund return should exceed the return achieved by its blended performance benchmark.
- Short-Term:
  - The returns of the particular asset classes of the System, measured on a rolling basis, should seek to exceed the returns achieved by comparable passive market indices as described in the appropriate Addendum of this statement.

#### **VII. Derivative Securities and Leveraging**

##### **Definition:**

A derivative is broadly defined as a financial instrument whose value, usefulness, and marketability is derived from or linked to the value of an underlying security.

Definitions and examples in the investment universe include:

**Forward Contracts** - a forward contract is a non-standardized, Over-the-Counter (OTC) contract between two parties, governed by ISDA agreements, to buy or sell an asset at a specified future time at a price agreed to today. This is in contrast to a spot contract, which is an agreement to buy or sell an asset at a set price today. It costs nothing to enter a forward contract. The party agreeing to buy the underlying asset in the future assumes a long position, and the party agreeing to sell the asset in the future assumes a short position. The price agreed upon is called the delivery price, which is equal to the forward price at the time the contract is entered into. An example of a forward contract is a currency forward contract. Currency forward contracts are commonly used to hedge foreign currency risk, which is an inherent risk of investing in international assets.

**Futures Contracts** - a futures contract is a standardized, exchange traded contract between two parties to buy or sell a specified asset of standardized quantity and quality at a specified future date at a price agreed to today (the futures price). Futures contracts are not "direct" securities like stocks, bonds, rights or warrants. The party agreeing to buy the underlying asset in the future assumes a long position and the party agreeing to sell the asset in the future assumes a short position. Futures may be settled in cash or physically settled depending on the characteristics of the underlying asset and the specifications of the contract. If futures are physically settled the buyer must make arrangements for taking physical delivery. An example of a futures contract is the S&P 500 Futures contract which is traded at the Chicago Mercantile Exchange. The S&P 500 futures contract is commonly used for equitization of cash held in the equity portfolio of a fund so as to keep un-invested cash levels at a minimum. Futures contracts have many other uses for portfolio managers and are considered a valuable tool for adding flexibility and cost effectiveness to the management of a portfolio.

**Options** - Options are derivative financial instruments that may be standardized, exchange traded, or OTC contracts that specify a contract between two parties for a future transaction on an asset at a reference price. The buyer of the option gains the right, but not the obligation, to engage in that transaction, while the seller incurs the corresponding obligation to fulfill the transaction. The price of an option is derived from the difference between the reference price and the value of the underlying asset (commonly a stock, a bond, a currency or a futures contract) plus a premium based on the time to maturity, expected volatility, and the interest rate environment. Other types of options exist, and options can in principle be created for any type of valuable asset.

An option which conveys the right to buy an asset is called a call; an option which conveys the right to sell an asset is called a put. The reference price at which the underlying asset may be traded is called the strike price or exercise price. The process of activating an option and thereby trading the underlying asset is referred to as exercising it. While there are several styles of option contracts the two most common are American-style contracts and European-style contracts. American-style options contracts may be exercised at or before expiration while European-style options may only be exercised at expiration. Most options have an expiration date while others have strike reset points. If the option is not exercised by the expiration date, it becomes void and worthless.

In return for assuming the obligation, called writing the option, the originator of the option collects a payment, a premium, from the buyer. The writer of an option must make good on delivering (or receiving) the underlying asset or its cash equivalent, if the option is exercised.

An example of an option contract is an S&P 500 put contract. These contracts may be used by a portfolio manager to purchase downside portfolio protection or may be combined with other options contracts to temper volatility in the portfolio, thus reducing risk.

**Swaps and Swaptions** – Swaps are derivative financial instruments in which counterparties exchange certain benefits of one party's financial instrument for those of the other party's financial instrument. (Swaptions are simply options on swaps) Most swaps are non-standardized, OTC contracts between two parties and are governed by ISDA agreements. Some types of swaps are also exchanged on public markets such as the Chicago Mercantile Exchange, the Chicago Board Options Exchange, Intercontinental Exchange and Frankfurt-based Eurex AG. The benefits of a swap depend on the type of financial instruments involved. At the initiation of a swap contract, two counterparties agree to exchange one stream of cash flows against another stream. These streams are called the legs of the swap. The swap agreement defines the dates when the cash flows are to be paid and the way they are calculated. Usually at the time when the contract is initiated, at least one of these series of cash flows is determined by a reference point such as an interest rate, foreign exchange rate, equity price or commodity price. The cash flows are calculated on a notional principal amount, which is usually not exchanged between counterparties. Value transfers can be made with cash or collateral depending on contract terms.

An example of a swap contract is an interest rate swap. An interest rate swap is an agreement to exchange a series of cash flows on periodic settlement dates over a certain time period. The duration properties of interest rate swaps are the primary reason for their popularity as an effective portfolio management tool for fixed income managers. If a fixed income manager agrees to pay a floating rate and receive a fixed rate in a swap, s/he will be increasing duration in her/his portfolio.

**Warrants** - a warrant is a type of derivative security that entitles the holder to buy or sell the underlying stock of the issuing company at a fixed exercise price until the expiry date. Warrants may be either exchange traded or OTC in nature. OTC Warrants are typically long term in nature.

Warrants are frequently attached to bonds (to reduce interest rates for the issuer) or preferred stock (to reduce dividend payments) as a sweetener. Warrants can also be used in private equity deals. Frequently, these warrants are detachable, and can be sold independently of the bond or stock. (Typically traded OTC)

*This list is not intended to be an all encompassing list of derivative contracts available for use in in the portfolios, but rather, to display a sample of the most common types of contracts and describe the spirit of their intended use in the portfolios.*

#### **Derivatives Permitted Use:**

KRS permits external managers and Investment Division (Staff) to invest in derivative securities, or strategies which make use of derivative investments, for exposure, cost efficiency and risk management purposes, if such investments do not cause the portfolio to be leveraged beyond a 100% invested position. Any derivative security shall be sufficiently liquid that it can be expected to be sold at, or near, its most recently quoted market price. Typical uses of derivatives in the portfolio are broadly defined below:

#### **Exposure:**

Derivatives are an effective way for a portfolio manager to gain exposure to a security that the manager does not want to purchase in the cash market. Reasons for gaining exposure to a security through the use of derivatives may include cheaper transactions costs, liquidity/lack of supply in the underlying market, and the flexibility to implement investment views with minimum portfolio disruption. An example is a cash equitization program.

**Cost Efficiency:**

Derivatives are often used due to the cost efficiency associated with the contract properties. Given the fact that derivatives can be used as a form of insurance, upfront trading costs must be sufficiently low for investors to purchase the contract and insure their portfolios efficiently. Furthermore, due to properties associated with derivatives and cash outlay characteristics (minimal cash outlay at inception of the contract) derivatives are generally a vehicle of gaining cost efficient exposure. An example is the cost (zero) to purchase a futures contract.

**Risk Management:**

Derivatives can be used for mitigating risk in the portfolio. When used as a risk management tool, derivatives can significantly reduce an identified financial risk or involuntary risk from investment areas by providing changes in fair values or cash flows that substantially offset the changes in fair values or cash flows of the associated item being hedged. An example is the use of currency forwards to offset periods of dollar strength when international equity markets increase in value, thereby protecting foreign asset gains in the portfolio.

**Derivatives Restricted Use:**

**Settlement:**

Investments in futures contracts are to be cash settled unless physically settled and stored by external managers. At no time shall KRS agree to take physical delivery on a futures contract.

**Position Limits:**

Futures and options positions entered into by KRS, or on its behalf, will comply with all position and aggregate limits established by the local governing authorities within each jurisdiction.

**Investment:**

Investments in securities such as collateralized mortgage obligation (CMO), planned amortization class (PAC) issues, interest only (IO), principal only (PO), inverse floater, or structured note securities are prohibited unless specifically allowed in a manager's contract and delineated in the manager's guidelines. They will only be allowed if, in the judgment of the investment manager, they are not expected to be subject to large or unanticipated changes in duration or cash flows. IO, PO, inverse floaters, and structured note securities are not allowed for use in cash or core fixed income portfolios.

**Over-the-Counter (OTC):**

Investments in securities not traded on public exchanges that are deemed Over-the-Counter (OTC) in nature are allowed provided that a counterparty risk monitoring component is delineated in the manager's guideline section of the manager's contract. All counterparties must have a short-term credit rating of at least A- (Standard and Poor's or Fitch) or A3 (Moody's).

All OTC derivative transactions, including those managed through Agency Agreements, must be subject to established International Swaps and Derivatives Association, Inc. (ISDA) Master Agreements and have full documentation of all legal obligations of KRS under the transactions. All ISDA Master Agreements entered into by or on behalf of KRS by the Investment Division (Staff) and external manager pursuant to an Agency Agreement shall provide that Netting applies. (Netting allows the parties to an ISDA Master Agreement to aggregate the amounts owed by each of them under all of the transactions outstanding under that ISDA Master Agreement and replace them with a single net amount payable by one party to the other.) The Investment Division (Staff) and external managers may also use collateral arrangements to mitigate counterparty credit or performance risk. If an external manager utilizes a collateral arrangement to mitigate counterparty credit or performance risk the arrangement shall be delineated in the manager's guideline section of the manager's contract.

**Derivatives Applications Not Permitted:****Speculation:**

Except for investments in alternative, absolute return investments, and real return investments, derivatives may not be used for any activity for which the primary purpose is speculation or to profit while materially increasing risk to KRS. Derivatives are considered speculative if their uses have no material relation to objectives and strategies specified by KRS IPS or applicable to the portfolio. Derivatives may not be used for circumventing any limitations or restrictions imposed by the KRS IPS or applicable regulatory requirements.

**Leverage:**

Leverage is inherent in derivative contracts since only a small cash deposit is required to establish a much larger economic impact position. Thus, relative to the cash markets, where in most cases the cash outlay is equal to the asset acquired, derivative investments offer the possibility of establishing substantially larger market risk exposures with the same amount of cash as a traditional cash market portfolio. Therefore, risk management and control processes must focus on the total risk assumed in a derivative investment. Leveraging for purposes of enhancing yield or total return is expressly prohibited except for investments in alternative and absolute return investments, and real return investments. Furthermore, the use of leveraged ETF's as a means to circumvent derivatives applications not permitted is expressly forbidden. Investment managers in alternative, absolute return investments, and real return investments strategies are granted the authority to engage in positive leverage to the extent authorized in their offering memorandum and delineated in the manager's guideline section of the manager's contract.



*The above is not intended to limit KRS from borrowing to cover short-term cash flow needs nor prohibit KRS from loaning securities in accordance with a securities lending agreement.*

## VIII. Asset Allocation Guidelines

In establishing asset allocation guidelines the Board recognizes that each system has its own capacity to tolerate investment volatility, or risk. Therefore, each system has been studied and asset allocation guidelines have been established on a system by system basis. The Board will cause the asset allocation guidelines of each system to be reviewed annually. The Board will also undertake an asset liability study every three to five years as determined by program needs.

The intent of the Board of Trustees in allocating funds to the investment managers is for the investment managers to fully invest the funds. However, the Board of Trustees is aware that from time to time the investment manager will require a portion of the allocated funds to be held in cash provided the cash holdings do not exceed three percent (3%) of the manager's allocation for any given quarter, unless such cash holdings are an integral part of a fixed income manager's investment strategy.

The individual plan level asset allocations of the each Pension and Insurance Fund constituent will be reviewed monthly by staff relative to its target asset class allocation. Staff shall reallocate the assets when the actual asset class allocation is within one percentage point of the allowable range boundary, but may also opportunistically reallocate when the actual asset class allocation exceeds the target asset class allocation by a margin of +/- 1 percentage points. See Appendix A and B for current asset allocation targets.

In keeping with its responsibility as trustee and wherever consistent with its fiduciary responsibility, the board encourages the investment of the fund's assets in investments, funds, and securities of corporations which provide a positive contribution to the economy of the Commonwealth of Kentucky. However, where any security is not a prohibited investment under the governing laws and policies, discretion will be granted to the appointed investment managers in the selection of such securities and timing of transactions consistent with the following guidelines and restrictions.

### A. Domestic Equity Investments

Investment may be made in common stock, securities convertible into common stock, preferred stock of publicly traded companies on stock markets, asset class relevant ETF's or any other type of security contained in a manager's benchmark. Each individual domestic equity account shall have a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions and standards of performance for the account.

The internally managed equity index funds are intended, consistent with the governing plan documents, to gain exposure to a broad asset sector to replicate the characteristics of the asset class, to minimize administrative expenses and to help achieve overall portfolio objectives. These objectives can be achieved through several management techniques, including but not limited to, portfolio optimization, non-reinvestment of index dividends and other management techniques intended to help achieve the objectives of the entire pension fund.

## B. International Equity Investments

Investments may be made in common stock, securities convertible into common stock, preferred stock of publicly traded companies on stock markets, asset class relevant ETF's or any other type of security contained in a manager's benchmark. Each individual international equity account shall have a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions and standards of performance for the account.

The internally managed equity index funds are intended, consistent with the governing plan documents, to gain exposure to a broad asset sector to replicate the characteristics of the asset class, to minimize administrative expenses and to help achieve overall portfolio objectives. These objectives can be achieved through several management techniques, including but not limited to, portfolio optimization, non-reinvestment of index dividends and other management techniques intended to help achieve the objectives of the entire pension fund.

## C. Fixed Income Investments

Fixed Income investments will be similar in type to those securities found in the KRS fixed income benchmarks and the characteristics of the KRS fixed income portfolio will be similar to the KRS fixed income benchmarks. The fixed income accounts may include, but are not limited to the following fixed income securities: U.S. Government and Agency bonds, investment grade U.S. corporate credit, investment grade non-U.S. corporate credit, non-investment grade U.S. corporate credit including both bonds and bank loans, non-investment grade non U.S. corporate credit including bonds and bank loans, municipal bonds, non-U.S. sovereign debt, mortgages including residential mortgage backed securities, commercial mortgage backed securities, and whole loans, asset-backed securities, and emerging market debt including both sovereign EMD and corporate EMD and asset class relevant ETF's.

Each individual fixed income account shall have a comprehensive set of investment guidelines prepared, which contains a listing of permissible investments, portfolio restrictions, risk parameters, and standards of performance for the account.

## D. Private Equity Investments

Subject to specific approval of the Investment Committee of the Board of Trustees, investments may be made for the purpose of creating a diversified portfolio of alternative investments.

*Private equity investments are expected to achieve attractive risk-adjusted returns and, by definition, possess a higher degree of risk with a higher return potential than traditional investments. Accordingly, total rates of return from private equity investments are expected to be greater than those that might be obtained from conventional public equity or debt investments. They have low correlation to other investment classes and therefore can contribute to reducing the risk and enhancing the returns of a total portfolio, as well as providing portfolio diversification. Examples of such investments include, but are not limited to, venture capital partnerships, private equity, leveraged buyouts and funds, private debt, timberland, oil and gas partnerships, commodities and private placements. While it is expected that the majority of these*

assets will be invested within the United States, a portion has been allocated to non-US investments. These non-U.S. investments are not restricted by geography.

### **Guidelines for Private Equity**

The private equity market is highly sophisticated and specialized with respect to variety and types of investment structures. There exist major competition for deal flow on the part of both investor and general partners. To a great extent, market forces drive the bargaining of economic terms. Most investment vehicles are structured as commingled vehicles and often blind pool investment partnerships. The most common offering forms are equity private placements where the governing laws of the partnership impose a passive role of the limited partner investor. These contractual arrangements are long-term in nature and provide the general partner or sponsors a reasonable time horizon to wisely invest capital, add value through intensive operational management, then realize the proceeds of such an investment. Moreover, terms of the partnership are proposed by the general partner are critical to the economic incentives and ultimate net performance of the partnership.

Over the long term, KRS will use a specified index plus risk premium approach.

### **Investment Strategy and Plan Guidelines**

To strengthen the diversification of the investments, several guidelines will be utilized in Staff's formulation and recommended annual investment strategy and plan. These guidelines encompass annual commitment levels to the asset class, types of investment vehicles that can be utilized, controlling financing stage risks, industry, manager and geography concentration/diversification limits, acceptable contact negotiations, appropriate sizes for investments, and the preferred alignment of interests.

**Investment Vehicles:** KRS will gain exposure to private equity investments by hiring external investment managers either directly or through participation in secondary private equity markets. Typically, the Fund will subscribe as a Limited Partner to limited partnership vehicles sponsored by such specialty external investment managers. KRS may also gain exposure by utilizing the following vehicles: limited liability companies and co-investments alongside the Fund's existing or potential limited partnerships.

**Investment Timing Risks:** Staff should limit the potential for any one investment to negatively impact the long-term results of the portfolio by investing across business cycles. Moreover, the portfolio must gain exposure to the array of financing stages by opportunistically exploiting the best investments at different stages of the business cycle. Staff may also consider purchasing secondary partnership interests to shorten the effective life of the partnership interest and therefore positively impacting the current and long term net return of the portfolio. In addition, mindful of vintage year diversification, KRS should seek to identify attractive commitments annually, further ensuring the portfolio invests across business cycles.

**General Partner Diversification:** Staff will seek to work with a variety of general partners due to their specialized expertise in particular segments of the private equity market and source of their

deal flow. No more than fifteen (15) percent of the Fund's total allocation to private equity investments may be committed to any one partnership, without the approval of the Board.

Geographical Diversification: To ensure geographical diversification, the target range for total commitments outside of the United States will be 15-45% through commitments to funds located and or investing both in and outside of the United States.

Industry/Sector Concentration: As fallout of diversified commitments outlined above, it is expected that the portfolio will be generally diversified by sector/industry. KRS will maintain diversification by ensuring:

*No more than 35% of total net assets of the private equity portfolio may be invested in a single sector of the domestic economy.*

*No more than 50% of total net assets of the private equity portfolio may be invested in a single industry within a particular sector.*

*No more than 10% of total net assets of the private equity portfolio may be invested in any single equity or debt related assets.*

#### Subcategory Strategy

The private equity portfolio includes strategic subcategory classifications including venture capital, buyouts and debt-related. The target percentages set forth below for each category are based on invested capital. For specific plan allocations to Private Equity, Please refer to Appendix A for the Pension funds and Appendix B for the Insurance funds. All plans will have a policy range of 5% and KRS staff shall periodically review policy ranges targets.

The following sub-asset target allocations are based on market value and will have a range of +/- 10%:

<u>Sub-Category</u>	<u>Target Allocations</u>	<u>Ranges</u>
Venture Capital	20.0%	10-30%
Buyouts	60.0%	50-70%
Debt-Related	20.0%	10-30%

#### E. Real Estate Investments

Subject to specific approval of the Investment Committee of the Board of Trustees, Investments may be made in equity and debt real estate for the purpose of achieving the highest total rate of return possible consistent with a prudent level of risk. Allowable real estate investments include open-end and closed-end commingled real estate funds, joint venture investments, public and private REITs (real estate investment trusts), public real estate operating companies, and real estate related debt.

Private real estate investments are unique and can be illiquid and long term in nature. Given that this may lead to large short term performance discrepancies versus public benchmarks, KRS more appropriately measures its real estate investments based on both relative return and absolute return methodologies:

*Relative Return:* The real estate portfolio is expected to generate returns, net of all fees and expenses, in excess of the National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity Index ("NCREIF ODCE") lagged 1 month.

*Absolute Return:* The long term real return objective (returns adjusted for inflation) for the KRS real estate portfolio is five percent (5%), net of investment management fees. This return shall be calculated on a time-weighted basis using industry standard reporting methodologies.

KRS has determined that the primary role of the real estate asset class is to provide for the following:

- Attractive risk adjusted returns through active management and ability to access managers with the expertise and capabilities to exploit market inefficiencies in the asset class.

The illiquid nature of real estate investments combined with the complexity of investments makes it difficult for casual investors to effectively access the asset class effectively.

It is the belief that through active management and by investing in top tier managers with interests aligned through co-investment and incentive based compensation, KRS can maximize its risk adjusted returns.

This active management approach will be pursued.

- Diversification benefits through low correlations with other asset classes, primarily the U.S. equity markets.
- Provide a hedge against unanticipated inflation, which real estate has historically provided due to lease structures and the increases in material and labor costs during inflationary periods.
- Permit KRS to invest in unique opportunities that arise due to dislocations in markets that occur from time to time.

#### Allocation to Real Estate Asset Class

KRS divides the real estate investment universe into core, value-add, opportunistic and public securities sectors, with descriptive attributes of each listed below. It should be noted that targeted returns for each sector denoted in the descriptions below are based on industry guidelines and may vary based on different points in market cycles and changes in general inflation levels.

##### A. Core Properties

- Operating, substantially leased office, retail, industrial or apartment properties. Several alternative property types may be included in Core such as self-storage, medical office, ground leases, senior housing and triple net leased properties to the extent they exhibit similar risk and return attributes to the traditional Core property types.
- Generally have institutional qualities for size, physical attributes and location.
- Target total returns of 7%-9% per year (net of fees and promoted interest), with a high proportion of the total return to be generated from current income and a small proportion of the total return generated from appreciation.
- Leverage for core properties is moderate with an upper limit of 50% loan to value.

#### B. Value Added Properties

- Office, retail, industrial or apartment properties that have moderate risk associated with their investment. Several alternative property types may be included in Value-Added such as self-storage, medical office, senior housing and triple net leased properties to the extent they exhibit similar risk and return attributes for Value-Added investments.
- Value-Added investments are targeted to capitalize on defects with specific properties that can be identifiable and correctable through leasing, re-development, management and/or recapitalization.
- Target returns for value added investments are 9% to 12% per year (net of fees and promoted interest).
- Leverage for value added investments is generally limited to approximately 65% loan to value.

#### C. Opportunistic Investments

- Opportunistic investments can be comprised of any property sector. Opportunistic investments can include office, retail, industrial and apartments with high-risk attributes. In addition, hotels, operating companies, development, land and distressed properties are all examples of opportunistic investments
- Leverage for opportunistic investments can be 75% loan to value or higher in certain cases.
- Opportunistic investments will target returns in excess of 12% (net of fees and promoted interest) in order to compensate for the additional risk commensurate with the increased risk compared to core property investments.

#### D. Public Securities

- Public Real Estate securities ("Public Securities") do not allow for control over the assets or management. Examples of public securities may include REITs and CMBS, among others. Investment strategies using public securities may be classified as core, value-add, or opportunistic strategies based on the characteristics of those specific investments and are reviewed on a case by case basis. Real estate strategies utilizing public securities that provide daily liquidity to KRS shall be required to be classified as "Public Securities" under the Investment Policy Statement.
- Public Securities generally have higher risk and return characteristics than Core properties due to higher leverage and operating company risks. In addition, the daily pricing of securities result in additional reported volatility of returns.
- Daily pricing and public market trading provide liquidity. However, due to small float and limited market capitalization of Public Securities, improved liquidity may come at a price.
- The emergence of the international Public Securities market has broadened the universe to include Asia, European, Australian and North American property companies.
- Expected returns are approximately 9%-11% (net of fees) over a 10-year period and 11-13% (net of fees) for non-U.S. Public Securities.

#### Diversification and Risk Management Guidelines

The policy ranges for the real estate portfolio sectors have been set with reasonably wide ranges in order to allow KRS to capitalize on market inefficiencies and attractive opportunities, while also maintaining a certain level of low risk stability to the portfolio. Since many of the real estate investments will be private market investments in commingled funds, KRS will not have precise control over the actual real estate exposure. Funding, de-funding and rebalancing the portfolio may be protracted (like private equity) due to the asset classes illiquid characteristics.

#### A. Sector Diversification

KRS will seek to limit investments using the following diversification limits:

	Target	Range
Core:	70%	50% to 90%
Value Added:	20%	10% to 30%
Opportunistic:	10%	0% to 20%
Public Securities:	0%	0% to 20%

#### B. Investment Vehicles

Due to the size of KRS's portfolio, the preferred investment structure is commingled funds. Exceptions may be for public equity accounts which may be efficiently invested through a separate account or single property investments. Single property investments shall be limited to no more than 5% of the total real estate allocation.

KRS may also consider co-investment opportunities in cases where discounted fees and appropriate diversification can be achieved for a particular investment opportunity.

#### C. Diversification

KRS will seek to control risk in its real estate investment program by diversifying its investments by investment manager, property type and location diversification.

#### D. Investment Manager

KRS will limit the amount committed to any one investment manager to the larger of twenty percent (20%) of the total allocation for real estate investments or 1% of the total funds value at the time of commitment.

#### E. Property Type Diversification

KRS will seek to limit investments by property type diversification using the following limits:



Office:	0% to 40% of the total allocation
Retail:	0% to 40% of the total allocation
Apartment:	0% to 40% of the total allocation
Industrial:	0% to 40% of the total allocation
F. Other:	0% to 40% of the total allocation (other includes hotels, self-storage, parking, etc.)

Geographic Diversification  
The KRS real estate portfolio shall seek to include investments diversified across various locations with different economic concentrations. The portfolio shall be at least 80% invested in U.S. markets.

Diversification will be monitored with respect to major regional areas; e.g. Pacific, Mountain, Southwest, Southeast, Mideast, Northeast, East North Central, West North Central. International monitoring will be carried out in a similar fashion as that used domestically.

#### G. Total Leverage

KRS recognizes that leverage is an inherent component of real estate investments and use of leverage can be an effective means to increase overall returns from time to time on a risk-adjusted basis. There will be a limit of 65% of the total portfolio placed on the use of leverage.

All portfolio leverage will be secured through the individual fund investments. There will be no recourse debt permitted.

#### H. Vintage Year Risks

KRS will seek to avoid any concentrated vintage year risks.

#### F. Real Return Investments

The purpose of the Real Return Portfolio is to identify strategies that provide both favorable stand alone risk-adjusted returns as well as the benefit of hedging inflation for the broader plans. Real return strategies are not necessarily a separate asset class but may include real assets, such as infrastructure, real estate, commodities, and natural resources among others, as well as financial assets that have a positive correlation to inflation. This can include "real" bonds such as TIPs (and other inflation linkers) or "real" stocks such as REITs, MLPs, and oil & gas stocks. Additionally, real return managers may attempt to add value by tactically allocating to various asset classes according to how each asset class performs across an economic cycle and the manager's perception of where we are in the cycle. The goal is to invest in inflation sensitive assets during inflationary periods, and avoid those assets in deflationary periods, thus providing a positive real return across the cycle.

The real return opportunity set may include numerous vehicles to access a wide variety of investment styles and strategies. These investment vehicles may include mutual funds, ETFs, separately managed accounts as well as hedge funds (open-end limited partnerships) and private equity (close-end limited partnerships). The list of strategies that the KRS Real Return Portfolio may use includes, but is not limited to, the following:

- GTAA (Global Tactical Asset Allocation)/ Global Macro: GTAA or macro strategies are those that make directional bets on major markets or asset classes instead of individual securities. GTAA and macro strategies typically invest in all major asset classes including equity markets, credit and debt instruments, currencies/interest rates, and commodities. These strategies tend to focus on economic factors that would suggest an opportune time to invest in a given asset class, and will change their allocations actively over time. Within a real return portfolio, these strategies may use inflation as the economic factor to gain exposure to and will target a real rate of return over time.
- Inflation Linked Securities are securities that directly tie coupon payments or principal increases to an inflation index, such as CPI. These strategies could include not only US TIPS, but also global sovereign inflation linked bonds, corporate or infrastructure inflation linked bonds, and possibly short duration floating rate bonds.
- Inflation Sensitive Equities include publicly traded equity and equity related securities in companies which have a high sensitivity to inflation in their profit margins via the nature of their operating assets, such as energy companies, basic materials and miners, natural resource stocks, and listed infrastructure. This category can also include REITs, MLPs as well as ETFs and index products on REITs, MLPs, natural resource stocks, etc.
- Commodities: Commodities are the raw materials that are physical inputs into the production process. Managers that invest in liquid commodity strategies using exchange traded futures can span from simple indexing (matching a long-only commodities index), to enhanced indexing or active long (selecting positions that vary from the index but within fairly tight ranges), as well as unconstrained long-short managers.
- Private Property: For the purposes of this policy, private property refers to the ownership of an idiosyncratic, physical asset that is predominately fixed and/or permanent or at least substantially long-lived. This includes real estate, such as land and any improvements to or on the land, as well as timberland and farmland. Timberland investing involves the institutional ownership of forest for the purpose of growing and harvesting the timber. The timber may be used for furniture, housing lumber, flooring, pulp for paper, woodchips, and charcoal, among other things. Farmland investing entails ownership of land used primarily if not exclusively for agricultural production both for crops, including row crops and permanent crops, as well as livestock. Private property can also include infrastructure investing, which refers to financing the manufacture or development of the underlying fundamental assets and basic systems that are necessary for an economy whereby such assets are largely fixed and long-lived. These tend to be high cost, capital intensive investments that are vital to a society's prosperity and facilitate the transfer, distribution, or production of basic goods and services.

- **Natural Resources:** Natural resources can include investing in the financing, development, extraction, and production of minerals, basic materials, petroleum products, and water as well as renewable resources such as agricultural commodities and solar energy. As opposed to property, the returns generated in these investment strategies come more from the actual production of the resource itself. Further, these are depleting and/or consumable assets that are also portable and fungible and which in the aggregate comprise a majority of the inputs into most measurements of inflation.
- **Private Assets:** Private assets can include tangible or intangible assets that are not easily sold in the regular course of a business's operations for cash, and which are held for their role in contributing directly to the business's ability to generate profit. As the useful life of the asset tends to extend across many years and the assets tend to be capital intensive as well, they have some similarity to private infrastructure. Further, given that the assets contribute directly to the production process as well as often retaining intrinsic value, there is a fundamental link to inflation somewhat similar to natural resources.
- **Other (Opportunistic Inflation Hedge):** Other/opportunistic strategies include those that have a propensity to provide a positive real return or positive correlation with inflation over time. Liquid strategies such as inflation swaps, diversified inflation hedging mutual funds, or nominal bonds backed by inflation sensitive assets may be included in this allocation, while other illiquid strategies that may provide the same real profile can include private equity in inflation sensitive companies, hard asset-backed private credit, and structured inflation-linked products among others.

The Real Return allocation shall seek to achieve the following:

- 1) **Short-term benchmark:** For periods less than five years or a full market cycle, the allocation should achieve an annual rate of return that exceeds the appropriate benchmark (the weighted average return of the underlying investment benchmarks) annually over a complete market cycle, net of all investment management fees.
- 2) **Strategic objective:** For periods greater than five years or a full market cycle, the allocation should not only outperform the short-term benchmark, but also achieve a rate of return that exceeds (CPI + 300 basis points) as well.

#### **Portfolio Guidelines**

No more than 35% of the total net assets of the Real Return portfolio may be invested in any one registered investment vehicle, mutual fund, or separately managed account.

No more than 15% of the total net assets of the Real Return portfolio may be invested in any single closed-end or open-end limited partnership or other unregistered investment vehicle.

No investment in any commingled open-ended limited partnership may account for more than 20% of the net assets in that limited partnership.

No investment with any one single manager may account for more than 25% of that manager's total assets under management.

Policy allocations and ranges for strategies in the Real Return portfolio as a whole are as below.

The liquid real assets portfolio will be diversified according to the following strategy allocations:

Liquid Real Assets Portfolio	Allocation Targets	Range
GTAA/Global Macro	35.0%	15% to 40%
Inflation Linked Securities	30.0%	15% to 40%
Natural Resource Equities	20.0%	5% to 30%
Commodities	15.0%	0% to 25%
Opportunistic liquid	0.0%	0% to 10%

The illiquid real assets portfolio will be diversified according to the following strategy allocations:

Illiquid Real Assets Portfolio	Allocation Targets	Range
Property	20.0%	0% to 35%
Natural Resources	45.0%	15% to 65%
Private Assets	25.0%	0% to 35%
Opportunistic illiquid	10.0%	0% to 20%

The relative allocations to the liquid and illiquid portfolios will be determined according to each individual plan's liquidity needs, funding status, and allocation targets on an investment by investment basis. However, no plan shall invest more than 50% of the Real Assets Allocation into the Illiquid Real Assets Portfolio.

Further, in order to ensure sufficient diversification by investment style, the Illiquid Real Asset Portfolio as a whole will be diversified according to style allocations below:

Style Allocations	Allocation Targets	Range
Core	40.0%	25% to 50%
Value Add	30.0%	20% to 40%
Opportunistic	30.0%	20% to 40%

#### G. Cash Equivalent Securities

Selection of particular short-term instruments, whether viewed as liquidity reserves or as investment vehicles, should be determined primarily by the safety and liquidity of the investment and only secondarily by the available yield. The following short-term investment vehicles are considered acceptable:

Publicly traded investment grade corporate bonds, variable rate demand notes, government and agency bonds, mortgages, municipal bonds, and collective STIFs, money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper) and repurchase agreements relating to the above instruments. Instruments may be selected from among those having an investment grade rating at the time of purchase by at least one recognized bond rating service. In cases where the instrument has a split rating, the lower of the two ratings shall prevail. All instruments shall have a maturity at the time of purchase that does not exceed two years. Repurchase agreements shall be deemed to have a maturity equal to the period remaining until the date on which the repurchase of the underlying securities is scheduled to occur. Variable rate securities shall be deemed to have a maturity equal to the time left until the next interest rate reset occurs, but in no case will any security have a stated final maturity of more than three years.

The Systems' fixed income managers that utilize cash equivalent securities as an integral part of their investment strategy are exempt from the permissible investments contained in the preceding paragraph. Permissible short-term investments for fixed income managers shall be included in the investment manager's investment guidelines.

#### H. Absolute Return Strategies

The purpose of the Absolute Return Portfolio is to identify strategies that provide both favorable stand-alone risk-adjusted returns as well as the benefit of diversification for the overall plan. Absolute return strategies, by definition, are not necessarily a separate asset class, but broaden the opportunity set within existing asset classes such as stocks, bonds, currencies and commodities by going both long and short, employing derivatives and leverage, shortening and extending investment horizons, and moving across public and private markets, amongst others. By focusing on the idiosyncratic risks of security selection and often attempting to minimize systematic market risks through hedging activities, absolute return managers can make investment decisions unconstrained by restrictive relative benchmarks such as the S&P 500 or Barclay's Aggregate Bond Index, and add value to portfolios by achieving favorable risk-adjusted returns in most market environments while also reducing overall plan volatility.

The absolute return opportunity set is generally considered to include hedge funds and other strategies attempting to achieve positive returns without heavy reliance on the assumption of traditional systematic risk factors. Investment vehicles used to access this opportunity set can include limited partnerships, but also mutual funds, ETFs, and separately managed accounts, amongst others. Absolute return strategies are extremely heterogeneous, as managers have both greater variability within a strategy and the flexibility to evolve across styles and asset classes. This is a key benefit of absolute return; however, it also makes strategy classifications less meaningful and manager selection significantly more important.

It also necessitates relatively broader allowable strategy ranges than in other more traditional asset classes.

The list of strategies that the KRS Absolute Return Portfolio may utilize includes, but is not limited to:

- **Equity Strategies:** Equity based hedge funds are those which primarily purchase listed stocks, long and short, using no to substantial leverage. These strategies may differ across multiple styles such as broad or sector based mandates, geographically focused or global, concentrated versus diversified, long biased or market neutral, or short term trading versus longer term fundamental. Sub-strategies in this category would include fundamental long/short equity, short bias, tactical trading, and equity market neutral.
- **Event Driven:** Event driven strategies also invest in the securities of corporate issuers, including stocks and corporate bonds. However, these strategies will invest based upon specific corporate actions that will change the value of these securities including mergers, spin-offs, tender and exchange offers and bankruptcy or restructuring. These strategies can be flexible across equity/credit, long/short as well as other style characteristics noted earlier. Another critical differentiator among event driven strategies is whether they pursue primarily hard versus soft catalysts. Examples of sub-strategies in this category include merger arbitrage, shareholder activism, multi-strategy event, special situations, and opportunistic value/soft catalyst.
- **Credit Strategies:** Credit strategies are those which focus on the debt side of the capital structure. They may have equity exposure, but the vast majority of the portfolio is invested in credit securities. Similarly, these strategies may be long biased or more hedged, may be more fundamentally based or more quantitative, focus on paying versus non-performing, and shorter term trading versus longer term focused. However, some funds may be focused on structured credit markets, including RMBS and CMBS, and others may move opportunistically across various credit segments. Sub-strategies may include long/short corporate credit, structured credit, and distressed securities.
- **Relative Value:** Relative Value strategies are those that do not invest in the intrinsic value of any individual security, but rather research the historical and/or mechanical relationships between related securities and invest in the spread. For example, they may bet on one bond being overvalued relative to another bond from the same issuer. These strategies are almost always market neutral, but may vary from moderately to highly leveraged, concentrated versus diversified, or from HFT (high frequency trading) to a longer term investment horizon. Examples of sub-strategies in this category include fixed income arbitrage, convertible arbitrage, and statistical arbitrage.
- **Multi-Strategies:** Multi-Strategy hedge funds are those which will actively employ several of the other major hedge fund categories. Typically, hedge funds may do more than one thing, but to be a true multi-strategy, a hedge fund must have meaningful allocations of capital to at least 3 of the other four major categories: equity, credit/event, relative value, and macro/CTA. A true multi-strategy hedge fund should not have 50% to 70% of NAV invested in one strategy or 50% to 70% of the historical return attribution from one strategy. Finally, most multi-strategy hedge funds have their roots in one specific style and have evolved into multi-strategies over time.

- Global Macro: Macro strategies are those that make directional bets on major markets or asset classes instead of individual securities. Global macro funds are typically diversified across 3 of the 4 major liquid markets: equity indices, credit/debt, currencies/rates, and commodities. These strategies are often quantitative or discretionary, or shorter term/market timing versus longer term/macroeconomic focused. Finally, some traders may focus largely on certain markets, such as rates or currencies, trading on fundamental economic signals.
- CTA/Commodity/Currency: Managed Futures or CTAs will trade the same markets as global macro funds (i.e. equity indices, debt markets, currencies, and commodities) but will focus heavily on price or other technical signals, instead of fundamental or economic data. CTAs tend to be purely systematic (black-box) or discretionary, shorter to longer term and will employ either trend following/momentum strategies or counter-trend/ mean reversion. Similar to macro funds, some CTAs focus purely on certain markets, such as commodities or currencies.
- Other: Strategies in this category, sometimes referred to as alternatives to alternatives, tend to be the most highly uncorrelated strategies. These may not be true “alpha” generators, as they often are simply accessing extremely unique and non-competitive markets, looking to harvest systemic risk premia found in these markets. However, the “betas” they are accessing are truly idiosyncratic. These strategies are much smaller and tend to have a bit higher illiquidity than other hedge funds. Examples of sub-strategies that fall in this category would be intellectual property, weather risk, and insurance strategies.

The Absolute Return allocation shall seek to achieve the following.

- 1) Short-term benchmark: For periods less than five years or a full market cycle, the allocation should achieve an annual rate of return that exceeds the appropriate benchmark (HFRI Diversified Fund of Fund Composite), net of all investment management fees, with similar risk relative to the benchmark.
- 2) Strategic benchmark: For periods greater than five years or a full market cycle, the allocation should not only outperform the short-term benchmark, but also achieve a rate of return that exceeds the appropriate long-term benchmark (1 Year Treasury Bill Rate + 500 basis points) as well.

#### Portfolio Guidelines

No more than 10% of the total net assets of the Absolute Return portfolio may be invested in any one single manager hedge fund. No more than 15% of the total net assets of the Absolute Return portfolio may be invested in any one single separately managed account, mutual fund, or other registered investment vehicle.

No more than 15% of the total net assets of the Absolute Return portfolio allocation may be invested with any one single hedge fund manager (excluding Funds of Funds). No more than 25% of the net assets of the Absolute Return portfolio allocation may be invested with any one single investment manager (excluding Funds of Funds).

No investment in any commingled open-ended limited partnership may account for more than 20% of the net assets in that limited partnership.

No investment with any one single manager may account for more than 25% of that manager's total assets under management (including Funds of Funds).

Policy allocations and ranges for the strategies in the Absolute Return allocation as a whole are:

	Allocation Targets	Range
Equity Strategies	15.0%	5.0% to 35.0%
Event Driven Strategies	15.0%	5.0% to 35.0%
Credit Strategies	15.0%	5.0% to 35.0%
Relative Value Strategies	15.0%	5.0% to 35.0%
Multi-Strategies	10.0%	5.0% to 35.0%
Global Macro	15.0%	3.5% to 30.0%
CTA/Commodity/Currency	10.0%	1.5% to 20.0%
Other	5.0%	0% to 15%

As the Absolute Return allocation can invest in various investment vehicles and strategies with differing liquidity profiles, it is important to consider liquidity as a separate risk spectrum. In order to manage the portfolio and provide the system liquidity as necessary, but remain flexible enough to capture returns available in moderately illiquid opportunities, the Absolute Return allocation will adhere to the following liquidity targets:

At all times, at least 25.0% of the Absolute Return portfolio as a whole is to be available in quarterly or better liquidity vehicles.

At all times, no more than 50.0% of the Absolute Return portfolio as a whole is to be committed to vehicles that provide liquidity on a greater than annual basis.

No investments to vehicles with a greater than 3 year lock-up are permitted in the Absolute Return portfolio.

#### IX Standards of Measurement



## Performance Measurement

The Kentucky Retirement Systems ("KRS") overall fund performance is measured relative to the KRS Pension or Insurance Total Fund Benchmark. The benchmark is calculated by means of a weighted average methodology. This method is consistent with industry-wide standards and the practices utilized by the CFA Institute. It is the product of the various component weights (i.e., asset classes' percentages) by their respective performance (returns). Due to market fluctuations and acceptable divergence, the asset classes' weights (percentages) are often not equivalent to the benchmark's weights. Therefore, the performance may indicate that the Funds have outperformed (underperformed) relative to their respective benchmarks, even when the preponderance of lesser weighted categories have underperformed (outperformed) their indices.

KRS measures its asset classes, sub-asset classes, sectors, strategies, portfolios, and instruments (investment) performance with indexes that are recognized and published (e.g., S&P 500 & Barclays Aggregate Bond Index). These indices are determined to be appropriate measures of investments and composites of investments with identical or similar investments profiles, characteristics, and strategies. The benchmarks and indexes are intended to be objective, investable, replicable, representative and measurable of the investment mandate and, developed from publicly available information that is acceptable to KRS and the investment manager/advisor as the neutral position consistent with the underlying investor status. KRS' investment consultant and staff recommend the benchmarks and indexes. These measures shall be subject to the annual review and approval of the KRS Investment Committee and ratification of the Kentucky Retirement Systems' Board of Trustees.

The KRS Total Fund Benchmarks and sub-components, indexes, are described in Appendix A and B of this document.

The following descriptions represent general standards of measurement that will be used as guidelines for the various classes of investments and managers of the Kentucky Retirement Systems. They are to be computed and expressed on a time-weighted total return basis:

### Total Public Asset Class Allocations

#### Short-term

- For periods less than five years or a full market cycle, the Asset Class Allocation should exceed the returns of the appropriate Index.

#### Intermediate & Long-term

- For periods greater than five years or one market cycle, the Asset Class Allocation should exceed the appropriate Index, compare favorably on a risk-adjusted basis, and generate returns that rank above the median return of a relevant peer group. Volatility, as measured by the standard deviation of monthly returns, should be comparable to the Index.

Individual Public Security Portfolios: Individual portfolios shall be assigned a market goal or benchmark that is representative of the style or market capitalization of the assignment. Individual accounts should be monitored using the following Standards:

#### Short-term

- For periods less than five years or a full market cycle, individual portfolios should exceed the returns of their market goal or benchmark.

#### Intermediate & Long-term

- For periods greater than five years or one market cycle, individual portfolios should exceed the return of their market goal or benchmark, compare favorably on a risk-adjusted basis, and generate returns that rank above the median return of a relevant peer group. Volatility, as measured by the standard deviation of monthly returns, should be comparable to the benchmark.

#### Alternative Assets:

In addition to exceeding the appropriate benchmark listed in Appendix A and B, the Alternative portfolio should also seek to achieve the following:

##### Short-term

- Alternative investments should earn a Net IRR that place the investment above the median Net IRR of other similar funds, of the same vintage year, as reported by Venture Economics.

##### Intermediate & Long-term

- The private equity portfolio should earn a return that meets or exceeds the KRS Private Equity Index. Individual private equity investments should earn a Net IRR above the median Net IRR of other similar funds, of the same vintage year, as reported by Venture Economics.

## Real Estate

The Total Real Estate allocation of the fund shall be benchmarked to the appropriate benchmark and are listed in Appendix A and B.

In addition, target returns for value added investments should be 9% to 12% per year (net of fees and promoted interest). Target returns for Opportunistic investments should be in excess of 12% (net of fees and promoted interest) in order to compensate for the additional risk commensurate with the increased risk compared to core property investments.

## Real Return

The total Real Return allocation shall seek to :

- (1) Achieve a rate of return that exceeds the appropriate benchmark annually over a complete market cycle (historically 3-5 years), net of all investment management fees.
- (2) Achieve a rate of return that exceeds the appropriate real return composite index over a complete market cycle (historically 3-5 years), net of all investment management fees.
- (3) Achieve a positive risk/reward trade-off when compared to similar style real return Investment Managers.

## Absolute Returns

The total Absolute Return allocation shall seek to :

- (1) Achieve a rate of return that exceeds the appropriate benchmark annually over a complete market cycle (historically 3-5 years), net of all investment management fees.
- (2) Achieve a positive risk/reward trade-off when compared to similar style FOF return Investment Managers.

## X Investments Performance Review Procedures

On a timely basis, but not less than quarterly, the Investment Committee, on behalf of the Board of Trustees, will review the performance of the portfolio for determination of compliance with this Statement of Investment Policy. On an annual basis, a comprehensive review of each asset class and underlying portfolios shall be conducted by the staff and presented to the Investment Committee. The review shall consist of an organizational, performance and compliance assessment.

The Compliance Officer shall perform tests each month to assure compliance with the restrictions imposed by this policy. These tests shall be performed at the asset class and total fund level. Quarterly, the Compliance Officer shall prepare a report to the Investment Committee detailing the restrictions tested, exceptions, the cause of the exception and the subsequent resolution. The Investment Committee shall report the findings to the Board of Trustees at the next regularly scheduled meeting.

The following restrictions shall be tested monthly:

- ▶ The amount of stock in the domestic or international equity allocation in any single corporation shall not exceed 5% of the aggregate market value of the Systems' assets.
- ▶ The amount of stock held in the domestic or international equity allocation shall not exceed 3% of the outstanding shares of any single corporation.
- ▶ The amount of stock in any one industry in the domestic equity allocation shall not exceed 10% of the aggregate market value of the Systems' assets.
- ▶ Investment in "frontier" markets (those countries not included in the MSCI EM Index) shall not exceed 5% of the System's international equity assets.
- ▶ The duration of the total fixed income portfolio shall not deviate from the KRS Fixed Income Index by more than 25%.
- ▶ The duration of the TIPS portfolio shall not deviate from the KRS TIPS benchmark by more than 10%.
- ▶ The amount invested in the debt of a single issuer shall not exceed 5% of the total market value of the Systems' assets, with the exception of U.S. Government issued, guaranteed or agency obligations (or securities collateralized by same), and derivative securities used for exposure, cost efficiency, or risk management purposes in compliance with Section VII of this policy.
- ▶ The amount invested in SEC Rule 144a securities shall not exceed 15% of the market value of the aggregate market value of the Systems' fixed income investments.

The Chief Investment Officer shall develop a comprehensive set of investment guidelines for each externally managed account. These guidelines should ensure, at the total fund and asset class level, that the restrictions set forth above are preserved. The Compliance Officer shall perform tests each month to assure compliance with the guidelines. Quarterly, the Compliance Officer shall prepare a report to the Investment Committee detailing the restrictions tested, exceptions, the cause of the exception and the subsequent resolution. The Investment Committee shall report the findings to the Board of Trustees at the next regularly scheduled meeting

#### XI. Additional Items

The KRS Board recognizes that the voting of proxies is an important responsibility in assuring the overall performance of the Fund over a long time horizon. The Board has delegated the responsibility of voting all proxies to an outside Proxy Voting service provider or contracted external investment manager. The Board expects that the proxy voting service will execute all proxies in a timely fashion, and in accordance with the voting policy which has been formally adopted.

The Board has adopted the ISS U.S. Proxy Voting Guidelines as the System's approved Proxy Voting Policy for all internally voted items. This policy is updated at least annually by ISS and hereby incorporated by this reference. The policy can be found publically using the following link:

<http://www.issgovernance.com/files/2012USSummaryGuidelines1312012.pdf>

A. Brokerage Policy dated May 2011

manager. The Board expects that the proxy voting service will execute all proxies in a timely fashion, and in accordance with the voting policy which has been formally adopted.

The Board has adopted the ISS U.S. Proxy Voting Guidelines as the System's approved Proxy Voting Policy for all internally voted items. This policy is updated at least annually by ISS and hereby incorporated by this reference. The policy can be found publically using the following link:

<http://www.issgovernance.com/files/2012USSummaryGuidelines1312012.pdf>

A. Investment Brokerage Policy dated May 2011

The Investment Committee brokerage policy is hereby incorporated by reference.

B. Transactions Procedures Policy dated November 2014

The Investment Committee transaction procedures are hereby incorporated by reference.

C. Securities Litigation Policy and Procedures dated May 2011

The Investment Committee securities litigation policy and procedures are hereby incorporated by reference.

D. Investment Securities Lending Guidelines dated May 2011

The Investment Committee securities lending policy and procedures are hereby incorporated by reference.

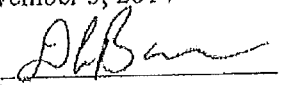
E. Securities Trading Policy for Trustees and Employees dated February 2012

F. Manager and Placement Agent Statement of Disclosure Policy dated November 2014

#### Signatories

As Adopted by the Investment Committee

Date: November 5, 2014

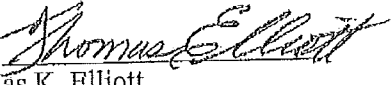
Signature: 

Dr. Daniel L. Bauer

Chair, Investment Committee

As Adopted by the Board of Trustees

Date: December 4, 2014

Signature: 

Mr. Thomas K. Elliott

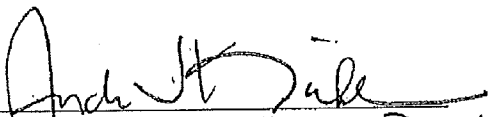
Chair, Board of Trustees

**Kentucky Retirement Systems Insurance Trust Fund**  
Real Asset Income  
Addendum to Investment Guidelines dated January 1, 2015

Effective April 1, 2016, the portfolio level benchmark shall be updated as below.

**Benchmark:**

28% S&P Global Infrastructure Index, 21% FTSE EPRA/NAREIT Developed Index, 18% Wells Fargo Hybrid and Preferred Securities REIT Index, 15% Barclays Global Capital Securities Index, 18% Barclays U.S. Corporate High Yield Index

  
Kentucky Retirement Systems - Director

6/23/16  
Date

  
Nuvven Asset Management

6/23/2016  
Date

## ATTACHMENT II

### Portfolio Guidelines

<b>Kentucky Retirement Systems Insurance Trust Fund</b> Real Asset Income Investment Guidelines
---

*Pursuant to your Investment Management Agreement with Nuveen Asset Management, this statement is intended to outline the portfolio characteristics within which Nuveen Asset Management will conduct its activities. Subject to the guidelines and objectives set forth below, Nuveen Asset Management is to have full discretion with respect to individual investment management decisions.*

**OBJECTIVE:** Serve as a liquid real asset component as part of the Kentucky Retirement Systems Insurance Trust Fund's real asset portfolio. The long term return goal of the portfolio is Consumer Price Index plus 300 basis points.

### **PORTFOLIO**

#### **CHARACTERISTICS:**

The Real Asset Income Strategy will focus its investments on publicly traded equity and debt securities of infrastructure and real estate related companies.

#### **Allowable Investments:**

- Common stock
- Preferred securities
- Hybrid securities
- Convertible securities
- Real Estate Investment Trusts ("REITs")
- Exchange-traded notes ("ETNs"),
- Other investment companies (including exchange-traded funds ("ETFs"))
- Equity & Debt of Master Limited Partnerships (MLPs)
- Corporate debt obligations
- Mortgage-backed securities

#### **Expected Allocation Range over time:**


Asset Class	Minimum	Maximum
Equity	25%	100%
Preferred Securities	0%	50%
Debt	0%	40%
Cash	0%	5%

Benchmark:

The benchmark shall be a blend of the following; 33% S&P Global Infrastructure Index, 20% BofA ML Preferred REIT Index, 15% MSCI U.S. REIT Index, 12% BofA ML Preferred Fixed Rate Index, 20% Barclays U.S. Corporate High Yield Index

OTHER CHARACTERISTICS, INSTRUCTIONS OR RESTRICTIONS:

- Equity securities may be of any market capitalization, including small- and mid-capitalization companies.
- The Strategy will invest in non-U.S. securities, but will limit its exposure to emerging markets to 50% of market value at the time of purchase.
- The Strategy may utilize derivatives, including options, futures contracts, options on futures contracts, and forward foreign currency exchange contracts. The Strategy may use these derivatives to manage market or business risk, enhance the Strategy's return, or hedge against adverse movements in currency exchange rates.
- Debt and preferred securities may include securities with no rating or securities rated BB/Ba or lower

  
\_\_\_\_\_  
Kentucky Retirement Systems  
Insurance Trust Fund

10/4/2014  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Nuveen Asset Management

12/9/2014  
\_\_\_\_\_  
Date



### ATTACHMENT III

#### Fee Schedule

Fees are paid quarterly in arrears upon submission of an invoice by Manager. Fees shall be computed on the basis of the average of the adjusted closing market value of assets as determined by the Master Custodian on the last business day of each month in the calendar quarter, in accordance with the following schedule;

The annual advisory fee for the portfolio is calculated as follows:

<u>Assets</u>	<u>Fees per annum (expressed in basis points)</u>
First \$50 million	80 bps
Next \$50 million	75 bps
Next \$150 million	65 bps
Amounts over \$250 million	60 bps

**NOTE:** For billing purposes, the assets from the Account shall be aggregated with the assets of the Kentucky Retirement Systems Insurance Trust Fund managed by the Manager pursuant to the Real Asset Income strategy in order to calculate fees. Each account will be billed a pro-rated share of the fees based on the total average market value of assets invested by each account in the strategy.

If an investment strategy utilizes a commingled, pooled fund, mutual fund, money fund, or other vehicle which has a built in management fee, these fees will be identified and reimbursed to KRS Account and the Managers Fee Schedule will be applied, or the Manager will deduct the assets already assessed a fee, from their fee calculation. (Details shown on the invoice.) Any over-billing will be reimbursed to KRS Account immediately.

#### PRO-RATION OF CONTRIBUTIONS/WITHDRAWALS

Fees are calculated at the end of each calendar quarter on the basis of the average of the closing market value of assets on the last day of each month in the calendar quarter; provided however, that the market value shall be adjusted such that contributions and disbursements made during the quarter (and which constitute greater than 1 (one) percent of the total portfolio market value) shall be billed on a pro rata basis for the amount of time under management.

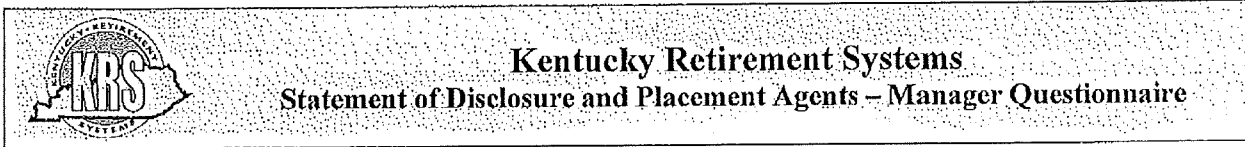
The **adjusted monthly market value** = month-end asset value adjusted for contributions or withdrawals made by KRS.

- (a) For **contributions** to the assets in the account after the first business day of a month, the adjusted ending assets will be determined by subtracting from the closing value of the account on the last business day of the month an amount equaling the product of (x) the quotient derived by dividing the amount of the contribution by the number of days in the month, and (y) the number of days from the beginning of the month to the transfer date.

- (b) For **withdrawals from** the account after the first business day of a month, the adjusted assets will be determined by adding to the closing value of the account on the last business day of the month an amount equaling the product of (x) the quotient derived by dividing the amount of the withdrawal by the number of days in the month, and (y) the number of days from the beginning of the month to the transfer date.

ATTACHMENT IV

Statement of Disclosure and Placement Agents



1. Did your firm use a placement agent as defined in the KRS "Statement of Disclosure and Placement Agents" policy in an effort to solicit an investment from KRS? If yes, please continue to question 2; if no, please proceed to question 10.

No.

2. Please disclose the name of the placement agency used, the names of the individuals contracted by the placement agency (either as employees or as sub-agents) in order to solicit an investment from KRS, and the fees paid or payable to the placement agent in connection with a prospective KRS investment.

N/A.

3. Please represent that any fees paid to placement agents are the sole obligation of the investment manager and not that of KRS or the limited partnership.

N/A.

4. Please disclose the names of any current or former Kentucky elected or appointed government officials (federal, state, and local government), KRS Board of Trustees members, employees, or consultants of KRS, or any other person, if any, who suggested the retention of the placement agent.

N/A.

5. Please provide evidence of the regulatory agencies, if any, in any Federal, state or foreign jurisdiction the placement agent or any of its affiliates are registered with, such as the Securities and Exchange Commission ("SEC"), FINRA, or any similar regulatory agency.

N/A.

6. Please provide a resume for each officer, partner or principal of the Placement Agent detailing the person's education, professional designations, regulatory licenses and investment and work experience.

N/A.

7. Please describe the services to be performed by the Placement Agent.

N/A.

8. Please disclose whether the Placement Agent, or any of its affiliates, is registered as a lobbyist with any and all Kentucky state and local (county) governments.

N/A.

9. Please disclose any political contributions made by the Placement Agent, a Placement Agent principal, or their family as defined by KRS 11A.010(4) to: any Kentucky official; political party; political organization; or other political entity within the prior 2 years.

N/A.

10. Please disclose the names of any current or former Kentucky elected or appointed government officials (federal, state, and local government) KRS Board of Trustees members, employees, or consultants of KRS that are receiving any fees or compensation from the External Manager and/or placement agent. Please disclose any additional known relationships or conflicts with same.

None.

11. Please disclose any political contributions made by External Manager, its principals, or their family as defined by KRS 11A.010(4) to any Kentucky official; political party; political organization; or other political entity in the prior 2 years.

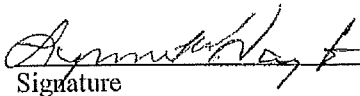
None.

12. Please disclose whether any principals of the firm are the subject of any pending litigation or have been involved in any regulatory proceedings related to the performance of their duties as an investment adviser. If so, please supply details concerning the issue.

None.

13. Please provide a statement representing and warranting the accuracy of the information provided to KRS regarding the Statement of Disclosure, and acknowledge that similar language will be included in any final written agreement with a continuing obligation to update any such information within 10 business days of any change in the information.

Nuveen Asset Management, LLC hereby represents and warrants the accuracy of the information provided to KRS included in this Statement of Disclosure; it also acknowledges that similar representations and warranties will be included in any final written agreement with KRS, and that it will have a continuing obligation to update any such information within 10 business days of any change to the information disclosed.

 12/12/2014  
Signature Date

Print Name: Lynne M. Herring

Firm Name: Nuveen Asset Management, LLC

**ATTACHMENT V**  
Compliance Certificate

As a duly authorized officer of \_\_\_\_\_ (the "Investment Manager"), I hereby certify that I am familiar with that certain Investment Management Agreement dated \_\_\_\_\_, 20\_\_ (the "Agreement") between Kentucky Retirement Systems ("KRS") and the Investment Manager relating to investment of certain KRS assets by the Investment Manager. In addition, to the best of my knowledge after diligent inquiry, I hereby certify to KRS that:

- (a) All investments of the KRS assets made by the Investment Manager during the fiscal year ending June 30, \_\_\_\_\_, were made within applicable Investment Policy and Procedures incorporated in the Agreement at the time each investment was made, except as set forth below;
- (b) All current investment holdings in the portfolio managed by the Investment Manager are in compliance with the Investment Policy and Procedures currently applicable under the Agreement, except as set forth below;
- (c) During the fiscal year ending June 30, \_\_\_\_\_, no member of the KRS Board of Trustees, or key staff of KRS, and no person claiming to represent or have influence with the Board of Trustees has contacted the Investment Manager with respect to a financial transaction or solicitation which is not solely on behalf of KRS with the Investment Manager, except as set forth below; and
- (d) The Investment Manager is in compliance with all representations, warranties and covenants in the Agreement which apply to the Investment Manager, including but not limited to any indemnity or insurance coverage requirements, except as set forth below. Current insurance coverage applicable to KRS's assets are as follows: (Please attach insurance certificates.)

Errors and Omissions dedicated to the Agreement: Date of expiration: \_\_\_\_\_

Per occurrence limit: \_\_\_\_\_

Annual aggregate: \_\_\_\_\_

Directors and officers liability: \_\_\_\_\_ Date of expiration: \_\_\_\_\_

Brokers blanket bond or similar coverage: \_\_\_\_\_ Date of expiration: \_\_\_\_\_

Other: \_\_\_\_\_ Date of expiration: \_\_\_\_\_

Exceptions: (Attach a separate sheet if necessary.)

Dated: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_



ATTACHMENT VI

Authorized Signers

Kentucky Retirement Systems' designated positions listed below are authorized to provide verbal and written instructions and notices on behalf of the Systems. Such instructions may be provided by facsimile or e-mail. PM may conclusively rely on the instructions and notices received from any one of these authorized persons unless notified to the contrary.

Chief Investment Officer  
Incumbent: David Peden  
(502) 696-8485 phone; (502) 696-8805 fax

Signature: David Peden

Director of Fixed Assets  
Incumbent: David Peden  
(502) 696-8485 phone; (502) 696-8805 fax

Signature: David Peden

Director of Private Equity  
Incumbent: Brent Aldridge  
(502) 696-8633 phone; (502) 696-8805 fax

Signature: Brent Aldridge

Deputy CIO, Director of Absolute Return  
Incumbent: Chris Schelling  
(502) 696-8642 phone; (502) 696-8805 fax

Signature: Chris Schelling

Director of Equity Assets  
Incumbent: Joe Gilbert  
(502) 696-8632 phone; (502) 696-8805 fax

Signature: Joe Gilbert

Executive Director  
Incumbent: William A. Thielon  
(502) 696-8444 phone; (502) 696-8801 fax

Signature: William A. Thielon

I hereby certify that the above individuals have been duly authorized as indicated above, and that such authorization remains in force as of this date.

Signed: Brian Thomas

Brian Thomas  
General Counsel  
(502) 696-8654 phone; (502) 696-8801 fax  
(502) 696-8645 phone; (502) 696-8801 fax

Dated: 11/26/14

**ATTACHMENT VII**

Proxy Voting Policy

Nuveen Asset Management, LLC

Proxy Voting Policies and Procedures

Effective Date: January 1, 2011, as last amended October 27, 2014

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**I. General Principles**

*A.* Nuveen Asset Management, LLC (“NAM”) is an investment sub-adviser for certain of the Nuveen Funds (the “Funds”) and investment adviser for institutional and other separately managed accounts (collectively, with the Funds, “Accounts”). As such, Accounts may confer upon NAM complete discretion to vote proxies.<sup>1</sup>

*B.* It is NAM’s duty to vote proxies in the best interests of its clients (which may involve affirmatively deciding that voting the proxies may not be in the best interests of certain clients on certain matters). In voting proxies, NAM also seeks to enhance total investment return for its clients.

*C.* If NAM contracts with another investment adviser to act as a sub-adviser for an Account, NAM may delegate proxy voting responsibility to the sub-adviser. Where NAM has delegated proxy voting responsibility, the sub-adviser will be responsible for developing and adhering to its own proxy voting policies, subject to oversight by NAM.

*D.* NAM’s Proxy Voting Committee (“PVC”) provides oversight of NAM’s proxy voting policies and procedures, including (1) providing an administrative framework to facilitate and monitor the exercise of such proxy voting and to fulfill the obligations of reporting and recordkeeping under the federal securities laws; and (2) approving the proxy voting policies and procedures.

**II. Policies**

The PVC after reviewing and concluding that such policies are reasonably designed to vote proxies in the best interests of clients, has approved and adopted the proxy voting policies of Institutional Shareholder Services, Inc. (“ISS”), a leading national provider of proxy voting administrative and research services. As a result, such policies set forth NAM’s positions on recurring proxy issues and criteria for addressing non-recurring issues. These policies are reviewed periodically by ISS, and therefore are subject to change. Even though it has adopted ISS policies, NAM maintains the fiduciary responsibility for all proxy voting decisions.

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<sup>1</sup> NAM does not vote proxies where a client withholds proxy voting authority, and in certain non-discretionary and model programs NAM votes proxies in accordance with its policies and procedures in effect from time to time. Clients may opt to vote proxies themselves, or to have proxies voted by an independent third party or other named fiduciary or agent, at the client’s cost.



### III. Procedures

*A. Supervision of Proxy Voting.* Day-to-day administration of proxy voting may be provided internally or by a third-party service provider, depending on client type, subject to the ultimate oversight of the PVC. The PVC shall supervise the relationships with NAM's proxy voting services, ISS. ISS apprises Nuveen Global Operations ("NGO") of shareholder meeting dates, and casts the actual proxy votes. ISS also provides research on proxy proposals and voting recommendations. ISS serves as NAM's proxy voting record keepers and generate reports on how proxies were voted.

#### *B. Conflicts of Interest.*

1. The following relationships or circumstances may give rise to conflicts of interest<sup>2</sup>:
  - a. The issuer or proxy proponent (e.g., a special interest group) is TIAA-CREF, the ultimate principal owner of NAM, or any of its affiliates.
  - b. The issuer is an entity in which an executive officer of NAM or a spouse or domestic partner of any such executive officer is or was (within the past three years of the proxy vote) an executive officer or director.
  - c. The issuer is a registered or unregistered fund for which NAM or another Nuveen adviser serves as investment adviser or sub-adviser.
  - d. Any other circumstances that NAM is aware of where NAM's duty to serve its clients' interests, typically referred to as its "duty of loyalty," could be materially compromised.
2. NAM will vote proxies in the best interest of its clients regardless of such real or perceived conflicts of interest. By adopting ISS policies, NAM believes the risk related to conflicts will be minimized.
3. To further minimize this risk, Compliance will review ISS' conflict avoidance policy at least annually to ensure that it adequately addresses both the actual and perceived conflicts of interest the proxy voting service may face.

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<sup>2</sup> A conflict of interest shall not be considered material for the purposes of these Policies and Procedures with respect to a specific vote or circumstance if the matter to be voted on relates to a restructuring of the terms of existing securities or the issuance of new securities or a similar matter arising out of the holding of securities, other than common equity, in the context of a bankruptcy or threatened bankruptcy of the issuer, even if a conflict described in III.B.1.a.-d is present.

4. In the event that ISS faces a material conflict of interest with respect to a specific vote, the PVC shall direct ISS how to vote. The PVC shall receive voting direction from appropriate investment personnel. Before doing so, the PVC will consult with Legal to confirm that NAM faces no material conflicts of its own with respect to the specific proxy vote.
5. If Legal concludes that a material conflict does exist for NAM, the PVC will recommend to NAM's Compliance Committee or designee a course of action designed to address the conflict. Such actions could include, but are not limited to:
  - a. Obtaining instructions from the affected client(s) on how to vote the proxy;
  - b. Disclosing the conflict to the affected client(s) and seeking their consent to permit NAM to vote the proxy;
  - c. Voting in proportion to the other shareholders;
  - e. Recusing the individual with the actual or potential conflict of interest from all discussion or consideration of the matter, if the material conflict is due to such person's actual or potential conflict of interest; or
  - f. Following the recommendation of a different independent third party.
6. In addition to all of the above-mentioned and other conflicts, the Head of Equity Research, NGO and any member of the PVC must notify NAM's Chief Compliance Officer ("CCO") of any direct, indirect or perceived improper influence exerted by any employee, officer or director within the MDP affiliate or Fund complex with regard to how NAM should vote proxies. NAM Compliance will investigate any such allegations and will report the findings to NAM's Compliance Committee. If it is determined that improper influence was attempted, appropriate action shall be taken. Such appropriate action may include disciplinary action, notification of the appropriate senior managers within the MDP affiliate, or notification of the appropriate regulatory authorities. In all cases, NAM will not consider any improper influence in determining how to vote proxies, and will vote in the best interests of clients.

*C. Proxy Vote Override.* From time to time, a portfolio manager of an Account (a "Portfolio Manager") may initiate action to override ISS's recommendation for a particular vote. Any such override by a NAM Portfolio Manager (but not a sub-adviser Portfolio Manager) shall

be reviewed by NAM's Legal Department for material conflicts. If the Legal Department determines that no material conflicts exist, the approval of one member of the PVC shall authorize the override. If a material conflict exists, the conflict and, ultimately, the override recommendation will be addressed pursuant to the procedures described above under "Conflicts of Interest."

**D. *Securities Lending.***

1. In order to generate incremental revenue, some clients may participate in a securities lending program. If a client has elected to participate in the lending program then it will not have the right to vote the proxies of any securities that are on loan as of the shareholder meeting record date. A client, or a Portfolio Manager, may place restrictions on loaning securities and/or recall a security on loan at any time. Such actions must be affected prior to the record date for a meeting if the purpose for the restriction or recall is to secure the vote.
2. Portfolio Managers and/or analysts who become aware of upcoming proxy issues relating to any securities in portfolios they manage, or issuers they follow, will consider the desirability of recalling the affected securities that are on loan or restricting the affected securities prior to the record date for the matter. If the proxy issue is determined to be material, and the determination is made prior to the shareholder meeting record date the Portfolio Manager(s) will contact the Securities Lending Agent to recall securities on loan or restrict the loaning of any security held in any portfolio they manage, if they determine that it is in the best interest of shareholders to do so.

**E. *Proxy Voting for ERISA Clients.*** If a proxy voting issue arises for an ERISA client, NAM is prohibited from voting shares with respect to any issue advanced by a party in interest of the ERISA client, and will rely on its ERISA clients to inform NAM of any actual or perceived client conflicts.

**F. *Proxy Voting Records.*** As required by Rule 204-2 of the Investment Advisers Act of 1940, NAM shall make and retain five types of records relating to proxy voting; (1) proxy voting policies and procedures; (2) proxy statements received for client and fund securities; (3) records of votes cast on behalf of clients and funds; (4) records of written requests for proxy voting information and written responses from NAM to either a written or oral request; and (5) any documents prepared by the adviser that were material to making a proxy voting decision or that memorialized the basis for the decision. NAM may rely on ISS to make and retain on NAM's behalf records pertaining to the rule.

**G. *Fund of Funds Provision.*** In instances where NAM provides investment advice to a fund of funds that acquires shares of affiliated funds or three percent or more of the outstanding voting securities of an unaffiliated fund, the acquiring fund shall vote the shares in

the same proportion as the vote of all other shareholders of the acquired fund. If compliance with this policy results in a vote of any shares in a manner different than the ISS recommendation, such vote will not require compliance with the Proxy Vote Override procedures set forth above.

*H. Legacy Securities.* To the extent that NAM receives proxies for securities that are transferred into an Account's portfolio that were not recommended or selected by it and are sold or expected to be sold promptly in an orderly manner ("legacy securities"), NAM will generally instruct ISS to refrain from voting such proxies. In such circumstances, since legacy securities are expected to be sold promptly, voting proxies on such securities would not further NAM's interest in maximizing the value of client investments. NAM may agree to an institutional account's special request to vote a legacy security proxy, and would instruct ISS to vote such proxy in accordance with its guidelines.

*I. Terminated Accounts.* Proxies received after the termination date of an Account generally will not be voted. An exception will be made if the record date is for a period in which an Account was under management or if a separately managed account ("SMA") custodian failed to remove the account's holdings from its aggregated voting list.

*J. Non-votes.* NGO shall be responsible for obtaining reasonable assurance that proxies are voted and submitted in a timely manner. It should not be considered a breach of this responsibility if NAM does not receive a proxy from ISS or a custodian with adequate time to analyze and direct to vote or vote a proxy by the required voting deadline.

NAM may determine not to vote proxies associated with the securities of any issuer if as a result of voting, subsequent purchases or sales of such securities would be blocked. However, NAM may decide, on an individual security basis that it is in the best interests of its clients to vote the proxy associated with such a security, taking into account the loss of liquidity. In addition, NAM may not to vote proxies where the voting would in NAM's judgment result in some other financial, legal, regulatory disability or burden to the client (such as imputing control with respect to the issuer) or subject to resolution of any conflict of interest as provided herein, to NAM.

In the case of SMAs, NAM may determine not to vote securities where voting would require the transfer of the security to another custodian designated by the issuer. Such transfer is generally outside the scope of NAM's authority and may result in significant operational limitations on NAM's ability to conduct transactions relating to the securities during the period of transfer. From time to time, situations may arise (operational or otherwise) that prevent NAM from voting proxies after reasonable attempts have been made.

*K. Review and Reports.*

1. The PVC shall maintain a review schedule. The schedule shall include reviews of the proxy voting policy (including the policies of any sub-adviser engaged by NAM), the proxy voting record, account maintenance,

and other reviews as deemed appropriate by the PVC. The PVC shall review the schedule at least annually.

2. The PVC will report to NAM's Compliance Committee with respect to all identified conflicts and how they were addressed. These reports will include all Accounts, including those that are sub-advised. NAM also shall provide the Funds that it sub-advises with information necessary for preparing Form N-PX.

*L. Vote Disclosure to Clients.* NAM's institutional and SMA clients can contact their relationship manager for more information on NAM's policies and the proxy voting record for their account. The information available includes name of issuer, ticker/CUSIP, shareholder meeting date, description of item and NAM's vote.

**IV. Policy Owner**

PVC

**V. Responsible Parties**

PVC

NGO

Compliance

Legal Department

As amended: 3/1/13

6/5/14

10/27/14

### Electronic Delivery of Manager Reports and Notices

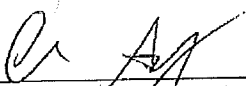
Check one:

- Client requests that Manager deliver reports and notices **electronically via email.**
- Client requests that Manager deliver reports and notices **in hard copy.**
- Client requests that Manager deliver reports and notices **electronically via email and in hard copy.**

Client understands and agrees that if Client consented to electronic delivery of Manager reports and notices, Client's consent authorizes Manager to deliver notices and reports by email. To receive notices or reports, Client must have an email address, access to the Internet and the ability to download PDF documents. Client acknowledges that Client has access to view Manager notices or reports via PDF or HTML. It is Client's responsibility to inform Manager in writing of Client's current email address and any changes to Client's email address. When certain Manager notices or reports are not available electronically, they will be delivered to Client by U.S. mail, overnight courier or facsimile.

Client may elect to receive confirmations, invoices, quarterly reports of fee payments and certain notices or reports in paper form. Even after consenting to electronic delivery, Client may, upon written request to Manager, obtain a paper copy of a notice or report, which Manager will distribute to Client at no additional cost to Client. Client may revoke this electronic delivery consent at any time by providing written notice to Manager. Withdrawal or revocation of Client consent does not affect the legal effectiveness or validity of any electronic notice or report provided while Client consent was in effect.

### Kentucky Retirement Systems Insurance Trust Fund

By: 

Name: Chris Schelling

Date: 12/11/2014

Title: Deputy CIO

## Reference and Representative List Authorization

As used herein, "Manager" is Nuveen Asset Management, LLC and "Client" is **Kentucky Retirement Systems Insurance Trust Fund**.

1. From time to time, Manager is asked to provide names of current clients who are willing to provide a reference on our behalf.

Check one:

- Client **consents** to Manager's use of Client's name as a reference.
- Client **does not consent** to Manager's use of Client's name as a reference.

2. From time to time, Manager is asked to provide a representative list of clients. Such lists typically reference client name and may include investment strategy.

Check one:

- Client **consents** to Manager's use of Client's name in a representative client list.
- Client **does not consent** to Manager's use of Client's name in a representative client list.

**Kentucky Retirement Systems Insurance Trust Fund**

By: Chris Schelling

Name: Chris Schelling

Date: 12/11/2014

Title: Deputy CIO

### Certification Regarding Status as Qualified Institutional Buyer

Kentucky Retirement Systems Insurance Trust Fund ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement.

Do the Investment Guidelines for the Account allow Manager to purchase securities offered pursuant to Rule 144A under the Securities Act of 1933, as amended (the "Securities Act")?

Yes

No

If "Yes," please complete the remainder of this certification.

If "No," the remainder of this certification is not applicable to the Account.

In order to purchase Rule 144A securities for Client's Account, Manager must represent to the seller of such securities that Client is certified as a "qualified institutional buyer," as defined in Rule 144A. Client hereby certifies that it meets Rule 144A's definition of qualified institutional buyer and is eligible to receive allocations of securities offered pursuant to Rule 144A because Client (*check the applicable box*):

1. Owns and invests on a discretionary basis, at least \$100 million in "eligible securities" (as defined below) AND Client is one of the following types of entities (*check one if applicable*):

A **corporation** (other than a domestic bank as defined in Section 3(a)(2) of the Securities Act, savings and loan association or other institution as referenced in Section 3(a)(5)(A) of the Securities Act, or any equivalent foreign institution), **partnership**, Massachusetts or similar **business trust**, or a **not-for-profit organization** described in section 501(c)(3) of the Internal Revenue Code; or

An **employee benefit plan** within the meaning of Title I of the Employee Retirement Income Security Act of 1974 ("ERISA"); or

A **plan established and maintained by a state**, its political subdivisions, or any agency or instrumentality of a state or its political subdivisions, for the benefit of its employees; or

A **trust fund** whose trustee is a bank or trust company and whose participants are exclusively plans of the types identified in the two preceding paragraphs, except trust funds that include as participants individual retirement accounts or H.R. 10 plans; or

An **insurance company** as defined in section 2(a)(13) of the Securities Act; or

A **Small Business Investment Company** licensed by the U.S. Small Business Administration under section 301(c) or (d) of the Small Business Investment Act of 1958; or

A **business development company** as defined in section 202(a)(22) of the Investment Advisers Act of 1940 ("Advisers Act"); or



- A domestic **bank** as defined in Section 3(a)(2) of the Securities Act, savings and loan association or other institution as referenced in Section 3(a)(5)(A) of the Securities Act, or any equivalent foreign institution, which has an audited net worth of at least \$25 million as demonstrated in its latest annual financial statements; or
- An **investment adviser** registered under the Advisers Act; or
- An **investment company** registered under the Investment Company Act of 1940 ("Investment Company Act") or any **business development company** as defined in section 2(a)(48) of the Investment Company Act.

2. If item 1 above does not apply, Client meets the definition of qualified institutional buyer because Client (*check one if applicable*):

- Is a **dealer** registered with the U.S. Securities and Exchange Commission ("SEC") and owns and invests on a discretionary basis at least \$10 million in securities of issuers that are not affiliated with Client; or
- Is a **dealer** registered with the SEC that will only purchase Rule 144A Securities in transactions in which it acts as a riskless principal (as defined in Rule 144A) on behalf of qualified institutional buyers; or
- Is an **investment company** registered under the Investment Company Act, which, together with one or more registered investment companies having the same or an affiliated investment advisor, owns at least \$100 million of "eligible securities"; or
- Is an entity, all the equity owners of which are qualified institutional buyers.

Client further certifies that it will promptly advise Manager if Client ceases to be a qualified institutional buyer.

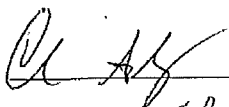
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"**Eligible securities**" includes all securities within the meaning of the Securities Act, except: (i) securities of issuers that are affiliated with Client (or if Client is an investment company, are securities issued by a member of its "family of investment companies"); (ii) bank deposit notes and certificates of deposit; (iii) loan participations; (iv) repurchase agreements; (v) securities owned but subject to a repurchase agreement; and (vi) currency, interest rate and commodity swaps.

The value of "eligible securities" must be calculated based on cost (or on the basis of market value if (a) the entity reports its securities holdings in its financial statements on the basis of their market value and (b) no current information with respect to the cost of those securities has been published). Furthermore, securities owned by subsidiaries of the entity that are consolidated with the entity in its financial statements prepared in accordance with generally accepted accounting principles may be included if the investments of such subsidiaries are managed under the direction of the entity, except that, unless the entity is a reporting company under Section 13 or 15(d) of the Securities Exchange Act of 1934, securities owned by such subsidiaries may

not be included if the entity itself is a majority-owned subsidiary that would be included in the consolidated financial statements of another enterprise.

**Kentucky Retirement Systems Insurance Trust Fund**

By: 

Date: 12/11/2014

Name: Chris Schelling

Title: Deputy CEO

## Certification for Participation in Initial Public Offerings

Kentucky Retirement Systems Insurance Trust Fund ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement.

Do the Investment Guidelines for the Account allow Manager to purchase equity securities offered through initial public offerings ("IPOs")?

Yes

No

If "Yes," please proceed to the next question below.

If "No," the remainder of this certification is not applicable to the Account.

Financial Industry Regulatory Authority, Inc. ("FINRA") Rule 5130 generally prohibits FINRA member firms from selling securities from IPOs to any account in which a "restricted person" has a beneficial interest, unless the member has met the conditions set forth in Rule 5130. FINRA Rule 5131 prohibits member firms, under certain conditions, from selling securities from IPOs to any account in which a "covered person" has a beneficial interest.

If you want Manager to have the ability to allocate IPO securities to your Account, please indicate below, if applicable, that (a) there are no "restricted persons" that have a beneficial interest in the Account or that the Account meets one of Rule 5130's General Exemptions, and (b) there are no "covered persons" that have a beneficial interest in the Account or that the Account meets one of Rule 5131's General Exemptions. **Schedule 1 contains a definition of "restricted person" and "covered person" and lists the General Exemptions from the prohibitions of Rule 5130 and Rule 5131 in order to assist Client in making this determination.**

Does Client hereby (i) certify that the Account is eligible to purchase IPO securities and (ii) authorize Manager to purchase IPO securities in accordance with Manager's IPO allocation procedures? If "Yes," please check the box next to the appropriate representation below regarding Client's ability to purchase IPO securities. If "No," the remainder of this certification is not applicable to the Account.

Yes

No

In connection with FINRA Rule 5130 and with Client's delegation to Manager of discretionary authority over the Account, Client hereby represents and warrants to Manager as follows (*check the applicable box*):

The Account is eligible to purchase IPO securities because no "restricted person" holds a beneficial interest in the Account.

The Account is eligible to purchase IPO securities because it meets the General Exemption described in subparagraph \_\_\_\_ in Schedule 1.

- If the Account meets the General Exemption described in subparagraph 4 in Schedule 1 because Client has implemented procedures to reduce the beneficial interests of all "restricted persons" with respect to IPO securities to – in the



## SCHEDULE 1

### Definitions and General Exemptions

The following are "restricted persons":

(A) FINRA Members or other broker/dealers;

(B) Broker/Dealer Personnel

- (i) Any officer, director, general partner, associated person, or employee of a member or any other broker/dealer (other than a limited business broker/dealer);
- (ii) Any agent of a member or any other broker/dealer (other than a limited business broker/dealer) that is engaged in the investment banking or securities business; or
- (iii) An immediate family member of a person specified in subparagraph (B)(i) or (ii) if the person specified in subparagraph (B)(i) or (ii):
  - a. materially supports, or receives material support from, the immediate family member;
  - b. is employed by or associated with the member, or an affiliate of the member, selling the new issue to the immediate family member; or
  - c. has an ability to control the allocation of the new issue.

(C) Finders and Fiduciaries

- (i) With respect to the security being offered, a finder or any person acting in a fiduciary capacity to the managing underwriter, including, but not limited to, attorneys, accountants and financial consultants; and
- (ii) An immediate family member of a person specified in subparagraph (C)(i) if the person specified in subparagraph (C)(i) materially supports, or receives material support from, the immediate family member.

(D) Portfolio Managers

- (i) Any person who has authority to buy or sell securities for a bank, savings and loan institution, insurance company, investment company, investment advisor, or collective investment account.
- (ii) An immediate family member of a person specified in subparagraph (D)(i) that materially supports, or receives material support from, such person.

(E) Persons Owning a Broker/Dealer

- (i) Any person listed, or required to be listed, in Schedule A of a Form BD (other than with respect to a limited business broker/dealer), except persons identified by an ownership code of less than 10%;
- (ii) Any person listed, or required to be listed, in Schedule B of a Form BD (other than with respect to a limited business broker/dealer), except persons whose listing on Schedule B relates to an

ownership interest in a person listed on Schedule A identified by an ownership code of less than 10%;

- (iii) Any person listed, or required to be listed, in Schedule C of a Form BD that meets the criteria of subparagraphs (E)(i) and (E)(ii) above;
- (iv) Any person that directly or indirectly owns 10% or more of a public reporting company listed, or required to be listed, in Schedule A of a Form BD (other than a reporting company that is listed on a national securities exchange or other than with respect to a limited business broker/dealer);
- (v) Any person that directly or indirectly owns 25% or more of a public reporting company listed, or required to be listed, in Schedule B of a Form BD (other than a reporting company that is listed on a national securities exchange or other than with respect to a limited business broker/dealer);
- (vi) An immediate family member of a person specified in subparagraphs (E)(i)-(v) unless the person owning the broker/dealer:
  - a. does not materially support, or receive material support from, the immediate family member;
  - b. is not an owner of the member, or an affiliate of the member, selling the new issue to the immediate family member; and
  - c. has no ability to control the allocation of the new issue.

**The following are "covered persons":**

- (A) An executive officer or director of a public company or a covered non-public company, or a person materially supported by such executive officer.
  - (i) A "public company" is any company that is registered under Section 12 of the Securities Exchange Act of 1934 or files periodic reports pursuant to Section 15(d) thereof.
  - (ii) A "covered non-public company" is any non-public company satisfying the following criteria: (i) income of at least \$1 million in the last fiscal year or in two of the last three fiscal years and shareholders' equity of at least \$15 million; (ii) shareholders' equity of at least \$30 million and a two-year operating history; or (iii) total assets and total revenue of at least \$75 million in the latest fiscal year or in two of the last three fiscal years.
  - (iii) "Material support" means directly or indirectly providing more than 25% of a person's income in the prior calendar year. Persons living in the same household are deemed to be providing each other with material support.

**General Exemptions**

The general prohibitions of Rule 5130 and Rule 5131 shall not apply to sales to and purchases by the following accounts or persons, whether directly or through accounts in which such persons have a beneficial interest:

- (1) An investment company registered under the Investment Company Act of 1940;

- (2) A common trust fund or similar fund as described in Section 3(a)(12)(A)(iii) of the Securities Exchange Act of 1934, provided that:
  - (A) the fund has investments from 1,000 or more accounts; and
  - (B) the fund does not limit beneficial interests in the fund principally to trust accounts of restricted persons;
- (3) An insurance company general, separate or investment account, provided that:
  - (A) the account is funded by premiums from 1,000 or more policyholders, or, if a general account, the insurance company has 1,000 or more policyholders; and
  - (B) the insurance company does not limit the policyholders whose premiums are used to fund the account principally to restricted persons, or, if a general account, the insurance company does not limit its policyholders principally to restricted persons;
- (4) An account if the beneficial interests of:
  - (A) for purposes of Rule 5130, restricted persons do not exceed, in the aggregate, 10% of such account;
  - (B) for purposes of Rule 5131, cover persons of a particular company do not exceed, in the aggregate, 25% of such account;
- (5) A publicly traded entity (other than a broker/dealer or an affiliate of a broker/dealer where such broker/dealer is authorized to engage in the public offering of new issues either as a selling group member or underwriter) that:
  - (A) is listed on a national securities exchange; or
  - (B) is a foreign issuer whose securities meet the quantitative designation criteria for listing on a national securities exchange;
- (6) An investment company organized under the laws of a foreign jurisdiction, provided that:
  - (A) the investment company is listed on a foreign exchange or authorized for sale to the public by a foreign regulatory authority; and
  - (B) no person owning more than 5% of the shares of the investment company is a restricted person;
- (7) An ERISA benefits plan that is qualified under Section 401(a) of the Internal Revenue Code, provided that such plan is not sponsored solely by a broker/dealer;
- (8) A state or municipal government benefits plan that is subject to state and/or municipal regulation;
- (9) A tax exempt charitable organization under Section 501(c)(3) of the Internal Revenue Code; or
- (10) A church plan under Section 414(e) of the Internal Revenue Code.

## Employee Benefit Plans and Individual Retirement Accounts

Kentucky Retirement Systems Insurance Trust Fund ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement.

Manager is a Qualified Professional Asset Manager (a "QPAM"), as defined in Prohibited Transaction Exemption 84-14, as amended ("PTE 84-14"). As such, it may engage in certain transactions with certain of Client's parties in interest on behalf of the Account.

Mindful of PTE 84-14, Client hereby provides the name of each party in interest (within the meaning of Section 3(14) of ERISA) that has, or whose "affiliate" (as defined below) has, the authority to appoint, terminate or negotiate the terms of the Agreement with Manager (attach a list with additional names if necessary):

<u>Name</u>	<u>Employed by and/or Director of</u>	<u>Position/Title</u>
1. David Peden	Kentucky Retirement Systems	CIO
2. William Thielen	"	Executive Director
3. Chris Schelling	"	Deputy CIO
4. Brent Aldridge	"	Director of PE
5. Joe Gilbert	"	Director of Equity
6.		

**Client shall promptly provide an updated list to Manager in the event that there are any changes to this list.**

For purposes of this certification, an "affiliate" of a party in interest is:

- any person directly or indirectly, through one or more intermediaries, controlling, controlled by, or under common control with the party in interest;
- any corporation, partnership, trust or unincorporated enterprise of which the party in interest is an officer, director, 10% or more partner or "highly compensated employee" (as defined in the Section 4975(e)(2)(H) of the Code); and
- any director of the party in interest or any employee of the party in interest who is a "highly compensated employee" (as defined in Section 4975(e)(2)(H) of the Code) or who has direct or indirect authority, responsibility or control regarding the custody, management or disposition of plan assets involved in the transaction. A named fiduciary (within the meaning of Section 401(a)(2) of ERISA) of a plan with respect to the plan assets involved in the transaction and an employer any of whose employees are covered by the plan will also be considered affiliates with respect to each other if such employer or an affiliate of such employer has the authority, alone or shared with others, to appoint or terminate the named fiduciary or otherwise negotiate the terms of the named fiduciary's employment agreement.

### Kentucky Retirement Systems Insurance Trust Fund

By: Chris Schelling

Name: Chris Schelling

Date: 12/11/2014

Title: Deputy CIO



**Certification for Derivatives Trading**

**Kentucky Retirement Systems Insurance Trust Fund** ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement.

Do the Investment Guidelines for the Account allow Manager to trade exchange traded and over-the-counter derivative contracts, securities and instruments, including those listed below ("Permitted Derivatives")?

- Yes. If the Investment Guidelines only permit trading in certain types of the derivatives listed below, please strike the types that are not permitted.
- No

Type of Contract	Underlying Index, Security, Commodity, Rate or Event
<b>EXCHANGE TRADED CONTRACTS</b>	
- Futures	Stocks
- Options	Fixed Income Instruments
- Other Exchange Traded Contracts	Currencies Interest Rates
<b>OVER-THE-COUNTER CONTRACTS</b>	
- Swaps (Includes, without limitation, credit default swaps and other credit derivatives)	One or more rates, currencies, commodities, equity securities or other equity instruments, debt securities or other debt instruments, economic indices or measures of economic risk or value, or other benchmarks against which payment or deliveries are to be made
- Forwards	
- Options	

If "No," the remainder of this certification is not applicable to the Account.

If "Yes," Client hereby confirms and agrees with Manager that:

1. Subject to the terms and conditions of the Agreement and the Investment Guidelines, Manager may negotiate and enter into Permitted Derivatives as agent on behalf of Client. Client shall act as the principal in any Permitted Derivative entered into by Manager for the Account, and Manager shall not assume any liability for performance of such Permitted Derivative. Manager shall provide the Custodian with proper instructions as to the execution, performance, settlement and termination of any Permitted Derivative. However, this certification shall not be construed to authorize Manager to take custody of any cash, securities, instruments or other assets received or delivered under the terms of any Permitted Derivative entered into for the Account.

2. Manager may establish a trading account for Permitted Derivatives ("Derivatives Trading Accounts") with a broker, dealer, futures commission merchant, bank or investment bank

("Brokers") entered into on Client's behalf. Such Brokers are authorized to act on instructions from Manager, including but not limited to instructions with respect to transferring money, securities or other property to or from an account held by such Broker on behalf of the Client. Manager may further negotiate, execute and deliver, in Client's name as Client's agent or attorney-in-fact, all agreements, documents and other instruments needed to enter into Permitted Derivatives ("Derivatives Documentation"), including without limitation:

- (a) Derivatives Trading Account Applications and Agreements;
- (b) Futures Customer Agreements;
- (c) Exchange-Traded Options Agreements;
- (d) Margin and Netting Agreements;
- (e) Master Agreements, Schedules, Credit Support Agreements, Confirmations and other agreements based on forms published by the International Swap Dealers Association;
- (f) Electronic Trading Agreements; and
- (g) Give-up Agreements.

The Client understands that it will be bound by the terms of any agreement executed by the Manager on the Client's behalf in accordance with the terms of this certification to the same extent as if the Client had executed such agreement directly.

3. For the purpose of entering into Derivatives Documentation, Client hereby represents and warrants to Manager that on the date Manager enters into any Derivatives Documentation or a Permitted Derivative on Client's behalf:

- (a) Client will be duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing;
- (b) Client (i) will have the power to authorize Manager to execute and deliver any Derivatives Documentation on its behalf, (ii) will have the power to perform its obligations under any Derivatives Documentation or Permitted Derivative, and (iii) will have taken all necessary action to authorize such execution, delivery and performance;
- (c) Such execution, delivery and performance will not violate or conflict with any law applicable to Client, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any contractual restriction binding on or affecting it or any of its assets; and
- (d) All governmental and other consents that are required to have been obtained by Client with respect to any Derivatives Documentation will have been obtained and will be in full force and effect and all conditions of any such consents will have been complied with; Client's obligations under any Derivatives Documentation will constitute its legal, valid and binding obligations, enforceable in accordance with its terms (subject to applicable laws and, as to enforceability, to equitable principles of general application).

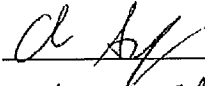
- (e) Client is an "eligible contract participant" as that term is defined in Section 1(a)(12) of the Commodity Exchange Act, as amended. Client is aware that it is exposed to losses with respect to Permitted Derivatives. Accordingly, each time Manager enters into a Permitted Derivative on behalf of Client, Client will have the financial ability to bear the economic risk of such Permitted Derivative, and adequate means to provide for its current needs and personal or other contingencies. In addition, Client is an "accredited investor" as that term is defined in Rule 501 under the Securities Act of 1933, as amended.

Client will promptly notify Manager in writing of any material change in or qualification to any of these representations.

4. Manager may provide copies of this certification to others as proof of its authority to enter into Permitted Derivatives, open Derivatives Trading Accounts, and execute and deliver Derivatives Documentation, as agent on behalf of Client. Upon request, Client will confirm the continued validity and effectiveness of this certification to any person or entity that has entered, or proposes to enter, into a Permitted Derivative with Manager for the Account. The authorizations in this certification will remain in effect until terminated by provision of written notice to Manager.

5. All capitalized terms contained herein and not otherwise defined herein shall have the meaning assigned to them in the Agreement.

**Kentucky Retirement Systems Insurance Trust Fund**

By:   
Name: Chris Schellmy

Date: 12/11/2014  
Title: Deputy CIO

## Certification for Trading Certain Agency Mortgage-Backed Securities

Kentucky Retirement Systems Insurance Trust Fund ("Client") has hired Nuveen Asset Management, LLC ("Manager") to manage an account (the "Account") pursuant to an investment management agreement (the "Agreement").

Do the Investment Guidelines for the Account allow Manager to trade mortgage-backed or asset-backed securities ("Permitted MBS Transactions")?

Yes

No

If "No," the remainder of this certification is not applicable to the Account.

If "Yes," pursuant to recent regulatory changes governing the posting of collateral in connection with Permitted MBS Transactions<sup>1</sup>, Client hereby confirms and agrees with Manager:

1. Subject to the terms and conditions of the Agreement and the Investment Guidelines, Manager may negotiate and enter into Permitted MBS Transactions as agent on behalf of Client. Client shall act as the principal in any Permitted MBS Transaction entered into by Manager for the Account, and Manager shall not assume any liability for performance of such Permitted MBS Transaction. Manager shall provide the Custodian with proper instructions as to the execution, performance, settlement and termination of any Permitted MBS Transaction. However, this Exhibit shall not be construed to authorize Manager to take custody of any cash, securities, instruments or other assets received or delivered under the terms of any Permitted MBS Transaction entered into for the Account.

2. Manager may establish a trading account for Permitted MBS Transactions ("MBS Trading Accounts") with a broker, dealer, bank or investment bank ("Brokers") entered into on Client's behalf. Such Brokers are authorized to act on instructions from Manager, including but not limited to instructions with respect to transferring money, securities or other property to or from an account held by such Broker on behalf of the Client. Manager may further negotiate, execute and deliver, in Client's name as Client's agent or attorney-in-fact, all agreements, documents and other instruments needed to enter into Permitted MBS Transactions ("MBS Transaction Documentation"), including without limitation:

- (a) MBS Trading Account Applications and Agreements;
- (b) Margin and Netting Agreements;
- (c) Master Agreements, Schedules, Confirmations and other agreements, including a Master Securities Forward Transaction Agreement, based on forms published by the Securities Industry and Financial Markets Association;
- (d) Electronic Trading Agreements; and

<sup>1</sup> The U.S. Treasury Market Practices Group ("TMPG") and the Financial Industry Regulatory Authority ("FINRA") have recently recommended that forward-settling agency mortgage-backed securities transactions be margined in order to manage counterparty risk. In order to comply with the new regulations, all parties to these transactions must enter into written master trading agreements that will govern the posting of collateral and other margining activity.

(e) Give-up Agreements.

The Client understands that it will be bound by the terms of any agreement executed by the Manager on the Client's behalf in accordance with the terms of this Exhibit to the same extent as if the Client had executed such agreement directly.

4. For the purpose of entering into MBS Transaction Documentation, Client hereby represents and warrants to Manager that on the date Manager enters into any MBS Transaction Documentation or a Permitted MBS Transaction on Client's behalf:

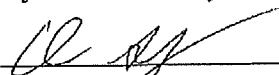
- (a) Client will be duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing;
- (b) Client (i) will have the power to authorize Manager to execute and deliver any MBS Transaction Documentation on its behalf, (ii) will have the power to perform its obligations under any MBS Transaction Documentation or Permitted MBS Transaction, and (iii) will have taken all necessary action to authorize such execution, delivery and performance;
- (c) Such execution, delivery and performance will not violate or conflict with any law applicable to Client, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any contractual restriction binding on or affecting it or any of its assets; and
- (d) All governmental and other consents that are required to have been obtained by Client with respect to any MBS Transaction Documentation will have been obtained and will be in full force and effect and all conditions of any such consents will have been complied with; Client's obligations under any MBS Transaction Documentation will constitute its legal, valid and binding obligations, enforceable in accordance with its terms (subject to applicable laws and, as to enforceability, to equitable principles of general application).
- (e) Client is aware that it is exposed to losses with respect to Permitted MBS Transactions. Accordingly, each time Manager enters into a Permitted MBS Transaction on behalf of Client, Client will have the financial ability to bear the economic risk of such Permitted MBS Transaction, and adequate means to provide for its current needs and personal or other contingencies.
- (f) Client is aware that certain MBS Transaction Documentation may contain a waiver of immunities and so authorizes Manager to enter into such MBS Transaction Documentation on its behalf that waive, to the fullest extent permitted by law, any immunity (on the basis of sovereignty or otherwise) from (i) suit; (ii) jurisdiction; (iii) relief by way of injunction, order for specific performance or for recovery of property; (iv) attachment of assets; and (v) execution or enforcement of any judgment to which Client might otherwise be entitled in any proceeding relating to such MBS Transaction Documentation.

Client will promptly notify Manager in writing of any material change in or qualification to any of these representations.

4. Manager may provide copies of this Exhibit to others as proof of its authority to enter into Permitted MBS Transactions, open MBS Trading Accounts, and execute and deliver MBS Transaction Documentation, as agent on behalf of Client. Upon request, Client will confirm the continued validity and effectiveness of this Exhibit to any person or entity that has entered, or proposes to enter, into a Permitted MBS Transaction with Manager for the Account. The authorizations in this Exhibit will remain in effect until terminated by provision of written notice to Manager.

5. All capitalized terms contained herein and not otherwise defined herein shall have the meaning assigned to them in the Agreement.

**Kentucky Retirement Systems Insurance Trust Fund**

By: 

Date: 12/11/2014

Name: Chris Scheffly

Title: Deputy CEO