

**KENTUCKY RETIREMENT SYSTEMS
INVESTMENT MANAGEMENT AGREEMENT**

THIS INVESTMENT MANAGEMENT AGREEMENT (the "Agreement" or "Contract") is entered into as of July 1, 2012 by and between NISA Investment Advisors, L.L.C. ("Manager"), and Kentucky Retirement Systems ("KRS" or "Systems"). This Agreement is an amendment and restatement of the investment management agreement effective October 7, 2008 between KRS and Manager with respect to the management of a portion of KRS' assets held from time to time in one or more investment accounts, and on and after July 1, 2012 shall constitute the sole agreement between KRS and Manager in connection with such accounts.

WITNESSETH:

WHEREAS, KRS desires to appoint Manager as investment manager with authority to manage and control a portion of KRS' assets held from time to time in one or more investment accounts (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 continues the appointment of 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 will act as a "fiduciary" of KRS, as that term is defined the U.S. Employee Retirement Income Security Act of 1974, as amended ("ERISA") and Section 4975(c)(3) of the 1986 Internal Revenue Code and the rules and regulations promulgated thereunder, with respect to the investment and management of the assets in the Account. KRS and Manager acknowledge that although the Account is not subject to ERISA, KRS administers the Account in certain respects as though it were subject to ERISA as set forth in this Agreement. Any of KRS' or Manager's representations, warranties, agreements or acknowledgments in this Agreement that refer to ERISA shall be interpreted or applied as though the Account were subject to ERISA.

2. **Custody of Account Assets.** KRS has established or will establish the Account 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' 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' 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, nor shall the Manager have any responsibility or

liability with respect to the custody or physical control of the assets of 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 and Guidelines. 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; provided, that Manager will be given sufficient time to come into compliance with such modification. In the event the Manager takes the position that the terms of the Guidelines conflict with those of the Investment Policy, the Manager shall promptly notify KRS of such conflict so that the conflict may be resolved and shall refrain from taking actions that would give rise to the conflict until such conflict has been resolved. Pending resolution of the conflict, the Guidelines shall control. The Manager will attempt to obtain the "most favorable combination of price and execution" with respect to all Account transactions.

4. **Brokerage.** In selecting brokers or dealers, the Manager shall comply with its Brokerage Policy. Manager has read the Investment Brokerage Policy of the Systems (as contained on the Systems web site as of June 29, 2012). In the event of any conflict between the Manager's Brokerage Policy and the Investment Brokerage Policy of the Systems, the Manager's Brokerage Policy shall govern. In selecting brokers or dealers, the Manager shall use reasonable efforts to seek the most favorable combination of price and execution, and may consider the fact that a broker or dealer has furnished, or has agreed to furnish in the future, statistical, research or other information or services which generally enhance the Manager's investment research and portfolio management capability for investing the assets. Except as already disclosed on Manager's SEC Form ADV, 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)(iv).

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 (of whom there are none at the time of execution of this Agreement), (b) is affiliated with the Manager or (c) is affiliated with an investment consultant that provides non-brokerage related services to KRS as notified to the Manager by written notice from KRS. 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 an affiliate of 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. KRS may amend the Performance Objectives by providing written notice to Manager. Neither the Manager nor any of its officers, directors or employees makes any representation or warranty that the Account will not suffer a loss.

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.

7. **Benefit of More Favorable Terms.** For so long as this Contract remains effective, the Manager shall promptly advise Systems of any fee agreement or arrangement between the Manager and any of its clients with similar investment guidelines, asset size, account type, and services rendered that contains more favorable terms than those set forth herein; provided that any client of the Manager with a fee schedule proposed to that client prior to January 1, 2008 shall not be considered for purposes of the foregoing representation. Systems shall automatically receive the benefit of any such more favorable terms at Systems' option

8. **Placement Agents.** The Manager agrees that, to the extent applicable, it will remain in compliance with System's Statement of Disclosure and Placement Agent policy, which is attached hereto as Attachment IV. The Manager represents that the Statement of Disclosure and Placement Agents - Manager Questionnaire" that is executed by Manager and attached hereto as Attachment IV is accurate.

In addition, the Manager represents and warrants that:

(a) No fees, bonuses, compensation, gratuities including placement fees and finder's fees, have been promised or provided by or on behalf of the Manager or any of its agents or affiliates to any placement agent, finder or other person or entity (other than Manager's bona fide employees) in connection with KRS's investment, or which could be charged to KRS directly or indirectly. (A bona fide employee of the Manager is an employee who has responsibilities materially broader than those related to KRS, and whose employment is anticipated to be long-term.)

(b) None of (i) the Manager, (ii) any placement agent, solicitor, broker-dealer or other agent engaged by the Manager pursuant to a written agreement, or (iii) any other affiliate of the Manager, has a commercial, investment, or business or other similar relationship with a Covered Person, nor has it engaged in any financial or other transaction with a Covered Person. "Covered Person" means: (i) any Enumerated Person, (ii) any person known to the Manager to be an immediate family member of an Enumerated Person (*i.e.*, a spouse, parent, child or sibling), and (iii) any affiliate of any of the foregoing known to the Manager. "Enumerated Person" means (i) any Member of the KRS Board of Trustees as of the date of the execution of this Agreement (see <https://kyret.ky.gov/index.php/about/trustees>), and (ii) any other person known to the Manager to be a fiduciary, trustee, staff member, or employee of KRS.

(c) Neither the Manager nor any affiliate or agent of the Manager, has offered, promised, or provided, directly or indirectly, anything of economic value to any Covered Person in connection with KRS's investment. Items of economic value include (by way of example, but not by way of limitation) any economic opportunity, future employment, gift, loan, gratuity, entertainment, meals, campaign contribution, finder's fee, placement fee, discount, travel or trip, favor, or service.

(d) Neither the Manager nor any of its affiliates has been convicted of bribery or attempting to bribe an officer or employee of the Commonwealth of Kentucky, nor have any of them made an admission of guilt of such conduct.

(e) The term "in connection with KRS's investment," as used in this paragraph, includes (i) obtaining an introduction to KRS or any of KRS's officers or employees, and (ii) obtaining a favorable recommendation with respect to KRS's investment. The term "agents," as used in this paragraph, includes anyone who is acting at the behest of any of the persons identified above. An "affiliate" of, or a person "affiliated" with, a specified person, is a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the person specified.

(f) The Manager agrees to provide KRS notice within 10 business days if it becomes aware that any of the provisions in this paragraph are not true and accurate, either on the date on which made or on any subsequent date.

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 any 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.

In addition, Manager shall provide reasonable assistance to the Custodian in connection with any claims that the Custodian elects to pursue on behalf of KRS (e.g., in connection with bankruptcy of an issuer); provided, however, the Manager shall not, and shall not have any duty, responsibility or authority to act on behalf of KRS or any other person in respect of any (i) class action litigation in which KRS or any other person may be a party or a potential party, or (ii) the bankruptcy or liquidation (or similar proceeding) of the issuer of any security held in the Account. In the event that Manager receives any written notices regarding such an action, it shall promptly notify KRS and the Custodian and forward such written notice to the Custodian.

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 unless the prohibited transaction meets the conditions of one or more statutory, regulation-based or class prohibited transaction exemptions.

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's 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. **Services to Other Clients; Acting on Illegal Information.** The Manager renders similar services to other persons and concerns and the advice given and timing of the Manager's services to Systems may not necessarily relate to, and may differ from, the advice given and/or timing of the Manager's services to such other persons or concerns. The Manager shall not place orders to purchase and/or sell any assets on the basis of any material non-public 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 Fund'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 in excess of a 2% difference in market value in the valuation of individual Account assets that are not reconciled.

16. **Notification of Tax Liabilities.** The Manager shall promptly notify KRS if, at any time, the Manager is notified that KRS is required to pay taxes to any government or to file any returns or other tax documents with respect to income earned on the Account assets. KRS understands and acknowledges that the Manager does not provide legal or tax advice, and KRS is not relying on the Manager for legal or tax advice

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 a registered investment adviser as defined in the Investment Advisers Act of 1940, as amended ("the Advisers Act"), and therefore eligible to act as an investment manager under ERISA, is registered in 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;
 - ii) An errors and omissions policy in the minimum amount of \$10,000,000 with a maximum deductible of \$1,000,000 per claim. The policy shall cover, at a minimum, losses caused by errors, omissions, or negligent acts of the Manager. In the event Manager's policy is written on a "claims made" form, Manager shall, upon written request of Systems, furnish evidence that the liability coverage has been maintained for at least five (5) years after this Contract's expiration or cancellation, either by submitting renewal policies with a retroactive date of not later than the date work commenced under this Contract, or by evidence that Manager has purchased an "extended reporting period endorsement" that will apply to any and all claims arising from work performed under this contract. Upon request of Systems, Manager shall provide copies of renewal policies or Certificates of Insurance on an annual basis to Systems so that continuous coverage is provided during the term of this Contract.
- g) Manager will immediately notify KRS by telephone (at the telephone number set forth below), upon the receipt of information indicating possible material loss in connection with the Account assets. Such telephonic notice shall be followed by written notice to KRS within twenty-four hours. For purposes of this notice, a material loss shall mean a loss which causes (or, in the Manager's determination, is likely to cause) the Account to

decline in value by an amount that exceeds the "permitted deviation" from the index which the Account is designed to track (such index being defined in the Guidelines). For purposes of this notice, the "permitted deviation" shall equal 0.50% per day, or 2.00% month-to-date, and shall incorporate anticipated cash flows;

- h) It has disclosed to KRS directly, any material litigation pending, and will notify KRS of all future actions against the Manager relevant to the Manager's performance of its duties under this Agreement or that results in the material loss of the Manager's business revenue or clients. It also has, and will in the future, promptly disclose to KRS directly and to the extent permitted by law, any pending or future non-routine investigation of the Manager by the SEC or any other regulatory authority that could impact Manager's reputation or ability to perform its duties as an investment adviser to the Account;
- i) Manager will promptly notify KRS in writing in the event any of these representations is no longer true;
- j) The Manager will make all required filings with all applicable regulatory agencies within all prescribed deadlines on behalf of its investments of the assets in the Account; and
- k) 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 reports in the format specified by KRS upon their reasonable request.

- a) The Manager shall provide the following reports monthly (either 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 as appropriate. A summary of purchases & sales (Account activity), sector weights and other appropriate Account characteristics (e.g. convexity and effective duration, P/E, etc.) for both the benchmark and the Account; and
 - ii) Reports tracking market value of each holding (including par value).
- b) The Manager shall provide quarterly reports within thirty (30) calendar days of calendar quarter-end:
 - i) Reports reviewing portfolio performance (as above) and the Manager's current investment strategy and outlook;
 - ii) A summary of the proxy votes for the quarter, if any;
 - 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, the perceived market costs (market

- impact) if any, and the dollar volume executed through each broker/dealer, and a commission analysis report;
- v) A synopsis of the key investment decisions made by the Manager, the 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, any amendments thereto as available;
 - ii) A copy of the Manager's annual report and SAS 70 (if applicable);
 - iii) A Compliance Certificate provided in Attachment V;
 - iv) A report on the Manager's use of soft dollars earned and expended resulting from its duties under this Agreement. The report shall include the products and services obtained through soft dollar arrangements and their approximate value. 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 affiliates' conflict of interest policies and any situations where the Manager allows a conflict of interest to exist (e.g., because the Manager determines that such conflict situations are not prohibited under its policies); and
 - iii) Any other such reports regarding the Account as KRS or the Custodian may reasonably request.
- e) The Manager in the maintenance of its records does not assume responsibility for the accuracy of any information furnished by KRS or any other person, firm or corporation. KRS understands and acknowledges that: (i) any reports supplied by the Manager to KRS are intended to be used by KRS for its evaluation of the Manager's portfolio management services; and (ii) the Manager is not the official record keeper or pricing agent for the Account.

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 adversely affect 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 manager, any material litigation instituted against the Manager relevant to the Manager's performance of its duties under this Agreement, any material loss of business revenue or clients or any change in the members of its Investment Committee. It shall promptly notify KRS of any conflicts of interest (as such term is commonly understood under the Advisers Act or ERISA) arising from Manager and its relationship with any entity. Manager agrees to provide KRS a copy of any amendment to its Form ADV that includes additional conflicts of interest or discloses material changes to its conflict of interest policies, procedures or controls within 10 business days of the day when Manager files such amendment with the SEC, along with a summary of any material changes to the conflict of interest policies, procedures or controls that could be materially adverse to the services provided to the Account.

21. **KRS Representations.** KRS hereby represents to Manager that:

- a) The execution and performance of this Agreement and the making of investments of 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, or 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 any statute, rule, regulation or order of any governmental body;
- b) KRS has duly executed and delivered this Agreement, and this Agreement constitutes the legal, valid and binding agreement and obligation of KRS, enforceable against KRS 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) The Guidelines are consistent with Systems' investment objectives and with the Investment Policy and are appropriate for Systems' financial situation, and Systems has independently determined the strategy and objectives with respect to Systems without relying as a principal basis on the Manager;
- d) Systems is not, and is not acting on behalf of a person who is (i) an employee benefit plan subject to Title I of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), including without limitation, the provisions of Section 406 of ERISA relating to "prohibited transactions," (ii) a plan subject to Section 4975 of the Internal Revenue Code of 1986, as amended, (iii) an entity whose underlying assets include "plan assets" for purposes of ERISA by reason of investments by "benefit plan investors" within the meaning of Section 3(42) of ERISA or any relevant U.S. Department of Labor regulation promulgated under ERISA, or (iv) subject to any other federal, state, local or other law, statute or regulation that is materially similar to Section 406 of ERISA or Section 4975 of the Code;
- e) (i) no person or entity other than KRS has, or will exercise, the discretionary authority to appoint or terminate the Manager or to negotiate this Agreement, and each individual who can exercise such authority is exclusively employed by or associated with KRS or its affiliates; (ii) Systems is independent of, and is not related to, any broker-dealer or any

other financial service provider which might reasonably be expected to be involved in the Account's investment transactions; and (iii) KRS has not taken any action that would contravene Part I(c) of PTE 84-14 and knows of no fact or circumstance that would make such exemption not applicable with respect to any transaction entered into by the Manager in accordance with this Agreement;

- f) Systems shall provide the Manager with timely notice of any and all changes and additions to the legal and regulatory restrictions on Systems that bear on the Manager's activities on Systems' behalf and shall provide the Manager with information to assist the Manager in performing its fiduciary duties hereunder;
- g) Systems is a Qualified Institutional Buyer ("QIB") as that term is defined in Rule 144A of the Securities Act of 1933, as amended. Unless the Manager receives written notice to the contrary, the Manager may rely on this representation for the purpose of investing in securities issued in reliance on the safe harbor provided by Rule 144A. Notwithstanding anything in this Contract to the contrary, the Manager may also certify to sellers that Systems qualifies as a QIB for the purpose of purchasing securities in reliance on Rule 144A;
- h) Except as disclosed by Systems to the Manager in writing, neither Systems nor any affiliate of Systems (within the meaning of Section 407(d) of ERISA) has any securities (including any "marketable obligations" within the meaning of Section 407(e) of ERISA) issued and outstanding that are publicly traded, exempt from registration under Rule 144A or otherwise available for purchase by the Account;
- i) Except as otherwise provided in this Contract or in another written agreement between the Manager and Systems, the Manager shall have no duty, responsibility, or liability in connection with the operation or administration of any assets of Systems, or the selection and designation of the strategy or objectives for Systems, and the Manager shall be responsible for the management of assets of Systems only to the extent specifically provided herein; and
- j) Systems has received a copy of the Manager's current Form ADV Part 2, as required by Rule 204-3 under the Advisers Act.

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 are 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 signed by one or more Authorized Persons and the Manager shall be fully protected in relying on such directions. The Manager shall have no obligation or duty to ascertain or determine whether such appointment, designation, or grant of power is authorized or in compliance with any document relating to the Systems, or applicable state and federal laws. Any written notice, direction or other communication to be given by Systems in connection with the Investment Policy or the Guidelines may be validly given by facsimile or e-mail, and subject to the following requirements: (i) notice by e-mail must be sent to **cs-kentucky@nisa.com**, as updated by the Manager from time to time by written notice to the Systems; and (ii) the receipt of any notice must be acknowledged by an employee of the

Manager (which acknowledgement shall be made promptly by the Manager) by e-mail to the Systems' authorized person, and until an employee of the Manager has acknowledged receipt of any notice, such notice will not be deemed to have been delivered to the Manager.

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. In addition, KRS may not assign this Contract without the written consent of the Manager.

24. **Examination of Records.** The Manager agrees that any authorized representative of KRS shall have access to and the right to examine, 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.

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 advices 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 transaction or cash flows. Electronic mail transmissions may not be used by Manager to terminate this Contract, and but may be used by both parties to amend this Contract or the Guidelines so long as both parties' signatures appear on such amendment):

The Manager at: NISA Investment Advisors, Inc.
150 North Meramec, Suite 640
St. Louis, MO 63105
Attn: General Counsel
facsimile: 314.721.3041
email: Bella.Sanevich@nisa.com

KRS at: T.J. Carlson
Chief Investment Officer
1260 Louisville Rd
Frankfort KY, 40601
facsimile: 502.696.8889

With a copy to: Jennifer Jones
Interim General Counsel
1260 Louisville Rd
Frankfort KY, 40601

Custodian at: The Northern Trust Company
Attn: Ms. Pam Newton, Vice President
50 South LaSalle Street, B-8
Chicago, IL 60675
facsimile: 312.557.2710

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.** 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. The Manager shall preserve the confidentiality of the information except where otherwise required by law or a court of competent jurisdiction, requested by an appropriate regulator, to third parties as contemplated under this Agreement or as agreed between the parties. The Manager shall maintain 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. Unless notified otherwise in writing by the Manager, all information, advice, recommendations, processes, methods and strategies furnished by the Manager to KRS shall be regarded as confidential and for use only by KRS or such persons as KRS may designate, and only in connection with the Account; provided, however, KRS internal investment personnel may use information that they obtain from KRS's relationship with the Manager for the purpose of managing KRS's other investments (e.g., internally managed accounts), with the understanding that KRS will not share such information with any third party investment manager.

Throughout the term of this Agreement, unless notified otherwise in writing by KRS, the Manager is authorized, in its discretion, to disclose the name of KRS, provided such disclosure does not appear in any published advertisement and does not violate any state or federal law. Such disclosure may include, but is not limited to, utilizing KRS' name on any client list the Manager may prepare, provided such list includes a statement that it is not intended as a recommendation.

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 final judgment from a court of competent jurisdiction against the Manager as a result of a breach of contract, the Manager consents to such judgment being set-off against any monies owed but not paid 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".

31. **Duration of Contract.** The period in which subject services are to be performed is from the date first above written through June 30, 2015. At the expiration of each term, a new term of three years shall automatically be come into being, unless one of the parties hereto notifies the other that they do not wish to renew. In addition, termination or cancellation may be effected at any time by either party as provided below.

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 (or at any time thereafter) in the event of the Manager's default or breach of this Agreement.

Following termination notification, KRS shall direct the disposition of the assets of the Account, and Manager shall have no further investment management responsibility for the Account. 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. At the expiration of its term, this Contract may, at the option of the parties hereto, be renewed by negotiation for further periods not to exceed 60 months for each such renewal.

35. **Conflicts of Laws.** Manager hereby certifies Manager is legally capable to enter into this Contract with the Commonwealth of Kentucky and certifies that Manager is not and will not be violating any conflict of interest statute (KRS 121.056 or any other applicable statute in effect on the effective date of this Agreement) or principle by the performance of this Contract. The Manager shall not knowingly 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 KRS Chapter 11A.

36. **Purchasing by the Commonwealth of Kentucky.** The Manager hereby certifies that it will not attempt in any manner to influence any specifications to be restrictive in any way or respect nor will Manager attempt in any way to influence any purchasing of services, commodities or equipment by the Commonwealth of Kentucky. For the avoidance of doubt, the foregoing certification does not apply to the Manager's selection of brokers or dealers, acquisition or sale of securities and other property for the Account or other activities related to this Agreement.

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.** KRS acknowledges and agrees that Manager shall not, and shall not have any duty, responsibility or authority to act on behalf of KRS or any other person in respect of any proxy votes solicited by or with respect to the issuers of securities in which the Account may be invested from time to time.

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

Kentucky Retirement Systems

By: TJ Carlson
Name: TJ Carlson
Title: CIO
Date: 11-20-12

NISA Investment Advisors, L.L.C.

By: William Marshall
Name: William Marshall
Title: President
Date: 11/19/12

ATTACHMENT I

Investment Policy and Procedures



Kentucky Retirement Systems

Statement of Investment Policy

Approved November 2011

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.

Three 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, two 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 equilization 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 the portfolios, but rather, to display a sample of the most common types of contracts and describe the spirit of 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:

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. 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.

Overall, KRS aims to achieve a level of return using a specified index plus a risk premium approach.

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. The overall private equity policy target for the KRS pension plan, on invested capital, is 10%, with the exception of the SPRS plan (7%). The private equity policy target for the KRS Insurance plan, on invested capital is 10% with the exception of the KERS Non-hazardous plan (0%) and the KERS hazardous plan (7%). 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%:

Sub-Category	Target Allocations	Ranges
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").

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

- A. 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. 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 one investment manager to no more than twenty percent (20%) of the total allocation for real estate investments.

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

F. 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.

E. Real Return Investments

Real return investment strategies target a return that exceeds inflation by some premium (e.g. CPI + 3%) based on the risk inherent in the overall program. Real return managers typically invest in a core of "real" return assets, such as TIPS (and Linkers), commodities, infrastructure, timber, oil, energy, MLP's and core real estate, as well as traditional asset classes such as equity and fixed income. Additionally, real return managers attempt to add value by tactically allocating to asset classes they perceive to be undervalued, thus contributing to the "real" return orientation.

To avoid concentration risk, real return investments must be diversified by asset class, and maintain a core portfolio position in real assets, or assets that generally exhibit a positive correlation with inflation over time. Leverage shall not be employed within real return portfolios.

F. 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.

Absolute Return Program

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 absolute return investments. Examples of such investments include, but are not limited to, fund of hedge funds, multi-strategy hedge funds, and single strategy hedge funds. The objective of the absolute return strategy is to preserve capital and deliver positive (absolute) returns under most market conditions. It is anticipated that the returns from this program should largely be uncorrelated to market movements in both the equity and fixed income markets (systematic risk) and primarily be based on manager skill; therefore, helping to diversify the overall KRS portfolio. It is intended that this program be structured so that risk should be specific to each manager, not to the systematic risk of the markets. By emphasizing absolute, rather than relative returns, and utilizing a wider range of investment techniques, such as leverage, short selling and derivatives to achieve their objectives, hedge funds are expected to deliver an absolute return with a risk level between that of stocks and bonds. As such, the objective of the Absolute Return Program is designed to help reduce the volatility of the overall KRS portfolio while seeking to enhance returns in a variety of market environments.

KRS does not consider Absolute Return Strategies to be a separate asset class, but rather a set of investment strategies utilizing public and private securities and instruments.

The list of absolute return strategies that the KRS absolute return portfolio may utilize via direct hedge funds or fund of hedge funds include, but are not limited to:

- **Convertible Arbitrage:** Investment strategy that is long convertible securities and short the underlying equities
- **Distressed Securities:** Invests long (and some short) securities of companies that are in reorganizations, bankruptcies, or some other corporate restructuring
- **Emerging Markets:** Investment in securities of companies in developing or "emerging" countries - primarily long
- **Growth Funds:** Investment in a portfolio or "core" holdings in growth stocks. Many of these portfolios are hedged by shorting and utilizing options
- **Macro Funds:** The investment philosophy is based on shifts in global economies. Derivatives are often used to speculate on currency and interest rate moves
- **Market Neutral:** Strategy that attempts to lockout or "neutralize" market risk
- **Market Timing:** Allocation of assets among investments primarily switching between mutual funds and money markets

- **Merger Arbitrage:** Invests in event-driven situations of corporations, such as leveraged buy-outs, mergers, and hostile takeovers. Managers purchase stock in the firm being taken over and, in some situations, sell short the stock of the acquiring company
- **Multi-strategies:** Specific portions are utilized for separate strategies, e.g., growth, convertible arbitrage, and market neutral
- **Opportunistic:** Investment theme is dominated by events that are seen as special situations or opportunities to capitalize from price fluctuations or imbalances
- **Sector Funds:** Invest in companies in sectors of the economy, e.g., financial institutions or biotechnologies. These funds invest in both long and short securities and will utilize options
- **Short Selling:** Short selling of securities
- **Derivative Funds:** These funds invest in derivative instruments such as futures and options with the aim of achieving high returns
- **Commodity Funds:** These funds invest in shares of companies that operate in commodity related industries or hold physical commodities such as bullion
- **CTA:** A fund that is a Commodity Trading Advisor's account where the trades are generally focused in commodity futures, options, and foreign exchange with a high degree of leverage
- **Short Bias:** A fund that consistently maintains a net short position to the overall market

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.

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 (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 (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 (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.

24. Additional Items

A. Proxy Voting Policy dated May 2011

The Board of Trustees reserves the right to direct the Chief Investment Officer, or designee, to vote proxies in accordance with the Investment Committee Proxy Voting Policy, which is hereby incorporated by reference.

B. Brokerage Policy dated May 2011

The Investment Committee brokerage policy is hereby incorporated by reference.

C. Transactions Procedures Policy dated May 2011

The Investment Committee transaction procedures are hereby incorporated by reference.

D. Securities Litigation Policy and Procedures dated May 2011

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

E. Securities Lending Guidelines dated May 2011

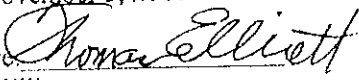
The Investment Committee securities lending policy and procedures are hereby incorporated by reference.

F. Securities Trading Policy for Trustees and Employees dated May 2011

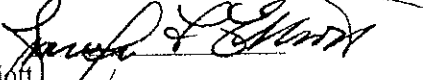
G. Placement Agent Statement of Disclosure dated May 2011

Signatories

As Adopted by the Investment Committee
Date: November 3, 2011

Signature: 
Tommy Elliott
Chair, Investment Committee

As Adopted by the Board of Trustees
Date: November 17, 2011

Signature: 
Jennifer Elliott
Chair, Board of Trustees



Kentucky Retirement Systems

Appendix A: Addendum to the Statement of Investment Policy Pension Fund - Asset Allocation / Benchmark Composite Effective July 1, 2011

This addendum to the investment policy is issued by the Board of Trustees of Kentucky Retirement Systems (Systems) in connection with investing the pension 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 Addendum to the Statement of Investment Policy.

I. Asset Allocation with Benchmarks

KRS Pension Fund - Asset Allocation							
Asset Class	Benchmark	Target					Allowable Range (+/- Target)
		KERS	KERS Hazardous	CERS	CERS Hazardous	SPRS	
US Equity	Russell 3000	20.0%	20.0%	20.0%	20.0%	20.0%	5.0%
Non US Equity	MSCI ACWI Ex-US Standard	20.0%	20.0%	20.0%	20.0%	20.0%	5.0%
Emerging Market	MSCI Emerging Markets	4.0%	4.0%	4.0%	4.0%	4.0%	2.0%
Core Fixed Income	Barclays US Aggregate	10.0%	10.0%	10.0%	10.0%	10.0%	3.0%
High Yield Bonds	Barclays US High Yield	5.0%	5.0%	5.0%	5.0%	5.0%	2.0%
Global Bonds	Barclays Global Agg	5.0%	5.0%	5.0%	5.0%	5.0%	3.0%
Real Estate	NCREIF ODCE	5.0%	5.0%	5.0%	5.0%	5.0%	3.0%
Absolute Return	HFRI Diversified FOF	10.0%	10.0%	10.0%	10.0%	12.0%	3.0%
Real Return	CPI + 300 bps	10.0%	10.0%	10.0%	10.0%	10.0%	3.0%
Private Equity	Russell 3000 + 400 bps (lagged)	10.0%	10.0%	10.0%	10.0%	7.0%	5.0%
Cash	Cit Grp 3-mos Treasury Bill	1.0%	1.0%	1.0%	1.0%	2.0%	-

II. Total Fund Blended Benchmark Composite

Pension Fund Composite		
US Equity	Russell 3000	20.0%
Non US Equity	MSCI ACWI Ex-US Standard	20.0%
Emerging Market	MSCI Emerging Markets	4.0%
Fixed Income	Barclays Universal Index	20.0%
Real Estate	NCREIF ODCE	5.0%
Absolute Return	HFRI Diversified FOF	10.0%
Real Return	CPI + 300 bps	10.0%
Private Equity	Russell 3000 (lagged 1 qtr) + 400 bps	9.9%
Cash	Cit Grp 3-mos Treasury Bill	1.0%

Signatories

As Adopted by the Investment Committee
Date: November 3, 2011

Signature:
Tommy Elliott
Chair, Investment Committee

As Adopted by the Board of Trustees
Date: November 17, 2011

Signature:
Jennifer Elliott
Chair, Board of Trustees



Kentucky Retirement Systems
Appendix B: Addendum to the Statement of Investment Policy
Insurance Fund - Asset Allocation / Benchmark Composite
Effective July 1, 2011

This addendum to the investment policy is issued by the Board of Trustees of Kentucky Retirement Systems (Systems) in connection with investing the 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 Addendum to the Statement of Investment Policy.

I. Asset Allocation with Benchmarks

KERS Insurance Fund Asset Allocation		Target					Allowable Range (+/- Target)
Asset Class	Benchmark	KERS	KERS Hazardous	CERS	CERS Hazardous	SPRS	
US Equity	Russell 3000	28.0%	20.0%	20.0%	20.0%	20.0%	5.0%
Non US Equity	MSCI ACWI Ex-US Standard	27.0%	20.0%	20.0%	20.0%	20.0%	5.0%
Emerging Market	MSCI Emerging Markets	-	4.0%	4.0%	4.0%	4.0%	2.0%
Core Fixed Income	Barclays US Aggregate	15.0%	10.0%	10.0%	10.0%	10.0%	3.0%
High Yield Bonds	Barclays US High Yield	-	5.0%	5.0%	5.0%	5.0%	2.0%
Global Bonds	Barclays Global Agg	-	5.0%	5.0%	5.0%	5.0%	2.0%
Real Estate	NCREIF ODCE	-	5.0%	5.0%	5.0%	5.0%	3.0%
Absolute Return	HFRI Diversified FOF	10.0%	12.0%	10.0%	10.0%	10.0%	3.0%
Real Return	CPI + 300 bps*	20.0%	10.0%	10.0%	10.0%	10.0%	3.0%
Private Equity	Russell 3000 + 400 bps (lagged)	-	7.0%	10.0%	10.0%	10.0%	5.0%
Cash	Cit Grp 3-mos Treasury Bill	-	2.0%	1.0%	1.0%	1.0%	-

*KERS 20% allocation to Real Return includes a 15% dedicated allocation to US TIPS, thus the benchmark for KERS is CPI + 250 bps.

II. Total Fund Blended Benchmark Composite

Insurance Fund Composite		
US Equity	Russell 3000	21.1%
Non US Equity	MSCI ACWI Ex-US Standard	21.0%
Emerging Market	MSCI Emerging Markets	3.4%
Fixed Income	Barclays Universal Index	19.3%
Real Estate	NCREIF ODCE	4.3%
Absolute Return	HFRI Diversified FOF	10.2%
Real Return	CPI + 300 bps	11.4%
Private Equity	Russell 3000 (lagged 1 qtr) + 400 bps	8.2%
Cash	Cit Grp 3-mos Treasury Bill	1.0%

Signatories

As Adopted by the Investment Committee
Date: November 3, 2011

Signature:
Tommy Elliott
Chair, Investment Committee

As Adopted by the Board of Trustees
Date: November 17, 2011

Signature:
Jennifer Elliott
Chair, Board of Trustees

ATTACHMENT II
NISA INVESTMENT ADVISORS, L.L.C.
PORTFOLIO GUIDELINES
KENTUCKY RETIREMENT SYSTEMS ("SYSTEMS") PORTFOLIO
Effective as of July 1, 2012

Unless otherwise noted, all percentages refer to portfolio market value at the time of purchase.

A. BENCHMARK AND DURATION

1. The Benchmark shall be the Barclays U.S. Aggregate Index.
2. The effective modified duration of the portfolio shall be maintained within +/- 0.25 years of the Benchmark. For the purpose of calculating effective modified duration (i.e., option adjusted duration), the PM shall use conventional quantitative techniques.

B. INVESTMENT UNIVERSE

1. The investment universe is limited to fixed income instruments denominated in U.S. dollars that are either registered and publicly traded in the United States or are exempt from registration under Section 3(a), Rule 144A or Regulation S of the Securities Act of 1933. Securities issued by Systems, its subsidiaries or affiliates, are prohibited. Unless otherwise specifically prohibited herein, any security in the Benchmark (including both the forward and backward universe of securities) may be held. The portfolio shall not be leveraged.
2. Investments are subject to the following additional constraints:

Instrument Type	Maximum Exposure	
	Sector	Issuer
U.S. Government Securities	100%	100%
U.S. Treasury securities	100%	100%
Securities issued or guaranteed by an agency of the U.S. Government backed by the full faith and credit of the U.S. Government or securities fully collateralized by the foregoing securities.	60%	30%
Securities issued or guaranteed by a U.S. Agency or Government Sponsored Enterprise ("GSE") that are not backed by the full faith and credit of the U.S. Government or fully collateralized by the foregoing securities.	20%	10%
Mortgage-backed securities are not included in this category.		

Instrument Type	Maximum Exposure	
	Sector	Issuer
Credit Securities Securities issued by a corporation, a domestic state or local government entity or a foreign government or instrumentality. Securities of issuers classified in any one Credit industry sector, as defined in the Barclays Aggregate Index, shall not exceed 20%.	50%	5%
Mortgage-backed Securities Residential, Multifamily and Commercial mortgage pass-throughs, CMOs and REMICs. No IOs, POs, Z or other volatile tranches shall be held. Agency issuers Pass-throughs CMOs, REMICS, Multi-family and Project Loans (issuer limit is per CUSIP) Non-agency residential Commercial	60% 60% 60% 25% 15% 15%	 40% 40% 5% 5% 5%
<i>The issuer of a non-agency mortgage-backed security will be considered to be the trust that holds the associated collateral, and the issuer limits will apply to securities representing claims against any one such trust.</i>		
Asset-backed Securities Securities collateralized by manufactured housing loans and home equity loans shall be classified as ABS and not MBS.	25%	5%
<i>The issuer of an asset-backed security will be considered to be the trust that holds the associated collateral, and the issuer limits will apply to securities representing claims against any one such trust.</i>		
Cash and Cash Equivalents Cash and Cash Equivalents are limited to the STIF or STIFs selected by Systems and U.S. Government securities (as described above) maturing in 365 days or less. Cash and Cash Equivalents may exceed the stated limit if and to the extent that the excess corresponds to balances held in conjunction with unsettled transactions, as a result of contributions, in anticipation of withdrawals, or to accommodate reasonably anticipated cash flows.	15%	15%

C. ADDITIONAL LIMITS

1. Other than U.S. Government Securities, securities that achieve their rating by virtue of a third-party guarantee are limited to 10% per guarantor. The applicable issuer limit will still apply to the underlying issuer.
2. Rule 144A and Regulation S securities are each limited to 7.5% of the portfolio.

D. CREDIT QUALITY

1. To determine an individual security's rating and average portfolio credit quality, the methodology employed from time to time by the Barclays Global Family of Indices then in effect (the "Barclays Index Methodology") shall be used.
2. Credit Securities shall be rated Baa3 or better. Asset-backed and mortgage-backed securities shall be guaranteed by the U.S. Government, a U.S. Government Agency or GSE or shall be rated Aaa or better.

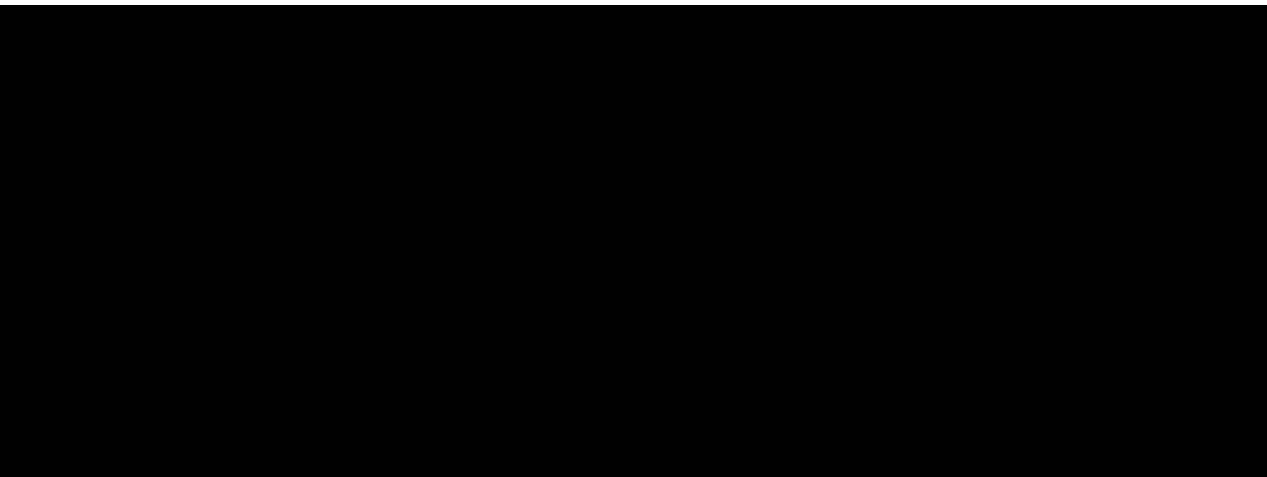
E. OTHER

1. Unless otherwise specifically prohibited herein, securities in the Barclays U.S. Aggregate Index (backward and forward) may be held in the portfolio.
2. In the event that a security fails to meet the any of the guidelines defined above, the PM must sell the security within ten (10) business days or notify Systems as to why, in the PM's judgment, sale should be further delayed.

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 Custodian on the last business day of each month in the calendar quarter, in accordance with the following schedule:



NOTE: For billing purposes, the average market value of assets for the Pension and Insurance Portfolio will be aggregated 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.

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



Kentucky Retirement Systems

Statement of Disclosure and Placement Agents – Manager Questionnaire

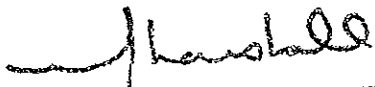
1. Did your firm use a placement agent as defined in the KRS "Statement of Disclosure and Placement Agents" policy in an effort to solicit an investment from KRS? If yes, please continue to question 2; if no, please proceed to question 10.

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

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.
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.
To our knowledge, NISA does not provide fees or compensation to any current or former Kentucky elected or appointed government officials, KRS Board of Trustees members or employees/consultants of KRS
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.
To our knowledge, neither NISA nor its members (including their family) has made any political contribution to a Kentucky official, Kentucky political party, Kentucky political organization; or other Kentucky political entity in the past 2 years.
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. To our knowledge, no member of NISA is (i) the subject of any pending litigation related to the performance of duties as an investment adviser or (ii) has been involved in regulatory proceedings related to the performance of their duties as an investment adviser.
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.

This statement is covered by Section 8 of the Investment Management Agreement between KRS and NISA dated July 1, 2012.

 9/28/12

Signature Date

Print Name: William Marshall, President

Firm Name: NISA INVESTMENT ADVISORS, L.L.C.

ATTACHMENT V
Compliance Certificate

As a duly authorized officer of NISA Investment Advisors, L.L.C. (the "Investment Manager"), I hereby certify that I am familiar with that certain Investment Management Agreement dated as of July 1, 2012 (the "Agreement") between Kentucky Retirement Systems 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 dated November 2011 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 dated November 2011 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, as identified on the attached Exhibit A as updated by KRS from time to time by written notice to the Investment Manager, 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 materially in compliance with all representations, warranties and covenants in the Agreement which apply to the Investment Manager, including but not limited to any 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 V EXHIBIT A

KRS Board of Trustees and Key Staff

ATTACHMENT VI

Authorized Persons

Systems' designated positions listed below are authorized to provide verbal and written instructions and notices on behalf of Systems. Such instructions may be provided by facsimile or e-mail. Manager 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: TJ Carlson

(502) 696-8442 phone; (502) 696-8805 fax

Signature: 

Director of Equity Assets

Incumbent: Carlos B. Cracraft

(502) 696-8445 phone; (502) 696-8805 fax

Signature: _____

Director of Fixed Assets

Incumbent: David Peden

(502) 696-8485 phone; (502) 696-8805 fax

Signature: _____

Director of Alternative Investments

Incumbent: Brent Aldridge

(502) 696-8633 phone; (502) 696-8805 fax

Signature: _____

Director of Absolute Return

Incumbent: Chris Schelling

(502) 696-8642 phone; (502) 696-8805 fax

Signature: _____

Executive Director

Incumbent: Bill Thielen

(502) 696-8455 phone; (502) 696-8801 fax

Signature: _____

[authorized signature follows on next page]

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: _____ Dated: _____

Jennifer Jones

Interim General Counsel

(502) 696-8645 phone; (502) 696-8801 fax