

**KENTUCKY RETIREMENT SYSTEMS
INVESTMENT MANAGEMENT AGREEMENT**

THIS INVESTMENT MANAGEMENT AGREEMENT (the "Agreement" or "Contract") is entered into as of October 24th, 20 19 by and between Pzena Investment Management, LLC ("Manager"), and Kentucky Retirement Systems ("KRS" or "Systems"), a 401(a) governmental defined benefit pension plan; each a "Party" and together the "Parties".

W I T N E S S E T H:

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

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

1. **Designation of Manager; Prudent Person.** Subject to the terms and conditions contained in this Agreement, KRS hereby appoints Manager as investment manager of the Account with full power and discretion to manage such assets of the Account as KRS designates, such assets not otherwise being subject to the management or control of another investment manager specifically appointed by KRS. Manager hereby accepts appointment as investment manager of the Account pursuant to the terms of this Agreement. Manager shall discharge its duties under this Agreement solely in the interest of KRS with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent investment manager acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims, pursuant to Kentucky Revised Statutes Section 61.650(1)(c)(3). In addition, Manager is a "fiduciary" of KRS, as that term is defined the U.S. Employee Retirement Income Security Act of 1974, as amended ("ERISA"), with respect to the investment and management of the assets in the Account. KRS has selected the Manager's Emerging Markets Select Value strategy.

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

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

which are attached hereto as Attachment II and incorporated herein by this reference. Manager shall exercise its power and authority with respect to the Account in accordance with the Investment Policy. The Investment Policy and Guidelines shall remain in effect until such time as KRS approves (in writing) a modification to the Investment Policy or Guidelines. The Manager shall have no responsibility to implement any changes in the investments of the Account as a result of any change in the Investment Policy or the Guidelines unless and until such change is communicated to the Manager in writing; provided, such change becomes effective only upon the Manager's written acknowledgment of receipt. The Manager shall acknowledge receipt within five (5) business days after receiving the notification and shall be in compliance with the modified Investment Policy of Guidelines within forty-five (45) days after receiving notification. Notwithstanding anything to the contrary contained herein, in the event the terms of the Guidelines conflict with those of the Investment Policy, the terms of the Investment Policy shall control. The Manager will attempt to obtain the "best available price and most favorable execution" with respect to all Account transactions.

4. **Brokerage.** 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 enhance the Manager's investment research and portfolio management capability for investing the assets, all in accordance with Section 28(e) of the U.S. Securities Exchange Act of 1934. 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) of this Agreement.

Notwithstanding the foregoing, the Manager shall not place orders with any broker/dealer who: (a) KRS has by written notice to the Manager deemed unsuitable for Account trades, (b) is affiliated with the Manager or (c) is affiliated with an investment consultant that provides non-brokerage related services to KRS. KRS shall provide the initial list of restricted broker/dealers arising under (a) and (c), and any changes, to the Manager in writing. The Manager agrees to be bound by such broker/dealer list, or any changes to such broker/dealer list upon receipt of written notice from KRS. In addition, the Manager shall not engage in transactions that involve a broker acting as a principal where the broker is also the investment manager, without KRS's advance written consent.

5. **Performance Objectives.** The Manager acknowledges that KRS has established performance objectives for the assets in the Account as are set forth in Attachment II attached hereto (the "Performance Objectives"), as the same may be amended from time to time by KRS in writing, and that failure to consistently meet such performance standards may result in termination of this Agreement. The Manager hereby acknowledges that it has reviewed and is familiar with the Performance Objectives. KRS may amend the Performance Objectives by providing written notice to Manager.

6. **Fees and Terms of Payment.** As consideration for the services rendered pursuant to this Agreement, the Manager shall receive a management fee, payable quarterly in arrears, and calculated as outlined in Attachment III titled "Fee Schedule". 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. Under Section 61.645(i) of the Kentucky Revised Statutes, KRS is required to disclose, and post on its website, the dollar value of fees and commissions paid to each individual manager or partnership. KRS shall not publicly disclose the Fee Schedule listed in Attachment

III, unless legally required to do so after exhausting all reasonable available remedies to prevent disclosure as determined by KRS, however, on a quarterly basis, it is legally required to update and post to its website the fees and commissions paid for each fund administered by the board, as well as any fees and commissions paid to a manager or partnership. If KRS does disclose the Fee Schedule listed in Attachment III, KRS shall immediately notify the Manager. Public disclosure shall not encompass KRS' lawful responses to a valid subpoena or order from a Court of competent jurisdiction, or disclosure and posting required pursuant to KRS 61.645(19)(i). KRS shall also reimburse the Manager for any third-party costs incurred by the Manager at the instruction of KRS.

7. **Benefit of More Favorable Terms.** The Manager hereby agrees that at all times during the management of the Account, the management fee charged to the System hereunder will be no less favorable than that charged to similar accounts established subsequent to the date of this Agreement, under the same strategy and of comparable size, objectives, and guidelines, excluding Manager-affiliated accounts, U.S. or foreign registered or exempt commingled funds, multi-manager/consultant programs, accounts that are part of a larger overall relationship, and accounts whose fees are based on investment performance. The Manager agrees to notify the System if, at any time, the Manager is in violation of the aforementioned clause, and to offer to reduce the management fee accordingly.

8. **Placement Agents.** The Manager agrees that it will remain in compliance with System's Statement of Disclosure and Placement Agent policy, which is attached hereto as Attachment IV. The Manager warrants that no person or selling agency has been employed or retained to solicit and secure this Agreement upon an agreement or understanding for commission, percentage, brokerage or contingency; excepting bona fide employees or selling agents maintained by the Manager for the purpose of securing business unless disclosed in writing, prior to the engagement. The Manager has not paid any placement fees, finder's fees, or gratuities (including gifts and entertainment) to any fiduciary, trustee or employee of KRS. The Manager has not made any contributions that would result in an Investment Adviser being disqualified from collecting performance fees under rule 206(4)-5 of the Investment Advisers Act of 1940, as amended ("Advisers Act"). Additionally, under Section 61.645(1) of the Kentucky Revised Statutes, Manager acknowledges and agrees that no funds of KRS, including the fees and commissions paid to the Manager, shall be used to pay fees and commissions to placement agents. For the purposes of this Agreement, "placement agent" means a third-party individual, who is not an employee, or firm, wholly or partially owned by the entity being hired, who solicits investments on behalf of an investment manager, private fund, or company issuing securities

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.

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

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

12. **Trade Confirmation and Settlement.** Where a transaction is eligible for settlement through the Depository Trust Company's Institutional Delivery System, the Manager shall use such System for trade confirmation and settlement. The Manager shall cooperate with KRS'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. The Manager shall not be responsible for notifying KRS or the Custodian of, or managing, monitoring or conducting litigation or other proceedings (including class action or bankruptcy proceedings) related to any investment held or once held in the Account, and KRS acknowledges and agrees that it, and any legal adviser of KRS, shall remain solely responsible for the management of such proceedings. Despite the preceding sentence, the Manager will use best efforts to forward to KRS any proof of claims forms or related materials that the Manager receives for the Account.

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

16. **Notification of Tax Liabilities.** The Manager shall promptly notify KRS if, at any time, the Manager becomes aware of KRS' obligation to pay taxes to any government or to file any returns or

other tax documents with respect to income earned on the Account assets. The Manager is not an expert in tax matters and does not possess the information necessary to assist KRS in determining its tax liabilities.

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. In accordance with the provisions of the Advisers Act, no assignment of this Agreement shall be made by Manager without KRS' permission;
 - 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 coverage¹ for the duration of the Agreement plus [REDACTED] 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 [REDACTED] with a maximum deductible of [REDACTED]. The bond shall cover at a minimum, losses due to dishonest or fraudulent acts by the Manager; and

¹ The limits of insurance described herein shall not limit the liability of the Manager and Manager's officers, employees, agents, representatives or subcontractors. Failure to procure and maintain insurance shall constitute a material breach of this Agreement upon which KRS may immediately terminate the Agreement.

- ii) An errors and omissions policy in the minimum amount of [REDACTED] with a maximum deductible of [REDACTED] per claim. The policy shall cover, at a minimum, Manager's business activities and any claim made against Manager in the conduct of any professional services by or on behalf of Manager that Manager is legally obligated to pay.
- g) Manager will immediately notify KRS by telephone (at the telephone number set forth below), upon the receipt of information indicating possible risks of seizure, loss, or loss of use of Account assets. Such telephonic notice shall be followed by written notice to KRS within twenty-four hours;
- h) Manager has disclosed to KRS directly, any litigation pending, and will notify KRS of all future actions against the Manager, related to the performance of its duties as an investment adviser. It also has, and will in the future, promptly disclose to KRS directly, any pending or future investigation of the Manager by the SEC or any other regulatory authority, foreign or domestic, related to the Manager's performance of duties as an investment adviser; and
- i) Manager warrants that these representations shall be deemed to be continuing as long as KRS participates in Manager's account and that Manager shall notify KRS in writing before or immediately upon the occurrence of any event which causes a change to the representations and warranties made hereunder.
- 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.
- 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 December 31.
- l) Pursuant to Kentucky Revised Statutes Section 61.650(1)(d)2., Manager shall comply with all applicable provisions of the federal Investment Advisers Act of 1940, as amended, and the rules and regulations promulgated thereunder, and shall comply with all other applicable federal securities statutes and related rules and regulations that apply to investment managers.
- m) Manager shall comply with all laws and regulations issued from time to time by any governmental or administrative or other body which relate to the discharge of its duties under this Agreement.

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 units, original cost, amortized cost, market value, and gain/loss of each holding.
- 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;
 - 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 at a portfolio level, 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, his or her underlying rationale, and how those decisions could affect future results;
 - vi) A commentary on investment results in light of the appropriate standards of performance; and
- c) The Manager shall provide annually, after the close of the calendar year:
- i) Within 120 days after the end of Manager's fiscal year, a copy of SEC form ADV – Part 2, 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. 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

- iii) Any other such reports regarding the Account as KRS or the Custodian may reasonably request.

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

20. **Change in Status.** Manager shall promptly notify KRS in writing of any material change in Manager's business which may 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, any material adverse changes to the Manager's financial or organizational status or any material change in its Executive Committee, and any change in portfolio managers managing a KRS Account. Manager shall promptly notify KRS of any conflicts of interest arising from Manager and its relationship with any KRS employees, KRS trustees, elected officials of the Commonwealth of Kentucky, or third-party vendors of KRS related to the services provided under this Agreement. If, at the sole discretion of KRS, it is determined that any relationship would be considered a potential or actual conflict of interest, KRS may require Manager to cease dealing with such entity on behalf of KRS.

KRS authorizes Manager to combine orders for the Account with orders for other clients of Manager. When effecting trades on an aggregated basis, the Manager is required to allocate aggregated trades promptly and fairly. Securities purchased or proceeds of securities sold through aggregated orders shall be allocated in accordance with the Manager's Trade Allocation & Aggregation Policy. Further, in the event not all portfolios are allocated the entire number of securities sought to be bought or sold on behalf of such portfolio, it is possible that no portfolio will be deemed to have purchased or sold the entire number of securities sought to be purchased or sold on behalf of such portfolio.

21. **KRS Representations and Acknowledgement.** KRS hereby represents to Manager that 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. KRS will inform the Manager of any event which might affect this authority or the propriety of this Agreement. KRS hereby represents that it is independent of, and unrelated to, the Manager or any affiliate thereof. KRS acknowledges that it has received Part 2 of the Manager's Form ADV or similar disclosure document prior to entering into this Agreement.

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.

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

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

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

26. **Notice.** All notices, instructions and 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 to terminate or amend this Contract):

The Manager at: Pzena Investment Management, LLC
Attn: William L. Lipsey, President
320 Park Avenue, 8th Floor
New York, NY, 10022

With a copy to: Pzena Investment Management, LLC
Attn: Joan F. Berger, General Counsel
320 Park Avenue, 8th Floor
New York, NY, 10022

KRS at: Rich Robben
Chief Investment Officer
1260 Louisville Rd
Frankfort KY, 40601

With a copy to: Mark C. Blackwell
Executive Director
Office of Legal Services
1260 Louisville Road
Frankfort, KY 40601

Custodian at:

BNY Mellon
Attn: Nina L. Caruso, Vice President
BNY Mellon Center, Suite 4040
Pittsburgh, PA 15258

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, except to the extent preempted by federal law(s), if any. 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. Manager stipulates and agrees that it is subject to personal jurisdiction of such courts. 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 and in accordance with the rules established by the custodian of the records. The Manager shall preserve the confidentiality of the information except where otherwise required by law, where requested by an appropriate regulator, or where reasonably required to be disclosed by the Manager to a person (including, without limitation, affiliates, the Custodian, delegates, agents, advisers, brokers and counterparties) in order to perform the services under this Agreement. The Manager shall maintain positive policies and procedures for safeguarding the confidentiality of such information. The Manager recognizes that it may be liable for the negligent, wanton, or willful release of such information.

KRS is a public agency subject to (i) Kentucky's public record law (Kentucky Revised Statutes sections 61.870 to 61.884, the "Open Records Act"), which provides generally that all records relating to a public agency's business are open to public inspection and copying unless exempted under the Open Records Act and (ii) Kentucky Revised Statutes sections 61.645 (19)(l) and (20) (the "Document Disclosure Law"), which provides generally that all contracts or offering documents for services, goods, or property purchased or utilized by KRS shall be made available to the public, and posted on KRS' website, unless exempt under the Document Disclosure Law (the Open Records Act and Document Disclosure Law, collectively, the "Kentucky Information Disclosure Laws"). Notwithstanding any provision in this Agreement to the contrary, the Manager hereby agrees that (i) KRS will, to the extent required by the Kentucky Information Disclosure Laws treat all information received from the Manager as open to public inspection under the Kentucky Information Disclosure Laws unless such information is exempt from such disclosure under the Kentucky Information Disclosure Laws, and (ii) KRS will not be deemed to be in violation of any provision of this Agreement if KRS discloses or makes available to the public (e.g., via KRS' website) any information regarding the Manager to the extent required pursuant to or under the Kentucky Information Disclosure Laws, provided that KRS shall use reasonable efforts to notify the Manager in the case of any request for disclosure of this Agreement which is not redacted or any other information or material relating to the business of the Manager and provided by the Manager and marked by the Manager as "Confidential" (or with words of similar import) pursuant to the Kentucky Information Disclosure Laws so that the Manager may, at its own expense, seek an appropriate exemption to such

disclosure as and to the extent permitted under any Kentucky Information Disclosure Law. Manager acknowledges that KRS is subject to the Open Records Act. Manager also acknowledges that a party requesting information that is unable to obtain such information directly from KRS may bring legal action (either in a court of law, or by appealing to the attorney general) to compel disclosure of the information.

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

30. **Defense and Indemnification.** Manager shall indemnify, hold harmless and defend KRS and its agents, officers and employees from and against all claims, damages, losses, judgments, liabilities, expenses and other costs, including litigation costs and attorneys' fees, arising directly from, a fiduciary breach of this Agreement by the Manager or Manager's officers, employees, agents, representatives or subcontractors; provided, however, such indemnification shall not extend to or cover loss, damage or expense arising from the negligence or willful misconduct of KRS or its agents, officers and employees, or its Custodian and other third parties. Manager's obligation to defend, indemnify and hold KRS and its agents, officers and employees harmless under the provisions of this paragraph is not limited to or restricted by any requirement in this Agreement for Manager to procure and maintain a policy of insurance.

31. **Securities Lending.** The Manager understands that KRS may engage in a "Securities lending program".

32. **Duration of Contract.** The period in which subject services are to be performed is October 24, 2019 through June 30, 2022. At the expiration of this term and any subsequent terms, a new term of three years shall automatically come into being, unless one of the parties hereto notifies the other party that it wishes to terminate the Agreement in accordance with section 33 below.

33. **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 to KRS. Manager shall cooperate with KRS and follow KRS's written directions in connection with the termination of this agreement to effect the smooth and orderly transfer of securities and all applicable records to a successor or other entity designated by KRS; or
- b) At KRS's discretion, immediately, if a result of the Manager's default or breach of contract; or
- c) At KRS's discretion, immediately, if the Manager's decisions/conduct/actions are deemed not to be in alignment with KRS's interests.

Following termination notification, Manager shall not take any action with respect to the Account, unless specifically authorized to do so by KRS. In the event of termination of the Agreement, the

exclusive, sole and complete remedy of the Manager shall be payment for services rendered prior to termination.

34. **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.

35. **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 sixty (60) months for each such renewal.

36. **Conflicts of Laws.** Manager hereby certifies Manager is legally entitled to enter into the subject contract with the Commonwealth of Kentucky and certifies that Manager is not and will not be violating any conflict of interest statute (KRS 121.056 or any other applicable statute) or principle by the performance of this Contract. The Manager shall not engage directly or indirectly in any financial or other transaction with a trustee or employee of Systems which would violate standards of the Executive Branch Ethics provisions, as set forth in KRS Chapter 11A. Manager hereby agrees to provide the services referenced in this agreement, and execute the corresponding External Conflict of Interest Statement, in accordance with KRS' Conflict of Interest and Confidentiality Policy as adopted by Systems, which are attached hereto as Attachment VIII and incorporated herein by this reference. Manager hereby affirms that there are no relevant facts or circumstances now giving rise or which could, in the future, give rise to a Conflict of Interest except as otherwise set forth in its Form ADV Part II, as received by KRS. A Conflict of Interest means that because of other activities or relationships with other persons, Manager is unable or potentially unable to render impartial assistance or advice to KRS, or Manager's objectivity in performing the Agreement work is or might be otherwise impaired. If any other actual or potential Conflict of Interest arises subsequent to the date of this Agreement, Manager shall make a full disclosure in writing to KRS of all relevant facts and circumstances. This disclosure shall include a description of actions that Manager has taken and proposes to take to avoid, mitigate, or neutralize the action or potential Conflict of Interest. Manager will continue performance of work under this Agreement until notified by KRS of any contrary action to be taken.

37. **Sovereign Immunity.** Manager acknowledges that KRS reserves all immunities, defenses, rights or actions arising out of its sovereign status or under the Eleventh Amendment to the United States Constitution, and no waiver of any such immunities, defenses, rights or actions shall be implied or otherwise deemed to exist by reason of its entry into this Agreement, by an express or implied provision thereof or by any actions or omissions to act by KRS or any of its employees, representatives or agents, whether taken pursuant to this Agreement prior to the execution thereof.

38. **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 he attempt in any way to influence any purchasing of services, commodities or equipment by the Commonwealth of Kentucky.

39. **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, to the fullest extent permitted by law.

40. **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.

KRS understands that Manager serves as investment manager for other clients and will continue to do so. KRS also understands that Manager, its personnel and affiliates ("Affiliated Persons") may give advice or take action in performing their duties to other clients, or for their own accounts, that differ from advice given to or action taken for KRS. Manager is not obligated to buy, sell or recommend for KRS any security or other investment that Manager or its Affiliated Persons may buy, sell or recommend for any other client or for their own accounts. This Agreement does not limit or restrict in any way Manager or any of its Affiliated Persons from buying, selling or trading in any securities for their own accounts; provided, however, that neither Manager nor any of its Affiliated Persons will act as principal or receive any compensation in connection with the purchase or sale of any securities by the Account, other than the investment management fee described in Section 6 above.

Manager does not guarantee the future performance of the Account or any specific level of performance, the success of any investment decision or strategy that Manager may use, or the success of Manager's overall management of the Account. KRS understands that investment decisions made for the Account by Manager are subject to various market, currency, economic and business risks, and that those investment decisions will not always be profitable. Manager will manage only the securities, cash and other investments held in the Account and in making investment decisions for the Account, Manager will not consider any other securities, cash or other investments owned by KRS. Except as may otherwise be provided by law, Manager will not be liable to KRS for (i) any loss that KRS may suffer by reason of any investment decision made or other action taken or omitted in good faith by Manager with that degree of care, skill, prudence, and diligence under the circumstances that a prudent person acting in a like capacity would use; or (ii) any loss arising from Manager's adherence to KRS's instructions. The federal securities laws impose liabilities under certain circumstances on persons who act in good faith, and therefore nothing in this Agreement shall waive or limit any rights which KRS may have under those laws.

41. **Voting of Proxies.** The Manager shall exercise voting rights with respect to securities under its management. Manager is authorized and directed to vote all proxies and affect any corporate

actions (except with respect to class action and related litigation, as provided above) in accordance with Manager's Proxy Voting Policy, a copy of which, if Manager has a Proxy Voting Policy, has been provided to KRS. If Manager does not have a written Proxy Voting Policy, the Manager is authorized and directed to vote all proxies and affect any corporate actions in accordance with KRS's Investment Proxy Voting Policy attached hereto as Attachment VII. The Manager shall maintain detailed records of its performance of this duty and shall provide those records to KRS quarterly. Manager will not advise KRS or act for KRS in any legal proceedings, including bankruptcies and class action litigation, involving securities held or previously held by the Account or the issuers of these securities.

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

Kentucky Retirement Systems

By: _____

Name: Joe G. Hart

Title: Director of Equity

Kentucky Retirement Systems

1260 Louisville Road

Frankfort, Kentucky 40601

On behalf of Kentucky Retirement Systems

Manager

By: _____

Name: William L. Lipsey

Title: Managing Principal

Pzena Investment Management, LLC

320 Park Avenue, 8th Floor

New York, NY 10022

On behalf of Manager

ATTACHMENT I

Investment Policy and Procedures

(Remainder of this page left blank intentionally.)



Kentucky Retirement Systems
Statement of Investment Policy Adopted
July 12th, 2017

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 Systems, the County Employees Retirement Systems and the State Police Retirement System. This document supersedes all prior documents entitled Statement of Investment Policy.

I. The Board of Trustees

The retirement plans administered by the Kentucky Retirement Systems are a "Qualified Pension Plan" under Section 401 of the Internal Revenue Code. Additionally, KRS 61.701 establishes health insurance benefits to recipients of the Kentucky Employees Retirement Systems, County Employees Retirement Systems 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.

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 nine members of the Board of Trustees. The 6 members appointed by the Governor, and 3 members of the committee being appointed by the chairperson of the Board of Trustees. In accordance with statute, six (6) 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. If a situation warrants a termination of an investment manager prior to the next available investment committee, the Chief Investment Officer can terminate an investment manager relationship with a detailed review of the situation to occur at the next investment committee.

- C. Meet no less than 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 KRS Investment Committee 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. Assess and report on the performance and risk exposure of the overall investment program relative to goals, objectives, policies and guidelines.
- C. Monitoring and assessing service providers, including not less than annual onsite visits, to assure that they meet expectations and conform to 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.
- G. Preparing for each proposed investment a memo to the Investment committee covering the pertinent details including but not limited to: Amount of the investment, type of investment, purpose, opportunity/goal, risks, volatility assumptions, liquidity, structure, fees, background of investment firm with reasons for selection, list of other firms considered, which plans will invest, and the reasons why specific plans may be excluded.

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.
3. Total assets assigned to the selected manager shall not exceed 25% of that firm's total assets under management and shall not exceed 25% of a firm's total assets under management in a commingled product. Separate accounts or funds of one are not included in this 25% limitation for commingled products.
4. The assets managed by any one active or passive Investment manager shall not exceed 15% of the assets in the pension and insurance funds.
5. All investment management services will be contracted according to the KRS Investment Procurement Policy established by the Board of Trustees.

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 in accordance with the KRS Investment Procurement Policy. The selection shall be based upon the demonstrated ability of the professional(s) to provide the required expertise or assistance described in the RFP/RFI (if utilized). 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.

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 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 which may not necessarily be the lowest 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:** Defined as a period of time exceeding twenty years. In the long-term, the total assets of the Systems should achieve a return which exceeds the actuarially required rate of return of each plan. 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:** Defined as any period shorter than the defined Long-Term period.

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 equalization 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 their intended use in the portfolios.

Derivatives Permitted Use:

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

Exposure:

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

Cost Efficiency:

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

Risk Management:

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

Derivatives Restricted Use:

Settlement:

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

Position Limits:

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

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 BBB (Standard and Poor's or Fitch) or Baa2 (Moody's).

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

Derivatives Applications Not Permitted:

Speculation:

Except for investments in alternative, absolute return investments, and real return investments, derivatives may not be used for any activity for which the primary purpose is speculation or to profit while materially increasing risk to KRS. Derivatives are considered

speculative if their uses have no material relation to objectives and strategies specified by KRS IPS or applicable to the portfolio. Derivatives may not be used for circumventing any limitations or restrictions imposed by the KRS IPS or applicable regulatory requirements.

Leverage:

Leverage is inherent in derivative contracts since only a small cash deposit is required to establish a much larger economic impact position. Thus, relative to the cash markets, where in most cases the cash outlay is equal to the asset acquired, derivative investments offer the possibility of establishing substantially larger market risk exposures with the same amount of cash as a traditional cash market portfolio. Therefore, risk management and control processes must focus on the total risk, i.e. the net notional value, assumed in a derivative investment.

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 provide the Investment Committee with the results of any asset liability study and guidance for determining the needs of the systems.

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 Five percent (5%) 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, taking into account any tactical policy shift directed by the Investment Committee. Staff shall reallocate the assets when the actual asset class allocation deviates from the policy plus any tactical shift by a minimum of 1%, and a maximum of 15% of the allocation target (if target allocation is 20% then action required when +/- 3%).

Regarding individual investment manager initial allocations, staff will get approval at the Investment Committee meeting for a specific dollar amount intended to be committed to a closed-end fund such as private equity or real estate funds and will get approval for a percent of plan assets for open-end investments such as public equity, public fixed income, and absolute return managers. For those open-end funds where assets can be added or

subtracted, the Chief Investment Officer will have full discretion to reduce an investment manager's allocation or fire a manager, and will have limited discretion to add to an investment manager's allocation. Limited discretion is defined as doubling the size of any Investment Committee approved investment where the of that investment that is less than or equal to 1% of total assets, or adding an additional 1% of capital to any investment committee approved amount that is greater than 1% of total assets. In neither case will this occur prior to the one-year anniversary of the amount approved by the Investment Committee, and must be reported to the Investment Committee at the next scheduled meeting

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 which shall contain a listing of permissible investments, portfolio restrictions and standards of performance for the account.

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 which contains a listing of permissible investments, portfolio restrictions, risk parameters, and standards of performance for the account.

D. Private Equity Investments

Subject to specific approval of the Investment Committee of the Board of Trustees, investments may be made for the purpose of creating a diversified portfolio of alternative investments. Private equity investments are expected to achieve attractive risk-adjusted returns and, by definition, possess a higher degree of risk with a higher return potential than traditional investments. Accordingly, total rates of return from private equity investments are expected to be greater than those that might be obtained from conventional public equity or debt investments. They have low correlation to other investment classes and therefore can contribute to reducing the risk and enhancing the returns of a total portfolio, as well as providing portfolio diversification. Examples of such investments include, but are not limited to, venture capital partnerships, private equity, leveraged buyouts and funds, private debt, timberland, oil and gas partnerships, commodities and private placements. While it is expected that the majority of these assets will be invested within the United States, a portion has been allocated to non-US investments. These non-U.S. investments are not restricted by geography.

Guidelines for Private Equity

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

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

Investment Strategy and Plan Guidelines

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

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

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

General Partner Diversification: Staff will seek to work with a variety of general partners due to their specialized expertise in particular segments of the private equity market and source of their deal flow. No more than fifteen (15) percent of the KRS Pension or Insurance 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 20 % of total net assets of the private equity portfolio may be invested in a single industry within a particular sector.

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

Subcategory Strategy

The private equity portfolio includes strategic subcategory classifications including venture capital, buyouts and debt-related. The target percentages set forth below for each category are based on invested capital. For specific plan allocations to Private Equity, Please refer to Appendix A for the Pension funds and Appendix B for the Insurance funds.

The sub-asset target allocations to Venture Capital, Buyouts, and Debt-related for specific plan allocations refer to Appendix A for the Pension funds and Appendix B for the Insurance fund are based on market value and will have a range of +/- 10%:

E. Real Estate Investments

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

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

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

Absolute Return: The long term real return objective (returns adjusted for inflation) for the KRS real estate portfolio is five percent (5%) over the Barclays Capital U.S. 7-10 Year Treasury Bond Index, 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 our belief that through active management and by investing in top tier managers with interests aligned through co-investment and incentive based compensation, KRS can maximize its risk adjusted returns. This active management approach will be pursued.
- Diversification benefits through low correlations with other asset classes, primarily the U.S. equity markets.
- Provide a hedge against unanticipated inflation, which real estate has historically provided due to lease structures and the increases in material and labor costs during inflationary periods.
- Permit KRS to invest in unique opportunities that arise due to dislocations in markets that occur from time to time.

Allocation to Real Estate Asset Class

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

A. Core Properties

- Operating, substantially leased office, retail, industrial or apartment properties. Several alternative property types may be included in Core such as self-storage, medical office, ground leases, senior housing and triple net leased properties to the extent they exhibit similar risk and return attributes to the traditional Core property types.
- Generally have institutional qualities for size, physical attributes and location.
- Target total returns of 3-5% per year (net of fees and promoted interest) above the *Barclays Capital U.S. 7-10 Year Treasury Bond Index*, 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 5-7% above the *Barclays* Capital U.S. 7-10 Year Treasury Bond Index 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 7% (net of fees and promoted interest) above the *Barclays* Capital U.S. 7-10 Year Treasury Bond Index 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 dependent on investment strategy of the public security which shall be identified at time of investment and the return expectation will match one the above the categories

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 100%

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, outside of a joint venture with an approved property manager or co-investment with an approved real estate fund manager, shall be limited to no more than 5% of the total real estate allocation and a presentation to the full board prior to investment.

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

C. Diversification

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

D. Investment Manager

KRS will limit the amount committed to any one investment manager to the larger of thirty percent (30%) of the total allocation for real estate investments or 1% of the total funds value at the time of commitment.

E. Property Type Diversification

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

Office: 0% to 40% of the total allocation

Retail: 0% to 40% of the total allocation

Apartment: 0% to 40% of the total allocation

Industrial: 0% to 40% of the total allocation

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

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

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

F. 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 goal to a limit of 65% of the total portfolio placed on the use of leverage. The measurement will be the weighted average of investments with their max allowed leverage.

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

G. Vintage Year Risks

KRS will seek to avoid any concentrated vintage year risks.

F. Real Return Investments

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

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

- GTAA (Global Tactical Asset Allocation)/ Global Macro: GTAA or macro strategies are those that make directional bets on major markets or asset classes instead of individual securities. GTAA and macro strategies typically invest in all major asset classes including equity markets, credit and debt instruments, currencies/interest rates, and commodities. These strategies tend to focus on economic factors that would suggest an opportune time to invest in a given asset class, and will change their allocations actively

over time. Within a real return portfolio, these strategies may use inflation as the economic factor to gain exposure to and will target a real rate of return over time.

- **Inflation Linked Securities** are securities that directly tie coupon payments or principal increases to an inflation index, such as CPI. These strategies could include not only US TIPs, but also global sovereign inflation linked bonds, corporate or infrastructure inflation linked bonds, and possibly short duration floating rate bonds.
- **Inflation Sensitive Equities** include publicly traded equity and equity related securities in companies which have a high sensitivity to inflation in their profit margins via the nature of their operating assets, such as energy companies, basic materials and miners, natural resource stocks, and listed infrastructure. This category can also include REITs, MLPs as well as ETFs and index products on REITS, MLPs, natural resource stocks, etc.
- **Commodities:** Commodities are the raw materials that are physical inputs into the production process. Managers that invest in liquid commodity strategies using exchange traded futures can span from simple indexing (matching a long-only commodities index), to enhanced indexing or active long (selecting positions that vary from the index but within fairly tight ranges), as well as unconstrained long-short managers.
- **Private Property:** For the purposes of this policy, private property refers to the ownership of an idiosyncratic, physical asset that is predominately fixed and/or permanent or at least substantially long-lived. This includes real estate, such as land and any improvements to or on the land, as well as timberland and farmland. Timberland investing involves the institutional ownership of forest for the purpose of growing and harvesting the timber. The timber may be used for furniture, housing lumber, flooring, pulp for paper, woodchips, and charcoal, among other things. Farmland investing entails ownership of land used primarily if not exclusively for agricultural production both for crops, including row crops and permanent crops, as well as livestock. Private property can also include infrastructure investing, which refers to financing the manufacture or development of the underlying fundamental assets and basic systems that are necessary for an economy whereby such assets are largely fixed and long-lived. These tend to be high cost, capital intensive investments that are vital to a society's prosperity and facilitate the transfer, distribution, or production of basic goods and services.
- **Natural Resources:** Natural resources can include investing in the financing, development, extraction, and production of minerals, basic materials, petroleum products, and water as well as renewable resources such as agricultural commodities and solar energy. As opposed to property, the returns generated in these investment

strategies come more from the actual production of the resource itself. Further, these are depleting and/or consumable assets that are also portable and fungible and which in the aggregate comprise a majority of the inputs into most measurements of inflation.

- **Private Assets:** Private assets can include tangible or intangible assets that are not easily sold in the regular course of a business's operations for cash, and which are held for their role in contributing directly to the business's ability to generate profit. As the useful life of the asset tends to extend across many years and the assets tend to be capital intensive as well, they have some similarity to private infrastructure. Further, given that the assets contribute directly to the production process as well as often retaining intrinsic value, there is a fundamental link to inflation somewhat similar to natural resources.
- **Other (Opportunistic Inflation Hedge):** Other/opportunistic strategies include those that have a propensity to provide a positive real return or positive correlation with inflation over time. Liquid strategies such as inflation swaps, diversified inflation hedging mutual funds, or nominal bonds backed by inflation sensitive assets may be included in this allocation, while other illiquid strategies that may provide the same real profile can include private equity in inflation sensitive companies, hard asset-backed private credit, and structured inflation-linked products among others.

The Real Return allocation shall seek to achieve the following:

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

Portfolio Guidelines

No more than 50% of the total net assets of the Real Return portfolio may be invested in any one registered investment vehicle, mutual fund, or separately managed account.

No more than 20% of the total net assets of the Real Return portfolio may be invested in any single closed-end or open-end limited partnership or other unregistered investment vehicle.

The relative allocations to the liquid and illiquid portfolios will be determined according to each individual plan's liquidity needs, funding status, and allocation targets on an investment by investment basis.

G. Cash Equivalent Securities

Selection of particular short-term instruments, whether viewed as liquidity reserves or as investment vehicles, should be determined primarily by the safety and liquidity of the investment and only secondarily by the available yield. The following short-term investment vehicles are considered acceptable: Publicly traded investment grade corporate bonds, variable rate demand notes, government and agency bonds, mortgages, municipal bonds, and collective STIFs, money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper) and repurchase agreements relating to the above instruments. Instruments may be selected from among those having an investment grade rating at the time of purchase by at least one recognized bond rating service. In cases where the instrument has a split rating, the lower of the two ratings shall prevail. All instruments shall have a maturity at the time of purchase that does not exceed 397 days. Repurchase agreements shall be deemed to have a maturity equal to the period remaining until the date on which the repurchase of the underlying securities is scheduled to occur. Variable rate securities shall be deemed to have a maturity equal to the time left until the next interest rate reset occurs, but in no case will any security have a stated final maturity of more than three years.

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

H. Absolute Return Strategies

The purpose of the Absolute Return Portfolio is to identify strategies that provide both favorable stand-alone risk-adjusted returns as well as the benefit of diversification for the overall plan. Absolute return strategies, by definition, are not necessarily a separate asset class, but broaden the opportunity set within existing asset classes such as stocks, bonds, currencies and commodities by going both long and short, employing derivatives and leverage, shortening and extending investment horizons, and moving across public and private markets, amongst others. By focusing on the idiosyncratic risks of security selection and often attempting to

minimize systematic market risks through hedging activities, absolute return managers can make investment decisions unconstrained by restrictive relative benchmarks such as the S&P 500 or Barclay's Aggregate Bond Index, and add value to portfolios by achieving favorable risk-adjusted returns in most market environments while also reducing overall plan volatility.

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

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

- **Equity Strategies:** Equity-based hedge funds are those which primarily purchase listed stocks, long and short, using no to substantial leverage. These strategies may differ across multiple styles such as broad or sector based mandates, geographically focused or global, concentrated versus diversified, long biased or market neutral, or short term trading versus longer term fundamental. Sub-strategies in this category would include fundamental long/short equity, short bias, tactical trading, and equity market neutral.
- **Event Driven:** Event-driven strategies also invest in the securities of corporate issuers, including stocks and corporate bonds. However, these strategies will invest based upon specific corporate actions that will change the value of these securities including mergers, spin-offs, tender and exchange offers and bankruptcy or restructuring. These strategies can be flexible across equity/credit, long/short as well as other style characteristics noted earlier. Another critical differentiator among event driven strategies is whether they pursue primarily hard versus soft catalysts. Examples of sub-strategies in this category include merger arbitrage, shareholder activism, multi-strategy event, special situations, and opportunistic value/soft catalyst.
- **Credit Strategies:** Credit strategies are those which focus on the debt side of the capital structure. They may have equity exposure, but the vast majority of the portfolio is invested in credit securities. Similarly, these strategies may be long biased or more hedged, may be more fundamentally based or more quantitative, focus on paying versus non-performing, and shorter term trading versus longer term focused. However, some funds may be focused on structured credit markets, including RMBS and CMBS, and others may move opportunistically across various credit segments. Sub-strategies may include long/short corporate credit, structured credit, and distressed securities.
- **Relative Value:** Relative Value strategies are those that do not invest in the intrinsic value of any individual security, but rather research the historical and/or mechanical

relationships between related securities and invest in the spread. For example, they may bet on one bond being overvalued relative to another bond from the same issuer. These strategies are almost always market neutral, but may vary from moderately to highly leveraged, concentrated versus diversified, or from HFT (high frequency trading) to a longer term investment horizon. Examples of sub-strategies in this category include fixed income arbitrage, convertible arbitrage, and statistical arbitrage.

- **Multi-Strategies:** Multi-Strategy hedge funds are those which will actively employ several of the other major hedge fund categories. Typically, hedge funds may do more than one thing, but to be a true multi-strategy, a hedge fund must have meaningful allocations of capital to at least 3 of the other four major categories: equity, credit/event, relative value, and macro/CTA. A true multi-strategy hedge fund should not have 50% to 70% of NAV invested in one strategy or 50% to 70% of the historical return attribution from one strategy. Finally, most multi-strategy hedge funds have their roots in one specific style and have evolved into multi-strategies over time.
- **Global Macro:** Macro strategies are those that make directional bets on major markets or asset classes instead of individual securities. Global macro funds are typically diversified across 3 of the 4 major liquid markets: equity indices, credit/debt, currencies/rates, and commodities. These strategies are often quantitative or discretionary, or shorter term/market timing versus longer term/macroeconomic focused. Finally, some traders may focus largely on certain markets, such as rates or currencies, trading on fundamental economic signals.
- **CTA/Commodity/Currency:** Managed Futures or CTAs will trade the same markets as global macro funds (i.e. equity indices, debt markets, currencies, and commodities) but will focus heavily on price or other technical signals, instead of fundamental or economic data. CTAs tend to be purely systematic (black-box) or discretionary, shorter to longer term and will employ either trend following/momentum strategies or counter-trend/mean reversion. Similar to macro funds, some CTAs focus purely on certain markets, such as commodities or currencies.
- **Other:** Strategies in this category, sometimes referred to as alternatives to alternatives, tend to be the most highly uncorrelated strategies. These may not be true "alpha" generators, as they often are simply accessing extremely unique and non-competitive markets, looking to harvest systemic risk premia found in these markets. However, the "betas" they are accessing are truly idiosyncratic. These strategies are much smaller and tend to have a bit higher illiquidity than other hedge funds. Examples of sub-strategies that fall in this category would be intellectual property, weather risk, and insurance strategies.

The Absolute Return allocation shall seek to achieve the following.

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

Portfolio Guidelines

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

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

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

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

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

No investments to vehicles with a greater than 5 year look-up are permitted in the Absolute Return portfolio.

IX. Standards of Measurement

Performance Measurement

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

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

The KRS Total Fund Benchmarks and sub-components, indexes, are described in Appendix A and B of this document. The following descriptions represent general standards of measurement that will be used as guidelines for the various classes of investments and managers of the Kentucky Retirement Systems. They are to be computed and expressed on a time-weighted total return basis:

Total Public Asset Class Allocations

Short-term

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

Intermediate & Long-term

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

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

Short-term

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

Intermediate & Long-term

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

Alternative Assets:

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

Short-term

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

Intermediate & Long-term

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

Real Estate

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

Real Return

The total Real Return allocation shall seek to :

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

Absolute Returns

The total Absolute Return allocation shall seek to :

- (1) Achieve a rate of return that exceeds the appropriate benchmark annually over a complete market cycle (historically 3-5 years), net of all investment management fees.

- (2) Achieve a positive risk/reward trade-off when compared to similar style FOF return Investment Managers.

X. Investments Performance Review Procedures

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

The Compliance Officer shall perform tests at least monthly 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 at least 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.
- ▶ 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 core and global fixed income portfolios combined shall not vary from that of the KRS Fixed Income Index by more than +/- 25% duration as measured by effective duration, modified duration, or dollar duration.
- ▶ 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' fixed income 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.
- ▶ 50% of the fixed income assets must have liquidity that is trade date plus three days or better.

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.

XI. Additional Items

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

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

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

- A. Investment Procurement Policy Dated July 2017 is hereby Incorporated by reference.
- B. Investment Brokerage Policy dated May 2011 is hereby Incorporated by reference.
- C. Transactions Procedures Policy dated November 2014 is hereby Incorporated by reference.
- D. Securities Litigation Policy and Procedures dated May 2011 is hereby Incorporated by reference.
- E. Investment Securities Lending Guidelines dated May 2011 is hereby Incorporated by reference.
- F. Securities Trading Policy for Trustees and Employees dated February 2015 is hereby Incorporated by reference.
- G. Manager and Placement Agent Statement of Disclosure Policy dated August 2012 is hereby incorporated by reference.

Signatories

As Adopted by the Investment Committee

Date: 9/25/2017

Signature: [Signature]
Mr. David L. Harris
Chair, Investment Committee

As Adopted by the Board of
Trustees

Date: 9/14/17

Signature: [Signature]
Mr. John R. Farris
Chair, Board of Trustees



Kentucky Retirement Systems
Appendix A: Addendum to the Statement of Investment Policy
Pension Fund – Asset Allocation / Benchmark Composite
Effective July 1st, 2018

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 and the State Police Retirement System. This document supersedes all prior documents entitled Addendum to the Statement of Investment Policy.

KRS Pension Fund (KERS / SPRS) - Asset Allocation					
Asset Class	Long-Term Benchmark	Target Allocation			
		KERS	SPRS	Compliance Bands	
Assumed Rate of Return		5.25%	5.25%	Min	Max
Growth		53.50%	53.50%	50%	65%
US Equity	Russell 3000	15.75%	15.75%	10%	25%
Non US Equity	MSCI ACWI Ex-US IMI	15.75%	15.75%	10%	25%
Private Equity	Russell 3000 + 300 bps (lagged)	7.00%	7.00%	5%	15%
High Yield / Specialty Credit	Bloomberg Barclays US High Yield	15.00%	15.00%	10%	25%
Fixed Income / Liquidity		23.50%	23.50%	15%	26%
Core Fixed Income	Bloomberg Barclays US Aggregate	20.50%	20.50%	15%	36%
Cash	Clk Grp 3-mos Treasury Bill	3.00%	3.00%	0%	5%
Diversifying Strategies		23.00%	23.00%	15%	26%
Real Estate	NCREIF ODCE	5.00%	5.00%	0%	10%
Opportunistic / Absolute Return	HFRI Diversified	3.00%	3.00%	0%	10%
Real Return	US CPI + 3%	15.00%	15.00%	5%	20%

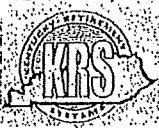
Signatories

As Adopted by the Investment Committee
 Date: June 7th, 2018

Signature:
 Neil P. Ramsey
 Chair, Investment Committee

As Adopted by the Board of Trustees
 Date: June 7th, 2018

Signature:
 David L. Harris
 Chair, Board of Trustees



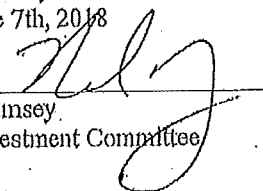
Kentucky Retirement Systems
Appendix A: Addendum to the Statement of Investment Policy
Pension Fund – Asset Allocation / Benchmark Composite
Effective July 1st, 2018

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 (Hazardous Duty only), and the County Employees Retirement System. This document supersedes all prior documents entitled Addendum to the Statement of Investment Policy.

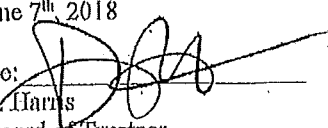
KRS Pension Fund - Asset Allocation (KERS-Haz / CERS / CERS-Haz Only)						
Asset Class	Long-Term Benchmark	Asset Allocation			Compliance Bands	
		KERS-Hazardous	CERS	CERS-Hazardous	Min	Max
Assumed Rate of Return		6.25%	6.25%	6.25%		
Growth		62.50%	62.50%	62.50%	60%	66%
US Equity	Russell 3000	18.75%	18.75%	18.75%	10%	25%
Non US Equity	MSCI ACWI Ex-US IMI	18.75%	18.75%	18.75%	10%	25%
Private Equity	Russell 3000 + 300 hrs (lagged)	10.00%	10.00%	10.00%	7%	13%
High Yield / Specialty Credit	Bloomberg Barclays US High Yield	15.00%	15.00%	15.00%	5%	20%
Fixed Income / Liquidity		14.50%	14.50%	14.50%	10%	18%
Core Fixed Income	Bloomberg Barclays US Aggregate	13.50%	13.50%	13.50%	7%	18%
Cash	CDI Grp 3-mos Treasury Bill	1.00%	1.00%	1.00%	0%	5%
Diversifying Strategies		23.00%	23.00%	23.00%	15%	26%
Real Estate	NCREIF ODCE	5.00%	5.00%	5.00%	0%	10%
Opportunistic / Absolute Return	HPRI Diversified	3.00%	3.00%	3.00%	0%	10%
Real Return	US CPI + 3%	15.00%	15.00%	15.00%	5%	20%

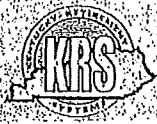
Signatories

As Adopted by the Investment Committee
Date: June 7th, 2018

Signature: 
Neil P. Ramsey
Chair, Investment Committee

As Adopted by the Board of Trustees
Date: June 7th, 2018

Signature: 
David L. Harris
Chair, Board of Trustees



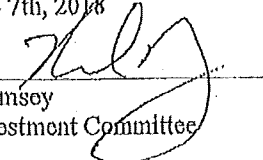
Kentucky Retirement Systems
Appendix B: Addendum to the Statement of Investment Policy
Insurance Fund – Asset Allocation / Benchmark Composite
Effective July 1st, 2018

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.

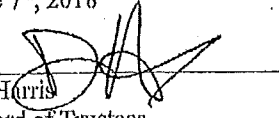
KRS Insurance Fund - Asset Allocation								
Asset Class	Long-Term Benchmark	Target Allocation					Compliance Bands	
		KERS	KERS Hazardous	CERS	CERS Hazardous	SPRS	Min	Max
Assumed Rate of Return		6.25%	6.25%	6.25%	6.25%	6.25%		
Growth		62.50%	62.50%	62.50%	62.50%	62.50%	60%	66%
US Equity	Russell 3000	18.75%	18.75%	18.75%	18.75%	18.75%	10%	25%
Non US Equity	MSCI ACWI Ex-US IMI	18.75%	18.75%	18.75%	18.75%	18.75%	10%	25%
Private Equity	Russell 3000 + 300 bps (lagged)	10.00%	10.00%	10.00%	10.00%	10.00%	7%	13%
High Yield / Specialty Credit	Bloomberg Barclays US High Yield	15.00%	15.00%	15.00%	15.00%	15.00%	5%	20%
Fixed Income / Liquidity		14.50%	14.50%	14.50%	14.50%	14.50%	10%	18%
Core Fixed Income	Bloomberg Barclays US Aggregate	13.50%	13.50%	13.50%	13.50%	13.50%	7%	18%
Cash	Citi Grp 3-mos Treasury Bill	1.00%	1.00%	1.00%	1.00%	1.00%	0%	5%
Diversifying Strategies		23.00%	23.00%	23.00%	23.00%	23.00%	15%	26%
Real Estate	NCREIF ODCE	5.00%	5.00%	5.00%	5.00%	5.00%	0%	10%
Opportunistic / Absolute Return	HFRJ Diversified	3.00%	3.00%	3.00%	3.00%	3.00%	0%	10%
Real Return	US CPI + 3%	15.00%	15.00%	15.00%	15.00%	15.00%	5%	20%

Signatories

As Adopted by the Investment Committee
Date: June 7th, 2018

Signature: 
Neil P. Ramsey
Chair, Investment Committee

As Adopted by the Board of Trustees
Date: June 7th, 2018

Signature: 
David L. Harris
Chair, Board of Trustees

ATTACHMENT II

Portfolio Guidelines

(Remainder of this page left blank intentionally.)

ATTACHMENT II



KENTUCKY RETIREMENT SYSTEMS

Investment Guidelines for Pzena Investment Guidelines Pzena Emerging Market Select Value Strategy



PURPOSE

These investment guidelines represent an extension of the Statement of Investment Policy for the Kentucky Retirement Systems.

KRS RETURN AND RISK OBJECTIVES

Performance/Tracking Error: Over the long term, our goal is for the Pzena Emerging Markets Select Value strategy to outperform the benchmark by [REDACTED] basis points on a gross basis. Since we are not attempting to track a benchmark in the short-term, we do not believe that traditional short-term measurements of risk are appropriate (e.g., one-year standard deviation, tracking error). However, based on realized since-inception tracking error, we anticipate the tracking error for the Emerging Markets Select Value strategy to be approximately [REDACTED] basis points per annum. Note that there is no guarantee of performance, past performance is not indicative of future results, and all investing involves risk, including risk of permanent capital loss.

Benchmark: MSCI Emerging Markets Index (Net W/H)

GUIDELINES

- 1) Permissible investments include, but are not limited to:
 - Common Stock or Equity-Like
 - Depositary Receipts (ADRs, GDRs, EDRs)
 - Foreign Companies that trade on a U.S stock exchange
 - Participatory Notes
 - Warrants
 - Rights
 - REITs (Real Estate Investment Trusts)
 - FX & Spot FX forwards may be utilized for trade settlement purposes.
- 2) The following types of assets or transactions are expressly prohibited without prior written permission:
 - Use of margin or leverage
 - Direct investments in real estate
 - Direct investments in commodities

DIVERSIFICATION

Security Type Qualifications

- No one position shall be greater than 5% at the time of purchase. By way of example, Investment Manager may buy a 5% position in month 3, and if that position falls to 4% in month 9 because the stock price falls, Investment Manager may then buy up to 1% more to make it a 5% position.
- No one position shall be greater than 7.50% at market.
- Portfolio will generally consist of 30 to 60 securities.
- No one economic sector to exceed the greater of (a) 20% of the total portfolio or (b) 150% of the sector's weight in the MSCI Emerging Market Index

- No one country to exceed the greater of (a) 20% of the total portfolio or (b) 150% of the country's weight in the MSCI Emerging Market Index or MCSI Frontier Index. Emerging Markets country defined as located in an Emerging Market country if organized under laws or has principal office in an Emerging Market country if it has a class of securities whose principal securities market is in an Emerging Market country; derives 50% or more of total rev from goods produced, sales made, or services provided in one or more Emerging Market countries; or if it maintains 50% or more assets in one or more Emerging Market country. Manager has discretion to determine which countries are regarded as Emerging Market, although those classified by MSCI as Emerging Market will typically be included.

ATTACHMENT III

Fee Schedule

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

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

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.

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

PRO-RATION OF CONTRIBUTIONS/WITHDRAWALS

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

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

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

ATTACHMENT IV

Statement of Disclosure and Placement Agents

(Remainder of this page left blank intentionally.)



Kentucky Retirement Systems
Manager and Placement Agent Statement of Disclosure
Approved June 27, 2018

A. Purpose

This Manager Statement of Disclosure (Policy) sets forth the disclosure requirements which must be satisfied prior to any Kentucky Retirement Systems (KRS) investment. This policy requires disclosure of conflicts of interest and/or political contributions with any new KRS investment. KRS shall require the disclosure of detailed information regarding any manager used, their services, and payments and fees in connection with all KRS investments. This Policy is intended to apply broadly to all of the types of investment advisors with whom KRS conducts or potentially conducts business with including general partners, managers, investment managers and sponsors of hedge funds, private equity funds, real estate funds, as well as investment managers retained pursuant to a contract.

The goal of this Policy is to bring transparency to our investment management relationships in connection with KRS' investments and to help ensure that KRS' investment decisions are made based solely on the merits of the investment opportunity and in a manner consistent with the responsibilities of the Board of Trustees and individuals who owe a fiduciary duty to KRS.

B. Objectives

The objectives of KRS' policy are:

1. To ensure that KRS' investment decisions are consistent with KRS' overall Investment Policy Statements;
2. To supplement the due diligence and information available to KRS Board members, staff, and consultants when evaluating an investment opportunity;
3. To prevent impropriety and/or the appearance of improprieties and to disclose conflicts of interest and/or the appearances of conflicts of interest;
4. Provide transparency and confidence in KRS investment decision-making and process; and
5. Establish procedures to comply with state and federal law.

C. Application

This Policy applies to all agreements with managers that are entered into after the date this Policy is adopted. This Policy also applies to existing agreements with managers if, after the date this Policy is adopted, the term of the agreement is extended; there is any increased commitment of funds by KRS pursuant to the existing agreement; or there is a material amendment to the substantive terms of an existing agreement, including the fees or compensation payable to the manager.

D. Definitions

1. "KRS vehicle" means a partnership, limited liability company, account or other investment vehicle in which KRS is the investor.
 2. "Consultant" refers to individuals or firms, and includes key personnel of consultant firms, who are contractually retained or have been contracted by KRS to provide investment advice to KRS but who do not exercise investment discretion.
 3. "Manager" means an asset management firm that is seeking to be, or has been, retained by KRS or by a KRS vehicle to manage a portfolio of assets (including securities and or contracts, etc...) for a fee. The manager usually has full discretion to manage KRS assets, consistent with investment management guidelines provided by KRS and fiduciary responsibility.
 4. "Placement Agent" means any person or entity hired, engaged or retained by or acting on behalf of an External Manager or on behalf of another Placement Agent as a finder, solicitor, marketer, consultant, broker or other intermediary to raise money or investments from or to obtain access to KRS, directly or indirectly, including without limitation through a KRS Vehicle.
 5. "Executive Agency Lobbyist (EAL)" means any person engaged to influence executive agency decisions or to conduct executive agency lobbying activity as one of his main purposes on a substantial basis. An EAL does not include an elected or appointed officer or employee of a federal or state agency, state college, state university, or political subdivision who attempts to influence or affect executive agency decisions in his fiduciary capacity as a representative of his agency, college, university, or political subdivision.
 6. "Executive Agency Lobbying Activity" includes any contact made to promote, oppose, or otherwise influence the outcome of an executive agency decision by direct communication with an elected executive official, the secretary of any cabinet listed in Kentucky Revised Statutes 12.250, any executive agency official, or a member of the staff of any one of the officials listed in this paragraph.
 7. "Real Party-In-Interest (RPI)" is a person or organization on whose behalf the executive agency lobbyist is acting, if that person is not the employer. For example, if the ABC Corporation engages XYZ Consulting Company which, in turn, hires John Smith to influence decisions or conducts
- Consulting Company is the employer; and (c) ABC Corporation is the "real party in interest".

Manager's Responsibilities

Prior to KRS investing with any manager, KRS Staff shall obtain a signed Manager Disclosure Questionnaire from the investment manager. This form includes a statement as to whether or not the investment manager has used a placement agent in connection with the proposed KRS investment opportunity. It also includes conflict of interest disclosures and political contribution disclosures among other required information including but not limited to:

- The name of the placement agent;
- The fee paid or payable to the placement agent;
- Representation that the fee is the sole obligation of the investment manager and not that of KRS or the limited partnership;

- Current or former Kentucky officials (federal, state, and local government), KRS Board of Trustees members, KRS employees or consultants to KRS that are receiving any fees or compensation from the manager and/or placement agent;
- 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;
- 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), Financial Regulatory Agency (FINRA), or any similar regulatory agency;
- A résumé for each officer, partner or principal of the placement agent detailing the person's education, professional designations, regulatory licenses and investment and work experience;
- A description of the services to be performed by the placement agent;
- A statement whether the placement agent, or any of its affiliates, is registered as a lobbyist with any and all Kentucky state and local (county) governments; and
- A statement by the manager and/or placement agent representing and warranting the accuracy of the information provided to KRS regarding the Statement of Disclosure in any final written agreement with a continuing obligation to update any such information within 10 business days of any change in the information.

The manager shall notify the placement agent of his or her obligations under Kentucky Revised Statutes Chapter 11A.

Compliance with the following procedures is the responsibility of the manager, the EAL and the placement agent. KRS staff is not responsible for ensuring compliance with the following procedures as staff is not a party to the process.

The following is a description of the process external persons must follow to comply with Kentucky's EAL registration procedures:

1. Prior to contact with KRS personnel the placement agent, employer, and, if applicable, the RPI, is required to file jointly, the Initial Registration Statement Form* with the Kentucky Executive Branch Ethics Commission (EBEC) and furnish a copy to KRS.

Questions as to the process or applicability should be addressed to:

Executive Branch Ethics Commission (502) 564-7954.

2. After Initial Registration, the placement agent, employer, and, if applicable, the RPI, is required to abide by the EBEC *Requirements After Registration* by filing an Updated Registration Statement** annually (Due by July 31) with the EBEC and furnish a copy to KRS.
3. If the placement agent, employer, and, if applicable, the RPI, wishes to terminate their lobbying effort they must notify the EBEC within 30 days after the termination of engagement by filling out the Termination Notification Form *** attaching it to the EAL's final Updated Registration Statement form** and furnishing a copy to KRS.

* Initial Registration Statement Form is available at:
<http://ethics.ky.gov/lobbying/Pages/Registration.aspx>

** Updated Registration Statement Forms are available at:
<http://ethics.ky.gov/lobbying/Pages/RequirementsAfterRegistration.aspx>

*** Termination Notification Form is Available at:
<http://ethics.ky.gov/lobbying/Pages/howToTerminate.aspx>

In the event a placement agent is expected to receive remuneration for a KRS investment, KRS staff will notify the Investment Committee in the memorandum discussing the recommended/approved investment. If a manager breaches this policy, staff will notify the Investment Committee as soon as practicable.

KRS Staff Responsibilities

KRS staff are responsible for:

- Providing the public with disclosure by posting a copy of this policy on KRS' website;
- Implementing this policy on behalf of KRS with each Investment Director responsible for their specific asset class; and
- Providing regular disclosure updates to the KRS Investment Committee and the Board of Trustees.

All parties responsible for implementing, monitoring and complying with this Policy shall consider the spirit as well as the literal expression of the Policy.

F. Conflict of Interest

All persons and entities contracting with KRS shall certify that:

- they are legally capable of entering into a binding contract and authorized to do so;
- that they are not, nor shall be, in violation of any Kentucky law, statute or regulation pertaining to a conflict of interest including, but not limited to, Kentucky Revised Statutes 121.056; and
- that they are not, nor shall be, in violation of any provision of Kentucky Revised Statutes Chapter 11A or any regulation promulgated there under, or any law or regulation pertaining to the Kentucky Registry of Election Finance and the reporting requirements thereof.

All persons and entities seeking to or actually contracting with KRS shall disclose all relationships and potential conflicts of interest with any KRS staff, committee or Board Member. Any disclosed conflicts of interest will be discussed at the Investment Committee as to the severity of the conflict and the appropriate resolution. Options the Investment Committee might recommend include but are not limited to: no action required; conflicted party abstention; and refusal to invest. Subsequent discovery of any undisclosed conflict may be considered a breach of contract and may result in immediate termination of any agreements without penalty or fee to KRS.

Signatories

As Adopted By The Investment Committee

Date:

6-27-18

Signature:

Mr. Neil Ramsey

As Adopted By The Board of Trustees

Date:

6-27-18

Signature:

Mr. David L. Harris



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 Please indicate fund vehicle title if relevant? If yes, please continue to question 2; if no, please proceed to question 10.

No, we did not use a third-party placement agent in an effort to solicit an investment from KRS.

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

N/A

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

N/A

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

N/A

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

N/A

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

N/A

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

N/A

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

N/A

9. Please disclose any political contributions made by the Placement Agent to any Kentucky official within the prior 2 years.

N/A

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

None.

11. Please disclose any political contributions made by External Manager or principals of the External Manager in the prior 2 years.

There were no political contributions made by the External Manager or principals of the External Manager to Kentucky political officials in the prior two years ended March 31, 2019.

12. Please disclose whether any principals of the firm have been involved in any regulatory proceedings, and if so, details concerning the same.

There is no material regulatory action pending or, to the best of our knowledge, threatened, against the External Manager or any of its principals relating to the business of the firm in the past ten years ended March 31, 2019.

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.

I confirm the information provided herein is accurate to the best of my knowledge, and I acknowledge that similar language will be included in any final written agreement between the External Manager and KRS, with a continuing obligation to update any such information within 10 business days of any change in such information.

Pzena Investment Management, LLC



External Manager Signature

Name: Joan F. Berger

Title: General Counsel

June 7, 2019

Date

ATTACHMENT V

Compliance Certificate

(The remainder of this page intentionally left blank.)

Compliance Certificate

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

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

Errors and Omissions dedicated to the Agreement: Date of expiration: _____

Per occurrence limit: _____

Annual aggregate: _____

Directors and officers liability: _____

Date of expiration: _____

Brokers blanket bond or similar coverage: _____

Date of expiration: _____

Other: _____

Date of expiration: _____

Exceptions: (Attach a separate sheet if necessary.)

Dated: _____

By: _____

Name: _____

Title: _____

ATTACHMENT VI

Authorized Persons

(Remainder of this page left blank intentionally.)



KENTUCKY RETIREMENT SYSTEMS

David L. Eager, Executive Director

Perimeter Park West • 1260 Louisville Road • Frankfort, Kentucky 40601
kyret.ky.gov • Phone: 502-696-8800 • Fax: 502-696-8822



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/Director of Fixed Income Assets

James R. Robben

(502) 696-8642 phone; (502) 696-8806

Signature: 

Deputy Chief Investment Officer/Director of Real Estate & Real Return

Andy Kiehl

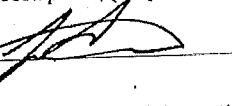
(502) 696-8470 phone; (502) 696-8806 fax

Signature: 

Director of Equity Assets

Joe Gilbert

(502) 696-8632 phone; (502) 696-8806 fax

Signature: 

Director of Private Equity/Alternative Assets

Anthony Chiu

(502) 696-8491 phone; (502) 696-8600 fax

Signature: 

Executive Director

David Eager

(502) 696-8453 phone; (502) 696-8801 fax

Signature: 

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.

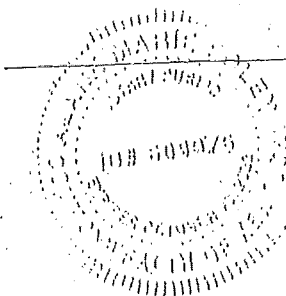
Signed: 

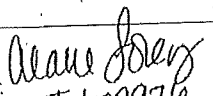
Dated: 5/31/2019

Mark Blackwell

Executive Director, Legal Division

(502) 696-8649 phone; (502) 696-8801 fax




ID# 609976
Exp. 10/13/2022

Authorized Persons List

ATTACHMENT VII

Proxy Voting Policy

(The remainder of this page intentionally left blank.)



Kentucky Retirement Systems
Investment Proxy Voting Policy
Approved June 27, 2018

The Kentucky Retirement Systems (KRS) Board of Trustees (Board) appoints an Investment Committee with full authority to act for the Board in the acquisition, sale and management of the securities and funds of the Retirement Systems. The Board also authorizes the Investment Committee or designee, custodian, investment manager or agent to execute stock proxies for the Board. Said delegate(s) shall maintain detailed records of its performance of its duty and provide such records to the Board as may be requested by the Board from time to time.

This position paper is hereby adopted by the Investment Committee to provide a set of guidelines to be followed in order to execute proxies. The following statement reflects the general policy that shall be applied as proxy issues are considered:

To support management if management's position appears reasonable, is not detrimental to the long term equity ownership of the corporation and reflects consideration of the impact of societal values and attitudes on the long-term liability of the corporation and is in the best interest of the plan participants.

The following paragraphs shall be applied when considering the more specific proxy issues that are likely to be encountered on a more routine basis.

A. Routine Business or Financial Matters

Election of Directors

FOR

In a majority of instances, election of directors is a routine voting issue. Unless there is a proxy fight for seats on the Board, KRS will usually vote in favor of the Management-proposed slate of directors.

Appointment of Auditors

FOR

The selection of independent accountants to audit the company's financial records is a routine business matter and in most instances is submitted to shareholders for public relations reasons. Since the accounting firm selected to do the audit has no effect on the investment value of the company's securities, KRS will support Management's recommendation.

Increase Authorized Common Stock

FOR *

KRS will support an increase in authorized common stock needed to implement a stock split when coupled with intent to immediately effect the split, or aid in a restructuring or acquisition or provide a sufficient number of shares for employee savings plans, stock option or executive compensation plans. A satisfactory explanation for a company's plans for the stock must be disclosed in the proxy statement.

* KRS will oppose increases in authorized common stock if we suspect that the shares are to be used to

implement a poison pill or another form of anti-takeover device, or if the issuance of new shares could excessively dilute the value of the outstanding shares upon issuance.

Changes in Board Structure

FOR *

Companies may propose various provisions related to the structure of the Board of Directors. These provisions may include changing the way Board vacancies are filled, directors are nominated or the number of directors. These provisions may include Majority Vote Director Elections and the Separation of the CEO and Chairman of Board. These proposals may be proposed amendments to the Charter or by-laws and need to be reviewed by the shareholders prior to voting. In most instances these proposals are not controversial nor an anti-takeover device. Therefore, KRS generally votes in favor of the proposal.

* However, KRS is opposed to cumulative voting for members of the Board and attempts to limit term of Board of Directors based on tenure or age.

B. Non-Routine Business or Financial Matters

Considering Non-Financial Effects of a Merger Proposal

AGAINST

KRS will oppose proposals that require the Board of Directors to consider what impact a merger would have on certain groups other than a company's shareholders, such as employees, consumers, business partners, and the communities in which the company is located. We expect that a company's Board of Directors will act in the best interest of its shareholders at all times.

Director Liability and Indemnification

FOR *

The Investment Committee believes that proposals concerning Liability and Indemnification, which limit the personal liability of directors for breaches of fiduciary duty of care and provisions for payment of expenses incurred by officials, directors and other representatives who become defendants in lawsuits, should be evaluated on a case by case basis with reasonable measures supported and extreme measures opposed.

Executive Compensation

FOR *

Executive compensation can take various forms but should provide adequate compensation and incentives to management consistent with the long term interests of the shareholders of the company.

* Management should have some assurance that they will not, in the event of a takeover, be terminated without motive and compensation. However, KRS is concerned that some compensation agreements provide excessive compensation in the event of a takeover. KRS does not oppose agreements which provide executives with a reasonable period of compensation after termination; however, they will oppose compensation plans which are excessive.

Stock Splits

FOR

KRS will vote in favor of a proposal to split the company's stock if there is an immediate intent to effect the split.

FOR *

Employment Relations

The Board of Directors and Corporate Management have the responsibility for harmonious labor relations. This responsibility also includes conducting labor negotiations within the appropriate laws of the jurisdiction.

- * Where efficient operation of the corporation requires plant closings or relocations, the corporation should give as much notice as possible and assist its employees in relocating or in seeking other employment. Resolutions of shareholders which seek to impose requirements on management in this regard will not be supported automatically. Support will be contingent upon whether or not managers can demonstrate that efforts have been made to retain good employment relations subject to the constraints encountered in the particular circumstances.

C. Anti-Takeover Issues

AGAINST

Blank Check Preferred Stock

A Blank Check Preferred Stock proposal is one that authorizes the issuance of certain preferred stock at some future point in time and allows the Board of Directors to establish voting, dividend, conversion, and other rights at the time of issuance. While Blank Check Preferred Stock can provide a corporation with the flexibility needed to meet changing financial conditions, it also may be used as the vehicle for implementing a poison pill defense, or it may be placed in friendly hands to help block a takeover bid. KRS' concern is that once this stock has been authorized, shareholders have no further power to determine how or when it will be allocated.

AGAINST

Classified Boards

A Classified Board is typically divided into three separate classes, each class to hold office for a term of two or three years. Only a portion of the Board of Directors can be elected or replaced each year. Since this type of proposal has fundamental anti-takeover implications, KRS opposes the adoption of Classified Boards.

AGAINST

Fair Price Provisions

A Fair Price provision in the company's charter or by-laws is designed to assure that, if the Corporation is acquired under a plan not agreed to by the Board of Directors, each shareholder's securities will be purchased at the same price. In most instances the provision requires that any tender offer made by a third party be made to all shareholders at the same price.

Fair pricing provisions attempt to limit the "two-tiered" pricing systems in which the interested party or would-be acquirer of the company initially offers a premium for a sufficient number of shares of the company to garner control. Thereafter, an offer at a much lower price is made to the remaining shareholders who have no choice at all but to accept the offer. The "two-tiered" approach is coercive in that it makes it easier for an outsider to gain control of a company because it provides an incentive to the shareholder to sell his shares immediately in order to receive the benefits of a higher price per share and avoid falling into the second tier, if the offer is successful. The coercive pressures associated with these offers have caused many states to adopt controlled share acquisition statutes which restrict this practice by law.

In theory this type of provision is acceptable standing alone, however, given the fact that the practice is in most aspects prohibited by law, and the fact that Fair Price Provisions are invariably linked with other anti-takeover measures, such as supermajority voting requirements to approve certain transactions, KRS will vote against most Fair Price Provisions.

Limiting Shareholders' Right to Call Special Meetings

AGAINST

Companies contend that such limitations are necessary to prevent minority shareholders from taking control of the company's agenda. However, such limits also have anti-takeover implications such as preventing a shareholder who has acquired a significant stake in the company from forcing management to address the potential sale of the company. Additionally, a limitation on shareholder action makes it difficult for a large shareholder or group of shareholders to use this facility to force management to address issues that may be of urgent or utmost importance. Since, in most instances, state law prohibits shareholders from abusing or using this facility in certain manners. KRS sees no justifiable reason for management to eliminate this facility. KRS will oppose the elimination of this fundamental shareholder right.

Limiting Shareholders' Right to Act by Written Consent

AGAINST

Action by written consent enables a large shareholder or group of shareholders of a company to initiate and vote on corporate matters without having to wait until the date of the next annual meeting. KRS believes this is a fundamental shareholder right that is inherent in the concept of stock ownership and will oppose any proposals which may limit.

Supermajority Vote Requirements

AGAINST

A Supermajority Vote Requirement is a charter or by-law requirement that, when implemented, raises the percentage of shareholder votes needed to approve certain proposals such as mergers, changes of control, or proposals to amend or repeal a portion of the Articles of Incorporation.

Re-incorporation

AGAINST

For various reasons, a corporation may choose to reincorporate under the laws of a different state. Their reasoning may include taxation, the state's General Business Law and the level of corporate experience the state's court may have. However, in a majority of instances a re-incorporation proposal has its foundation in the corporations's desire to incorporate in another state in order to take advantage of that state's laws governing corporations and corporate control and the state courts' views in interpreting laws that make it more difficult for unsolicited takeovers to occur. In such cases, KRS will oppose proposals for reincorporation.

Issuance of Stock with Unequal Voting Rights

AGAINST

Proposals of this nature are generally anti-takeover schemes which result in unequal voting rights among different classes of shareholders. The most frequent proposal of this type is a dual class capitalization plan which establishes two classes of stock. As an incentive to encourage shareholders to approve plans designed to concentrate voting power in the hands of insiders, some plans give higher dividends to shareholders willing to exchange shares with superior voting rights for shares with inferior voting rights.

Unequal voting rights plans are designed to reduce the voting power of existing shareholders and concentrate a significant amount of voting power in the hands of management. In the majority of instances,

they serve as an effective safeguard against hostile takeovers. For these reasons, KRS deems these plans unacceptable and in most instances will vote against these proposals.

AGAINST

Elimination of Preemptive Rights

Preemptive Rights allow the shareholders of the company to buy newly issued shares before they are offered to the public in order to retain their then current percentage of ownership as well as to avoid ownership dilution by the issuance of additional stock. KRS believes this is fundamental right of a shareholder and barring a compelling reason should not be eliminated by management. KRS will oppose management proposals requesting eliminating these rights and will support shareholder proposals which request the restoration of Preemptive Rights.

D. Corporate Governance Shareholder Proposals

FOR *

Submit Company's Shareholder Rights Plan Shareholder Vote

Most Shareholder Rights Plans (sometimes called poison pills) permit the shareholders of a target company involved in a hostile takeover to acquire shares of that company, the acquiring company, or both, at a substantial discount once a triggering event occurs. A triggering event is usually a hostile tender offer or the acquisition by an outside party of a certain percentage of the company's stock. Since most plans exclude the hostile bidder from the purchase, the effect in most instances, is to dilute the equity interest and the voting rights of the potential acquirer once the plan is triggered. Shareholder Rights Plans are designed to be so disadvantageous to potential acquirers that merely their existence could deter possible acquirers from making a hostile bid.

* KRS will support shareholder proposals asking that the company submit their Shareholder Rights Plan to a shareholder vote. KRS will vote case-by-case on proposals to completely redeem Rights Plans.

FOR

Anti-Greenmail Proposal

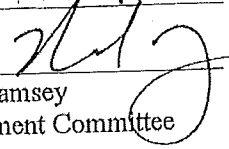
Greenmail payments generally result when a potential hostile acquirer has accumulated a significant percentage of the company's stock and the company acquires the raider's stock at an aggregate price usually above the then current market value usually in exchange for an agreement that the raider would not attempt to acquire control within a certain number of years. The proposal that has been proposed most often to prevent greenmail is the adoption of charter amendments severely limiting the board's ability to acquire blocks of the company's stock in these situations and at above market prices. KRS will vote in favor of an anti-greenmail proposal standing alone provided the proposal has no other management initiated anti-takeover attributes.

E. Social and Policy Issues

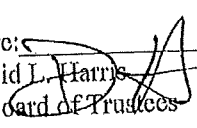
We believe that most decisions of a policy nature, having either a direct or an indirect effect on the conduct of business and on corporate profitability should remain management responsibilities. As such, they should be subject only to their Board of Director's approval; therefore, we would support the position taken by management.

Signatories

As Adopted by the Investment Committee
Date: 6-27-18

Signature: 
Mr. Neil P. Ramsey
Chair, Investment Committee

As Adopted by the Board of Trustees
Date: 6-27-18

Signature: 
Mr. David L. Harris
Chair, Board of Trustees

ATTACHMENT VIII

Conflict of Interest and Confidentiality Policy

(The remainder of this page intentionally left blank.)

6

**KENTUCKY RETIREMENT SYSTEMS
CONFLICT OF INTEREST AND CONFIDENTIALITY POLICY
[As Amended: September 14, 2017]**

INTRODUCTION

Adoption of Conflict of Interest and Confidentiality Policy:

Pursuant to the provisions of KRS 61.645, the Board of Trustees ("Board") of the Kentucky Retirement Systems ("KRS") is permitted to adopt procedures necessary to conduct the business of the Retirement Systems as needed. The law shall control if any inconsistency exists between the law and this policy.

Statement of Conflict of Interest and Confidentiality Policy:

KRS recognizes the need to maintain the public's confidence and trust in the integrity of KRS and the Commonwealth of Kentucky. Individuals associated with KRS must not engage in activities that have the potential to become a conflict of interest with their association with KRS. Likewise, individuals associated with KRS must not release information about KRS or any of its members that would breach any duty to protect such information. KRS recognizes the need to establish procedures to prevent such conflicts or breaches.

Purpose:

The purpose of this Conflict of Interest and Confidentiality Policy ("Policy") is to: a) establish what individuals are subject to conflict of interest provisions of KRS; b) establish the specific standards of conduct with regard to conflict of interest; c) establish standards with regard to the confidentiality of information; and d) establish procedures for the obtaining of written conflict of interest statements and confidentiality agreements from certain individuals.

PROCEDURES REGARDING CONFLICTS OF INTEREST AND CONFIDENTIALITY

Section 1: Application of Policy

1. This Policy shall apply to all individuals who have a statutory, contractual or working relationship with KRS.
2. Individuals affected by this Policy shall include, but are not limited to:
 - a. Employees of KRS;
 - b. KRSTrustees;
 - c. Independent contractors of KRS; and
 - d. Vendors and service providers of KRS with whom a contractual obligation to KRS exists.

Section 2: Standards of Conduct Regarding Conflicts of Interest

1. Individuals have an obligation to diligently identify, disclose, avoid, and manage conflicts of interest or potential conflicts of interest.
2. Potential conflicts of interest exist when an individual or an individual's family may be directly or indirectly financially impacted, whether favorably or detrimentally, by a decision made or considered by KRS in which the individual participates or would participate.
3. Individuals and their family members should not enter into any contract with KRS or any agency doing business with KRS, for financial gain, apart from an employment contract, without full disclosure and satisfactory management of any potential conflict of interest in accordance with the Executive Branch Code of Ethics provisions, as set forth in KRS Chapter 11A.
4. Individuals should not be involved in the decision to hire or in the supervision of any member of their immediate family.
5. Individuals should not conduct business or participate in decisions with a company or agency in which the individual or family member is employed or is actively seeking employment.
6. Individuals should not accept gifts, loans, gratuities, discounts, favors, hospitality, services, or other compensation under circumstances from which it could reasonably be inferred that a major purpose of the donor is to influence the individual in the performance of their duties.
7. Individuals must avoid all conduct which in any way might lead the public to believe that the individual is using his or her position with KRS to further a professional or private interest.
8. Individuals not covered by the conflict of interest provisions under KRS Chapter 11A must not violate any conflict of interest statute or principle by the performance of their duties with KRS. These individuals must not engage directly or indirectly in any financial or other transaction with a Trustee or employee of KRS that would violate the standards of the Executive Branch Ethics provisions, as set forth in KRS Chapter 11A.

Section 3: Standards of Conduct Regarding Confidentiality

1. Individuals associated with KRS may be granted access to confidential information in the course of employment, as a KRS Trustee, or within a contractual relationship with KRS.
2. This information may include, but is not limited to, individual member information, including but not limited to, Social Security numbers, names, addresses, phone numbers, birth dates, beneficiaries, health insurance information, Personal Identification Numbers (PIN), as well as documents, records, programs, files, scientific or technical information, or other information made available to individuals for purposes of completing their obligations to KRS.

3. These individuals have a duty to keep confidential the information to which they are granted access as a result of their association with KRS.
4. KRS and these individuals shall also recognize that confidential member information is protected under KRS 61.661.

Section 4: Written Statements of Conflict of Interest and Confidentiality

1. Conflict of Interest (KRS Trustees and Employees): On an annual basis, the Executive Director, Executive Director Office of Investments, Executive Director Office of Operations, Executive Director Office of Benefits, Executive Director Office of Legal Services, Executive Advisor, all employees of the Division of Investments and Investment Operations, General Counsel(s), all Division Directors, and all KRS Trustees shall file a written conflict of interest statement on the form(s) provided by KRS and approved by the Board of Trustees.
2. Conflict of Interest (Contractors; Vendors; Service Providers): All independent contractors, vendors and service providers of KRS shall file a written conflict of interest statement on the form(s) provided by KRS and approved by the Board of Trustees, which shall remain effective during the term of their relationship with KRS and thereafter.
3. Confidentiality Agreement (Contractors; Vendors; Service Providers): Upon proposal for contract that requires the exchange or disclosure of confidential KRS information, the contractor, vendor or service provider making the proposal shall file a written confidentiality agreement on a form provided by KRS and approved by the Board of Trustees. The confidentiality agreement may be amended to conform to specific needs of the proposed contract as well as the individual contractor, vendor or service provider.
4. Conflict of Interest and Confidentiality: Other individuals or entities covered by this Policy may also be requested to file a written conflict of interest or confidentiality statement as needed or requested by the Board.

Individuals or entities covered by this Policy who abstain from involvement in an official KRS decision because of personal or private interests must disclose that fact. KRS employees, contractors, vendors and service providers must disclose the conflict in writing to KRS' Executive Director or his or her designee. KRS Trustees who abstain from an official KRS decision because of personal or private interests shall disclose that fact in the minutes for the meeting where the recusal or abstention occurs.

Section 5: Violations of Conflict of Interest and Confidentiality Policy

1. Any person who suspects that an employee of KRS, a member of the Board of Trustees of KRS, or a contractor, vendor or service provider has violated the Kentucky Retirement Systems' Conflict of Interest and Confidentiality Policy, the Bylaws, or any Board policy, may file a complaint in writing with the Board.
2. The written complaint shall be in the form of a letter addressed to the Chair of the Board, or if the complaint is about the Chair of the Board, the complaint shall be addressed to the Vice Chair of the Board. A complaint may be filed anonymously. Employees of KRS filing a complaint may be protected by the Kentucky Whistleblower Statute, KRS 61.102.

3. A complaint shall include the name of the person or organization against whom the complaint is made and include a detailed description of the alleged violation including the time, date, and place, if known. The person should attach to the complaint all evidence in his or her possession regarding the alleged violation.
4. If the complaint is against an employee of KRS (other than the Executive Director, the Internal Auditor, or the Executive Director Office of Investments) the complaint shall be forwarded to the Executive Director (or delegate) for investigation, or in the discretion of the Executive Director (or delegate) may be referred to the Executive Branch Ethics Branch; if the alleged violation is found to be true by the Executive Director (or delegate), the employee shall be disciplined as procedures established by the Personnel Cabinet policies.
5. If the complaint is against a contractor, vendor or service provider of KRS, the complaint shall be forwarded to the Executive Director for investigation. If the alleged violation is found to be true, any action taken shall be consistent with the contract between KRS and the contractor, vendor or service provider.
6. If the complaint is against (i) a member of the Board of Trustees, (ii) the Executive Director, (iii) the Internal Auditor, or (iv) the Executive Director Office of Investments, the Chair shall, in consultation with the Board: (A) appoint an ad hoc special committee ("Special Committee") in accordance with the Bylaws of the Board, to investigate the complaint and report its conclusions and recommendations to the Board, or (B) if the complaint alleges a violation of the Executive Branch Code of Ethics (KRS Chapter 11A), refer the complaint to the Executive Branch Ethics Commission (KRS 11A.060), the Kentucky Attorney General or other appropriate entity.
7. Upon appointment of a Special Committee, the Chairman of the Board shall appoint a Chair of the Special Committee and designate other Board members (which shall be not less than three (3) nor more than seven (7) members, including the Chair of the Special Committee). The Chair of the Special Committee shall forward the complaint to the person against whom the complaint is made. The person may file a written response to the complaint, which should include all evidence in his or her possession regarding the alleged violation.
8. The Special Committee shall determine how the investigation of the complaint is to proceed; provided that the investigation and any information gathered in the course of investigation shall be conducted and maintained on a confidential basis. The Special Committee may assign staff to investigate the alleged violation or may engage a third party to investigate the alleged violation. Information shall be deemed confidential if it is not subject to public disclosure pursuant to the Kentucky Open Records Act, KRS 61.872 to 61.884, at the time of its disclosure or use.
9. If the result of the investigation indicates that the facts are not sufficient to constitute a violation of this (or other applicable) Policy, the Special Committee shall immediately terminate the investigation and report its determination and recommendations to the Board of Trustees. If the Board decides to take no action, the Special Committee shall prepare an explanation of the decision to take no action and shall maintain a copy of the complaint and the explanation in a confidential file. A copy of the explanation shall be sent to the person against whom the allegations were made and no further disclosure shall be made.

10. If the results of the investigation indicate that there is cause to believe that a violation of this (or other applicable) Policy has occurred, the Special Committee shall report its determination to the Board for its consideration at the next regular or special Board meeting. The Board discussion of the allegations and the report of the Special Committee, including any proposed disciplinary action, shall be conducted in closed session pursuant to KRS 61.810(f). The decision regarding disciplinary action shall be made in open session as required by KRS 61.815(l)(c).

11. If the Executive Director, the Internal Auditor, or the Executive Director Office of Investments is found to have violated this (or other applicable) Policy, the Board may impose one of the following disciplinary actions:

- a. Verbal Reprimand;
- b. Written reprimand, which will be added to the minutes and placed in the personnel file of the Executive Director, Internal Auditor, or Executive Director Office of Investments;
- c. Suspension without pay for a period of time; or
- d. Termination of employment.

The determination that the Executive Director, the Internal Auditor, or the Executive Director Office of Investments violated this (or other applicable) Policy shall require a vote of two-thirds (2/3) of the total membership of the Board. The Executive Director, the Internal Auditor and the Executive Director Office of Investments shall not have the right to appeal to the Kentucky Personnel Board.

12. If a member of the Board of Trustees is found to have violated this (or other applicable) Policy, the Board may impose any or all of the following disciplinary actions:

- a. Remove the member of the Board from any or all committees of the Board to which the member is assigned;
- b. Verbal public reprimand; and/or
- c. Written public reprimand.

The determination that a member of the Board violated this (or other applicable) Policy shall require a vote of two-thirds (2/3) of the total membership of the Board. If there are not sufficient members of the Board present at a meeting, the Chair may pass the matter to the next regular or special meeting of the Board.


13. If KRS becomes aware of violations of its Conflict of Interest and Confidentiality Policy, no provision of this (or other applicable) Policy shall be interpreted to limit KRS' remedies provided pursuant to the terms of an applicable contract, and by State or Federal Law.

ETHICS AND CONFIDENTIALITY

Individuals as set forth above shall conform to the Executive Branch Code of Ethics with regard to conflicts of interests as set forth in KRS Chapter 11A. Individuals as set forth above shall conform to the confidentiality requirements of KRS 61.661.

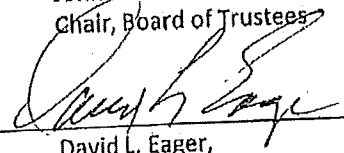
CERTIFICATION

We, the Chair of the Board of Trustees and the Executive Director, do each hereby certify that this Kentucky Retirement Systems' Conflict of Interest and Confidentiality Policy was amended and made effective by the Board of Trustees on the 14th day of September, 2017.



John R. Farris
Chair, Board of Trustees

9/28/17
Date



David L. Eager,
Interi

10/9/17
Date

EXHIBIT B – Conflict of Interest Statement

**KENTUCKY RETIREMENT SYSTEMS
CONFLICT OF INTEREST STATEMENT**

In consideration of the investment by Kentucky Retirement Systems and Kentucky Retirement Systems Insurance Trust Fund (collectively, "KRS") in a vehicle or account ("Account") managed by Pzena Investment Management, LLC (the "Manager"), the Manager acknowledges the need to maintain the public's confidence and trust in the integrity of KRS and the Commonwealth of Kentucky. In light of the forgoing, the Manager agrees to:

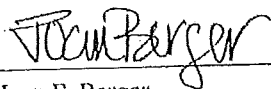
- Diligently identify, disclose, avoid and manage conflicts of interest that may arise through its relationship with KRS.
- Conduct activities with KRS so as not to advance or protect its own interests or the private interests of others with whom it has a relationship in a way that is detrimental to the interests of KRS.
- Conduct its activities in a manner to best promote the interests of KRS, but subject to the Manager's duty which requires it not to put the interests of one investor ahead of those of another investor.
- Upon discovery of an actual or potential conflict of interest involving KRS, disclose such conflict of interest to KRS and work with KRS in good faith to resolve or mitigate such conflict.
- Not engage directly or indirectly in any financial or other transactions with a trustee or employee of KRS that would violate the standards of the Executive Branch Ethics provisions as set forth in KRS Chapter 11A.

Agreed this the 7th day of June, 2019

MANAGER

For itself and on behalf of the Account

By: _____



Name: Joan F. Berger

Title: General Counsel