

## COLLECTIVE FUND CUSTODY AGREEMENT

This Collective Fund Custody Agreement is made as of this 13<sup>th</sup> day of November, 2008, between Kentucky Retirement Systems ("Investment Fiduciary") on behalf of the Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement System (collectively, the "Systems") and Northern Trust Investments, N.A. ("NTI"), a national banking association.

### 1. Appointment

The Investment Fiduciary hereby appoints NTI as custodian to maintain in the name of the Systems a custody account for the purpose of facilitating investment in one or more collective funds (each, a "Fund", collectively, the "Funds") maintained by NTI as collective fund trustee under the Declaration of Trust of the Northern Trust Global Investments Collective Funds Trust effective January 31, 2006, as amended from time to time ("Declaration"), a copy of which is attached hereto as Exhibit A.

### 2. Collective Fund Investments

(a) NTI shall, as soon as practicable, invest the assets transferred to it from the Systems pursuant to separate written instruction from the Investment Fiduciary in one or more of the Funds identified on Exhibit B ("Designated Funds") in such amount or proportion as directed.

(b) If it is not practicable for NTI to immediately invest any cash received by it as directed, then NTI shall invest such cash in the NTGI Short-Term Investment Fund until investment in the Designated Fund is practicable. The NTGI Short-Term Investment Fund is a collective fund maintained by NTI as trustee.

(c) The Investment Fiduciary may change the Designated Funds from time to time by filing a new Exhibit B with NTI, provided that the timing of any such change must be in accordance with Fund rules.

(d) NTI shall have no responsibility or accountability for assets of the Systems until they are received by it.

(e) In the event of termination of this Agreement, Federal law precludes continued participation by the Systems in any Designated Fund. Accordingly, NTI must withdraw the value of the Systems' investment from all Designated Funds on the next valuation date (as defined in the Declarations) immediately following the date of termination. Pursuant to the terms of the Declarations, NTI in its capacity as collective fund trustee retains and will exercise discretion, based solely on its own judgment, to pay over the value on such valuation date of the Systems' investment in the Designated Funds in cash, in-kind, or in any combination thereof to such entity as the Investment Fiduciary directs. Written notice of termination by either party is irrevocable. Following the valuation date after termination, participation in the Funds may continue only upon execution of a new agreement by the Investment Fiduciary and NTI or its affiliate.

3. Collective Fund Withdrawals

NTI shall make withdrawals from the Designated Funds and shall distribute or invest assets so withdrawn pursuant to written direction of the Investment Fiduciary. The Investment Fiduciary understands that the collective fund trustee may require that part or all of any withdrawal from the Designated Funds be made in-kind.

4. Representation and Warranties by Investment Fiduciary

The Investment Fiduciary represents and warrants to NTI as follows:

(a) the Investment Fiduciary is authorized to execute this Agreement under the terms of the Systems and applicable plans:

(b) the Systems are retirement pension, profit sharing or stock bonus trusts or collective trust funds composed of assets which are exempt from federal income taxation under Section 501 of the Internal Revenue Code of 1986, as amended ("Code"), by reason of qualifying under Section 401(a) of the Code or is a governmental plan within the meaning of Section 414(d) of the Code;

(c) the agreement or legislation creating the Systems ("Trust Agreement") authorizes investment in collective funds and provides that any declaration pursuant to which the Fund is maintained is incorporated by reference in the Trust Agreement and shall prevail over any contrary provisions of this Agreement; and

(d) investment of Systems' assets in the Fund pursuant to this Agreement is in accordance with applicable law and the terms of the applicable plan and Trust Agreement.

The Investment Fiduciary further warrants that the foregoing representations shall be deemed to be continuing so long as the Systems participate in the Fund and that the Investment Fiduciary shall notify NTI in writing before or immediately upon the occurrence of any event which causes a change to the representations and warranties made hereunder.

5. Representation and Warranties by NTI

NTI represents and warrants to the Investment Fiduciary as follows:

(a) NTI has full power and authority to execute, deliver and perform this Agreement and has taken all necessary and proper action to authorize the execution and delivery of this Agreement; and

(b) NTI will perform its obligations hereunder in accordance with the terms of this Agreement; and

- (c) NTI acknowledges that, in its capacity as collective fund trustee, it is a "fiduciary" as defined in Section 3(21) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA") with respect to Plan assets invested in any Fund maintained under the Declarations or this Agreement.

NTI further warrants that the foregoing representations shall be deemed to be continuing so long as the Systems participate in the Fund and that NTI shall notify the Investment Fiduciary in writing before or immediately upon the occurrence of any event which causes a change to the representations and warranties made hereunder.

#### 6. Statements and Reports

NTI shall deliver to the Investment Fiduciary the following statements and reports:

- (a) monthly statements of the Systems account showing all investments, receipts, disbursements and other transactions as of the close of business on the last business day of each month, with copies of such statements and reports delivered to the trustee of the Systems;
- (b) such periodic Fund statements as may be required under the Declaration governing the Fund; and
- (c) such additional reports or statements as may be agreed from time to time by the Investment Fiduciary and NTI.

#### 7. Investments in Northern Trust Corporation Stock

Pursuant to the terms of the Declarations, certain of the passively managed Funds may maintain investments in Northern Trust Corporation ("NTC") stock. The Investment Fiduciary acknowledges that NTC is an affiliate of NTI and authorizes the investment in NTC common stock to the extent consistent with the investment objectives of any Funds in which Systems assets are invested.

#### 8. Securities Lending

Pursuant to the terms of the Declaration, certain of the Funds may lend securities ("Lending Funds"). Any such securities lending will be in accordance with Department of Labor Prohibited Transaction Class Exemption 2006-16. NTI's affiliate, The Northern Trust Company, has been appointed to serve as securities lending agent for the Lending Funds, with responsibility for administering the securities lending program. As compensation for such services, the Investment Fiduciary authorizes the payment by any Lending Fund in which Systems assets are invested of a monthly fee no greater than 40% of the securities lending revenue earned by such Lending Fund (such revenue to be calculated net of rebates paid to the borrowers of securities and other expenses).

Securities lending revenue consists of (a) in the case of loans secured by cash collateral, the aggregate income derived from the investments of such cash collateral, net of (i) any applicable payment or withholding of tax, (ii) aggregate rebate fees paid or accrued to borrowers and (iii) certain expenses, adjustments and other charges provided for in the lending agreement

between NTI and The Northern Trust Company as securities lending agent and (b), in the case of loans secured by all other types of collateral, the aggregate loan fees paid by the borrower, reduced by any applicable payment or withholding of tax. There are a variety of cash collateral investment options (which may include investment in collective funds of affiliates) available to NTI which will be selected from time to time in its discretion.

If the Investment Fiduciary subsequently notifies NTI that it no longer desires Systems assets to be included in the securities lending program, NTI will cause such Systems assets to be redeemed from any Funds that lend securities within thirty (30) days following its receipt of such notice.

9. Compensation and Reimbursement

NTI shall be reimbursed for all extraordinary and non-recurring expenses incurred in the custody and protection of the account, including legal and accounting fees, and shall receive such reasonable compensation for its services as may be agreed by the parties in writing from time to time. The initial fees are set forth in Exhibit C to this Agreement.

10. Limitation on Custodian's Liability

NTI shall be entitled to rely upon any direction, notice or other communication or document it receives from the Investment Fiduciary pursuant to this Agreement and shall have no responsibility for any loss to the account that may result from acting in accordance with the terms of this Agreement, unless NTI could not reasonably rely upon such direction, notice, communication or document which NTI in good faith believes it has received from the person authorized to act on behalf of the Investment Fiduciary under 12(b) hereof.

11. Governing Law

The terms and provisions of this Agreement shall be construed and governed in accordance with the laws of the Commonwealth of Kentucky, without regard to conflict of laws principles thereof. NTI hereby consents to the jurisdiction of the courts of the Commonwealth of Kentucky and further consents that venue shall lie in the Franklin Circuit Court located in Franklin County, Kentucky. To the extent that in any jurisdiction NTI 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, NTI, to the extent it may effectively do so, irrevocably agrees not to claim, and it hereby waives, same. The invalidity of any part of this Agreement shall not affect the remaining parts thereof.

12. Notices

Notices or other communications relating to this Agreement shall be sent as follows:

(a) If to NTI:

Northern Trust  
Attention: James A. Aitcheson  
181 West Madison Street, M-23

Chicago, IL 60603

(b) If to the Investment Fiduciary:

Kentucky Retirement Systems  
Attention: Adam Tosh, Chief Investment Officer  
Perimeter Park West  
1260 Louisville Road  
Frankfort, Kentucky 40601

13. Entire Agreement

This Agreement, together with the Declarations, embodies the entire agreement between the parties and supersedes any and all prior commitments, agreements, representations and understandings, whether written or oral, relating to the subject matter hereof and may not be contradicted or varied by evidence of prior, contemporaneous, or subsequent oral agreements or discussions of the parties hereto.

14. Amendment

The provisions of this Agreement may be amended or waived only by an instrument in writing signed by the parties hereto.

15. Termination

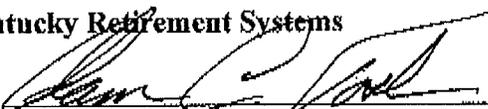
Each of the parties hereto may terminate this Agreement by giving to the other party thirty (30) days written notice of such termination.

16. Assignment

Neither the Investment Fiduciary nor NTI may assign this Agreement without the prior written consent of the other, except that NTI may assign its rights and delegate its duties hereunder to any corporation or entity which directly or indirectly is controlled by, or is under common control with, NTI. Any entity which shall by merger, consolidation, purchase or otherwise, succeed to substantially all the trust business of NTI shall, upon such succession and without any appointment or other action by the Investment Fiduciary, be and become successor custodian hereunder, upon notification to the Investment Fiduciary.

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed as of the day and year first written above.

**Kentucky Retirement Systems**

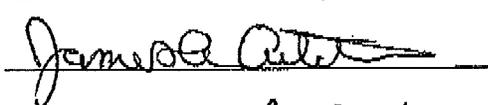
By: 

Name: Adam C. Tish

Its: \_\_\_\_\_

Date: November 13, 2008

**Northern Trust Investments, N.A.**

By: 

Name: James A. Aheizer

Its: Senior Vice President

Date: November 14, 2008

**EXHIBIT B**

**DESIGNATED COLLECTIVE FUNDS**

The Investment Fiduciary hereby designates the following collective funds for investment by the Trust from time to time in such proportions or amounts as the Investment Fiduciary shall direct in writing:

- **NTGI-QM Collective Daily Developed International Small Cap (DISC) Equity Index Fund – Lending**
- **NTGI-QM Collective Daily Emerging Markets Small Cap Equity Index Fund – Lending**
- **NTGI-QM Collective Diversified Frontier Markets Fund – Lending**

**Kentucky Retirement Systems**

By: 

Name: Adam C. Tish

Its: \_\_\_\_\_

Date: November 13, 2008

**Northern Trust Investments, N.A.**

By: 

Name: James A. Aitcheson

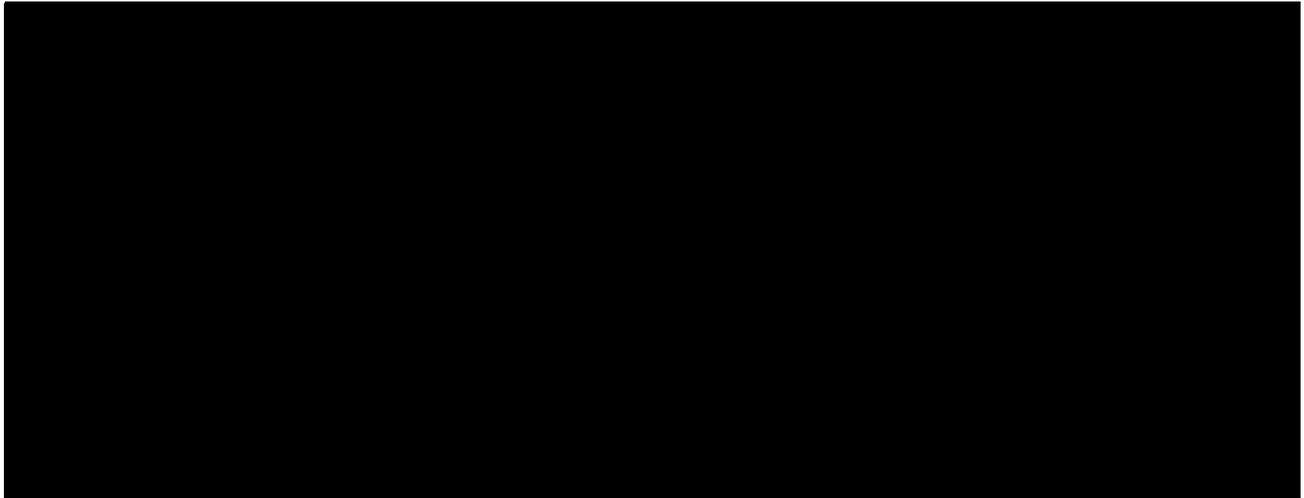
Its: Senior Vice President

Date: November 14, 2008

**EXHIBIT C**

**FEES**

The Investment Fiduciary shall pay NTI a fee for services rendered pursuant to the following fee schedule:



Valuations for fee calculations are made based on the aggregate market value of assets held at the end of each calendar quarter, and fees are charged quarterly in arrears based on one-fourth of the annual fee. Fees will be prorated appropriately if investments are not held for a full quarter.

**Kentucky Retirement Systems**

By: *Adam C. Tosh*

Name: *Adam C. Tosh*

Its: \_\_\_\_\_

Date: *November 13, 2008*

**Northern Trust Investments, N.A.**

By: *James A. Archer*

Name: *James A. Archer*

Its: *Senior Vice President*

Date: *November 14, 2008*

**SECOND AMENDMENT TO COLLECTIVE FUND CUSTODY AGREEMENT**

This Second Amendment is made as of and effective March 5th, 2014, amending the Collective Fund Custody Agreement dated November 13, 2008, as previously amended (the "Agreement"), by and between Kentucky Retirement Systems (the "Investment Fiduciary"), on behalf of the **Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement Systems** (collectively, the "Systems"), and Northern Trust Investments, Inc. (formerly Northern Trust Investments, N.A.) ("NTI"), an Illinois bank with trust powers.

1. The Agreement is hereby amended in the following particulars:

Exhibit C attached to the Agreement, as well as any amendments thereto executed prior to the effective date of this Amendment, is hereby deleted and revoked, and in lieu thereof, the Exhibit C attached to this Amendment is adopted and incorporated in the Agreement, pursuant to sections 9 and 14 thereof.

2. Except for this Second Amendment, the Agreement remains in full force and effect without change.

IN WITNESS WHEREOF, the parties have caused this Second Amendment to be executed as of the day and year first written above.

**Kentucky Retirement Systems, on behalf of the  
Kentucky Employees Retirement System,  
County Employees Retirement System and State  
Police Retirement Systems**

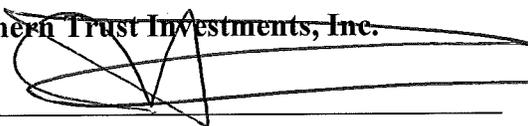
By: 

Name: Joe Gilbert

Its: Director of Equity

Date: 3/5/14

~~Northern Trust Investments, Inc.~~

By: 

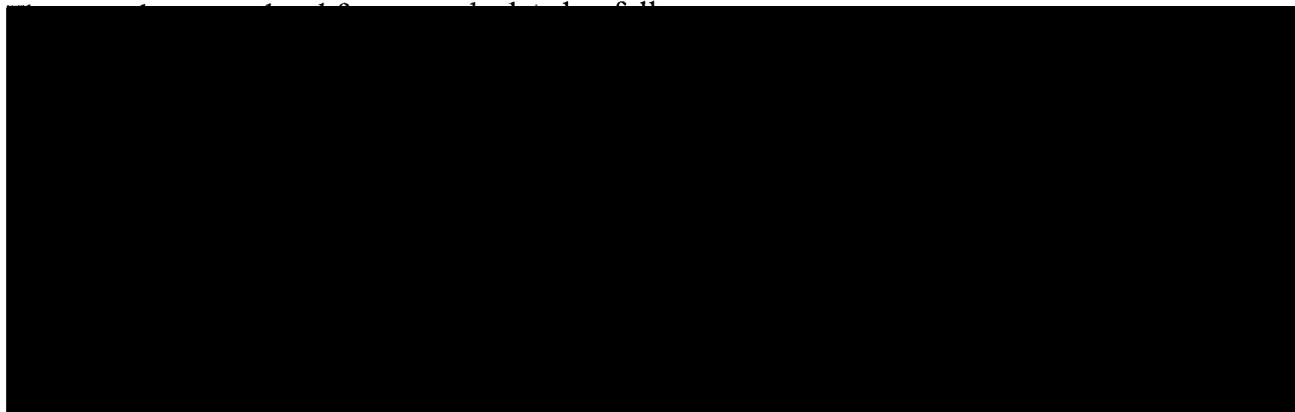
Name: Jason Pasavelli

Its: Vice President

Date: 3/5/14

**FEES**

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



The account-level fees set forth above are in addition to the fund-level custody, fund administration services, and external audit services expressly set forth in the Fund Declarations for the Funds.

**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.

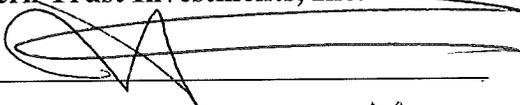
The **adjusted monthly market value** = month-end asset value adjusted for contributions or withdrawals made by the Investment Fiduciary.

- (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.

Investment Fiduciary agrees that fees for all Accounts governed by this Agreement shall be paid by being automatically debited from the Accounts. *A copy of all invoices should be sent for review at least 10 business days prior to payment. Unless notified to the contrary, each such debited payment may take place on the first day of the month following such 10-day review period.*

**Kentucky Retirement Systems, on behalf of the  
Kentucky Employees Retirement System,  
County Employees Retirement System and State  
Police Retirement Systems**

By:   
Name: Joe Gilbert  
Its: Director of Equity  
Date: 3/5/14

~~Northern Trust Investments, Inc.~~  
By:   
Name: Jason Pasquelli  
Its: Vice President  
Date: 3/5/14

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## FIRST AMENDMENT TO COLLECTIVE FUND CUSTODY AGREEMENT

This First Amendment is made as of and effective June 28, 2013, amending the Collective Fund Custody Agreement dated November 13, 2008 (the "Agreement") by and between Kentucky Retirement Systems (the "Investment Fiduciary"), on behalf of the **Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement Systems** (collectively, the "Systems"), and Northern Trust Investments, Inc. (formerly Northern Trust Investments, N.A.) ("NTI"), an Illinois bank with trust powers.

1. The Agreement is hereby amended in the following particulars:

Exhibits B and C attached to the Agreement, as well as any amendments thereto executed prior to the effective date of this Amendment, are hereby deleted and revoked, and in lieu thereof, the Exhibits B and C attached to this First Amendment are adopted and incorporated in the Agreement, pursuant to sections 9 and 14 thereof.

2. Except for this First Amendment, the Agreement remains in full force and effect without change.

IN WITNESS WHEREOF, the parties have caused this First Amendment to be executed as of the day and year first written above.

**Kentucky Retirement Systems, on behalf of the Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement Systems**

By: T.J. Carlson  
T.J. Carlson  
Chief Investment Officer

Date: 6-28-13

**Northern Trust Investments, Inc.**

By: James Dominguez  
Name: JAMES DOMINGUEZ

Its: SECOND VICE PRESIDENT

Date: 7-18-13

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**EXHIBIT B**

**DESIGNATED COLLECTIVE FUNDS**

The Investment Fiduciary hereby designates the following collective funds for investment by the Trust from time to time in such proportions or amounts as the Investment Fiduciary shall direct in writing:

- Northern Trust Collective Developed International Small Cap (DISC) Index Fund – Lending
- Northern Trust Collective Emerging Markets Small Cap Index Fund – Non-Lending

**Kentucky Retirement Systems, on behalf of the Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement Systems**

By: T.J. Carlson  
T.J. Carlson  
Chief Investment Officer

Date: 6-28-13

Date: \_\_\_\_\_

**Northern Trust Investments, Inc.**

By: James Dominguez

Name: JAMES DOMINGUEZ

Its: SECOND VICE PRESIDENT

Date: 7-18-13

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**EXHIBIT C**

**FEEES**

The Investment Fiduciary shall pay NTI a fee for account-level services rendered pursuant to the following fee schedule, which shall be applied to the Accounts in the aggregate:



The account-level fees set forth above are in addition to the fund-level custody, fund administration services, and external audit services expressly set forth in the Fund Declarations for the Funds.

Fees shall be calculated quarterly, based on the aggregate market value of assets held in the Accounts on the last day of each prior calendar quarter end. For the avoidance of doubt, fee calculations for the second calendar quarter will be based on the aggregate market value of assets held in the Accounts on the last day of March. Fees are charged quarterly based on one-fourth of the annual fee. Fees will be prorated appropriately if investments are not held for a full quarter.

Investment Fiduciary agrees that fees for all Accounts governed by this Agreement shall be paid as follows (please check one):

automatically debited from the Account

*A copy of all invoices should be sent for review at least 10 business days prior to payment. Unless notified to the contrary, each such debited payment may take place on the first day of the month following such 10-day review period.*

An invoice shall be sent to the Investment Fiduciary

If one of the fee payment options above has not been selected, the first option shall be applied.

[Signature Block on Following Page]

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**Kentucky Retirement Systems, on behalf of the Kentucky Employees Retirement System,  
County Employees Retirement System and State Police Retirement Systems**

By: T.J. Carlson  
T.J. Carlson  
Chief Investment Officer

Date: 6-28-13

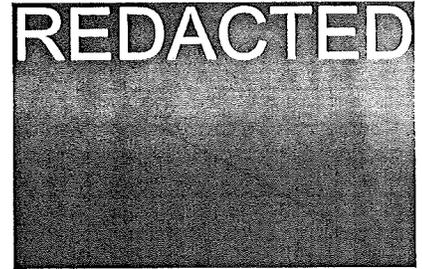
**Northern Trust Investments, Inc.**

By: James Dominguez

Name: JAMES DOMINGUEZ

Its: SECOND VICE PRESIDENT

Date: 7-18-13



**KENTUCKY RETIREMENT SYSTEMS  
INVESTMENT MANAGEMENT AGREEMENT**

THIS INVESTMENT MANAGEMENT AGREEMENT (the "Agreement" or "Contract") is entered into as of June 30, 2013 by and between **Northern Trust Investments, Inc.**, with offices located at **50 South LaSalle Street, Chicago, Illinois 60675** ("Manager"), and **Kentucky Retirement Systems** ("KRS" or "Systems").

**WITNESSETH:**

WHEREAS, KRS desires to appoint **Northern Trust Investments, Inc.** as investment manager with authority to manage and control a portion of KRS' assets held from time to time (the "Account") pursuant to this Contract;

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

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

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

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

“Guidelines”), which are attached hereto as Attachment II and incorporated herein by this reference. Manager shall exercise its power and authority with respect to the Account in accordance with the Investment Policy. The Investment Policy shall remain in effect until such time as KRS approves (in writing) a modification to the Investment Policy. Manager will be furnished a copy of the revised Investment Policy prior to and for the purpose of implementing any changes which may affect Manager. The Guidelines shall remain in effect unless amended by written agreement of both KRS and Manager. 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. If Manager accepts or receives such information or services from a broker or dealer, then Manager shall report to KRS in accordance with section 18(c)(iv).

Notwithstanding the foregoing, the Manager shall not place orders with any broker/dealer who: (a) KRS has by written notice to the Manager deemed unsuitable for Account trades, (b) is affiliated with the Manager or (c) is affiliated with an investment consultant that provides non-brokerage related services to KRS. The Manager agrees to be bound by any changes to such broker/dealer list upon receipt of written notice from KRS. In addition, the Manager shall not engage in transactions that involve a broker acting as a principal where the broker is 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, and calculated as outlined in Attachment III. **REDACTED**

**REDACTED**

# REDACTED

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 an Investment Adviser being disqualified from collecting performance fees under rule 206(4)-5 of the Investment Advisers Act of 1940.

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 advance 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.

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

- a) Manager is duly organized, validly existing and in good standing under the laws of the state of its organization and has complete authority to carry out its business as it has been conducted;
- b) The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby are within the power of the Manager and have been duly authorized by all necessary corporate action. The Manager has duly executed and delivered this Agreement, and this Agreement constitutes the legal, valid and binding agreement and obligation of the Manager, enforceable against the Manager in accordance with its terms, except insofar as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar limitations on creditors' rights generally and general principles of equity.
- c) Neither the execution and delivery of this Agreement nor the consummation of the transactions provided herein will violate any agreement to which the Manager is a party or by which it is bound, any law, regulation, order, or any provision of the charter documents of the Manager.
- d) Manager is a registered investment adviser as defined in the Investment Advisers Act of 1940, as amended ("the Advisers Act"), and therefore eligible to act as an investment

manager under ERISA, is registered in or is exempt from registration in accordance with applicable state laws and is not subject to any of the disqualifications set forth in Section 411 of ERISA;

- e) Manager has completed, obtained, and performed all registrations, filings, approvals, authorizations, consents, or examinations required by any government or governmental authority for acts as contemplated by this Agreement;
- f) Manager will maintain the following insurance coverage for the duration of the Agreement plus sixty months after expiration or termination of the Agreement. Proof of the existence of such policies shall be provided to KRS annually with the Compliance Certificate in Attachment V:
  - i) An errors and omissions policy in the minimum amount of \$10,000,000 with a maximum deductible of \$1,000,000 per claim. The policy shall cover, at a minimum, losses caused by errors, omissions, or negligent acts of the Manager.
- 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. Manager will promptly follow such telephonic notice with written notice to KRS;
- h) It 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 under this Agreement. 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 related to the Manager's performance of duties as an investment adviser under this Agreement; and
- i) Manager will promptly notify KRS in writing in the event any of these representations is no longer true.
- j) The Manager will make all required filings with all applicable regulatory agencies within all prescribed deadlines on behalf of its investments of the assets in the Account.
- k) The Manager shall annually file with KRS a compliance certificate, executed by a responsible officer of the Manager's firm, in the form attached hereto as Attachment V, within thirty (30) days after each June 30.

17. **Reporting Requirements.** Manager shall furnish reports in a mutually agreed upon format to KRS upon their reasonable request.

- a) The Manager shall provide the following reports monthly (either hard copy or by electronic access) within twelve (12) 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, in which the Manager shall provide the following information to KRS:
- i) A review of 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 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) A copy of SEC form ADV – Part II, any amendments thereto as available;
  - ii) A copy of the Manager's annual report and SAS 70 (if applicable);
  - iii) A Compliance Certificate provided in Attachment V;
  - iv) A report on the Manager's use of soft dollars earned and expended resulting from its duties under this Agreement. The report shall include the products and services obtained through soft dollar arrangements and their approximate value. Otherwise, the Manager shall indicate in writing that soft dollar information is not applicable to this Account.
- d) The Manager shall provide the following information periodically as requested:
- i) Information relating to industries, businesses, corporations or securities as requested by KRS;
  - ii) Reports containing the Manager's and affiliates' conflict of interest policies; and

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

18. **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.

19. **Change in Status.** Manager shall promptly notify KRS in writing of any material change in Manager's business which may effect Manager's ability to perform its duties and responsibilities under this Agreement, including, but not limited to, any change in Manager's status as a registered investment manager, any material litigation, any material adverse changes to the Manager's financial or organizational status or any material change in its senior professional personnel, and any change in personnel involving a KRS Account. It shall promptly notify KRS of any conflicts of interest arising from Manager and its relationship with any entity. 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.

20. **KRS Representations.** 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.

21. **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.

22. **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.

23. **Audit or Examination of Records.** REDACTED

REDACTED

24. **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.

25. **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:	Northern Trust Investments, Inc. Jason D. Pasquinelli 50 South LaSalle Street, Chicago, IL 60603 [facsimile: 312.557.1478}
KRS at:	T.J. Carlson Chief Investment Officer 1260 Louisville Rd Frankfort KY, 40601 [facsimile: 502.696.8889]
With a copy to:	Jennifer Jones Interim General Counsel 1260 Louisville Rd Frankfort KY, 40601
Custodian at:	The Northern Trust Company Attn: Ms. Kathy Stevenson, Vice President 50 South LaSalle Street, B-8 Chicago, IL 60675 [facsimile: 312.557.2710]

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

27. **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 or requested by an appropriate regulator, and shall maintain positive policies and procedures for safeguarding the confidentiality of such information. REDACTED  
REDACTED

28. Remedies. REDACTED

REDACTED

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

30. Duration of Contract. The period in which subject services are to be performed is from the date first above written through June 30, 2016. At the expiration of each term, a new term of three years shall automatically be come into being, unless one of the parties hereto notifies the other this agreement may, at the option of the parties hereto, be extended by negotiation for additional periods.

31. 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 thirty (30) business days written notice to the Manager or at Manager's discretion upon thirty (30) calendar days written notice. Manager shall cooperate with KRS and follow KRS's written directions in connection with the termination of this agreement to effect the orderly transfer of securities; or
- b) At KRS's discretion, immediately, if a result of the Manager's default or breach of contract.

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

32. 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.

33. **Amendments.** Except as otherwise provided herein, written modifications, amendments or additions to this Contract shall be effective only when signed by both parties. At the expiration of its term, this Contract may, at the option of the parties hereto, be renewed by negotiation for further periods not to exceed 60 months for each such renewal.

34. **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.

35. **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.

36. **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.

37. **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.

38. **Voting of Proxies.** The Manager shall exercise voting rights with respect to securities under its management. Manager is authorized and directed to vote all proxies and affect any corporate actions in accordance with KRS's Investment Proxy Voting Policy attached hereto as Attachment VII. If the Investment Proxy Voting Policy does not directly address how KRS's voting rights shall be exercised, then the Manager shall vote in accordance with the recommendations of Institutional Shareholder Services ("ISS"). If ISS has not issued a recommendation, then KRS shall consult with an Authorized Person to determine how the vote shall be cast. The Manager shall maintain detailed records of its performance of this duty and shall provide those records to KRS quarterly.

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

**Kentucky Retirement Systems**

By: T.J. Carlson

T.J. Carlson  
Chief Investment Officer

Date: 5-6-13

**Northern Trust Investments, Inc.**

By: [Signature]

Name: JASON PASQUINELLI  
Title: Vice President

Date: 5-6-2013



## Kentucky Retirement Systems

Statement of Investment Policy

Approved October 5, 2012

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

### I. The Board of Trustees

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

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

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

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

### II. The Investment Committee

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

The Investment Committee has the following oversight responsibilities:

- A. Assure compliance with this policy and all applicable laws and regulations.
- B. Approve the selection and termination of service providers.

- C. Meet quarterly to evaluate whether this policy, the investment activities and management controls and processes continue to be consistent with meeting the Systems' goals. Mandate actions necessary to maintain the overall effectiveness of the program.
- D. Review assessment of investment program management processes and procedures, and this policy relative to meeting stated goals.

### III. Staff Responsibilities

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

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

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

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

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

### IV. Service Providers

#### A. Investment Managers

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

1. Investment Managers shall be qualified and agree to serve as a fiduciary to the

Systems and shall generally have been in the business of investment management for large United States institutional investors for at least three to five years.

2. Investment Managers shall manage assets in accordance with this Policy and any additional guidelines established by contract, as may be modified in writing from time to time.

#### B. Custody Bank

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

#### C. Investment Consultants

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

#### D. Selection

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

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

### V. Investment Philosophy

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

The Trustees recognize that, commensurate with their overall objective of maximizing long-range return while maintaining a high standard of portfolio quality and consistency of return, it is necessary that proper diversification of assets be maintained both across and within the classes of securities held

to minimize/mitigate overall portfolio risk. Consistent with carrying out their Fiduciary Responsibilities and the concept of Modern Portfolio Theory, the Trustees will not systematically exclude any investments in companies, industries, countries, or geographic areas unless required to do so by statute. Within this context of proactive management and the necessity for adherence to proper diversification, the Trustees rely upon appropriate professional advice from multiple service providers.

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

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

## VI. Investment Objectives

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

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

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

## VII. Derivative Securities and Leveraging

### Definition:

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

Definitions and examples in the investment universe include:

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

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

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

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

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

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

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

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

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

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

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

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

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

**Exposure:**

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

**Cost Efficiency:**

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

**Risk Management:**

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

**Derivatives Restricted Use:****Settlement:**

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

**Position Limits:**

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

**Investment:**

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

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

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

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

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

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

**Leverage:**

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

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

## VIII. Asset Allocation Guidelines

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

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

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

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

### A. Domestic Equity Investments

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

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

#### B. International Equity Investments

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

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

#### C. Fixed Income Investments

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

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

#### D. Private Equity Investments

Subject to specific approval of the Investment Committee of the Board of Trustees, investments may be made for the purpose of creating a diversified portfolio of alternative investments. Examples of such investments include, but are not limited to, venture capital partnerships, private equity, leveraged buyouts and funds, private debt, timberland, oil and gas partnerships, commodities and private placements. While it is expected that the majority of these assets will be invested within the United States, a portion has been allocated to non-US investments. These non-U.S. investments are not restricted by geography.

### **Guidelines for Private Equity**

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

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

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

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

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

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

*General Partner Diversification:* Staff will seek to work with a variety of general partners due to their specialized expertise in particular segments of the private equity market and source of their deal flow. No more than fifteen (15) percent of the Fund's total allocation to private

equity investments may be committed to any one partnership, without the approval of the Board.

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

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

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

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

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

### Subcategory Strategy

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

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

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

### E. Real Estate Investments

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

Private real estate investments are unique and can be illiquid and long term in nature. Given

that this may lead to large short term performance discrepancies versus public benchmarks, KRS more appropriately measures its real estate investments based on both relative return and absolute return methodologies:

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

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

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

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

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

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

This active management approach will be pursued.

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

#### Allocation to Real Estate Asset Class

KRS divides the real estate investment universe into core, value-add, opportunistic and public securities sectors, with descriptive attributes of each listed below. It should be noted that targeted returns for each sector denoted in the descriptions below are based on industry

guidelines and may vary based on different points in market cycles and changes in general inflation levels.

#### A. Core Properties

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

#### B. Value Added Properties

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

#### C. Opportunistic Investments

- Opportunistic investments can be comprised of any property sector. Opportunistic investments can include office, retail, industrial and apartments with high-risk attributes. In addition, hotels, operating companies, development, land and distressed properties are all examples of opportunistic investments
- Leverage for opportunistic investments can be 75% loan to value or higher in certain cases.

- Opportunistic investments will target returns in excess of 12% (net of fees and promoted interest) in order to compensate for the additional risk commensurate with the increased risk compared to core property investments.

#### D. Public Securities

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

#### Diversification and Risk Management Guidelines

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

##### A. Sector Diversification

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

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

#### B. Investment Vehicles

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

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

#### C. Diversification

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

#### D. Investment Manager

KRS will limit the amount committed to one investment manager to no more than twenty percent (20%) of the total allocation for real estate investments.

#### E. Property Type Diversification

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

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

#### F. Geographic Diversification

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

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

### G. Total Leverage

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

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

### H. Vintage Year Risks

KRS will seek to avoid any concentrated vintage year risks.

### E. Real Return Investments

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

To avoid concentration risk, real return investments must be diversified by asset class, and maintain a core portfolio position in real assets, or assets that generally exhibit a positive correlation with inflation over time.

### F. Cash Equivalent Securities

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

Publicly traded investment grade corporate bonds, variable rate demand notes, government and agency bonds, mortgages, municipal bonds, and collective STIFs, money market funds or instruments (including, but not limited to, certificates of deposit, bank notes, deposit notes, bankers' acceptances and commercial paper) and repurchase agreements relating to the above instruments. Instruments may be selected from among those having an investment grade rating at the time of purchase by at least one recognized bond rating service. In cases where the instrument has a split rating, the lower of the two ratings shall prevail. All instruments shall have a maturity at the time of purchase that does not exceed two years. Repurchase agreements shall be deemed to have a maturity equal to the period remaining until the date on which the

repurchase of the underlying securities is scheduled to occur. Variable rate securities shall be deemed to have a maturity equal to the time left until the next interest rate reset occurs, but in no case will any security have a stated final maturity of more than three years.

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

### **Absolute Return Program**

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

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

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

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

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

## IX. Standards of Measurement

### Performance Measurement

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

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

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

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

Total Public Asset Class Allocations

Short-term

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

Intermediate & Long-term

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

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

Short-term

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

Intermediate & Long-term

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

Alternative Assets:

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

Short-term

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

Intermediate & Long-term

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

### Real Estate

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

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

### Real Return

The total Real Return allocation shall seek to :

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

### Absolute Returns

The total Absolute Return allocation shall seek to :

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

## X. Investments Performance Review Procedures

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

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

The following restrictions shall be tested monthly:

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

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

#### **XI. Additional Items**

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

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

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

## A. Brokerage Policy dated May 2011

The Investment Committee brokerage policy is hereby incorporated by reference.

## B. Transactions Procedures Policy dated August 2011

The Investment Committee transaction procedures are hereby incorporated by reference.

## C. Securities Litigation Policy and Procedures dated May 2011

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

## D. Securities Lending Guidelines dated May 2011

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

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

## F. Manager and Placement Agent Statement of Disclosure Policy dated August 2012

## Signatories

As Adopted by the Investment Committee  
Date: September 19, 2012

Signature: \_\_\_\_\_

Dr. Daniel L. Bauer

Chair, Investment Committee

As Adopted by the Board of Trustees  
Date: October 5, 2012

Signature: \_\_\_\_\_

Thomas K. Elliott

Chair, Board of Trustees



## Kentucky Retirement Systems

Appendix A: Addendum to the Statement of Investment Policy  
 Pension Fund – Asset Allocation / Benchmark Composite  
 Effective January 1, 2013

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

### I. Asset Allocation with Benchmarks

KRS Pension Fund - Asset Allocation							
Asset Class	Benchmark	Target					Allowable Range (+/- Target)
		KERS	KERS Hazardous	CERS	CERS Hazardous	SPRS	
US Equity	Russell 3000	22.0%	20.0%	20.0%	20.0%	20.0%	5.0%
Non US Equity	MSCI ACWI Ex-US Standard	20.0%	20.0%	20.0%	20.0%	20.0%	5.0%
Emerging Market	MSCI Emerging Markets	0.0%	4.0%	4.0%	4.0%	4.0%	2.0%
Core Fixed Income	Barclays US Aggregate	10.0%	9.0%	9.0%	9.0%	8.0%	3.0%
High Yield Bonds	Barclays US High Yield	5.0%	5.0%	5.0%	5.0%	5.0%	2.0%
Global Bonds	Barclays Global Agg	5.0%	5.0%	5.0%	5.0%	5.0%	2.0%
Real Estate	NCREIF ODCE	3.0%	5.0%	5.0%	5.0%	5.0%	3.0%
Absolute Return	HFRI Diversified FOF	10.0%	10.0%	10.0%	10.0%	10.0%	3.0%
Real Return	CPI + 300 bps	10.0%	10.0%	10.0%	10.0%	10.0%	3.0%
Private Equity	Russell 3000 + 400 bps (lagged)	10.0%	10.0%	10.0%	10.0%	10.0%	5.0%
Cash	Cit Grp 3-mos Treasury Bill	5.0%	2.0%	2.0%	2.0%	3.0%	2.0

### II. Total Fund Blended Benchmark Composite

Pension Fund Composite		
US Equity	Russell 3000	20.5%
Non US Equity	MSCI ACWI Ex-US Standard	20.0%
Emerging Market	MSCI Emerging Markets	2.9%
Fixed Income	Barclays Universal Index	19.3%
Real Estate	NCREIF ODCE	4.5%
Absolute Return	HFRI Diversified FOF	10.0%
Real Return	CPI + 300 bps	10.0%
Private Equity	Russell 3000 (lagged 1 qtr) + 400 bps	10%
Cash	Cit Grp 3-mos Treasury Bill	2.8%

At the November 3, 2011 Investment Committee meeting Staff was authorized to combine Public and Private Equity targets and exposures to help manage portfolio risks caused by the unintended overweight to Private Equity, which is caused by the denominator effect over time.

#### Signatories

As Adopted by the Investment Committee  
 Date: September 19, 2012

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

As Adopted by the Board of Trustees  
 Date: October 5, 2012

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



## Kentucky Retirement Systems

Appendix B: Addendum to the Statement of Investment Policy  
Insurance Fund - Asset Allocation / Benchmark Composite  
Effective January 1, 2013

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

### I. Asset Allocation with Benchmarks

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

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

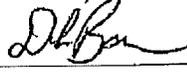
### II. Total Fund Blended Benchmark Composite

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

At the November 3, 2011 Investment Committee meeting Staff was authorized to combine Public and Private Equity targets and exposures to help manage portfolio risks caused by the unintended overweight to Private Equity, which is caused by the denominator effect over time.

#### Signatories

As Adopted by the Investment Committee  
Date: September 19, 2012

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

As Adopted by the Board of Trustees  
Date: October 5, 2012

Signature:   
Thomas K. Elliott  
Chair, Board of Trustees

## ATTACHMENT II



## KENTUCKY RETIREMENT SYSTEMS

Investment Guidelines for  
Northern Trust Investments, Inc  
Structured Small Cap U.S. Equity



### PURPOSE

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

### INVESTMENT MANAGEMENT OBJECTIVES

1. The goal of the Structured Small Capitalization Equity portfolio is to provide an exposure to the small capitalization sectors of the U.S. equity market, while capturing the market return in a manner that is consistent with the volatility exhibited by the Russell 2000 Index.
2. The portfolio shall be broadly diversified across markets, sectors, industries, and securities in a manner that is consistent with accepted standards of prudence.
3. The portfolio shall be managed in accordance with the Statement of Investment Policy and the following performance objectives, guidelines, and restrictions set forth in the following sections.

### KRS RETURN AND RISK OBJECTIVES

1. The return objectives of the portfolio are:
  - a. For periods less than five years or a full market cycle, individual portfolios should exceed the returns of their market benchmark.
  - b. For periods greater than five years or one market cycle, individual portfolios should exceed the return of their market benchmark and compare favorably on a risk-adjusted basis.
2. The risk objectives of the portfolio are:
  - a. The portfolio's volatility, as measured by the standard deviation of returns, should be comparable (within 5%) to the market benchmark over one (1) year and three (3) year time horizons.

### GUIDELINES

1. Permitted Securities—
  - a. Common stocks and convertible securities of companies traded on a U.S. stock exchange and may also include American Depositary Receipts ("ADRs"), Global Depositary Receipts ("GDRs"), International Depositary Receipts, exchange-traded funds ("ETFs"), closed-end investment companies, and real estate investment trusts ("REITs");
  - b. Cash or short-term cash equivalents denominated in U.S. currency; and
  - c. You may invest in exchange traded funds and may engage in futures, options, swaps and other derivative transactions as part of a hedging strategy, provided any such derivative transactions are fully collateralized
2. Prohibited Investments/ Strategies—
  - a. Leverage (borrowing & borrowing on margin);
  - b. Short sales of common stock;
  - c. Loans;
  - d. Direct participations; and
  - e. Direct investments in real estate.

3. Equity portfolios are to be diversified to reduce the impact of large losses in individual investments in a manner that is at the discretion of the portfolio manager.
4. There are no specific restrictions regarding the rate of turnover in the portfolio. KRS will monitor the portfolio turnover levels and expects the Advisor to exercise prudent judgment when addressing the issue of portfolio turnover. The Advisor shall foremost seek to achieve "best execution" when transacting.

#### **RESTRICTIONS**

##### ***Security Type Qualifications***

1. Equity portfolios may be invested up to 100% in common stocks, other equity-related securities, or in fixed-income securities traded on recognized exchanges throughout the U.S.
2. Equity portfolios are to be diversified to reduce the impact of large losses in individual investments in a manner that is at the discretion of the portfolio manager.

##### ***Sector and Position Limits***

1. Manager shall not invest more than 5% of the portfolios market value in any single corporation or issuer of common stock at time of purchase.
2. Manager shall not invest in more than 3% of the outstanding shares of any single corporation or issuer of common stock at time of purchase.
3. Manager shall not invest more than 2% greater weight than the benchmark sector weight as defined by GICS at time of purchase.
4. Manager's unequitized cash holding, not including cash held for investments yet to settle, shall not exceed 3% of manager's portfolio.

ATTACHMENT III

REDACTED



**Kentucky Retirement Systems**  
**Manager and Placement Agent Statement of Disclosure Policy**  
Approved August 16, 2012

### **I. Purpose**

This 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, political contributions, and whether or not a placement agent is involved with any new KRS investment among other things. KRS shall require the disclosure of detailed information regarding any Manager or Placement Agent 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, funds of funds, private equity funds, real estate funds, infrastructure 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 and placement agent activity 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.

### **II. Objectives**

The objectives of this Kentucky Retirement Systems' 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.

### **III. 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.

## IV Definitions

### **KRS Vehicle**

A partnership, limited liability company, account or other investment vehicle in which KRS is the investor.

### **Consultant**

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.

### **Manager**

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.

### **Executive Agency Lobbyist (EAL)**

Any person engaged to influence executive agency decisions or to conduct executive agency lobbying activity as one (1) of his main purposes on a substantial basis.

(b) "Executive agency lobbyist" 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.

### **Executive Agency Lobbying Activity**

Any contacts 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 KRS 12.250, any executive agency official, or a member of the staff of any one of the officials listed in this paragraph.

### **Placement Agent**

Placement Agents exist because, with the exception of the largest firms (i.e., private equity and hedge fund general partnerships), many of these investment managers are not equipped to raise their investment funds independently. They require services such as crafting presentations, drafting, proofing and distributing private placement memorandums, sorting the potential universe of limited partners and determining how to access those limited partners, arranging meetings with the limited partners, handling follow-up meetings, assisting in the due diligence process including managing on-site due diligence meetings, and the closing process.

A Placement Agent is any 3<sup>rd</sup> party person or entity hired, engaged or retained by or acting on behalf of a 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. A placement agent is by definition an executive agency lobbyist as defined in KRS 11A.201 (8)(a).

For clarity, persons employed directly by an organization (in a traditional employer/employee relationship) seeking to do business with KRS, is not considered a Placement Agent for purposes of this policy.

### **Real Party-In-Interest**

The 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 conduct executive agency lobbying on behalf of ABC Corporation: (a) John Smith is the EAL; (b) XYZ Consulting Company is the employer; and (c) ABC Corporation is the "real party in interest".

## **V. Responsibilities:**

### **A. Manager's Responsibilities**

Prior to KRS investing with any manager, KRS Staff shall obtain a signed Manager and Placement Agent 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"), FINRA, or any similar regulatory agency
- 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
- 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
- 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 KRS Chapter 11A.

Compliance with the following procedures is the responsibility of the Manager, the Executive Agency Lobbyist 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 should follow to comply with Kentucky's Executive Agency Lobbyist registration procedures:

1. Prior to contact with KRS personnel the Placement Agent, Employer, and, if applicable, Real Party in Interest, 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, Real Party in Interest, 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, Real Party in Interest, 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 executive agency lobbyists 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.

#### **B. 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 Division Director responsible for their specific asset class
- 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.

## VI. 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, KRS 121.056; and
- that they are not nor shall be in violation of any provision of KRS Chapter 11A or any regulation promulgated thereunder, 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: August 7, 2012

Signature: DL Bauer  
Dr. Daniel Bauer

As Adopted By The Board of Trustees

Date: August 16, 2012

Signature: Thomas K. Elliott  
Mr. Thomas K. Elliott

Compliance Certificate

As a duly authorized officer of Northern Trust Investments, Inc. (the "Investment Manager"), I hereby certify that I am familiar with that certain Investment Management Agreement dated **May 1, 2013** (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 calendar year ending December 31, 2012, were made within applicable Investment Guidelines 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 Guidelines currently applicable under the Agreement, except as set forth below;
- (c) During the calendar year ending December 31, 2012, 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 assets of the Investment Manager's clients are as follows: **(Certificate of Liability Insurance Attached)**

Errors and Omissions dedicated to the Agreement:  
Per occurrence limit: \_\_\_\_\_  
Annual aggregate: \_\_\_\_\_

Date of expiration: **6.30.13**

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

Date of expiration: **6.30.13**

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

Date of expiration:

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

Date of expiration:

Exceptions: (Attach a separate sheet if necessary.)



Dated: May 1, 2013

By:

Name: Jason Pasquinelli, CFA

Title: Vice President

**ATTACHMENT VI**  
Authorized Persons

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

**Chief Investment Officer**

Incumbent: TJ Carlson  
(502) 696-8442 phone; (502) 696-8805 fax

Signature: TJ Carlson

**Director of Equity Assets**

Incumbent: Carlos B. Cracraft  
(502) 696-8445 phone; (502) 696-8805 fax

Signature: Carlos B. Cracraft

**Director of Absolute Return and Real Assets**

Incumbent: Christopher M. Schelling  
(502) 696-8642 phone; (502) 696-8805 fax

Signature: Chris Schelling

**Director of Fixed Assets**

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

Signature: David Peden

**Director of Alternative Investments**

Incumbent: Brent Aldridge  
(502) 696-8633 phone; (502) 696-8805 fax

Signature: Brent Aldridge

**Executive Director**

Incumbent: Bill Thielen  
(502) 696-8455 phone; (502) 696-8801 fax

Signature: Bill Thielen

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: Jones  
Jennifer Jones  
Interim General Counsel  
(502) 696-8645 phone; (502) 696-8801 fax

Dated: 5-3-13

## ATTACHMENT VII

### Proxy Voting Policy

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

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

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

REDACTED

**KENTUCKY RETIREMENT SYSTEMS  
INVESTMENT MANAGEMENT AGREEMENT**

THIS INVESTMENT MANAGEMENT AGREEMENT (the "Agreement" or "Contract") is entered into as of June 30, 2013 by and between **Northern Trust Investments, Inc.**, with offices located at **50 South LaSalle Street, Chicago, Illinois 60675** ("Manager"), and **Kentucky Retirement Systems Insurance Trust Fund** ("KRS" or "Systems").

**WITNESSETH:**

WHEREAS, KRS desires to appoint **Northern Trust Investments, Inc.** as investment manager with authority to manage and control a portion of KRS' assets held from time to time (the "Account") pursuant to this Contract;

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

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

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

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

“Guidelines”), which are attached hereto as Attachment II and incorporated herein by this reference. Manager shall exercise its power and authority with respect to the Account in accordance with the Investment Policy. The Investment Policy shall remain in effect until such time as KRS approves (in writing) a modification to the Investment Policy. Manager will be furnished a copy of the revised Investment Policy prior to and for the purpose of implementing any changes which may affect Manager. The Guidelines shall remain in effect unless amended by written agreement of both KRS and Manager. 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. If Manager accepts or receives such information or services from a broker or dealer, then Manager shall report to KRS in accordance with section 18(c)(iv).

Notwithstanding the foregoing, the Manager shall not place orders with any broker/dealer who: (a) KRS has by written notice to the Manager deemed unsuitable for Account trades, (b) is affiliated with the Manager or (c) is affiliated with an investment consultant that provides non-brokerage related services to KRS. The Manager agrees to be bound by any changes to such broker/dealer list upon receipt of written notice from KRS. In addition, the Manager shall not engage in transactions that involve a broker acting as a principal where the broker is 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, and calculated as outlined in Attachment III. **REDACTED**

**REDACTED**

# REDACTED

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 an Investment Adviser being disqualified from collecting performance fees under rule 206(4)-5 of the Investment Advisers Act of 1940.

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 advance 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.

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

- a) Manager is duly organized, validly existing and in good standing under the laws of the state of its organization and has complete authority to carry out its business as it has been conducted;
- b) The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby are within the power of the Manager and have been duly authorized by all necessary corporate action. The Manager has duly executed and delivered this Agreement, and this Agreement constitutes the legal, valid and binding agreement and obligation of the Manager, enforceable against the Manager in accordance with its terms, except insofar as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar limitations on creditors' rights generally and general principles of equity.
- c) Neither the execution and delivery of this Agreement nor the consummation of the transactions provided herein will violate any agreement to which the Manager is a party or by which it is bound, any law, regulation, order, or any provision of the charter documents of the Manager.
- d) Manager is a registered investment adviser as defined in the Investment Advisers Act of 1940, as amended ("the Advisers Act"), and therefore eligible to act as an investment

manager under ERISA, is registered in or is exempt from registration in accordance with applicable state laws and is not subject to any of the disqualifications set forth in Section 411 of ERISA;

- e) Manager has completed, obtained, and performed all registrations, filings, approvals, authorizations, consents, or examinations required by any government or governmental authority for acts as contemplated by this Agreement;
- f) Manager will maintain the following insurance coverage for the duration of the Agreement plus sixty months after expiration or termination of the Agreement. Proof of the existence of such policies shall be provided to KRS annually with the Compliance Certificate in Attachment V:
  - i) An errors and omissions policy in the minimum amount of \$10,000,000 with a maximum deductible of \$1,000,000 per claim. The policy shall cover, at a minimum, losses caused by errors, omissions, or negligent acts of the Manager.
- 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. Manager will promptly follow such telephonic notice with written notice to KRS;
- h) It 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 under this Agreement. 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 related to the Manager's performance of duties as an investment adviser under this Agreement; and
- i) Manager will promptly notify KRS in writing in the event any of these representations is no longer true.
- j) The Manager will make all required filings with all applicable regulatory agencies within all prescribed deadlines on behalf of its investments of the assets in the Account.
- k) The Manager shall annually file with KRS a compliance certificate, executed by a responsible officer of the Manager's firm, in the form attached hereto as Attachment V, within thirty (30) days after each June 30.

17. **Reporting Requirements.** Manager shall furnish reports in a mutually agreed upon format to KRS upon their reasonable request.

- a) The Manager shall provide the following reports monthly (either hard copy or by electronic access) within twelve (12) 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, in which the Manager shall provide the following information to KRS:
- i) A review of 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 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) A copy of SEC form ADV – Part II, any amendments thereto as available;
  - ii) A copy of the Manager's annual report and SAS 70 (if applicable);
  - iii) A Compliance Certificate provided in Attachment V;
  - iv) A report on the Manager's use of soft dollars earned and expended resulting from its duties under this Agreement. The report shall include the products and services obtained through soft dollar arrangements and their approximate value. Otherwise, the Manager shall indicate in writing that soft dollar information is not applicable to this Account.
- d) The Manager shall provide the following information periodically as requested:
- i) Information relating to industries, businesses, corporations or securities as requested by KRS;
  - ii) Reports containing the Manager's and affiliates' conflict of interest policies; and

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

18. **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.

19. **Change in Status.** Manager shall promptly notify KRS in writing of any material change in Manager's business which may effect Manager's ability to perform its duties and responsibilities under this Agreement, including, but not limited to, any change in Manager's status as a registered investment manager, any material litigation, any material adverse changes to the Manager's financial or organizational status or any material change in its senior professional personnel, and any change in personnel involving a KRS Account. It shall promptly notify KRS of any conflicts of interest arising from Manager and its relationship with any entity. 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.

20. **KRS Representations.** 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.

21. **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.

22. **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.

23. **Audit or Examination of Records.** REDACTED

REDACTED

24. **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.

25. **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: Northern Trust Investments, Inc.  
Jason D. Pasquinelli  
50 South LaSalle Street,  
Chicago, IL 60603  
[facsimile: 312.557.1478]

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

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

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

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

27. **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 or requested by an appropriate regulator, and shall maintain positive policies and procedures for safeguarding the confidentiality of such information. REDACTED

REDACTED

28. **Remedies.** REDACTED

REDACTED

29. **Securities Lending** The Manager understands that KRS may engage in a “Securities lending program”.

30. **Duration of Contract.** The period in which subject services are to be performed is from the date first above written through June 30, 2016. At the expiration of each term, a new term of three years shall automatically be come into being, unless one of the parties hereto notifies the other this agreement may, at the option of the parties hereto, be extended by negotiation for additional periods.

31. **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 thirty (30) business days written notice to the Manager or at Manager’s discretion upon thirty (30) calendar days written notice. Manager shall cooperate with KRS and follow KRS’s written directions in connection with the termination of this agreement to effect the orderly transfer of securities; or
- b) At KRS’s discretion, immediately, if a result of the Manager’s default or breach of contract.

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

32. **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.

33. **Amendments.** Except as otherwise provided herein, written modifications, amendments or additions to this Contract shall be effective only when signed by both parties. At the expiration of its term, this Contract may, at the option of the parties hereto, be renewed by negotiation for further periods not to exceed 60 months for each such renewal.

34. **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.

35. **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.

36. **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.

37. **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.

38. **Voting of Proxies.** The Manager shall exercise voting rights with respect to securities under its management. Manager is authorized and directed to vote all proxies and affect any corporate actions in accordance with KRS's Investment Proxy Voting Policy attached hereto as Attachment VII. If the Investment Proxy Voting Policy does not directly address how KRS's voting rights shall be exercised, then the Manager shall vote in accordance with the recommendations of Institutional Shareholder Services ("ISS"). If ISS has not issued a recommendation, then KRS shall consult with an Authorized Person to determine how the vote shall be cast. The Manager shall maintain detailed records of its performance of this duty and shall provide those records to KRS quarterly.

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

**Kentucky Retirement Systems  
Insurance Trust Fund**

By: T.J. Carlson

T.J. Carlson  
Chief Investment Officer

Date: 6-20-13

**Northern Trust Investments, Inc.**

By: [Signature]

Name: Jason Pasquelli  
Title: Vice President

Date: 6-20-2013

ATTACHMENT III

Fee Schedule

REDACTED

**ATTACHMENT V**  
Compliance Certificate

As a duly authorized officer of \_\_\_\_\_ (the "Investment Manager"), I hereby certify that I am familiar with that certain Investment Management Agreement dated \_\_\_\_\_, 20\_\_\_\_ (the "Agreement") between Kentucky Retirement Systems 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

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

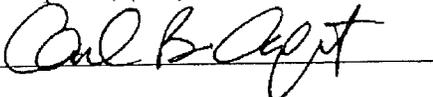
**Chief Investment Officer**

Incumbent: TJ Carlson  
(502) 696-8442 phone; (502) 696-8805 fax

Signature: 

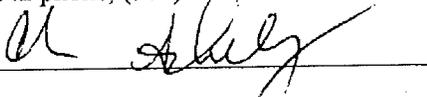
**Director of Equity Assets**

Incumbent: Carlos B. Cracraft  
(502) 696-8445 phone; (502) 696-8805 fax

Signature: 

**Director of Absolute Return and Real Assets**

Incumbent: Christopher M. Schelling  
(502) 696-8642 phone; (502) 696-8805 fax

Signature: 

**Director of Fixed Assets**

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

Signature: 

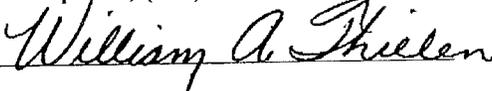
**Director of Alternative Investments**

Incumbent: Brent Aldridge  
(502) 696-8633 phone; (502) 696-8805 fax

Signature: 

**Executive Director**

Incumbent: Bill Thielen  
(502) 696-8455 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: 6-20-13  
Jennifer Jones  
Interim General Counsel  
(502) 696-8645 phone; (502) 696-8801 fax