

# Special Called Investment Committee Meeting - June 27, 2018 (June 27, 2018)

## Table of Contents:

---

Agenda	1
Approval of Minutes- June 7, 2018	2
Investment Policies Review - Jared Crawford	5
Equity Futures Training - Russell Investments	42
Lord Abbett- Short Duration Core Fixed Income* - Rich Robben	53
IFM Infrastructure Debt Fund* - Andy Kiehl	136
General Private Equity Discussion - Anthony Chiu	166

IAL

**KENTUCKY RETIREMENT SYSTEMS  
SPECIAL CALLED  
INVESTMENT COMMITTEE MEETING  
AGENDA  
Wednesday, June 27, 2018  
9:00 a.m.**

IAL

- 9:00AM Call to Order
- 9:01AM [Approval of Minutes\\*- June 7, 2018](#)
- 9:02AM [Investment Policies Review\\* – Jared Crawford](#)
- 9:15AM [Equity Futures Training – Russell Investments](#)
- 9:30AM [Lord Abbett – Short Duration Core Fixed Income\\* – Rich Robben](#)
- 10:00AM [IFM Infrastructure Debt Fund\\* – Andy Kiehl](#)
- 10:30AM [General Private Equity Discussion – Anthony Chiu](#)
- 11:00AM Adjourn

*\* All times are approximations, one or more items on this agenda may be discussed in closed session.*

**MINUTES OF MEETING  
KENTUCKY RETIREMENT SYSTEMS  
SPECIAL CALLED INVESTMENT COMMITTEE  
JUNE 7, 2018, 9:00 A.M., E.T.  
1270 LOUISVILLE ROAD, FRANKFORT, KENTUCKY 40601**

At the June 7, 2018 Special Called Investment Committee Meeting, the following Committee members were present: Neil Ramsey (Chair), William Cook, Kelly Downard, John Farris, Dave Harris, Sherry Kremer, Matthew Monteiro, Keith Percy, and Jerry Powell. Board Members Betty Pendergrass, David Rich, JT Fulkerson and John Chilton were also present. Staff members present were David Eager, Karen Roggenkamp, Erin Surratt, Rich Robben, Andy Kiehl, Joe Gilbert, Connie Davis, Ann Case, Natalie Young, Dale DeVore, David Ziegler, Shaun Case, Mark Blackwell, Jared Crawford, Kristen Coffey, Kimberly Smith and Alane Foley.

Mr. Ramsey called the meeting to order and Ms. Alane Foley called roll.

Mr. Ramsey introduced the agenda item *Approval of Minutes- May 1, 2018*. Mr. Farris moved and was seconded by Mr. Harris to approve the minutes as presented. The motion passed unanimously.

Mr. Ramsey advised that Closed Session would be moved to the end of the meeting and introduced agenda item *Review of Wilshire Asset Allocation Recommendation*. Mr. Robben introduced Dave Lindberg (via telephone) and Ned McGuire from Wilshire. They provided a presentation and answered questions from the Committee. Mr. Harris moved and was seconded by Mr. Cook to approve the recommended policy and compliance bands for KERS Non-Hazardous, SPRS, KERS Hazardous, CERS (Hazardous and Non-Hazardous) and all Insurance Plans. The motion passed unanimously.

Mr. Ramsey introduced agenda item *Performance*. Mr. Robben and Mr. Dave Lindberg (Wilshire) provided an overview of Pension and Insurance performance. These were presented for informational purposes only.

Mr. Farris moved and was seconded by Mr. Harris to enter in to closed session. The motion passed unanimously. Mr. Ramsey read the following statement: A motion having been made in open session to move into closed session for a specific purpose, and such motion having carried by majority vote in open, public session, the Board shall now enter closed session to discuss litigation, pursuant to KRS 61.801(1)(c), because of the necessity of protecting the confidentiality of the Systems' litigation strategy and preserving any available attorney-client privilege. The meeting moved into closed session.

All public attendees exited the meeting.

No action was taken on any items discussed at closed session.

There being no further business, Mr. Cook moved and was seconded by Mr. Harris to adjourn the meeting at 9:55 a.m. The next meeting of the Investment Committee is scheduled for 9:00 a.m. June 27, 2018. Copies of all documents presented are incorporated as part of the minutes of the Investment Committee meeting held June 7, 2018.

**CERTIFICATION**

I do certify that I was present at this meeting and I have recorded above the action of the Committee on the various items considered by it at this meeting. Further, I certify that all requirements of KRS 61.805-61.850 were met in connection with this meeting.

\_\_\_\_\_  
Recording Secretary

I, as Chair of the Investment Committee of the Board of Trustees of the Kentucky Retirement Systems, do certify that the Minutes of the meeting held on June 7, 2018 were approved by the Investment Committee on June 27, 2018

\_\_\_\_\_  
Committee Chair

I have reviewed the Minutes of the Investment Committee Meeting on June 7, 2018, for form, content, and legality.

\_\_\_\_\_  
Office of Legal Services



## KENTUCKY RETIREMENT SYSTEMS

David L. Eager, Executive Director

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



### MEMORANDUM

Date: June 27, 2018

To: Mr. Neil P. Ramsey, Chair  
Investment Committee of the Board of Trustees

From: J. Jared Crawford  
Assistant Director of Internal Audit Division and Investment Compliance Officer

Re: Updated Investment Policies

The Board of Trustees is charged with the responsibility of investing KRS' assets to provide for the benefits of the systems' members. The Board should implement policies that thoughtfully grow the asset base while protecting against undue risk and losses in any particular investment area. These investment policies are intended to provide specific guidance to Trustees and Employees to ensure compliance with legal and fiduciary responsibilities as governed by the Commonwealth of Kentucky and the KRS Board of Trustees. To that end, it is necessary that these policies be routinely updated to reflect changes in policy made by the Investment Committee and the Board of Trustees. Enclosed you will find an addendum detailing major policy changes and the updated investment policies for June 27, 2018.

cc:

William S. Cook, Member  
Investment Committee of the Board of Trustees

Kelly Downard, Member  
Investment Committee of the Board of Trustees

John R. Farris, Member  
Investment Committee of the Board of Trustees

Sherry L. Kremer, Member  
Investment Committee of the Board of Trustees

Matthew Monteiro, Member  
Investment Committee of the Board of Trustees

Keith Percy, Member  
Investment Committee of the Board of Trustees

Jerry Powell, Member  
Investment Committee of the Board of Trustees

David L. Harris, Member  
Investment Committee of the Board of Trustees

David L. Eager  
Executive Director

Karen Roggenkamp  
Executive Director, Office of Operations

Mark Blackwell  
Executive Director, Office of Legal Services

Rich Robben,  
Interim Executive Director of Office of Investments.  
Officer and Director of Fixed Income

Kristen Coffey  
Director of Internal Audit Division

## ADDENDUM

After a request to review and, subsequently, update the Personal Securities Trading Policy, we determined that it would be advantageous to ensure all of our investment policies are current. A review of our investment policies was necessary because we have not updated many of them since 2011. The policy type and changes made therein are detailed below.

The updated policies include:

1. Proxy Voting Policy (no substantive changes);
2. Investment Transaction Procedures Policy (no substantive changes);
3. Brokerage Policy (no substantive changes);
4. Securities Lending Guidelines Policy (no substantive changes);
5. Securities Litigation Policy (no substantive changes);
6. Manager and Placement Agent Statement of Disclosure (no substantive changes);
7. Personal Securities Trading Policy (*see* details in the following) and,
8. Real Estate Policy (*see* details in the following).

### **Personal Securities Trading Policy Changes**

#### Personal Securities Transactions Definitions

The policy with the most substantive change was the Personal Securities Trading Policy. Per a request from the Executive team, we were asked to address what was deemed an overly broad and vague policy. We researched and examined other systems policies and processes in regard to personal securities trading which included: State of Tennessee Department of Treasury; North Carolina Department of Treasury; California Public Employees' Retirement System; and Indiana Public Retirement System. From the data garnered, we updated the personal securities transactions definition to match the much narrower definition of personal securities transactions that many of these organizations use in their policies. The policy changes are noted below.

*Old*

"Personal securities transactions" means:

- a. Transactions in securities in any investment account(s) including, but not limited to, brokerage accounts, Traditional and Roth Individual Retirement Accounts, Section 401(k) or similar plans and college savings plans, that are owned, individually or jointly, or controlled by a Trustee or Employee, and
- b. Transactions for an account in which a Trustee or Employee has indirect beneficial interest, unless the Trustee or Employee has no direct or indirect influence or control over the account. Accounts involving family or accounts in which the Trustee or Employee has a beneficial interest (such as a trust of which he or she is an income or principal beneficiary) are included within the meaning of "indirect beneficial interest."

*New*

“Personal securities transactions” means:

- a. a **discretionary** transaction involving the purchase or sale of a security in which a person, or any member of such person’s immediate family, had or gained directly or indirectly a financial interest and in which the person or any member of such person’s immediate family had influence or control, directly or indirectly, over the timing of the trade of the security or derivative on a security.

### Covered Persons

The other major change to this policy was a change in the definition as to whom the policy covers. The language in the previous policy describes “Access Persons” and “Covered Persons.” “Access Persons” are defined as persons occupying one of the following KRS positions: The Executive Director, Chief Operations Officer, Chief Investment Officer, General Counsel, Assistant General Counsel, Compliance Officer and Investment Division Staff. “Access Persons” also includes any Trustee or employee who recommends a specific asset or security. An employee in one of the aforementioned positions and any Trustee or employee who makes investment decisions will continue to be subject to this policy.

“Covered Persons” are defined as a Trustee or a person occupying one of the following KRS positions: Chief Benefits Officer, Controller, Deputy Controller, Internal Audit Staff, Accounting Staff and Information Technology (IT) staff. All of our technology division members are included as “Access Persons.” However, after consulting with our Director of the Division of Enterprise and Technology Services, we determined that only IT employees that have direct access to the investment drive need be covered by the policy. We were able to exempt about 55 people from this policy, making it narrower and more efficient.

We also combined the terminologies “Covered Persons” and “Access Persons” and will only be using the term “Covered Persons.” “Covered Persons” are defined as KRS employees and Trustees with access to material, non-public information about proposed trading, trading strategies, or holdings and the other investment funds held by KRS.

### **Real Estate Policy Changes**

We updated sector diversification and property type diversification in the Real Estate Policy to align with the Statement of Investment Policy.

### Sector

	Target	Range
Core:	70%	50% to 90% of the total allocation
Value Added:	20%	10% to 30% of the total allocation
Opportunistic:	10%	0% to 20% of the total allocation

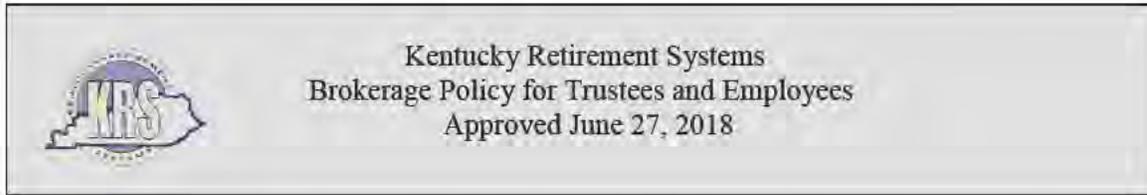
Public Securities:	0%	0% to 100% of the total allocation
--------------------	----	------------------------------------

Property Type

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.)

I/A/L



### Statement of Intent

This policy documents the intent of the Investment Committee of the Kentucky Retirement Systems (KRS) related to brokerage direction.

#### A. Objectives

Brokerage direction shall result from a competitive process, with the objective of achieving the best execution by minimizing commission and market impact costs while maximizing value to KRS. The competitive bids/offers received should be documented on buy/sell orders.

Brokerage shall never be awarded on the basis of repayment for personal advice, favors or political patronage. Any attempts to solicit or direct business based upon these considerations shall be reported to the Investment Committee immediately.

#### B. Criteria for Selecting Brokers

Investment Directors shall be responsible for selecting brokers to execute their transactions. Investment Directors are also responsible for assuring the financial soundness in order to protect the Systems from failed trades or other liabilities.

Prior to executing the first trade, all of the appropriate documents must be executed and on file with the broker and the investment manager.

It is the desire of the Investment Committee that, whenever it is in the best interest of the Fund, brokerage will be directed within the Commonwealth of Kentucky, or full or partial credit will be assigned to a Kentucky-based broker.

#### C. Monitoring

Investment Staff shall monitor the brokerage and report findings periodically to the Investment Committee. Investment Directors shall report brokerage information to staff in a format acceptable to KRS.

The Investment Committee shall periodically monitor market impact and commission cost for stock trades versus the trading Universe maintained by a third party vendor.

Signatories

As Adopted by the Investment Committee

As Adopted by the Board of Directors

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

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

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

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

Mr. Neil Ramsey  
Chair, Investment Committee

Mr. David L. Harris  
Chair, Board of Trustees

IAL



**Kentucky Retirement KRS**  
Investment Transaction Procedures Policy  
Approved June 27, 2018

4.2

This document is intended to identify the communications and procedures that are necessary to properly execute investment transactions for the Kentucky Retirement Systems (KRS).

The Executive Director of the Office of Investments is responsible for keeping a record of all official Investment Committee meetings. This record shall identify those subjects discussed during the meeting and shall make specific note of any formal action taken by the Investment Committee. This record will be retained by KRS as further documentation of Investment Committee actions.

Procedures for specific transaction classifications are discussed in the following paragraphs.

#### Equity Transactions

Equity transactions must be in compliance with the current Statement of Investment Policy and their written guidelines, therefore; approval of individual purchase and sale recommendations are not required as long as they are in conformance with the Investment Director's role, function and present strategy.

Investment Directors shall have discretion in implementing a trading strategy which may include, but is not limited to, utilizing: primary, secondary, over-the-counter, third or fourth markets; crossing networks, and; intermarket trading systems. It shall be the responsibility of the Investment Director to ensure any necessary federal or state regulatory filing and document retention of the filings associated with the securities activities the Investment Director chooses to engage in.

It shall be the responsibility of the Investment Directors to ascertain that funds will be available on settlement date before securities are purchased.

#### Fixed Income Transactions

Fixed income transactions must be in compliance with the current Statement of Investment Policy and their written guidelines, therefore, approval of individual purchase and sale recommendations are not required as long as they are in conformance with the Investment Director's role function and present bond market strategy.

Investment Directors may execute transactions through primary, secondary, over-the-counter, third or fourth markets. It shall be the responsibility of the Investment Director to ensure any necessary federal or state regulatory filing and document retention of the filings associated with the securities activities the Investment Director chooses to engage in.

It shall be the responsibility of the Investment Director to ascertain that funds will be available on settlement date before securities are purchased

## Repurchase Agreements

4.2

Short-term cash reserves are to be invested daily by the Investment Division. Repurchase Agreements may be initiated only with those firms that have been approved by the Investment Committee and invested in compliance with the current Statement of Investment Policy.

## Investment Manager Selection, Due Diligence and Disclosure

All Investment Managers will be selected utilizing the procedures outlined in the Statement of Investment Policy. All Investment Managers will be Registered Investment Advisors with the SEC or qualify for one of the exemptions spelled out in the Dodd-Frank Act and specifically discussed at the approving investment committee meeting and approved by the Investment Committee.

### Selection Criteria

- Experience of the firm in the management of institutional portfolios operated under the prudent person standard;
- Verifiable historical performance record of at least three years in the desired strategy (may be shortened or waived depending on the strategy considered);
- Qualifications and depth of the investment professionals;
- Soundness of the firm's investment philosophy and process;
- Adequacy of the firm's trading, back office, accounting, reporting and client service capabilities;
- Fees and other economic terms;
- Legal structure and terms; and
- Fit within the asset class.

### Due Diligence

- 1) When a prospective General Partner has been identified, Investment Staff shall have at least one meeting at KRS' offices and one on-site at the prospective General Partner's offices. The General Partner's presentation to the Investment Committee at the time of prospective approval may serve as the meeting at KRS' offices if at no other time could it be arranged to have a meeting at KRS.
- 2) Investment Staff shall document any and all formal meetings with the prospective general partner and make that documentation available upon request.
- 3) Investment Staff shall retain its consultant to perform due diligence on any investments that go before the Investment Committee for approval. A formal write-up of the due diligence process shall be prepared and distributed to Investment Committee members prior to the date of prospective Investment Committee approval. This write-up shall generally detail the following components of the decision making process:
  - a. Overview of the Firm
  - b. Investment Strategy
  - c. Organizational Structure and Key Personnel
  - d. Summary of Investment Performance
  - e. Investment Rationale
  - f. Investment Terms

- g. Whether any principles of the firm have been involved in any regulatory proceedings and, if so, the details concerning same,
  - h. Whether a placement agent has been involved and, if so, the identity of the agent and the details of the agreement, in accordance with the Kentucky Retirement KRS Statement of Disclosure, Placement Agents.
- 4) Investment Staff and Consultant shall make themselves available for questioning by the Investment Committee regarding any prospective investment. This time shall generally be made available to the Investment Committee at such a time a prospective investment is before the Investment Committee for approval. However, should additional time or materials be requested of knowledgeable parties, it shall be provided to the Investment Committee expediently.

#### Investment IMA, Guidelines, Side Letters

- Staff shall work with either approved outside legal counsel or internal KRS legal counsel on all Investment Management Agreements, Limited Partnership Agreements, and Side Letters.
- Alignment of Interests: Staff shall actively negotiate partnership agreements on behalf of KRS to ensure that the interests of the general partner are aligned with those of KRS. Staff shall endeavor to ensure that the majority of senior investment professionals within each general partner firm make substantial investments of their own personal net worth within the partnerships in which KRS invests, and that the mix of management fees and carried interest is consistent with KRS' objectives of maximizing long-term returns from the asset class.
- Special Services: Due to the complex nature of alternative investment structures and partnership agreements, Staff will retain expert legal counsel on an as-needed basis. From time-to-time, during the due diligence process private investigators may be engaged to investigate general partner principals for integrity, ethical standards, tax-related issues, etc. prior to an investment commitment. Staff may retain a post-venture distribution manager to manage common stock and other public securities distributed by its general partners, consistent with the long-term objectives of the KRS.

#### Disclosure Policy

- Subject to the procedures and any other restrictions applicable under the Open Records Act and Kentucky Revised Statutes 61.650, the Executive Director of the Office of Investments or designee will disclose information such as the name of the funds, limited partnership investments, investment managers, and general partners that have been selected by the KRS to manage alternative investments. Additionally, aggregate portfolio returns will also be disclosed.
- In order to comply with the prohibition on disclosure of records that contain real estate appraisals, feasibility estimates, and evaluations relative to the investment in the Open Records Act, Kentucky Revised Statutes 61.650 and certain partnership agreements, KRS will not disclose the individual underlying investments and their performance.
- KRS will make available to the public the management fee, performance fee or carried interest rate if applicable, and hurdle rates or preferred returns if applicable of all investment managers. It will be shown as a percentage rate and it will be based on the rate that was disclosed at the investment committee when the investment manager was approved. If staff is able to negotiate a better fee rate than what was approved at the investment committee meeting that rate will not be shown.

Signatories

As Adopted by the Investment Committee  
Date: \_\_\_\_\_

Signature: \_\_\_\_\_  
Mr. Neil Ramsey  
Chair, Investment Committee

As Adopted by the Board of Trustees  
Date: \_\_\_\_\_

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

I/A/L



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

4.3

#### A. Purpose

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

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

#### B. Objectives

The objectives of KRS' policy are:

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

#### C. Application

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

#### D. Definitions

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

#### Manager's Responsibilities

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

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

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

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

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

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

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

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

Executive Branch Ethics Commission (502) 564-7954.

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

\* Initial Registration Statement Form is available at:

<http://ethics.ky.gov/lobbying/Pages/Registration.aspx>

\*\* Updated Registration Statement Forms are available at:

<http://ethics.ky.gov/lobbying/Pages/RequirementsAfterRegistration.aspx>

\*\*\* Termination Notification Form is Available at:

<http://ethics.ky.gov/lobbying/Pages/howToTerminate.aspx>

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

#### KRS Staff Responsibilities

KRS staff are responsible for:

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

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

F. Conflict of Interest

All persons and entities contracting with KRS shall certify that:

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

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

Signatories

As Adopted By The Investment Committee

As Adopted By The Board of Trustees

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

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

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

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

Mr. Neil Ramsey

Mr. David L. Harris



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

4.4

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

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

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

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

#### A. Routine Business or Financial Matters

##### Election of Directors

FOR

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

##### Appointment of Auditors

FOR

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

##### Increase Authorized Common Stock

FOR \*

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

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

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

#### Changes in Board Structure

FOR \*

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

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

### B. Non-Routine Business or Financial Matters

#### Considering Non-Financial Effects of a Merger Proposal

AGAINST

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

#### Director Liability and Indemnification

FOR \*

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

#### Executive Compensation

FOR \*

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

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

#### Stock Splits

FOR

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

Employment Relations

FOR \*

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

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

## C. Anti-Takeover Issues

Blank Check Preferred Stock

AGAINST

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

Classified Boards

AGAINST

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

Fair Price Provisions

AGAINST

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

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

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

Limiting Shareholders' Right to Call Special Meetings

AGAINST

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

Limiting Shareholders' Right to Act by Written Consent

AGAINST

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

Supermajority Vote Requirements

AGAINST

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

Re-incorporation

AGAINST

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

Issuance of Stock with Unequal Voting Rights

AGAINST

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

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

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

#### Elimination of Preemptive Rights

AGAINST

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

### D. Corporate Governance Shareholder Proposals

#### Submit Company's Shareholder Rights Plan Shareholder Vote

FOR \*

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

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

#### Anti-Greenmail Proposal

FOR

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

### E. Social and Policy Issues

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

Signatories

As Adopted by the Investment Committee

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

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

Mr. Neil P. Ramsey  
Chair, Investment Committee

As Adopted by the Board of Trustees

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

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

Mr. David L. Harris  
Chair, Board of Trustees

IAL



Kentucky Retirement Systems  
Real Estate Policy  
Approved June 27, 2018

4.5

### A. Role of Real Estate

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

- Invest in top tier, attractive risk adjusted returns through active management.
- Utilize access to managers with the expertise and capabilities to exploit market inefficiencies in the asset class.
- Manage interests through co-investment and incentive based compensation and maximize risk adjusted returns.
- Diversify 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 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.

### B. Allocation to Real Estate Asset Class

KRS has approved a target Real Estate allocation of five percent (5%) of the total fund for real estate investments. KRS will endeavor to achieve the target allocation over a three to five-year period by averaging into the market and avoiding any concentrated vintage year risks.

### C. Investment Policies

For purposes of this Investment Policy, the real estate investment universe is divided into the following sectors, with descriptive attributes to follow:

#### 1. 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.

## 2. 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.

## 3. 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 generate 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.

## 4. Public Securities

- Real estate public securities (“Public Securities”) do not allow control over the assets or management.
- 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.

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

	Target	Range
Core:	70%	50% to 90% of the total allocation
Value Added:	20%	10% to 30% of the total allocation
Opportunistic:	10%	0% to 20% of the total allocation
Public Securities:	0%	0% to 100% of the total allocation

KRS seeks to maintain the flexibility to overweight or underweight any sector in order to capitalize on market opportunities.

#### D. 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.

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

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. Total Leverage

4.5

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.

Signatories

As Adopted by the Investment Committee

As Adopted by the Board of Trustees

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

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

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

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



**Kentucky Retirement Systems**  
**Investment Securities Lending Guidelines**  
 Approved June 27, 2018

4.6

This document sets forth the investment policy for the securities lending program.

#### A. Objectives

To generate incremental income by lending securities to qualified borrowers. Borrowers provide collateral in exchange for the right to borrow securities. Collateral should follow the system's guidelines as set forth in the Securities Lending Authorization Agreement. Total return from securities lending should meet or exceed Risk Management Association's (RMA) Lending Composite on an annual basis.

#### B. Responsibilities and Delegations

The KRS Investment Committee have the following responsibilities and duties:

1. Approving the securities lending guidelines.
2. Reviewing the securities lending program performance annually with the Executive Director, Office of Investments, and KRS staff.

The KRS investment staff duties include, but are not limited to, the following:

1. Reporting to the Investment Committee annually about the performance and compliance of the securities lending program.
2. Recommending guideline changes to the Investment Committee as needed.
3. Reviewing monthly reports from the Lending Agent.
4. Reviewing and evaluating quarterly reports from the Lending Agent. Furnishing the quarterly reports to the Investment Committee.
5. Monitoring the Lending Agent's compliance with the securities lending guidelines.

The Lending Agent's duties include:

1. At least annually, or more frequently if requested by KRS, the Lending Agent must present the Executive Director of the Office of Investments, with a list of potential borrowers and the applicable credit exposure.
2. The Lending Agent must immediately notify the Executive Director of the Office of Investments and KRS staff of any violation of the securities lending guidelines.
3. The Lending Agent must provide a quarterly report showing: historical net earnings; volume on loan, loanable base, percentage of loan, gross spread, net earnings and gross basis point return by class; comparable gross basis point return by class with the RMA Lending Composite, BNY Mellon and KRS; detailed performance comparison with RMA, BNY Mellon and KRS of percentage on loan, spread and gross basis point return by class, and; other information as reasonably requested by KRS.

C. Lending and Collateral Guidelines

4.6

The collateral guidelines are set forth in the Securities Lending Authorization Agreement. The Lending Agent shall follow these guidelines explicitly in conjunction with these policies. If, at anytime, a violation occurs, the Lending Agent shall immediately notify the Executive Director of the Office of Investments and KRS staff by e-mail; together all parties shall determine the action or actions needed to bring the portfolio back into compliance.

Signatories

As Adopted by the Investment Committee

As Adopted by the Board of Trustees

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

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

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

Mr. Neil P. Ramsey  
Chair, Investment Committee

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

Mr. David L. Harris  
Chair, Board of Trustees



Kentucky Retirement Systems  
 Securities Litigation Policy  
 Approved June 27, 2018

4.7

#### A. Statement of Intent

This Securities Litigation Policy (Policy) is issued by the Investment Committee of the Board of Trustees of the Kentucky Retirement Systems (KRS) in connection with monitoring pending actions in which KRS is a named party or otherwise directly impacted.

KRS acknowledges that it has a duty to monitor and evaluate actions in which it may potentially be a member or participant. While KRS will take reasonable steps to monitor and evaluate the actions, it is also cognizant that most, if not all, of these claims will be prosecuted by securities lawyers specializing in representing investors, regardless of whether or not KRS takes an active role. Therefore, the decision regarding the degree of KRS direct involvement in a claim requires evaluating the potential of KRS to add value.

#### B. Identifying and Evaluating Potential Claims

Periodically, the Executive Director of the Office of Investments or other staff will identify actions that are filed in which KRS is a named party or otherwise directly impacted and present them to the Investment Committee. A variety of sources may be used to identify the actions including, without limitation, a retained third party securities class action monitoring service, portfolio managers, the Internet, and the class action bar.

Upon identification of a potential claim, KRS trading activity will be examined by the retained securities class action monitoring firm to estimate the potential damages utilizing the average results of the two damage calculation methodologies recommended by the National Association of Public Pension Attorneys (NAPPA).

If the potential damages are less than \$10 million, the Executive Director of the Office of Investments, or designee, shall monitor the class action suit and file a claim upon its conclusion to participate in the class settlement, unless unique circumstances warrant consideration of alternative approaches. If the potential damages exceed \$10 million, then the claim will be screened for more in-depth evaluation.

If further evaluation is warranted, the Executive Director of the Office of Investments shall, in conjunction with the Executive Director of Office of Legal Services and an external legal firm ("evaluation counsel") that has a demonstrated expertise in securities class action legal matters, perform additional due diligence on the claim. The Executive Director of the Office of Investments shall confer with the General Counsel and may utilize internal legal resources, along with the evaluation counsel, when appropriate. Additional due diligence may include, without limitation: assessment of the complaint; SEC filings and company disclosures; contacts with other investors;

consideration of non-litigation alternatives; staffing, resources and other issues; impact of active claim management and; potential conflicts with other class members. If, based upon this additional due diligence it appears that KRS may add significant value by more active participation, then the Executive Director of the Office of Investments shall present this recommendation to the Investment Committee. Any firm, or its partners, that has been selected as evaluation counsel for a particular case is precluded, by this policy, from representing the Systems in any securities litigation matter for a period of three years upon completion of their assignment.

Recommendations to the Investment Committee shall take one of the three following forms:

1. Monitor the course of the class action suit and file a claim upon its conclusion to participate in the class settlement, giving appropriate consideration to objecting to one or more terms of the settlement including, but not limited to, the amount of attorneys' fees to be paid.
2. Seek to control a class action by seeking designation as lead plaintiff, either singly or with others.
3. Opting out of a class action suit and filing a separate suit, either singly or with others.

Based on the review of the potential claim, the Investment Committee will determine whether active involvement is warranted by KRS and the nature of such involvement, if any. If active involvement is deemed to be warranted, appropriate outside counsel will be sought at that time by the Investment Committee.

Notwithstanding the foregoing, managers delegated monitoring responsibilities may utilize their existing monitoring system. The manager shall prepare records, and from time to time, shall furnish information KRS may require in the discharge of its duties. KRS shall continue to monitor the claim notwithstanding the nature of its involvement.

**C. Monitoring Claims**

The Executive Director of the Office of Investments shall recommend to the Investment Committee the retention of an independent third-party securities class action monitoring firm to assist in the monitoring, filing and claims collection processes. The services of the retained firm shall be evaluated on a periodic basis and the results of the evaluation communicated to the Investment Committee. Any firm providing such monitoring services shall be precluded from representing the Systems in any litigation efforts undertaken by the Investment Committee.

Signatories

As Adopted by the Investment Committee

As Adopted by the Board of Trustees

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

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

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

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

Mr. Neil P. Ramsey  
Chair, Investment Committee

Mr. David L. Harris  
Chair, Board of Trustees



Kentucky Retirement Systems  
Statement of Disclosure and Placement Agents  
Manager Questionnaire

4.8

1. Did your firm use a placement agent as defined in the KRS “Statement of Disclosure and Placement Agents” policy in an effort to solicit an Investment from KRS? If yes, please continue to question 2; if no, please proceed to question 10.
  
2. Please disclose the name of the placement agency used, the names of the individuals contracted by the placement agency (either as employees or as sub-agents) in order to solicit an investment from KRS, and the fees paid or payable to the placement agent in connection with a prospective KRS investment.
  
3. Please represent that any fees paid to placement agents are the sole obligation of the investment manager and not that of KRS or the limited partnership.
  
4. Please disclose the names of any current or former Kentucky elected or appointed government officials (federal, state, and local government), KRS Board of Trustees members, employees, or consultants of KRS, or any other person, if any, who suggested the retention of the placement agent.
  
5. Please provide evidence of the regulatory agencies, if any, in any Federal, state or foreign jurisdiction the placement agent or any of its affiliates are registered with, such as the Securities and Exchange Commission (“SEC”), FINRA, or any similar regulatory agency.
  
6. Please provide a resume for each officer, partner or principal of the Placement Agent detailing the person’s education, professional designations, regulatory licenses and investment and work experience.
  
7. Please describe the services to be performed by the Placement Agent.
  
8. Please disclose whether the Placement Agent, or any of its affiliates, is registered as a lobbyist with any and all Kentucky state and local (county) governments.

9. Please disclose any political contributions made by the Placement Agent, a Placement Agent principal, or their family as defined by KRS 11A.010(4) to: any Kentucky official; political party; political organization; or other political entity within the prior 2 years.
  
10. Please disclose the names of any current or former Kentucky elected or appointed government officials (federal, state, and local government) KRS Board of Trustees members, employees, or consultants of KRS that are receiving any fees or compensation from the External Manager and/or placement agent. Please disclose any additional known relationships or conflicts with same.
  
11. Please disclose any political contributions made by External Manager, its principals, or their family as defined by KRS 11A.010(4) to any Kentucky official; political party; political organization; or other political entity in the prior 2 years.
  
12. Please disclose whether any principals of the firm are the subject of any pending litigation or have been involved in any regulatory proceedings related to the performance of their duties as an investment adviser. If so, please supply details concerning the issue.
  
13. Please provide a statement representing and warranting the accuracy of the information provided to KRS regarding the Statement of Disclosure, and acknowledge that similar language will be included in any final written agreement with a continuing obligation to update any such information within 10 business days of any change in the information.

\_\_\_\_\_  
Signature Date

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

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



**Kentucky Retirement Systems**  
**Securities Trading Policy for Trustees and Employees**  
 Approved June 27, 2018

4.9

The Kentucky Retirement Systems (KRS) is charged with the administration of pension and group health insurance funds held in trust for active, inactive and retired KRS members and their beneficiaries. Accordingly, its Trustees and Employees have fiduciary duties commonly associated with pension and other trusts. The principal purpose of the Securities Trading Policy (Policy) is to prevent an intentional or inadvertent violation of Federal securities laws as well as Kentucky's fiduciary and ethics standards. Further, this policy serves to act as an ethical guideline to ensure that KRS' Trustees and Employees conduct themselves in a manner that fosters public confidence. Since KRS is described by statute as a state agency, KRS Trustees and Employees have special responsibilities for honesty and integrity applicable to public servants. This Policy acknowledges certain standards of conduct expected of Trustees and Employees in view of these responsibilities.

Although many of the provisions of this Policy are based upon legal and fiduciary concepts, this Policy should not be interpreted as an exclusive and complete statement of legal and fiduciary responsibilities. The primary source of laws governing the legal and fiduciary conduct of Trustees and Employees are set forth in Kentucky Revised Statutes Chapter 11A, et seq. and Kentucky Revised Statutes 61.645. This Policy does not limit or expand the scope of those laws.

This Policy is intended to provide specific requirements to Trustees and Employees regarding personal securities trading for KRS accounts and compliance with legal and fiduciary responsibilities as governed by the Commonwealth of Kentucky and KRS Board of Trustees. Personal securities trading and transactions in accordance with this policy should create a presumption of compliance with legal and fiduciary responsibilities by Trustees and Employees. Willful disregard of this Policy could result in disciplinary actions which include formal reprimands, adverse performance reviews, disgorgement of profits, removal from office, or termination of employment.

#### A. Definitions

In this Policy, the following definitions apply unless the context requires otherwise:

1. "KRS" means the Kentucky Retirement Systems.
2. "Board" means the Board of Trustees of KRS.
3. "Employee" means a person working for KRS in an employer/employee relationship.
4. "Trustee" means a member of the Board of KRS.
5. "Covered Persons" are defined as KRS employees and Trustees with access to material, non-public information about proposed trading, trading strategies, or holdings and the other investment funds held by KRS. This includes individuals involved in recommending or making investment decisions or who have access to systems containing investment information. It also includes those working with or in close proximity to persons involved in decision making who regularly have the opportunity to see written information or hear discussions relating to investments. The following KRS employees are, by virtue of their

positions, conclusively presumed to be Covered Persons: Executive Director, Executive Director of Operations, Executive Director Office of Investments, Executive Director Office of Legal Services, Executive Director Office of Benefits, General Counsel, Assistant General Counsel, all Investment Division staff, all Accounting Division staff, all Internal Audit Division staff, select Division Directors, and select positions within the Information Technology Division.

6. "Personal securities transactions" means a discretionary transaction involving the purchase or sale of a security in which a person, or any member of such person's immediate family, had or gained directly or indirectly a financial interest and in which the person or any member of such person's immediate family had influence or control, directly or indirectly, over the timing of the trade of the security or derivative on a security.
7. "Family" means the Trustee's or Employee's spouse, their children under the age of 18, adult children financially dependent upon them or living in the same household and any other person(s) living in their household. This policy also applies to any relative of a Trustee or Employee, even if not living in their household, over whose investments the Trustee or Employee has discretionary authority.
8. "Federal Securities Laws" shall mean the Securities Act of 1933, the Securities Exchange Act of 1934, the Investment Company Act of 1940, the Investment Advisers Act of 1940, Title V of the Gramm-Leach-Bliley Act, the Sarbanes-Oxley Act of 2002 Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Jumpstart Our Business Startups Act of 2012 along with any rules adopted by the U.S. Securities and Exchange Commission ("SEC") and any rules adopted by the U.S. Department of the Treasury including sanction programs enforced by the Office of Foreign Assets Control (OFAC).
9. "Policy" means this Securities Trading Policy.

## B. General Ethical Standards

All KRS Trustees and Employees must comply with all applicable state and federal laws and ethical principles. They should specifically be aware of the following statutes and rules: KRS 11A, et seq., KRS 61.645, 15 U.S.C. 78j, Section 10 of the Securities Exchange Act of 1934 (including rules 10b-5, 10b5-1, 10b5-2) and the Kentucky Retirement Systems Personnel and Investment Policies. The omission of any applicable statute from this list does not excuse violation of its provisions.

Federal securities laws also prohibit persons, including KRS Trustees and Employees, from trading securities or commodities using any manipulative or deceptive device or scheme to defraud. This includes misstating or omitting any material fact. Moreover, trading securities or commodities on the basis of material non-public information is prohibited. This prohibition covers both "insiders" (persons who acquire material, non-public information in the context of their employment or a relationship of trust such as a fiduciary relationship) and "Tippees" (persons who misappropriate material, non-public information obtained from an insider). This Policy is designed to prevent KRS Trustees and Employees from misusing material, non-public information in a manner that might violate Federal securities laws or from otherwise engaging in inappropriate securities transactions such as front-running in KRS accounts as well as their personal and family accounts.

Accordingly, all KRS Trustees or Employees are prohibited from trading on material, inside and non-public information whether obtained in the course of their KRS duties or otherwise. Material, inside information is non-public information that a reasonable investor is likely to consider important in determining whether to purchase or sell a security. It is also information that, if made public, would likely affect the market price of a security. Information may be considered material even if it relates to future, speculative or contingent events and even if it is significant only when considered in combination with publically available information. Information is considered non-public unless it has been publically disclosed and adequate time has passed for securities markets to digest the information. Any instances or questions regarding possible inside information must be immediately brought to the attention of the Compliance Officer.

Federal laws also prohibit KRS Trustees, Employees or Investment Managers from transacting securities issued in countries subject to economic sanctions by the U. S. Department of Treasury OFAC. Additionally, KRS Trustees, Employees and Investment Managers should not conduct business or invest with individuals or entities connected with sanction targets or Specially Designated Nationals (SDNs).

### C. Personal Securities Transactions

#### Prohibited Transactions

All KRS Trustees or Employees are prohibited from engaging in the following personal securities transactions:

1. **Knowingly** conducting any securities transaction in any instrument KRS is actively trading until three (3) trading days after the buy/sell orders have been completed or canceled.
2. Purchasing stock in any Initial Public Offering (IPO) in order to prevent quid pro quo activity or conflicts of interest. Employees may accept IPO shares derived from a stock dividend on shares previously owned, from demutualization of an insurance company in which they are a policy holder or as the result of a Family member's employment by an IPO issuer.
3. Front-running, which is defined as buying or selling a security in advance of the time such a transaction would be blocked by the pre-clearance procedure. Trustees and Employees who have actual knowledge of transactions that are being considered for implementation in KRS portfolios, even in securities exempted by this policy, are prohibited from acting in advance thereof even if such purchase or sale would not otherwise be barred by the pre-clearance procedure below.

#### Covered Accounts, Securities and Assets

Personal securities transactions covered by this policy include transactions in:

- Individual equity or equity-related instruments, including but not limited to stocks, convertibles, preferred stock, options and futures on individual stocks, warrants, rights, etc., for domestic and foreign securities, whether publicly traded or privately placed.
- Individual bonds, options and financial futures on individual bonds.
- Investments in real estate involving more than one individual or entity with a fiduciary duty to KRS, or otherwise subject to the requirements of this policy, must be disclosed thirty (30) days PRIOR to transaction consummation even if it falls under an exemption listed below.

**Exempted Accounts, Securities and Assets**

The following are exempt trades: (1) trades in units of open ended mutual funds, segregated funds, or pooled trust funds; (2) purchases made under automatic dividend reinvestment or share purchase plans, but not sales from these made at the direction of those covered under this Policy; (3) trades that result from corporation actions without any voluntary action by the person holding the security; and (4) trades in index products (ETF securities, options, futures, or other derivatives that track published indices). Exempt trade examples include the following:

- Stock splits,
- Stock dividends,
- Mutual funds,
- Index funds,
- Unit Investment Trusts,
- Master trusts,
- Covered call writing or protective put purchases on securities already owned by the Trustee or Employee,
- Real estate used for personal or recreational residence,
- Agricultural or real property with a value of less than \$250,000 and bona fide rental properties with two (2) or fewer units,
- Real estate held through a real estate investment trust for which the Trustee or Employee is not making individual property selections,
- Dividend Reinvestment Plans (DRIP) or Direct Stock Plans (DSP) purchases, and
- Discretionary, fee-based accounts where the account owner is not making individual security selections.
- Annuity or insurance contracts,
- Tangible personal property and hard assets,
- Money market instruments,
- Certificates of deposit,
- Commercial paper,
- Options and futures on indices.

**Pre-Clearance**

Covered Persons shall not enter into a non-exempt personal securities transaction without first complying with the pre-clearance process defined herein and receiving approval or clearance from the KRS Compliance Officer or the Executive Director Office of Investments. The KRS Compliance Officer shall be responsible for implementation of this policy and for establishing procedures to track Trustee and Employee compliance with this Policy.

**A. Open Orders/Options**

If a Covered person wants to place a “good until canceled” limit, which is the equivalent of an open order that specifies certain execution limits, or writing a covered call in a security that has not been defined as exempt in this policy, they must indicate the order type on their request for approval. If the order request is approved in accordance with pre-clearance procedures in this policy, a transactional disclosure form must be completed and submitted to the Compliance

Officer within ten (10) calendar days of the order being executed. **If at any time between approval by the Compliance Officer and trade execution the Covered Person obtains actual knowledge of KRS or its external managers transacting in that security, then transacting in that option or open order is no longer approved.**

Employees may obtain pre-clearance for personal securities transactions by sending an e-mail to the KRS Compliance Officer requesting a determination as to whether trading is allowed and must wait for approval from the Compliance Officer **before entering into the transaction**. In the absence of the Compliance Officer, the Executive Director Office of Investments may also consider the pre-clearance request of an Employee pursuant to the same procedure. In consultation with KRS investment managers and staff, the Compliance Officer may approve or deny pre-clearance approval or denial based on reasonable discretion that the transaction does not conflict with federal or Kentucky law or KRS policies.

Pre-clearance for Trustees and Employees will be documented in a personal securities transaction log, which will provide a record of all requests for approval of personal securities transactions. The KRS Compliance Officer will provide pre-clearance and maintain the log. Unless otherwise noted by the Compliance Officer, pre-clearance approval for personal securities transactions is effective until market close on the first trading day following communication of pre-clearance approval, unless the Trustee or Employee has been approved for an open order. **Under no circumstances shall a KRS employee approve or clear their own transaction.**

A transactional disclosure form must be completed for personal securities transactions, except for those described above which are exempted from the disclosure requirement. Transactional disclosure forms must be fully completed and given to the KRS Compliance Officer along with the trade confirmation from the broker (unless the transaction only involved real estate) within ten calendar days of the personal transaction trade date. A sample of the required form is attached to this policy.

The transactional disclosure form must be fully completed and contain information including:

- The name and amount of the security involved. If the asset is real estate not exempted by this policy, then the address of the property should also be included.
- The date and nature of the transaction.
- The price at which the transaction was effected.
- The name of the broker through whom the transaction was effected.

## D. Certifications

### 1. Annual

Each year, at the request of the Compliance Officer, all Covered and Deemed Covered Persons shall submit to the Compliance Officer a certification of their understanding of the requirements of this policy. Additionally, unless they are a Trustee, all Covered and Covered persons should submit a brokerage statement disclosing the account title, their securities holdings and securities transactions for personal and family accounts where any non-exempt securities transactions may occur for the period ending the preceding December 31<sup>st</sup>.

2. New Hire/Appointment

All Covered Persons or Deemed Covered persons shall also be required to file with the Compliance Officer, in such a format as the Compliance Officer may require, a certification of their understanding of the requirements of this policy. Additionally, unless they are a Trustee, all Covered and Deemed Covered persons should disclose the account name and account for all personal and family accounts where non-exempt securities transactions may occur within fifteen business (15) days of becoming a Covered Person.

E. Violations and Remediation

KRS takes violations of securities laws and this policy very seriously. As mentioned previously, willful disregard of this Policy could result in disciplinary actions which include formal reprimands, adverse performance reviews, disgorgement of profits and termination of employment or removal from office. Failure to pre-clear non-exempt personal securities transactions shall be considered a willful violation of this policy and will subject that Covered Person to appropriate sanctions.

As such, KRS Trustees and Employees should promptly report any suspected violation of securities laws or this policy to the Compliance Officer. If any violation of this policy is determined to have occurred, the Compliance Officer will escalate the situation to the Executive Director and Chair of the Board of Trustees for action. No KRS Trustee or Employee shall participate in a determination of whether he or she has committed a violation of this policy or in the imposition of any sanction against himself or herself.

Signatories

As Adopted by the Investment Committee

As Adopted by the Board of Directors

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

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

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

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

Mr. Neil Ramsey  
Chair, Investment Committee

Mr. David L. Harris  
Chair, Board of Trustees



# Kentucky Retirement Systems

## Russell Investments Overlay Services

Mart Mitchell – Regional Director

Greg Nordquist, CFA – Director, Overlay Strategies

JUNE 2018

IAL

# Why use a derivatives Overlay?

5

<b>INCREASED RETURN</b>	<ul style="list-style-type: none"><li>› Operational cash is a drag on plan performance</li><li>› An overlay allows for full investment while maintaining liquidity<ul style="list-style-type: none"><li>› ~15 bps per year at the total fund level</li></ul></li></ul>
<b>RISK MANAGEMENT</b>	<ul style="list-style-type: none"><li>› Unintended exposures add risk but not expected return</li><li>› Disciplined rebalancing can reduce this risk by ~75%</li></ul>
<b>LOWER COSTS</b>	<ul style="list-style-type: none"><li>› Manage cash flows more effectively reducing trading costs</li><li>› The cost to trade futures is about 1/4 the cost of physicals</li></ul>
<b>REDUCE ADMINISTRATIVE BURDEN</b>	<ul style="list-style-type: none"><li>› Reduce time staff spends on managing cash flows and rebalancing</li><li>› Allows staff to focus on value-add activities vs operational tasks</li></ul>

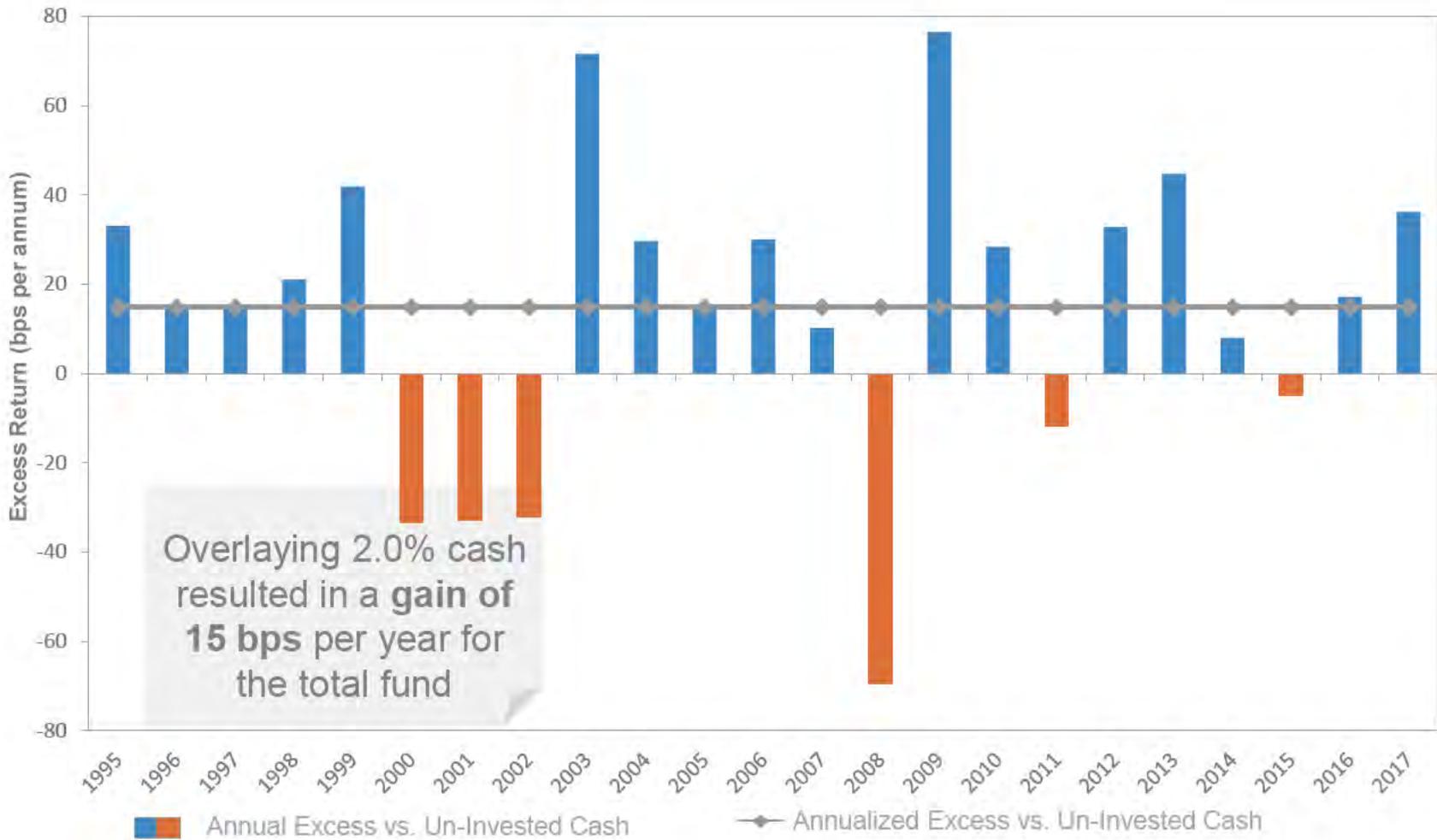
**Investment success requires excellence in both strategy and implementation**

IAL

# Potential benefit of cash Overlay for KRS

Frictional cash drag can have a significant impact on performance<sup>1</sup>

5



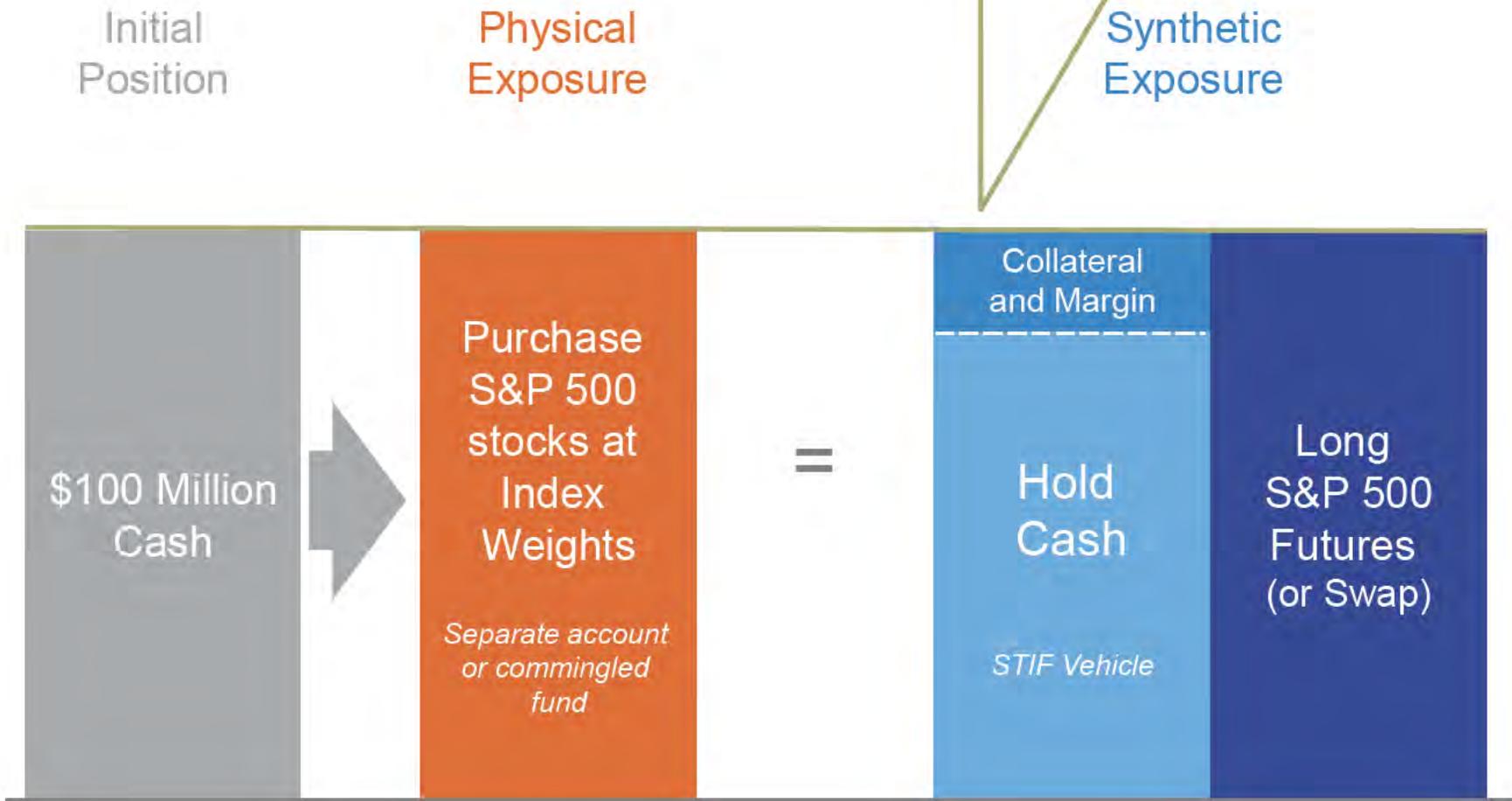
<sup>1</sup> Impact from 12/31/95 to 10/31/17 of 1.4% Int'l Equity cash, 1.4% US Equity cash and 1% fund cash (total cash ~ 2.0%) vs. a pro-rated target of 36.4% Russell 3000/ 35.8% MSCI ACWI ex-US IMI/ 13.9% Barclays Universal/ 13.9% Barclays US High Yield. Excludes Real Estate, Absolute Return, Real Return, and Private Equity from policy. For illustrative purposes only. Does not represent any actual investment. Indexes are unmanaged and cannot be invested in directly. Data is historical and not a guarantee of future results.

# Overlay futures explained

## Physicals vs Futures example – Day 1

Note: Futures = Liquid Exposure (NOT Leverage)

5



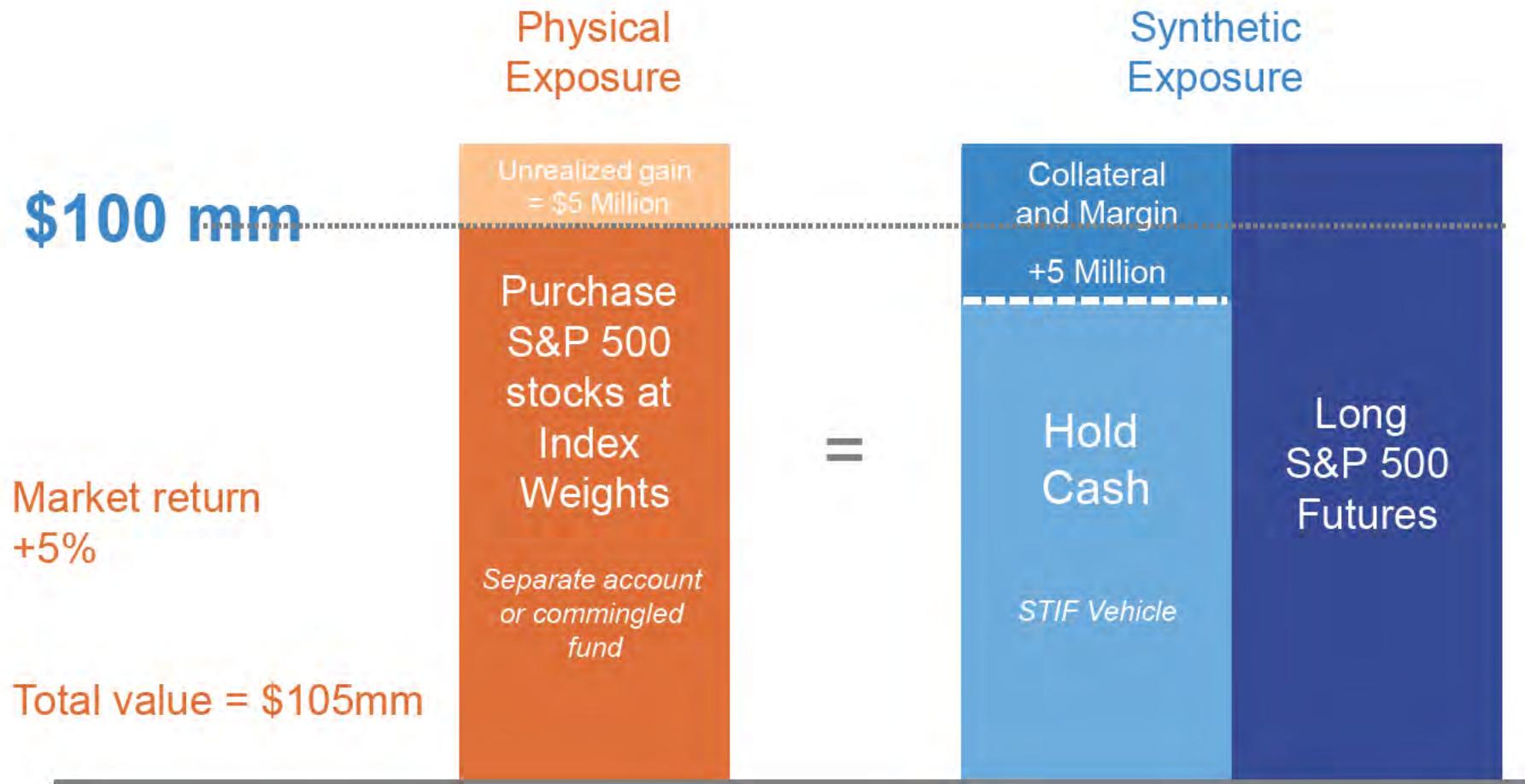
For illustrative purposes only.  
Indexes are unmanaged and cannot be invested in directly.

IAL

# Overlay futures explained

## Physicals vs Futures example - Day 2

5



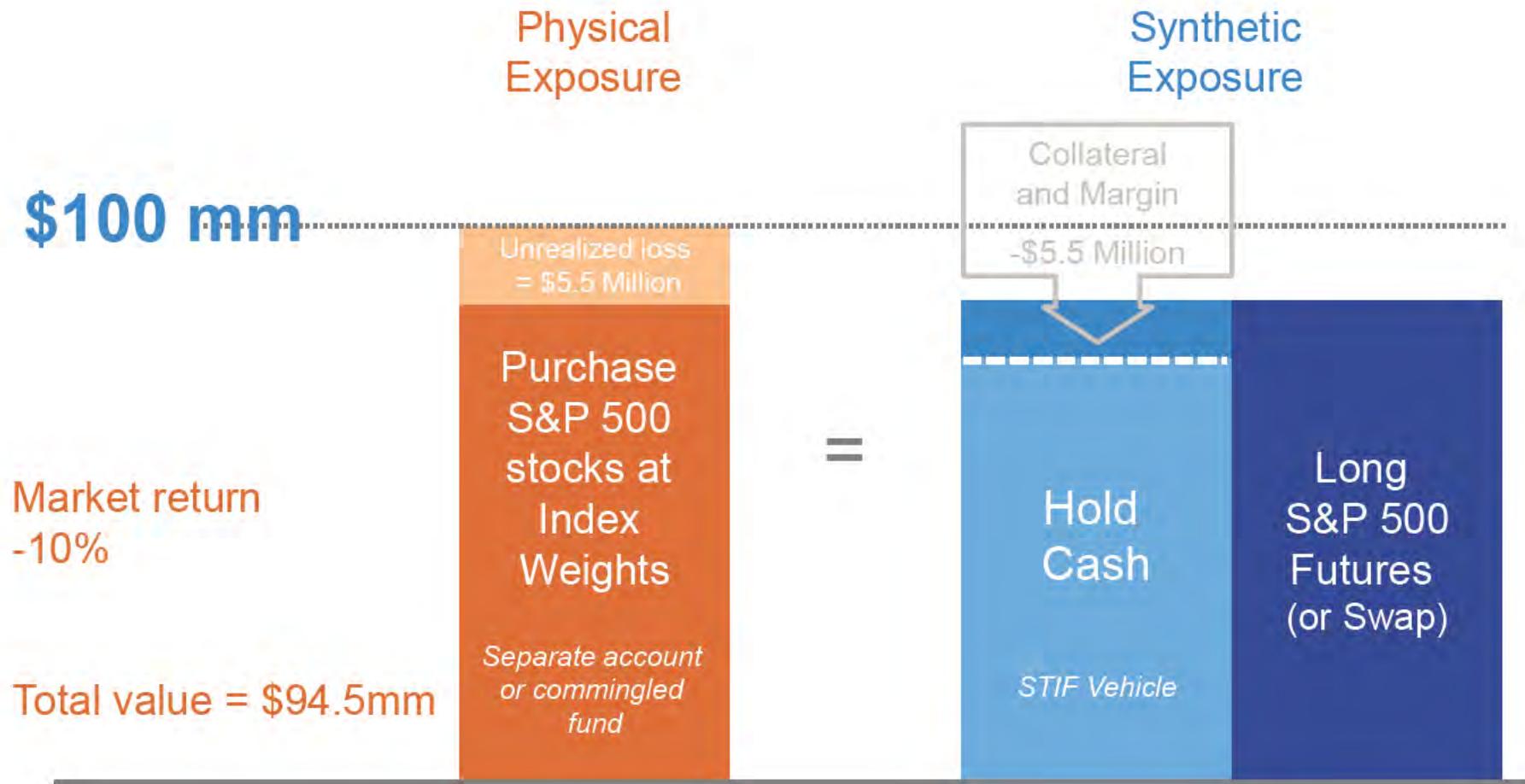
For illustrative purposes only.  
Indexes are unmanaged and cannot be invested in directly.

IAL

# Overlay futures explained

## Physicals vs Futures example - Day 3

5



For illustrative purposes only.  
Indexes are unmanaged and cannot be invested in directly.

# A large and diverse representative client list

Managing exposure for a global client base

5

## US Public Funds

Ohio SERS  
Oregon PERS  
Rhode Island ERS  
San Bernardino County ERS  
South Carolina Retirement System  
Utah Retirement System  
Wyoming Retirement System

## US Corporate

AT&T  
Campbell Soup Company  
Kaiser Permanente  
Pacific Gas & Electric  
Reynolds American  
Shell  
Southern California Edison

## US Other

Kaiser Foundation  
Nuclear Electric Insurance Ltd.

## UK/EMEA

CAA  
IBM Netherlands  
IBM UK

## Asia/Japan

Astellas Pharma  
Japan Corporate Pension Funds

87 clients

\$570  
billion AUM

Americas – 54  
Australasia – 10  
Europe – 23

This is a representative client list and excludes clients who have not given their permission to use their name in materials. The identification of the clients listed does not constitute an endorsement or recommendation of Russell Investments' products or services by such client.

As of December 2017.



# Appendix



## Mart K. Mitchell

### Regional Director Americas Institutional



Mart Mitchell is a regional director for Russell Investments' Americas institutional business. Mart represents all of Russell Investments' products and services to large institutional clients and prospective clients in the Midwest and Southern U.S. territory. Mart markets and manages client relationships that include investment management products, consulting, alternative investments, transition management, currency management, commission management and overlay services. He is also responsible for providing outsourced CIO (OCIO) and traditional investment consulting services to large retirement plan sponsors and endowment & foundation funds. His expertise in the workings of global capital markets and a variety of investments plans is a valuable resource in helping clients find unique solutions.

Mart joined Russell Investments implementation services department in 2000 as an associate client executive and was promoted to client executive at the beginning of 2001 and regional director at the beginning of 2005. Prior to 2000, Mart served nearly seven years within the investment management business of Russell Investments.

Mart joined Russell Investments as an intern in 1993, working as an account assistant in the company's analytical services division. After graduating with a degree in finance, he joined Russell Investments full-time as an accountant, performing financial and regulatory functions for the company's mutual funds.

In mid-1995, Mart moved to Russell Investments' New York office, where he supported East Coast client service and sales efforts for two years until he transferred to focus on clients based in the Southern and Mid-Atlantic U.S. in 1997 at Russell Investments' North Carolina office. While there, Mart provided asset allocation, investment objective-setting and employee communications services to Russell Investments' direct investment management clients.

**B.A., Finance, University of Puget Sound, 1993**

**M.B.A., Babcock School of Management, Wake Forest University, 2000**

**Licensed Registered Representative, FINRA Series 7 and 63 (Russell Investments Implementation Services, LLC., member FINRA)**

# Gregory S. Nordquist, CFA

Director, Overlay Strategies

Russell Investments Implementation Services, LLC



Greg Nordquist is a director, overlay strategies on the overlay services team for Russell Investments. This team manages custom overlays for large institutional investors. Assignments include equitization, policy implementation, portable alpha, and liability based solutions as well as client-directed hedges. Through these assignments, Russell Investments strives to improve the implementation of existing investment strategies by reducing slippage inherent in most portfolios and provide an efficient platform for implementing newer strategies such as portable alpha and interest rate hedging. From 1996 to 2006 Greg was with Russell Investments' U.S. consulting group, the final eight years as a consultant. In that role Greg provided advice to large institutional fund clients on all aspects of their investment programs including governance, asset allocation, investment structure, manager selection and performance monitoring. Greg was also involved in researching global tactical asset allocation strategies, a team leader on U.S. and international equity strategy and served on Russell's index content committee.

Greg joined Russell Investments' trust operations in 1990 as a technical assistant. In 1993 Greg moved to the firm's investment management group as a portfolio specialist, where his responsibilities included executing trades for money market funds, short-term investment funds and various custom assignment fixed income funds.

Greg served as a member of FTSE America's Regional Index Committee from 2002 to 2006.

Greg is a director, overlay strategies for overlay services of Russell Investments Implementation Services LLC, Russell Investments' global trading firm. Russell Investments Implementation Services LLC is an SEC registered investment adviser and FINRA member firm.

**B.A., Finance and Accounting, University of Puget Sound  
CFA Charterholder, CFA Institute, 1997**

IAL





## KENTUCKY RETIREMENT SYSTEMS INVESTMENTS



6.1

To: Investment Committee – Kentucky Retirement Systems

From: Richard Robben, Interim CIO

Date: June 27<sup>th</sup>, 2018

Subject: Lord Abbett Short Duration and NISA Core Fixed Income Recommendations

Over the past few weeks staff has been engaged with Wilshire to determine the best way to allocate our investments within the Core Fixed Income, or Liquidity portion of our asset allocations. While the work is ongoing, we do know enough at this point to recommend that the IC make an initial allocation of \$750MM to Lord Abbett for investment in their short duration fixed income strategy. Coincidental to this allocation, staff intends to increase the existing allocation to NISA in their US Aggregate strategy to \$750MM.

The Lord Abbett short duration product, when combined with the US Aggregate product from NISA, produces some very desirable results for the KRS Core Fixed Income portfolio. As illustrated below, a 50%/50% combination not only increases the return, but also decreases the volatility of the combined portfolio.

Risk-Return Table									
January 2008 - December 2017: Annualized Summary Statistics									
	Return (%)	Std Dev (%)	Downside Risk (%)	Beta vs. Market	Alpha vs. Market (%)	R-Squared vs. Market (%)	Sharpe Ratio	Tracking Error vs. Market (%)	Observ.
Lord, Abbett & Co: Short Duration (Gross)	4.78	2.89	1.97	0.4036	3.16	20.54	1.5370	3.2170	120
NISA: Core Brd Mkt FI (Gross)	4.34	3.23	2.24	0.9936	0.34	99.48	1.2364	0.2337	120
50/50 LA/NISA	4.57	2.58	1.83	0.6986	1.74	76.89	1.6373	1.5792	120
Bloomberg Barclays U.S. Aggregate	4.01	3.24	2.27	1.0000	0.00	100.00	1.1299	0.0000	120

Ultimately, we feel that way may want to employ 3 to 5 managers with this portion of our portfolio, however we are confident that we want to keep NISA, and add Lord Abbett now.

Staff is recommending an initial investment of \$750MM (6% of plan assets for KERS and SPRS Pension / 4% of plan assets for all other plans) with Lord Abbett, to be managed as a Separate Account. This investment will be shared among all plans in both Pension and Insurance.

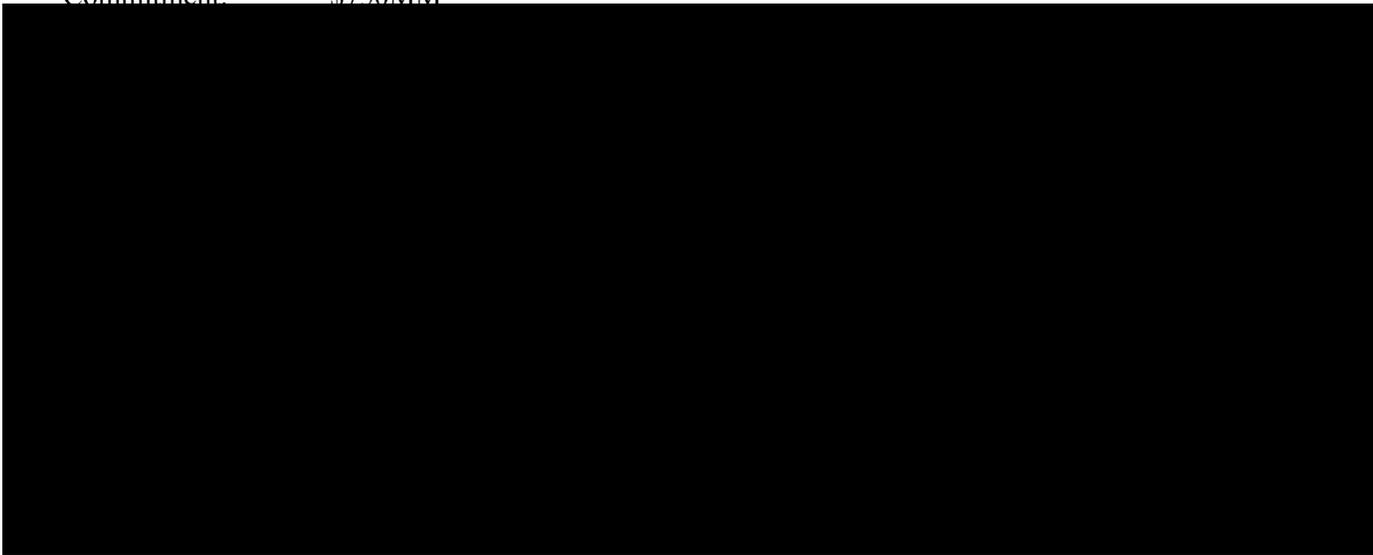
In considering complimentary strategies to the aggregate product from NISA, we also looked at 2 other forms in the short duration space, Loomis Sayles and Allianz. The Allianz product is exclusively High Yield, and the Loomis product does not have the scale or performance history of the Lord Abbett offering. Lord Abbett is the largest active manager in the space, and has performance in the top decile over the last 1, 3, 5, and 10 year periods.

**Terms**

Type of Investment: Core Fixed Income  
Structure: Separate Account  
Commitment: \$750MM

IAL

6.1





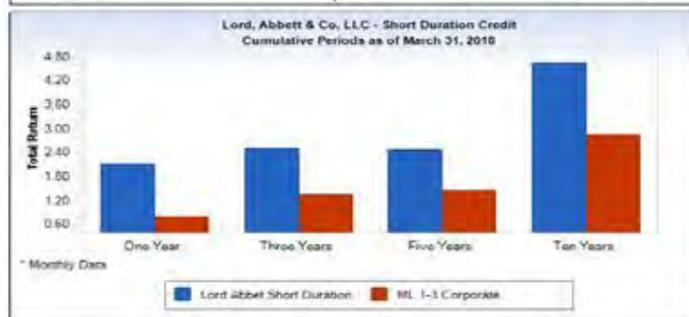
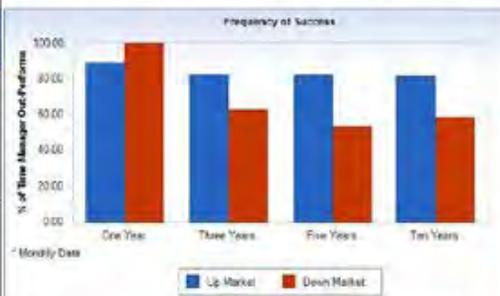
Wilshire Consulting

# LORD ABBETT SHORT CREDIT

As of March 31, 2018

Historical Returns	Annualized Ended 3/31/2018				Annual Returns									
	1 Year	3 Years	5 Years	10 Years	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Lord Abbet Short Duration	2.13	2.50	2.47	4.65	2.91	4.64	1.03	2.33	2.23	7.25	3.77	7.10	17.86	-0.24
ML 1-3 Corporate	0.80	1.35	1.46	2.84	1.90	2.39	1.01	1.19	1.78	4.49	1.76	4.86	14.69	-2.68
<b>Risk - Standard Deviation</b>														
Lord Abbet Short Duration	0.62	1.20	1.26	2.88	0.44	1.58	1.07	1.17	1.58	1.33	2.12	1.75	3.78	6.34
ML 1-3 Corporate	0.69	0.85	0.84	2.77	0.59	1.11	0.76	0.75	0.86	1.11	1.52	1.58	3.99	6.79
<b>Risk - Semi-Variance</b>														
Lord Abbet Short Duration	0.46	0.77	0.93	1.97	0.31	1.00	0.83	0.95	1.32	0.99	1.62	1.30	2.59	4.56
ML 1-3 Corporate	0.50	0.57	0.60	2.12	0.45	0.73	0.52	0.60	0.69	0.69	1.16	1.15	2.79	5.75
<b>Excess Returns</b>														
Arithmetic Excess	1.33	1.15	1.01	1.81	1.01	2.25	0.02	1.14	0.45	2.76	2.01	2.24	3.17	2.44
Geometric Excess	1.32	1.13	1.00	1.76	0.99	2.20	0.02	1.13	0.44	2.64	1.98	2.14	2.76	2.51
<b>Excess Statistics</b>														
Manager vs. Benchmark	Annualized Ended 3/31/2018													
	1 Year	3 Years	5 Years	10 Years										
Tracking Error	0.41	0.63	0.65	1.76										
Information Ratio	3.20	1.79	1.53	1.00										
Downside Deviation	0.24	0.45	0.50	1.16										
Skewness	1.07	-0.15	-0.69	0.40										
Kurtosis	0.64	0.38	1.20	15.14										
Alpha	1.24	0.98	0.67	2.15										
Beta	0.74	1.18	1.29	0.84										
Residual Risk	0.37	0.61	0.60	1.70										
R Squared	0.67	0.74	0.77	0.67										

6.1



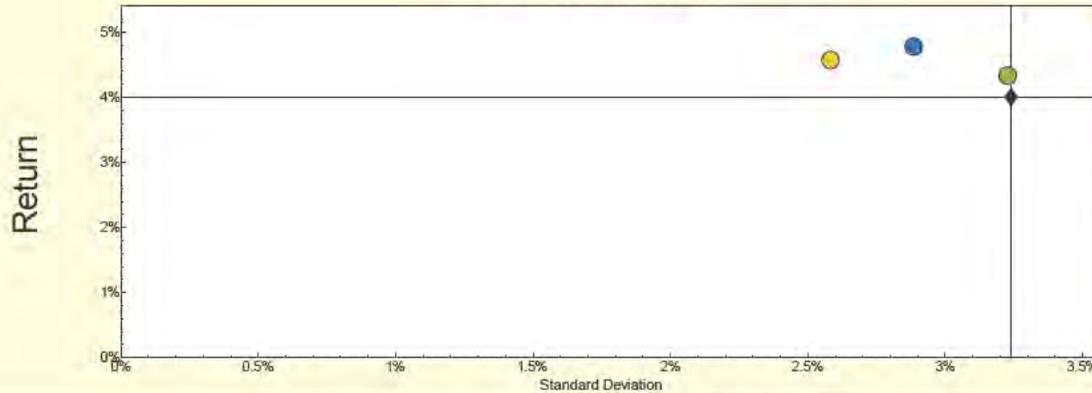
# Zephyr StyleADVISOR

Zephyr StyleADVISOR: Lord, Abbett and Co.

## Manager Risk/Return

Single Computation

January 2008 - December 2017



- Lord, Abbett & Co: Short Duration (Gross)
- NISA: Core Brd Mrkt FI (Gross)
- 50/50 LA/NISA
- ◆ Market Benchmark:  
Bloomberg Barclays U.S. Aggregate

## Risk-Return Table

January 2008 - December 2017: Annualized Summary Statistics

	Return (%)	Std Dev (%)	Downside Risk (%)	Beta vs. Market	Alpha vs. Market (%)	R-Squared vs. Market (%)	Sharpe Ratio	Tracking Error vs. Market (%)	Observ.
Lord, Abbett & Co: Short Duration (Gross)	4.78	2.89	1.97	0.4036	3.16	20.54	1.5370	3.2170	120
NISA: Core Brd Mrkt FI (Gross)	4.34	3.23	2.24	0.9936	0.34	99.48	1.2364	0.2337	120
50/50 LA/NISA	4.57	2.58	1.83	0.6986	1.74	76.89	1.6373	1.5792	120
Bloomberg Barclays U.S. Aggregate	4.01	3.24	2.27	1.0000	0.00	100.00	1.1299	0.0000	120

Past performance is not indicative of future results. Indices are unmanaged, do not reflect the deduction of fees or expenses and are not available for direct investment.

Performance data is based on the strategy's institutional composite. All information provided is supplemental to the strategy's institutional composite presentation, which is included at the end of this report, and is subject to change.

This material has been prepared exclusively for use by analysts, institutional investors and their consultants, registered investment advisors, broker-dealers, and sponsors of plans with a minimum of 100 participants. It is not intended for, and should not be used with, small plan sponsors, plan participants, or the public in written or oral form or for any other purpose.

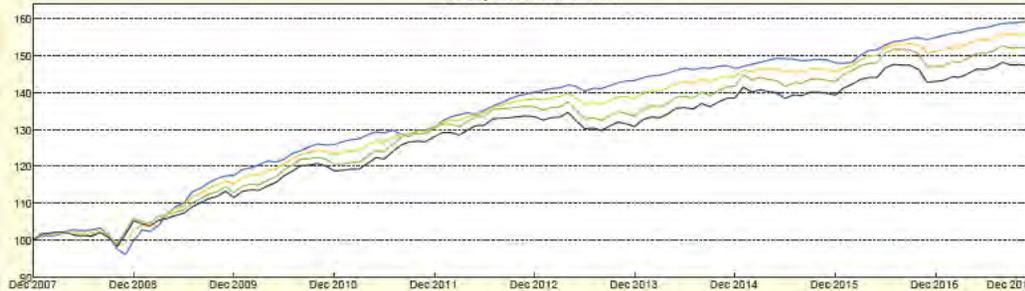
# Zephyr StyleADVISOR

Zephyr StyleADVISOR: Lord, Abbett and Co.

## Manager Performance

Single Computation

January 2008 - December 2017



- Lord, Abbett & Co: Short Duration (Gross)
- NISA: Core Brd Mrkt FI (Gross)
- 50/50 LA/NISA
- Bloomberg Barclays U.S. Aggregate

6.1

## Performance Table

January 2008 - December 2017. Single Computation

	Portfolio Performance			vs. Bloomberg Barclays U.S. Aggregate					
	Annualized Return (%)	Cumulative Return (%)	Std Dev (%)	Annualized Excess Return (%)	Cumulative Excess Return (%)	Info Ratio	Significance Level (%)	Explained Variance (%)	Tracking Error (%)
Lord, Abbett & Co: Short Duration (Gross)	4.78	59.50	2.89	0.77	11.39	0.24	76.78	20.54	3.22
NISA: Core Brd Mrkt FI (Gross)	4.34	52.87	3.23	0.33	4.77	1.41	99.94	99.48	0.23
50/50 LA/NISA	4.57	56.36	2.58	0.57	8.25	0.36	85.81	76.89	1.58

Past performance is not indicative of future results. Indices are unmanaged, do not reflect the deduction of fees or expenses and are not available for direct investment.

Performance data is based on the strategy's institutional composite. All information provided is supplemental to the strategy's institutional composite presentation, which is included at the end of this report, and is subject to change.

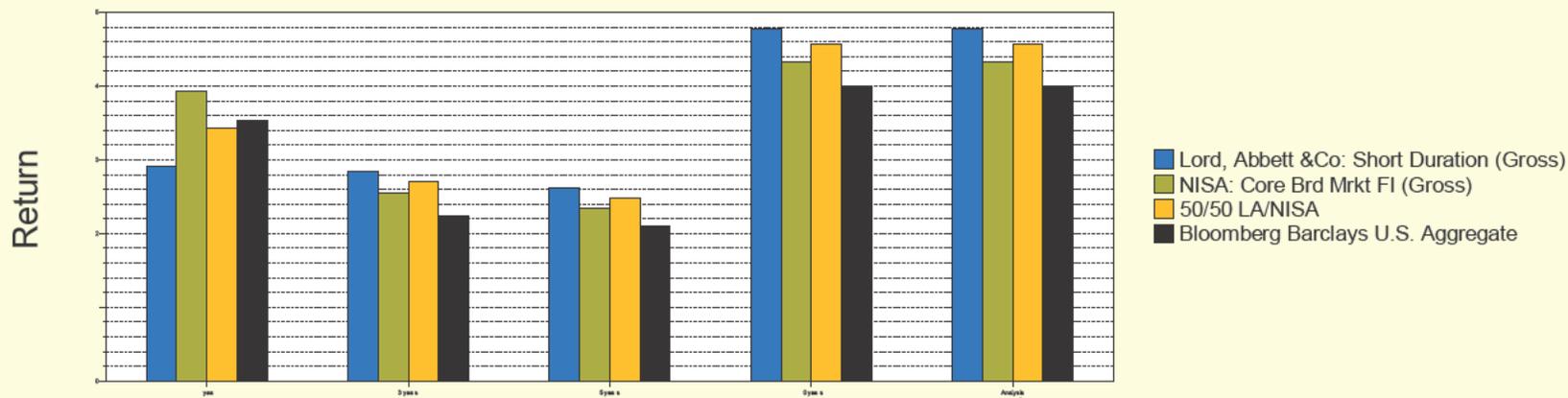
This material has been prepared exclusively for use by analysts, institutional investors and their consultants, registered investment advisors, broker-dealers, and sponsors of plans with a minimum of 100 participants. It is not intended for, and should not be used with, small plan sponsors, plan participants, or the public in written or oral form or for any other purpose.

# Zephyr StyleADVISOR

Zephyr StyleADVISOR: Lord, Abbett and Co.

## Manager vs Benchmark: Return through December 2017

(not annualized if less than 1 year)



## Manager vs Benchmark: Return through December 2017

(not annualized if less than 1 year)

	YTD	1 year	2 years	3 years	4 years	5 years	10 years	Analysis Period
Lord, Abbett & Co: Short Duration (Gross)	2.91%	2.91%	3.77%	2.85%	2.72%	2.62%	4.78%	4.78%
NISA: Core Brd Mrkt FI (Gross)	3.94%	3.94%	3.39%	2.54%	3.43%	2.34%	4.34%	4.34%
50/50 LA/NISA	3.42%	3.42%	3.59%	2.70%	3.08%	2.49%	4.57%	4.57%
Bloomberg Barclays U.S. Aggregate	3.54%	3.54%	3.09%	2.24%	3.16%	2.10%	4.01%	4.01%

Past performance is not indicative of future results. Indices are unmanaged, do not reflect the deduction of fees or expenses and are not available for direct investment.

Performance data is based on the strategy's institutional composite. All information provided is supplemental to the strategy's institutional composite presentation, which is included at the end of this report, and is subject to change.

This material has been prepared exclusively for use by analysts, institutional investors and their consultants, registered investment advisors, broker-dealers, and sponsors of plans with a minimum of 100 participants. It is not intended for, and should not be used with, small plan sponsors, plan participants, or public in written or oral form or for any other purpose.

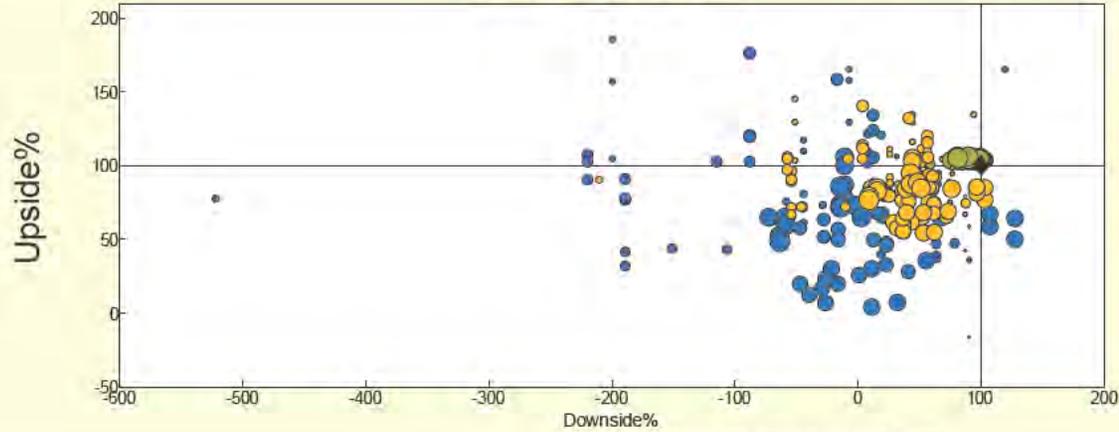
Created with Zephyr StyleADVISOR. Manager returns supplied by: Informa Investment Solutions, Inc.(PSN)

6.1

# Zephyr StyleADVISOR

Zephyr StyleADVISOR: Lord, Abbett and Co.

January 2008 - December 2017



- Lord, Abbett & Co: Short Duration (Gross)
- NISA: Core Brd Mrkt FI (Gross)
- 50/50 LA/NISA
- ◆ Bloomberg Barclays U.S. Aggregate

10-Month Moving Windows, Computed Monthly

## Up/Down Table

January 2008 - December 2017. Single Computation

	# of Months		Average Return (%)		Average Return (%) vs. Market		Month (%)		1-Year (%)		Market Benchmark (%)		
	Up	Down	Up	Down	Up Market	Down Market	Best	Worst	Best	Worst	Up Capture	Down Capture	R-Squared
Lord, Abbett & Co: Short Duration (Gross)	94	26	0.65	-0.53	0.59	0.01	3.83	-3.55	22.24	-0.24	71.7	-1.0	20.54
NISA: Core Brd Mrkt FI (Gross)	79	41	0.84	-0.57	0.84	-0.56	3.57	-2.37	14.19	-2.34	102.9	94.5	99.48
50/50 LA/NISA	91	29	0.65	-0.49	0.71	-0.28	3.70	-2.76	17.00	0.14	87.3	47.3	76.89
Bloomberg Barclays U.S. Aggregate	79	41	0.81	-0.60	0.81	-0.60	3.73	-2.37	13.79	-2.47	100.0	100.0	100.00

Past performance is not indicative of future results. Indices are unmanaged, do not reflect the deduction of fees or expenses and are not available for direct investment.

Performance data is based on the strategy's institutional composite. All information provided is supplemental to the strategy's institutional composite presentation, which is included at the end of this report, and is subject to change.

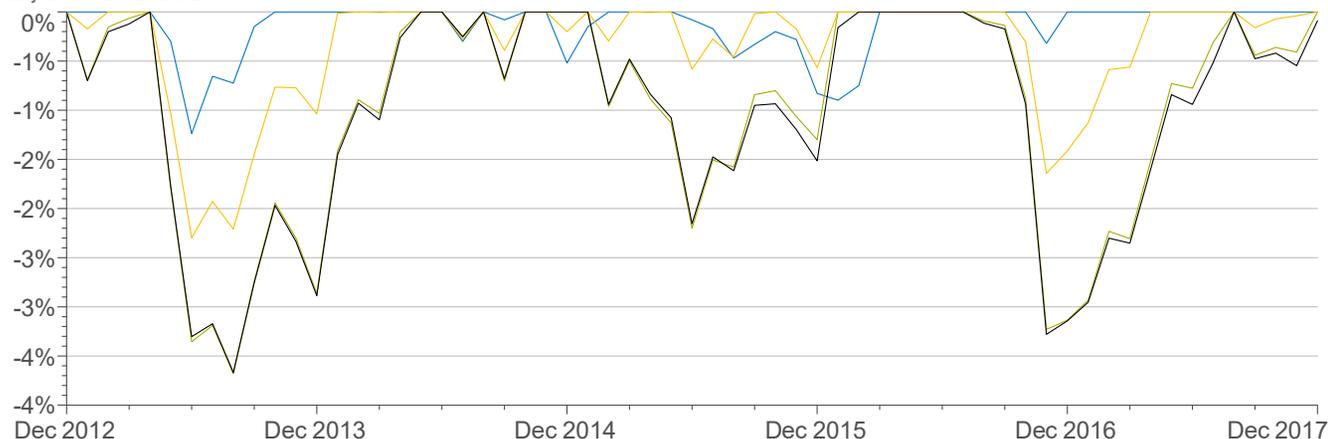
This material has been prepared exclusively for use by analysts, institutional investors and their consultants, registered investment advisors, broker-dealers, and sponsors of plans with a minimum of 100 participants. It is not intended for, and should not be used with, small plan sponsors, plan participants, or public in written or oral form or for any other purpose.

Past performance is not indicative of future results. Indices are unmanaged, do not reflect the deduction of fees or expenses and are not available for direct investment.

# Zephyr StyleADVISOR

Zephyr StyleADVISOR: Lord, Abbett and Co.

Drawdown  
January 2013 - December 2017



6.1

## Drawdown Table

January 2008 - December 2017: Summary Statistics

	Max Drawdown	Max Drawdown Begin Date	Max Drawdown End Date	Max Drawdown Length	Max Drawdown Recovery Date	Pain Index	Pain Ratio	Omega (MAR = 0.00%)	Gain to Loss Ratio	High Water Mark Date	To High Water Mark
Lord, Abbett & Co: Short Duration (Gross)	-6.94%	Sep 2008	Nov 2008	3	Mar 2009	0.26%	16.89	4.42	1.22	Dec 2017	0.00%
NISA: Core Brd Mrkt FI (Gross)	-3.68%	May 2013	Aug 2013	4	May 2014	0.64%	6.19	2.86	1.48	Dec 2017	0.00%
50/50 LA/NISA	-4.35%	Sep 2008	Oct 2008	2	Dec 2008	0.29%	14.78	4.15	1.32	Dec 2017	0.00%
Bloomberg Barclays U.S. Aggregate	-3.83%	Apr 2008	Oct 2008	7	Dec 2008	0.69%	5.31	2.63	1.36	Aug 2017	0.09%

Past performance is not indicative of future results. Indices are unmanaged, do not reflect the deduction of fees or expenses and are not available for direct investment.

Performance data is based on the strategy's institutional composite. All information provided is supplemental to the strategy's institutional composite presentation, which is included at the end of this report, and is subject to change.

This material has been prepared exclusively for use by analysts, institutional investors and their consultants, registered investment advisors, broker-dealers, and sponsors of plans with a minimum of 100 participants. It is not intended for, and should not be used with, small plan sponsors, plan participants, or the public in written or oral form or for any other purpose.

# Zephyr StyleADVISOR

Zephyr StyleADVISOR: Lord, Abbett and Co.

## Relative Statistics

January 2008 - December 2017: Summary Statistics

	Return	Standard Deviation	Sharpe Ratio	Maximum Drawdown	Maximum Drawdown Begin Date	Maximum Drawdown End Date	Pain Index	Pain Ratio	Excess Return vs. Market	Tracking Error vs. Market	Batting Average vs. Market	Information Ratio vs. Market	Up Capture vs. Market	Down Capture vs. Market	Alpha vs. Market	Beta vs. Market	R-Squared vs. Market	Treynor Ratio vs. Market
Lord, Abbett & Co: Short Duration (Gross)	4.78%	2.89%	1.54	-6.94%	Sep 2008	Nov 2008	0.28%	16.89	0.77%	3.22%	55.00%	0.24	71.88%	-1.01%	3.16%	0.40	20.54%	10.78
NISA: Core Brd Mrkt FI (Gross)	4.34%	3.23%	1.24	-3.88%	May 2013	Aug 2013	0.64%	6.19	0.33%	0.23%	70.83%	1.41	102.88%	94.46%	0.34%	0.99	99.48%	4.02
50/50 LA/NISA	4.57%	2.58%	1.64	-4.35%	Sep 2008	Oct 2008	0.20%	14.78	0.57%	1.58%	55.00%	0.36	87.30%	47.32%	1.74%	0.70	78.80%	6.01
Bloomberg Barclays U.S. Aggregate	4.01%	3.24%	1.13	-3.83%	Apr 2008	Oct 2008	0.69%	5.31	0.00%	0.00%	0.00%	0.00	100.00%	100.00%	0.00%	1.00	100.00%	3.66

Past performance is not indicative of future results. Indices are unmanaged, do not reflect the deduction of fees or expenses and are not available for direct investment.

Performance data is based on the strategy's institutional composite. All information provided is supplemental to the strategy's institutional composite presentation, which is included at the end of this report, and is subject to change.

This material has been prepared exclusively for use by analysts, institutional investors and their consultants, registered investment advisors, broker-dealers, and sponsors of plans with a minimum of 100 participants. It is not intended for, and should not be used with, small plan sponsors, plan participants, or public in written or oral form or for any other purpose.

# Zephyr StyleADVISOR

Zephyr StyleADVISOR: Lord, Abbett and Co.

## Zephyr StyleADVISOR

**StyleAdvisor** is not meant to replace a thorough analysis by a consultant. You and your consultant best understand the overall goals of your investment program, and how a particular portfolio may or may not help you accomplish these goals. StyleADVISOR is meant to alert you to situations where you and your consultant may wish to consider generic portfolios.

**Benchmark** – An index or combination of indices used to characterize a manager.

**Beta Benchmark** – When StyleADVISOR performs basic or general style analyses, it attempts to track the manager with a style benchmark formed from the palette of indices. For comparison purposes, it also attempts to track the manager with a beta benchmark formed using the same rules and constraints as the style benchmark, except that the palette of indices for the beta benchmark consists only of the market benchmark. It is a single-parameter beta of excess returns of a manager over T-Bills against excess returns of the market benchmark over T-Bills.

**Budget Constraint** – The requirement that the weights in a benchmark add to 100%. Since only governments are exempt from the budget constraint, StyleADVISOR places this restriction on all style benchmarks, beta benchmarks, and completeness funds.

**Index** – A portfolio (or the return of series of that portfolio) formed by a quantitative or otherwise rigorously specified, publicly disclosed, process. Many index portfolios can be acquired for very low management fees.

**Manager** – In StyleADVISOR, a manager is a portfolio or return series to be analyzed. A manager may be a portfolio managed by an investment advisor or a mutual fund. More generally, a manager may be any return series derived from portfolios, securities, or asset such as indices, commodities, futures, or economic time series.

**Manager Style Graph** – The manager style graph is a two-dimensional graph displaying manager style against a style basis.

**Market Benchmark** – The market benchmark is a single fund or index specified in the Analysis Information dialog.

**Optimization** – The mathematical process by which StyleADVISOR determines style and beta benchmarks, as well as completeness fund portfolios. More precisely, the program uses quadratic optimization with linear constraints.

**Palette of Indices** – The palette of indices (or palette) is the set of indices that can be used to track a manager or managers, or to form a custom core portfolio. The style basis is automatically included in the palette.

6.1

# Zephyr StyleADVISOR

Zephyr StyleADVISOR: Lord, Abbett and Co.

## Zephyr StyleADVISOR

**StyleAdvisor** is not meant to replace a thorough analysis by a consultant. You and your consultant best understand the overall goals of your investment program, and how a particular portfolio may or may not help you accomplish these goals. StyleADVISOR is meant to alert you to situations where you and your consultant may wish to consider generic portfolios.

**Style** – A persistent, discernible factor in manager returns. In StyleADVISOR, styles are captured by generic indices. If a manager's return series is tracked well by a generic index's return series, then we have evidence that the style embodied by the index is being displayed by the manager.

**Style Bias** – A definition of a manager style graph consisting of indices and axis definitions based on those indices. The standard StyleADVISOR manager style graph is defined by four Russell style indices: the Russell large growth portfolio at the upper right, the large value portfolio at the upper left, the small value portfolio at the lower left, and the small growth portfolio is the lower right. These four indices (possibly with T-Bills) form the basic palette. Their placement implies that the vertical axis represents the capitalization of a manager placed on the graph, while the horizontal axis represents the value or growth orientation of the manager.

**Style Benchmark** – A style benchmark is a combination of palette indices that best tracks a manager in some time period. The style benchmark is established subject to constraints specified by the Run/Analyze Style command. For example, the style benchmark may be constrained to consist only of long holdings of palette indices.

For rolling windows, a style benchmark is computed for each window. The term style benchmark then means the concatenation of style benchmarks established for each window.

**Tracking error** – The standard deviation of the difference of two return series. Generally StyleADVISOR tries to minimize the tracking error between manager and a style benchmark, or between an overall benchmark and a plan sponsor's aggregate portfolio.

**Trailing Window (Moving Window, Rolling Window)** – A window consisting of some number of time periods of return data (specified in the Analysis Parameters dialog) that is moved along through time in monthly, quarterly, or annual jumps. Computations are done for each window. The analysis results are compiled from the computation results of all the window.

Rolling windows are used in style analysis to demonstrate how a portfolio has changed over time. In the Manager vs Universe analysis, they serve to eliminate the recent good or bad performance biases associated with cumulative analyses.

**Value (style)** – The value style of investing is characterized by a view of a share of a company as a claim on the company's assets. Value investors attempt to find companies whose net asset value is greater than is reflected in their stock prices. In StyleADVISOR, value style investing is quantified by correlation with Russell (or other) value and growth indices. A manager whose returns correlate highly with one or more of Russell's value indices is characterized as a value manager.

**Growth (style)** – The growth style of investing is characterized by a view of a share of a company as a claim on the company's earnings. Growth investors attempt to find companies whose earnings growth will be greater than is reflected in their stock prices. In StyleADVISOR, growth style investing is quantified by correlation with Russell (or other) value and growth indices. A manager whose returns correlate highly with one or more of Russell's growth indices is characterized as a growth manager.

The information contained herein is being provided for informational purposes only; is current as of the date of issuance (or such earlier date as referenced herein); and is subject to change without notice. Lord Abbett has no obligation to update any or all of such information. All amounts, market value information, and estimates included herein have been obtained from outside sources where indicated or represent the good faith judgment of Lord Abbett. Where such information has been obtained from outside sources, Lord Abbett cannot guarantee the accuracy or completeness of such information. These materials are not intended to be an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or any investment management services. These materials do not constitute investment advice and should not be used as the basis for any investment decision.

6.1



## END NOTES TO PERFORMANCE

The Global Investment Performance Standards (GIPS®) compliant performance results shown represent the investment performance record for the Lord, Abbett & Co. LLC (Lord Abbett) **Short Duration Credit Institutional Composite**. Prior to April 1, 2013, the composite was named Short Duration Fixed Income Institutional Composite. This composite is comprised of all fully discretionary portfolios managed on behalf of institutional investors investing primarily in taxable short duration investment grade debt securities of various types. The portfolios may also invest in lower-rated debt securities, including non-U.S. debt securities denominated in foreign currencies and floating or adjustable rate senior loans. Effective November 30 2017, only accounts with a value of \$45 million or more are included in the composite. Effective July 1, 2014, only accounts with an initial value of \$100 million or more are included in the composite. Other than registered investment companies sponsored by Lord Abbett, accounts opened/funded on or before the 15<sup>th</sup> of the month will be included in the Composite effective on the first day of the second following month. Accounts opened/funded after the 15<sup>th</sup> of the month will be included in the Composite effective on the first day of the third following month. Registered investment companies sponsored by Lord Abbett are included in the Composite in the first full month of management. Closed accounts are removed from the Composite after the last full month in which they were managed in accordance with applicable objectives, guidelines, and restrictions. Performance results are expressed in U.S. dollars and reflect reinvestment of any dividends and distributions. The Composite was created in 2008. A complete list of Lord Abbett composites and a description of their investment strategies is available on request. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

For GIPS® purposes, the firm is defined as Lord, Abbett & Co. LLC ("Lord Abbett"). Total Firm Assets are the aggregate fair value of all discretionary and non-discretionary assets for which the Firm has investment management responsibility. Accordingly, Total Firm Assets include, but are not limited to, mutual funds (all classes of shares), privately placed investment funds, non-U.S. domiciled investment funds, separate/institutional portfolios, individual portfolios and separately managed accounts ("Wrap Fee/SMA Portfolios") managed by Lord Abbett. Total Firm Assets also include any collateralized, structured investment vehicle, such as a collateralized debt obligation or collateralized loan obligation, for which Lord Abbett has been appointed as the collateral manager. For the period prior to January 1, 2000, the definition of the Firm does not include any hedge fund or SMA program accounts where Lord, Abbett & Co. LLC did not have the records so long as it is impossible for Lord, Abbett & Co. LLC to have the records (within the meaning of relevant GIPS® standards interpretations). Total Firm Assets also exclude separately managed program accounts that involve model delivery.

The number of portfolios and total assets in the Composite, and the percentage of total "firm" assets represented by the Composite at the end of each calendar year for which performance information is provided are as follows:

Calendar Year Ended	2016	2015	2014	2013	2012	2011	2010	2009	2008
# of Portfolios	3	2	2	1	1	1	1	1	1
Total Assets (\$M)	\$38,072	\$34,127	\$37,197	\$33,783	\$28,523	\$16,733	\$11,525	\$4,443	\$301
Percentage of Firm Assets	28.29%	27.52%	27.36%	24.88%	22.30%	15.60%	10.80%	5.00%	0.40%
Total Firm Assets (\$M)	\$134,565	\$124,007	\$135,945	\$135,786	\$127,753	\$107,449	\$106,528	\$88,895	\$70,347
Dispersion	N/A	N/A	N/A						
Lord Abbett Short Duration Credit Institutional Composite Gross (Annual)	4.64%	1.03%	2.33%	2.23%	7.25%	3.77%	7.10%	17.86%	-0.24%
Lord Abbett Short Duration Credit Institutional Composite Gross (3 year Annualized Return*)	2.66%	1.86%	3.91%	4.40%	6.03%	9.42%	7.98%	N/A	N/A
Lord Abbett Short Duration Credit Institutional Composite Gross (3 year Annualized Ex-Post Standard Deviation*)	1.33%	1.27%	1.49%	1.76%	1.77%	3.07%	4.70%	N/A	N/A
Lord Abbett Short Duration Credit Institutional Composite Net (Annual)	4.39%	0.79%	2.08%	1.99%	7.00%	3.53%	6.84%	17.58%	-0.48%
Lord Abbett Short Duration Credit Institutional Composite Net (3 year Annualized Return*)	2.41%	1.62%	3.66%	4.15%	5.78%	9.15%	7.73%	NA	NA
ICE BofA Merrill Lynch 1-3 year U.S. Corporate Credit Index (Annual)	2.39%	1.01%	1.19%	1.78%	4.49%	1.76%	4.86%	14.69%	-2.68%
ICE BofA Merrill Lynch 1-3 year U.S. Corporate Credit Index (3 year Annualized Return*)	1.53%	1.32%	2.47%	2.67%	3.69%	6.97%	5.39%	N/A	N/A
ICE BofA Merrill Lynch 1-3 year U.S. Corporate Credit Index (3 year Annualized Ex-Post Standard Deviation*)	0.88%	0.77%	0.98%	1.21%	1.43%	2.96%	4.91%	N/A	N/A

\*N/A for periods with less than 3 years of data based on the composite inception date.



## END NOTES TO PERFORMANCE

Dispersion is represented by the asset-weighted standard deviation, a measure that explains deviations of portfolio rates of return from the asset-weighted composite return. Only portfolios that have been managed within the Composite style for a full year are included in the asset-weighted standard deviation calculation. The measure may not be meaningful (N/A) for composites consisting of five or fewer portfolios or for periods of less than a full year.

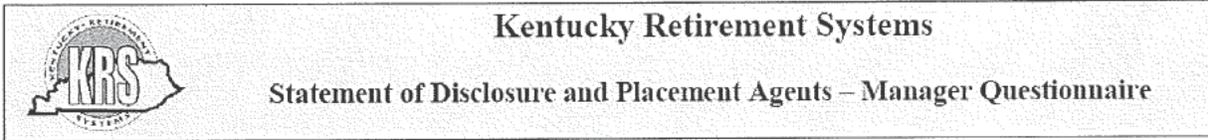
The performance of the Composite is shown net and gross of advisory fees, and reflects the deduction of transaction costs. The deduction of advisory fees and expenses (and the compounding effect thereof over time) will reduce the performance results and, correspondingly, the return to an investor. Net performance of the Composite as presented in the table on the previous page reflects the deduction of a "model" advisory fee, calculated as the highest advisory fee, borne by any account (without giving effect to any performance fee that may be applicable) in the Composite (an annual rate of 0.20% of assets from April 1, 2017 forward, prior to April 1, 2017 an annual rate of 0.24% of assets) and other expenses (including trade execution expenses). **For example, if \$10 million were invested and experienced a 10% compounded annual return for 10 years, its ending dollar value, without giving effect to the deduction of the advisory fee, would be \$25,937,425. If an advisory fee of 0.20% of average net assets per year for the 10-year period were deducted, the annual total return would be 9.78% and the ending dollar value would be \$25,469,675.. The management fee schedule is as follows: 0.20% on the first \$50 million, 0.17% on the next \$100 million, 0.15% on the next \$100 million and 0.13% on all assets over \$250 million.** Net-of-fee performance reflects the deduction of the highest applicable institutional advisory fee that would be charged to a new institutional client account based on the current fee schedule for this strategy. The composite includes one or more registered investment companies sponsored by Lord Abbett ("Lord Abbett Funds") that are subject to fees and expenses that would be inapplicable to an institutional client account. Therefore, the actual performance of Lord Abbett Fund accounts included in the composite may be lower than the net-of-fee composite performance presented. Fees and expenses applicable to the Lord Abbett Funds are disclosed in each Fund's Prospectus, which is available upon request. Past performance does not guarantee future results. Certain securities held in portfolios contained in this composite may have valuations determined using both subjective observable and subjective unobservable inputs. The Firm's valuation hierarchy does not materially differ from the hierarchy in the GIPS Valuation Principles. Portfolios in this composite may be managed against an internal index that is constructed utilizing sectors and sub-sectors of publicly available indices. The weights of the sectors and sub-sectors of the internal index may vary over time and differ materially from the sectors and weightings of the benchmark Index.

Lord Abbett claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Lord, Abbett & Co. LLC has been independently verified for the periods 1993 through 2016. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Short Duration Credit Institutional composite has been examined for the periods 2008 through 2016. The verification and performance examination reports are available upon request.

The ICE BofA Merrill Lynch 1-3 year U.S. Corporate Index is an unmanaged index comprised of U.S. dollar denominated investment grade corporate debt securities publicly issued in the U.S. domestic market with between one and three year remaining to final maturity. Prior to May 2013, the benchmark for the composite was the Bloomberg Barclays Capital 1-3 Year Government/Credit Bond Index. Lord Abbett believes the ICE BofA Merrill Lynch 1-3 year U.S. Corporate Index is more representative of the investment strategy based on the strategy's higher allocation to corporates credit and reduced exposure to U.S. Government securities. The benchmarks have not been examined by Deloitte & Touche LLP.

Source ICE Data Indices, LLC ("ICE"), used with permission. ICE PERMITS USE OF THE ICE BofAML INDICES AND RELATED DATA ON AN "AS IS" BASIS, MAKES NO WARRANTIES REGARDING SAME, DOES NOT GUARANTEE THE SUITABILITY, QUALITY, ACCURACY, TIMELINESS, AND/OR COMPLETENESS OF THE ICE BofAML INDICES OR ANY DATA INCLUDED IN, RELATED TO, OR DERIVED THEREFROM, ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF THE FOREGOING, AND DOES NOT SPONSOR, ENDORSE, OR RECOMMEND LORD ABBETT, OR ANY OF ITS PRODUCTS OR SERVICES.

Past performance is not a reliable indicator or a guarantee of future results. Differences in account size, timing of transactions, and market conditions prevailing at the time of investment may lead to different results among accounts. Differences in the methodology used to calculate performance also might lead to different performance results than those shown. Composite performance is compared to that of an unmanaged index, which does not incur management fees, transaction costs, or other expenses associated with a managed account.



IAL

6.1

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

No. Lord Abbett does not currently utilize third-party placement agents with respect to the distribution of U.S. mutual funds or its investment advisory business within the United States and did not use a third party placement agent in an effort to solicit an investment from Kentucky Retirement Systems.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

Not applicable.

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

No Lord, Abbett & Co. LLC employee or partner has made a political contribution to any current or former Kentucky elected government official in the past two years.

While Lord Abbett maintains relationships with the investment consultant community, including Wilshire Associates, the firm does not believe there to be any conflicts of interest inherent in these relationships with regards to Kentucky Retirement Systems. As we continue to grow our institutional business, we do share mutual clients with Wilshire Associates. To the knowledge of the undersigned, Lord Abbett has no other relationships with any current or former Kentucky elected or appointed government officials, KRS Board of Trustees members, employees, or consultants of KRS.

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

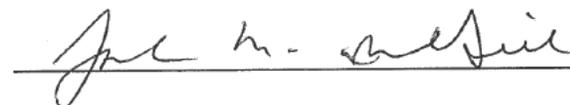
Lord, Abbett & Co. LLC ("Lord Abbett") maintains a political contribution policy and procedure designed to achieve compliance with the US Securities and Exchange Commission's "Pay-to-Play" Rule 206(4)-5 and other applicable Federal and State political contribution laws, regulations, and procedures. During the prior two year period, various Lord Abbett principals have made political contributions to a range of candidates for political office. None of such contributions were made to a candidate running for any Kentucky political office.

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

None of the principals of Lord, Abbett & Co. LLC have been the subject of a regulatory proceeding in the past ten years. Although our response is limited to ten years due to readily available information maintained in line with the firm's Form ADV reporting requirements, we are amenable to researching longer time periods upon request.

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

Lord, Abbett & Co. LLC warrants the accuracy of the information provided to KRS regarding the Statement of Disclosure and acknowledges that similar language will be included in any final written agreement with a continuing obligation to update any such information within 10 business days of any change in the information.



Date: June 26, 2018

Joseph M. McGill, J.D., Partner & Chief Compliance Officer

External Manager Signature



**MEMORANDUM**

**To:** Kentucky Retirement System Investment Committee and Staff  
**From:** Wilshire Consulting  
**Date:** June 27, 2018  
**Subject:** **Lord Abbett Short Duration Credit Strategy**

---

6.2

**Background**

The Kentucky Retirement System (“KRS”) is considering an investment with the Lord Abbett Short Duration Credit strategy. The strategy, if selected, will be part of the Total Fixed Income / Liquidity ‘bucket’ within Core Fixed Income. The asset allocation targets to Core Fixed Income are 20.5% (in the KERS Non-Hazardous and SPRS Plans), and 13.5% (in the KERS Hazardous, CERS Hazardous and Non-Hazardous, and Insurance Plans).

The current Core Fixed Income portfolio includes one dedicated Core Fixed Income manager, NISA, and two passive investments within Investment Grade Credit. The two passive investments within Investment Grade Credit serve as placeholders for future manager recommendations that meet the objective of the Core Fixed Income portfolio. Wilshire and KRS Staff are working together to build a highly efficient Core Fixed Income structure for the new Policy allocation. The new structure is expected to include one or more new managers.

The Lord Abbett Short Duration Credit strategy complements NISA given historically negative correlations to one another. The short duration nature of the strategy will obviously reduce the overall duration of the Core Fixed Income Portfolio, all other things being equal; however, an appropriate allocation of the strategy within the Portfolio will enable it to differentiate the existing and potential future mandates comprising the Core Fixed Income Portfolio.

While Wilshire currently does not maintain a formal opinion on the strategy, Wilshire’s Manager Research team is in the late stages of writing the full evaluation. Given our favorable opinions of Lord Abbett as a firm, and other Lord Abbett fixed income strategies, we have a preliminary indication that the Short Duration Credit strategy will score highly.

Wilshire supports the investment recommendation for the Lord Abbett Short Duration Credit Strategy.

**Lord Abbett Short Duration Credit Strategy**

*Organization and Team*

Founded in 1929, Lord Abbett is an independent investment management firm structured as a partnership and based in Jersey City, New Jersey. Over the years, the firm has successfully



transitioned ownership to new partners and currently has over 60 partners within the firm. Partnership at the firm is not solely held by senior investment officers, but is widespread amongst all of the business functions. As of March 31, 2018, the firm had nearly \$160 billion in assets under management consisting approximately of 60% fixed income and 40% equity.

Robert Lee, previous Head of Fixed Income, became the firm's Chief Investment Officer in July 2016 when Bob Gerber retired. Steven Rocco, CFA, became the Director of Taxable Fixed Income upon Messr. Lee's transition to CIO and brings over 17 years of experience in the space. Messr. Rocco oversees the Short Duration Credit strategy and has final authority on all investment related decisions.

The Short Duration Credit team is highly experienced and includes five sector focused Portfolio Managers, the Director and Deputy Director of Global Credit Research, and the Director of Global Fixed Income Trading. The team is supported by a centralized group of 20 research analysts, 11 traders, 20 sector focused portfolio managers, the strategic asset allocation team, and the quantitative research team, which consists of nine investment professionals.

#### *Investment Philosophy & Process*

The Lord Abbett Short Duration Credit strategy offers a well-diversified, risk-controlled approach seeking to outperform the BofA Merrill Lynch 1-3 Year U.S. Corporate Index over a full market cycle. The team combines top-down and bottom-up research to construct a portfolio with the flexibility to invest across multiple sectors in the market. Sector allocation decisions are driven primarily through an allocation tool based on econometric modeling to help identify macroeconomic themes and trends. Security selection is initially conducted through a credit valuation model that identifies securities with attractive option-adjusted spreads prompting bottom-up, fundamental credit research.

While the team subscribes to a large amount of specialized external research from Wall Street and other information sources, approximately 90% of its research is conducted internally. Additionally, credit analysts have the ability to leverage the firm's equity research platform to gain access to senior management of various issuers.

The strategy will invest across fixed income sectors including, but not limited to - investment grade corporates, CMBS, ABS, high yield, and U.S. treasuries and agencies. The investment team typically favors sectors with superior risk-adjusted return profiles – CMBS, investment grade corporates, and high yield.

Sector allocation is expected to be the greatest source of alpha in the portfolio, representing approximately +50% of added value. Security selection, and to a less extent yield curve management, are additional sources of expected alpha. The final portfolio typically contains 300 – 350 issues with tracking error ranging from 1.00% - 1.25%.

As of March 31, 2018, the Short Duration Credit strategy had \$43.1 billion in assets under management.

#### **Wilshire Associates**

210 Sixth Avenue Suite 3720 Pittsburgh, PA 15222 TEL 412.434.1580 FAX 412.434.1584  
www.wilshire.com



**Quantitative Statistics**

6.2



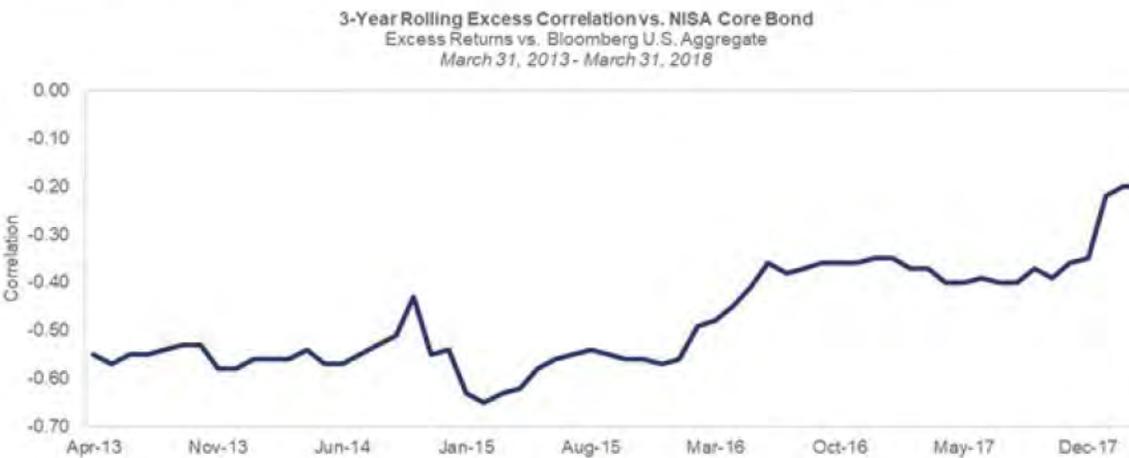
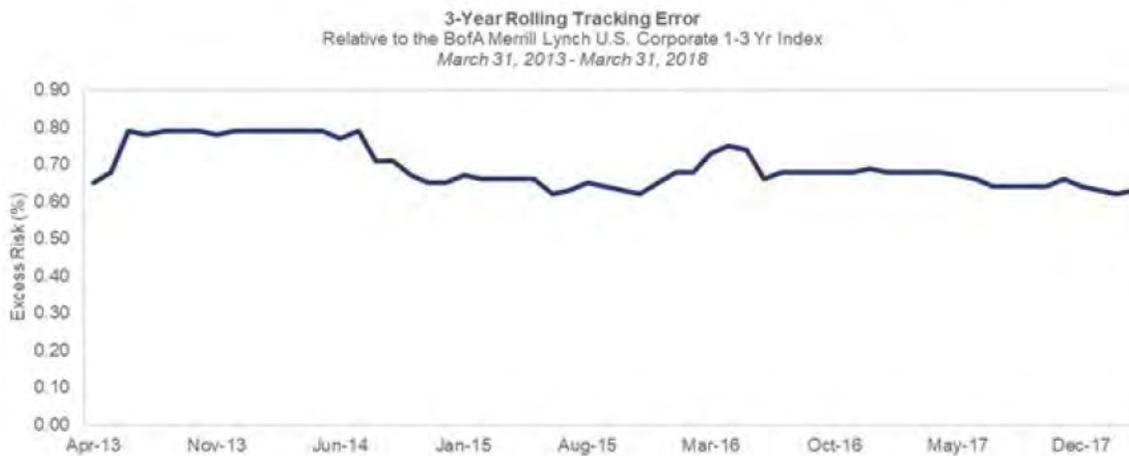
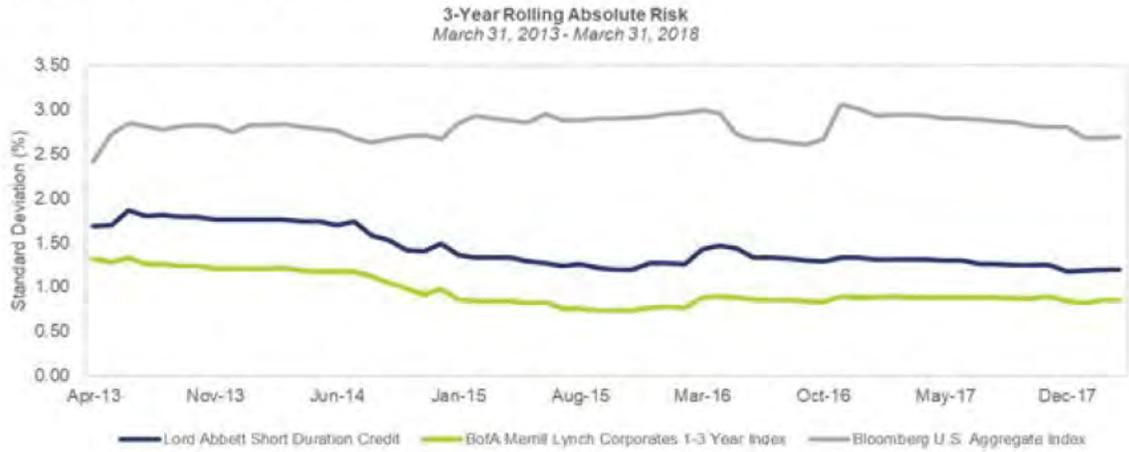
	Cumulative Annualized Performance (%)				
	Quarter	One Year	Three Years	Five Years	Ten Years
Lord, Abbett Short Duration Credit	0.11	2.13	2.5	2.47	4.65
BofA Merrill Lynch Corporates 1-3 Year Index	-0.38	0.8	1.35	1.46	2.84
<i>Value Added</i>	<i>0.49</i>	<i>1.33</i>	<i>1.15</i>	<i>1.01</i>	<i>1.81</i>



	Calendar Year Performance (%)									
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Lord, Abbett Short Duration Credit	2.91	4.64	1.03	2.33	2.23	7.25	3.77	7.10	17.86	-0.24
BofA Merrill Lynch Corporates 1-3 Year Index	1.90	2.39	1.01	1.19	1.78	4.49	1.76	4.86	14.69	-2.68
<i>Value Added</i>	<i>1.01</i>	<i>2.25</i>	<i>0.02</i>	<i>1.14</i>	<i>0.45</i>	<i>2.76</i>	<i>2.01</i>	<i>2.24</i>	<i>3.17</i>	<i>2.44</i>



Quantitative Statistics (Cont.)



IAL

6.2



LORD ABBETT

6.3

## LORD ABBETT SHORT DURATION CREDIT

*Kentucky Retirement Systems*

JUNE 27, 2018

**Andrew H. O'Brien, CFA**  
*Partner & Portfolio Manager*

**Joseph M. Graham, CFA**  
*Fixed Income Investment Strategist*

**Samantha Scher**  
*Director, Institutional Investor Services*



Lord Abbett  
90 Hudson Street  
Jersey City, NJ 07302

This presentation has been prepared exclusively for use in a one-on-one meeting with Kentucky Retirement Systems. It is not intended for, and should not be used with, any third party, or the public in written or oral form or for any other purpose.



## OUR FIRM



LORD ABBETT

*A singular focus since 1929*

### Investment-Led

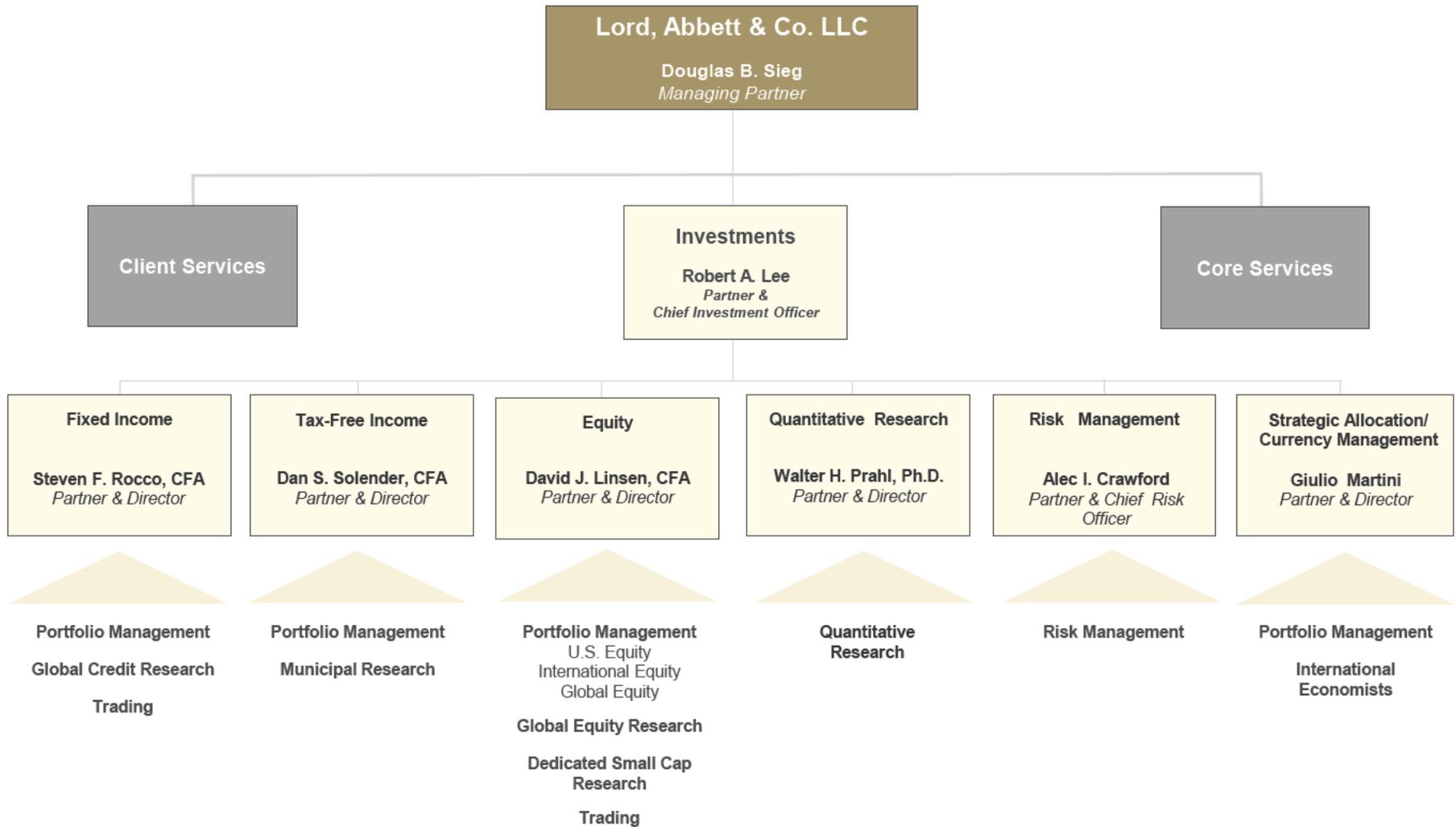
- Active management characterized by a deliberate process, teamwork, and collaboration
- Rigorous research that challenges consensus and identifies opportunities
- Comprehensive risk management that enhances investment decisions

### Investor-Focused

- Perspectives shaped and decisions sharpened by our independence
- Resources dedicated to the markets we serve
- Strategies intelligently designed to meet client needs



# OUR ORGANIZATIONAL STRUCTURE & INVESTMENT TEAMS



**160 Investment Professionals with an Average of 18 Years Industry Experience**

As of 03/31/2018.



## OUR ASSETS & INVESTMENT STRATEGIES

### \$157.7 BILLION IN ASSETS UNDER MANAGEMENT

Including over \$800 million from current and former partners, employees and their families

#### U.S. Equity

- Large Value
- Mid Value
- Smid Value
- Small Value
- Micro Value
- Multi Value
- Large Core
- Small Core
- Large Growth
- Mid Growth
- Small Growth
- Micro Growth
- Dividend Growth
- Equity Income

#### Global & International Equity

- International Equity
- International Dividend
- International Small Core
- Global Equity

#### Tax-Free Fixed Income

- Short
- Short Duration High Yield
- Intermediate
- Long
- High Yield
- AMT Free
- State Specific (CA, NY, NJ)

#### Taxable Fixed Income

- Ultra Short Bond
- Short Credit
- Intermediate Government/Credit
- Government
- Core
- Core Plus
- Inflation Focused
- Corporate Credit
- Bank Loan
- Multi-Sector
- EM Corporate Debt
- EM Currency
- Long Duration
- High Yield
- Global High Yield
- Convertible

Note: Assets under management data is as of 03/31/2018 unless noted and includes approximately \$1.6 billion for which Lord Abbett provides investment models to managed account sponsors.



## TAXABLE FIXED INCOME INVESTMENT CAPABILITIES

### ASSETS UNDER MANAGEMENT BY STRATEGY & CAPABILITY (AS OF 03/31/2018)

Strategy	Assets
<b>Total Taxable Fixed Income</b>	<b>\$104,362,935,802</b>
Money Market	\$386,920,696
Ultra Short	\$3,828,222,760
<b>Short Duration Credit</b>	<b>\$43,123,421,322</b>
Intermediate Government/Credit	\$382,032,459
Government	\$335,673,414
Core	\$4,238,404,828
Core Plus	\$6,125,338,265
Inflation Focused	\$1,219,672,919
Corporate Credit	\$2,256,461,892
Bank Loan	\$13,025,847,786
Multi Sector	\$15,220,729,928
Emerging Markets Corporate	\$72,932,079
Emerging Markets Currency	\$213,892,685
Long Duration	\$42,440,766
High Yield Core	\$4,307,417,541
High Yield Opportunistic	\$7,934,444,302
Convertible	\$1,634,364,918
Emerging Markets Local Bond	\$14,717,242

Capability	Assets
<b>Total Corporate Credit</b>	<b>\$63,034,564,451</b>
<b>Investment Grade Corporate</b>	<b>\$22,905,569,441</b>
U.S. IG Corporate	\$15,052,613,321
Non-U.S IG Corporate	\$7,852,956,120
<b>High Yield Corporate</b>	<b>\$18,535,912,210</b>
U.S. HY Corporate	\$14,405,749,584
Non-U.S. HY Corporate	\$4,130,162,626
<b>Short Duration High Yield</b>	<b>\$4,771,612,235</b>
U.S. HY Corporate	\$3,398,004,263
Non-U.S. HY Corporate	\$1,373,607,972
<b>Bank Loans</b>	<b>\$14,832,245,601</b>
<b>Convertibles</b>	<b>\$1,989,224,964</b>
<b>Total Securitized Products</b>	<b>\$30,097,777,468</b>
<b>Commercial MBS</b>	<b>\$12,406,523,463</b>
<b>Asset Backed Securities</b>	<b>\$15,798,441,390</b>
<b>Residential MBS</b>	<b>\$1,892,812,615</b>
<b>U.S. Government Related</b>	<b>\$4,106,969,453</b>
<b>Emerging Markets Debt</b>	<b>\$5,095,152,472</b>
EM Corporate	\$4,299,902,930
EM Sovereign US\$	\$678,272,244
EM Sovereign Local Currency	\$116,977,298

Assets under management data is as of 03/31/2018 unless noted and includes approximately \$632.7 million for which Lord Abbett provides investment models to managed account sponsors. In addition to the strategies listed above, the fixed income asset totals include the fixed income portion of the multi-asset class strategies managed by Lord Abbett. Strategy and Capability total assets may differ since only key capabilities are displayed.



## LORD ABBETT SHORT DURATION CREDIT

- Seeks to exploit the inefficiency in short maturity assets through unique strategic design
- Active multi sector approach with a focus on security selection and sector rotation
- Experienced and well-resourced team, supported by fundamental research and proprietary tools

*Strong absolute, relative, and risk-adjusted returns*

AS OF 03/31/2018

Short Duration Credit Institutional Composite	3 Year (%)	5 Year (%)	10 Year (%)
Excess Return*	1.34	1.28	2.33
eVestment Category Percentile Rank**	3	2	1
Sharpe Ratio	1.67	1.72	1.51
eVestment Category Percentile Rank**	7	6	30
Information Ratio	1.82	1.56	1.03
eVestment Category Percentile Rank**	3	1	1

**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change. \*excess Return represents gross-of-fees performance relative to the eVestment category average. \*\*Source: eVestment Alliance. U.S. Short Duration Fixed Income Universe consisting of 219, 209, and 171 managers for the 3-, 5-, and 10 year periods. eVestment rankings are based on gross of fee performance. Most recent data available.

IAL

6.3



## THE CASE FOR SHORT MATURITY CREDIT



# SHORT MATURITIES HAVE CONSISTENTLY GENERATED POSITIVE RETURNS

Short Maturity Credit

## U.S. SHORT MATURITY DEBT CALENDAR YEAR RETURNS (12/31/1978 - 12/31/2017)



6.3

7

Source: Morningstar.

1-3 Year U.S. Treasuries represented by the ICE BofA Merrill Lynch 1-3 Year U.S. Treasury Index; 1-3 year U.S. Corporates represented by the ICE BofA Merrill Lynch 1-3 Year Corporate Index. Shaded areas represent periods during which the Federal Reserve raised interest rates.

The historical data are for illustrative purposes only, do not represent the performance of any specific portfolio managed by Lord Abbett or any particular investment, and are not intended to predict or depict future results. Investors may experience different results. Due to market volatility, the market may not perform in a similar manner in the future. Indexes are unmanaged, do not reflect the deduction of fees or expenses, and are not available for direct investment. Other time periods may have been different.

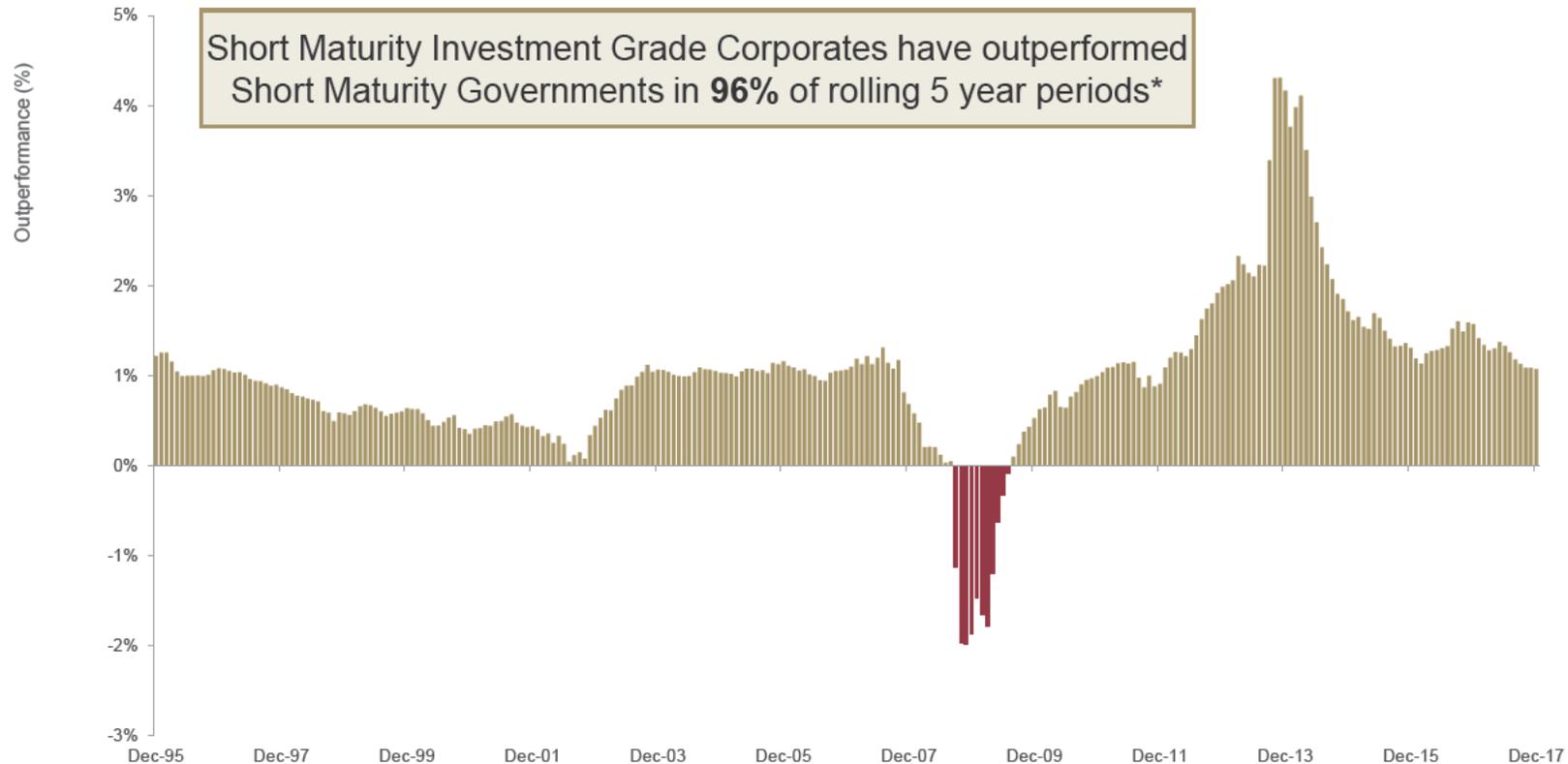
**Past performance is no guarantee of future results.** The value of an investment in fixed-income securities will change as interest rates fluctuate and in response to market movements. As interest rates fall, the prices of debt securities tend to rise. As rates rise, prices tend to fall. Treasuries are debt securities issued by the U.S. government and secured by its full faith and credit.



# SHORT MATURITY CORPORATES HAVE CONSISTENTLY OUTPERFORMED

Short Maturity Credit

## SHORT MATURITY CORPORATES<sup>1</sup> VS. GOVERNMENTS<sup>2</sup>



\*Rolling 5-Year Returns as of 12/31/2017. **Past performance is not a reliable indicator or guarantee of future results.**

<sup>1</sup>BofAML 1-3 Year U.S. Corporate Index (Inception date: 01/01/1976) <sup>2</sup> Bloomberg Barclays U.S. 1-3 Year Government Index. Beginning dates for the rolling five-year return series are the inception dates of the respective indexes.

For illustrative purposes only and does not represent any specific portfolio managed by Lord Abbett or any particular investment. Indexes are unmanaged, do not reflect the deduction of fees or expenses, and are not available for direct investment.

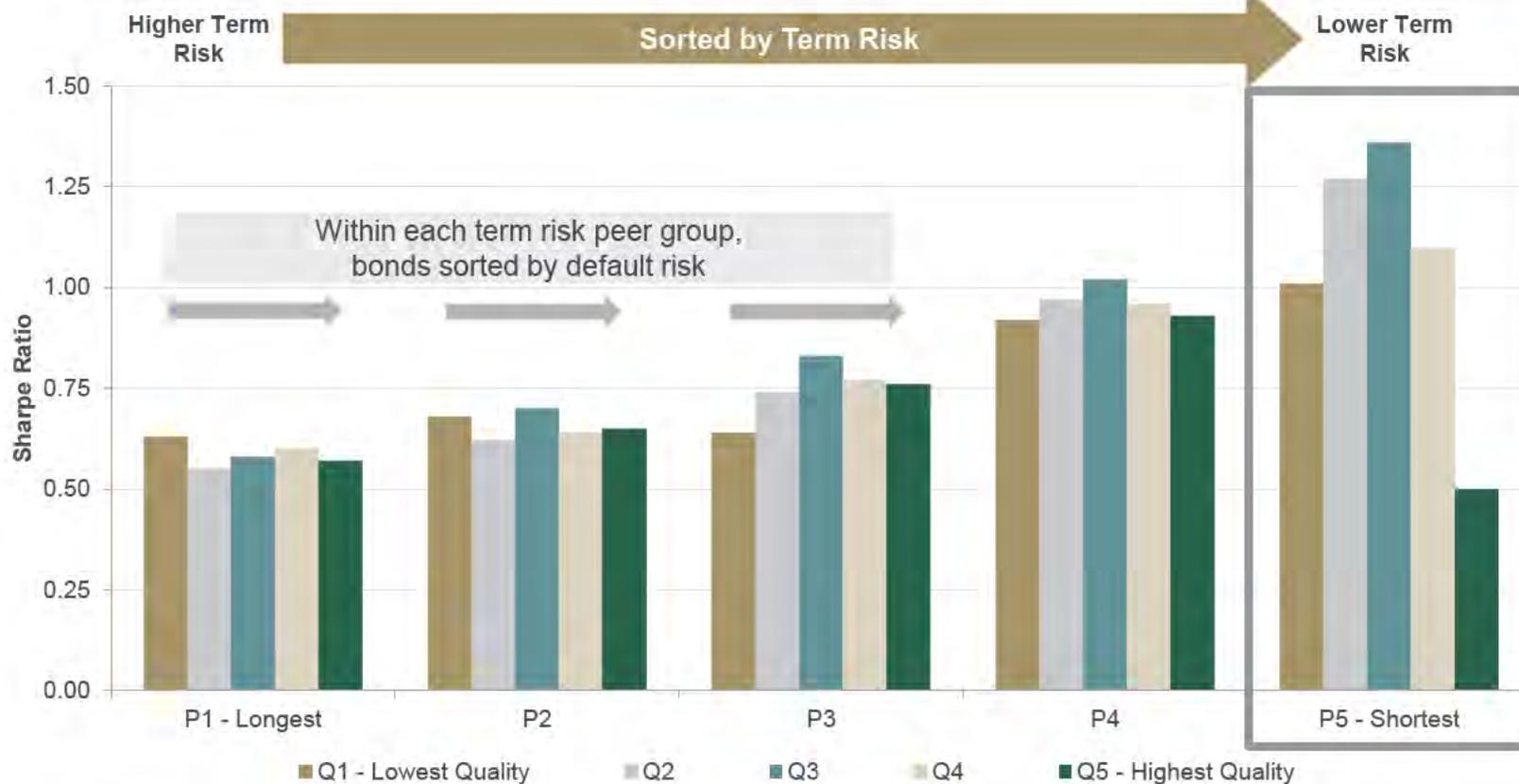


# PERSISTENT MIS-PRICING OF RISK

Short Maturity Credit

## “THE SHORT TERM CORPORATE BOND ANOMALY”

Higher default risk, lower term risk corporates have unusually high Sharpe Ratios



- Corporate bonds were sorted by term risk
- Within each term risk peer group, bonds were sorted by default risk
- Shorter term corporates with higher default risk consistently generated high risk-adjusted returns

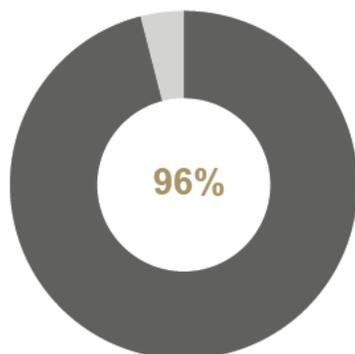
Source: *The Short-Term Corporate Bond Anomaly* by Jeroen Derwall, Joop Huij and Gerben de Zwart.



## THE ANOMALY EXTENDS BEYOND CORPORATES

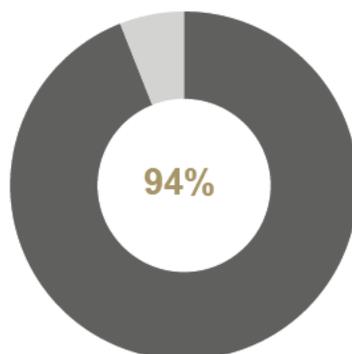
### SHORT-TERM BONDS RELATIVE TO TREASURIES<sup>1</sup> (AS OF 03/31/2018)

Short Maturity  
Investment-Grade Corporates<sup>2</sup>  
Outperformed in



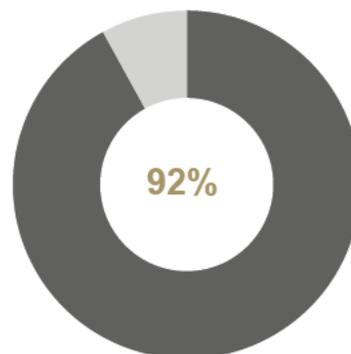
Of Rolling Five-Year Periods  
(01/01/1976-03/31/2018)

Short Maturity  
Investment-Grade CMBS<sup>3</sup>  
Outperformed in



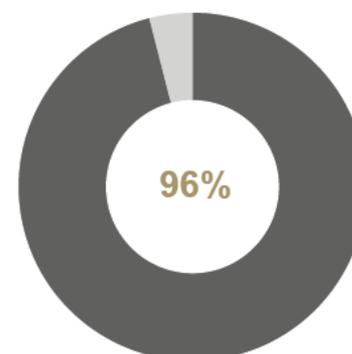
Of Rolling Five-Year Periods  
(01/01/1997-03/31/2018)

Short Maturity  
Investment-Grade ABS<sup>4</sup>  
Outperformed in



Rolling Five-Year Periods  
(01/01/1997-03/31/2018)

Short Maturity  
High Yield Bonds<sup>5</sup>  
Outperformed in



Of Rolling Five-Year Periods  
(08/01/1988-03/31/2018)

Short maturity, credit-sensitive sectors have consistently generated higher returns than short maturity Treasuries

Source: Bloomberg Barclays, Bloomberg, and Morningstar, Inc. For illustrative purposes only and does not represent the performance of any specific portfolio managed by Lord Abbett or any particular investment, and is not intended to predict or depict future results. **Past performance is not a reliable indicator or guarantee of future results.** The value of an investment in fixed-income securities will change as interest rates fluctuate and in response to market movements. As interest rates fall, the prices of debt securities tend to rise. As rates rise, prices tend to fall. Treasuries are debt securities issued by the U.S. government and secured by its full faith and credit. Income from Treasury securities is exempt from state and local taxes.

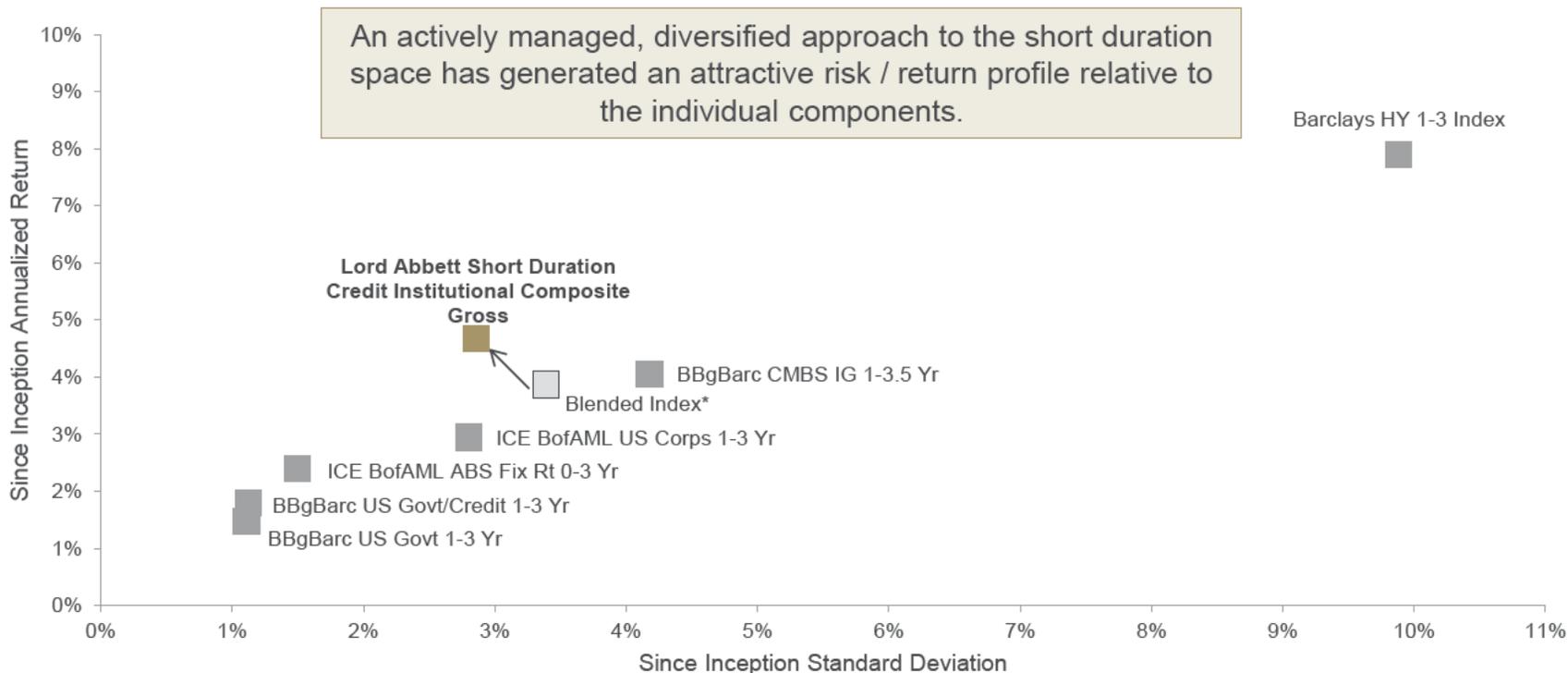
<sup>1</sup>Bloomberg Barclays 1-3 Year Government Index. <sup>2</sup>ICE BofAML 1-3 Year Corporate Index. <sup>3</sup>Bloomberg Barclays 1-3.5 Year CMBS Index. <sup>4</sup>ICE BofAML ABS Fixed Rate 0-3 Year Index. <sup>5</sup>Bloomberg Barclays 1-3 Year High Yield Index. Rolling five-year returns as of 03/31/2018. Beginning dates for the rolling five-year return series are the inception dates of the respective indexes. Indexes are unmanaged, do not reflect the deduction of fees or expenses, and are not available for direct investment.



# ACTIVE MANAGEMENT: DIVERSIFIED EXPOSURE HAS REDUCED VOLATILITY

Short Maturity Credit

## RISK / RETURN (01/01/2008 – 03/31/2018)



Short Duration Credit Institutional Composite	1 Year	3 Years	5 Years	10 Years
Gross of Fees	2.14%	2.51%	2.47%	4.65%

\*Blended Allocation includes 30% ICE BofAML US Corps 1-3 Yr, 30% BbgBarc CMBS 1 - 3.5Yr, 15% ICE BofAML ABS Fixed Rate 0-3 Yr, 15% BbgBarc HY 1-3 Index, 10% BbgBarc US Govt/Credit 1-3 Yr

**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change. The gross performance shown does not reflect a deduction of investment advisory fees or other expenses. For additional performance information, including the effect of fees on performance, please refer to the Composite presentation.

IAL

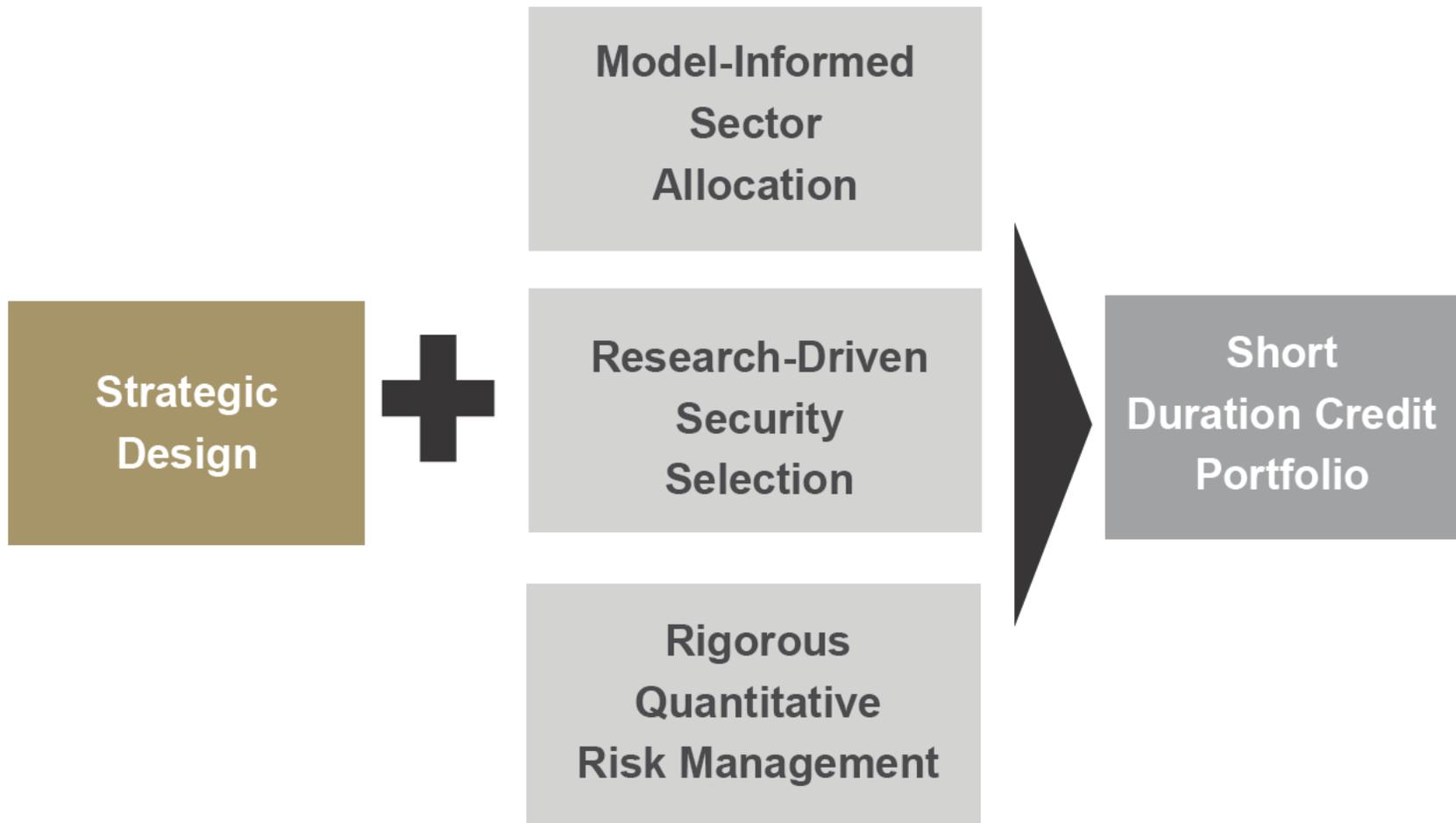
6.3



# LORD ABBETT SHORT DURATION



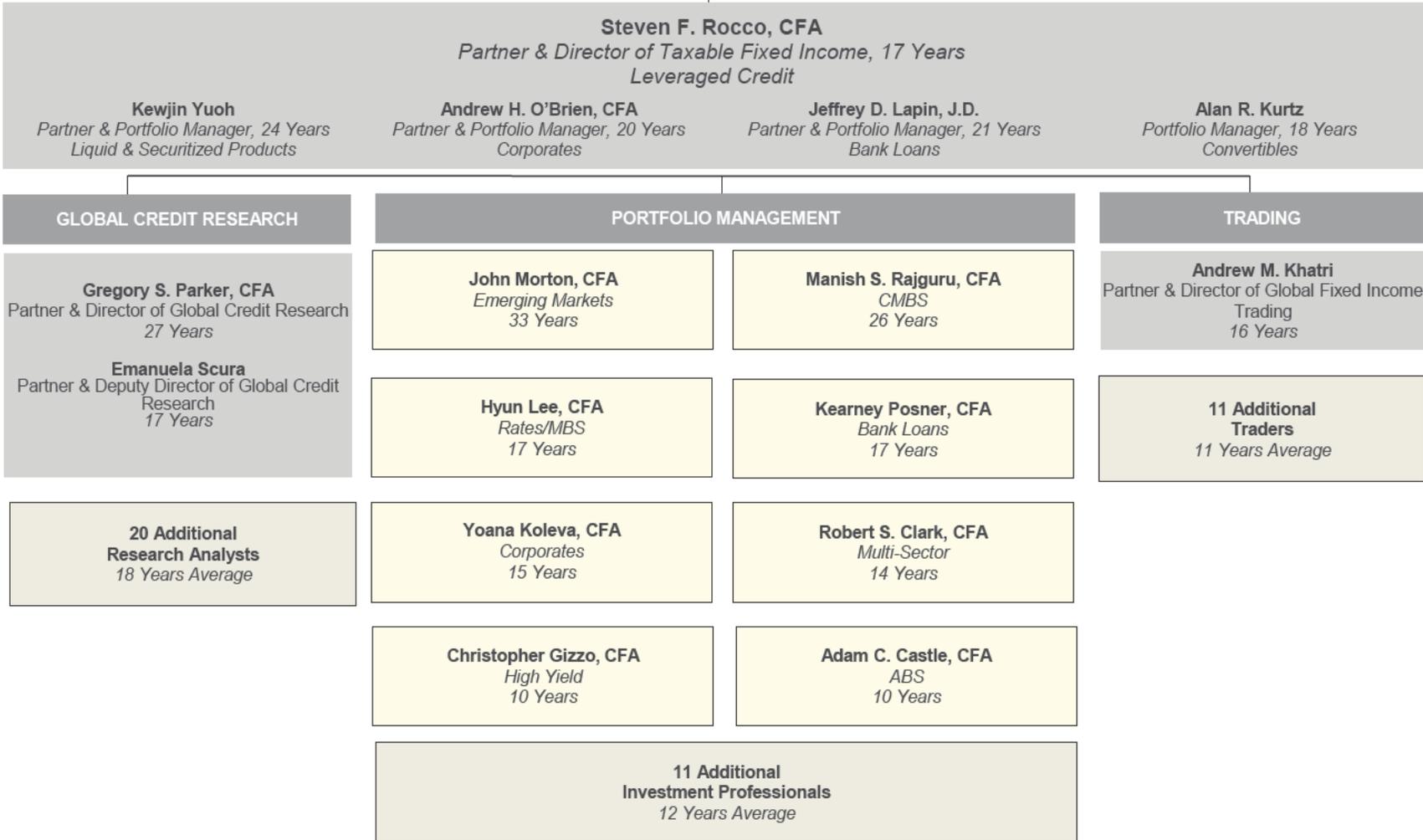
## OUR APPROACH TO SHORT DURATION CREDIT





# INVESTMENT TEAM – SECTOR EXPERTISE

**Robert A. Lee**  
 Partner & Chief Investment Officer  
 27 Years



As of 04/01/2018. Years of industry experience, as of 01/01/2018.

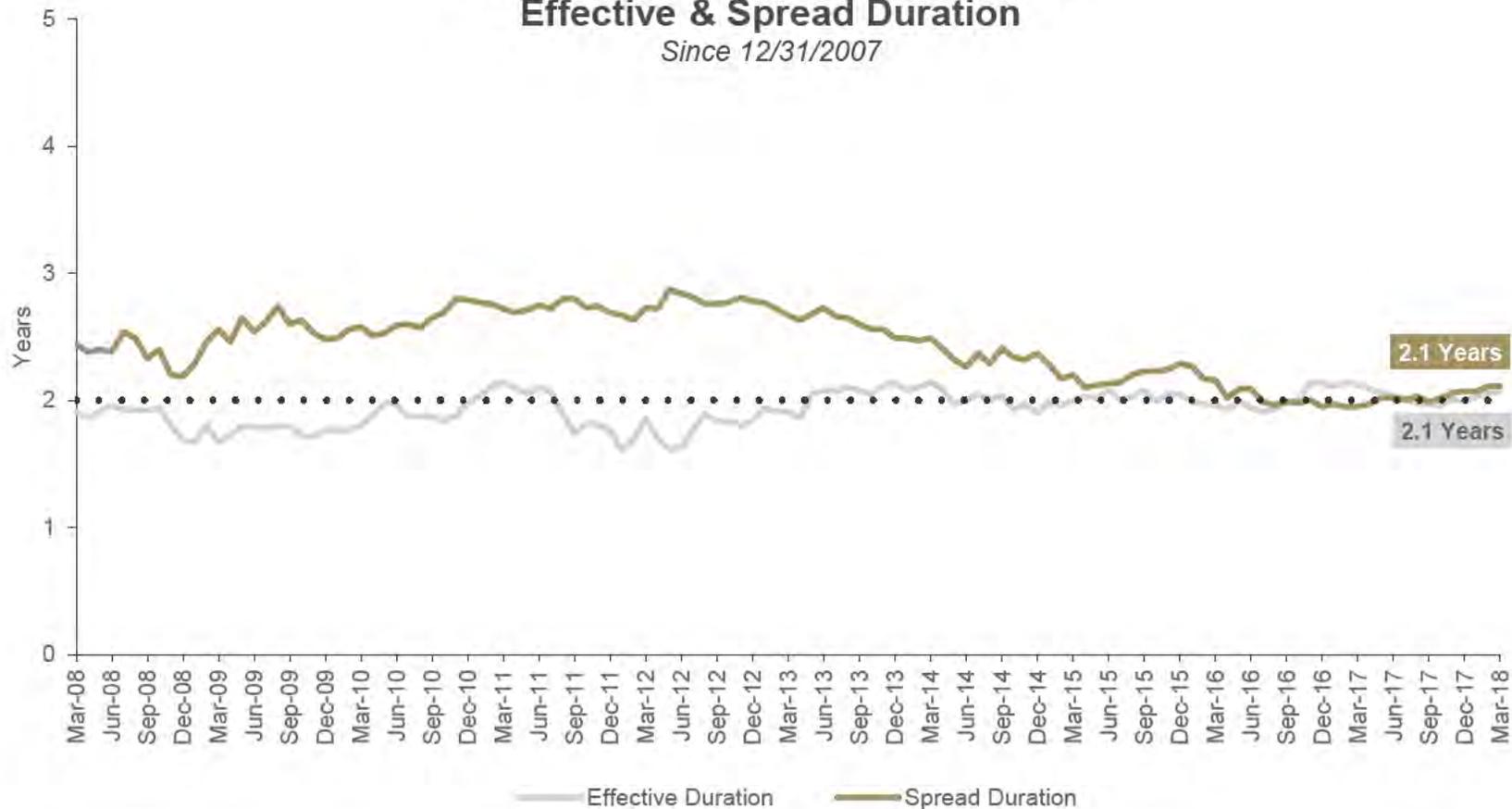


# TRUE SHORT MATURITY

Strategic Design

- The strategy has historically maintained a short effective duration and a short spread duration, limiting both interest rate and credit sensitivity

**Lord Abbett Short Duration Credit  
Effective & Spread Duration**  
*Since 12/31/2007*



**Past performance is not a reliable indicator or guarantee of future results.** Information shown is based on the strategy's representative portfolio. The statistical information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



# INVESTMENT PROCESS

*Investment Process*

6.3

16



# PROPRIETARY MODELS

*Investment Process*



6.3

17



# SECTOR ROTATION

*Investment Process*

6.3

18



## HISTORICAL ALLOCATION RANGE

*Investment Process*

6.3



19

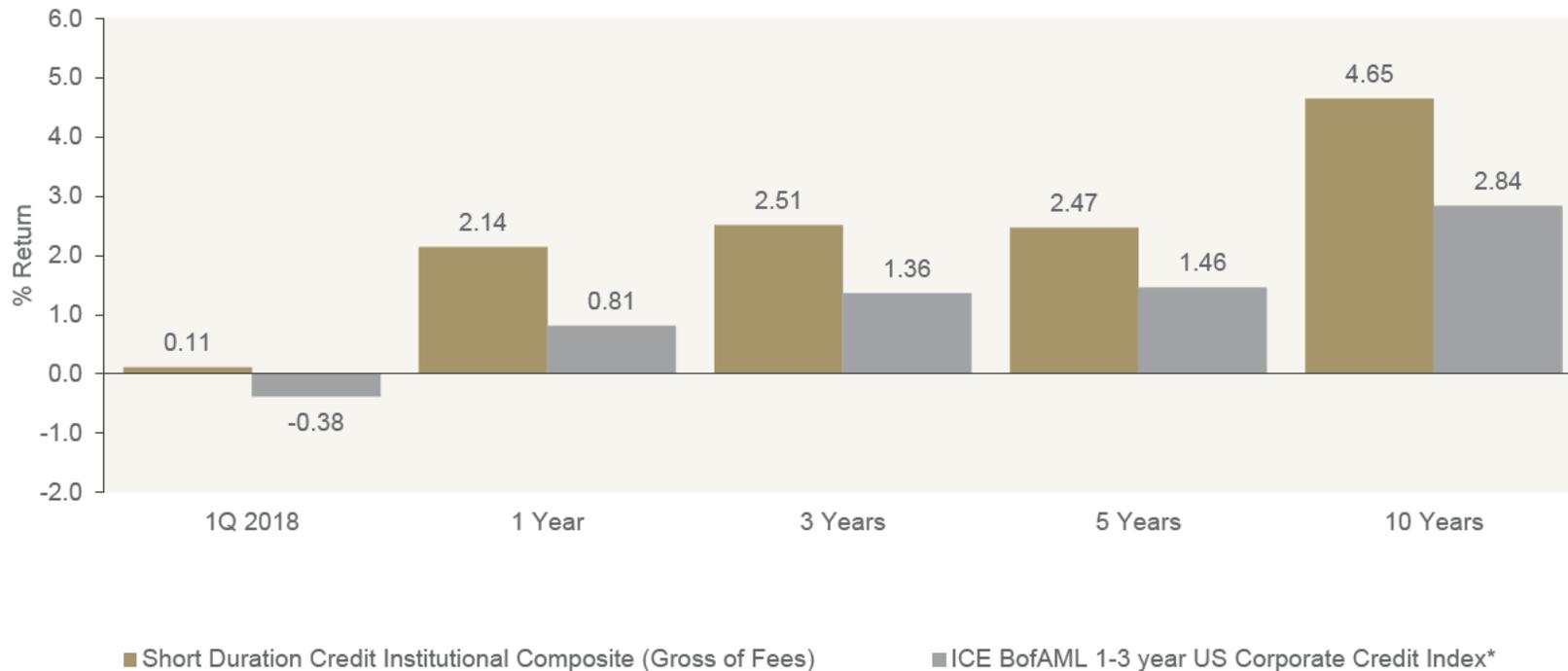
Short Duration Income Fund as of 03/31/2018. Historical average sector allocation is based on the allocation at each quarter-end from 03/31/2008– 03/31/2018. The Fund's portfolio is actively managed and is subject to change. Bank loans are included in the investment grade corporates or high yield corporates sectors, as applicable. For informational purposes only.



# AVERAGE ANNUAL RATES OF RETURN

Performance

AS OF 03/31/2018



6.3

20

**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change. Returns for periods of less than one year are not annualized.  
 \*Source: ICE Data Indices, LLC.

IAL

6.3

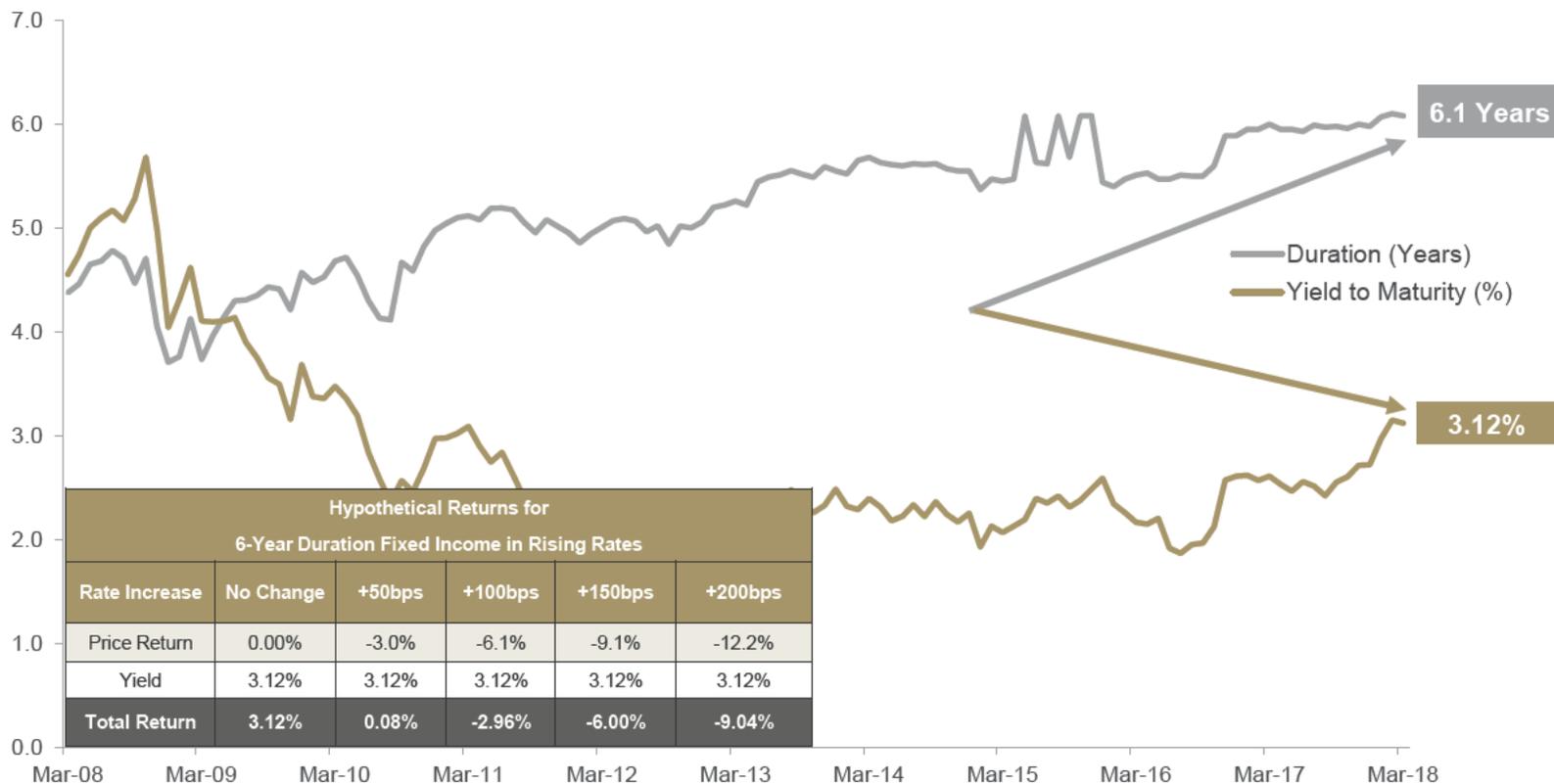


**APPLICATION:  
COMPLEMENT TO CORE BONDS**



# DURATION RISK IN CORE BONDS

## BLOOMBERG BARCLAYS U.S. AGGREGATE BOND INDEX: DURATION & YIELD (AS OF 03/31/2018)



Source: Bloomberg Barclays.

Duration as represented by modified adjusted duration in years. Yield as represented by yield to maturity.

Yield to maturity is the rate of return anticipated on a bond if held until it matures. Duration is a measure of the sensitivity of the price (the value of principal) of a fixed-income investment to a change in interest rates. Bps represents a basis point. One basis point equals 0.01%.

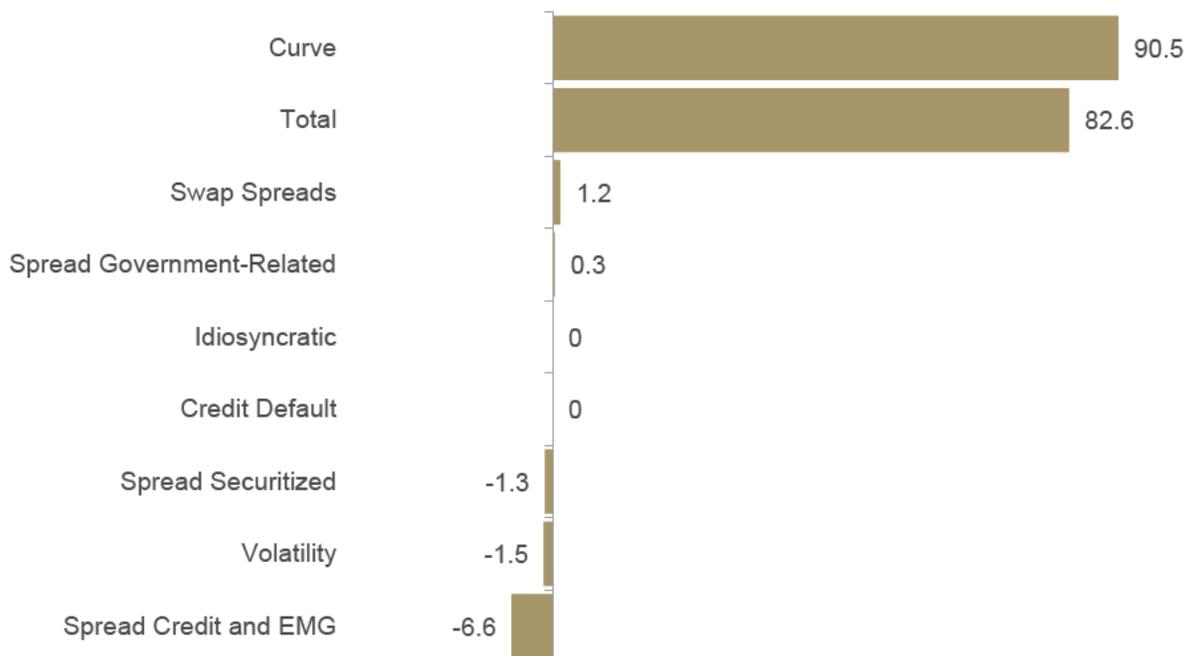
**Performance quoted above is historical. Past Performance is not a reliable indicator or guarantee of future results.** The historical data are for illustrative purposes only, do not represent the performance of any specific portfolio managed by Lord Abbett or any particular investment, and are not intended to predict or depict future results. Investors may experience different results. Due to market volatility, the market may not perform in a similar manner in the future. Indexes are unmanaged, do not reflect the deduction of fees or expenses, and are not available for direct investment.



# CURVE RISK DOMINATES OTHER RISKS IN THE AGG

IAL

## SOURCES OF VARIATION IN RETURNS FOR CORE FIXED INCOME (AS OF 12/29/2017)



Source: Barclay's Point, Lord Abbett

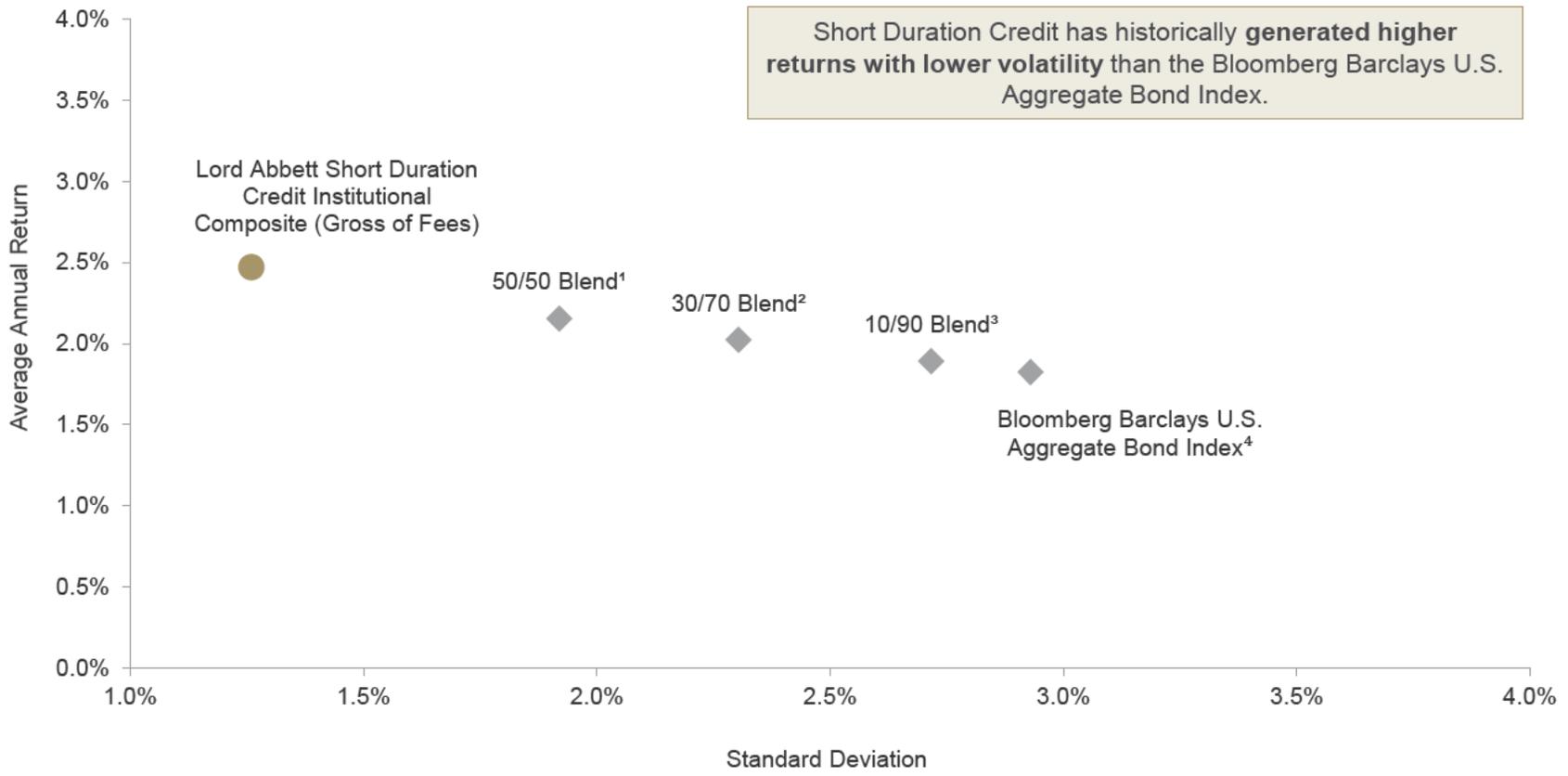
\*Barclay US Aggregate versus cash.

**Past performance is not a reliable indicator or guarantee of future results.** For illustrative purposes only and does not represent any specific portfolio managed by Lord Abbett or any particular investment. Indexes are unmanaged, do not reflect the deduction of fees and expenses, and are not available for direct investment.



# AN ATTRACTIVE COMPLEMENT TO A CORE BOND ALLOCATION

## SHORT DURATION CREDIT INSTITUTIONAL COMPOSITE VERSUS THE BLOOMBERG BARCLAYS AGGREGATE FIVE-YEAR RISK/RETURN AS OF 03/31/2018



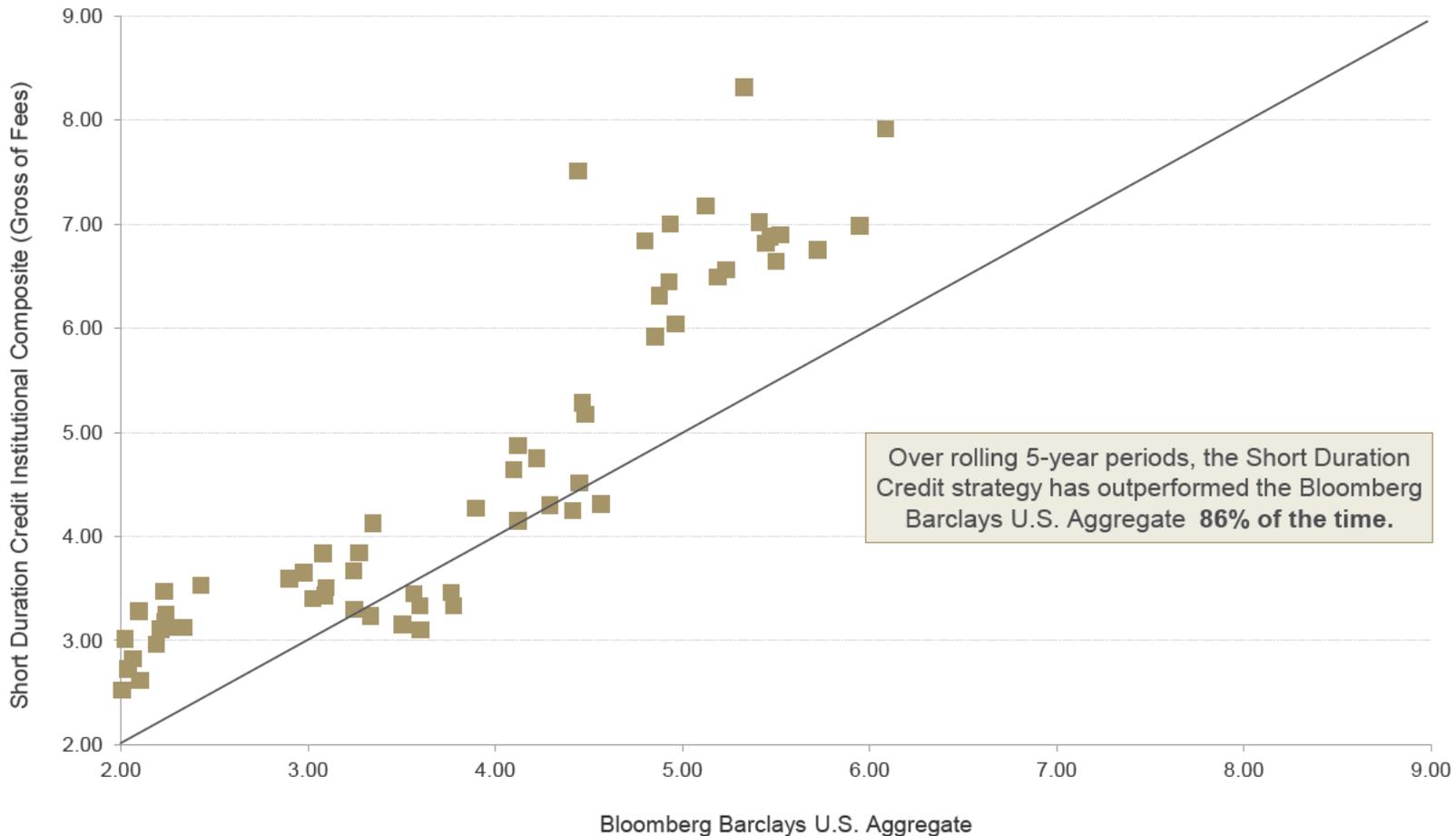
Source: Morningstar.

**Past performance is not a reliable indicator or guarantee of future results.** <sup>1</sup>50% Short Duration Composite (Gross of Fees) / 50% Bloomberg Barclays U.S. Aggregate Bond Index. <sup>2</sup>30% Short Duration Composite (Gross of Fees) / 70% Bloomberg Barclays U.S. Aggregate Bond Index. <sup>3</sup>10% Short Duration Composite (Gross of Fees) / 90% Bloomberg Barclays U.S. Aggregate Bond Index. <sup>4</sup>Bloomberg Barclays U.S. Aggregate Bond Index. The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



# GENERALLY HIGHER RETURNS THAN THE AGGREGATE INDEX

## EXCESS RETURNS VS. BLOOMBERG BARCLAYS U.S. AGGREGATE BOND INDEX (ROLLING 5 YEAR RETURNS: 01/01/2008 – 03/31/2018)



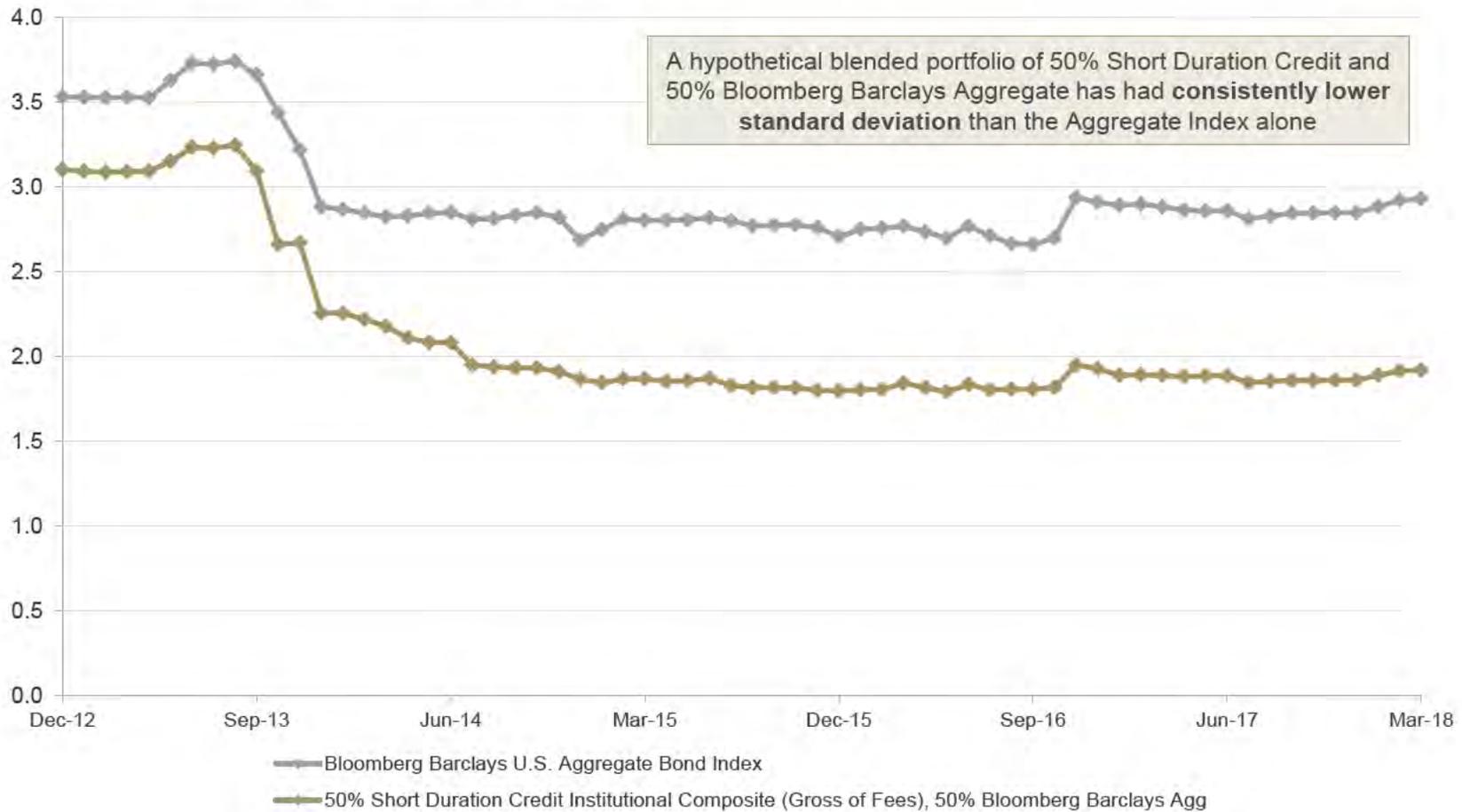
**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



# BLENDED PORTFOLIO HAS CONSISTENTLY HAD LOWER VOLATILITY

## STANDARD DEVIATION

(ROLLING 5 YEARS: 01/01/2008 – 03/31/2018)



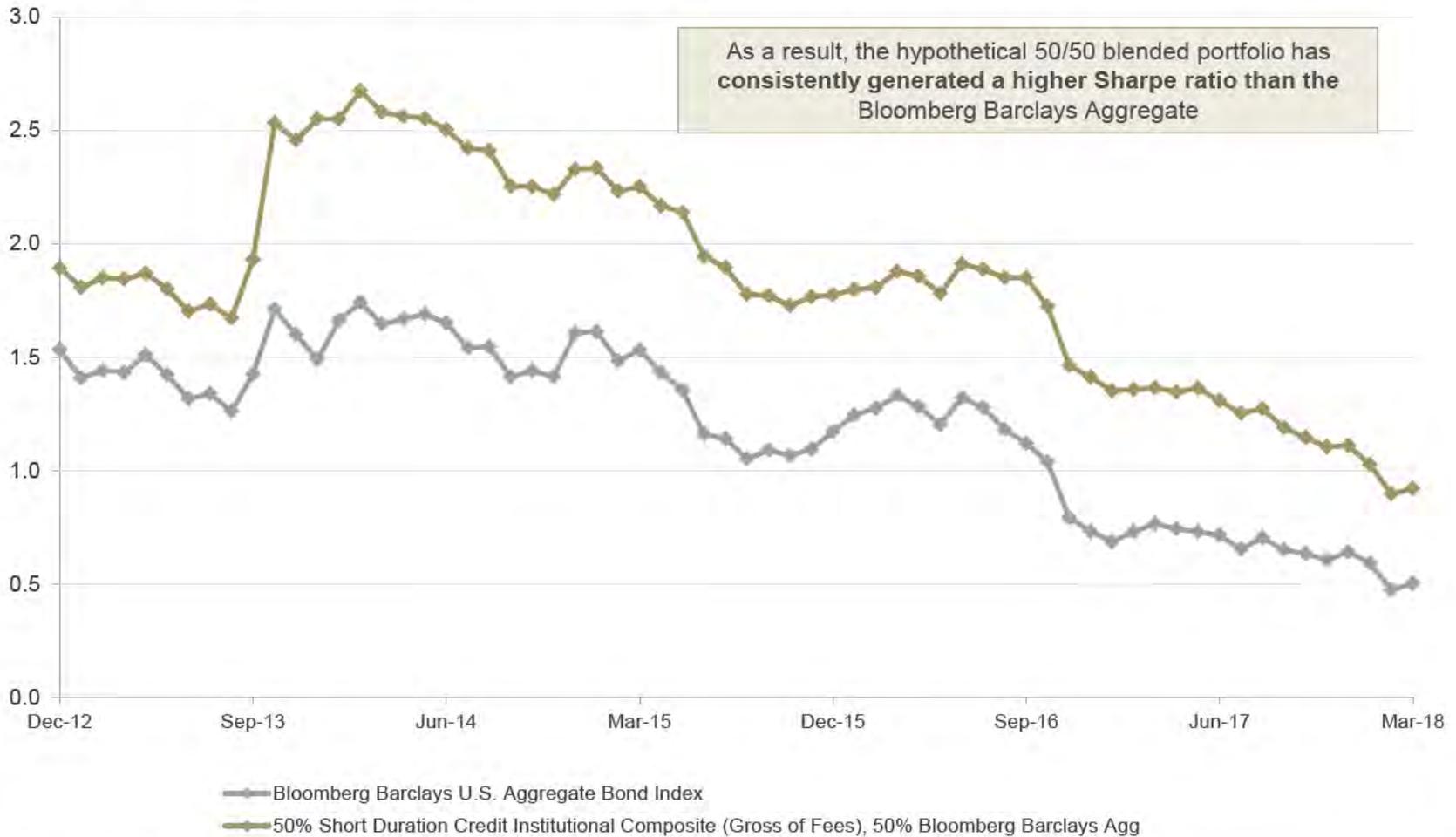
**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



# LEADING TO HIGHER RISK-ADJUSTED RETURNS

## SHARPE RATIO

(ROLLING 5 YEARS: 01/01/2008 – 03/31/2018)



**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



## LORD ABBETT SHORT DURATION CREDIT

- Seeks to exploit the inefficiency in short maturity assets through unique strategic design
- Active multi sector approach with a focus on security selection and sector rotation
- Experienced and well-resourced team, supported by fundamental research and proprietary tools

*Strong absolute, relative, and risk-adjusted returns*

AS OF 03/31/2018

Short Duration Credit Institutional Composite	3 Year (%)	5 Year (%)	10 Year (%)
Excess Return*	1.34	1.28	2.33
eVestment Category Percentile Rank**	3	2	1
Sharpe Ratio	1.67	1.72	1.51
eVestment Category Percentile Rank**	7	6	30
Information Ratio	1.82	1.56	1.03
eVestment Category Percentile Rank**	3	1	1

**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change. \*excess Return represents gross-of-fees performance relative to the eVestment category average. \*\*Source: eVestment Alliance. U.S. Short Duration Fixed Income Universe consisting of 219, 209, and 171 managers for the 3-, 5-, and 10 year periods. eVestment rankings are based on gross of fee performance. Most recent data available.

IAL

6.3



# APPENDIX



# SEPARATE ACCOUNT FEE PROPOSAL

IAL



6.3

30



## BIOGRAPHIES



### Andrew H. O'Brien, CFA

#### Partner & Portfolio Manager

Andrew O'Brien is responsible for managing the taxable fixed income strategies and is a key member of the team that manages Lord Abbett's Core Fixed Income Fund, Income Fund, Short Duration Income Fund, Total Return Fund, and U.S. Government and Government Sponsored Enterprises Money Market Fund. Mr. O'Brien began his career in the financial services industry at Lord Abbett in 1998 as an Associate Portfolio Manager for Taxable Fixed Income, and was named Partner in 2008. He earned an AB in economics from Princeton University. He also is a holder of the Chartered Financial Analyst® (CFA) designation.



### Joseph M. Graham, CFA

#### Fixed Income Investment Strategist

Joseph Graham leads the efforts of Lord Abbett's Investment Strategists and Portfolio Specialists. In addition, Mr. Graham is responsible for providing the portfolio management teams with investment insight and relevant market information for the firm's fixed income strategies and Calibrated equity strategies. In this role, he communicates with institutional clients and prospects regarding current portfolio positioning and the firm's market outlook. Mr. Graham also collaborates with the consultant relations, product development, and relationship management teams as appropriate. Mr. Graham joined Lord Abbett in 2015. Prior to joining the firm, he was a Founder and CIO at HudsonView Capital Management and Route 3 Capital; Vice President and Analyst at Millennium Partners; Analyst and Associate Portfolio Manager at LibertyView Capital Management; and Investment Banker at Morgan Keegan. He has been in the financial services industry since 1999. Mr. Graham earned a BS in finance and philosophy from Washington University and an MBA from the Wharton School of Business at the University of Pennsylvania. He is also a holder of the CFA® (Chartered Financial Analyst) designation.



### Samantha Scher

#### Director, Institutional Investor Services

Samantha Scher is responsible for working with institutional investors across a range of segments, including corporate, public, insurance, health care, endowments and foundations. In this role, she provides the professional investor with market perspectives, new investment ideas, in-depth portfolio reviews, and access to the full breadth of Lord Abbett's resources. Ms. Scher began her career at Lord Abbett in 2013 as an Institutional Sales Director. Prior to joining Lord Abbett, she served as a Director in the Global Client Group at BlackRock, where she worked with U.S. tax-exempt institutional investors across asset classes and investment approaches. She has been in the financial services industry since 2002. Ms. Scher earned a BA summa cum laude in economics and biological basis of behavior from the University of Pennsylvania.



## GLOBAL CREDIT RESEARCH TEAM

### Gregory Parker, CFA, Partner & Director of Credit Research

### Emanuela Scura, Partner & Deputy Director of Credit Research

- *retail, food & beverage, apparel & textile*

#### Matthew Albrecht, Research Analyst

- *metals & mining, coal*

#### Andrew Bernstein, Research Analyst

- *energy (E&P, services)*

#### Ryan Butkus, Research Analyst

- *financials (banks, asset managers, special)*

#### Kevin Coyne, Research Analyst

- *gaming, lodging, & leisure; media*

#### Alan Danzig, CFA, Research Analyst

- *financials (insurance, REITs)*

#### Murali Ganti, CPA, Research Analyst

- *health care facilities, services*

#### Eran Grumberg, CFA, Research Analyst

- *technology*

#### Brian Ilardo, Research Analyst

- *consumer products & tobacco, restaurants, services*

#### Paul Langlois, CFA, Research Analyst

- *chemicals, energy (refiners, storage, pipelines)*

#### Ryan Lim, Research Analyst

- *paper & packaging, building material, environmental*

#### Mitchell Moss, CFA, Research Analyst

- *utilities*

#### John Novak, CFA, Research Analyst

- *auto & truck, heavy machinery, transportation, E&C*

#### Iskra Simidchieva, CFA, Research Analyst

- *medical devices, pharmaceuticals*

#### Sundar Varadarajan, Research Analyst

- *cable, telecom & satellite, broadcasting*

#### Raymond Wu, CFA, Research Analyst

- *aerospace & defense, electrical equipment, machinery*

#### Klim Fedoff, Research Analyst

- *EM Corporates, CEEMEA*

#### Alex Marrucho, Research Analyst

- *EM Corporates, Latin America*

#### Kunal Rambhia, CFA, Research Analyst

- *EM Corporates, Asia*

#### Martha Rocha, Research Analyst

- *EM Corporates, Latin America*

#### Elan Ariel, Associate Analyst

- *energy, chemicals; senior coverage of homebuilders*



## SECURITY SELECTION: PROPRIETARY CREDIT ANALYTICS PLATFORM



6.3

33

Source: Lord Abbett. Provided for illustrative purposes only. The data contained herein is provided for informational purposes only and is intended to illustrate various inputs and outputs associated with proprietary tools used by Lord Abbett for valuation analysis and risk management. Does not constitute a recommendation nor investment advice, and should not be used as the basis for any investment decision. This is not a representation of any securities Lord Abbett purchased or would have purchased or that an investment in any securities of such issuers would be profitable.



# CURRENT REPRESENTATIVE PORTFOLIO SECTOR ALLOCATION

*Current Portfolio*



6.3

34

"Other" may include municipal bonds and non-index holdings. Allocations are reported as of the date a security transaction is initiated; however, certain transactions may not settle until several days later. Accordingly, cash may appear as a negative allocation as a result of forward settling instruments, such as currency forwards, certain mortgage-backed securities, and treasury futures. The statistical information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



# REPRESENTATIVE PORTFOLIO DURATION DISTRIBUTION

*Current Portfolio*



6.3

35

	Short Duration Credit Representative Portfolio	ICE BofAML 1-3 Year U.S. Corporate Index*
Average Effective Duration	2.1 Years	1.9 Years
Average Life	2.3 Years	2.0 Years
Average Spread Duration	2.1 Years	2.0 Years

Data as of 03/31/2018. **Past performance is not a reliable indicator or guarantee of future results.** The statistical information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change. \*Source: ICE Data Indices, LLC.



# CREDIT QUALITY DISTRIBUTION

Current Portfolio

Strategic Allocation creates a "quality barbell" around the 1 – 3 year Corporate Index



The portfolio is active Treasury securities and credit quality distribution may change significantly over time. Totals may not equal 100% due to rounding. Ratings (other than U.S. Treasury securities provided or backed by U.S. agencies) provided by Standard & Poor's, Moody's, and Fitch. For certain securities that are not rated by any of these three agencies, ratings from other agencies may be used. Where the rating agencies rate a security differently, Lord Abbett uses the average rating based on numeric values. A portion of the portfolio's securities may not be rated. Breakdown is not an S&P credit rating or an opinion of S&P as to the creditworthiness of the portfolio. The statistical information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the presentation and is subject to change. \*Source: ICE Data Indices, LLC.



## CONSISTENT RETURNS VS. INDEX

Performance

6.3

### CALENDAR YEAR RETURNS VS. INDEX

	Short Duration Credit Institutional Composite (Gross of Fees)	ICE BofA Merrill Lynch 1-3 Year U.S. Corporate Index*	Excess Returns**
2017	2.91%	1.91%	1.00%
2016	4.64%	2.39%	2.25%
2015	1.03%	1.01%	0.02%
2014	2.33%	1.19%	1.14%
2013	2.23%	1.78%	0.45%
2012	7.25%	4.49%	2.76%
2011	3.77%	1.76%	2.01%
2010	7.10%	4.86%	2.24%
2009	17.86%	14.69%	3.17%
2008	-0.24%	-2.68%	2.44%

37

**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change. The gross performance shown does not reflect a deduction of investment advisory fees or other expenses. For additional performance information, including the effect of fees on performance, please refer to the Composite presentation. \*Source: ICE Data Indices, LLC. \*\*Excess Returns: difference between Short Duration Credit Institutional Composite (Gross of Fees) and the ICE BofA Merrill Lynch 1-3 Year U.S. Corporate Index.



## PERFORMANCE THROUGH THE MARKET CYCLE

### Performance

The market has gone through periods of rising / falling rates, and “Risk on” / “Risk off” environments

Change in Rates	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fed Funds Rate	-4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.75
2 yr Yield	-2.28	0.37	-0.54	-0.36	0.01	0.13	0.28	0.38	0.14	0.7
10 yr Yield	-1.81	1.63	-0.54	-1.42	-0.12	1.27	-0.86	0.10	0.18	-0.04
Credit Spreads	1,216	-1,175	-92	179	-185	-126	104	191	-273	-59

6.3

38

Lord Abbett Short Duration Credit has consistently outperformed peers

eVestment	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Short Duration Credit (Gross)	-0.2%	17.9%	7.1%	3.8%	7.3%	2.2%	2.3%	1.0%	4.6%	2.9%
Excess Return vs. Category	-3.8%	11.7%	3.4%	1.6%	4.6%	1.6%	1.1%	0.1%	3.0%	1.2%
Rank in Category	80	2	5	8	3	5	7	41	2	7

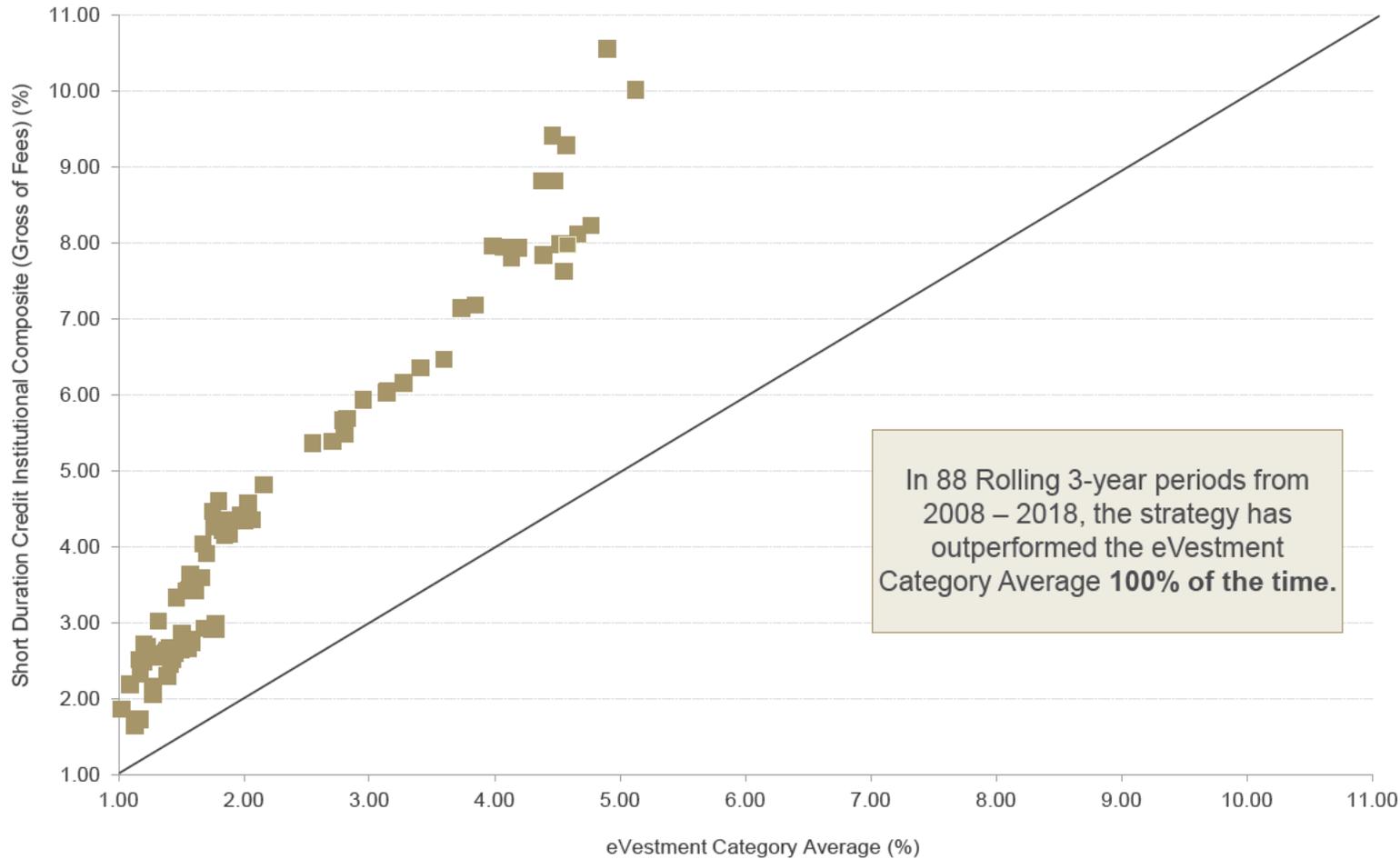
**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change. \*Source: eVestment Alliance. U.S. Short Duration Fixed Income Universe consisting of 256, 251, 253, 252, 252, 255, 255, 253, 248, and 245 managers for 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, and 2017, respectively. eVestment rankings are based on gross of fee performance. Most recent data available.



# CONSISTENT RETURNS VS. CATEGORY

Performance

## EXCESS RETURNS VS. SHORT TERM BOND CATEGORY AVERAGE (ROLLING 3 YEAR RETURNS: 01/01/2008 – 03/31/2018)



6.3

39

**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change. eVestment performance is based on gross of fee returns. Please refer to the Composite presentation in the Appendix for important performance information, including the effect of fees on performance. Source: eVestment Alliance. US Short Duration Fixed Income Category. Most recent data available.



## STRONG PERFORMANCE RELATIVE TO PEERS

Performance

AS OF 03/31/2018

	1 Year (%)	3 Year (%)	5 Year (%)	10 Years (%)
Short Duration Credit Institutional Composite (Gross of Fees)	2.14	2.51	2.47	4.65
<i>eVestment Category Average*</i>	0.89	1.17	1.19	2.32
Relative Performance	1.25	1.34	1.28	2.33
<i>eVestment Category Percentile Rank*</i>	5	3	2	1

Short Duration Credit Institutional Composite	3 Year (%)	5 Year (%)
Sharpe Ratio	1.67	1.72
<i>eVestment Category Percentile Rank*</i>	7	6

**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.

\*Source: eVestment Alliance. U.S. Short Duration Fixed Income Universe consisting of 222, 219, 209, and 171 managers for the 1-, 3-, 5-, and 10 year periods. eVestment rankings are based on gross of fee performance. Most recent data available.

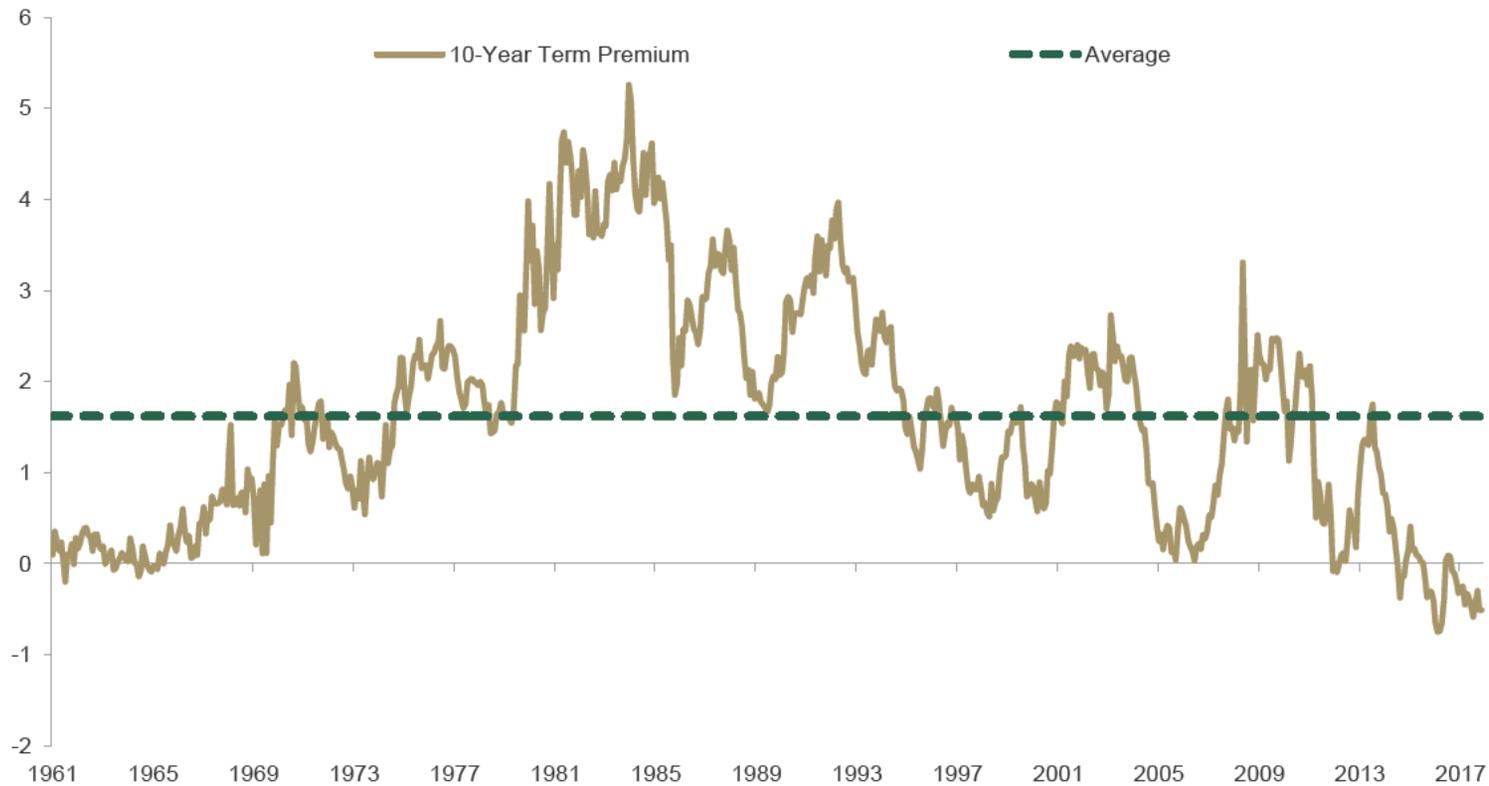
6.3

40



# TERM PREMIUM AT HISTORICAL LOWS

## ACM TREASURY TERM PREMIUM (AS OF 03/31/2018)



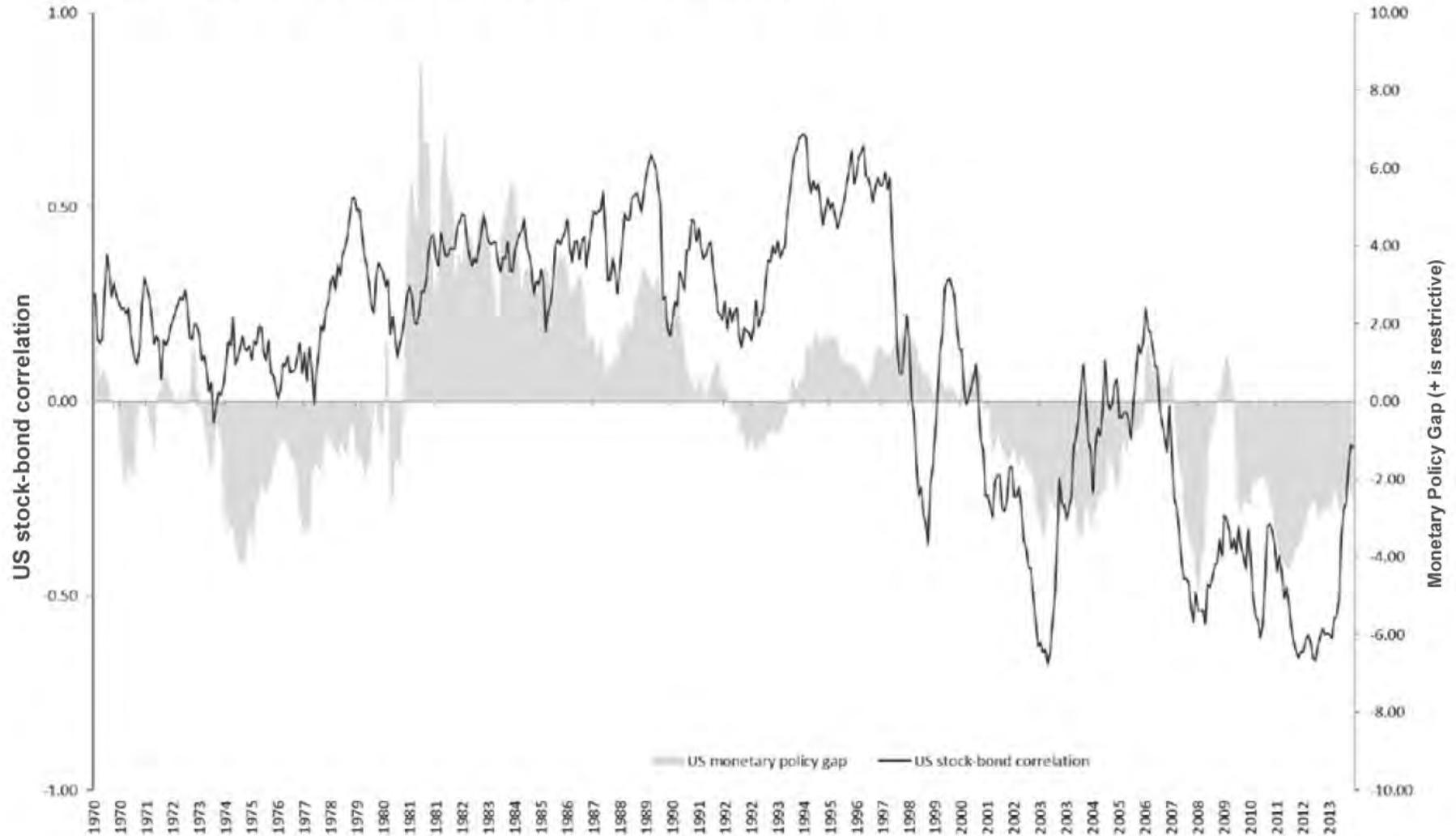
Source: Federal Reserve Bank of New York. As represented by ACMTP10. Y-Axis represents ACM Treasury Term Premium.

**Past performance is not a reliable indicator or guarantee of future results.** For illustrative purposes only and does not represent any specific portfolio managed by Lord Abbett or any particular investment. Indexes are unmanaged, do not reflect the deduction of fees and expenses, and are not available for direct investment.



# STOCK-BOND CORRELATIONS

## US STOCK-BOND VERSUS US MONETARY POLICY GAP

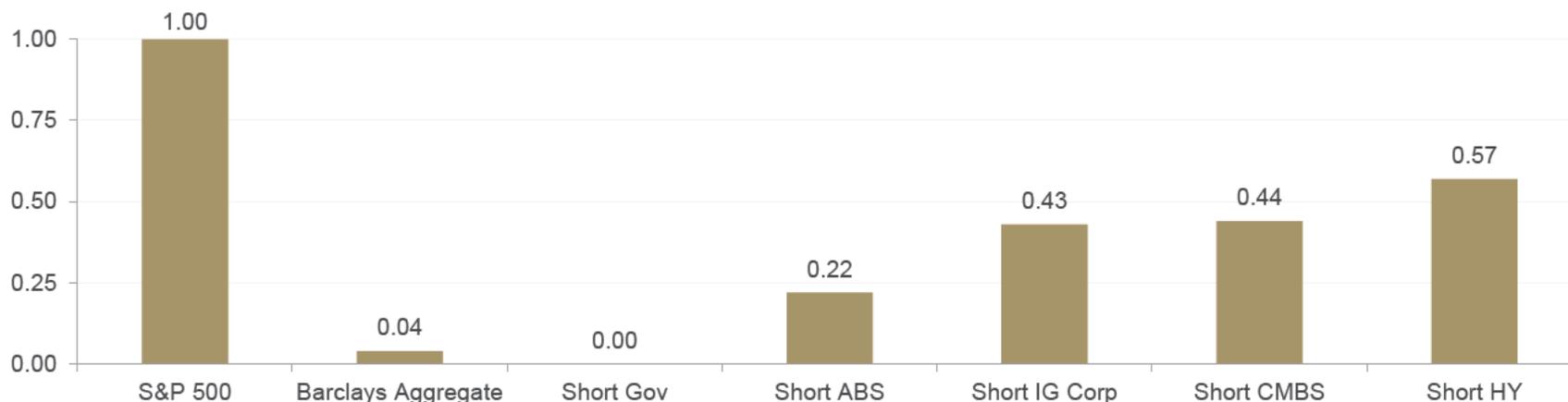


Source: Stock-Bond Correlations, Macroeconomic Regimes and Monetary Policy [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3075816](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3075816)  
**Past performance is not a reliable indicator or guarantee of future results.** For illustrative purposes only and does not represent any specific portfolio managed by Lord Abbett or any particular investment. Indexes are unmanaged, do not reflect the deduction of fees and expenses, and are not available for direct investment.



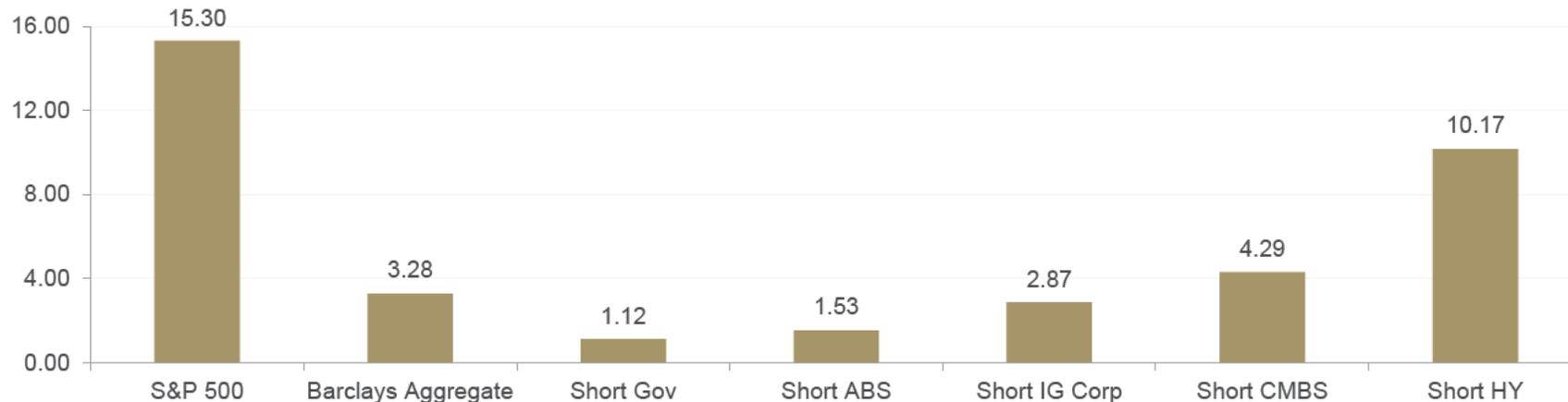
# CORRELATION VERSUS VOLATILITY

## CORRELATION WITH THE S&P 500 (01/01/2008 – 08/31/2017)



## STANDARD DEVIATION (01/01/2008 – 08/31/2017)

While short credit sectors have modestly positive correlation with equities, they have had a fraction of the volatility



Source: Morningstar. Barclays Aggregate as represented by BBgBarc US Agg Bond, Short Gov as represented by BBgBarc US Govt 1-3 Yr, Short ABS as represented by BofAML ABS Fixed Rate 0-3 Yr, Short IG Corp as represented by BofAML US Corps 1-3 Yr, Short CMBS as represented by BBgBarc CMBS IG 1-3.5 Yr, Short HY as represented by Barclays HY 1-3 Index.

**Past performance is not a reliable indicator or guarantee of future results.** For illustrative purposes only and does not represent any specific portfolio managed by Lord Abbett or any particular investment.



# INSTITUTIONS ARE RE-THINKING THEIR CASH ALLOCATIONS

Long Term Cash

## INSTITUTIONAL CASH TIERS



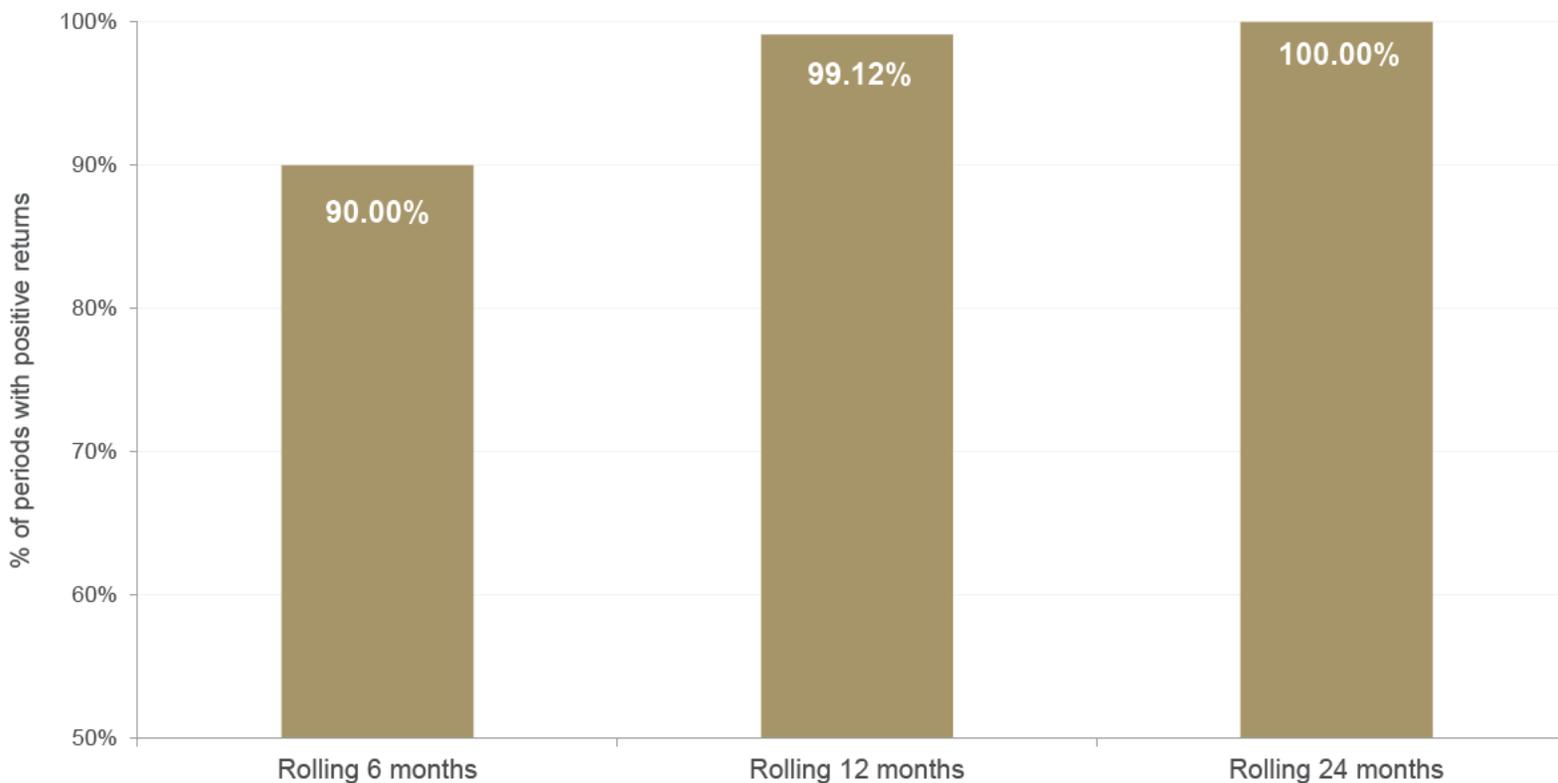


# SHORT DURATION CREDIT: NEGATIVE RETURNS HAVE BEEN RARE

Long Term Cash

## PERCENTAGE OF TIME PERIODS WITH POSITIVE RETURNS

(ROLLING RETURNS: 1/1/2008 – 05/31/2018)



All holding periods of greater than 13 months have generated positive total returns

Rolling Returns of the Lord Abbett Short Duration Credit Institutional Composite (gross of fees), since inception 01/01/2008.

**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



# SCENARIO ANALYSIS: RETURN DISTRIBUTIONS

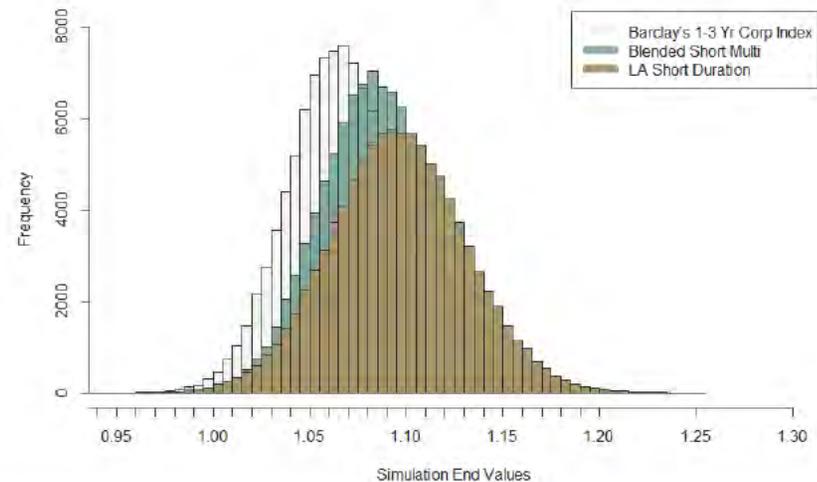
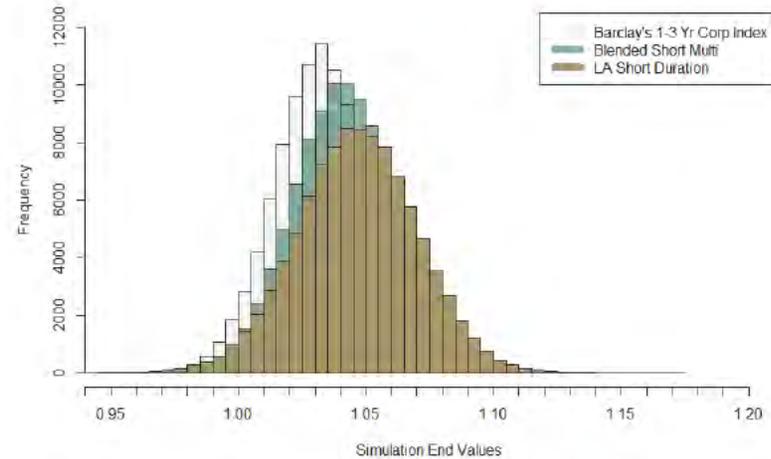
## Long Term Cash

### One Year Simulations

	Mean	Std Dev	< 100%
Barclay's 1-3 Yr Corp Index	3.20%	1.81%	3.98%
Blended Short Multi-Sector*	4.08%	1.97%	1.96%
Lord Abbett Short Duration Credit Institutional Composite	4.66%	2.35%	2.50%

### Two Year Simulations

	Mean	Std Dev	< 100%
Barclay's 1-3 Yr Corp Index	6.48%	2.62%	0.76%
Blended Short Multi-Sector*	8.34%	2.90%	0.19%
Lord Abbett Short Duration Credit Institutional Composite	9.53%	3.48%	0.32%



The diversification of asset classes and the addition of active management have created superior return distributions

\*Blended Index includes 30%ML Corp 1-3 Yr, 30% BbgBarc CMBS 1 - 3.5Yr, 15% ML ABS Fixed Rate 0-3 Yr, 15% BbgBarc HY 1-3 Index, 10% BBgBarc US Govt/Credit 1-3 Yr  
**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.

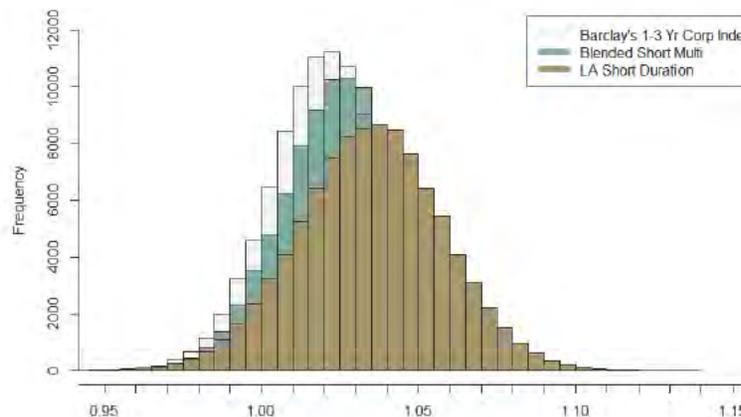


# SCENARIO ANALYSIS: ADJUSTED RETURN DISTRIBUTIONS

Long Term Cash

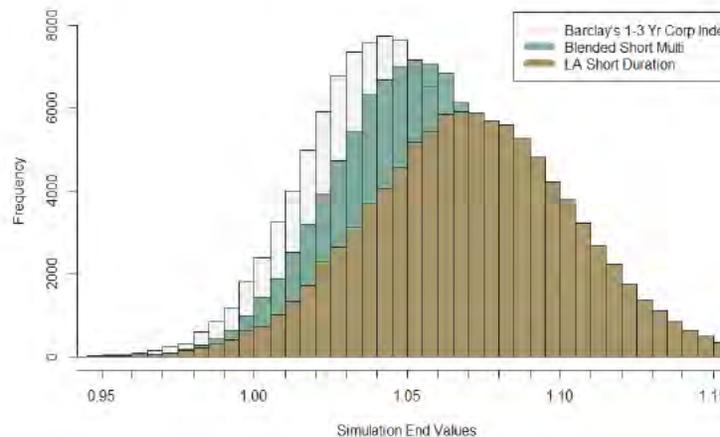
## One Year Simulations

	Mean	Std Dev	< 100%
Barclay's 1-3 Yr Corp Index	2.07%	1.78%	12.16%
Blended Short Duration Allocation*	2.62%	1.93%	8.79%
Lord Abbett Short Duration Credit Institutional Composite	3.49%	2.32%	6.72%



## Two Year Simulations

	Mean	Std Dev	< 100%
Barclay's 1-3 Yr Corp Index	4.15%	2.57%	5.31%
Blended Short Duration Allocation*	5.32%	2.78%	2.78%
Lord Abbett Short Duration Credit Institutional Composite	7.10%	3.38%	1.75%



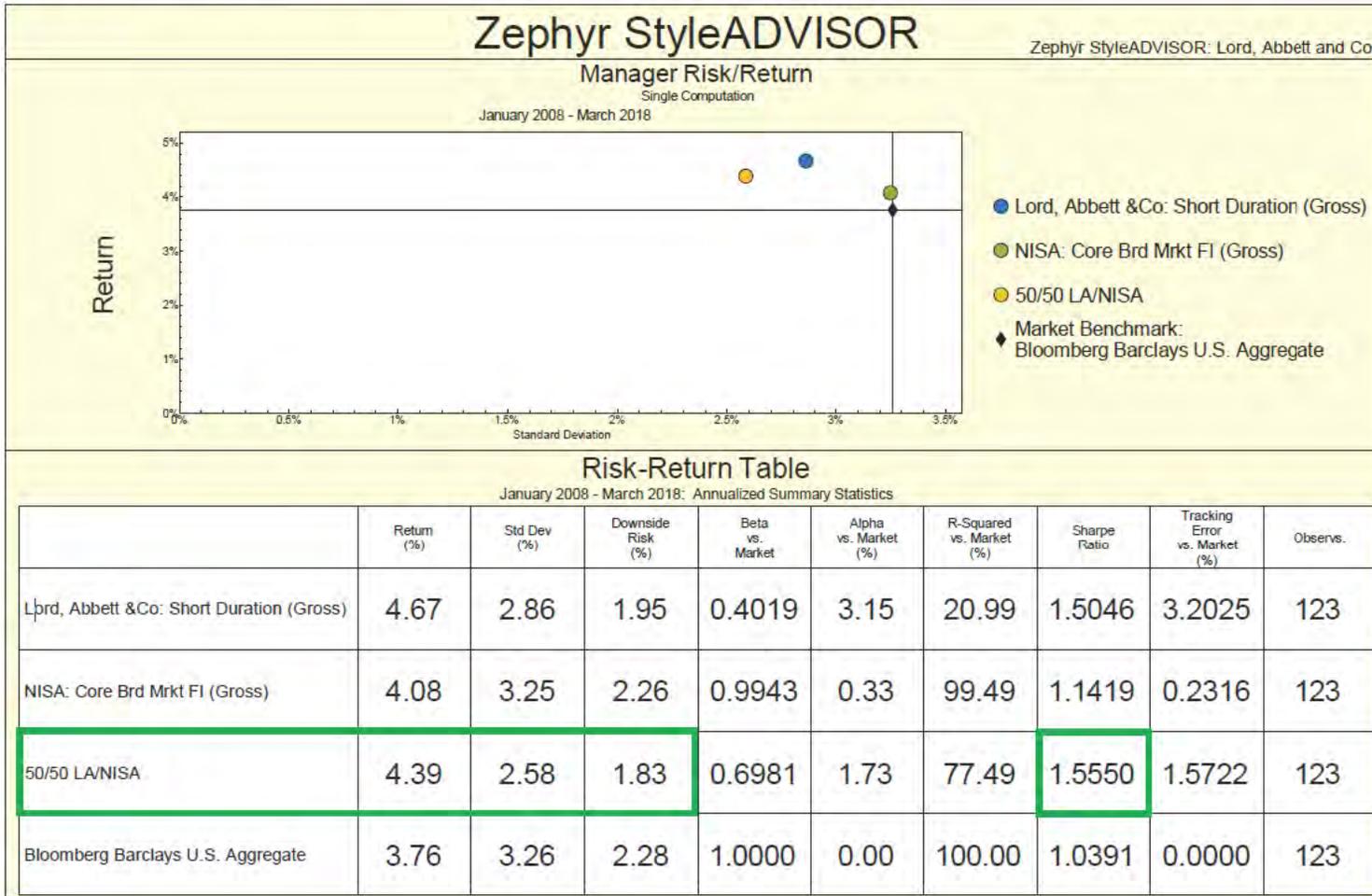
The diversification of asset classes and the addition of active management have created superior return distributions

\*Blended Index includes 30%ML Corp 1-3 Yr, 30% BbgBarc CMBS 1 - 3.5Yr, 15% ML ABS Fixed Rate 0-3 Yr, 15% BbgBarc HY 1-3 Index, 10% BBgBarc US Govt/Credit 1-3 Yr  
**Past performance is not a reliable indicator or guarantee of future results.** The performance information provided is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



# ANALYSIS OF SHORT DURATION AND EXISTING CORE MANAGER

SINCE SHORT DURATION INCEPTION  
(01/01/2008 – 03/31/2018)

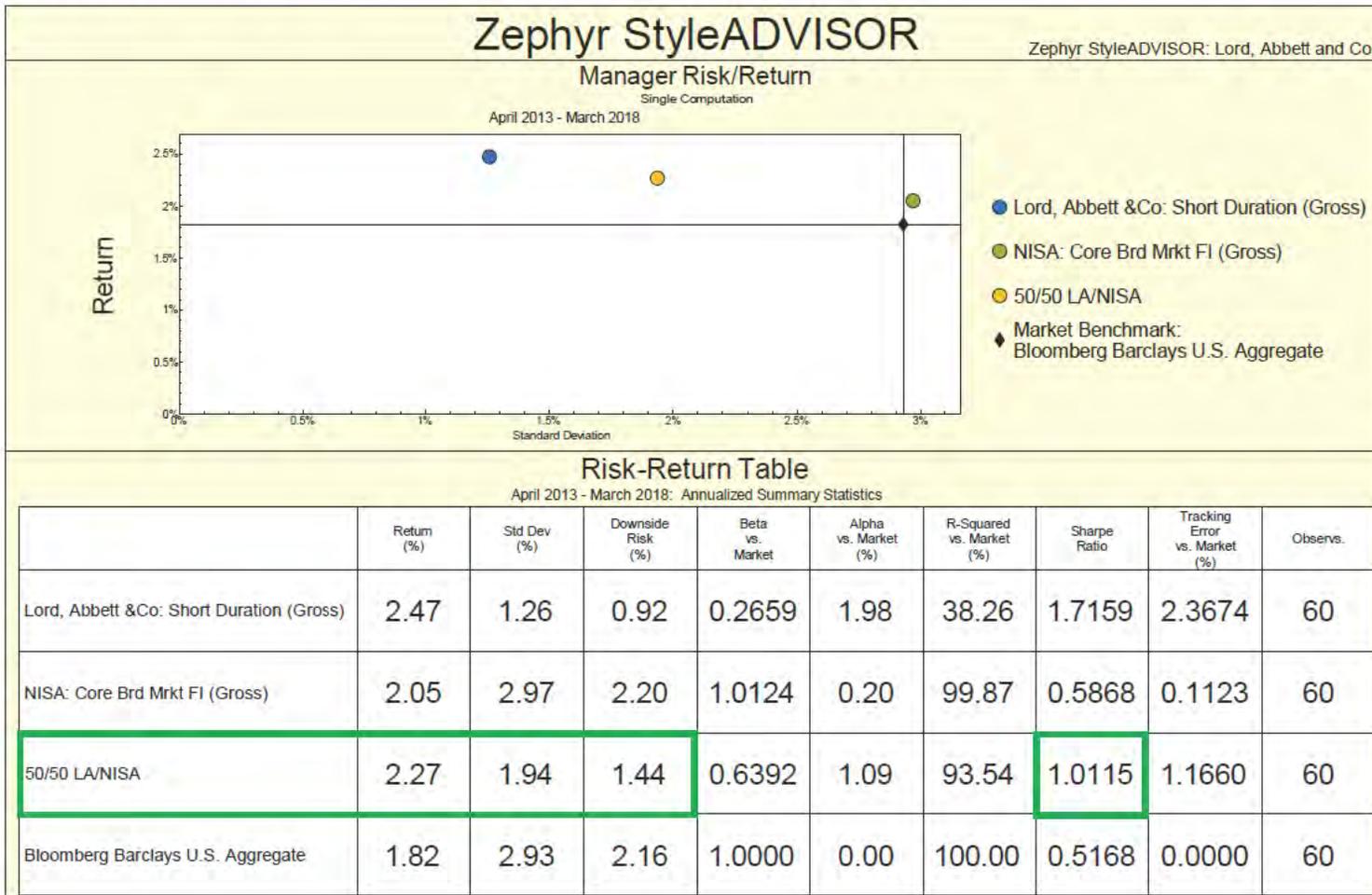


Source: Zephyr StyleADVISOR. **Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



# ANALYSIS OF SHORT DURATION AND EXISTING CORE MANAGER

LAST 5 YEARS  
(04/01/2013 – 03/31/2018)



Source: Zephyr StyleADVISOR. **Past performance is not a reliable indicator or guarantee of future results.** The performance information provided above is supplemental to the Short Duration Credit Institutional Composite presentation, which is included in the Appendix, and is subject to change.



## TEAM MEMBER BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Robert A. Lee*	Chief Investment Officer	27	21	ARM Capital Advisors; Kidder Peabody Asset Management; First Boston Corporation	BS, University of Pennsylvania
Steven F. Rocco, CFA*	Director	17	14	FactSet	BA, Cornell University
Kewjin Yuoh*	Portfolio Manager	24	8	AllianceBernstein, LLP; Credit Suisse Asset Management; Sanford C. Bernstein & Co., Inc.	BS, Cornell University
Andrew H. O'Brien, CFA*	Portfolio Manager	20	20	N/A	BA, Princeton University
Jeffrey D. Lapin, J.D.*	Portfolio Manager	21	6	Post Advisory Group; Tablerock Fund Management; Avenue Capital Management, LLC	AB, Georgetown University; JD, Northwestern University; MBA, New York University
Alan R. Kurtz	Portfolio Manager	18	18	N/A	BA, Hartwick College; MBA, New York University
John J. Morton, CFA	Portfolio Manager	33	1	Fisher, Francis, Trees & Watts; Rexiter Capital Management; State Street Global Advisors	BA, Suffolk University

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



## TEAM MEMBER BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Manish S. Rajguru, CFA	Portfolio Manager	27	4	Guggenheim Partners Investment Management; Houlihan Lokey/Red Pine Advisors; UBS; Credit Suisse	BS, Northeastern University; MBA, New York University
Robert S. Clark, CFA	Portfolio Manager	21	8	Turner Investment Partners; People's Bank	BS, Bryant College; MBA, Yale University
Eric P. Kang	Associate Portfolio Manager	19	3	MidOcean Credit Partners; Bell Point Capital; Citadel Investment Group	BS, University of Pennsylvania; MBA, University of Virginia
Hyun Lee, CFA	Portfolio Manager	17	17	N/A	BA, MA, University of Chicago
Mila Skulkina, CFA	Associate Portfolio Manager	17	5	Sanders Capital, LLC; Bain & Company; Triton Pacific Capital Partners	BA, University of California; MBA, UCLA Anderson School of Management
Kearney Posner, CFA	Portfolio Manager	17	3	Metropolitan Life Insurance Company; Radian Group; Goldman Sachs	BS, Georgetown University; MBA, University of Pennsylvania
Darnell C. Azeez, CFA	Associate Portfolio Manager	16	15**	TAMRO Capital Partners	BA, Lafayette College

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018. \*\*Years at Lord Abbett includes 2002 – 2014 and 2015-present.



## TEAM MEMBER BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Yoana Koleva, CFA	Portfolio Manager	15	7	Morgan Stanley; BlackRock	BA, The College of Saint Elizabeth
Juan Francisco Navarro-Staicos	Associate Portfolio Manager	13	<1	Omers Capital Markets; Federal Reserve Bank of New York; Bain & Company, Inc	BS/BA, Rice University; MPA/ID, MBA, Harvard University
Annika Lombardi	Associate Portfolio Manager	11	<1	Janus Capital International; Rogge Global Partners; Delaware Investments	BA, University of Pennsylvania
Peter Noel, CFA	Associate Portfolio Manager	11	3	QBE Insurance; PFM Asset Management	BS, Carnegie Mellon University
Christopher Gizzo, CFA	Portfolio Manager	10	10	N/A	BS, Cornell University
Jeremy P. Shean	Associate Portfolio Manager	10	4	Nomura Securities International, Inc.; Malloy and Company	BS, University of Massachusetts, Lowell; MBA, University of Southern California
Adam C. Castle, CFA	Portfolio Manager	10	3	Credit Suisse; AllianceBernstein	BS, Cornell University

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



## TEAM MEMBER BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Frank Zhi	Associate Portfolio Manager	9	5	Commerzbank AG; BlackRock Inc.	BS, Columbia University
Karen Gunnerson	Associate Portfolio Manager	8	<1	RBC Capital Markets; Bank of America Merrill Lynch	BS, University of Florida
Yuan (Shawn) Yue	Associate Portfolio Manager	7	1	Potomac River Capital; Bank of America Merrill Lynch; MSCI	BS, Jilin University; MS, University of Chicago
Jeremy Lehmann, CFA	Associate Portfolio Manager	6	6	N/A	BA, Columbia University
Jordan Kling, CFA	Portfolio Analyst	8	8	N/A	BA, Dartmouth College
Devin Hagens, CFA	Portfolio Analyst	5	<1	Bloomberg L.P.	BS, Cornell University
Walter H. Prah, Ph.D.*	Director of Quantitative Research	33	21	Sanford C. Bernstein & Co.	BS, Ph.D., University of Wisconsin
Bjorn Flesaker, Ph.D.	Director of Quantitative Research, Fixed Income	26	1	Prudential; Bloomberg, L.P.; Morgan Stanley	MM, BI Norwegian Business School; Ph.D., University of California at Berkeley

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



## TEAM MEMBER BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Giulio Martini*	Director of Strategic Asset Allocation	33	3	Anderson Global Macro LLC; Sanford C. Bernstein & Co. and AllianceBernstein	BA, University of Colorado; MA, Boston University
Brian Arsenault	Investment Strategist	24	4	Claren Road Asset Management; Offshore Advisors/AVM, L.P.; Morgan Stanley	BS, Seton Hall University; MBA, University of Rochester
Timothy Paulson	Investment Strategist	19	4	Goldman Sachs	BA, Haverford College; MBA, Northwestern University

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



## GLOBAL CREDIT RESEARCH TEAM BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Gregory S. Parker, CFA*	Director of Global Credit Research	27	11	AIG SunAmerica Asset Management; Harbert Management Corporation; Schroder Investment Management	BS, St. Lawrence University; MBA, Babson College
Emanuela Scura*	Deputy Director of Global Credit Research	17	11	Pax World Funds; Ernst & Young Financial Advisors LLP	BA, Bocconi University; MBA, New York University
Andrew Bernstein	Research Analyst	22	4	Credit Suisse; Shenkman Capital Management; The Bank of Tokyo Mitsubishi UFJ	BA, University of Michigan; MBA, Cornell University
John Novak, CFA	Research Analyst	22	4	Mizuho Securities, USA, Inc.; Barclays Capital, Inc., Lehman Brothers	BS, Pennsylvania State University; MBA, New York University
Paul A. Langlois, CFA	Research Analyst	26	9	J&W Seligman & Co.; Triton Partners; Delaware Management Company	BS, The Pennsylvania State University; MBA, Temple University
Murali Ganti, CPA	Research Analyst	24	<1	Citigroup Inc.; BNP Paribas; Nomura Securities International, Inc.	BA, University at Buffalo; MBA, University of Rochester

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



## GLOBAL CREDIT RESEARCH TEAM BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Sundar Varadarajan	Research Analyst	23	2	BNP Paribas; Knight Capital; Citadel Securities	B.Com., University of Madras; MBA, University of Rochester
Kevin Coyne	Research Analyst	22	2	Goldman Sachs & Co.; Royal Bank of Canada Dain Rauscher; Corvis Corporation	BS, Villanova University; MBA, New York University
Eran Grumberg, CFA	Research Analyst	21	5	Deutsche Asset Management; Wells Fargo; RBS Securities	BS, Towson University; MS, George Mason University
Alan Danzig, CFA	Research Analyst	20	6	J.P. Morgan; Fox-Pitt, Kelton; Stern Stewart & Co.	BS, University of Pennsylvania
Martha C. Rocha	Research Analyst	19	5	Goldman, Sachs, & Co.; Standard & Poors; Central Bank of Colombia	BS, University of the Andes; MBA, Columbia Business School
Ryan Butkus	Research Analyst	18	2	Citigroup; KPMG, LLP	BS, Muhlenberg College; MBA, Fordham University
Brian A. Ilardo	Research Analyst	18	15	UBS Warburg; Brean Murray & Co., Inc.; HealthJump	BS, Villanova University; MBA New York University

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



## GLOBAL CREDIT RESEARCH TEAM BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Mitchell Moss, CFA	Research Analyst	18	6	Moody's Investors Service; Morgan Stanley; Lazard Frères & Co.	BS, MS, Washington University
Raymond Wu, CFA	Research Analyst	18	3	Genworth Asset Management, Twin Capital Management, Gross Asset Management	BA/BS, Duke University
Ryan Lim	Research Analyst	16	6**	Westspring Advisors; Credit Suisse; Nesbitt Burns	BA, Harvard University
Kunal Rambhia, CFA	Research Analyst	16	<1	Lazard Asset Management; Mount Kellett Capital Management; WL Ross India	BA, Pace University
Iskra Simidchieva, CFA	Research Analyst	15	5	BNP Paribas; Merrill Lynch	BA, American University in Bulgaria; MBA, University of Pennsylvania
Matthew Albrecht	Research Analyst	14	2	UBS Investment Bank	BS, Bucknell University
Klim Fedoff	Research Analyst	14	5	TIAA-CREF; HSBC Bank	BS, Manhattan College

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018. \*\*Years at Lord Abbett includes 2011– 2015 and 2017-present.



## GLOBAL CREDIT RESEARCH TEAM BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Alexandre Marrucho	Research Analyst	7	3	HSBC Securities; Pricewaterhouse Coopers	BS/BA Southern Illinois University; MS Vanderbilt University
Elan Ariel	Associate Research Analyst	4	4	N/A	BS, University of Pennsylvania

6.3

58

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



# GLOBAL FIXED INCOME TRADING TEAM BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Andrew M. Khatri*	Director of Global Fixed Income Trading	16	7	MarketAxess; Citigroup Global Markets Inc.; Wellington Management Company, LLP	BS, Boston College
Shane M. Magoon*	Trader	15	14	State Street Corp.	BS, Villanova University; MBA, New York University
Bryan Sheehan	Trader	14	<1	Nomura Securities; Barclays Capital; Lehman Brothers, Inc.	BS, University of Maryland
Nickolas A. Prala	Trader	13	3	UBS; Loomis Sayles; BNP Paribas	BA, Ohio University; MA, Ohio University
Matthew Jones, CFA	Trader	13	<1	AllianceBernstein; Barclays Capital; Lehman Brothers Inc.	BA, Rutgers University
Jason Stofkoper, CFA	Trader	13	11	Nomura Securities	BA, Drew University
Steven Zhou, CFA	Trader	13	<1	Deutsche Asset Management; JP Morgan Chase	BS, University of Maryland; MS, Carnegie Mellon University

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



# GLOBAL FIXED INCOME TRADING TEAM BIOGRAPHIES

Name	Role	Years of Industry Experience	Years with Lord Abbett	Prior Professional Experience	Education
Kate Farmer	Trader	10	2	Goldman Sachs; Citigroup	BA, University of Pennsylvania
Gregory A. Boukas	Associate Trader	8	3	Morgan Stanley Smith Barney; Keefe, Bruyette & Woods	BS, Villanova University
Gregory Benz, CFA	Associate Trader	7	2	Payden & Rygel Investment Management	BA, Occidental College
Patrick Daly, CFA	Assistant Trader	7	6	ING Financial Partners	BS, Villanova University
Harrison L. Fisher	Assistant Trader	4	4	N/A	BS, Auburn University

As of 04/01/2018. \*Partner of Lord Abbett. Years of industry experience is updated as of 01/01/2018.



## END NOTES TO PERFORMANCE

6.3

61

The Global Investment Performance Standards (GIPS®) compliant performance results shown represent the investment performance record for the Lord, Abbett & Co. LLC (Lord Abbett) **Short Duration Credit Institutional Composite**. Prior to April 1, 2013, the composite was named Short Duration Fixed Income Institutional Composite. This composite is comprised of all fully discretionary portfolios managed on behalf of institutional investors investing primarily in taxable short duration investment grade debt securities of various types. The portfolios may also invest in lower-rated debt securities, including non-U.S. debt securities denominated in foreign currencies and floating or adjustable rate senior loans. Effective July 1, 2014, only accounts with an initial value of \$100 million or more are included in the composite. Other than registered investment companies sponsored by Lord Abbett, accounts opened/funded on or before the 15<sup>th</sup> of the month will be included in the Composite effective on the first day of the second following month. Accounts opened/funded after the 15<sup>th</sup> of the month will be included in the Composite effective on the first day of the third following month. Registered investment companies sponsored by Lord Abbett are included in the Composite in the first full month of management. Closed accounts are removed from the Composite after the last full month in which they were managed in accordance with applicable objectives, guidelines, and restrictions. Performance results are expressed in U.S. dollars and reflect reinvestment of any dividends and distributions. The Composite was created in 2008. A complete list of Lord Abbett composites and a description of their investment strategies is available on request. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

For GIPS® purposes, the firm is defined as Lord, Abbett & Co. LLC ("Lord Abbett"). Total Firm Assets are the aggregate fair value of all discretionary and non-discretionary assets for which the Firm has investment management responsibility. Accordingly, Total Firm Assets include, but are not limited to, mutual funds (all classes of shares), privately placed investment funds, non-U.S. domiciled investment funds, separate/institutional portfolios, individual portfolios and separately managed accounts ("Wrap Fee/SMA Portfolios") managed by Lord Abbett. Total Firm Assets also include any collateralized, structured investment vehicle, such as a collateralized debt obligation or collateralized loan obligation, for which Lord Abbett has been appointed as the collateral manager. For the period prior to January 1, 2000, the definition of the Firm does not include any hedge fund or SMA program accounts where Lord, Abbett & Co. LLC did not have the records so long as it is impossible for Lord, Abbett & Co. LLC to have the records (within the meaning of relevant GIPS® standards interpretations). Total Firm Assets also exclude separately managed program accounts that involve model delivery.

The number of portfolios and total assets in the Composite, and the percentage of total "firm" assets represented by the Composite at the end of each calendar year for which performance information is provided are as follows:

Calendar Year Ended	2016	2015	2014	2013	2012	2011	2010	2009	2008
# of Portfolios	3	2	2	1	1	1	1	1	1
Total Assets (\$M)	\$38,072	\$34,127	\$37,197	\$33,783	\$28,523	\$16,733	\$11,525	\$4,443	\$301
Percentage of Firm Assets	28.29%	27.52%	27.36%	24.88%	22.30%	15.60%	10.80%	5.00%	0.40%
Total Firm Assets (\$M)	\$134,565	\$124,007	\$135,945	\$135,786	\$127,753	\$107,449	\$106,528	\$88,895	\$70,347
Dispersion	N/A	N/A	N/A						
Lord Abbett Short Duration Credit Institutional Composite Gross (Annual)	4.64%	1.03%	2.33%	2.23%	7.25%	3.77%	7.10%	17.86%	-0.24%
Lord Abbett Short Duration Credit Institutional Composite Gross (3 year Annualized Return*)	2.66%	1.86%	3.91%	4.40%	6.03%	9.42%	7.98%	N/A	N/A
Lord Abbett Short Duration Credit Institutional Composite Gross (3 year Annualized Ex-Post Standard Deviation*)	1.33%	1.27%	1.49%	1.76%	1.77%	3.07%	4.70%	N/A	N/A
Lord Abbett Short Duration Credit Institutional Composite Net (Annual)	4.39%	0.79%	2.08%	1.99%	7.00%	3.53%	6.84%	17.58%	-0.48%
Lord Abbett Short Duration Credit Institutional Composite Net (3 year Annualized Return*)	2.41%	1.62%	3.66%	4.15%	5.78%	9.15%	7.73%	NA	NA
BofA Merrill Lynch 1-3 year U.S. Corporate Credit Index (Annual)	2.39%	1.01%	1.19%	1.78%	4.49%	1.76%	4.86%	14.69%	-2.68%
BofA Merrill Lynch 1-3 year U.S. Corporate Credit Index (3 year Annualized Return*)	1.53%	1.32%	2.47%	2.67%	3.69%	6.97%	5.39%	N/A	N/A
BofA Merrill Lynch 1-3 year U.S. Corporate Credit Index (3 year Annualized Ex-Post Standard Deviation*)	0.88%	0.77%	0.98%	1.21%	1.43%	2.96%	4.91%	N/A	N/A

\*N/A for periods with less than 3 years of data based on the composite inception date.



## END NOTES TO PERFORMANCE

Dispersion is represented by the asset-weighted standard deviation, a measure that explains deviations of portfolio rates of return from the asset-weighted composite return. Only portfolios that have been managed within the Composite style for a full year are included in the asset-weighted standard deviation calculation. The measure may not be meaningful (N/A) for composites consisting of five or fewer portfolios or for periods of less than a full year.

The performance of the Composite is shown net and gross of advisory fees, and reflects the deduction of transaction costs. The deduction of advisory fees and expenses (and the compounding effect thereof over time) will reduce the performance results and, correspondingly, the return to an investor. Net performance of the Composite as presented in the table on the previous page reflects the deduction of a "model" advisory fee, calculated as the highest advisory fee, borne by any account (without giving effect to any performance fee that may be applicable) in the Composite (an annual rate of 0.20% of assets from April 1, 2017 forward, prior to April 1, 2017 an annual rate of 0.24% of assets) and other expenses (including trade execution expenses). **For example, if \$10 million were invested and experienced a 10% compounded annual return for 10 years, its ending dollar value, without giving effect to the deduction of the advisory fee, would be \$25,937,425. If an advisory fee of 0.20% of average net assets per year for the 10-year period were deducted, the annual total return would be 9.78% and the ending dollar value would be \$25,469,675. The management fee schedule is as follows: 0.20% on the first \$100 million, 0.18% on the next \$400 million, and 0.16% on all assets over \$500 million.** Net-of-fee performance reflects the deduction of the highest applicable institutional advisory fee that would be charged to a new institutional client account based on the current fee schedule for this strategy. The composite includes one or more registered investment companies sponsored by Lord Abbett ("Lord Abbett Funds") that are subject to fees and expenses that would be inapplicable to an institutional client account. Therefore, the actual performance of Lord Abbett Fund accounts included in the composite may be lower than the net-of-fee composite performance presented. Fees and expenses applicable to the Lord Abbett Funds are disclosed in each Fund's Prospectus, which is available upon request. Past performance does not guarantee future results. Certain securities held in portfolios contained in this composite may have valuations determined using both subjective observable and subjective unobservable inputs. The Firm's valuation hierarchy does not materially differ from the hierarchy in the GIPS Valuation Principles. Portfolios in this composite may be managed against an internal index that is constructed utilizing sectors and sub-sectors of publicly available indices. The weights of the sectors and sub-sectors of the internal index may vary over time and differ materially from the sectors and weightings of the benchmark Index.

Lord Abbett claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Lord, Abbett & Co. LLC has been independently verified for the periods 1993 through 2016. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Short Duration Credit Institutional composite has been examined for the periods 2008 through 2016. The verification and performance examination reports are available upon request.

The BofA Merrill Lynch 1-3 year U.S. Corporate Index is an unmanaged index comprised of U.S. dollar denominated investment grade corporate debt securities publicly issued in the U.S. domestic market with between one and three year remaining to final maturity. Prior to May 2013, the benchmark for the composite was the Bloomberg Barclays Capital 1-3 Year Government/Credit Bond Index. Lord Abbett believes the BofA Merrill Lynch 1-3 year U.S. Corporate Index is more representative of the investment strategy based on the strategy's higher allocation to corporates credit and reduced exposure to U.S. Government securities. The benchmarks have not been examined by Deloitte & Touche LLP.

Source Merrill Lynch, Pierce, Fenner & Smith Incorporated ("BofAML"), used with permission. BofAML PERMITS USE OF THE BofAML INDICES AND RELATED DATA ON AN "AS IS" BASIS, MAKES NO WARRANTIES REGARDING SAME, DOES NOT GUARANTEE THE SUITABILITY, QUALITY, ACCURACY, TIMELINESS, AND/OR COMPLETENESS OF THE BofAML INDICES OR ANY DATA INCLUDED IN, RELATED TO, OR DERIVED THEREFROM, ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF THE FOREGOING, AND DOES NOT SPONSOR, ENDORSE, OR RECOMMEND LORD ABBETT, OR ANY OF ITS PRODUCTS OR SERVICES.

Past performance is not a reliable indicator or a guarantee of future results. Differences in account size, timing of transactions, and market conditions prevailing at the time of investment may lead to different results among accounts. Differences in the methodology used to calculate performance also might lead to different performance results than those shown. Composite performance is compared to that of an unmanaged index, which does not incur management fees, transaction costs, or other expenses associated with a managed account.



## IMPORTANT INFORMATION

The information contained herein is provided by Lord, Abbett & Co. LLC ("Lord Abbett"). Distribution of this information to any person other than the person to whom it was originally delivered and to such person's advisers is unauthorized, and any reproduction of these materials, in whole or in part, or the divulgence of any of the contents hereof, without the prior consent of Lord Abbett, is prohibited. The information contained herein is current as of the date of issuance (or such earlier date as referenced herein) and is subject to change without notice. Lord Abbett has no obligation to update any or all of such information. All amounts, market value information, and estimates included herein have been obtained from outside sources where indicated or represent the good faith judgment of Lord Abbett. Where such information has been obtained from outside sources, Lord Abbett cannot guarantee the accuracy or completeness of such information. **These materials are not intended to be an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or any investment management services. These materials do not constitute investment advice and should not be used as the basis for any investment decision.**

These materials do not take into account individual client circumstances, objectives, or needs. No determination has been made regarding the suitability of any securities, financial instruments, or strategies for particular clients or prospects.

The information contained herein is provided on the basis and subject to the explanations, caveats, and warnings set out in this notice and elsewhere herein. Any discussion of risk management is intended to describe Lord Abbett's efforts to monitor and manage risk but does not imply low risk.

These materials do not purport to provide any legal, tax, or accounting advice.

**Any performance targets contained herein are subject to revision, and there can be no assurance that any product or strategy described herein will meet any such performance targets. An investor could lose some or all of its investment in such product or strategy. Past performance is not a guarantee or reliable indicator of future results. Investments are not guaranteed by Lord Abbett, its affiliates, or any governmental agency.**

The financial indices referenced herein as benchmarks are provided for information purposes only. Portfolio holdings and characteristics will differ from those of the benchmark(s), and such differences may be material. Factors affecting portfolio performance that do not affect benchmark performance may include portfolio rebalancing, the timing of cash flows, credit quality, diversification, and differences in volatility. In addition, financial indices do not reflect the impact of fees, applicable taxes, or trading costs, which reduce returns. Unless otherwise noted, financial indices assume reinvestment of dividends. You cannot make a direct investment in an index.

References to specific securities and issuers are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities. The securities referenced may or may not be held in portfolios managed by Lord Abbett and, if such securities are held, no representation is being made that such securities will continue to be held.

The information provided is not directed at any investor or category of investors and is provided solely as general information about Lord Abbett's products and services and to otherwise provide general investment education. None of the information provided should be regarded as a suggestion to engage in or refrain from any investment-related course of action as neither Lord Abbett nor its affiliates are undertaking to provide impartial investment advice, act as an impartial adviser, or give advice in a fiduciary capacity. If you are an individual retirement investor, contact your financial advisor or other fiduciary about whether any given investment idea, strategy, product or service may be appropriate for your circumstances.



KENTUCKY RETIREMENT SYSTEMS  
INVESTMENTS



To: Investment Committee – Kentucky Retirement Systems  
From: Rich Robben, Interim CIO / Andy Kiehl, Director of Investments  
Date: June 27, 2018  
Subject: IFM Infrastructure Debt \ Recommendation

Staff has been diligently researching opportunities in the Real Return asset class for several years, including a diverse group of sectors, strategies, firms, teams and processes. Specifically, staff is determined to identify partners who have an alignment of interest with their investors, and offer a value proposition beneficial to the specific needs of the KRS plans. KRS Staff and KRS Consultant Wilshire, have conducted thorough due diligence on IFM Investors, and the Infrastructure Debt strategy. IFM is a tenured infrastructure asset management firm, owned by 27 independent pension plans, with over \$79B in assets under management around the globe.

Opinion of staff is that IFM offers the best combination of potential return, cash flows, alignment of interests, fee structure and risk profile for investing in the Infrastructure Debt sector in the KRS Pension and Insurance Plans.

Type of Investment: Real Return Rate Infrastructure Debt Instruments

Structure: GP/L d Fund

Target Return:

Management Fee annually on invested capital (35 basis points)

Liquidity: year lock-up, quarterly liquidity thereafter.

Perfor Not

[REDACTED]



# IFM INVESTORS U.S. INFRASTRUCTURE DEBT FUND

7.2

## FIRM OVERVIEW

IFM Investors ("IFM" or the "Firm") is a private investment manager that was established in 1994 by 32 major Australian not-for-profit pension funds. The Firm is now owned by 27 pension funds with over \$78 billion in assets under management across several infrastructure asset classes and investment strategies. IFM has expanded its global presence to include offices in Australia, Europe, North America, and Asia. The Firm is managed by its executive committee, which reports to a Board independent from its owners.

The Firm's credit business launched in 1999 and has since expanded from its initial Australia focus to a global market presence with offices in New York, London, and Melbourne. The infrastructure debt team includes 19 professionals and is led by the Firm's Global Head of Debt Investments.

## INVESTMENT STRATEGY

IFM Investors U.S. Infrastructure Debt Fund (the "Fund") will target below investment grade private debt securities across a range of infrastructure assets predominately located in the US. The Fund will seek to achieve a 6-8% net return – primarily through floating rate senior and junior secured debt investments with a seven-year average maturity. IFM expects investments to be split equally across three broad sectors: midstream, power generation, and social infrastructure. Opportunistic investments are capped at 25% of the Fund.

The investment team is targeting a flexible portfolio composition of approximately equal weights to both primary and secondary deals. IFM intends to leverage its deep-seeded network of relationships to source opportunities from syndicated lenders, sponsors, and directly from secondary sellers.

## TRACK RECORD

Since 2013, IFM has deployed approximately \$122 million into the sub-investment grade infrastructure debt strategy across various investment vehicles and separate accounts. The track record below has been provided by the Firm

Fund	1-Year	2-Years p.a.	3-Years p.a.	Since Inception p.a.*
------	--------	--------------	--------------	-----------------------

Track Record	7.48%	6.42%	6.38%	5.63%
--------------	-------	-------	-------	-------

Source: IFM as of December 31, 2017, net of highest management fee applicable to the Fund.  
 \*Inception as of earliest relevant SMA investment, 2/6/2014  
 \*Past performance is not indicative of future results.



Key: 5 = Top Decile; 4 = Top Quartile; 3 = Average; 2 = Bottom Half; 1 = Bottom Decile; 0 = No Information

Investment Merits	Investment Concerns
<ul style="list-style-type: none"> <li>Institutionalized firm with global infrastructure presence</li> <li>Deep team dedicated to infrastructure debt investing</li> <li>Advantaged sourcing ability through senior team's network of relationships</li> <li>Attractive risk return profile relative to public indices</li> </ul>	<ul style="list-style-type: none"> <li>Team's alignment to the strategy</li> <li>Limited on-strategy track record</li> <li>Rising interest rate environment could adversely impact infrastructure debt returns moving forward</li> <li>Material recent turnover, including the semi-retirement of the Global Head of Credit</li> </ul>

\*Expecting initial investor capital to be fully deployed in 12 to 18 months.  
 \*\*First close and commitment size discounts available.

## FOIA DISCLOSURE



Strictly Confidential

The information contained herein is non-public and proprietary in nature and may constitute trade secrets under federal law, or otherwise protected under Kentucky state law (See Ky. Rev. Stat. Ann. § 61.878(1)(c)(1)) the disclosure of which could have adverse effects on the IFM U.S. Infrastructure Debt Fund or the strategies described herein and their investments. This information includes a detailed account of an investment strategy based on proprietary methods and techniques of financial analysis and valuation.

7.3

IFM has taken reasonable efforts to preserve the confidential nature of this information and derives independent economic value from the fact that such methods and techniques are not widely known. The following confidential information was prepared solely in connection with a proposed investment in the strategies described herein by the Kentucky Retirement Systems and may not be disclosed, reproduced or used for any other purposes.

The following confidential information may be excepted from public disclosure pursuant to Section 552(b)(4) of the Freedom of Information Act, Title 5 of the United States Code, as of 1966, and all related State Law. Any information provided by IFM must be returned upon request. Please advise IFM if the Kentucky Retirement Systems is subject to any additional entity-specific (including, but not limited to, pursuant to internal policies) Freedom of Information Act or similar open records disclosure requirements before any disclosure pursuant to such requirements is made.



# IFM U.S. Infrastructure Debt Fund

Q2 2018



# IMPORTANT NOTICE



## United States

The following disclaimer applies to this document and any information provided regarding the information contained in this document (the "Information"). By accepting this document and Information, you agree to be bound by the following terms and conditions. The Information does not constitute an offer, invitation, solicitation or recommendation in relation to the subscription, purchase or sale of securities in any jurisdiction and neither this presentation nor anything in it will form the basis of any contract or commitment. IFM Investors Pty Ltd, ABN 67 107 247 727, AFS Licence No. 284404, CRD No. 162754, SEC File No. 802-75701 and IFM (US) Securities, LLC ("IFM Investors") will have no liability, contingent or otherwise, to any user of the Information or to third parties, or any responsibility whatsoever, for the correctness, quality, accuracy, timeliness, pricing, reliability, performance or completeness of the Information. In no event will IFM Investors be liable for any special, indirect, incidental or consequential damages which may be incurred or experienced on account of an attendee using Information even if it has been advised of the possibility of such damages. Certain statements in the Information may constitute "forward looking statements." Words such as "expects," "anticipates," "plans," "believes," "scheduled," "estimates" and variations of these words and similar expressions are intended to identify forward-looking statements, which include but are not limited to projections of earnings, performance, and cash flows. These statements involve subjective judgement and analysis and reflect IFM Investors' expectations and are subject to significant uncertainties, risks and contingencies outside the control of IFM Investors which may cause actual results to vary materially from those expressed or implied by these forward looking statements. All forward-looking statements speak only as of the date of this presentation or, in the case of any document incorporated by reference, the date of that document. All subsequent written and oral forward-looking statements attributable to us or any person acting on our behalf are qualified by the cautionary statements in this section. Attendees are cautioned not to rely on such forward looking statements. The achievement of any or all goals of any investment that may be described in this Information is not guaranteed.

Risks of IFM Investors' investment programs typically include: assets of IFM Investors funds may have limited liquidity; distributions are uncertain, a return on your investment is not guaranteed and you may lose all or a substantial amount of your investment; unfavorable economic conditions in the markets in which IFM Investors funds operate could adversely affect your investment; assets acquired with leverage have risks including loss of value and limits on flexibility needed if there are changes in the business or industry.

Liquidity- An investment in the Partnership provides limited liquidity since withdrawal rights are not unqualified and Interests may not be transferred without the prior written consent of the General Partner, which generally may be withheld in its absolute discretion. Although the portfolio investments may generate some current income, they are expected to be generally illiquid.

Valuation- Most of the portfolio investments will be highly illiquid, and will most likely not be publicly traded or readily marketable.

Economic conditions- Interest rates, general levels of economic activity, the price of securities and participation by other investors in the financial markets may affect the value of portfolio investments made by the Master Fund or considered for prospective investment.

An infrastructure debt investment is subject to certain risks including: local, national and international economic conditions; the supply and demand for services from and access to infrastructure; the financial condition of users and suppliers of infrastructure assets; changes in interest rates and broader credit market conditions which may render the purchase, sale or refinancing of infrastructure debt assets difficult or impractical; changes in environmental and planning laws and regulations, and other governmental rules; environmental claims arising in respect of infrastructure acquired with undisclosed or unknown environmental problems or as to which inadequate reserves have been established; changes in energy prices; changes in fiscal and monetary policies; negative economic developments that depress travel; uninsured casualties; force majeure acts, terrorist events, under insured or uninsurable losses; and other factors beyond reasonable control. Please consult the constituent documents for more information on risks specific to infrastructure debt investing.

An investment in any of these investment programs should be made only after careful review of the risk factors described in the related offering documents. This Information may contain material provided by third parties for general reference or interest. While such third party sources are believed to be reliable, IFM Investors does not assume any responsibility for the accuracy or completeness of such information. This Information does not constitute investment, legal, accounting, regulatory, taxation or other advice and the Information does not take into account your investment objectives or legal, accounting, regulatory, taxation or financial situation or particular needs. You are solely responsible for forming your own opinions and conclusions on such matters and for making your own independent assessment of the Information. This Information is confidential and should not be distributed or provided to any other person without the written consent of IFM Investors.



## IFM Investors Infrastructure Debt

- ✓ Predominantly floating-rate exposure
- ✓ Potential liquidity premium available
- ✓ Aligned, pension fund-owned manager
- ✓ 18+ year track record with outperformance relative to the Moody's Default and Recovery Analysis

Past performance does not guarantee future results

# About Us

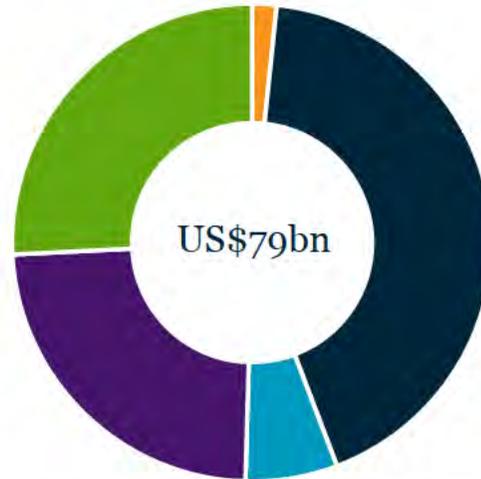


## Investor-owned global fund manager



## Independent Board & Management

## IFM Investors manages USD\$79 billion across four asset classes



- Private Equity \$1bn
- Infrastructure Equity \$34bn
- Infrastructure Debt \$5bn
- Debt \$19bn
- Listed Equity \$20bn

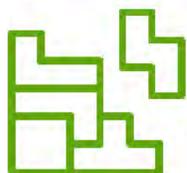
FUM figures as of December 31 2017  
Differences due to rounding

## Eight strategic global locations



- |          |        |           |       |
|----------|--------|-----------|-------|
| New York | Berlin | Melbourne | Tokyo |
| London   | Sydney | Hong Kong | Seoul |

# Why Choose IFM Investors?



## Alignment

- Pension fund-owned manager
- Philosophical alignment with shareholders
- Focused on institutional investors
- Focus on ESG
- Intended IFM capital commitment to proposed strategy



## 18+ Year Platform Track Record

- \$4.9bn FUM<sup>(1)</sup> in infrastructure debt
- Over 150 transactions globally in 18+ years
- Outperformance relative to the Moody's Default and Recovery Analysis<sup>(2)</sup>
- Established team of 19 infrastructure debt specialists



## Pipeline

- \$148bn global infrastructure debt issuance in 2016<sup>(3)</sup>
- \$3.2bn deployed since 2013 across both primary and secondary deals
- \$2bn+ ongoing pipeline across a range of sub-sectors and geographies<sup>(4)</sup>

Past performance does not guarantee future results

(1) FUM figures in USD billions as of December 31 2017.

(2) Moody's Infrastructure Default and Recovery Rates, 1983-2016 (published July 27, 2017); Moody's Default and Recovery Rates for Project Finance Bank Loans, 1983-2015 (published March 6, 2017); Moody's Special Comment: Annual Default Study: Corporate Default and Recovery Rates, 1920-2013.

(3) Dealogic, ProjectWare – as of December 31 2016. Issuance represents US, Canada, Europe, and Australia. Average figures cover infrastructure debt issuances from 2006 through 2016.

(4) As of December 31 2017

# Global Infrastructure Debt Team



## New York

Years  
of Experience

- Richard Randall, Global Head of Debt Investments: 20+ years
- Matthew Wade, Executive Director: 15+ years
- Jessica Thompson, Investment Director: 10+ years
- Joseph Braun, Associate Director: 10+ years
- Hannah Lindberg, Associate Director: 6+ years
- Peter Mordue, Associate Director: 10+ years

## Melbourne

- Scott Barker, Regional Head of APAC Debt Investments: 20+ years
- Kevin Lewis, Executive Director: 25+ years
- Niranjana Ravindran, Investment Director: 17+ years
- Jing Guo, Investment Director: 15+ years
- Hiran Wanigasekera, Investment Director: 14+ years
- Nick Zannis, Associate Director: 14+ years
- Rachel Fleming, Analyst: 4+ years

## London

- David Cooper, Regional Head of EMEA Debt Investments: 20+ years
- John Carey, Investment Director: 15+ years
- Chris Purcell, Associate Director: 10+ years
- Victor Mateu, Associate: 10+ years
- Cyrielle Bachelin, Associate: 7+ years
- Aksel Kivinurk, Analyst: 9+ years

An aerial photograph of a city skyline, likely New York City, featuring several prominent skyscrapers. The image is overlaid with a semi-transparent teal color. In the foreground, there is a park area with trees and a walkway. The text "Infrastructure Debt Overview" is centered in a white, serif font.

# Infrastructure Debt Overview

# Infrastructure Debt: Key Value Proposition



Infrastructure debt is a specialized class of debt that aims to generate premiums over comparable corporate credits with lower risk of loss<sup>(2),(3)</sup>



## Relatively Higher Returns

- Illiquidity premium
- Complexity in accessing, analyzing and pricing the asset
- Specialist origination offers advantage especially in the secondary market

## Relatively Lower Risk

- Infrastructure debt securities have experienced lower average cumulative default rates and higher recovery rates than comparable non-financial corporate issuers<sup>(1)</sup>
- In turn infrastructure debt assets have demonstrated:
  - Greater credit stability – i.e. lower propensity to default
  - In the event of a work-out, tends to lead to higher recovery rates
- Predominantly floating-rate debt, mitigating interest rate risk

<sup>(1)</sup> Moody's Infrastructure Default and Recovery Rates, 1983-2016 (published July 27, 2017); Moody's Default and Recovery Rates for Project Finance Bank Loans, 1983-2015 (published March 6, 2017); Moody's Special Comment: Annual Default Study: Corporate Default and Recovery Rates, 1920-2013.

<sup>(2)</sup> Dealogic/Projectware, Bloomberg, and IFM Investors infrastructure debt team's proprietary database of infrastructure transactions. As of December 31, 2016.

<sup>(3)</sup> There is no guarantee that these premiums will be realized.

# Infrastructure Investment Universe



2016 global infrastructure debt issuance stood at \$148bn<sup>(1)</sup>, 10% above the average annual issuance over the past decade



## Transportation

- Airports
- Port Facilities
- Roads
- Bridges & Tunnels
- Rail
- Airplane Leasing



## Utilities

- Water & Sewerage
- Transmission
- Distribution Networks
- Interconnectors



## Power Generation & Midstream

- Wind (onshore & offshore)
- Solar
- Gas-fired generation, gas gathering, pipeline, E&P
- Waste to Energy
- District Heating
- Biomass
- Gas Liquefaction (LNG)
- Storage (gas, oil, chemicals)



## Social Infrastructure

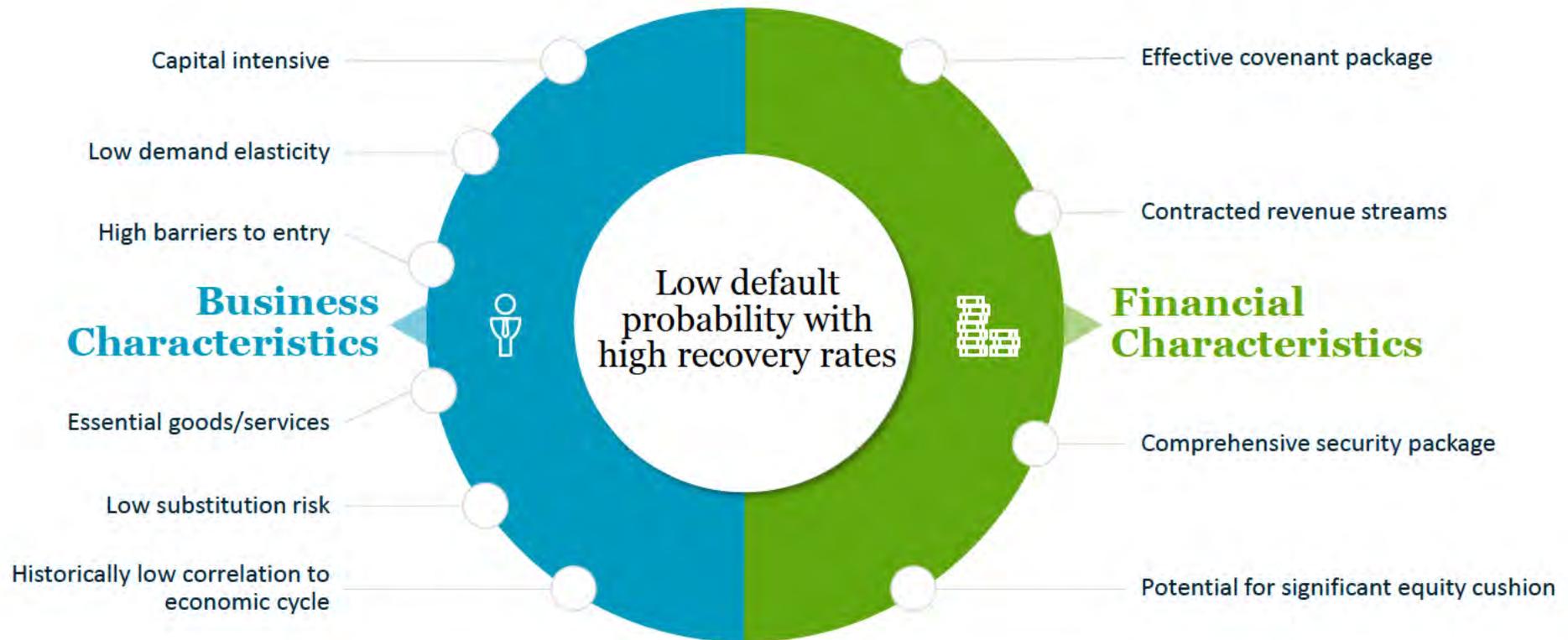
- Healthcare Facilities
- Schools
- Student Accommodation
- Government Offices & Courts
- Street Lighting
- Social Housing
- Telecommunications
- Satellites

<sup>(1)</sup> Debt Issuance Figures Source: Dealogic, ProjectWare. Issuance represents US, Canada, Europe, and Australia.

# Infrastructure Debt Key Characteristics



Typically assets with monopolistic characteristics, low demand risk and financial safeguards

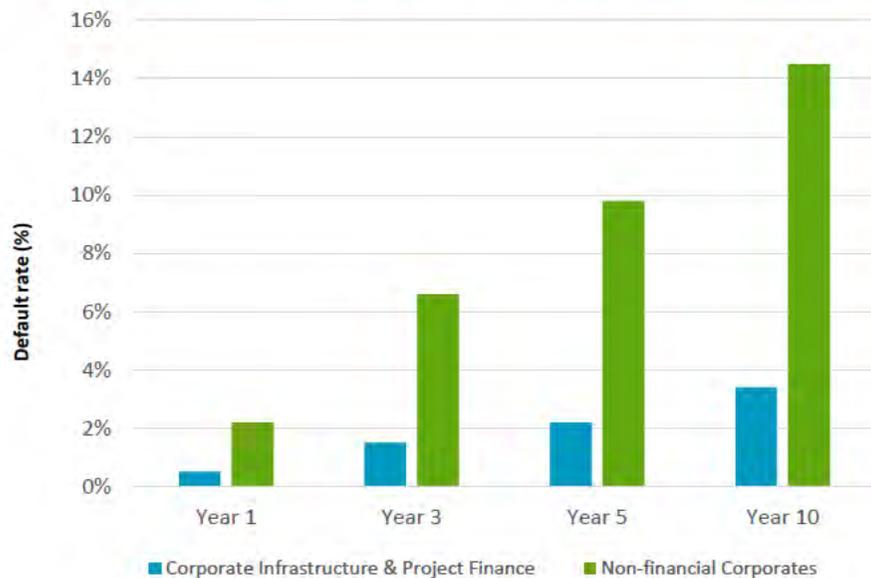


# Infrastructure Debt – Risk Profile

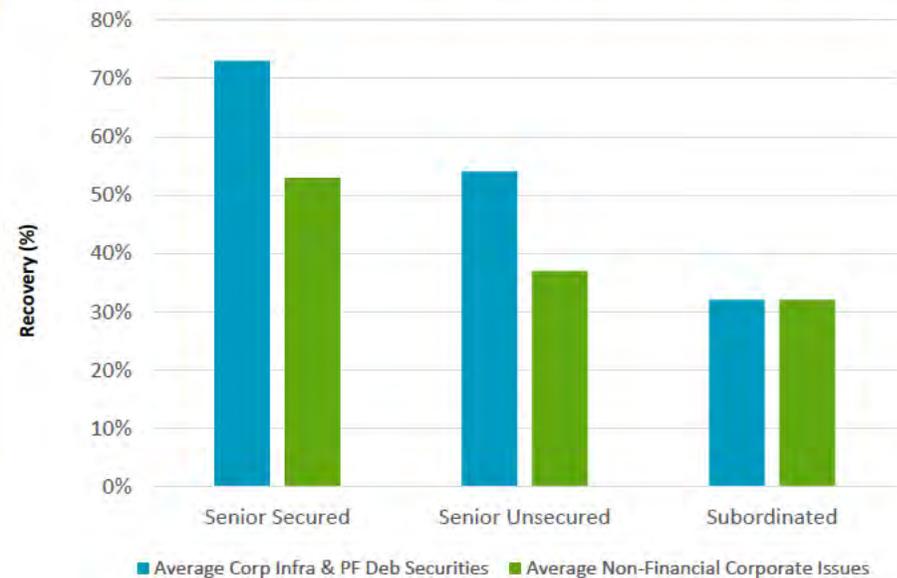


Independent empirical evidence shows lower default rates and higher recovery rates for senior infrastructure debt versus comparable corporate debt

### Moody's Cumulative Default Rate Analysis<sup>(1)</sup>



### Moody's Average Recovery Rate Analysis<sup>(1)</sup>



<sup>(1)</sup> Moody's Infrastructure Default and Recovery Rates, 1983-2016 (published July 27, 2017).

# Global Infra Debt Market Overview



## Canada

**2016 Infrastructure Debt Issuance: \$8.4bn**  
**Average Infrastructure Debt Issuance: \$8bn**  
**Credit Profile:** *Primarily Investment Grade*

**Tenors:** *IG: 10-30 years*

**Sectors:** *Economic and social infrastructure, power generation (traditional / renewable), and midstream*

**Floating vs Fixed:** *71% vs 29% (in 2016)*

## United States

**2016 Infrastructure Debt Issuance: \$53bn**  
**Average Infrastructure Debt Issuance: \$41bn**  
**Credit Profile:** *Investment Grade & Sub Investment Grade*

**Tenors:** *IG: 10-30 years; Sub IG: 5-10 years*

**Sectors:** *Power generation (traditional / renewable), transmission, midstream, economic infrastructure, social infrastructure*

**Floating vs Fixed:** *80% vs 20% (in 2016)*

## UK/Western Europe

**2016 Infrastructure Debt Issuance: \$59bn**  
**Average Infrastructure Debt Issuance: \$60bn**  
**Credit Profile:** *Investment Grade & Sub Investment Grade*

**Tenors:** *IG: 10-30 years; Sub IG: 5-10 years*

**Sectors:** *Economic and social infrastructure, power generation (traditional / renewable), and midstream*

**Floating vs Fixed:** *91% vs 9% (in 2016)*

## Australia

**2016 Infrastructure Debt Issuance: \$28bn**  
**Average Infrastructure Debt Issuance: \$25bn**  
**Credit Profile:** *Primarily Investment Grade*

**Tenors:** *IG: 10-30 years*

**Sectors:** *Economic and social infrastructure, power generation (traditional / renewable), and midstream*

**Floating vs Fixed:** *95% vs 5% (in 2016)*

# U.S. Sub-Investment Grade Market Overview

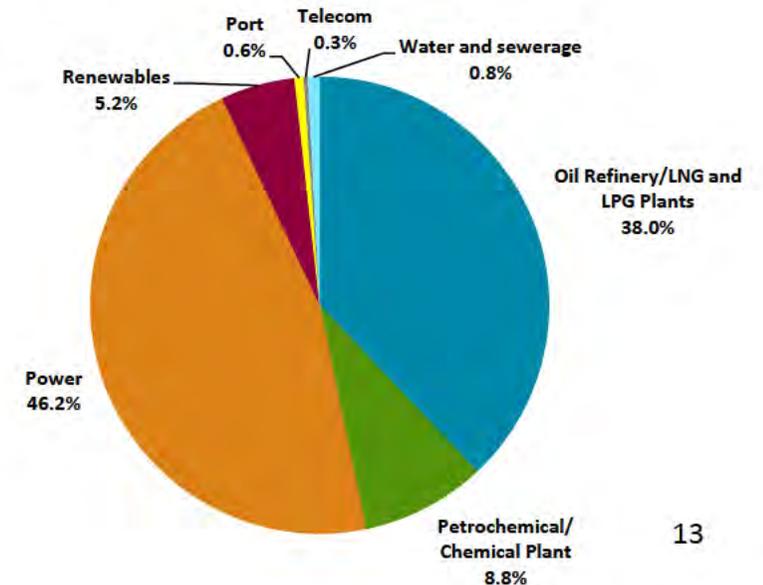
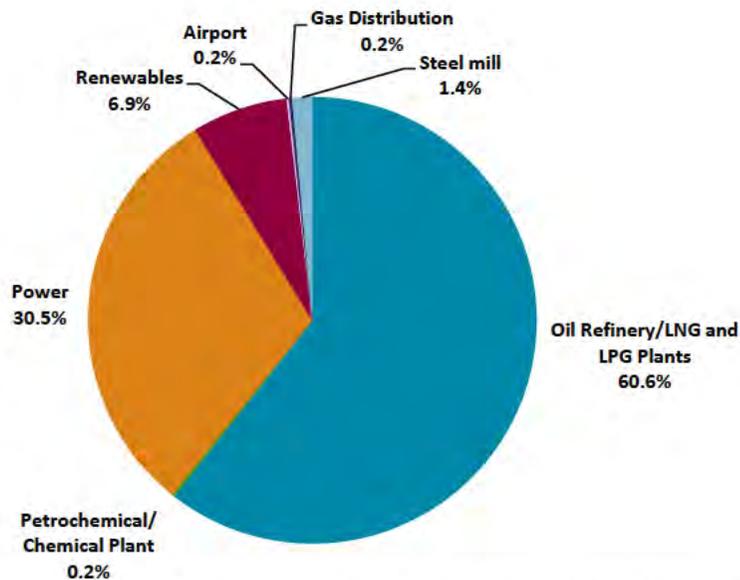
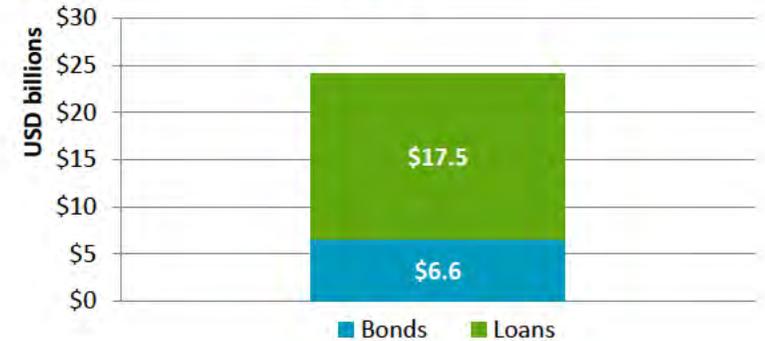


~47% infrastructure debt issued in the United States in 2016 and 2015 had a sub-investment grade credit profile

2015



2016





*One purpose. Shared prosperity.*

The following disclaimer applies to this document and any information provided regarding the information contained in this document (the "Information"). By accepting this document and Information, you agree to be bound by the following terms and conditions. The Information does not constitute an offer, invitation, solicitation or recommendation in relation to the subscription, purchase or sale of securities in any jurisdiction and neither this presentation nor anything in it will form the basis of any contract or commitment. IFM Investors Pty Ltd, ABN 67 107 247 727, AFS Licence No. 284404, CRD No. 162754, SEC File No. 802-75701 and IFM (US) Securities, LLC ("IFM Investors") will have no liability, contingent or otherwise, to any user of the Information or to third parties, or any responsibility whatsoever, for the correctness, quality, accuracy, timeliness, pricing, reliability, performance or completeness of the Information. In no event will IFM Investors be liable for any special, indirect, incidental or consequential damages which may be incurred or experienced on account of an attendee using Information even if it has been advised of the possibility of such damages. Certain statements in the Information may constitute "forward looking statements." Words such as "expects," "anticipates," "plans," "believes," "scheduled," "estimates" and variations of these words and similar expressions are intended to identify forward-looking statements, which include but are not limited to projections of earnings, performance, and cash flows. These statements involve subjective judgment and analysis and reflect IFM Investors' expectations and are subject to significant uncertainties, risks and contingencies outside the control of IFM Investors which may cause actual results to vary materially from those expressed or implied by these forward looking statements. All forward-looking statements speak only as of the date of this presentation or, in the case of any document incorporated by reference, the date of that document. All subsequent written and oral forward-looking statements attributable to us or any person acting on our behalf are qualified by the cautionary statements in this section. Attendees are cautioned not to rely on such forward looking statements. The IRRs presented on a "gross" basis do not reflect any management fees, carried interest, taxes and allocable expenses borne by investors, which in the aggregate may be substantial. The achievement of any or all goals of any investment that may be described in this Information is not guaranteed. Risks of IFM Investors' investment programs typically include: assets of IFM Investors funds may have limited liquidity; distributions are uncertain, a return on your investment is not guaranteed and you may lose all or a substantial amount of your investment; unfavorable economic conditions in the markets in which IFM Investors funds operate could adversely affect your investment; assets acquired with leverage have risks including loss of value and limits on flexibility needed if there are changes in the business or industry. An investment in any of these investment programs should be made only after careful review of the risk factors described in the related offering documents. This Information may contain material provided by third parties for general reference or interest. While such third party sources are believed to be reliable, IFM Investors does not assume any responsibility for the accuracy or completeness of such information. This Information does not constitute investment, legal, accounting, regulatory, taxation or other advice and the Information does not take into account your investment objectives or legal, accounting, regulatory, taxation or financial situation or particular needs. You are solely responsible for forming your own opinions and conclusions on such matters and for making your own independent assessment of the Information. This Information is confidential and should not be distributed or provided to any other person without the written consent of IFM Investors.

**CONTACT:**

Christopher Falzon, CFA  
Vice President, Product Specialist  
Phone: +1 212 784 2289  
Email: [christopher.falzon@ifminvestors.com](mailto:christopher.falzon@ifminvestors.com)  
**IFM (US) Securities, LLC**  
**Member: FINRA/SIPC**



## Wilshire Private Markets

# IMPORTANT INFORMATION

This Presentation contains confidential and proprietary information of Wilshire Private Markets ("WPM"), a business unit of Wilshire Associates, and is intended for the exclusive use of the person to whom it is provided. It may not be disclosed, reproduced or redistributed, in whole or in part, to any other person or entity without prior written permission from WPM. This presentation is for information only and is being provided exclusively to recipients reasonably believed to be qualified to invest, as defined in the relevant jurisdiction of the prospective investor, in the types of investments discussed and as generally managed or recommended by WPM. This presentation is a marketing communication. It is not intended to represent investment research or investment advice. This Presentation is not an offer to sell, or a solicitation to an offer to buy, any security or to adopt any specific investment strategy. Nothing contained herein should be considered a recommendation or advice to purchase or sell any security or to adopt any specific investment strategy. By accepting this information you agree you have a duty to keep confidential the information contained herein.

Third party information contained herein has been obtained from sources believed to be reliable. WPM makes no representations or warranties as to the accuracy of such information, and WPM accepts no responsibility or liability (including for indirect, consequential or incidental damages) for any error, omission or inaccuracy in such information and for results obtained from its use. Information and opinions are as of the date indicated, and are subject to change without notice. This Presentation is intended for informational purposes only and should not be construed as legal, accounting, tax, investment, or other professional advice.

Past performance does not guarantee future returns.

Any opinions expressed in this Presentation are current only as of the time made and are subject to change without notice. WPM assumes no duty to update any such statements. Any holdings of a particular company or security discussed herein are under periodic review by the author and are subject to change at any time, without notice. This Presentation may include estimates, projections and other "forward-looking statements." Due to numerous factors, actual events may differ substantially from those presented.

These materials do not disclose all the risks and other significant issues related to an investment in any proposed transactions described herein. Prior to entering into any such transactions, potential investors should ensure that they fully understand the terms of that proposed transaction and any applicable risks, some, but not all, of which are described in more detail in any offering documents, if applicable, or may be discussed with representatives of WPM.

WPM, its officers, directors, employees or clients may have positions in securities or investments mentioned in this presentation, which positions may change at any time, without notice.

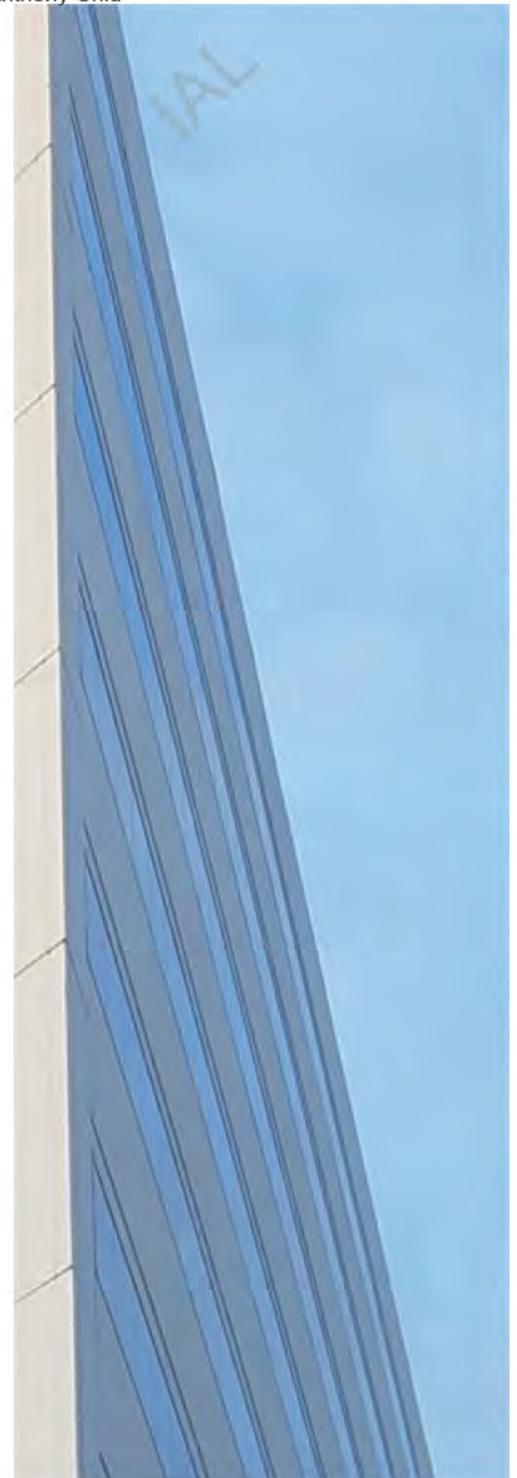
Wilshire® is a registered service mark of Wilshire Associates Incorporated, Santa Monica, California. All other trade names, trademarks, and/or service marks are the property of their respective holders. Copyright © 2017 Wilshire Associates Incorporated. All rights reserved.

## Wilshire Private Markets AGENDA

### PRIVATE EQUITY PORTFOLIO IMPLEMENTATION – PENSION & INSURANCE

#### APPENDIX

- HISTORICAL PERFORMANCE
- IFM INVESTORS U.S. INFRASTRUCTURE DEBT  
FUND FOCUS LIST REPORT SUMMARY



IAL

8



# PRIVATE EQUITY PORTFOLIO IMPLEMENTATION – PENSION & INSURANCE



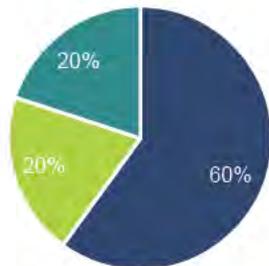
## Wilshire Private Markets

# PRIVATE EQUITY TARGET PORTFOLIO CONSTRUCTION – PENSION & INSURANCE

Investment Type	Future Commitment (\$M)	% Total Future Commitment	Future Annual Commitments (\$M) <sup>1</sup>			
			2018	2019	2020	2021
<b>Total Future Commitments</b>	<b>1,200</b>	<b>100%</b>	<b>300</b>	<b>300</b>	<b>300</b>	<b>300</b>
Buyout	720	60%	175	180	185	180
Distressed / Special Situations	240	20%	65	55	60	60
Venture / Growth	240	20%	60	65	55	60
<i>Number of Funds</i> <sup>2</sup>	<i>34</i>		<i>7</i>	<i>9</i>	<i>9</i>	<i>9</i>
<i>Average Deal Size</i>	<i>35</i>		<i>43</i>	<i>33</i>	<i>33</i>	<i>33</i>

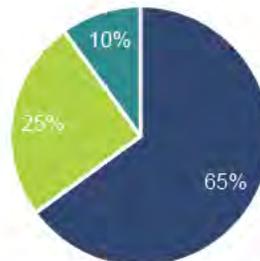
8

Target Commitment by Sector\*



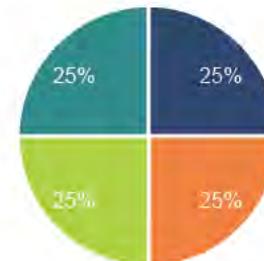
- Buyout
- Distressed / Special Situations
- Venture / Growth

Target Commitment by Geography\*



- U.S.
- Europe
- Asia-Pacific

Target Commitment by Vintage\*



- 2018
- 2019
- 2020
- 2021

<sup>1</sup> For this presentation, Future Commitment is defined as commitments made by KRS during the four-year pacing and portfolio implementation timeline (e.g. 2018-2021). Future Commitments on this page are representative of both plans' combined annual commitments and number of funds recommended. WPM Analysis excluded KERS and SPRS pension plan segments in future portfolio pacing and implementation.

<sup>2</sup> Number of funds includes commitments from both the pension and insurance plans.

\*Portfolio allocation implementation should be +/- 5% of these targets.

5



## Wilshire Private Markets

# 2018 KRS PRIVATE EQUITY PORTFOLIO IMPLEMENTATION – PENSION & INSURANCE

Fund	General Partner	Geography	Vintage	Future Commitment Pension (\$M)*	Future Commitment Insurance (\$M)*	Total Future Commitment (\$M)*	Target Allocation Percent
<b>Total</b>				<b>200</b>	<b>100</b>	<b>300</b>	<b>100%</b>
<b>Buyout</b>				<b>117</b>	<b>58</b>	<b>175</b>	<b>58%</b>
<i>Reserved Buyout U.S. 2018</i>	TBD	U.S.	2018	37	18	55	18%
<i>Reserved Buyout U.S. 2018</i>	TBD	U.S.	2018	34	16	50	17%
<i>Reserved Buyout Europe 2018</i>	TBD	Europe	2018	32	18	50	17%
<i>Reserved Buyout Asia-Pacific 2018</i>	TBD	Asia-Pacific	2018	13	7	20	7%
<b>Distressed / Special Situations</b>				<b>43</b>	<b>22</b>	<b>65</b>	<b>22%</b>
Strategic Value Special Situations Fund IV	Strategic Value Partners	U.S.	2018	43	22	65	22%
<b>Venture / Growth</b>				<b>40</b>	<b>20</b>	<b>60</b>	<b>20%</b>
<i>Reserved Venture / Growth U.S. 2018</i>	TBD	U.S.	2018	27	13	40	13%
<i>Reserved Venture / Growth Europe 2018</i>	TBD	Europe	2018	14	6	20	7%

8

\* For this presentation, Future Commitment is defined as KRS' allocations within the four-year pacing and portfolio implementation horizon (e.g. 2018-2021). Future Allocation should be +/- 5% of KRS' target allocations. WPM has excluded the KERS and SPRS plan commitments and total values from the portfolio pacing and implementation analysis

IAL



8

# APPENDIX



## Wilshire Private Markets

# KRS PORTFOLIO AND HISTORICAL PERFORMANCE – PENSION

Fund	General Partner	Geography	Vintage	Currency	Existing Commitment (\$M)	Total Contributions (\$M)	Total Distributions (\$M)	Remaining Value (\$M)	TVPI*	TVPI Quartile	IRR*	IRR Quartile
<b>Total</b>					<b>2,526</b>	<b>2,558</b>	<b>2,640</b>	<b>1,215</b>				
<b>Buyout</b>					<b>1,339</b>	<b>1,492</b>	<b>1,704</b>	<b>649</b>				
JW Childs Equity Partners III, L.P.	J.W. Childs Associates	North America	2002	USD	36	35	70	0	2.0x	2nd	16%	3rd
Green Equity Investors IV, L.P.	Leonard Green & Partners	North America	2003	USD	68	65	126	4	2.0x	2nd	11%	3rd
Oak Hill Capital Partners II, L.P.	Oak Hill Capital Partners	North America	2005	USD	68	67	110	3	1.7x	2nd	10%	2nd
Warburg Pincus Private Equity IX, L.P.	Warburg Pincus LLC	North America	2005	USD	50	90	128	5	1.5x	3rd	8%	3rd
New Mountain Partners II, L.P.	New Mountain Capital LLC	North America	2005	USD	25	41	68	1	1.7x	2nd	12%	2nd
Golder Thoma Cressey Rauner IX-A, L.P.	GTCR	North America	2006	USD	63	60	100	6	1.8x	2nd	14%	1st
Blackstone Capital Partners V, L.P.	Blackstone Group	Global	2006	USD	48	108	134	6	1.3x	3rd	5%	4th
Arbor Capital II, L.P.	Arbor Investments	North America	2006	USD	23	19	42	5	2.5x	1st	20%	1st
Green Equity Investors V, L.P.	Leonard Green & Partners	North America	2007	USD	90	92	141	52	2.1x	2nd	18%	2nd
Warburg, Pincus Private Equity X, L.P.	Warburg Pincus	Global	2007	USD	39	59	59	18	1.3x	4th	6%	4th
Harvest Partners V, L.P.	Harvest Partners	North America	2007	USD	36	33	54	9	1.9x	2nd	19%	2nd
New Mountain Partners III, L.P.	New Mountain Capital LLC	North America	2007	USD	34	57	65	23	1.5x	3rd	11%	3rd
Oak Hill Capital Partners III, L.P.	Oak Hill Capital Partners	North America	2007	USD	34	91	88	18	1.2x	4th	4%	4th
Hellman and Friedman Capital Partners VI, L.P.	Hellman & Friedman	North America	2007	USD	20	61	80	5	1.4x	4th	10%	3rd
Crestview Partners II, L.P.	Crestview Partners	North America	2008	USD	68	76	88	57	1.9x	2nd	16%	2nd
Vista Equity Partners III, L.P.	Vista Equity Partners	North America	2008	USD	45	47	111	12	2.6x	1st	29%	1st
Mill Road Capital I, L.P.	Mill Road Capital	North America	2008	USD	27	24	24	20	1.9x	2nd	12%	3rd
Tenaska Power Fund II, L.P.	Tenaska Capital Management LLC	Global	2008	USD	27	24	21	1	0.9x	4th	-2%	4th
Blackstone Capital Partners VI, L.P.	Blackstone Group	Global	2011	USD	60	62	32	57	1.4x	3rd	12%	3rd
Vista Equity Partners IV, L.P.	Vista Equity Partners	North America	2011	USD	27	27	30	21	1.9x	2nd	18%	2nd
Green Equity Investors VI, L.P.	Leonard Green & Partners	North America	2012	USD	32	34	17	32	1.4x	3rd	14%	3rd
Harvest Partners VI, L.P.	Harvest Partners	North America	2012	USD	28	30	32	20	1.7x	2nd	21%	2nd
Levine Leichtman Capital Partners V, L.P.	Levine Leichtman Capital Partners	North America	2013	USD	46	58	26	44	1.2x	3rd	11%	3rd
Riverside Capital Appreciation Fund VI, L.P.	Riverside Company	North America	2013	USD	36	32	12	34	1.4x	2nd	17%	2nd
Triton Fund IV, L.P.	Triton Partners	Europe	2013	EUR	30	27	11	22	1.2x	4th	11%	3rd
H.I.G. Capital Partners V, L.P.	H.I.G. Capital LLC	North America	2013	USD	13	8	1	8	1.3x	3rd	17%	2nd
New Mountain Partners IV, L.P.	New Mountain Capital	North America	2014	USD	33	29	6	33	1.3x	2nd	18%	2nd
CVC European Equity Partners VI, L.P.	CVC Capital Partners	Europe	2014	EUR	26	25	6	24	1.2x	3rd	14%	3rd
Crestview Partners III, L.P.	Crestview Partners	North America	2015	USD	39	15	0	17	1.1x	3rd	7%	3rd
Kayne Anderson Energy Fund VII, L.P.	Kayne Anderson Capital Advisors	North America	2016	USD	50	43	17	42	1.4x	NM	40%	NM
Vista Equity Partners VI, L.P.	Vista Equity Partners	North America	2016	USD	25	20	2	19	1.1x	NM	5%	NM
Harvest Partners VII, L.P.	Harvest Partners	North America	2016	USD	20	7	1	6	1.0x	NM	-2%	NM
KCP IV Co-Invest L.P.	Keyhaven Capital	Europe	2016	EUR	14	7	0	7	1.0x	NM	-1%	NM
Levine Leichtman Capital Partners VI, L.P.	Levine Leichtman Capital Partners	North America	2017	USD	38	12	3	9	1.0x	NM	-1%	NM
Green Equity Investors VII, L.P.	Leonard Green and Partners	North America	2017	USD	25	8	0	7	1.0x	NM	-10%	NM

Benchmark information based on Preqin most up-to-date information Buyout, Distressed / Special Situations, Fund of Funds, Mezzanine, and Venture / Growth funds per vintage and region.  
\* TVPI and IRR performance numbers as of Q4 2017. Please refer to WPM's most recent quarterly report for further information.



## Wilshire Private Markets

# KRS PORTFOLIO AND HISTORICAL PERFORMANCE – PENSION

Fund	General Partner	Geography	Vintage	Currency	Existing Commitment (\$M)	Total Contributions (\$M)	Total Distributions (\$M)	Remaining Value (\$M)	TVPI*	TVPI Quartile	IRR*	IRR Quartile
<b>Distressed Debt / Special Situations</b>					<b>434</b>	<b>435</b>	<b>473</b>	<b>89</b>				
MatlinPatterson Global Opportunities Partners	MatlinPatterson Global Advisers	Global	2003	USD	45	47	82	0	1.8x	2nd	30%	2nd
MatlinPatterson Global Opportunities Partners II	MatlinPatterson Global Advisers	Global	2004	USD	45	67	37	1	0.6x	Below Median	-21%	Below Median
Wayzata Opportunities Fund, L.P.	Wayzata Investment Partners	North America	2005	USD	68	100	143	0	1.4x	2nd	8%	2nd
Wayzata Opportunities Fund II, L.P.	Wayzata Investment Partners	North America	2007	USD	68	79	144	4	1.9x	1st	17%	1st
MatlinPatterson Global Opportunities Partners III	MatlinPatterson Global Advisers	Global	2007	USD	45	56	53	19	1.3x	3rd	6%	3rd
CM Growth Capital Partners, L.P.	The Camelot Group	North America	2010	USD	23	23	1	11	0.5x	4th	-10%	4th
Wayzata Opportunities Fund III, L.P.	Wayzata Investment Partners	North America	2013	USD	36	17	9	8	1.0x	4th	0%	4th
BDCM Opportunity Fund IV, L.P.	Black Diamond Capital Mgmt.	Global	2015	USD	36	25	2	28	1.2x	1st	13%	3rd
Ares Special Situations Fund IV, L.P.	Ares Management	Global	2015	USD	26	17	2	12	0.8x	4th	-12%	4th
Strategic Value Special Situations Feeder Fund IV	Strategic Value Partners	Global	2017	USD	43	4	0	4	1.0x	NM	NM	NM
<b>Venture Capital / Growth Equity</b>					<b>337</b>	<b>330</b>	<b>280</b>	<b>156</b>				
VantagePoint Venture Partners IV, L.P.	VantagePoint Capital Partners	Global	2003	USD	36	27	31	3	1.3x	2nd	4%	3rd
Columbia Capital Equity Partners IV, L.P.	Columbia Capital	North America	2005	USD	27	27	54	5	2.2x	1st	12%	1st
H.I.G. Venture Partners II, L.P.	H.I.G. Capital Management	North America	2005	USD	18	18	15	8	1.3x	2nd	4%	2nd
DAG Ventures II, L.P.	Duff Ackerman & Goodrich LLC	North America	2006	USD	27	28	11	6	0.6x	4th	-6%	4th
VantagePoint Venture Partners 2006, L.P.	VantagePoint Capital Partners	Global	2006	USD	27	27	2	7	0.4x	4th	-16%	4th
Institutional Venture Partners XII, L.P.	Institutional Venture Partners	North America	2007	USD	27	27	61	10	2.6x	1st	26%	1st
DAG Ventures III, L.P.	Duff Ackerman & Goodrich LLC	North America	2007	USD	27	27	39	5	1.6x	2nd	9%	3rd
DAG Ventures IV, L.P.	Duff Ackerman & Goodrich LLC	North America	2008	USD	90	90	38	49	1.0x	3rd	-1%	4th
Essex Woodlands Fund VIII, L.P.	Essex Woodlands Health Ventures	North America	2008	USD	23	31	18	13	1.0x	3rd	0%	3rd
DCM VI, L.P.	DCM	North America	2010	USD	14	12	2	13	1.3x	3rd	5%	4th
H.I.G. BioVentures II, L.P.	H.I.G. Capital LLC	North America	2011	USD	14	8	2	9	1.4x	3rd	13%	3rd
DAG Ventures V, L.P.	Duff Ackerman & Goodrich LLC	North America	2011	USD	8	8	5	27	3.9x	1st	33%	1st
<b>Fund of Funds</b>					<b>389</b>	<b>276</b>	<b>145</b>	<b>316</b>				
Bay Hills Capital I, L.P.	Bay Hills Capital	Global	2007	USD	68	46	65	24	1.9x	1st	13%	1st
Bay Hills Emerging Partners II, L.P.	Bay Hills Capital	Global	2009	USD	90	76	37	118	2.0x	1st	21%	1st
Horsley Bridge International Fund V, L.P.	Horsley Bridge Partners LLC	Global	2009	USD	45	43	15	60	1.8x	1st	16%	1st
Arcano KRS Fund I, L.P.	Arcano Group	Global	2010	USD	36	28	7	31	1.3x	4th	7%	4th
Keyhaven Capital Partners Fund III, L.P.	Keyhaven Capital Partners Ltd	Europe	2010	EUR	31	26	11	23	1.3x	2nd	10%	Above Median
Bay Hills Capital III, L.P.	Bay Hills Capital	Global	2013	USD	81	34	3	36	1.2x	3rd	9%	3rd
Secondary Opportunities Fund III, L.P.	Deutsche Alternative Asset Mgmt.	Global	2014	USD	25	18	6	16	1.3x	1st	21%	1st
Keyhaven Capital Partners Fund IV, L.P.	Keyhaven Capital Partners Ltd	Europe	2016	EUR	14	5	0	8	1.5x	NM	38%	NM
<b>Private Credit / Mezzanine</b>					<b>27</b>	<b>25</b>	<b>39</b>	<b>6</b>				
Merit Mezzanine Fund IV, L.P.	Merit Capital Partners	North America	2005	USD	27	25	39	6	1.8x	1st	11%	1st

Benchmark information based on Preqin most up-to-date information Buyout, Distressed / Special Situations, Fund of Funds, Mezzanine, and Venture / Growth funds per vintage and region.  
\* TVPI and IRR performance numbers as of Q4 2017. Please refer to WPM's most recent quarterly report for further information.



## Wilshire Private Markets

# KRS PORTFOLIO AND HISTORICAL PERFORMANCE – INSURANCE

Fund	General Partner	Geography	Vintage	Currency	Existing Commitment (\$M)	Total Contributions (\$M)	Total Distributions (\$M)	Remaining Value (\$M)	TVPI*	TVPI Quartile	IRR*	IRR Quartile
<b>Total</b>					<b>890</b>	<b>696</b>	<b>490</b>	<b>514</b>				
<b>Buyout</b>					<b>511</b>	<b>428</b>	<b>320</b>	<b>315</b>				
JW Childs Equity Partners III, L.P.	J.W. Childs Associates	North America	2002	USD	4	4	8	0	2.0x	2nd	16%	3rd
Green Equity Investors IV, L.P.	Leonard Green & Partners	North America	2003	USD	8	7	14	0	2.0x	2nd	11%	3rd
Warburg Pincus Private Equity IX, L.P.	Warburg Pincus LLC	North America	2005	USD	10	10	16	1	1.8x	2nd	10%	3rd
Oak Hill Capital Partners II, L.P.	Oak Hill Capital Partners	North America	2005	USD	8	7	12	0	1.7x	2nd	10%	3rd
New Mountain Partners II, L.P.	New Mountain Capital LLC	North America	2005	USD	5	5	9	0	2.0x	1st	14%	2nd
Blackstone Capital Partners V, L.P.	Blackstone Group	Global	2006	USD	13	12	20	1	1.7x	2nd	8%	3rd
Golder Thoma Cressey Rauner IX-A, L.P.	GTCR	North America	2006	USD	7	7	11	1	1.8x	2nd	14%	1st
Arbor Capital II, L.P.	Arbor Investments	North America	2006	USD	3	2	5	1	2.5x	1st	20%	1st
Oak Hill Capital Partners III, L.P.	Oak Hill Capital Partners	North America	2007	USD	13	14	16	7	1.6x	3rd	10%	3rd
Green Equity Investors V, L.P.	Leonard Green & Partners	North America	2007	USD	10	10	16	6	2.1x	2nd	18%	2nd
New Mountain Partners III, L.P.	New Mountain Capital LLC	North America	2007	USD	8	8	10	5	1.8x	3rd	13%	3rd
Hellman and Friedman Capital Partners VI, L.P.	Hellman & Friedman	North America	2007	USD	8	7	12	2	1.9x	2nd	13%	3rd
Warburg, Pincus Private Equity X, L.P.	Warburg Pincus LLC	Global	2007	USD	8	7	8	4	1.6x	3rd	8%	3rd
Harvest Partners V, L.P.	Harvest Partners	North America	2007	USD	4	4	6	1	1.9x	2nd	19%	2nd
Crestview Partners II, L.P.	Crestview Partners	North America	2008	USD	8	8	10	6	1.9x	2nd	16%	2nd
Vista Equity Partners III, L.P.	Vista Equity Partners	North America	2008	USD	5	5	12	1	2.6x	1st	29%	1st
Mill Road Capital I, L.P.	Mill Road Capital	North America	2008	USD	3	3	3	2	1.9x	2nd	12%	3rd
Tenaska Power Fund II, L.P.	Tenaska Capital Management	Global	2008	USD	3	3	2	0	0.9x	4th	-2%	4th
Blackstone Capital Partners VI, L.P.	Blackstone Group	Global	2011	USD	40	41	21	38	1.4x	3rd	12%	3rd
Vista Equity Partners IV, L.P.	Vista Equity Partners	North America	2011	USD	23	23	26	18	1.9x	2nd	18%	2nd
Green Equity Investors VI, L.P.	Leonard Green & Partners	North America	2012	USD	28	30	15	28	1.4x	3rd	14%	3rd
Harvest Partners VI, L.P.	Harvest Partners	North America	2012	USD	12	12	13	8	1.7x	2nd	21%	2nd
Levine Leichtman Capital Partners V, L.P.	Levine Leichtman Capital Partners	North America	2013	USD	24	30	14	23	1.2x	3rd	11%	3rd
Riverside Capital Appreciation Fund VI, L.P.	Riverside Company	North America	2013	USD	19	17	6	18	1.4x	2nd	17%	2nd
Triton Fund IV, L.P.	Triton Partners	Europe	2013	EUR	16	14	6	12	1.2x	4th	11%	3rd
H.I.G. Capital Partners V, L.P.	H.I.G. Capital LLC	North America	2013	USD	7	4	1	4	1.3x	3rd	17%	2nd
New Mountain Partners IV, L.P.	New Mountain Capital LLC	North America	2014	USD	17	15	3	17	1.3x	2nd	18%	2nd
CVC European Equity Partners VI, L.P.	CVC Capital Partners	Europe	2014	EUR	14	13	3	13	1.2x	3rd	14%	3rd
Crestview Partners III, L.P.	Crestview Partners	North America	2015	USD	21	8	0	9	1.1x	3rd	7%	3rd
Kayne Anderson Energy Fund VII, L.P.	Kayne Anderson Capital Advisors	North America	2016	USD	50	43	17	42	1.4x	NM	40%	NM
Vista Equity Partners VI, L.P.	Vista Equity Partners	North America	2016	USD	25	20	2	19	1.1x	NM	5%	NM
Harvest Partners VII, L.P.	Harvest Partners	North America	2016	USD	20	7	1	6	1.0x	NM	-2%	NM
KCP IV Co-Invest L.P.	Keyhaven Capital Partners Ltd	Europe	2016	EUR	10	5	0	5	1.0x	NM	-1%	NM
Levine Leichtman Capital Partners VI, L.P.	Levine Leichtman Capital Partners	North America	2017	USD	38	12	3	9	1.0x	NM	-1%	NM
Green Equity Investors VII, L.P.	Leonard Green & Partners	North America	2017	USD	25	8	0	7	1.0x	NM	-10%	NM

Benchmark information based on Preqin most up-to-date information Buyout, Distressed / Special Situations, Fund of Funds, Mezzanine, and Venture / Growth funds per vintage and region.

\* TVPI and IRR performance numbers as of Q4 2017. Please refer to WPM's most recent quarterly report for further information.



## Wilshire Private Markets

## KRS PORTFOLIO AND HISTORICAL PERFORMANCE – INSURANCE

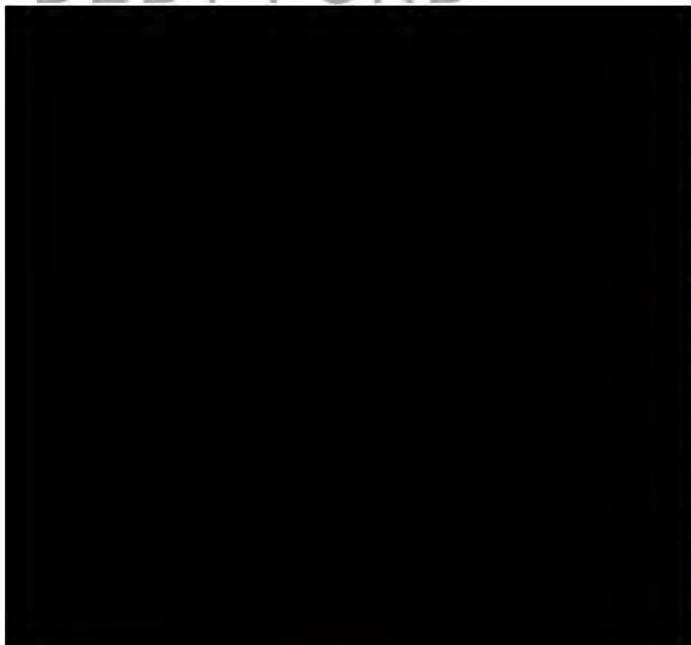
Fund	General Partner	Geography	Vintage	Currency	Existing Commitment (\$M)	Total Contributions (\$M)	Total Distributions (\$M)	Remaining Value (\$M)	TVPI*	TVPI Quartile	IRR*	IRR Quartile
<b>Distressed Debt / Special Situations</b>					<b>132</b>	<b>100</b>	<b>86</b>	<b>39</b>				
MatlinPatterson Global Opportunities Partners	MatlinPatterson Global Advisers	Global	2003	USD	5	5	9	0	1.8x	2nd	30%	2nd
MatlinPatterson Global Opportunities Partners II	MatlinPatterson Global Advisers	Global	2004	USD	5	7	4	0	0.6x	Below Median	-21%	Below Median
Wayzata Opportunities Fund, L.P.	Wayzata Investment Partners	North America	2005	USD	8	11	16	0	1.4x	2nd	8%	2nd
Sun Capital Partners IV, L.P.	Sun Capital Partners	North America	2005	USD	2	2	3	1	1.4x	2nd	5%	3rd
MHR Institutional Partners III LP	MHR Institutional Partners III LP	North America	2006	USD	4	4	4	2	1.5x	2nd	7%	2nd
Avenue Special Situations Fund V, L.P.	Avenue Capital Group	North America	2007	EUR	8	8	10	1.3x	3rd	11%	2nd	
Wayzata Opportunities Fund II, L.P.	Wayzata Investment Partners	North America	2007	USD	8	9	16	0	1.9x	1st	17%	1st
MatlinPatterson Global Opportunities Partners III	MatlinPatterson Global Advisers	Global	2007	USD	5	6	6	2	1.3x	3rd	6%	3rd
OCM Opportunities Fund VII-B, L.P.	Oaktree Capital Management	North America	2008	USD	8	7	11	1	1.7x	2nd	17%	2nd
CM Growth Capital Partners, L.P.	The Camelot Group	North America	2010	USD	3	3	0	1	0.5x	4th	-10%	4th
Wayzata Opportunities Fund III, L.P.	Wayzata Investment Partners	North America	2013	USD	19	9	5	4	1.0x	4th	0%	4th
BDCM Opportunity Fund IV, L.P.	Black Diamond Capital Mgmt.	Global	2015	USD	24	17	1	19	1.2x	1st	13%	3rd
Ares Special Situations Fund IV, L.P.	Ares Management	Global	2015	USD	14	9	1	7	0.8x	4th	-12%	4th
Strategic Value Special Situations Fund IV	Strategic Value Partners	North America	2017	USD	22	2	0	2	1.0x	NM	NM	NM
<b>Venture Capital / Growth Equity</b>					<b>60</b>	<b>55</b>	<b>43</b>	<b>47</b>				
VantagePoint Venture Partners IV, L.P.	VantagePoint Capital Partners	Global	2003	USD	4	3	3	0	1.3x	2nd	4%	3rd
Columbia Capital Equity Partners IV, L.P.	Columbia Capital	North America	2005	USD	3	3	6	1	2.2x	1st	12%	1st
H.I.G. Venture Partners II, L.P.	H.I.G. Capital LLC	North America	2005	USD	2	2	2	1	1.3x	2nd	4%	2nd
Institutional Venture Partners XI, L.P.	Institutional Venture Partners	North America	2005	USD	2	2	2	1	1.1x	3rd	1%	3rd
DAG Ventures II, L.P.	Duff Ackerman & Goodrich LLC	North America	2006	USD	3	3	1	1	0.6x	4th	-6%	4th
VantagePoint Venture Partners 2006, L.P.	VantagePoint Capital Partners	Global	2006	USD	3	3	0	1	0.4x	4th	-16%	4th
TCV VI, L.P.	Technology Crossover Ventures	North America	2006	USD	3	2	4	1	1.7x	2nd	13%	1st
Institutional Venture Partners XII, L.P.	Institutional Venture Partners	North America	2007	USD	3	3	7	1	2.6x	1st	26%	1st
DAG Ventures III, L.P.	Duff Ackerman & Goodrich LLC	North America	2007	USD	3	3	4	1	1.6x	2nd	9%	3rd
DAG Ventures IV, L.P.	Duff Ackerman & Goodrich LLC	North America	2008	USD	10	10	4	5	1.0x	3rd	-1%	4th
Essex Woodlands Fund VIII, L.P.	Essex Woodlands Health Ventures	North America	2008	USD	5	5	3	3	1.1x	3rd	2%	3rd
DCM VI, L.P.	DCM	North America	2010	USD	2	1	0	1	1.3x	3rd	5%	4th
H.I.G. BioVentures II, L.P.	H.I.G. Capital LLC	North America	2011	USD	12	7	2	8	1.4x	3rd	13%	3rd
DAG Ventures V, L.P.	Duff Ackerman & Goodrich LLC	North America	2011	USD	7	7	5	23	3.9x	1st	33%	1st
<b>Fund of Funds</b>					<b>184</b>	<b>111</b>	<b>37</b>	<b>113</b>				
Bay Hills Capital I, L.P.	Bay Hills Capital	Global	2007	USD	8	5	7	3	1.9x	1st	13%	1st
Bay Hills Emerging Partners II, L.P.	Bay Hills Capital	Global	2009	USD	10	8	4	13	2.0x	1st	21%	1st
Horsley Bridge International Fund V, L.P.	Horsley Bridge Partners LLC	Global	2009	USD	5	5	2	7	1.8x	1st	16%	1st
Arcano KRS Fund I, L.P.	Arcano Group	Global	2010	USD	4	3	1	3	1.3x	4th	7%	4th
Keyhaven Capital Partners Fund III, L.P.	Keyhaven Capital Partners Ltd	Europe	2010	EUR	3	3	1	3	1.3x	4th	10%	Above Median
Bay Hills Capital III, L.P.	Bay Hills Capital	Global	2013	USD	69	29	3	31	1.2x	3rd	9%	3rd
Secondary Opportunities Fund III, L.P.	Deutsche Alternative Asset Mgmt	Global	2014	USD	75	54	19	49	1.3x	1st	21%	1st
Keyhaven Capital Partners Fund IV, L.P.	Keyhaven Capital Partners Ltd	Europe	2016	EUR	10	4	0	5	1.5x	NM	38%	NM
<b>Private Credit / Mezzanine</b>					<b>3</b>	<b>3</b>	<b>4</b>	<b>1</b>				
Merit Mezzanine Fund IV, L.P.	Merit Capital Partners	North America	2005	USD	3	3	4	1	1.8x	1st	11%	1st

Benchmark information based on Preqin most up-to-date information Buyout, Distressed / Special Situations, Fund of Funds, Mezzanine, and Venture / Growth funds per vintage and region.

\* TVPI and IRR performance numbers as of Q4 2017. Please refer to WPM's most recent quarterly report for further information.



# IFM INVESTORS U.S. INFRASTRUCTURE DEBT FUND



## FIRM OVERVIEW

IFM Investors ("IFM" or the "Firm") is a private investment manager that was established in 1994 by 32 major Australian not-for-profit pension funds. The Firm is now owned by 27 pension funds with over \$78 billion in assets under management across several infrastructure asset classes and investment strategies. IFM has expanded its global presence to include offices in Australia, Europe, North America, and Asia. The Firm is managed by its executive committee, which reports to a Board independent from its owners.

The Firm's credit business launched in 1999 and has since expanded from its initial Australia focus to a global market presence with offices in New York, London, and Melbourne. The infrastructure debt team includes 19 professionals and is led by the Firm's Global Head of Debt Investments.

## INVESTMENT STRATEGY

IFM Investors U.S. Infrastructure Debt Fund (the "Fund") will target below investment grade private debt securities across a range of infrastructure assets predominately located in the US. The Fund will seek to achieve a 6-8% net return – primarily through floating rate senior and junior secured debt investments with a seven-year average maturity. IFM expects investments to be split equally across three broad sectors: midstream, power generation, and social infrastructure. Opportunistic investments are capped at 25% of the Fund.

The investment team is targeting a flexible portfolio composition of approximately equal weights to both primary and secondary deals. IFM intends to leverage its deep-seeded network of relationships to source opportunities from syndicated lenders, sponsors, and directly from secondary sellers.

## TRACK RECORD

Since 2013, IFM has deployed approximately \$122 million into the sub-investment grade infrastructure debt strategy across various investment vehicles and separate accounts. The track record below has been provided by the Firm

Fund	1-Year	2-Years p.a.	3-Years p.a.	Since Inception p.a.*
------	--------	--------------	--------------	-----------------------

Track Record	7.48%	6.42%	6.38%	5.63%
--------------	-------	-------	-------	-------

Source: IFM as of December 31, 2017, net of highest management fee applicable to the Fund.

\*Inception as of earliest relevant SMA investment, 2/6/2014

\*Past performance is not indicative of future results.



Key: 5 = Top Decile; 4 = Top Quartile; 3 = Average; 2 = Bottom Half; 1 = Bottom Decile; 0 = No Information

Investment Merits	Investment Concerns
<ul style="list-style-type: none"> <li>Institutionalized firm with global infrastructure presence</li> <li>Deep team dedicated to infrastructure debt investing</li> <li>Advantaged sourcing ability through senior team's network of relationships</li> <li>Attractive risk return profile relative to public indices</li> </ul>	<ul style="list-style-type: none"> <li>Team's alignment to the strategy</li> <li>Limited on-strategy track record</li> <li>Rising interest rate environment could adversely impact infrastructure debt returns moving forward</li> <li>Material recent turnover, including the semi-retirement of the Global Head of Credit</li> </ul>

\*Expecting initial investor capital to be fully deployed in 12 to 18 months.

\*\*First close and commitment size discounts available.

©2018 Wilshire Associates.