

# **ARKANSAS TEACHER RETIREMENT SYSTEM**

**December 6, 2021**

1400 West Third Street

**BOARD ROOM**

Little Rock, AR 72201

## **Board of Trustees Meeting**

**10:30 a.m.**

### **Trustees**

Danny Knight, Chair

Lloyd Black, Vice Chair

Anita Bell

Kathy Clayton

Kelly Davis

Dr. Mike Hernandez

Shawn Higginbotham

Michael Johnson

Bobby G. Lester

Chip Martin

Amanda Webb

### **Ex Officio Trustees**

Susannah Marshall, State Bank Commissioner

Johnny Key, Education Secretary

Honorable Andrea Lea, State Auditor

Honorable Dennis Milligan, State Treasurer

**AGENDA**  
**ARKANSAS TEACHER RETIREMENT SYSTEM**  
**BOARD OF TRUSTEES**

**December 6, 2021**  
**10:30 a.m.**  
**1400 West Third Street**  
**Little Rock, AR 72201**

- I. **\*Call to Order/Roll Call.** page 1.
- II. **\*Adoption of Agenda.** page 2.
- III. Executive Summary. (Attachment No. 1) page 7.
- IV. Approval of Prior Meeting Minutes.
  - A. **\*Minutes of February 1, 2021 - Scrivener's Error.** (Attachment No. 2) page 19.
  - B. **\*Minutes of September 27, 2021.** (Attachment No. 3) page 29.
  - C. **\*Minutes of October 18, 2021.** (Attachment No. 4) page 46.
  - D. **\*Minutes of November 15, 2021.** (Attachment No. 5) page 54.
- V. Actuarial Assumed Rate of Return. *Clint Rhoden, Executive Director* (Attachment No. 6) page 58.
- VI. Preliminary Active Actuarial Valuation. *Judy Kermans, Brian Murphy and Heidi Berry of Gabriel, Roeder, Smith and Company* (Attachment No. 7) page 62.
- VII. Statement of Financial Interest. (Attachment No. 8) page 98.
- VIII. **\*Proposed 2022 Board of Trustees Schedule.** (Attachment No. 9) page 115.
- IX. Report of Member Interest Waived Under A.C.A. Sec. 24-7-205. (Attachment No. 10) page 116.
- X. Report of Employer Interest and Penalties Waived Under A.C.A. Sec 24-7-411. (Attachment No. 11) page 117.

\* Action Item

2021-12-04 13:50:24.043857

XI. **\*Unreported Service - Employer and Member Contributions Due.**

A. **\*In Re: ATRS ID: 160668.**

XII. Manifest Injustice Report. (Attachment No. 12) page 118.

XIII. Investment Committee Report.

A. Arkansas Related and Investment Update.

1. List of Fund Closings.

- a. Revelstoke Capital Partners Fund III, L.P., a Buyout Fund that will Invest in Small and Lower Middle Market Healthcare and Related Business Services Companies, the Board Authorized Commitment of up to \$30 Million Dollars on June 23, 2021 was Accepted and Closed on October 1, 2021.
- b. Transfer of Assets from the Existing ATRS Investment in CFM Institutional Systematic Diversified Fund Series 1.5 (CFM ISD) to CFM Systematic Global Macro, L.P. Series 1 (CFM SGM), a Fund that Seeks to Deliver Consistent Returns at Targeted Risk Levels both on a Long and Short Basis, the Board Authorized Transfer on October 18, 2021 with Imminent Need was Completed on September 19, 2021.
- c. Redemption of the ATRS Investment in Nephila Rubik Holdings, Ltd., the Board Authorized Redemption on September 27, 2021 was Initiated on October 6, 2021.
- d. Chatham Asset Private Debt and Strategic Capital Fund III, L.P., a Fund that Invests in High Yield Bonds, Leverage Loans and Equity both on a Long and Short Basis, the Board Authorized Commitment of up to \$50 Million Dollars on October 18, 2021 with Imminent Need was Accepted and Closed on November 1, 2021.
- e. Almanac Realty Securities IX, L.P., a Closed End, Value Added Real Estate Fund Targeting Investments in Both Private and Public Real Estate Operating Companies, the Board Authorized Commitment of up to \$40 Million Dollars on October 18, 2021 with Imminent Need was Accepted and Closed on November 17, 2021.
- f. Redemption of Approximately \$140 Million Dollars from JP Morgan Strategic Property Fund (SPF), the Board Authorized Redemption on September 27, 2021 was Initiated on November 9, 2021.

\* Action Item

- g. Clearlake Capital Partners VII, L.P. a Private Equity Fund that Makes Opportunistic Debt and Equity Investments in Middle Market Companies Undergoing Change and/or are in Underserved Industries or Markets in North America, the Board Authorized Commitment of up to \$30 Million Dollars on October 18, 2021 with Imminent Need was Accepted and Closed on October 29, 2021.
  - h. LaSalle Asia Opportunity Fund VI, L.P., a Closed End Opportunistic Real Estate Fund Focused on Both Debt and Equity Investments in Asia the Board Authorized Commitment of up to \$50 Million Dollars on September 27, 2021 with Imminent Need was Accepted and Closed on October 15, 2021.
  - i. LBA Logistics Value Fund IX, L.P., a Closed End Value Add Real Estate Fund with the Primary Purpose of Acquiring Industrial Properties Located in the U.S. Real Estate Market the Board Authorized Commitment of up to \$55 Million Dollars on September 27, 2021 with Imminent Need was Accepted and Closed on October 4, 2021.
  - j. Redemption of Aeolus Property Catastrophe Keystone PF Fund LP. (Aeolus), the Board Authorized Redemption on October 18, 2021 was Initiated on October 28, 2021.
2. **\*Recommendation to approve for Board adoption Resolution 2021-68 authorizing the purchase of the revenue stream generated by State of Arkansas tax credits associated with Highland Pellets with Imminent Need.** (Attachment No. 13) page 119.
- a. **\*Resolution No. 2021-68.** (Attachment No. 14) page 123.
- B. General Investment Consultant Report.
- 1. Performance Report for the Quarter Ending September 30, 2021. (Attachment No. 15) page 125.
  - 2. Preliminary Performance Report for the Month Ended October 31, 2021. (Attachment No. 16) page 271.
- C. Real Assets Investment Consultant Report.
- 1. Performance Report for the Quarter Ending June 30, 2021. (Attachment No. 17) page 295.
  - 2. **\*Recommendation to approve for Board adoption Resolution 2021-66 authorizing an investment of up to \$50 million dollars in Landmark Real Estate Partners IX, L.P.** (Attachment No. 18) page 348.
    - a. **\*Resolution No. 2021-66.** (Attachment No. 19) page 354.
  - 3. **\*2022 Real Assets Commitment Pacing (Total Pacing \$575 Million Dollars).** (Attachment No. 20) page 355.

\* Action Item

- a. **\*Core Real Estate \$250 Million Dollars.**
  - b. **\*Value Added and Opportunistic Real Estate \$250 Million Dollars.**
  - c. **\*Infrastructure \$75 Million Dollars.**
- D. Private Equity Consultant Report.
- 1. Preliminary Private Equity Portfolio Review for the Quarter Ended June 30, 2021. (Attachment No. 21) page 359.
  - 2. **\*2022 Private Equity Pacing Schedule (Total Pacing \$350 Million Dollars).** (Attachment No. 22) page 413.
    - a. **\*Six Small or Mid Buyout/Growth/Turnaround \$30-35 Million Dollars Each in the U.S. (Total \$200 Million Dollars).**
    - b. **\*One Debt/Distressed Assets \$30 Million Dollars.**
    - c. **\*Franklin Park International Fund XI \$30 Million Dollars.**
    - d. **\*Franklin Park Venture Fund XIV \$30 Million Dollars.**
    - e. **\*Franklin Park Venture Capital Opportunity Fund \$30 Million Dollars.**
    - f. **\*Franklin Park Corporate Finance Access Fund II \$30 Million Dollars.**
    - g. **\*ATRS/FP Private Equity Fund (Co-InvestmentFund) No New Allocation.**
  - 3. **\*Recommendation to approve for Board adoption Resolution 2021-63 authorizing an investment of up to \$30 million dollars in Franklin Park International Fund XI, L.P. with Imminent Need.** (Attachment No. 23) page 419.
    - a. **\*Resolution No.2021-63.** (Attachment No. 24) page 429.
  - 4. **\*Recommendation to approve for Board adoption Resolution 2021-64 authorizing an investment of up to \$30 million dollars in Franklin Park Venture Capital Opportunity Fund, L.P. with Imminent Need.** (Attachment No. 25) page 431.
    - a. **\*Resolution No.2021-64.** (Attachment No. 26) page 441.
  - 5. **\*Recommendation to approve for Board adoption Resolution 2021-65 authorizing an investment of up to \$30 million dollars in Riverside Value Fund I, L.P. with Imminent Need.** (Attachment No. 27) page 443.
    - a. **\*Resolution No.2021-65.** (Attachment No. 28) page 447.

XIV. Operations Committee Report.

- A. Open Forum for Potential Rule or Law Changes by Committee Members and Board Members Present.

\* Action Item

1. Open Forum.
  - B. **\*Board Policy 3 Update - Regarding Independent Actuary.** (Attachment No. 29) page 449.
  - C. Rules Promulgation Status Update. (Attachment No. 30) page 459.
- XV. Board of Trustees Congressional District Map.
- A. **\*Resolution 2021-67.** (Attachment No. 31) page 465.
- XVI. **\*Board of Trustees Disability Review.**
- A. **\*Group Order - Approved - DR-2021-12-A.** (Attachment No. 32) page 466.
- XVII. **\*Staff Reports.**
- A. **\*Medical Committee Report. A Total of 17 Disability Retirement Applications were Approved.** *Willie Kincade, Director of Operations* (Attachment No. 33) page 468.
  - B. Financial Reports. *Curtis Carter, Chief Fiscal Officer*
    1. Financial Statement Report. (Attachment No. 34) page 471.
    2. Travel Reports. (Attachment No. 35) page 473.
- XVIII. **\*Election of Board Chair and Vice Chair.**
- XIX. Other Business.
- XX. **\*Adjourn.**

## EXECUTIVE SUMMARY

TO: Board of Trustees  
FROM: ATRS Staff  
RE: Executive Summary  
DATE: December 6, 2021

---

- V. Actuarial Assumed Rate of Return.** The actuarial assumed rate of return is the projected rate of investment returns used by actuaries to estimate a pension plan's soundness. This item is placed on the agenda to allow the board to continue discussion of this extremely important actuarial assumption.
- VI. Preliminary Active Actuarial Valuation.** This is a standard part of the ATRS Board agenda toward the end of each calendar year. The actuarial valuation for the 2020-2021 fiscal year and the figures cited are still preliminary, but near completion.
- VII. Statement of Financial Interest.** This is the reminder that ATRS Trustees must file a Statement of Financial Interest (SFI) by the end of January 2021, for their financial information for calendar year 2021. Included with the portal information are the instructions for completing the SFI, and a blank SFI for your use. Since the SFI may be completed on-line at the Secretary of State's website after creating a user name at the login screen: <https://www.ark.org/sos>, many Trustees prefer to complete the on-line version of the SFI. ATRS staff will assist in any way possible to help you file this information. ATRS staff will also follow-up from time to time with any Trustee who has not filed their Statement of Financial Interest in the latter half of January 2022.
- VIII. Proposed 2022 Board of Trustee Schedule.** ATRS staff has attached a proposed meeting schedule for 2022. It is subject to changes requested by the Board, and will be posted on the ATRS and State of Arkansas websites when finalized. It follows much the same pattern as in prior years, with Monday meetings to accommodate Trustees who have to travel a long distance to Little Rock. **This is an action item.**
- IX. Report of Member Interest Amount Waived Under A.C.A. Sec. 24-7-205.** ATRS waives interest for members when there is a dispute between ATRS and the member as to whether ATRS made a mistake or otherwise did not do all that was required on the member's account. Since ATRS has implemented the actuarial cost method for the purchase of service credit, interest waived is slowly disappearing, as well as the number of members who purchase service credit. No member interest amounts were waived for this reporting period. This is a standard report for information and is not an action item.

**X. Report of Employer Interest and Penalties Waived Under A.C.A. Sec. 24-7-411.** ATRS may also waive employer interest and penalties when reports or payments are late or have issues due to a new bookkeeper, inclement weather, sickness and other situations that justify a waiver. Six (6) employer penalties and interest amounts were waived for this reporting period in the amount of \$3,046.30. This is a standard report for information and is not an action item.

**XI. Unreported Service: Employer and Member Contributions Due.**

**A. In Re: ATRS ID: 160668.** The member has 15 years of unreported service from the Little Rock School District (LRSD) from 1996 to 2010. The LRSD failed to report the member's employment and did not pay the employer contributions for the contributory service. As a result, the member's record is missing fifteen (15) years of contributory service. The LRSD has certified the member's salary and service for the years from 1996 to 2010. In order to correct the member's record, the employer contributions in the amount of \$45,557.76 must be paid to ATRS. A.C.A. 24-7-411(a) requires ATRS to impose an interest penalty. A large amount of interest (\$103,984.45) has been assessed as a result of the 25 years that has passed since the initial unreported service. There is also a large amount of interest (\$48,497.60) due on the member's contributions of \$21,168.07. A.C.A. 24-7-411(c) allows the Board to waive interest if the employer delinquency was not the result of intentional nondisclosure, fraud or misrepresentation and that under the circumstances the payment would be unduly penal, or burdensome. Since executive staff only has authority to waive up to \$5,000, ATRS staff has placed this item on the agenda. ATRS has no evidence that the failure to report and remit employer contributions on this member's service was the result of an intentional nondisclosure, fraud or misrepresentation. Given that the initial failure to report the service occurred over 25 years ago, the amount of interest due could be considered unduly penal and burdensome. In the past the Board has waived the interest associated with errors involving unreported employer and member contributions. In the event interest is waived, promissory notes will be established so that the interest will be waived as long as the notes are paid off by the end of the following fiscal year, otherwise the full interest is reinstated. Executive Staff recommends the waiver of the employer's and member's interest due in the effort to finally resolve the errors in this member's record (ATRS ID: 160668). **This is an action item.**

**XII. Manifest Injustice Report.** The rule on Manifest Injustice requires reports to the Board at least two times per year. This is the second report of 2021. This report is for information purposes only and is not an action item.

**XIII. Investment Committee Report**

**A. Arkansas Related and Investment Update.**

1. **List of Fund Closings.**
  - a. **Revelstoke Capital Partners Fund III, L.P., a Buyout Fund that will Invest in Small and Lower Middle Market Healthcare and Related Business Services Companies, the Board Authorized Commitment of up to \$30 Million Dollars on June 23, 2021 was Accepted and Closed on October 1, 2021.** The ATRS full commitment of \$30 million dollars was negotiated, accepted, and closed on October 1, 2021.
  - b. **Transfer of Assets from the Existing ATRS Investment in CFM Institutional Systematic Diversified Fund Series 1.5 (CFM ISD) to CFM Systematic Global Macro, L.P. Series 1 (CFM SGM), a Fund that Seeks to Deliver Consistent Returns at Targeted Risk Levels both on a Long and Short Basis, the Board Authorized Transfer on October 18, 2021 with Imminent Need was Completed on September 19, 2021.** The ATRS transfer was negotiated, accepted, and closed on September 19, 2021.
  - c. **Redemption of the ATRS Investment in Nephila Rubik Holdings, Ltd., the Board Authorized Redemption on September 27, 2021 was Initiated on October 6, 2021.** The ATRS redemption was negotiated, accepted, and closed on October 6, 2021.
  - d. **Chatham Asset Private Debt and Strategic Capital Fund III, L.P., a Fund that Invests in High Yield Bonds, Leverage Loans and Equity both on a Long and Short Basis, the Board Authorized Commitment of up to \$50 Million Dollars on October 18, 2021 with Imminent Need was Accepted and Closed on November 1, 2021.** The ATRS full commitment of \$50 million dollars was negotiated, accepted, and closed on November 1, 2021.
  - e. **Almanac Realty Securities IX, L.P., a Closed End, Value Added Real Estate Fund Targeting Investments in Both Private and Public Real Estate Operating Companies, the Board Authorized Commitment of up to \$40 Million Dollars on October 18, 2021 with Imminent Need was Accepted and Closed on November 17, 2021.** The ATRS full commitment of \$40 million dollars was negotiated, accepted, and closed on November 17, 2021.

- f. Redemption of Approximately \$140 Million Dollars from JP Morgan Strategic Property Fund (SPF), the Board Authorized Redemption on September 27, 2021 was Initiated on November 9, 2021. The ATRS redemption was negotiated, accepted, and closed on November 9, 2021.**
  - g. Clearlake Capital Partners VII, L.P. a Private Equity Fund that Makes Opportunistic Debt and Equity Investments in Middle Market Companies Undergoing Change and/or are in Under-served Industries or Markets in North America, the Board Authorized Commitment of up to \$30 Million Dollars on October 18, 2021 with Imminent Need was Accepted and Closed on October 29, 2021. The ATRS full commitment of \$30 million dollars was negotiated, accepted, and closed on October 29, 2021.**
  - h. LaSalle Asia Opportunity Fund VI, L.P., a Closed End Opportunistic Real Estate Fund Focused on Both Debt and Equity Investments in Asia the Board Authorized Commitment of up to \$50 Million Dollars on September 27, 2021 with Imminent Need was Accepted and Closed on October 15, 2021. The ATRS full commitment of \$50 million dollars was negotiated, accepted, and closed on October 15, 2021.**
  - i. LBA Logistics Value Fund IX, L.P., a Closed End Value Add Real Estate Fund with the Primary Purpose of Acquiring Industrial Properties Located in the U.S. Real Estate Market the Board Authorized Commitment of up to \$55 Million Dollars on September 27, 2021 with Imminent Need was Accepted and Closed on October 4, 2021. The ATRS full commitment of \$55 million dollars was negotiated, accepted, and closed on October 4, 2021.**
  - j. Redemption of Aeolus Property Catastrophe Keystone PF Fund LP. (Aeolus), the Board Authorized Redemption on October 18, 2021 was Initiated on October 28, 2021. The ATRS redemption was negotiated, accepted, and closed on October 28, 2021.**
- 2. Recommendation to approve for Board adoption Resolution 2021-68 authorizing the purchase of the revenue stream generated by State of Arkansas tax credits associated with Highland Pellets with**

**Imminent Need.** Ari Levy with Global Principal Partners (GPP) will present the Board with a recommendation to purchase the revenue stream generated by tax credits associated with Highland Pellets.

**B. General Investment Consultant Report.**

- 1. Performance Report for the Quarter Ending September 30, 2021.** PJ Kelly and Katie Comstock of Aon Hewitt Investment Consulting will provide the Board with a portfolio update for the quarter ending September 30, 2021.
- 2. Preliminary Performance Report for the Month Ended October 31, 2021.** P. J. Kelly and Katie Comstock of Aon Hewitt Investment Consulting will provide the Board with a preliminary portfolio update for the month ending October 31, 2021.

**C. Real Assets Investment Consultant Report.**

- 1. Performance Report for the Quarter Ending June 30, 2021.** Jack Dowd of Aon Hewitt Investment Consulting will provide the Board with a portfolio update for the quarter ending June 30, 2021.
- 2. Recommendation to approve for Board adoption Resolution 2021-66 authorizing an investment of up to \$50 million dollars in Landmark Real Estate Partners IX, L.P.** Landmark Real Estate Partners IX is a closed end opportunistic real estate fund investing in secondary interests of value added and opportunistic funds. Landmark is a private equity and real estate investment company specializing in secondary funds. Formed in 1989, the firm has one of the longest track records in the industry and is a source of liquidity to owners of interests in venture, mezzanine, buy-out, and real estate limited partnerships. Landmark is headquartered in Simsbury, Connecticut, and has offices in Boston, New York, and London. In 1996 Landmark pioneered the real estate secondary market with the first institutional real estate secondary market transaction. The secondary real estate market for limited partnerships is a way that pension plans, like ATRS, can sell its partnership shares to another investor, including other pension plans, to obtain cash. An investor in a partnership may want to sell their interest for several reasons including the need to raise cash or asset allocation rebalancing. Investors who purchase the partnership shares receive all future income and assume all contractual obligations of the partnership including any remaining contributions to the partnership.

Landmark Real Estate Partners IX, L.P. (Fund IX) is a closed end opportunistic real estate fund-of-funds focused on acquiring existing real estate partnerships in the secondary market. Fund IX expects to leverage

its 32-year history of secondary investing to assemble a diverse, global portfolio of assets that span the real estate risk spectrum by acquiring interests in existing funds, partnerships and other structured entities invested in underlying real estate. Landmark will target funds that are substantially committed and seasoned and will look to acquire at a discount and/or structured purchase arrangements. The fund size is \$3.5 billion dollars and will target a 13-16% plus net IRR. To date, the fund has launched seven real estate secondary funds with assets under management totaling \$28.7 billion dollars. Previous funds have generated a net IRR of 16.5%. ATRS invested in Landmark Real Estate Partners Fund VI and VIII which have an average IRR of 16%. Aon Hewitt Investment Consulting recommends an investment of up to \$50 million dollars in Landmark Real Estate Partners IX, L.P and ATRS staff concurs.

3. **2022 Real Assets Commitment Pacing (Total Pacing \$575 Million Dollars).** Chae Hong of Aon Hewitt Investment Consulting will present the 2021 Real Assets Commitment Pacing. For calendar year 2022, Aon Hewitt Investment Consulting and ATRS staff are recommending approximately **\$575 million dollars for 2022 real assets pacing**. These targets are subject to availability of quality investments and prevailing market conditions. Actual amounts may vary as pacing is subject to change over the year according to available investment opportunities.
  - a. **Core Real Estate \$250 Million Dollars.** Core real estate funds employ low leverage, low-risk investment strategies that have predictable cash flows. The funds will generally invest in stable, fully leased, modern, multi-tenant properties within strong, diversified metropolitan areas. The ATRS real asset portfolio is within the upper range of the fund's target allocation to this type of real estate investment so no new allocation for core real estate is needed at this time.
  - b. **Value Added and Opportunistic Real Estate \$250 Million Dollars.** These are funds that invest in properties and make improvements to fairly stable properties but are one step below the core funds in quality. Opportunistic have more risk than value added funds but have potential for better returns.
  - c. **Infrastructure \$75 Million Dollars.** Infrastructure funds invest in the fundamental facilities and systems serving a country, city, or area including the services and facilities necessary for its economy to function. Infrastructure funds typically invest in structures such as roads, bridges, tunnels, water systems, sewers systems, electric grids, ports and so forth.

**D. Private Equity Consultant Report.**

- 1. Preliminary Private Equity Portfolio Review for the Quarter Ended June 30, 2021.** Michael Bacine of Franklin Park will provide the Board with a preliminary portfolio review for the quarter ending June 30, 2021.
- 2. 2022 Private Equity Pacing Schedule (Total Pacing \$350 Million Dollars).** Michael Bacine of Franklin Park will provide the 2022 pacing schedule for private equity. Typically, ATRS has been pacing up to 2% of its underlying value for private equity for the next calendar year. Based upon assumptions of the projected market value of total assets for the next ten years, Franklin Park recommends private equity pacing of \$350 million dollars for 2022 in order to maintain a 12% allocation to private equity and ATRS staff agrees.

In years past, an allocation of the total pacing amount was made for venture capital and more recently for smaller “next generation” private equity funds through Franklin Park vehicles. The Board has already approved commitments of \$30 million dollars each this year to Franklin Park Venture Fund XIV (a multi-year, early stage venture fund) and to Franklin Park Corporate Finance Access Fund II (a multi-year fund that invests in smaller buyout, growth and turnaround funds). Since these are two to three year funds, an additional commitment of \$30 million dollars to each fund is anticipated in 2022. A presentation and recommendation will be made at a later time for these funds. Until now, ATRS has invested only in early stage venture capital through Franklin Park’s dedicated vehicles. In addition to the original early stage funds, Franklin Park is now offering Franklin Park Venture Capital Opportunity Fund, a similarly structured multi-year fund that will invest in later stage venture capital funds. Late stage venture provides attractive returns with lower risk than early stage. A commitment of up to \$30 million dollars is recommended now as part of pacing for 2022.

Since 2011, ATRS has invested in Franklin Park’s International Funds primarily to obtain exposure to funds outside the U.S. The most recent fund, Franklin Park International Fund X is now fully committed and a recommendation is being made to commit up to \$30 million dollars to Fund XI for 2022. No new allocation is needed for the ATRS/FP Private Equity Fund at this time. Even though the ATRS/FP Private Equity Fund houses investments of various strategies, going forward it will be primarily used for co-investments. ATRS made a five-year commitment to the Franklin Park Co-Investment Fund last year through the ATRS/FP Fund, therefore no new commitment is expected for the coming year.

Franklin Park also expects to commit \$200 million dollars to approximately six funds with buyout, growth, or turnaround strategies within the U.S. during 2022. Additionally, a commitment of \$30 million dollars is planned for a fund that is focused on debt or distressed assets. The amounts of each type of investment mentioned here are targets. Actual amounts may vary as pacing is subject to change over the year according to available investment opportunities and prevailing market conditions.

- a. **Six Small or Mid Buyout/Growth/Turnaround \$30-35 Million Dollars Each in the U.S. (Total \$200 Million Dollars).** Buyout refers to funds that seek to acquire controlling interests in companies. Growth funds seek a minority interest in successful companies that need additional capital to expand. Turnaround funds invest in troubled or bankrupt companies that require special expertise to become profitable. This is an allocation for six of these funds at a \$30-35 million level each for a total of \$200 million dollars.
- b. **One Debt/Distressed Assets \$30 Million Dollars.** These funds lend money at higher interest rates to companies with liquidity needs. These managers also purchase the debt obligations of a company at or below actual value using specialized skills. The purpose of the purchase of debt can be to make interest, get the value from the discount price of the debt, or to obtain the company's equity after a default on the debt. This is an allocation for one of these funds at a \$30 million level.
- c. **Franklin Park International Fund XI \$30 Million Dollars**  
This item is explained below in item C.
- d. **Franklin Park Venture Fund XIV \$30 Million Dollars.** An additional investment in this fund is anticipated for 2022. A presentation and recommendation will be made at a later date.
- e. **Franklin Park Venture Capital Opportunity Fund \$30 Million Dollars** This item is explained below in item D.
- f. **Franklin Park Corporate Finance Access Fund II \$30 Million Dollars.** An additional investment in this fund is anticipated for 2022. A presentation and recommendation will be made at a later date.



preferred return is achieved. Existing clients that invest \$60 million or more in the two to three-year fund will not pay a management fee, and their carried interest is reduced to 4%. Due to the fact that this fund may need to close before the next meeting of the Arkansas Legislative Council, Imminent Need is requested. ATRS staff concurs with Franklin Park's recommendation to commit up to \$30 million dollars in Franklin Park Venture Capital Opportunity Fund, L.P. with Imminent Need and to the fee structure.

5. **Recommendation to approve for Board adoption Resolution 2021-65 authorizing an investment of up to \$30 million dollars in Riverside Value Fund I, L.P. with Imminent Need.** Riverside Value Fund I is a private equity turnaround fund that will invest in underperforming companies in the U.S. Founded in 1988, Riverside is a global private equity firm managing mid-market, micro-cap, European and Australian buyout funds, as well as direct lending, revenue interest lending and structured capital funds. The firm has \$12 billion in assets under management and employs over 300 professionals. Its headquarters are in Cleveland, Ohio with additional offices around the world. The overall firm is led by co-chief executive officers, Bela Szigethy and Stewart Kohl and the investment team for this fund is led by Ron Sansom, Sean Ozbolt and Andy Fohrer (principals). The team managers have an average of sixteen years' experience each in private equity investing.

The fund is being formed to acquire underperforming companies in the U.S. In particular, the general partner will target control investments in businesses with revenue of \$60 to \$300 million that are facing fixable operational or financial challenges. The targeted companies may be in need of investment in infrastructure, systems, and processes; in default of indebtedness, facing covenant pressures or liquidity constraints, in bankruptcy or facing insolvency proceedings; or in need of upgraded management talent and improved governance. The fund represents the first vehicle being raised by the general partner with the targeted strategy; however, the principals have collectively been responsible for managing twenty-one similar investments at prior firms. These investments have generated a 2.3X aggregate return over a twelve year period. Due to the fact that this fund may need to close before the next meeting of the Arkansas Legislative Council, Imminent Need is requested. Franklin Park recommends an investment of up to \$30 million dollars in Riverside Value Fund I, L.P. with Imminent Need and ATRS staff concurs.

#### **XIV. Operations Committee Report**

- A. Open Forum for Potential Rule or Law Changes by Committee Members and Board Members Present.**

    - 1. Open Forum.** This is a standard part of the Committee agenda to allow Committee Members and Board Members in attendance to address topics and issues for consideration.
  - B. Board Policy 3 Update - Regarding Independent Actuary.** Board Policy 3 currently states that an independent actuary will review the system every five years. The current process is that before each Regular Session of the Arkansas General Assembly, all actuarial census data is sent to an independent actuary hired by the State Legislature for use in reviewing the system and preparing cost analysis reports for legislation affecting ATRS. Board Policy 3 has been updated to reflect the current procedure. **This is an action item.**
  - C. Rules Promulgation Status Update.** ATRS staff will present a status update on the current rule changes.
- XV. Board of Trustees Congressional District Map.** The boundaries of the Arkansas congressional districts are redefined after each national census. Trustee positions 1 through 4 are required to be employed by an employer located in each of the four congressional districts respectively. Having the trustee eligibility criteria change in the middle of the election process would be problematic. It would be desirable to use consistent congressional district boundaries for a full fiscal year since the regular election process spans over several months. Executive Staff recommends the Board declare that all elections and appointments for a fiscal year shall be based on the congressional district map in effect on the first day of the fiscal year.
- A. Resolution 2021-67**
- XVI. Board of Trustees Disability Review.** Under the Disability Review procedure described in A.C.A. §24-7-704(b)(3)(D) the Board shall approve the recommendations of the Medical Committee. The following is a proposed order for Board approval regarding Disability Review recommendations.
- A. Group Order - Approved - DR-2021-12-A.** The proposed order is for the acceptance of **three (3) approved** disability reviews. **This is an action item.**
- XVII. Staff Reports.**
- A. Medical Committee Reports. A Total of 17 Disability Retirement Applications Approved.** The Medical Committee Report is a standard report made by staff on behalf of the Medical Committee approving

disability cases. A total of 24 disability applications were received, 17 were approved, 3 were denied, and 4 needed more information. **This is an action item.**

**B. Financial Reports.**

1. **Financial Statement Report.** The ATRS Chief Financial Officer will give the Board summary information for the financial reports for the year ending June 30, 2021. Plan net assets were \$21.4 billion dollars in fiscal year 2021. No action is needed for this information item.
2. **Travel Report.** The ATRS Chief Financial Officer will present a standard travel report showing the expenses for staff and Trustees for fiscal year ending June 30, 2021. Board travel expenses decreased by over \$23,000 in 2021 as compared to fiscal year 2020. Other staff travel also decreased by over \$48,000 in fiscal year 2021 as compared to fiscal year 2020. No action is needed for this information item.

**XVIII. Election of Board Chair and Vice Chair.** The Board holds an election for Chair and Vice chair every two years. Under Board Policy 1 V.A., the Chair and Vice Chair shall be elected for a term of two years and may be reelected for two additional two-year terms. The Chair and Vice Chair shall be either an active member or retiree trustee. A Board member must have served at least one full year as a member of the Board to be eligible for election to the position of Chair or Vice Chair.

**CORRECTED MINUTES  
ARKANSAS TEACHER RETIREMENT SYSTEM  
BOARD OF TRUSTEES**

**Monday, February 1, 2021  
11:00 a.m.  
1400 West Third Street  
Little Rock, AR 72201**

**ATTENDEES**

**Board Members Present**

Danny Knight, Chair  
Lloyd Black, Vice Chair\*  
Anita Bell\*  
Kathy Clayton\*  
Kelly Davis\*  
Dr. Mike Hernandez\*  
Shawn Higginbotham\*  
Michael Johnson\*  
Bobby Lester\*  
Chip Martin\*  
Robin Nichols\*  
Susannah Marshall, Bank Commissioner\*  
Johnny Key, Secretary, Dept. of Ed\*  
Hon. Andrea Lea, State Auditor\*

**Board Members Absent.**

Hon. Dennis Milligan, State Treasurer

**ATRS Staff Present**

Clint Rhoden, Executive Director  
Rod Graves, Deputy Director\*  
Tammy Porter, Ex. Assistant/Board Secretary  
Dena Dixon, Internal Audit/Risk Mgmt.\*  
Vicky Fowler, Manager, Human Resources\*  
Willie Kincade, Director of Operations\*  
Martha Miller, General Counsel\*  
Manju, Director Information Technology\*  
Leslie Ward, Manager, Private Equity\*  
Brenda West, Internal Audit/Risk Mgmt.\*  
Misty Yant, Manager, Reporting\*

**Guest Present**

Donna Morey, ARTA\*  
Duncan Baird, APERS\*  
Katie Comstock, Aon Hewitt (AHIC)\*  
Chae Hong, Aon Hewitt (AHIC)\*  
Michael Bacine, Franklin Park\*  
Gar Chung\*

*via Zoom\**

- I. **Call to Order/Roll Call.** Mr. Danny Knight, Chair, called the Board of Trustees meeting to order at 11:00 a.m. Roll call was taken. Hon. Dennis Milligan was absent.
  
- II. **Adoption of Agenda.**

***Ms. Nichols moved for adoption of the Agenda. Mr. Lester seconded the motion, and the Board unanimously approved the motion.***

**III. Executive Summary.** The Executive Summary was provided for reference with no questions or expansions on the written summary.

**IV. Approval of Prior Meeting Minutes.**

**A., December 7, 2020, Minutes**

**Ms. Bell *moved for approval of the Minutes of the Board of Trustees meeting of December 7, 2020. Ms. Davis seconded the motion, and the Board unanimously approved the motion.***

**B., January 20, 2021, Minutes.**

**Mr. Higginbotham *moved for approval of the Minutes of the Board of Trustees meeting of January 20, 2021. Ms. Davis seconded the motion, and the Board unanimously approved the motion.***

**V. Staff Empowerment.**

**A. Authority to Transact Business.**

**1. Resolution 2021-01**

**Ms. Nichols *moved to adopt Resolution 2021-01, Authority to Transact Business on behalf of the ATRS Board of Trustees. Mr. Lester seconded the motion, and the Board unanimously adopted the resolution.***

**B. Specific Powers of Executive Director.**

**1. Resolution 2021-02.**

**Dr. Hernandez *moved to adopt Resolution 2021-02, Authorizing Specific Powers of Executive Director on behalf of the ATRS Board of Trustees. Auditor Lea seconded the motion and the Board unanimously adopted the resolution.***

**C. Appointment of ATRS as Manager of LLC's.**

**1. Resolution 2021-03**

**Ms. Bell *moved to adopt* Resolution 2021-03, Appointment of ATRS as Manager of LLC's. Mr. Johnson *seconded the motion*, and the Board *unanimously adopted the resolution*.**

**VI. Authority to Reimburse Trustee Expenses for 2021.**

**A. Resolution 2021-04.**

**Mr. Lester *moved to adopt* Resolution 2021-04, authorizing ATRS to reimburse ATRS Trustees for miscellaneous expenses and losses in salary resulting from Board of Trustees meeting attendance or other official Board duties. Ms. Clayton *seconded the motion*, and the Board *unanimously adopted the resolution*.**

**VII. Authorization for Board Travel and Expense Reimbursement for 2021.**

**A. Resolution 2021-05.**

**Ms. Nichols *moved to adopt* Resolution 2021-05, authorizing ATRS to reimburse ATRS Trustees for expenses used in traveling for official Board duties. Ms. Bell *seconded the motion*, and the Board *unanimously adopted the resolution*.**

**VIII. Adoption of 2021-2022 Employer Contribution Rate.**

**A. Resolution 2021-06.**

**Mr. Higginbotham *moved to adopt* Resolution 2021-06, Adoption Employer Contribution Rate at the rate of 14.75% for the fiscal year starting July 1, 2021. Dr. Hernandez *seconded the motion*, and the Board *unanimously adopted the resolution*.**

**IX. Adoption of 2021-2022 Member Contribution Rate.**

**A. Resolution 2021-07.**

**Mr. Lester *moved to adopt* Resolution 2020-17, Adoption of Member Contribution Rate at the rate of 6.75% for the fiscal year starting July 1, 2021. Ms. Bell *seconded the motion*, and the Board *unanimously adopted the resolution*.**

**XI. Adoption of Contribution Rate applied to Outsourced Positions.**

**A. Resolution 2021-08.**

**Ms. Davis moved to adopt Resolution 2021-08, Adoption Contribution Rate of 4% applied to Outsourced Positions. Ms. Nichols seconded the motion, and the Board unanimously adopted the resolution.**

**XI. 2021 Board of Trustee Election Update.**

**A. Certification of Dr. Mike Hernandez as Administrator Trustee.**

**1. Resolution 2021-14.**

**Mr. Lester moved to adopt Resolution 2021-14, Certification of Dr. Mike Hernandez as Administrator Trustee. Ms. Davis seconded the motion, and the Board unanimously adopted the resolution.**

**B. Certification of Mr. Shawn Higginbotham as Administrator Trustee - Superintendent.**

**1, Resolution 2021-15.**

**Ms. Davis moved to adopt Resolution 2021-15 Certification of Mr. Shawn Higginbotham as Administrator Trustee - Superintendent. Ms. Bell seconded the motion, and the Board unanimously adopted the resolution.**

**C. Certification of Ms. Anita Bell as Minority Trustee.**

**2. Resolution 2021-16.**

**Ms. Davis moved to adopt Resolution 2021-16, Certification of Ms. Anita Bell as Minority Trustee. Ms. Nichols seconded the motion, and the Board unanimously adopted the resolution.**

**XII. Actuarial Valuations, June 30, 2020.** Mr. Rhoden presented the annual reports prepared by the Actuaries concerning the valuation of liability to active and inactive members along with the valuation of liabilities for annuities being paid to current retirees and current beneficiaries.

**A. Active & Inactive Members.** This report reflects the liabilities owed by ATRS to active and inactive members.

- B. Retirees & Beneficiaries.** This report reflects the liabilities to ATRS retirees, beneficiaries, survivors, and incapacitated children.

**Ms. Nichols moved to accept the Actuarial Valuations for Active & inactive Members, and Retirees & Beneficiaries as of June 30, 2020. Ms. Marshall seconded the motion, and the Board unanimously approved the motion.**

- XIII. Report of Member Interest Waived Under A. C. A. Section 24-7-205.** Mr. Rhoden presented the member interest amount waived report. ATRS waives interest for members when there is a dispute between ATRS and the member as to whether ATRS made a mistake or otherwise did not do all that was required on the member's account. No member interest was waived for this reporting period.

- XIV. Report of Employer Interest and Penalties Waived Under A. C. A. Sec. 24-7-411.** Mr. Rhoden presented the employer interest and penalties waived report. ATRS may also waive employer interest and penalties when reports or payments are late or have issues due to a new bookkeeper, inclement weather, sickness and other situations that justify a waiver. Six (6) employer penalties and interest amounts were waived for this reporting period in the amount of \$1,349.83.

**XV. Manifest Injustice For Board Approval**

- A. In the Matter of MI Claim #2020-06.** Director Rhoden presented the Board with MI Claim #2020-06. Executive Staff recommended the Board find a manifest injustice exists in this case and waive the \$2,498.11 interest due in the effort to finally resolve the errors in this member's record.

**Mr. Lester moved to approve the Recommendation to find a manifest injustice exists and waive \$2,498.11 interest due to resolve errors in the member's record. Ms. Clayton seconded the motion, and the Board unanimously approved the motion.**

- B. In the Matter of MI Claim #2020-07.** Director Rhoden presented the Board with MI Claim #2020-07. Executive Staff recommended the Board find a manifest injustice exists in this case and waive the \$8,448.38 interest due in the effort to finally resolve the errors in this member's record.

**Mr. Johnson moved to approve the Recommendation to find a manifest injustice exists and waive \$8,448.38 interest due to**

**resolve errors in the member’s record. Ms. Bell *seconded* the *motion*, and the Board *unanimously approved* the *motion*.**

**XVI. Clarification and Reaffirmation of Investment Management Processes under ATRS Policy 4.** Director Rhoden and Rod Graves gave a presentation regarding the need for clarification from the Board in this matter.

**A, Resolution No. 2021-13.**

**Ms. Lester *moved to adopt* Resolution 2021-13, Clarification and Reaffirmation of Investment Management Processes under ATRS Policy 4. Mr. Higginbotham *seconded* the *motion*, and the Board *unanimously adopted* the *resolution*.**

**XVII. Audit Committee Report.** Kelly Davis, Chair, gave a report on the Audit Committee Meeting.

**A. Internal Audit Report: Teacher Deferred Retirement Option Plan (T-DROP).** Dena Dixon gave the Committee the report on the Teacher Deferred Retirement Option Plan (T-DROP).

**XVIII. Investment Committee Report.** Robin Nichols, Chair, gave a report on the Investment Committee meeting.

**A. Arkansas Related and Investment Update.**

- 1. List of Fund Closings.** Rod Graves, Deputy Director, gave an update on recent Investment activity.
- 2. American Center Update.** Rod Graves, Deputy Director, gave the Committee an update on the American Center.

**B. General Investment Consultant Report.**

- 1. Preliminary Performance Report for the Quarter Ending December 31, 2020.** Katie Comstock of Aon Hewitt Investment Consulting provided the Committee with a preliminary portfolio update for the quarter ending December 31, 2020.

**C. Real Asset Consultant Report.**

1. **Performance Report for the Quarter Ending September 30, 2020.** Chae Hong of Aon Hewitt Investment Consulting provided the Committee with a portfolio update for the quarter ending September 30, 2020.
2. **Recommendation to Commit up to \$50 Million Dollars to ISQ Global Infrastructure Fund III, L.P, a Closed End Infrastructure Fund Specializing in Utilities, Transportation, and Power with Imminent Need.** Chae Hong provided the committee with the recommendation to Commit up to \$50 Million Dollars to ISQ Global Infrastructure Fund III, L.P, a Closed End Infrastructure Fund Specializing in Utilities, Transportation, and Power with Imminent Need

ATRS staff concurs with the recommendation.

a. **Resolution 2021-09**

**Ms. Nichols *moved to adopt* Resolution 2021-09, to Commit up to \$50 Million Dollars to ISQ Global Infrastructure Fund III, L.P, a Closed End Infrastructure Fund Specializing in Utilities, Transportation, and Power with Imminent Need. The Board *unanimously adopted the Resolution.***

D. **Private Equity Consultant Report.**

1. **Private Equity Portfolio Review for the Quarter Ending September 30, 2020.** Michael Bacine of Franklin Park provided the Committee with a portfolio update for the quarter ending September 30, 2020.
2. **Recommendation to Make an Additional Commitment of up to \$30 Million Dollars in Franklin Park Corporate Finance Access Fund, L.P., a Fund of Funds Managed by Franklin Park Investing in Smaller Buyout, Growth, and Turnaround Private Equity Funds with Imminent Need.** Michael Bacine of Franklin Park provided the Committee with a recommendation to make an Additional Commitment of up to \$30 Million Dollars in Franklin Park Corporate Finance Access Fund, L.P., a Fund of Funds Managed by Franklin Park Investing in Smaller Buyout, Growth, and Turnaround Private Equity Funds with Imminent Need. .

Staff Concurs with the Recommendation.

a. **Resolution 2021-10**

**Ms. Nichols *moved to adopt* Resolution 2021-10, to Make an Additional Commitment of up to \$30 Million Dollars in Franklin Park Corporate Finance Access Fund, L.P., a Fund of Funds Managed by Franklin Park Investing in Smaller Buyout, Growth, and Turnaround Private Equity Funds with Imminent Need. The Board *unanimously adopted the Resolution.***

3. **Recommendation to Make an Additional Commitment of up to \$30 Million Dollars in Franklin Park International Fund X, L.P. (formerly Franklin Park International Fund 2019), a Fund of Funds Managed by Franklin Park Investing in International Private Equity Funds with Imminent Need.** Michael Bacine of Franklin Park provided the Committee with a recommendation to Make an Additional Commitment of up to \$30 Million Dollars in Franklin Park International Fund X, L.P. (formerly Franklin Park International Fund 2019), a Fund of Funds Managed by Franklin Park Investing in International Private Equity Funds with Imminent Need.

Staff Concurs with the Recommendation.

a. **Resolution 2021-11**

**Ms. Nichols *moved to adopt* Resolution 2021-11, to Make an Additional Commitment of up to \$30 Million Dollars in Franklin Park International Fund X, L.P. (formerly Franklin Park International Fund 2019), a Fund of Funds Managed by Franklin Park Investing in International Private Equity Funds with Imminent Need. The Board *unanimously adopted the Motion.***

4. **Recommendation to Commit up to \$30 Million Dollars in Greenbriar Equity Fund V, L.P., a Buyout Fund that will Invest in Advanced Manufacturing and Business Services Companies Across the Logistics, Aerospace & Defense, and Transportation Sub-sectors with Imminent Need.** Chae

Hong provided the committee with the recommendation to Commit up to \$30 Million Dollars in Greenbriar Equity Fund V, L.P., a Buyout Fund that will Invest in Advanced Manufacturing and Business Services Companies Across the Logistics, Aerospace & Defense, and Transportation Sub-sectors with Imminent Need.

Staff Concurs with the Recommendation.

**a. Resolution 2021-12**

**Ms. Nichols *moved to adopt* Resolution 2021-12, to Commit up to \$30 Million Dollars in Greenbriar Equity Fund V, L.P., a Buyout Fund that will Invest in Advanced Manufacturing and Business Services Companies Across the Logistics, Aerospace & Defense, and Transportation Sub-sectors with Imminent Need. Board *unanimously adopted the Motion***

**XIX. Operations Committee Report.** Bobby Lester, Chair, gave a report on the Operations Committee meeting.

**A. Open Forum for Potential Rule or Law Changes by Committee Members and Board Members in Attendance.**

1. Open Forum. None.

**B. Legislative Package.** Mr. Rhoden gave the Committee an update on the 2021 Legislative Package.

**XX. Staff Reports.**

**A. Medical Committee Report.** Mr. Kincade reported that a total of Fifteen (14) Disability Retirement Applications were approved.

**Ms. Nichols *moved to approve* the Medical Committee Report. Ms. Bell *seconded* the *motion* and the Board *unanimously approved* the *Motion*.**

**XXI. Other Business:** None

**XXII. Adjourn.** With no other business, Danny Knight, Chair adjourned the meeting.

**Meeting adjourned at 11:51 a.m.**

---

Clint Rhoden,  
Executive Director

---

Mr. Danny Knight, Chair  
Board of Trustees

---

Tammy Porter,  
Recorder

---

Date Approved

**MINUTES  
ARKANSAS TEACHER RETIREMENT SYSTEM  
BOARD OF TRUSTEES**

**Monday, September 27, 2021  
11:30 a.m.  
1400 West Third Street  
Little Rock, AR 72201**

**ATTENDEES**

**Board Members Present**

Danny Knight, Chair  
Lloyd Black, Vice Chair  
Anita Bell  
Kathy Clayton\*  
Kelly Davis  
Dr. Mike Hernandez  
Shawn Higginbotham  
Michael Johnson  
Chip Martin  
Amanda Webb  
Hon. Andrea Lea, State Auditor\*  
Jason Brady, designee for Dennis Milligan

**Board Members Absent**

Bobby Lester  
Susannah Marshall, Bank Commissioner  
Johnny Key, Education Secretary

**Reporters Present**

Mike Wickline, Arkansas Dem Gaz.

*\*via ZOOM*

**ATRS Staff Present**

Clint Rhoden, Executive Director  
Rod Graves, Deputy Director  
Tammy Porter, Ex. Assistant/Board Secretary  
Dena Dixon, Int, Audit/Risk Mgmt.\*  
Braeden Duke, Software Specialist Analyst  
Vicky Fowler, Directory, Human Resources  
Willie Kincade, Director of Operations  
Mike Lauro, Manager, Information Systems  
Jennifer Liwo, Attorney Specialist  
Jerry Meyer, Manager, Real Assets  
Martha Miller, General Counsel\*  
Joe Sithong, Coordinator, Information Services  
Leslie Ward, Manager, Privat Equity  
Brenda West, Int. Audit/Risk Mgmt.

**Guest Present**

Duncan Baird, APERS\*  
Katie Comstock, Aon Hewitt (AHIC)\*  
PJ Kelly, Aon Hewitt (AHIC)\*  
Michael Bacine, Franklin Park\*  
Donna Morey, ARTA\*  
Robin Nichols  
Jeff Stubblefield  
Tom Reilly  
Heartsill Ragon

- I. **Call to Order/Roll Call.** Mr. Danny Knight, Chair, called the Board of Trustees meeting to order at 12:09 p.m. Roll call was taken. Mr. Bobby Lester, Ms. Susannah Marshall, and Mr. Johnny Key were absent.

**II. Motion for Excused Absences.**

**Mr. Martin *moved to excuse* Mr. Lester, Ms. Marshall, and Mr. Key from the September 27, 2021, Board of Trustees Meeting. Ms. Bell *seconded the motion*, and the Board *unanimously approved the motion*.**

**III. Adoption of Agenda.**

**Ms. Davis *moved for adoption* of the Agenda. Mr. Higginbotham *seconded the motion*, and the Board *unanimously approved the motion*.**

**IV. Approval of Prior Meeting Minutes.**

**A. December 7, 2020, Corrected Minutes.**

**Ms. Davis *moved for approval* of the Corrected Minutes of the Board of Trustees meeting of December 7, 2020. Mr. Higginbotham *seconded the motion*, and the Board *unanimously approved the motion*.**

**B. June 7, 2021 Minutes**

**Ms. Bell *moved for approval* of the Minutes of the Board of Trustees meeting of June 7, 2021, with a correction to item XV.D.2. Mr. Black *seconded the motion*, and the Board *unanimously approved the motion*.**

**C. June 23, 2021, Minutes.**

**Ms. Davis *moved for approval* of the Minutes of the Board of Trustees meeting of June 23, 2021. Mr. Higginbotham *seconded the motion*, and the Board *unanimously approved the motion*.**

**D. July 14, 2021, Minutes.**

**Mr. Black *moved for approval* of the Minutes of the Board of Trustees meeting of July 14, 2021. Mr. Martin *seconded the motion*, and the Board *unanimously approved the motion*.**

**E. August 3, 2021, Minutes.**

**Ms. Bell *moved for approval of the Minutes of the Board of Trustees meeting of August 3, 2021. Ms. Davis seconded the motion, and the Board unanimously approved the motion.***

**F. August 19, 2021, Minutes.**

**Mr. Higginbotham *moved for approval of the Minutes of the Board of Trustees meeting of August 19, 2021. Ms. Bell seconded the motion, and the Board unanimously approved the motion.***

**V. Recognition of Retired Trustee.**

**A. Resolution 2021-31**

**Mr. Black *moved to adopt Resolution 2021-31, recognition of Retired Trustee Ms. Robin Nichols. Mr. Martin seconded the Motion and the Board unanimously approved the Resolution.***

**VI. Report of Member Interest Amount Waived Under A.C.A. Sec. 24-7-205.**

ATRS waives interest for members when there is a dispute between ATRS and the member as to whether ATRS made a mistake or otherwise did not do all that was required on the member's account. Since ATRS has implemented the actuarial cost method for the purchase of service credit, interest waived is slowly disappearing, as well as the number of members who purchase service credit. Ten (10) member interest amounts were waived for this reporting period in the amount of \$2,233.24.

**VII. Report of Employer Penalties and Interest Waived Under A.C.A. Sec. 24-7-411.**

ATRS may also waive employer interest and penalties when reports or payments are late or have issues due to a new bookkeeper, inclement weather, sickness and other situations that justify a waiver. Six (6) employer penalties and interest amounts were waived for this reporting period in the amount of \$2,130.94.

**VIII. Legislative Audit Report, June 30, 2020 Official Review.**

The Division of Legislative Audit has provided ATRS staff with the 2020 fiscal year audit report for the fiscal year that ended on June 30, 2020. The audit report was reviewed by the Legislative Joint Auditing Committee on August 13, 2021. The audit report is included in the Board packet for this meeting. The law requires that the ATRS Board have the Legislative Audit report on the ATRS

Board agenda and that the ATRS Board pass a motion reflecting that the audit report was received and reviewed by the Board in the event issues arise in the future related to the audit.

**Ms. Davis moved for approval of the Legislative Audit Report, June 30, 2020 Official Review. Mr. Higginbotham seconded the motion, and the Board unanimously approved the motion.**

- IX. Establishment of a Fixed T-DROP Plan Interest Rate for Regular Participants.** Legislation was passed in the 2021 Regular Session that allowed the board to set an incentive Regular T-DROP interest rate as late as the first regular board meeting of the fiscal year. This allows the board to set a rate based on the actual investment returns. Resolution 2021-32 modifies the annual process accordingly.

**A. Resolution No. 2021-32**

**Ms. Davis moved to adopt Resolution 2021-32, Establishment of a Fixed T-DROP Plan Interest Rate for Regular Participants. Ms. Bell seconded the Motion and the Board unanimously approved the Resolution.**

- X. Establishment of a Variable Interest Rate for Post 10-Year T-DROP Plan.** Legislation was passed in the 2021 Regular Session that allowed the board to set the annual Post 10-year T-DROP interest rate as late as the first regular board meeting of the fiscal year. This allows the board to set a rate based on the actual investment returns. Resolution 2021-33 modifies the annual process accordingly.

**A. Resolution No. 2021-33**

**Mr. Martin moved to adopt Resolution 2021-33, Establishment of a Variable Interest Rate for Post 10-Year T-DROP Plan. Ms. Davis seconded the Motion and the Board unanimously approved the Resolution.**

- XI. Authorization to Pay Regular T-DROP Interest for Fiscal Year 2022.** The ATRS Board annually sets the interest rates on T-DROP accounts. Resolution 2021-32 sets the T-DROP rate at a fixed 3% unless investment returns in the prior fiscal year exceeded the current assumed rate of return by more than 2%. The resolution also allows the Board to award an incentive rate of up to 3% which when combined with the 3% fixed rate provides a maximum T-DROP rate of 6%. The executive staff recommends the incentive rate to be set at 3% for the fiscal year 2021-2022 (combined rate of 6.0%).

**A. Resolution No. 2021-34.**

**Ms. Bell *moved to adopt* Resolution 2021-34, Authorization to Pay Regular T-DROP Interest for Fiscal Year 2022. Mr. Black *seconded* the Motion and the Board *unanimously approved the Resolution***

**XII. Authorization to Pay Post 10 year T-DROP Interest for Fiscal Year 2022.**

The ATRS Board annually sets the interest rates on Post 10 Year T-DROP accounts. Resolution 2021-33 sets the Post 10 Year T-DROP rate at a rate between 4% and 6% with an incentive rate available when the returns exceed the assumed rate of return by more than 2%. The resolution also allows the Board to award an incentive rate of up to 1.5% which when combined with the 6% maximum rate provides a maximum Post 10 Year T-DROP rate of 7.5%. The executive staff recommends the combined rate to be set at 7.5% for fiscal year 2021-2022.

**A. Resolution No. 2021-35**

**Ms. Davis *moved to adopt* Resolution 2021-35, Authorization to Pay Post 10 year T-DROP Interest for Fiscal Year 2022. Mr. Martin *seconded* the Motion and the Board *unanimously approved the Resolution***

**XIII. Authorization to Pay an Incentive Interest Rate on T-DROP Cash Balance Accounts on June 30, 2022.**

The ATRS Board provides the CBA program for members who have retired out of T-DROP and wish to leave a cash balance at ATRS for ultimate distribution to the member after retirement based upon the members withdrawal request. The Board can award an incentive rate with an incentive rate when the returns exceed the assumed rate of return by more than 2%. The executive staff recommends the CBA incentive rate to be set at 1% for fiscal year 2021-2022. **This is an action item.**

**A. Resolution No. 2021-36**

**Ms. Davis *moved to adopt* Resolution 2021-36, Authorization to Pay an Incentive Interest Rate on T-DROP Cash Balance Accounts on June 30, 2022. Ms. Bell *seconded* the Motion and the Board *unanimously approved the Resolution.***

**XIV. Extension of ATRS CASH Program for Fiscal Year 2022.** The CASH Program expired on June 30, 2021. ATRS staff recommends that the CASH program for fiscal year 2022 be the same as the expiring program except that the age for calculation of the accrued liability be set to the age attained as of June 30, 2021. **This is an action item.**

**A. Resolution No. 2021-37**

**Mr. Higginbotham *moved to adopt* Resolution 2021-37, Extension of ATRS CASH Program for Fiscal Year 2022. Dr. Hernandez *seconded* the Motion and the Board *unanimously approved the* Resolution.**

**XV. Office Terms For Trustees Elected in 2021.** The term for elected trustee is six years. Resolution 2021-52 reaffirms the certification of all trustees elected in the 2021 regular system election and clearly states that the terms began July 1, 2021 and expire on June 30, 2027. **This is an action item.**

**A. Resolution No. 2021-52**

**Mr. Black *moved to adopt* Resolution 2021-52, Office Terms For Trustees Elected in 2021. Ms. Bell *seconded* the Motion and the Board *unanimously approved the* Resolution.**

**XVI. Discussion of Retirement Applications waived in 2020.** The Board granted the Executive Director some minor discretion last year to waive application deadlines for the month of May, 2020 due to the COVID-19 pandemic. It was also agreed that a report would be given to the Board on the number of applications waived.

**XVII. Audit Committee Report. *Kelly Davis, Chair.***

**A. Nominations for Vacant At-Large Member Position.** Ms. West presented the Committee with two (2) applicants for the Vacant At-Large Member position. Ms. Maggie Garrett, CPA, CIA, and Mr. John Owens.

**Ms. Davis *moved to recommend to the Board approval of* Ms. Maggie Garrett to fill the Vacant At-Large Member Position on the Audit Committee, and the Board *unanimously approved the motion.***

- B. Internal Audit Report: Implementation of Legislation Enacted by the 92<sup>nd</sup> General Assembly.** Ms. Dena Dixson presented the report to the Committee.

**XVIII. Investment Committee Report. *Chip Martin, Vice Chair***

**A. Arkansas Related and Investment Update.**

- 1. List of Fund Closings.** Rod Graves, Deputy Director, gave an update on recent investment activity.
- 2. Fixed Income Guidelines Update.** Rod Graves, Deputy Director, gave the Committee an update on the Fixed Income Guidelines update.
- 3. Highland Update.** Mr. Tom Reilley of Highland Pellets, and Mr. Heartsill Ragon, of Gill, Elrod and Ragon, gave the Committee an update on Highland Pellets

**B. General Investment Consultant Report.**

- 1. Preliminary Performance Report for the Quarter Ended June 30, 2021.** P. J. Kelly and Katie Comstock of Aon Hewitt Investment Consulting provided the Committee with a preliminary portfolio update for the quarter ending June 30, 2021.
- 2. Preliminary Performance Report for the Month Ended August 31, 2021.** P. J. Kelly and Katie Comstock of Aon Hewitt Investment Consulting provided the Committee with a preliminary portfolio update for the month ending August 31, 2021.
- 3. Emerging Manager Report for Fiscal Year Ended June 30, 2021.** P.J. Kelly and Katie Comstock of Aon Hewitt Investment Consulting (AHIC) provided the Committee with a report of AHIC's manager research process, including coverage of emerging managers, and provide an update on due diligence activities on emerging managers conducted on behalf of ATRS for the fiscal year ended June 30, 2021.
- 4. Recommendation to Transfer Assets from the Existing ATRS Investment in CFM Institutional Systematic Diversified Fund Series 1.5 (CFM ISD) to CFM Systematic**

**Global Macro, L.P. Series 1 (CFM SGM), a Fund that Seeks to Deliver Consistent Returns at Targeted Risk Levels both on a Long and Short Basis. Resolution 2021-38.** Mr. Kevin Hrad of Aon Hewitt Investing Consulting presented the recommendation to Transfer Assets from the Existing ATRS Investment in CFM Institutional Systematic Diversified Fund Series 1.5 (CFM ISD) to CFM Systematic Global Macro, L.P. Series 1 (CFM SGM), a Fund that Seeks to Deliver Consistent Returns at Targeted Risk Levels both on a Long and Short Basis. Director Rhoden confirmed staff concurs with the recommendation.

**a. Resolution 2021-38**

**Mr. Martin *moved to adopt* Resolution 2021-38, Recommendation to Transfer Assets from the Existing ATRS Investment in CFM Institutional Systematic Diversified Fund Series 1.5 (CFM ISD) to CFM Systematic Global Macro, L.P. Series 1 (CFM SGM), a Fund that Seeks to Deliver Consistent Returns at Targeted Risk Levels both on a Long and Short Basis and the Board *unanimously approved the* Resolution.**

- 5. Recommendation to Redeem in Full the ATRS Investment in Nephila Rubik Holdings, Ltd. Resolution 2021-39.** Mr. Kevin Hrad of Aon Hewitt Investing Consulting presented the Committee with the recommendation to redeem in full the ATRS Investment in Nephila Rubik Holdings, Ltd. Director Rhoden confirmed staff concurs with the recommendation.

**a. Resolution 2021-39**

**Mr. Martin *moved to adopt* Resolution 2021-39, Recommendation to Redeem in Full the ATRS Investment in Nephila Rubik Holdings, Ltd and the Board *unanimously approved the* Resolution.**

6. **Recommendation to Commit Approximately \$95 Million Dollars in Juniperus Insurance Opportunity Fund Limited.** Resolution 2021-40. Mr. Kevin Hrad of Aon Hewitt Investing Consulting presented the Committee with a recommendation to Commit Approximately \$95 Million Dollars in Juniperus Insurance Opportunity Fund Limited, a Fund that Invests across Insurance Linked Securities. Director Rhoden confirmed staff concurs with the recommendation.

- a. **Resolution 2021-40**

**Mr. Martin *moved to adopt* Resolution 2021-40, Recommendation to Commit Approximately \$95 Million Dollars in Juniperus Insurance Opportunity Fund Limited and the Board *unanimously approved the* Resolution.**

- 7, **Recommendation to Commit up to \$50 Million Dollars in Chatham Asset Private Debt and Strategic Capital Fund III, L.P. Resolution 2021-41.** Mr. Kevin Hrad of Aon Hewitt Investing Consulting presented the Committee with a recommendation to Commit up to \$50 Million Dollars in Chatham Asset Private Debt and Strategic Capital Fund III, L.P. Director Rhoden confirmed staff concurs with the recommendation.

- a. **Resolution 2021-41**

**Mr. Martin *moved to adopt* Resolution 2021-41, Recommendation to Commit up to \$50 Million Dollars in Chatham Asset Private Debt and Strategic Capital Fund III, L.P. and the Board *unanimously approved the* Resolution.**

**C. Real Assets Consultant Report.**

1. **Performance Report for the Quarter Ended March 31, 2021.** Chae Hong of Aon Hewitt Investment Consulting provided the Committee with the performance report for the quarter ending March 31, 2021.

2. **Recommendation to Commit up to \$40 Million Dollars in Almanac Realty Securities IX, L.P., a Closed End, Value Added Real Estate Fund Targeting Investments in Both Private and Public Real Estate Operating Companies. Resolution 2021-42.** Chae Hong of Aon Hewitt Investment Consulting provided the Committee with a recommendation to Commit up to \$40 Million Dollars in Almanac Realty Securities IX, L.P. Director Rhoden confirmed staff concurs with the recommendation.

- a. **Resolution 2021-42**

**Mr. Martin *moved to adopt* Resolution 2021-42, Recommendation to Commit up to \$40 Million Dollars in Almanac Realty Securities IX, L.P., a Closed End, Value Added Real Estate Fund Targeting Investments in Both Private and Public Real Estate Operating Companies and the Board *unanimously approved the* Resolution.**

3. **Recommendation to Commit up to \$50 Million Dollars in LaSalle Asia Opportunity Fund VI, L.P., a Closed End Opportunistic Real Estate Fund Focused on Both Debt and Equity Investments in Asia with Imminent Need. Resolution 2021-43.** Chae Hong presented the Committee with the recommendation to Commit up to \$50 Million Dollars to in LaSalle Asia Opportunity Fund VI, L.P a Closed End Opportunistic Real Estate Fund Focused on Both Debt and Equity Investments in Asia with Imminent Need. Director Rhoden confirmed staff concurs with the recommendation.

- a. **Resolution 2021-43**

**Mr. Martin *moved to adopt* Resolution 2021-43, Recommendation to Commit up to \$50 Million Dollars in LaSalle Asia Opportunity Fund VI, L.P., a Closed End Opportunistic Real Estate Fund Focused on Both Debt and Equity Investments in Asia with Imminent Need, and the Board *unanimously approved the* Resolution.**

4. **Recommendation to commit up to \$55 Million Dollars in LBA Logistics Value Fund IX, L.P., a Closed End Value Add Real Estate Fund with the Primary Purpose of Acquiring Industrial Properties Located in the U.S. Real Estate Market with Imminent Need. Resolution 2021-44.** Mr. Chae Hong presented the Committee with the recommendation to commit up to \$55 Million Dollars in LBA Logistics Value Fund IX, L.P., a Closed End Value Add Real Estate Fund with the Primary Purpose of Acquiring Industrial Properties Located in the U.S. Real Estate Market with Imminent Need. Director Rhoden confirmed staff concurs with the recommendation.

- a. **Resolution 2021-44**

**Mr. Martin *moved to adopt* Resolution 2021-44, Recommendation to commit up to \$55 Million Dollars in LBA Logistics Value Fund IX, L.P., a Closed End Value Add Real Estate Fund with the Primary Purpose of Acquiring Industrial Properties Located in the U.S. Real Estate Market with Imminent Need, and the Board *unanimously approved the* Resolution.**

5. **Recommendation to Redeem and Redeploy Approximately \$140 Million Dollars from JP Morgan Strategic Property Fund (SPF). Resolution 2021-45.** Mr. Chae Hong presented the Committee with the recommendation to Redeem and Redeploy Approximately \$140 Million Dollars from JP Morgan Strategic Property Fund (SPF). Director Rhoden confirmed staff concurs with the recommendation.

- a. **Resolution 2021-45**

**Mr. Martin *moved to adopt* Resolution 2021-45, Recommendation to Redeem and Redeploy Approximately \$140 Million Dollars from JP Morgan Strategic Property Fund (SPF), and the Board *unanimously approved the* Resolution.**

6. **Recommendation to Commit up to \$70 Million Dollars in Morgan Stanley Prime Property Fund LLC, (PPF) an Open**

**End, Core Real Estate Fund Focused on Income Producing Properties. Resolution 2021-46.** Mr. Chae Hong presented the Committee with the recommendation to commit up to \$70 Million Dollars in Morgan Stanley Prime Property Fund LLC, (PPF) an Open End, Core Real Estate Fund Focused on Income Producing Properties. Director Rhoden confirmed staff concurs with the recommendation.

**a. Resolution 2021-46**

**Mr. Martin *moved to adopt* Resolution 2021-46, Recommendation to Commit up to \$70 Million Dollars in Morgan Stanley Prime Property Fund LLC, (PPF) an Open End, Core Real Estate Fund Focused on Income Producing Properties, and the Board *unanimously approved the* Resolution.**

- 7. Recommendation to Commit up to \$70 Million Dollars in RREEF Core Plus Industrial Fund L.P.(CPIF), an Open End, Core Plus Real Estate Fund Specializing in Industrial Assets. Resolution 2021-47.** Mr. Chae Hong presented the Committee with the recommendation to Commit up to \$70 Million Dollars in RREEF Core Plus Industrial Fund L.P.(CPIF), an Open End, Core Plus Real Estate Fund Specializing in Industrial Assets. Director Rhoden confirmed staff concurs with the recommendation.

**a. Resolution 2021-47**

**Mr. Martin *moved to adopt* Resolution 2021-47, Recommendation to Commit up to \$70 Million Dollars in RREEF Core Plus Industrial Fund L.P.(CPIF), an Open End, Core Plus Real Estate Fund Specializing in Industrial Assets, and the Board *unanimously approved the* Resolution.**

**D. Private Equity Consultant Report.**

- 1. Preliminary Private Equity Portfolio Review for the Quarter Ended March 31, 2021.** Michael Bacine of Franklin Park

provided the Board with a portfolio review for the quarter ending March 31, 2021.

2. **Emerging Manager Report for Fiscal Year Ended June 30, 2021.** Michael Bacine of Franklin Park provided the Committee with a report of Franklin Park's manager research process, including coverage of emerging managers, and provide an update on due diligence activities on emerging managers conducted on behalf of ATRS for the fiscal year ended June 30, 2021.
  
3. **Recommendation to Commit up to \$30 Million Dollars in Bison Capital Partners VI, L.P., a Private Equity Debt and Equity Fund Focused on Hybrid Debt and Equity Investments in Small to Middle Market Companies.** Mr. Michael Bacine of Franklin Park provided the Committee with the recommendation to Commit up to \$30 Million Dollars in Bison Capital Partners VI, L.P., a Private Equity Debt and Equity Fund Focused on Hybrid Debt and Equity Investments in Small to Middle Market Companies. Director Rhoden confirmed staff concurs with the recommendation.

- a. **Resolution 2021-48**

**Mr. Martin *moved to adopt* Resolution 2021-48, Recommendation to Commit up to \$30 Million Dollars in Bison Capital Partners VI, L.P., a Private Equity Debt and Equity Fund Focused on Hybrid Debt and Equity Investments in Small to Middle Market Companies, and the Board *unanimously approved the* Resolution.**

4. **Recommendation to Commit up to \$30 Million Dollars in Clearlake Capital Partners VII, L.P. a Private Equity Fund that Makes Opportunistic Debt and Equity Investments in Middle Market Companies Undergoing Change and/or are in Underserved Industries or Markets in North America.** Mr. Michael Bacine of Franklin Park provided the Committee with the recommendation to Commit up to \$30 Million Dollars in Clearlake Capital Partners VII, L.P. a Private Equity Fund that Makes Opportunistic Debt and Equity Investments in Middle Market Companies Undergoing Change and/or are in

Underserved Industries or Markets in North America. Director Rhoden confirmed staff concurs with the recommendation.

a. **Resolution 2021-49**

**Mr. Martin *moved to adopt* Resolution 2021-49, Recommendation to Commit up to \$30 Million Dollars in Clearlake Capital Partners VII, L.P. a Private Equity Fund that Makes Opportunistic Debt and Equity Investments in Middle Market Companies Undergoing Change and/or are in Underserved Industries or Markets in North America, and the Board *unanimously approved the* Resolution.**

5. **Recommendation to Commit up to \$30 Million Dollars in Franklin Park Venture Fund XIV, L.P., (formerly Franklin Park Venture Fund Series) a Fund of Funds Managed by Franklin Park Investing in Venture Capital Private Equity Funds.** Mr. Michael Bacine presented the Committee with the recommendation to Commit up to \$30 Million Dollars in Franklin Park Venture Fund XIV, L.P., (formerly Franklin Park Venture Fund Series) a Fund of Funds Managed by Franklin Park Investing in Venture Capital Private Equity Funds. Director Rhoden confirmed staff concurs with the recommendation.

a. **Resolution 2021-50**

**Mr. Martin *moved to adopt* Resolution 2021-50, Recommendation to Commit up to \$30 Million Dollars in Franklin Park Venture Fund XIV, L.P., (formerly Franklin Park Venture Fund Series) a Fund of Funds Managed by Franklin Park Investing in Venture Capital Private Equity Funds, and the Board *unanimously approved the* Resolution.**

6. **Recommendation to Commit up to \$30 Million Dollars in Franklin Park Corporate Finance Access Fund II, L.P., a Fund of Funds Managed by Franklin Park Investing in Smaller Buyout, Growth, and Turnaround Private Equity Funds.** Mr. Michael Bacine presented the Committee with the recommendation to Commit up to \$30 Million Dollars in Franklin

Park Corporate Finance Access Fund II, L.P., a Fund of Funds Managed by Franklin Park Investing in Smaller Buyout, Growth, and Turnaround Private Equity Funds. Director Rhoden confirmed staff concurs with the recommendation.

**a. Resolution 2021-51**

**Mr. Martin *moved to adopt* Resolution 2021-51, Recommendation to Commit up to \$30 Million Dollars in Franklin Park Corporate Finance Access Fund II, L.P., a Fund of Funds Managed by Franklin Park Investing in Smaller Buyout, Growth, and Turnaround Private Equity Funds, and the Board *unanimously approved the* Resolution.**

**XVI. Operations Committee Report.** Kelly Davis, Vice Chair, gave a report on the Operations Committee meeting.

**A. Open Forum for Potential Rule or Law Changes by Committee Members and Board Members in Attendance.**

1. Open Forum. None.

**B. Board Policy 1 Update – Regarding Committee Appointments.** Director Rhoden gave the Committee a draft of the update to Board Policy 1 Update.

**Ms. Davis *moved to approve* the update to Board Policy 1 regarding Committee Appointments, and the Board *unanimously approved the Motion.***

**C. Potential Rule Changes.** Director Rhoden discussed potential rules changes to ATRS Rule package for the following Rules;

- Rule 4 – Election of Board of Trustees
- Rule 6 – Membership.
- Rule 7 – Reporting and Eligibility
- Rule 8 – Purchase and Refunds
- Rule 9 – Retirement Benefits
- Rule 10 – T-DROP and Return to Service
- Rule 11 – Survivors and Domestic Relations Order

**Ms. Davis moved to approve for ATRS staff to proceed with Rule Promulgation ATRS Rule Package for Rule 4, Rule 6, Rule 7, Rule 8, Rule 9, Rule 10, and Rule 11, and the Board unanimously approved the motion.**

**XX. Board of Trustees Disability Review.** Under the Disability Review procedure described in A.C.A. §24-7-704(b)(3)(D) the Board shall make a final decision on the recommendations of the Medical Committee. Mr. Rhoden presented the Board with the following proposed orders for Board approval regarding Disability Review recommendations.

**A. Group Order - Approved. DR-2021-09-A**

**Mr. Brady moved to approve the Group Order – Approved DR.2021-09-A. Mr. Higginbotham seconded the motion and the Board unanimously approved the Motion.**

**B. Member Order – DR-2021-09-444395.**

**Mr. Brady moved to approve the Member Order –DR.2021-09-444395. Dr. Hernandez seconded the motion and the Board unanimously approved the Motion.**

**C. Member Order – DR-2021-09-498094**

**Mr. Brady moved to approve the Member Order –DR.2021-09-498094. Mr. Black seconded the motion and the Board unanimously approved the Motion.**

**XXI. Staff Reports.**

**A. Medical Committee Report. Mr. Kincade reported that a total of Thirty-one (31) Disability Retirement Applications were approved.**

**Ms. Bell moved to approve the Medical Committee Report. Mr. Black seconded the motion and the Board unanimously approved the Motion.**

**XXII. Election of Board Chair and Vice Chair.**

**Mr. Black *moved to defer* the Election of the Board Chair and Vice Chair to the December Board meeting. Ms. Bell *seconded* the motion, and the Board *unanimously approved the motion*.**

**XXIII. Other Business. None.**

**XXIV. Adjourn.**

**Mr. Martin *moved to adjourn* the Board of Trustees meeting. Mr. Higginbotham *seconded the motion*, and the Board *unanimously approved the motion*.**

Meeting adjourned at 1:02 p.m.

---

Mr. Clint Rhoden,  
Executive Director

---

Mr. Danny Knight, Chair  
Board of Trustees

---

Tammy Porter,  
Recorder

---

Date Approved

**MINUTES  
ARKANSAS TEACHER RETIREMENT SYSTEM  
BOARD OF TRUSTEES - CALLED MEETING**

**Monday, October 18, 2021  
4:00 p.m.  
1400 West Third Street  
Little Rock, AR 72201**

**ATTENDEES**

**Board Member Present**

Danny Knight, Chair  
Lloyd Black, Vice Chair\*  
Anita Bell\*  
Kathy Clayton\*  
Kelly Davis\*  
Dr. Mike Hernandez\*  
Shawn Higginbotham\*  
Michael Johnson  
Bobby Lester  
Chip Martin\*  
Amanda Webb\*  
Susannah Marshall, Bank Commissioner\*  
Johnny Key, Education Secretary\*  
Jason Brady, designee for Dennis Milligan\*

**Board Member Absent**

Auditor Andrea Lea, State Auditor

**ATRS Staff Present**

Clint Rhoden, Executive Director  
Rod Graves, Deputy Director  
Tammy Porter, Ex. Assistant/Board Secretary  
Braeden Duke, Information Services\*  
Martha Miller, General Counsel\*  
Manju, Director, Information Services\*  
Leslie Ward, Manager, Private Equity  
Brenda West, Int. Audit/Risk Mgmt.

**Guest Present**

PJ Kelly, Aon Hewitt Investment Consulting\*  
Jack Dowd, Aon Hewitt Investment Consulting\*  
Duncan Baird, APERS\*  
Michael Bacine, Franklin Park\*  
Kevin Balaod\*  
Richard Ferguson\*

**Reporters Present**

Michael Wickline, AR Dem. Gazette

**\*via Zoom**

- I. **Call to Order/Roll Call.** Mr. Danny Knight, Chair, called the Board of Trustees meeting to order at 4:32 p.m. Roll call was taken. Auditor Andrea Lea was absent.
  
- II. **Adoption of Agenda.**  
  
**Mr. Black *moved for adoption of the Agenda. Ms. Bell seconded the motion and the Committee unanimously approved the motion.***
  
- III. **Executive Summary.** The Executive Summary was provided for reference with no questions or expansions on the written summary.

**IV. Investment Committee Report. *Mr. Chip Martin, actin Chair***

**A, Arkansas Related and Investment Update. Rod Graves presented the Committee with the following recommendations.**

- 1. Consideration to use the Special Procurement Process to Contract with Global Principal Partners as a Temporary Consultant for Direct Investments until the RFP and Contracting Process for a Long Term Direct Investment Consultant is Finalized.** The Board approved staff to begin a procurement process for a consultant to provide recommendations for potential new direct investments and also provide monitoring and management of existing and new direct investments at the June 7, 2021 meeting. ATRS staff worked with the Office of State Procurement (OSP) to issue an RFP for these services. Due to no vendor response for the initial bid opportunity, ATRS is currently working with OSP to reissue the RFP.

Global Principal Partners (GPP) is a U.S. based world class project finance group founded in 2003. GPP has worked on multiple projects of various sizes and the firm has extensive experience in project finance. GPP has raised over \$8 billion in financing for projects and has provided advisory services for over \$4 billion in mergers, acquisitions and consolidations of investments. ATRS has obtained approval from OSP to contract with GPP on a temporary basis through the special procurement process. If the special procurement contract is approved by the ATRS Board, ATRS staff would prepare and execute the contract before submitting the contract for appropriate legislative review.

***Mr. Martin moved to approve the Special Procurement Process to Contract with Global Principal Partners as a Temporary Consultant for Direct Investments until the RFP and Contracting Process for a Long Term Direct Investment Consultant is Finalized, and the Board unanimously approved the motion.***

- 2. Applying Imminent Need to Six Previously Approved Investments.**

- a. **Recommendation to Apply Imminent Need Status to the Previously Approved Transfer of Assets from the Existing ATRS Investment in CFM Institutional Systematic Diversified Fund Series 1.5 (CFM ISD) to CFM Systematic Global Macro, L.P. Series 1 (CFM SGM), Resolution 2021-53.** The Board approved Resolution 2021-38 at the September 27, 2021 meeting authorizing the transfer of assets from CFM ISD to CFM SGM. The recommendation for the transfer is based on continuous efforts to improve manager structures and is one of the results of the Opportunistic/Alternative Portfolio review presented to the Board at the June 7, 2021 meeting.

Initially imminent need was not requested for this transfer because an October 22, 2021 ALC meeting was scheduled at the time of the September 27, 2021 ATRS meeting. The October ALC meeting has since been cancelled and the next scheduled ALC meeting is November 19, 2021. Due to the change in schedule of the ALC meetings, imminent need is now requested by ATRS staff to implement the transfer.

1. **Resolution No. 2021-53**

**Mr. Martin *moved to adopt* Resolution 2021-53, to Apply Imminent Need Status to the Previously Approved Transfer of Assets from the Existing ATRS Investment in CFM Institutional Systematic Diversified Fund Series 1.5 (CFM ISD) to CFM Systematic Global Macro, L.P. Series 1 (CFM SGM), and the Board *unanimously approved the motion.***

- b. **Recommendation to Apply Imminent Need Status to the Previously Approved Commitment of up to \$50 Million Dollars in Chatham Asset Private Debt and Strategic Capital Fund III, L.P., Resolution 2021-54.** The Board approved Resolution 2021-41 at the September 27, 2021 meeting authorizing a commitment of up to \$50 million dollars in Chatham Asset Private Debt and Strategic Capital Fund III. Founded in 2002 and based in Chatham, NJ, the fund is designed to

provide clients with exposure to illiquid and opportunistic debt assets both on a long and short basis. The fund seeks to take advantage of opportunities arising from the mismatch between the supply of capital available to middle market companies and the demand for capital from those companies.

Initially imminent need was not requested for this investment because an October 22, 2021 ALC meeting was scheduled at the time of the September 27, 2021 ATRS meeting. The October ALC meeting has since been cancelled and the next scheduled ALC meeting is November 19, 2021. Due to the change in schedule of the ALC meetings, imminent need is now requested by ATRS staff to implement the investment.

**1. Resolution No. 2021-54**

**Mr. Martin *moved to adopt* Resolution No. 2021-54, to Apply Imminent Need Status to the Previously Approved Commitment of up to \$50 Million Dollars in Chatham Asset Private Debt and Strategic Capital Fund III, L.P., and the Board *unanimously approved the motion.***

- c. Recommendation to Apply Imminent Need Status to the Previously Approved Commitment of up to \$40 Million Dollars in Almanac Realty Securities IX, L.P., a Closed End, Value Added Real Estate Fund Targeting Investments in Both Private and Public Real Estate Operating Companies. Resolution 2021-55.** The Board approved Resolution 2021-42 at the September 27, 2021 meeting authorizing a commitment of up to \$40 million dollars in Almanac Realty Securities IX. Founded in 1996 and located in New York, Almanac was originally known as Five Arrows before changing the firm's name in 2011. ATRS has previously invested in Almanac Fund V (formerly known as Five Arrows Fund V), VI, VII and VIII for an average net IRR of 12.4%. This fund focuses on real estate operating companies that have strong management teams with stable cash flows. This strategy strives to provide attractive current yields

coupled with additional returns by continuing to grow already stable companies while providing downside protection.

Initially imminent need was not requested for this investment because an October 22, 2021 ALC meeting was scheduled at the time of the September 27, 2021 ATRS meeting. The October ALC meeting has since been cancelled and the next scheduled ALC meeting is November 19, 2021. Due to the change in schedule of the ALC meetings, imminent need is now requested by ATRS staff to implement the investment.

**1. Resolution No. 2021-55**

**Mr. Martin *moved to adopt* Resolution 2021-55 to Apply Imminent Need Status to the Previously Approved Commitment of up to \$40 Million Dollars in Almanac Realty Securities IX, L.P., a Closed End, Value Added Real Estate Fund Targeting Investments in Both Private and Public Real Estate Operating Companies, and the Board *unanimously approved the motion.***

- d. Recommendation to Apply Imminent Need Status to the Previously Approved Commitment of up to \$70 Million Dollars in Morgan Stanley Prime Property Fund LLC, (PPF) an Open End, Core Real Estate Fund Focused on Income Producing Properties. Resolution 2021-56.** The Board approved Resolution 2021-46 at the September 27, 2021 meeting authorizing a commitment of up to \$70 million dollars in Morgan Stanley Prime Property Fund LLC. Headquartered in New York, Morgan Stanley Real Estate Investing (MSREI) has a global platform of real estate investment products and strategies with almost \$44 billion in assets under management. PPF is MSREI's single largest fund. PPF is a U.S. open end, diversified core fund that targets the highest quality income-producing properties located in primary markets.

Initially imminent need was not requested for this investment because an October 22, 2021 ALC meeting was scheduled at the time of the September 27, 2021 ATRS meeting. The October ALC meeting has since been cancelled and the next scheduled ALC meeting is November 19, 2021. Due to the change in schedule of the ALC meetings, imminent need is now requested by ATRS staff to implement the investment.

**1. Resolution No. 2021-56**

**Mr. Martin *moved to adopt* Resolution 2021-56, to Apply Imminent Need Status to the Previously Approved Commitment of up to \$70 Million Dollars in Morgan Stanley Prime Property Fund LLC, (PPF) an Open End, Core Real Estate Fund Focused on Income Producing Properties, and the Board *unanimously approved the motion.***

- e. Recommendation to Apply Imminent Need Status to the Previously Approved Commitment of up to \$70 Million Dollars in RREEF Core Plus Industrial Fund L.P.(CPIF), an Open End, Core Plus Real Estate Fund Specializing in Industrial Assets. Resolution 2021-57.** The Board approved Resolution 2021-47 at the September 27, 2021 meeting authorizing a commitment of up to \$70 million dollars in RREEF Core Plus Industrial Fund L.P. The CPIF headquarters are located in New York. CPIF invests in high quality industrial assets via core, transitional and development investments primarily located in and around U.S. major industrial metropolitan areas. CPIF has a since inception net return of 10.5%.

Initially imminent need was not requested for this investment because an October 22, 2021 ALC meeting was scheduled at the time of the September 27, 2021 ATRS meeting. The October ALC meeting has since been cancelled and the next scheduled ALC meeting is November 19, 2021. Due to the change in schedule of the ALC meetings, imminent need is now requested by ATRS staff to implement the investment.

**1. Resolution No. 2021-57.**

**Mr. Martin *moved to adopt* Resolution 2021-57, to Apply Imminent Need Status to the Previously Approved Commitment of up to \$70 Million Dollars in RREEF Core Plus Industrial Fund L.P.(CPIF), an Open End, Core Plus Real Estate Fund Specializing in Industrial Assets, and the Board *unanimously approved the motion.***

- f. **Recommendation to Apply Imminent Need Status to the Previously Approved Commitment of up to \$30 Million Dollars in Clearlake Capital Partners Fund VII, L.P. a Private Equity Fund that Makes Opportunistic Debt and Equity Investments in Middle Market Companies Undergoing Change and/or are in Underserved Industries or Markets in North America. Resolution 2021-58.** The Board approved Resolution 2021-49 at the September 27, 2021 meeting authorizing a commitment of up to \$30 million dollars in Clearlake Capital Partners VII. Based in Santa Monica, California, Clearlake Capital was formed in 2007. Clearlake makes both debt and equity investments in companies undergoing significant change or that are in underserved industries or markets. These investment opportunities often involve bankruptcies, restructurings and turnarounds. They may also involve companies that are experiencing legal or regulatory challenges or challenges meeting growth plans. The fund will focus primarily on the industrials and energy, software and technology-enabled services, and consumer sectors. ATRS invested in Clearlake V and VI that have produced net returns of 56.1% and 38.8%, respectively.

Initially imminent need was not requested for this investment because an October 22, 2021 ALC meeting was scheduled at the time of the September 27, 2021 ATRS meeting. The October ALC meeting has since been cancelled and the next scheduled ALC meeting is November 19, 2021. Due to the change in schedule of the ALC meetings, imminent need is now requested by ATRS staff to implement the investment

**1. Resolution No. 2021-58.**

**Mr. Martin *moved to adopt* Resolution 2021-58, to Apply Imminent Need Status to the Previously**

**Approved Commitment of up to \$30 Million Dollars in Clearlake Capital Partners Fund VII, L.P. a Private Equity Fund that Makes Opportunistic Debt and Equity Investments in Middle Market Companies Undergoing Change and/or are in Underserved Industries or Markets in North America, and the Board *unanimously approved the motion.***

**B. General Investment Consultant Report**

1. **Aeolus Property Catastrophe Keystone PF Fund LP. (Aeolus).** Aon Hewitt Investment Consulting provided the Committee with an update and recommendation to withdraw from the Aeolus fund.

- a. **Resolution No. 2021-59.**

**Mr. Martin *moved to adopt* Resolution 2021-59, to withdraw from the Aeolus fund, and the Board *unanimously approved the motion.***

**V. Other Business.** None.

**VI. Adjourn.**

**Mr. Martin *moved to adjourn* the Board of Trustee meeting. Mr. Black *seconded the motion*, and the Board *unanimously approved the motion.***

**Meeting adjourned at 4:40 p.m.**

---

Mr. Clint Rhoden,  
Executive Director

---

Mr. Chip Martin, Acting Chair  
Investment Committee

---

Tammy Porter,  
Board Secretary

---

Date Approved

**ARKANSAS TEACHER RETIREMENT SYSTEM  
BOARD OF TRUSTEE MEETING – SPECIAL CALLED MEETING**

**Monday, November 15, 2021**

**4:00 p.m.**

**1400 West Third Street**

**Little Rock, AR 72201**

**ATTENDEES**

**Board Members Present**

Danny Knight, Chair  
Lloyd Black\*  
Anita Bell\*  
Kelly Davis\*  
Dr. Michael Hernandez\*  
Shawn Higginbotham\*  
Michael Johnson\*  
Bobby Lester\*  
Chip Martin\*  
Amanda Webb\*  
Susannah Marshall, Bank Commissioner\*  
Johnny Key\*  
Hon. Andrea Lea, State Auditor\*  
Jason Brady, designee for Dennis Milligan, State Treasurer\*

**ATRS Staff Present**

Clint Rhoden, Executive Director  
Rod Graves, Deputy Director  
Tammy Porter, Ex. Asst/Board Secretary  
Curtis Carter, Chief Financial Officer\*  
Braeden Duke, Information Services  
Vicky Fowler, Manager, Human Resources  
Willie Kincade, Director of Operations.  
Martha Miller, General Counsel\*  
Leslie Ward, Manager, Private Equity  
Brenda West, Internal Audit/Rick Mgmt.

**Guest Present**

Brian Murphy, GRS  
Judy Kermans, GRS  
Heidi Berry, GRS\*  
Derek Henning, GRS\*  
PJ Kelly, Aon Hewitt\*  
Katie Comstock, Aon Hewitt\*

\* *via ZOOM*

- I. **Call to Order/Roll Call.** Mr. Danny Knight, called the Board of Trustees meeting to order at 4:00 p.m. Roll call was taken. Ms. Kathy Clayton was absent.
  
- II. **Adoption of Agenda.**  
  
**Mr. Higginbotham *moved for adoption* of the Agenda. Ms. Davis *seconded* the *motion*, and the Committee *unanimously approved the motion*.**
  
- III. **Executive Summary.** The Executive Summary was provided for reference with no questions or expansions on the written summary.

**IV. Disability Review for Board Action.**

**A. Member Order - DR-2021-11-181245.** Member #181245 requested a one-time disability review within the six-month allotted time frame for a one-time disability review appeal. Executive staff concurs with the request and recommends to the Board that the case be returned to the Medical Committee to reconsider the matter using the standard of review established in A.C.A. §24-7-704(a)(1)(D). Director Rhoden confirmed staff concurs with the recommendation.

**Mr. Black moved to approve Disability Case DR-2021-11-181245 be returned to the Medical Committee for reconsideration. Ms. Davis seconded the motion and the Board unanimously approved the motion.**

**V. Discussions and Information about Implementing New Actuarial Assumptions.**

**A.** 2015-2020 Experience Study. Ms. Judy Kerman, Mr. Brian Murphy, Heidi Berry and Mr. Derek Henning of GRS provide the Board with information on the experience study. As the ATRS membership changes, the member behavior patterns change and ATRS adjusts its assumptions based upon passed experience and reasonable forward looking models. The experience study is not completed and will be presented in December. However, it is clear that the changes in assumptions, actuarial standards, and national trends necessitate that ATRS consider new demographic and financial assumptions to stay in the mainstream of actuarial compliance and properly state its financial condition.

**B. ATRS Long-Term Expected Rate of Return.** Aon Hewitt Investment Consultants provided the Board with their long-term expected rate of return based on the latest capital market assumptions. Aon develops risk, return and correlation assumptions for all major asset classes on a quarterly basis.

**VI. Recommendation to Adopt New Actuarial Assumed Rate of Return.** The actuarial assumed rate of return is the projected rate of investment returns used by actuaries to estimate a pension plan's future growth and asset size. A lower assumed rate of return will result in increasing the long term liabilities of ATRS. The Board periodically reviews the actuarial assumed rate of return used by ATRS to ensure it fairly and accurately reflects a reasonable rate of return for ATRS based upon the ATRS asset allocation, the expected rates of inflation, projected economic conditions, global economic activity, and actuarial standards.

As of June 30, 2021, ATRS had a fiscal year investment return of approximately 31% and a since inception investment return of over 8% that relates back to 1986. At the same time continued periods of lower inflation and changing actuarial standards have resulted in pension plans generally reducing actuarial assumed rates of return. With input from the ATRS general investment consultant, Aon, and additional input from Gabriel, Roeder, Smith, & Company, ATRS staff recommends adjusting the ATRS actuarial assumed rate of return from 7.5% to 7.25%.

**A. Resolution 2021-60**

**Mr. Black moved to adopt Resolution 2021-60, adjusting the ATRS actuarial assumed rate of return from 7.5% to 7.25%. Mr. Martin seconded the motion. A roll call was taken, and the Board unanimously approved the motion. For the record, Auditor Lea voted “no” against the adoption of Resolution 2021-60.**

**VII. Recommendation to Adopt Pub-2010 Mortality Table for the Actuarial Valuation of ATRS.** The life expectancy of a plan's members is one of many factors used to calculate a pension plan's cost of benefits and estimate unfunded liabilities. ATRS pays all retirees a lifetime retirement benefit. The longer the life expectancy of members, the larger the total payout will be to the membership group as a whole. The life expectancy of a pension plan's members is estimated using mortality assumptions produced by actuarial groups. The Board periodically reviews the mortality table used by ATRS to ensure it is adequately conservative and accurately reflects reasonable life expectancies and is generally accepted by actuaries for plan valuations. With input from the ATRS actuary, GRS, ATRS staff recommends the adoption of the appropriate Pub-2010 tables to be used in fiscal year 2021 and for each fiscal year after until such time as the Board may approve another mortality table in the future

**A. Resolution 2021-61**

**Mr. Higginbotham moved to adopt Resolution 2021-61, adoption of the appropriate Pub-2010 tables to be used in fiscal year 2021 and for each fiscal year after until such time as the Board may approve another mortality table in the future. Ms. Davis seconded the motion, and the Board unanimously approved the motion.**

**VIII. Recommendation to Adopt Additional Actuarial Assumptions Established by the 2015-2020 Experience Study.** With input from the ATRS actuary, GRS, ATRS staff recommends the adoption the demographic and economic assumption changes

presented in the 2015-2020 Experience Study to be used in fiscal year 2021 and for each fiscal year after until such time as the Board may approve assumptions from an experience study in the future.

**A. Resolution 2021-62**

**Mr. Black *moved to adopt* Resolution 2021-62, adoption of the demographic and economic assumption changes presented in the 2015-2020 Experience Study to be used in fiscal year 2021 and for each fiscal year after until such time as the Board may approve assumptions from an experience study in the future. Ms. Bell *seconded the motion*, and the Board *unanimously approved the motion*.**

**IX. Other Business. None**

**X. Adjourn.**

**With no further business, Mr. Knight *moved to adjourn* the meeting.**

**Meeting adjourned at 5:16 p.m.**

---

Clint Rhoden  
Executive Director

---

Mr. Danny Knight Chair  
Board of Trustees

---

Tammy Porter,  
Board Secretary

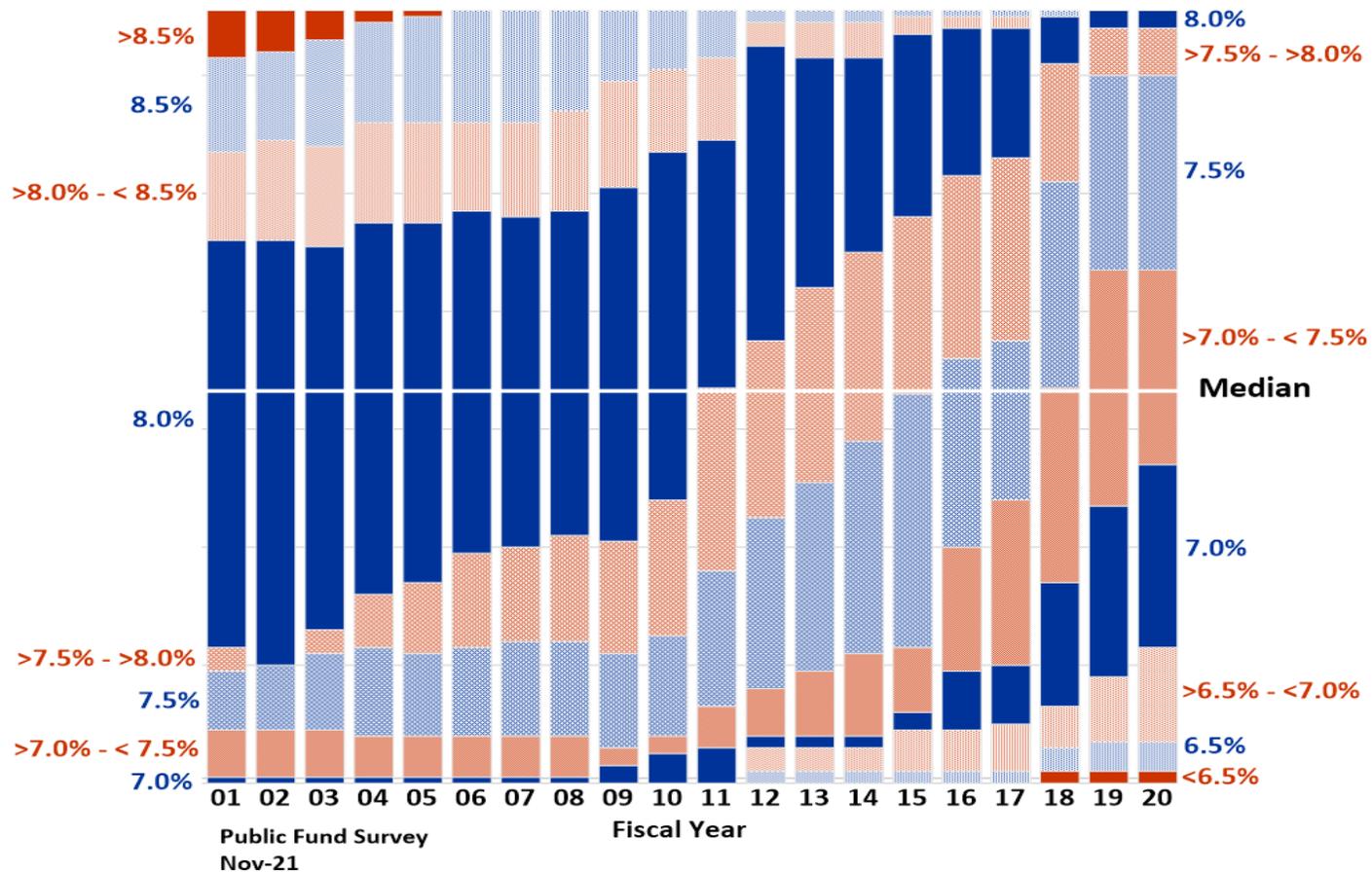
---

Date Approved

## Distribution of Investment Return Assumptions

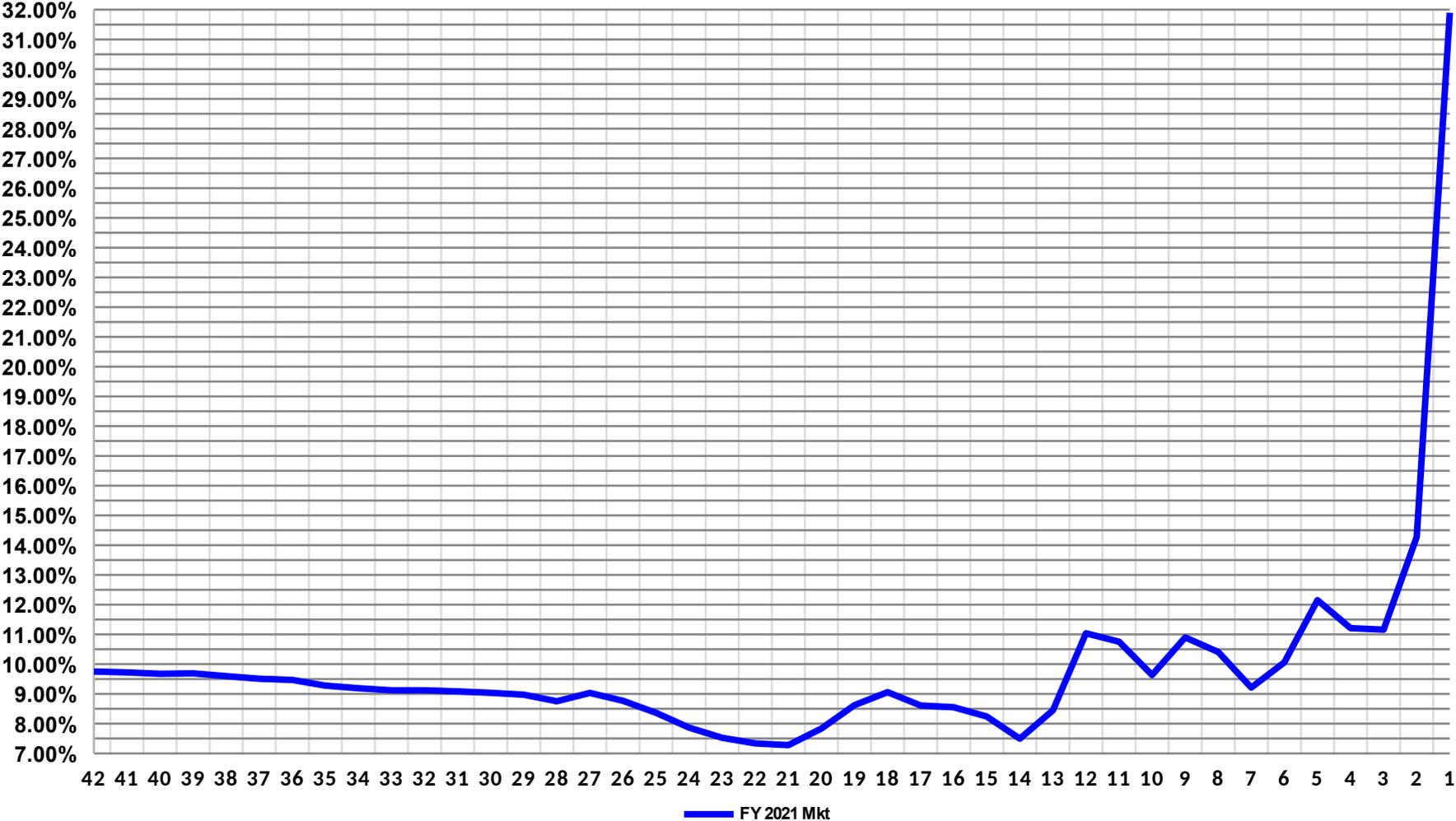
The National Association of State Retirement Administrators (NASRA) conducts an annual survey of the public pension plans' investment return assumption (or assumed rate of return). Following the sharp decline in global capital markets in 2008 and the subsequent decline in interest rates and projected returns on most major asset classes, nearly every plan in the survey has reduced its assumed investment return.

The following chart compares the distribution of investment return assumptions for each fiscal year. The chart illustrates the steady reduction in assumed rates of return, particularly since 2009.

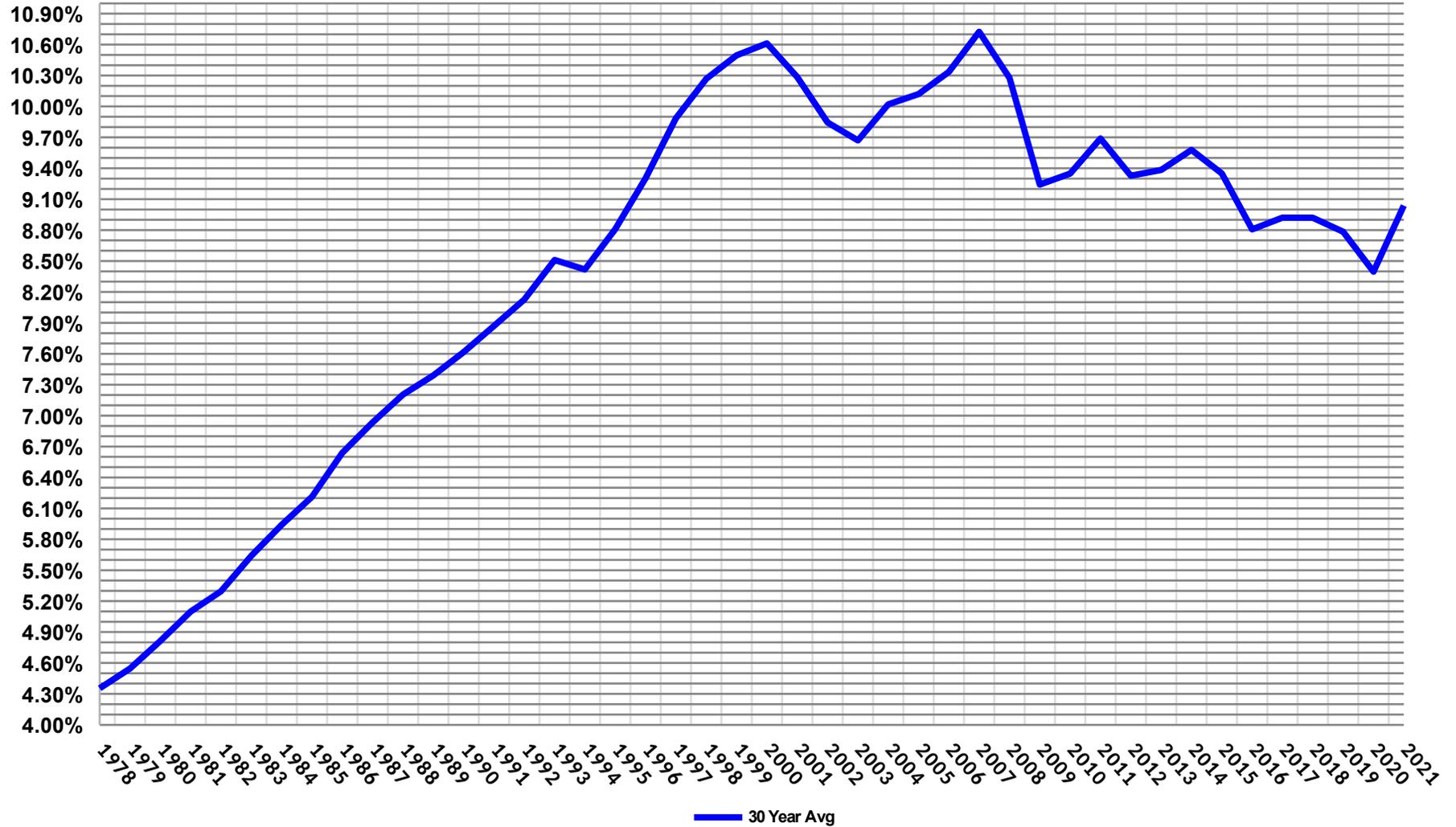


Source: National Association of State Retirement Administrators (NASRA)

### ATRS Geometric Average of Investment Returns (FY 2021 and back)



# ATRS 30-Year Geometric Average of Investment Returns

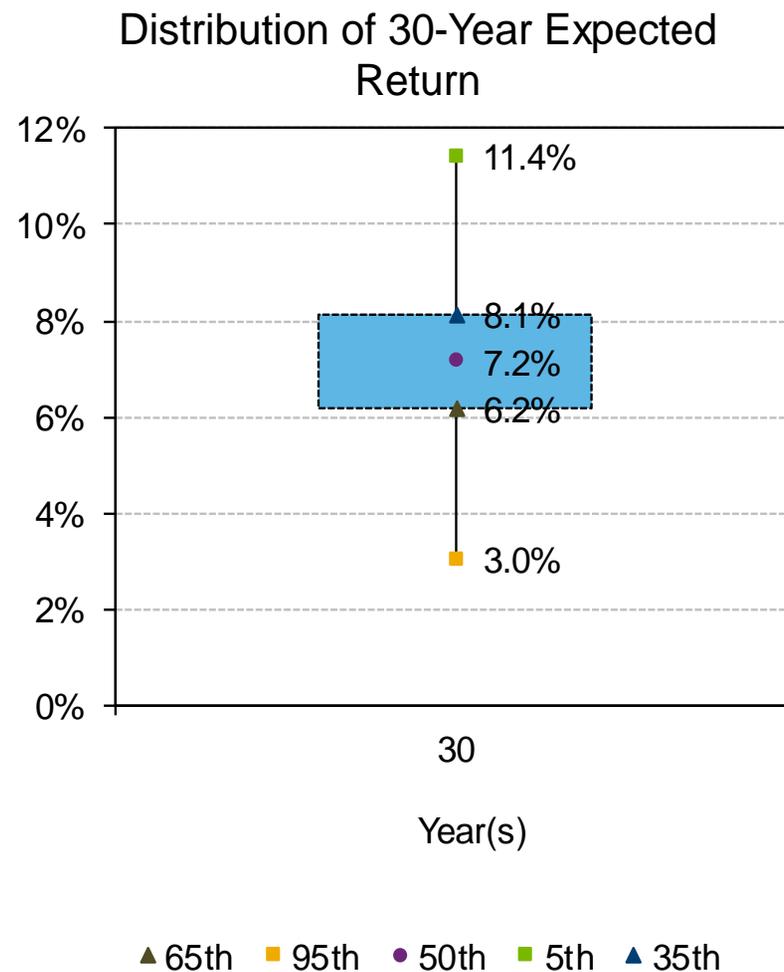


Historical Assumed Rates of Return:

	1991- 2017: 8.00%	
1986 - 1990: 7.50%		2018-2020: 7.50%
1981 - 1985: 7.00%		2021: 7.25%
1978 - 1980: 6.00%		

# ATRS: Distribution of Expected 30-Year Returns

Asset Class	Allocation (%)	Expected Return	Risk
Public Equity	53.0%	7.0%	19.0%
Private Equity	12.0	8.7	25.5
Real Assets	15.0	6.9	13.8
Opportunistic / Alternatives	5.0	5.9	5.8
Fixed Income	15.0	4.1	5.8
<b>Total ATRS Real ROR</b>	<b>100%</b>	<b>4.95%</b>	<b>14.12%</b>
<b>Total ATRS Nominal ROR*</b>		<b>7.15%</b>	



\*Aon's inflation assumption is 2.1%.

Note: Based on Aon 3Q 2021 30-year Capital Market Assumptions.



# Arkansas Teacher Retirement System

## Valuation Results as of June 30, 2021

December 6, 2021

Brian B. Murphy, FSA, EA, FCA, MAAA, PhD , Judith A. Kermans, EA, FCA, MAAA

Heidi G. Barry, ASA, FCA, MAAA and Derek A. Henning, ASA, EA, MAAA



# Agenda



**June 30, 2021 Valuation Results**

**1**



**Going Forward**

**2**

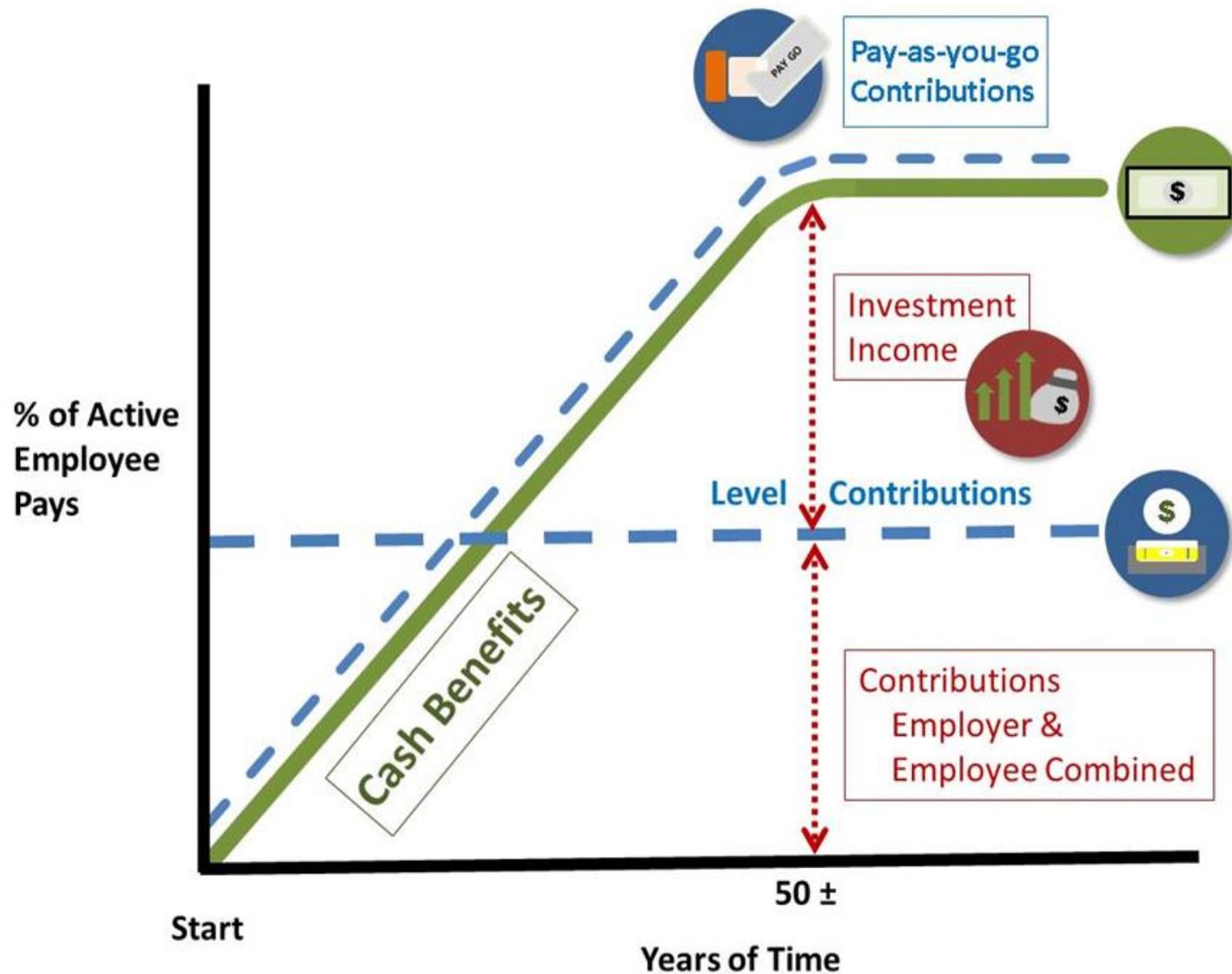
# Funding Objectives

---

24-7-401 (a). Fund contributions -- Fund rates.

- (1) The financial objective of the Arkansas Teacher Retirement System is to establish and receive contributions that expressed as percentages of active member payroll will remain approximately level from generation to generation of Arkansas citizens.
- (2) Contributions received each year shall be sufficient:
  - (A) To fully cover the costs of benefit commitments being made to members for their service being rendered in that year; and
  - (B) To make a level payment that if paid annually over a reasonable period of future years will fully cover the unfunded costs of benefit commitments for service previously rendered.

# Financing Increasing Benefit Obligations



# What Is Needed to Meet Objectives?

---

Reasonable forecasts of resources and obligations  
(i.e., good assumptions)

Smoothing devices

- Level % of payroll funding method (EANC)
- Market-related asset valuation method

Funding discipline

A sound investment program

# Covered Population Overview



	Number at June 30		% Change
	2021	2020	
Active	66,633	66,900	-0.4%
T-DROP	3,465	3,639	-4.8%
Inactive	13,574	13,338	1.8%
Retired	51,405	50,133	2.5%
<b>Total</b>	<b>135,077</b>	<b>134,010</b>	<b>0.8%</b>

ATRS receives full employer contributions for Active and T-DROP members and for 3,575 retirees who have returned to work.

# Active, T-DROP and RTW Members

June 30	Number				Total Payroll	% Change
	Active	T-DROP	RTW	Total	\$Millions	
2015	68,945	3,974	3,741	76,660	\$ 2,874	
2016	68,368	3,864	3,829	76,061	2,888	0.5%
2017	68,337	3,811	3,881	76,029	2,922	1.2%
2018	68,645	3,696	4,029	76,370	2,986	2.2%
2019	68,457	3,707	4,077	76,241	3,027	1.4%
2020	66,900	3,639	4,019	74,558	3,078	1.7%
2021	66,633	3,465	3,575	73,673	3,205	4.1%

The actuarial valuation assumes the number of working members will remain constant at the current level and that the payroll will increase at 2.75% per year. In recent years the total number of working members has decreased and the payroll has not increased at the assumed rate in most years. A decreasing population means less contribution income for the Retirement System than expected and can lead to funding difficulties in extreme cases.

# Active Members not in T-DROP

---

		Group Averages			
June 30	Number	Age	Service	Average Earnings	% Change
2015	68,945	44.6	10.3	\$36,717	2.93%
2016	68,368	44.4	10.3	37,235	1.41%
2017	68,337	44.3	10.2	37,707	1.27%
2018	68,645	44.2	10.2	38,477	2.04%
2019	68,457	44.1	10.1	39,065	1.53%
2020	66,900	44.3	10.3	40,709	4.21%
2021	66,633	44.2	10.5	42,901	5.38%

# Active Members in T-DROP

---

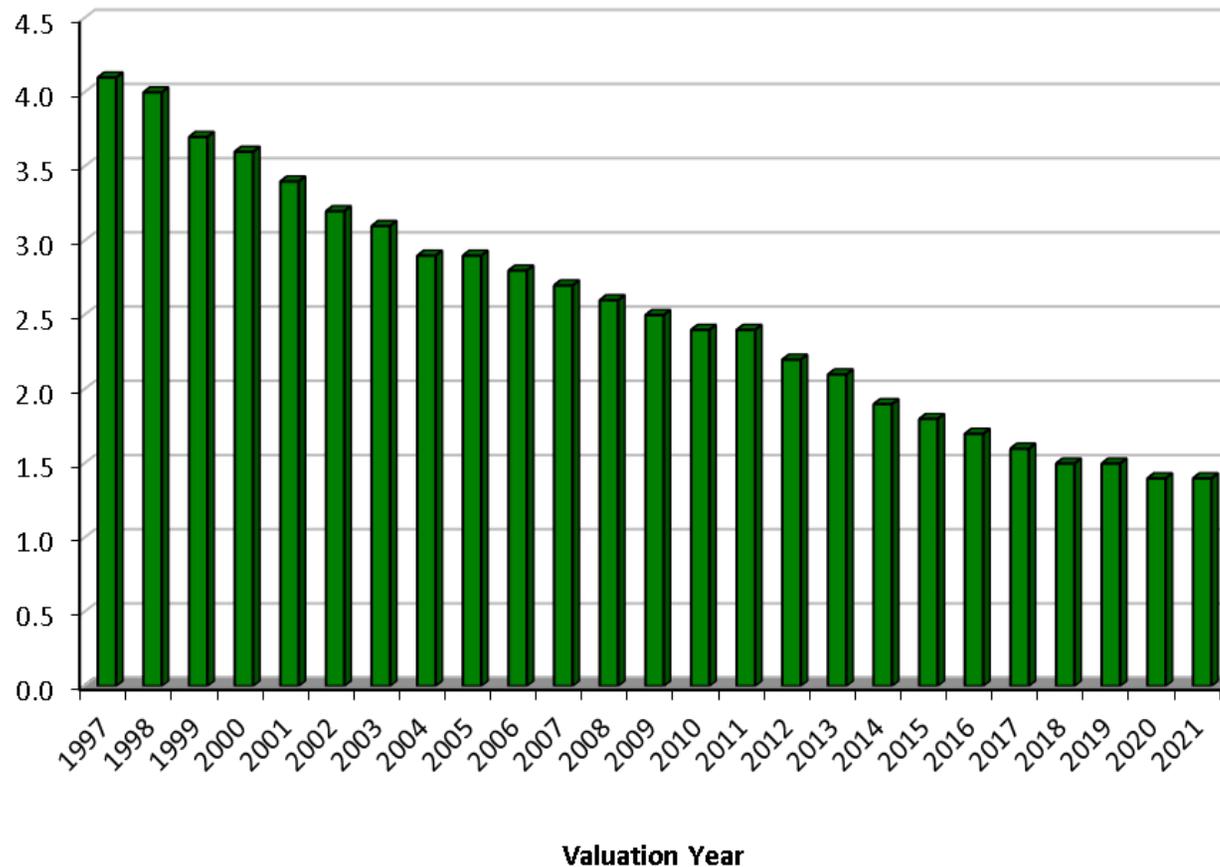
June 30	Number	Payroll		
		Average	\$ Millions	% Change
2015	3,974	\$61,874	\$245.9	
2016	3,864	61,943	239.3	-2.7%
2017	3,811	62,127	236.8	-1.0%
2018	3,696	62,456	230.8	-2.5%
2019	3,707	62,812	232.8	0.9%
2020	3,639	63,477	231.0	-0.8%
2021	3,465	65,732	227.8	-1.4%

# Deferred Vested and Retired Members

June 30	Deferred Members			Retired Members		
	Number	Benefit		Number	Benefit	
		\$ Millions	Average		\$ Millions	Average
2015	12,379	\$66.3	\$5,353	40,748	\$916.6	\$22,495
2016	12,937	72.2	5,577	43,095	983.9	22,830
2017	12,401	72.9	5,877	45,092	1,044.7	23,169
2018	12,544	66.2	5,279	46,824	1,099.3	23,478
2019	13,033	69.5	5,336	48,677	1,146.7	23,558
2020	13,338	72.9	5,464	50,133	1,194.8	23,833
2021	13,574	76.2	5,614	51,405	1,242.7	24,175

# Ratio of Actives to Retirees

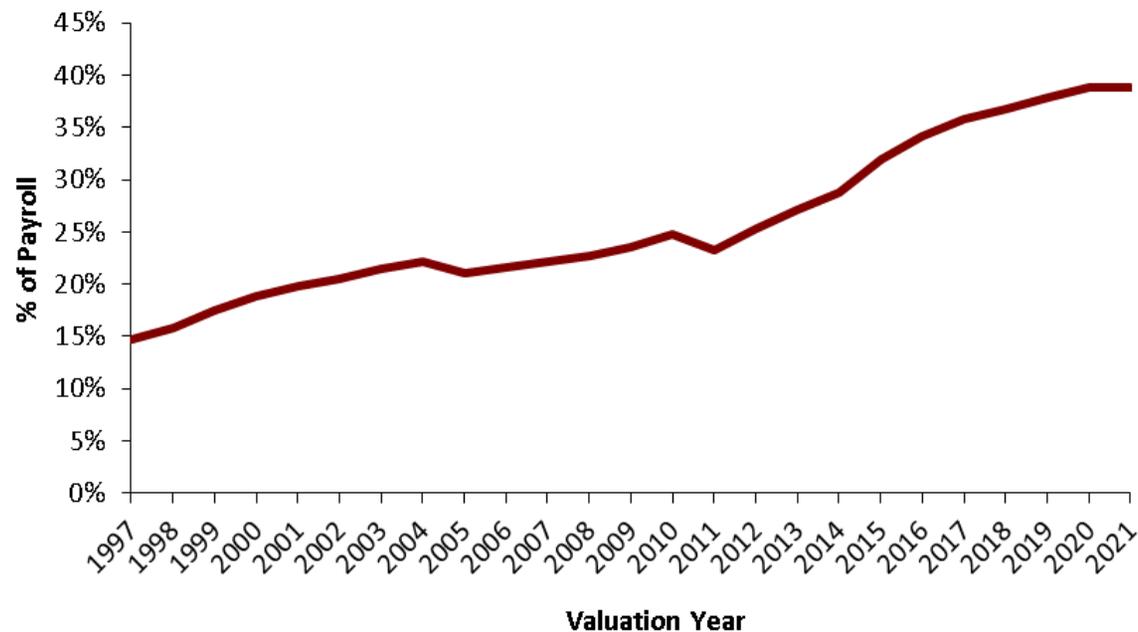
Active Members Per Retired Life \*



\* Members in T-DROP are included with Active members.

# Retirement Benefits as a Percent of Payroll

**Retirement Benefits Being Paid  
as a Percent of Member Payroll \***



*\* Payroll includes active members in T-DROP, active members not in T-DROP and the pays of Return to Work Retirees.*

# EXPERIENCE

in FY 2021

The amortization period is 32 years, an increase from the 27-year period last year

The results reflect assumption changes adopted after the 2015-2020 experience study. Most notably, the assumed rate of interest was lowered from 7.50% to 7.25%

There was a large investment gain this year. Gains and losses are spread over a four year period

Details of other experience in the Gain/Loss analysis this spring

# Investment Experience

---

Under the asset valuation method, investment gains and losses are spread over a 4-year period

This year there was a \$3.9 billion (Market Value) investment gain

25% of the gain was recognized this year and the remaining 75% will be recognized over 3 future years

This year's 25% recognized gain was added to portions of gains and losses from prior years producing a net \$687.4 million gain (Funding Value)

# Development of Funding Value of Assets

Year Ended June 30:	2020	2021	2022	2023	2024
A. Funding Value Beginning of Year	\$ 17,412,534,651	\$ 18,007,255,143			
B. Market Value End of Year	16,902,076,224	21,468,772,872			
C. Market Value Beginning of Year	17,741,621,773	16,902,076,224			
D. Non-Investment Net Cash Flow	(665,324,622)	(676,930,006)			
E. Investment Return					
E1. Market Total: B - C - D	(174,220,927)	5,243,626,654			
E2. Assumed Rate	7.50%	7.50%	7.25%		
E3. Amount for Immediate Recognition	1,280,990,426	1,325,159,261			
E4. Amount for Phased-In Recognition: E1-E3	(1,455,211,353)	3,918,467,393			
F. Phased-In Recognition of Investment Return					
F1. Current Year: 0.25 x E4	(363,802,838)	979,616,848	Unknown	Unknown	Unknown
F2. First Prior Year	(85,342,509)	(363,802,838)	\$ 979,616,848	Unknown	Unknown
F3. Second Prior Year	156,914,612	(85,342,509)	(363,802,838)	\$ 979,616,848	Unknown
F4. Third Prior Year	271,285,423	156,914,613	(85,342,508)	(363,802,839)	\$ 979,616,849
<b>F5. Total Recognized Investment Gain</b>	<b>(20,945,312)</b>	<b>687,386,114</b>	530,471,502	615,814,009	979,616,849
G. Funding Value End of Year:					
G1. Preliminary Funding Value End of Year: A+D+E3+F5	<b>18,007,255,143</b>	<b>19,342,870,512</b>			
G2. Upper Corridor Limit: 120% x B	<b>20,282,491,469</b>	<b>25,762,527,446</b>			
G3. Lower Corridor Limit: 80% x B	<b>13,521,660,979</b>	<b>17,175,018,297</b>			
<b>G4. Funding Value End of Year</b>	<b>18,007,255,143</b>	<b>19,342,870,512</b>			
H. Actual/Projected Difference between Market and Funding Value	(1,105,178,919)	2,125,902,360	1,595,430,858	979,616,849	-
I. Market Rate of Return	(1.00)%	31.66 %			
J. Funding Rate of Return	7.38 %	11.39 %			
K. Ratio of Funding Value to Market Value	106.54 %	90.10 %			

# Results of the 6/30/2021 Valuation

Actuarial Accrued Liabilities for:	\$Millions	
	2021	2020
Age and service retirement allowances based on total service likely to be rendered by <i>present active and T-DROP members</i>	\$ 9,362	\$ 8,501
Benefits payable to present retirees and beneficiaries	13,596	12,890
Benefits payable for all other reasons	1,029	961
Total	\$23,987	\$22,352
Funding Value of Assets	19,343	18,007
Unfunded Actuarial Accrued Liabilities (UAAL)	\$ 4,644	\$ 4,345
% Funded Based on		
Funding Value of Assets	81%	81%
Market Value of Assets	90%	76%

If the UAAL were measured based on the market value of assets, it would be \$2,518 Million.

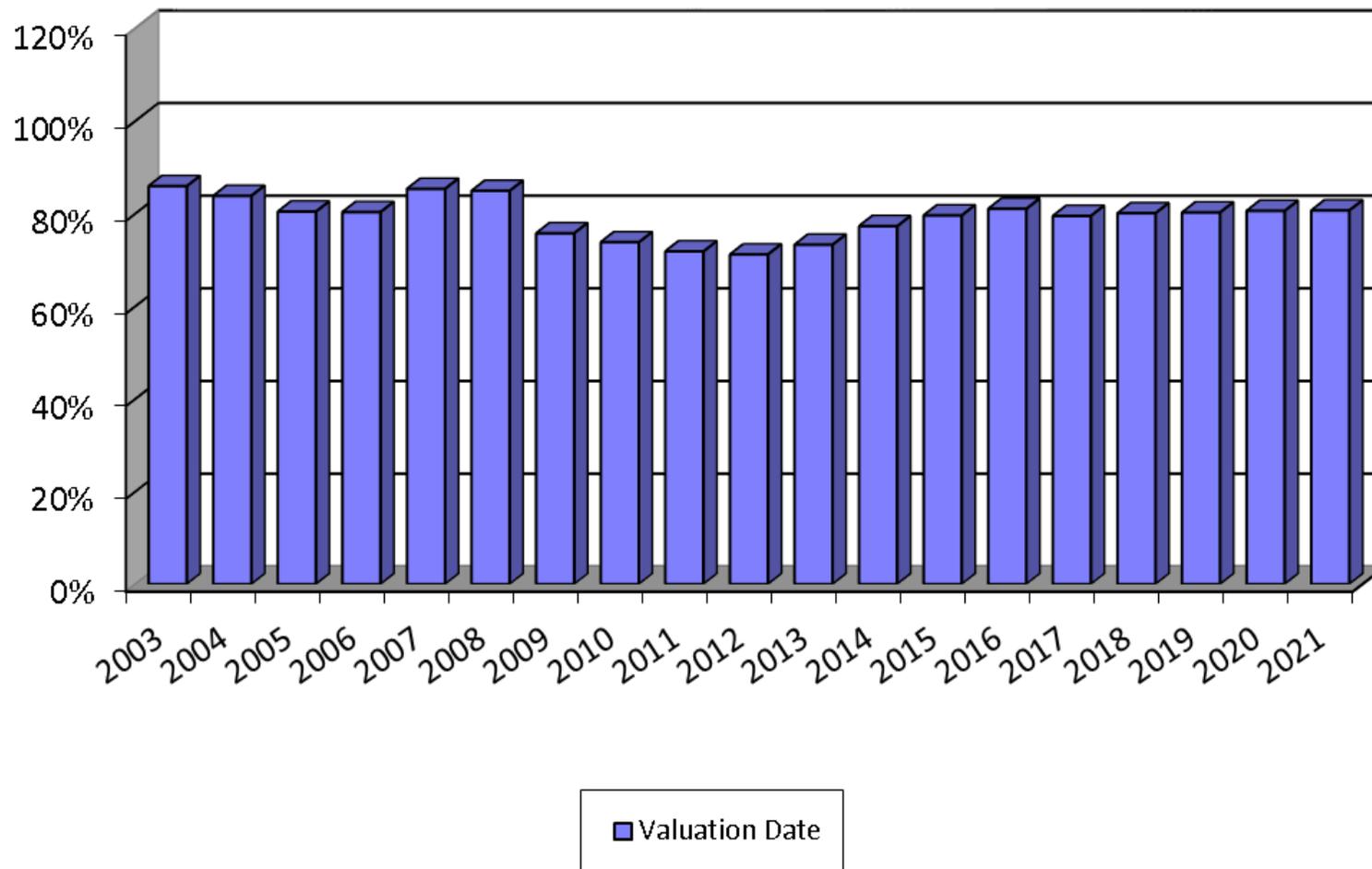
# Results of 6/30/2021 Valuation

	% Payroll	
	2021	2020
1) Employer Normal Cost	7.07%	6.27%
2) UAAL	7.93%	8.73%
3) Employer Contribution Rate	15.00%	15.00%
Amortization Years	32	27

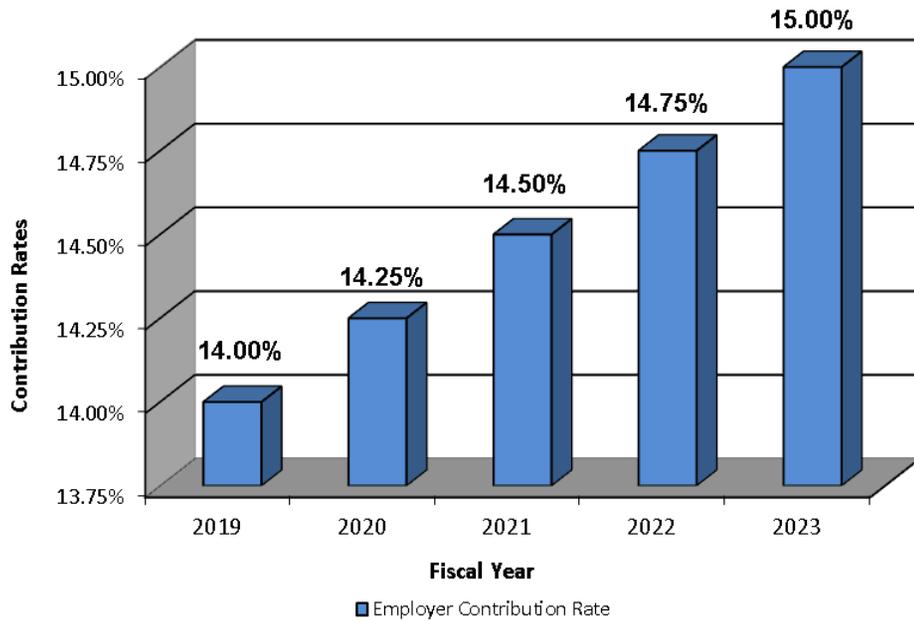
The employer and employee contribution rates each increase by 0.25% per year from FY 2020 through FY 2023 to ultimate levels of 15% and 7% respectively. The increases were taken into account in determining the amortization period. If the Market Value of Assets were used in the calculations instead of the Funding Value of Assets, the resulting amortization period would be 12 years instead of the 32 years that is shown.

# Funded Ratio: Actuarial Value of Assets as Percents of Accrued Liabilities

---

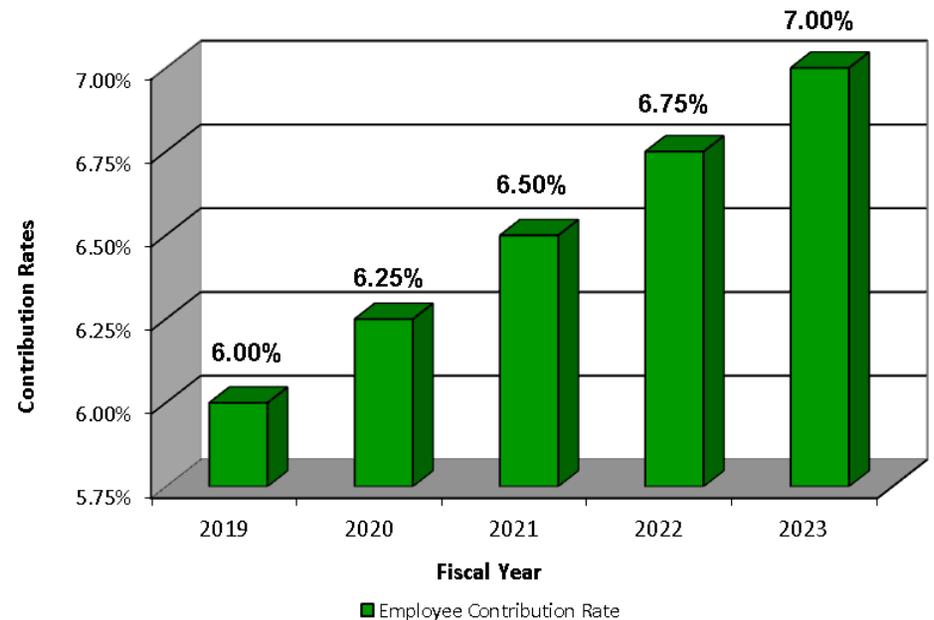


# Future Increases in Contribution Rates



The Employer Contribution Rate is scheduled to increase by 0.25% each year and reach an ultimate rate of 15.0% by FY 2023

The Employee Contribution Rate is scheduled to increase by 0.25% each year and reach an ultimate rate of 7.0% by FY 2023



# Disclosures of Risk

---

## Maturity Measures

- Ratio of actives to retired, etc.

## Scenario Testing

- Specify potential future events that differ from assumptions and estimate the effect on future results.

## Stress Testing

- Specify adverse changes in one or a few factors affecting the plan's financial condition and assess the impact.

## Stochastic Modeling

- Simulations showing envelope of outcomes that could occur.

## Other

- Sensitivity testing, liability measures under minimal risk investment policy, etc.

# Maturity Measures



	2021	2020	2019	2018	2017
Number of Active and T-DROP Participants	70,098	70,539	72,164	72,341	72,148
Number of Terminated Vested Participants	13,574	13,338	13,033	12,544	12,401
Number of Retirees	51,405	50,133	48,677	46,824	45,092
Retiree % of Total Liabilities	56.7%	57.7%	57.4%	56.6%	55.9%
Commentary	Retired participants account for approximately 57% of plan liabilities, a proportion which has been steadily increasing over the past 5 years. This is indicative of a maturing plan. As a plan matures, it becomes more sensitive to investment volatility.				

# Maturity Measures (\$Millions)



	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
Actuarial Accrued Liability	23,987	22,352	21,709	20,935	20,298
Payroll	3,205	3,078	3,027	2,986	2,922
Ratio of Actuarial Accrued Liability to Payroll	748.4%	756.7%	746.8%	728.9%	721.3%
Duration of the Present Value of Future Benefits	14.02	13.83	13.82	13.86	13.88

## Commentary

As the ratio of actuarial accrued liability to payroll increases, the amortization period becomes increasingly sensitive to the effects of demographic gains and losses, and assumption changes. For example, a 1% demographic gain or loss would correspond to 7.773% of payroll and would affect the amortization period by 4 years based on the 2021 results.

The duration of the present value of future benefits may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, the current duration of 14.0 indicates that the present value of future benefits would increase approximately 14.0% if the assumed rate of return were lowered 1%. Such a change could affect the amortization period by 20 years or more.

# Maturity Measures (\$Millions)



	2021	2020	2019	2018	2017
Market Value of Assets	21,469	16,902	17,742	17,493	16,285
Payroll	3,205	3,078	3,027	2,986	2,922
Ratio of Market Value of Assets to Payroll	669.9%	572.2%	610.3%	609.1%	578.7%

## Commentary

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. The market value of assets is currently 6.7 times the payroll indicating that a return on assets 2% different from assumed would equal approximately 13.4% of payroll. Such a change could affect the amortization period by approximately 8 years based on 2021 results. While asset smoothing would reduce the effect, asset gains and losses much larger than 2% are common. An increasing level of this maturity measure generally indicates an increasing volatility in the amortization period.



# Additional Maturity Measures (\$Millions)

Valuation Date June 30	(1) Accrued Liabilities (AAL)	(2) Market Value of Assets	(3) Unfunded AAL (1)-(2)	(4) Valuation Payroll	(5) % Change in Payroll	(6) Funded Ratio (2)/(1)	(7) Annuitant Liabilities (AnnLiab)	(8) AnnLiab/ AAL (7)/(1)
2012	\$16,139	\$11,484	\$4,655	\$2,803		71.2%	\$7,649	47.4%
2013#	\$16,718	\$12,830	\$3,888	\$2,819	0.6%	76.7%	\$8,181	48.9%
2014	\$17,310	\$14,856	\$2,454	\$2,851	1.1%	85.8%	\$8,777	50.7%
2015	\$18,136	\$15,036	\$3,100	\$2,874	0.8%	82.9%	\$9,778	53.9%
2016	\$18,812	\$14,559	\$4,253	\$2,888	0.5%	77.4%	\$10,430	55.4%
2017	\$20,298	\$16,285	\$4,013	\$2,922	1.2%	80.2%	\$11,337	55.9%
2018	\$20,935	\$17,493	\$3,442	\$2,986	2.2%	83.6%	\$11,851	56.6%
2019#*	\$21,709	\$17,742	\$3,967	\$3,027	1.4%	81.7%	\$12,460	57.4%
2020	\$22,352	\$16,902	\$5,450	\$3,078	1.7%	75.6%	\$12,890	57.7%
2021*	\$23,987	\$21,469	\$2,518	\$3,205	4.1%	89.5%	\$13,596	56.7%

# Benefit Change

\* Assumption change

Valuation Payroll includes T-DROP payroll

# Additional Maturity Measures (\$Millions)

Valuation Date June 30	(9) Liability/ Payroll (1)/(4)	(10) Assets/ Payroll (2)/(4)	(11) Est. Portfolio Std. Dev	(12) Std Dev % of Pay (10)x(11)	(13) Unfunded/ Payroll (3)/(4)	(14) Net External Cash Flow (NECF)	(15) NECF/ Assets (9)/(2)	(16) Portfolio Rate of Return	(17) 10 year Trailing Average
2012	575.8%	409.7%			166.1%	(\$285)	-2.5%	-1.1%	6.6%
2013#	593.0%	455.1%			137.9%	(\$337)	-2.6%	14.9%	8.0%
2014	607.2%	521.1%			86.1%	(\$395)	-2.7%	19.2%	8.2%
2015	631.0%	523.1%			107.9%	(\$445)	-3.0%	4.3%	7.7%
2016	651.3%	504.0%			147.3%	(\$505)	-3.5%	0.2%	6.3%
2017	694.7%	557.4%			137.3%	(\$556)	-3.4%	16.0%	6.0%
2018	701.1%	585.8%	12.7%	77.3%	115.3%	(\$607)	-3.5%	11.4%	7.6%
2019#*	717.2%	586.1%	12.5%	76.3%	131.1%	(\$642)	-3.6%	5.2%	10.4%
2020	726.2%	549.1%	12.5%	71.5%	177.1%	(\$665)	-3.9%	-1.0%	8.8%
2021*	748.4%	669.8%	13.8%	92.1%	78.6%	(\$677)	-3.2%	31.7%	9.6%

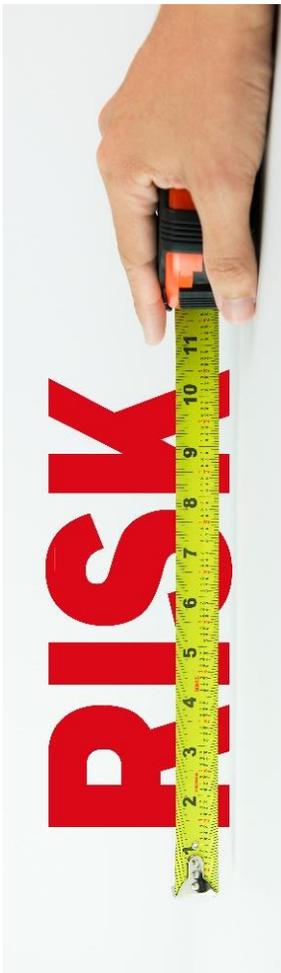
# Benefit Change

\* Assumption change

Valuation Payroll includes T-DROP payroll

# Footnotes

---



(\*) ATRS had experience studies in these years leading to a change or "true up" in actuarial assumptions. A pattern of periodic studies is a sign of a well-run system and suggests the extent to which the liability measures the actuary provides are likely to be realistic.

(#) ATRS had benefit changes in these years. Benefit increases cause liabilities to rise; benefit decreases cause liabilities to fall. In either case, benefit changes affect the year by year comparability of the measures on this page.

(6) The Funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

(9) and (10) The ratios of liabilities and assets to payroll gives an indication of both maturity and volatility. Many systems have values between 500% and 700%. Values significantly above that range may indicate difficulty in supporting the benefit level as a level % of payroll.

# Footnotes

---



(13) The ratio of unfunded liability to payroll gives an indication of the plan sponsor's ability to actually pay off the unfunded liability. A value above approximately 300% or 400% may indicate difficulty in discharging the unfunded liability within a reasonable time frame.

(14) and (15) The ratio of Net External Cash Flow to assets is an important measure of sustainability. Negative ratios are common and expected for a maturing system. In the longer term, this ratio should be on the order of approximately -4%. A ratio that is significantly more negative than that for an extended period could be a leading indicator of potential exhaustion of assets.

(16) and (17) Investment return is probably the largest single risk that most systems face. The year by year return and the 10 year geometric average give an indicator of past performance of the portfolio. The averages are of course distorted by the extraordinary events of 2008, and the past is not a predictor of the future.

# SCENARIO TESTING





# About Projections

The projections that follow are based upon many assumptions about the future.

Actual future valuation results will take all known future information into account and will differ from the projections -- perhaps materially.

Projected results are very sensitive to the rates of payroll growth and liability growth that are assumed. In the long run, according to theory, both of those figures should approach 2.75%.



# The Future

Let's have a look at projected valuation results and the amortization period for the next few years based on alternate future rates of investment return for 2022.

All scenarios assume a 7.25% return for years after 2022.

All scenarios assume a 15% of pay contribution rate for years after 2022.

Of course, actual experience will determine what actually happens.

# Projected Amortization Years

---

Valuation Year	2022	2023	2024
<b>Projection A</b>			
Investment Return	7.25%	7.25%	7.25%
Amortization Years	25	16	9
<b>Projection B</b>			
Investment Return	10%	7.25%	7.25%
Amortization Years	23	14	7
<b>Projection C</b>			
Investment Return	0%	7.25%	7.25%
Amortization Years	29	23	16



# Going Forward

The projections suggest a decreasing trend in the amortization period over the next several years. The trend is due to the continued recognition of the large Fiscal Year 2021 investment gain.

If this trend actually materializes, it would present the Board with an opportunity to move the interest rate assumption closer to current capital market expectations.

In that case, the Board could also revisit the asset allocation with a view toward reducing risk.



# Going Forward

Projections shown indicate that the amortization period will be 25 years in the next valuation if experience is as assumed.

With a 25 year period, the UAAL grows in \$ amount each year, although it declines as a % of payroll. This situation is referred to as “negative amortization” and is falling out of favor, particularly in situations where the active contributing population is declining.

“Negative Amortization” in the context of a mortgage is said to occur during any period during which the loan payment is less than the interest due so that the outstanding balance of the loan actually increases, rather than decreases, as one would normally expect.



# Going Forward

Based upon ATRS' assumptions, it takes about an 18-year period to avoid the “negative amortization.”

If experience emerges as expected, ATRS could be at 16 years in FY 2023. A contribution increase to the 18.5% of pay area would get us there now. Investment return above 7.25% in FY 2022 could get us there then.

# Risk Management

---

May involve:

- Reduction in assumed rate of investment return
- Reviewing asset allocation with a goal of reducing the standard deviation of the portfolio return
- Reducing asset-liability mismatch
- Other



# Disclaimers

---

- This presentation is intended to be used in conjunction with the June 30, 2021 actuarial valuation report. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- Readers are cautioned to examine original source materials and to consult with subject matter experts before making decisions related to the subject matter of this presentation.
- If anything in this presentation or in the full report appears to you to be incorrect or if you need additional information in order to make an informed decision on matters discussed herein, please contact the authors.
- This presentation expresses the views of the authors and does not necessarily express the views of Gabriel, Roeder, Smith & Company.

# STATEMENT OF FINANCIAL INTEREST

**State/District officials file with:**

John Thurston, Secretary of State  
State Capitol, Room 026  
Little Rock, AR 72201  
Phone (501) 682-5070  
Fax (501) 682-3548

**Calendar year covered** \_\_\_\_\_

(Note: Filing covers the previous calendar year)

For assistance in completing  
this form contact:  
Arkansas Ethics Commission  
Phone (501) 324-9600  
Toll Free (800) 422-7773

**Is this an amendment?**    Yes    No

Please provide complete information. If the information requested in a particular section does not apply to you, indicate such by noting “**Not Applicable**” in that section. Do not leave any part of this form blank. If additional space is needed, you may attach the information to this document. Do not file this form with the Arkansas Ethics Commission.

## SECTION 1- NAME AND ADDRESS

Name \_\_\_\_\_  
(Last) (First) (Middle)

Address \_\_\_\_\_  
(Street or P.O. Box Number) (City) (State) (Zip Code)

Phone \_\_\_\_\_

Spouse's name \_\_\_\_\_  
(Last) (First) (Middle)

All names under which you and/or your spouse do business: \_\_\_\_\_

## SECTION 2- REASON FOR FILING

- Public Official \_\_\_\_\_  
(office held)
- Candidate \_\_\_\_\_  
(office sought)
- District Judge \_\_\_\_\_  
(name of district)
- City Attorney \_\_\_\_\_  
(name of city)
- State Government: Agency Head/Department Director/Division Director \_\_\_\_\_  
(name of agency/department/division)
- Chief of Staff or Chief Deputy \_\_\_\_\_  
(name of Constitutional Officer, Senate, or House of Representatives)
- Public appointee to State Board or Commission \_\_\_\_\_  
(name of board/commission)
- School Board member \_\_\_\_\_  
(name of school district)
- Candidate for school board \_\_\_\_\_  
(name of school district)
- Public or Charter School Superintendent \_\_\_\_\_  
(name of school district/school)
- Executive Director of Education Service Cooperative \_\_\_\_\_  
(name of cooperative)
- Advertising and Promotion Commission member \_\_\_\_\_  
(name of advertising and promotion commission)
- Research Park Authority Board member under A.C.A. § 14-144-201 et seq. \_\_\_\_\_  
(name of research park authority board)

**SECTION 2- REASON FOR FILING (continued)**

- Appointee to one of the following municipal, county or regional boards or commissions (list name of board or commission):
- Planning board or commission \_\_\_\_\_
  - Airport board or commission \_\_\_\_\_
  - Water or Sewer board or commission \_\_\_\_\_
  - Utility board or commission \_\_\_\_\_
  - Civil Service commission \_\_\_\_\_

**SECTION 3- SOURCE OF INCOME**

List each employer and/or each other source of income from which you, your spouse, or any other person for the use or benefit of you or your spouse receives gross income amounting to more than \$1,000. (You are not required to disclose the individual items of income that constitute a portion of the gross income of the business or profession from which you or you spouse derives income. For example: accountants, attorneys, farmers, contractors, etc. do not have to list their individual clients.) If you receive gross income exceeding \$1,000 from at least one source, the answer N/A is not correct.

- a) Check appropriate box:       More than \$1,000                                       More than \$12,500

\_\_\_\_\_

(name of employer or source of income)

\_\_\_\_\_

(address)

\_\_\_\_\_

(name under which income received)

Provide a brief description of the nature of the services for which the compensation was received \_\_\_\_\_

\_\_\_\_\_

- b) Check appropriate box:       More than \$1,000                                       More than \$12,500

\_\_\_\_\_

(name of employer or source of income)

\_\_\_\_\_

(address)

\_\_\_\_\_

(name under which income received)

Provide a brief description of the nature of the services for which the compensation was received \_\_\_\_\_

\_\_\_\_\_

- c) Check appropriate box:       More than \$1,000                                       More than \$12,500

\_\_\_\_\_

(name of employer or source of income)

\_\_\_\_\_

(address)

\_\_\_\_\_

(name under which income received)

Provide a brief description of the nature of the services for which the compensation was received \_\_\_\_\_

\_\_\_\_\_

**SECTION 4- BUSINESS OR HOLDINGS**

List the name of every business in which you, your spouse or any other person for the use or benefit of you or your spouse have an investment or holding. Individual stock holdings should be disclosed. Figures should be based on fair market value at the end of the reporting period.

a) Check appropriate box:  More than \$1,000  More than \$12,500

(name of corporation, firm or enterprise)

(address)

(name under which investment held)

b) Check appropriate box:  More than \$1,000  More than \$12,500

(name of corporation, firm or enterprise)

(address)

(name under which investment held)

c) Check appropriate box:  More than \$1,000  More than \$12,500

(name of corporation, firm or enterprise)

(address)

(name under which investment held)

d) Check appropriate box:  More than \$1,000  More than \$12,500

(name of corporation, firm or enterprise)

(address)

(name under which investment held)

e) Check appropriate box:  More than \$1,000  More than \$12,500

(name of corporation, firm or enterprise)

(address)

(name under which investment held)

f) Check appropriate box:  More than \$1,000  More than \$12,500

(name of corporation, firm or enterprise)

(address)

(name under which investment held)

**SECTION 5- OFFICE OR DIRECTORSHIP**

List every office or directorship held by you or your spouse in any business, corporation, firm, or enterprise subject to jurisdiction of a regulatory agency of this State, or of any of its political subdivisions.

a) \_\_\_\_\_  
(name of business, corporation, firm, or enterprise)  
\_\_\_\_\_  
(address)  
\_\_\_\_\_  
(office or directorship held)  
\_\_\_\_\_  
(name of office holder)

b) \_\_\_\_\_  
(name of business, corporation, firm, or enterprise)  
\_\_\_\_\_  
(address)  
\_\_\_\_\_  
(office or directorship held)  
\_\_\_\_\_  
(name of office holder)

**SECTION 6- CREDITORS**

List each creditor to whom the value of five thousand dollars (\$5,000) or more was personally owed or personally obligated and is still outstanding. (This does not include debts owed to members of your family or loans made in the ordinary course of business by either a financial institution or a person who regularly and customarily extends credit.)

a) \_\_\_\_\_  
(name of creditor)  
\_\_\_\_\_  
(address of creditor)

b) \_\_\_\_\_  
(name of creditor)  
\_\_\_\_\_  
(address of creditor)

c) \_\_\_\_\_  
(name of creditor)  
\_\_\_\_\_  
(address of creditor)

**SECTION 7- PAST-DUE AMOUNTS OWED TO GOVERNMENT**

List the name and address of each governmental body to which you are legally obligated to pay a past-due amount and a description of the nature of the amount of the obligation.

a) \_\_\_\_\_  
(name of governmental body) (address of governmental body)  
\_\_\_\_\_  
(amount owed) (nature of the obligation)

b) \_\_\_\_\_  
(name of governmental body) (address of governmental body)  
\_\_\_\_\_  
(amount owed) (nature of the obligation)



**SECTION 10- AWARDS**

If you are an employee of a public school district, the Arkansas School for the Blind, the Arkansas School for the Deaf, the Arkansas School for Mathematics, Sciences, and the Arts, a university, a college, a technical college, a technical institute, a comprehensive life-long learning center, or a community college, the law requires you to disclose each monetary or other award over one hundred dollars (\$100) which you have received in recognition of your contributions to education. The information disclosed with respect to each such award should include the source, date, description, and a reasonable estimate of the fair market value.

a) \_\_\_\_\_  
(description of award)

\_\_\_\_\_ (date) \_\_\_\_\_ (fair market value)

\_\_\_\_\_ (source of award)

b) \_\_\_\_\_  
(description of award)

\_\_\_\_\_ (date) \_\_\_\_\_ (fair market value)

\_\_\_\_\_ (source of award)

c) \_\_\_\_\_  
(description of award)

\_\_\_\_\_ (date) \_\_\_\_\_ (fair market value)

\_\_\_\_\_ (source of award)

d) \_\_\_\_\_  
(description of award)

\_\_\_\_\_ (date) \_\_\_\_\_ (fair market value)

\_\_\_\_\_ (source of award)

**SECTION 11- NONGOVERNMENTAL SOURCES OF PAYMENT**

List each nongovernmental source of payment of your expenses for food, lodging, or travel which bears a relationship to your office when you appear in your official capacity when the expenses incurred exceed \$150.

a) \_\_\_\_\_  
(name of person or organization paying expense)

\_\_\_\_\_ (business address)

\_\_\_\_\_ (date of expense) \_\_\_\_\_ \$ \_\_\_\_\_ (amount of expense)

\_\_\_\_\_ (nature of expenditure)

b) \_\_\_\_\_  
(name of person or organization paying expense)

\_\_\_\_\_ (business address)

\_\_\_\_\_ (date of expense) \_\_\_\_\_ \$ \_\_\_\_\_ (amount of expense)

\_\_\_\_\_ (nature of expenditure)

**SECTION 12- DIRECT REGULATION OF BUSINESS**

List any business which employs you and is under direct regulation or subject to direct control by the governmental body which you serve.

- a) \_\_\_\_\_  
(name of business)  
\_\_\_\_\_  
(governmental body which regulates or controls)
- b) \_\_\_\_\_  
(name of business)  
\_\_\_\_\_  
(governmental body which regulates or controls)
- c) \_\_\_\_\_  
(name of business)  
\_\_\_\_\_  
(governmental body which regulates or controls)
- d) \_\_\_\_\_  
(name of business)  
\_\_\_\_\_  
(governmental body which regulates or controls)

**SECTION 13- SALES TO GOVERNMENTAL BODY**

List the goods or services sold to the governmental body for which you serve which have a total annual value in excess of \$1,000. List the compensation paid for each category of goods or services sold by you or any business in which you or your spouse is an officer, director, or stockholder owning more than 10% of the stock of the company.

- a) \_\_\_\_\_  
(goods or services)  
\_\_\_\_\_  
(governmental body to whom sold)  
\_\_\_\_\_  
(compensation paid)
- b) \_\_\_\_\_  
(goods or services)  
\_\_\_\_\_  
(governmental body to whom sold)  
\_\_\_\_\_  
(compensation paid)
- c) \_\_\_\_\_  
(goods or services)  
\_\_\_\_\_  
(governmental body to whom sold)  
\_\_\_\_\_  
(compensation paid)
- d) \_\_\_\_\_  
(goods or services)  
\_\_\_\_\_  
(governmental body to whom sold)  
\_\_\_\_\_  
(compensation paid)

**SECTION 14- SIGNATURE**

I certify under penalty of false swearing that the above information is true and correct.

\_\_\_\_\_  
Signature

STATE OF ARKANSAS

} ss

COUNTY OF \_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_ .

(Legible Notary Seal)

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

Note: If faxed, notary seal must be legible (i.e., either stamped or raised and inked) and the original must follow within ten (10) days pursuant to Ark. Code Ann. § 21-8-703(b)(3).

**IMPORTANT**

**Where to file:**

- State or district candidates/public servants file with the Secretary of State.
- Appointees to state boards/commissions file with the Secretary of State.
- County, township, and school district candidates/public servants file with the county clerk.
- Municipal candidates/public servants file with the city clerk or recorder, as the case may be.
- City attorneys file with the city clerk of the municipality in which they serve.
- District judges file with the Secretary of State.
- Members of regional boards or commissions file with the county clerk of the county in which they reside.

**General Information:**

- \* The Statement of Financial Interest should be filed by January 31 of each year.
- \* The filing covers the previous calendar year.
- \* Candidates for elective office shall file the Statement of Financial Interest for the previous calendar year on the first Monday following the close of the period to file as a candidate for elective office unless already filed by January 31. In addition, if the party filing period ends before January 1 of the year of the general election, candidates for elective office shall file a Statement of Financial Interest for the previous calendar year by no later than January 31 of the year of the general election.
- \* Agency heads, department directors, and division directors of state government shall file the Statement of Financial Interest within thirty (30) days of appointment or employment unless already filed by January 31.
- \* Appointees to state boards or commissions shall file the Statement of Financial Interest within thirty (30) days after appointment unless already filed by January 31.
- \* If a person is included in any category listed above for any part of a calendar year, that person shall file a Statement of Financial Interest covering that period of time regardless of whether they have left their office or position as of the date the statement is due.

## INSTRUCTIONS FOR STATEMENT OF FINANCIAL INTEREST

### INTRODUCTION/WHO MUST FILE

Ark. Code Ann. § 21-8-701(a) requires that the following persons file a written Statement of Financial Interest on an annual basis:

- A public official, as defined by Ark. Code Ann. § 21-8-402(17);
- A candidate for elective office;
- A district judge; or city attorney, whether elected or appointed;
- Any agency head, department director, or division director of state government;
- Any chief of staff or chief deputy of a constitutional officer, the Senate, or the House of Representatives;
- Any public appointee to any state board or commission (who possesses regulatory authority or is authorized to receive or disburse state or federal funds);<sup>1</sup>
- All persons who are elected members of a school board or who are candidates for a position on a school board;
- All public and charter school superintendents;
- All executive directors of education service cooperatives;
- Any person appointed to a municipal, county or regional (i) planning board or commission, (ii) airport board or commission, (iii) water or sewer board or commission, (iv) utility board or commission, or (v) civil service commission;
- Any member of an advertising and promotion commission; and
- Any member of a research park authority board under Ark. Code Ann. § 14-144-201 et seq.

The Arkansas Ethics Commission, which enforces this statute, has prepared these instructions, along with the office of the Secretary of State, whose office maintains the records, to assist persons required to file these statements. If you have any questions concerning the reporting requirements or how to fill out your Statement of Financial Interest, call or write either the **Arkansas Ethics Commission**, Post Office Box 1917, Little Rock, Arkansas 72203-1917, telephone (501) 324-9600 or the **Secretary of State, Elections Division**, State Capitol, Room 026, Little Rock, Arkansas 72201, telephone (501) 682-5070.

When preparing the Statement of Financial Interest, please **print or type the information**. You must also sign the Statement in Section 13 and your signature must be attested to before a Notary Public.

---

<sup>1</sup> Pursuant to Ark. Code Ann. § 21-8-701(a)(5)(B), a public appointee to a state board or commission which is not charged by law with the exercise of regulatory authority and which receives or disburses state or federal funds only in the form of mileage reimbursement for members attending meetings of the board or commission is not required file a written Statement of Financial Interest.

## **TIME FOR FILING/PERIOD COVERED**

Pursuant to Ark. Code Ann. § 21-8-701(c)(1)(A), a Statement of Financial Interest for the previous calendar year “shall be filed by January 31, of each year, except that a candidate for elective office shall file the Statement of Financial Interest for the previous calendar year on the first Monday following the close of the period to file as a candidate for elective office.” Pursuant to Ark. Code Ann. § 21-8-705, if the party filing period under Ark. Code Ann. § 7-7-203 ends before January 1 of the year of the general election, a candidate for elective office shall file a Statement of Financial Interest for the previous calendar year no later than January 31 of the year of the general election in addition to the Statement of Financial Interest required under Ark. Code Ann. § 12-8-701.

Moreover, an agency head, department director, or division director of state government and any public appointee to a state board or commission authorized or charged by law with the exercise of regulatory authority or authorized to receive or disburse state or federal funds shall file a Statement of Financial Interest for the previous calendar year within thirty (30) days after appointment or employment. Incumbent officeholders who filed a Statement of Financial Interest for the previous calendar year by January 31 of the year in which an election is held are not required to file an additional Statement of Financial Interest upon becoming a candidate for reelection or election to another office during the year. Ark. Code Ann. § 21-8-701(c)(2). If a person required to file a Statement of Financial Interest leaves his or her office or position during a particular calendar year, he or she shall still be required to file a Statement of Financial Interest covering that part of the year which he or she held the office or position. Ark. Code Ann. § 21-8-701(c)(1)(B).

## **WHERE TO FILE**

Pursuant to Ark. Code Ann. § 21-8-703, the Statement of Financial Interest shall be filed as follows:

- (1) State or district public servants (including appointees to state boards/ commissions) and candidates for state or district public office are required to file the statement with the Secretary of State;
- (2) County, township, or school district public servants and candidates for county, township, or school district public office are required to file the statement with the county clerks;
- (3) Municipal public servants and candidates for municipal office are required to file the statement with the city clerk or recorder;
- (4) City attorneys, whether elected or appointed, are required to file the statement with the city clerk of the municipality within which they serve;
- (5) Members of regional boards or commissions are required to file the statement with the county clerk of the county in which they reside; and
- (6) District judges are required to file the statement with the Secretary of State.

## **SPECIFIC REPORTING INSTRUCTIONS**

### **SECTION 1 (Name and Address)**

Answer each of these questions or indicate “Not Applicable”. List all names under which you and/or your spouse do business.

### **SECTION 2 (Reason for Filing)**

Check the box applicable to you and provide the office/position held or name of the board, commission or school district in the appropriate space.

### **SECTION 3 (Sources of Income)**

The term “gross income” is intended to be comprehensive. It refers to all income from whatever source derived, including but not limited to compensation for services, fees, commissions, and income derived from business interests. Report each employer and/or each other source of income from which you, your spouse, or any other person for the use or benefit of you or your spouse receives gross income exceeding \$1,000 on an annual basis. Include your governmental income from the office or position which requires your filing of this form. You are required to use the gross amount received as income. Thus, you must compute your total income from any particular source without first deducting expenses.

You are not required to list the individual items of gross income that constitute a portion of the income of the business or profession from which you or your spouse derives income. (For example: Accountants, attorneys, farmers, contractors, etc. do not have to list their individual clients.) If more than one source/employer/entity compensated you during the past year, you are required to list each source of income greater than \$1,000. If you or your spouse received speaking honoraria, you must report, under the request for “source”, the sponsor of each event for which a payment was made for your speech or appearance, as well as the date and dollar category (“more than \$1,000.00” or “more than \$12,500.00”). The term “honoraria”, as used herein, means a payment of money or any thing of value for an appearance, speech, or article. NOTE: Food, lodging, and travel provided to a public servant in connection with an appearance would not constitute honoraria if the public servant is appearing in his or her official capacity and the appearance bears a relationship to the public servant’s office or position. Section 10 of the Statement of Financial Interest addresses the reporting of payment for such food, lodging, and travel.

You must also provide a brief description of the nature of the services for which the income was received, as well as the name under which the income was received. For example:

<b>Source</b>	<b>Description</b>	<b>Amount</b>
State of Arkansas (address) John Doe	Executive Dir.	More than \$12,500.00
University of Arkansas (address) John M. Doe	Teaching	More than \$12,500.00
450 Main Street, Little Rock, Arkansas John M. Doe	Rent Income	More than \$12,500.00
Ark. Med. Society Annual Meeting (address) John Doe	Speaking fee Oct. 2, Little Rock	More than \$1,000.00
Star National Bank Star, Arkansas John or Jane Doe	Interest Income	More than \$1,000.00
City of Mayberry (address) Jane Doe	Spouse income	More than \$12,500.00
Ark. Bar Association Annual Meeting (address) Jane Doe	Speaking Fee  Spouse, June 12 Hot Springs	More than \$1,000.00

#### **Section 4 (Business or Holdings)**

In this section, list the name of every business in which you, your spouse or any other person for the use or benefit of you or your spouse have an investment or holding. Stocks, bonds, stock options and other securities held by you or your spouse must be reported. Figures for these items, as well as all other holdings or accounts, should be based on fair market value at the end of the reporting period.

For **securities, stocks, or bonds**, you must disclose each security held in your portfolio which exceeds the \$1,000.00 threshold. If securities are held through an investment firm, the firm will normally provide periodic statements from which you may obtain the information required to be disclosed. If you own different types of securities issued by the same authority, such as U. S. Treasury obligations or bonds, it is not necessary to provide an itemized list of each security worth

over \$1,000.00. Rather, you may simply report the aggregate value of the securities issued by the same authority and identify the type of securities.

In the case of **mutual funds or similar investments**, you need not disclose specific stocks held in a widely diversified investment trust or mutual fund as long as the holdings of the trust or fund are a matter of public record and you have no ability to exercise control over the specific holdings. If you have such control, you must disclose each holding exceeding the threshold level of \$1,000.00, whether or not you exercise the control. Otherwise, you may simply disclose the name, address, etc. of the authority through which your mutual fund is invested (e.g., IDS), the category of the fund and the category of the appropriate amount (e.g., “more than \$1,000.00”).

In the case of **bank accounts**, if the total of accounts (including certificates of deposit) deposited in a particular bank exceeds \$1,000.00, list each institution holding more than \$1,000.00. If no particular bank holds more than \$1,000.00, you need not report any bank accounts. All accounts at one institution, including those for your spouse, may be combined as one entry. Thus, for example, you may report a checking account, savings account, certificate of deposit, and IRA in Smith First National Bank of Arkansas by checking the gross total of the accounts (e.g., “more than \$1,000.00”) and stating “Smith First National Bank of Arkansas” with its address. You need not list each account. If you are listed on an account purely for custodial reasons, and you do not assert any ownership rights to the assets in the account (for example, if you are a joint tenant with an elderly relative), you need not list the account.

For any business interest, if you or your spouse has an interest in a proprietorship, partnership, or corporation that is actively engaged in a trade or business, you must disclose the name and address of each interest. It is not necessary to provide an itemized list of the assets of the business. For example, you need only categorize the total value of your interest (e.g., “more than \$12,500.00”) and not items such as “office equipment.” This includes each asset held in trust for you or your spouse which has a value greater than \$1,000.00. Holdings of a trust for which you or your spouse are merely an administrator and for which you have no beneficial interest need not be reported.

### **Section 5 (Office or Directorship)**

You must report your nongovernmental offices and directorships held by you or your spouse in any business, corporation, firm, or enterprise subject to the jurisdiction of a regulatory agency of this State, or any of its political subdivisions. For each such business, provide the name of the business, its address, the office or directorship held and the name of the person (either you or your spouse) who holds the office or directorship. A “regulatory agency”, as defined by Ark. Code Ann. § 21-8-301(1), means any “state board, commission, department, or officer authorized by law to make rules or to adjudicate contested cases except those in the legislative or judicial branches.”

### **Section 6 (Creditors)**

You must report the name and address of each creditor to whom the value of \$5,000.00 or more is personally owed and outstanding at the end of the reporting period. All information regarding a single creditor may be reported in a single entry. If you have more than one liability owed to the same creditor, add up the items of credit to determine if the \$5,000.00 threshold has

been met. The identity of the creditor is the name of the person or organization to which the liability is owed (e.g., “Bob Smith, 1000 Elm Street, Little Rock, Arkansas”).

You do not need to include debts owed to members of your family. You may also exclude loans made in the ordinary course of business by either a financial institution or a person who regularly and customarily extends credit. This exclusion applies to such items as a mortgage secured by real property which is your personal residence, credit extended to purchase personal items such as furniture or appliances, credit card debts, and car loans, provided the credit does not exceed the value of the item purchased.

Debts not incurred in the ordinary course of business include, but are not limited to, such items as legal judgments, judgment liens, money borrowed from individuals, other than family members, who are not normally in the business of lending money, and tax liens owed to any governmental agency.

### **Section 7 (Past-Due Amounts Owed to Government)**

You must report the name and address of each governmental body to which you are legally obligated to pay a past-due amount and a description of the nature and amount of the obligation. Such debts include, but are not limited to tax liens owed to any governmental agency or other legally obligated debts in which you may be in default to a governmental body.

### **Section 8 (Guarantor, Co-Maker)**

The law requires you to provide the name and address of each guarantor or co-maker, other than a member of your family, who has guaranteed a debt which is still outstanding. The \$5,000.00 threshold of Section 6 does not apply here. To the extent that you have a guarantor or co-maker of any of your outstanding debts, the guarantor or co-maker must be disclosed. There is no exception for debts incurred in the ordinary course of business. This requirement also includes debts arising, extended or refinanced after January 1, 1989.

This requirement extends to situations where you have co-signed a loan to assist another person in obtaining credit, unless the person is a member of your family.

### **Section 9 (Gifts)**

The law requires you to identify the source, date, description, and a reasonable estimate of the fair market value of each gift of more than one hundred dollars (\$100.00) received by you or your spouse during the reporting period or more than two hundred and fifty dollars (\$250.00) received by your dependent children during the reporting period. A gift is any “payment, entertainment, advance, services, or anything of value” unless consideration of equal or greater value has been given therefor. The value of an item shall be considered to be less than one hundred dollars (\$100) if the public servant reimburses the person from whom the item was received any amount over one hundred dollars (\$100) and the reimbursement occurs within ten (10) days from the date the item was received. All types of gifts must be reported. Items such as food, lodging, and travel are considered gifts unless they are received when you are appearing in your official capacity and the appearance bears a relationship to your office or position. [Note: The reporting of food, lodging,

and travel received by a public servant who is appearing in his or her official capacity at an event which bears a relationship to his or her office or position is addressed in Section 11 below.]

A gift can be a tangible item, such as a watch, or an intangible item, such as a hunting or fishing trip. A gift does not include (1) informational material; (2) receiving food, lodging, or travel which bears a relationship to the public servant's office and when appearing in an official capacity; (3) gifts which are not used and returned to the donor within 30 days; (4) gifts from a family member listed in Ark. Code Ann. § 21-8-402(5)(B)(iv), unless the family member is acting as an agent for a person not covered by the exception; (5) campaign contributions; (6) devises or inheritances; (7) anything with a value of \$100 or less; (8) wedding presents and engagement gifts; (9) a monetary or other award presented to an employee of a public school district, the Arkansas School for the Blind, the Arkansas School for the Deaf, the Arkansas School for Mathematics, Sciences, and the Arts, a university, a college, a technical college, a technical institute, a comprehensive life-long learning center, or a community college in recognition of the employee's contribution to education; (10) tickets to charitable fundraising events held within this state by a non-profit organization which is exempt from taxation under Section 501(c)(3) of the Internal Revenue Code; (11) a personalized award, plaque, or trophy with a value of one hundred fifty dollars (\$150) or less; (12) an item which appointed or elected members of a specific governmental body purchase with their own personal funds and present to a fellow member of that governmental body in recognition of public service; (13) food or beverages provided at a conference scheduled event that is part of the program of the conference; (14) food or beverages provided in return for participation in a bona fide panel, seminar, speaking engagement at which the audience is a civic, social, or cultural organization or group; (15) a monetary or other award publicly presented to an employee of state government in recognition of his or her contributions to the community and State of Arkansas when the presentation is made by the employee's supervisor or peers, individually or through a non-profit organization which is exempt from taxation under Section 501(c) of the Internal Revenue Code, and the employee's receipt of the award would not result in or create the appearance of the employee using his or her position for private gain, giving preferential treatment to any person, or losing independence or impartiality (This exception shall not apply to an award presented to an employee of state government by a person having economic interests which may be affected by the performance or nonperformance of the employee's duties or responsibilities.); and (16) anything of value provided by a political party under Ark. Code Ann. § 7-1-101 or § 7-7-205 when serving as the host of the following events to all attendees as part of attendance at the event: (A) the official swearing-in, inaugural, and recognition events of constitutional officers and members of the general assembly; and (B) an official event of a recognized political party so long as all members of either house of the General Assembly affiliated with the recognized political party are invited to the official event.

In reporting a gift, you must report the source, the date it was received, a reasonable estimate of its fair market value, and a brief description. In that regard, the Ethics Commission has issued opinions concerning the "fair market value" of such items as transportation on a private aircraft. A group of items received from the same source at the same time would be considered one gift and the separate values should be added together. As an example, if you receive a tie and tie clip (valued \$50.00) along with a pair of golf shoes (valued at \$75) from one donor, this should be reported and described in Section 9, as the receipt of a gift, "tie, tie clip and shoes." The value would be \$125.00. Similarly, food and beverages provided you in connection with lodging should be aggregated to ascertain if the threshold reporting level has been reached. If you are unsure if the value should be

aggregated for purposes of reporting, you may wish to contact the Arkansas Ethics Commission for an opinion.

In accordance with Ark. Code Ann. § 21-8-804, certain designated officials are authorized to accept gifts, grants, and donations of money or property on behalf of the State of Arkansas, the Arkansas Senate, the Arkansas House of Representatives, and the Arkansas Supreme Court. In addition, the designated officials are authorized to accept donations of money for the purpose of hosting official swearing-in and inaugural events of the constitutional officers, Senate, House of Representatives, and Supreme Court justices, the official recognition event for the President Pro Tempore, and the official recognition event for the Speaker of the House. The public official accepting the gift, grant, or donation of money or property on behalf of an appropriate entity is not required to disclose same on his or her Statement of Financial Interest. Instead, public servants are required to report such gifts, grants, or donations of money or property to the Ethics Commission on a quarterly basis on a separate disclosure form prepared for such purposes.

### **Section 10 (Awards)**

If you are an employee of a public school district, the Arkansas School for the Blind, the Arkansas School for the Deaf, the Arkansas School for Mathematics, Sciences, and the Arts, a university, a college, a technical college, a technical institute, a comprehensive life-long learning center, or a community college, the law requires you to disclose each monetary or other award over one hundred dollars (\$100) which you have received in recognition of your contributions to education. The information disclosed with respect to each such award should include the source, date, description, and a reasonable estimate of the fair market value.

### **Section 11 (Nongovernmental Sources of Payment)**

Payments for food, lodging, or travel are not considered a gift in situations where a public servant is appearing in his or her official capacity and the appearance bears a relationship to the public servant's office or position. However, Section 11 requires that each nongovernmental source of payment of expenses for such food, lodging, or travel be listed when the expenses paid by that source exceed \$150.00. [Note: The reporting of money or things of value received when you are not appearing in an official capacity or the appearance does not bear a relationship to your office or position is addressed in Section 3 ("Sources of Income") or Section 9 ("Gifts).] In this regard, you must list the name and business address of the person or organization which has paid your expenses, the date, nature, and amount of the expenses unless such person or organization was compensated by the governmental body for which the public servant serves. Thus, you must disclose in this section, lodging or travel received in connection with such activities as speaking engagements, conferences, or fact finding events related to your official duties.

Section 11 requires the disclosure of each nongovernmental source of payment when the expenses paid in connection with a particular appearance exceed \$150.00. Thus, if one source provides lodging and food and the total amount paid exceeds \$150.00, that source must be reported in this section.

The **organization** is the source of payment. It should be the name of the sponsor actually paying or providing the expenses. The **date of expenses** should be the inclusive dates of all travel provided. If the travel all occurred on one day, report that day. Otherwise, list the starting and ending dates of each trip provided (i.e., “May 1 - 5, 1997”).

It is permissible to extend the duration of a trip at your own expense, accepting return travel from the sponsor. However, to avoid suggesting that travel was accepted for a longer period of time than was actually the case, you should indicate any time not spent at the sponsor’s expense on either the line requesting the “date” or “nature” of expenses. For example, using the dates listed above, you could report “May 1 - 5, 1997. May 3 - 4 on personal business, expenses paid by me.”

## **Section 12 (Direct Regulation of Business)**

The law requires you to list any business by whom you are employed if the business is under direct regulation or subject to direct control by the governmental body which you serve. You must report the employment by listing the name of this business/employer and provide the governmental body which regulates or controls aspects of the business. Such a business relationship typically exists if your private employer is subject to any rules or regulations of a governmental body or if a governmental body adjudicates contested cases of fact involving your private employer. For example, if you work as a licensed dentist, the appropriate regulatory governing body may be the State Board of Dental Examiners.

Whether your business is under direct regulation or subject to direct control by a governing body is often a question of fact. If you are unsure, you should contact the Arkansas Ethics Commission or, if you know, the agency you suspect may regulate part or all of your activities.

## **Section 13 (Sales to Governmental Body)**

The law requires you to report certain business relationships with the government if a significant sale of goods or services occurs. Specifically, you must set out in detail the goods or services sold having a total annual value in excess of \$1,000.00 sold to the governmental body for which you serve or are employed and the compensation paid for each category of goods or services by you or any business in which you or your spouse is an officer, director, stockholder owning more than ten percent (10%) of the stock, owner, trustee, or partner.

## **Section 14 (Signature)**

Under the law, each person, required to file a Statement of Financial Interest must prepare the statement under penalty of false swearing and sign such form attesting to the truth and accuracy of the information set forth on the form. Ark. Code Ann. § 21-8-702. If a person who is required to file a Statement of Financial Interest is called to active duty in the armed forces of the United States, the statement may be completed by the spouse of the person. If the Statement of Financial Interest is completed by the spouse, under this exception, the spouse’s signature shall be sufficient for the requirement of Ark. Code Ann. § 21-8-702.

# 2022 Board of Trustees Meeting Schedule

**Arkansas Teacher Retirement System  
1400 West Third Street  
Little Rock, AR 72201**

Meeting Date*	Audit Committee	Investment Committee	Operations Committee	Board of Trustees
February 7, 2022	8:30 a.m.*	9:00 a.m.*	10:30 a.m.*	11:00 a.m.*
April 4, 2022	8:30 a.m.*	9:00 a.m.*	10:30 a.m.*	11:00 a.m.*
June 6, 2022	8:30 a.m.*	9:00 a.m.*	10:30 a.m.*	11:00 a.m.*
September 26, 2022	8:30 a.m.*	9:00 a.m.*	10:30 a.m.*	11:00 a.m.*
December 5, 2022	8:30 a.m.*	9:00 a.m.*	10:30 a.m.*	11:00 a.m.*

**NCTR Trustee Workshop: *To be announced at later date.***

**NCTR 98<sup>th</sup> Annual Conference: *To be announced at later date.***

**\*Dates and times are subject to change. Meeting times may be adjusted earlier or later than scheduled, depending upon time needed for the previous meeting.**

**All meetings will be held on the Third Floor, Room 300, of the Arkansas Teacher Retirement System Building unless noted otherwise.**

**Waiver of Member Interest 2021**  
**December 6, 2021, Board Meeting**  
**A.C.A. Sec. 24-7-205**

**Amount**

**Reason to Waive Interest**

**NONE**

**Waiver of Employer Report Penalties 2021**  
**December 6, 2021, Board Meeting**  
**A.C.A. Sec. 24-7-411**

These are typical reports of employer penalties and interest waived by ATRS during a reporting period.

<b>Employer Penalties Waived</b>	
DeQueen-Mena Education Service CO-OP Gillham, AR	\$900.00
Lisa Academy Charter Little Rock, AR	\$900.00
Brookland Public Schools Brookland, AR	\$450.00
Northwest Arkansas Community College	\$600.00
<b>TOTAL PENALTIES WAIVED</b>	<b>\$2,850.00</b>
<b>Employer Interest Waived</b>	
DeQueen-Mena Education Service CO-OP Gillham, AR	\$28.28
Northwest Arkansas Community College	\$168.02
<b>TOTAL INTEREST WAIVED</b>	<b>\$196.30</b>
<b>TOTAL PENALTIES AND INTEREST WAIVED</b>	<b>\$3,046.30</b>



December 4, 2021

Clint Rhoden  
Executive Director  
Arkansas Teacher Retirement System  
1400 West Third Street  
Little Rock, AR 72201

Dear Clint:

This letter outlines Global Principal Partners ("GPP")'s recommended transaction and associated purchase price with respect to Arkansas Teacher Retirement System ("ATRS")' proposed purchase of the revenue stream to be delivered to Highland Pellets LLC ("HP" or the "Company") by the Arkansas Department of Finance and Administration ("DFA") stemming from HP's sale of certain Arkansas tax credits to DFA.

#### Background

The Company is the wholly-owned operating subsidiary of Highland LLC. Highland LLC is a single member limited liability company owned by Highland LP. ATRS, via its investment vehicle, Pinnacle Mountain Holding Company V LLC, is the largest limited partner of Highland LP. The Company was formed for the purposes of constructing and operating a wood pellet manufacturing facility in Pine Bluff, Arkansas and has recently recommenced operations following a significant reconstruction project.

As an economic incentive for its investments as a wood energy products and forest maintenance project, the Company has been offered Arkansas income tax credits by the Arkansas Economic Development Commission ("AEDC"). The tax credits to be issued will equal 30% of the Company's investment costs in wood energy products equipment, pursuant to recently enacted Arkansas legislation. Under the terms of an incentive agreement pending execution with AEDC (the "Incentive Agreement"), the amount of the tax credits available to HP will be capped at \$23,688,728. Recognizing that ATRS is the majority partner in the partnership that owns HP and that ATRS has no ability to benefit from income tax credits in its investment in the partnership, as a further inducement under the terms of the Incentive Agreement and recently enacted legislation, AEDC will provide the Company with an opportunity to sell up to \$6,940,000 of the tax credits back to DFA. (The sale will, in effect, be conducted by ATRS on behalf of the Company as the Company will designate ATRS as being in control of the credits pursuant to the legislation.) Such sale is limited to \$5,000,000 of tax credits in any given year, and the purchase price to be paid by DFA is 80% of the nominal value of the credits. Under the terms of the Incentive Agreement, the Company commits to making the requisite investments and maintaining a one hundred permanent full-time jobs earning an average annual wage of \$60,000. Satisfaction of these requirements are to be certified by the Company on an annual basis over a twelve-year period.

Following the execution of the Incentive Agreement, it is envisioned that on or before July 15, 2022, the Company, via ATRS as controlling party over the credits, will notify DFA of its intention to sell \$5,000,000 of the tax credits to DFA. Per the terms of the Incentive Agreement, DFA would then purchase those credits for \$4,000,000 and deliver the funds to ATRS on behalf of the Company no

later than June 30, 2023. Then on or before July 15, 2023, the Company, via ATRS, would notify DFA of its intention to sell the remaining \$1,940,000 credits eligible for sale to DFA. DFA would purchase those credits and deliver the sale proceeds of \$1,552,000 to ATRS on behalf of the Company on or before June 30, 2024.

#### Proposed Transaction

Rather than ATRS delivering the proceeds from the sale of the credits to the Company when collected from DFA, the Company and ATRS are contemplating a transaction where ATRS will purchase from the Company the future revenue stream to be delivered by DFA. The benefits of the proposed transaction for the Company include a more efficient and expedient delivery of the economic value of the tax credit monetization. The benefit to ATRS, exclusive of any indirect benefits of its significant partnership interests in the Company, is an enhanced return on a medium-term investment relative to state of Arkansas risk. The "medium term" refers to the fact that the anticipated transaction term is two-and-a-half years as it is expected that ATRS would fund the purchase of the revenue stream to be delivered by DFA from the Company prior to year end and will have fully collected the revenue stream from DFA on or before June 30, 2024. The identified risks to the transaction include (i) the Company's failure to maintain the required employment and compensation targets required by the Incentive Agreement and (ii) the Company's insolvency during the two-and-a-half-year term of the ATRS investment in the revenue stream from DFA. In the event of (i), the Incentive Agreement includes claw-back language which could result in a prorated reduction of the tax credits which, in turn, would result in a lower-than-expected payment from DFA. The purchase agreement between the Company and ATRS would provide for claims by ATRS in the event that this risk materialized. In the event of (ii), AEDC would have the right to terminate the Incentive Agreement.

#### Recommendation

GPP's recommendation for ATRS' purchase price of the Company's tax credit revenue stream from DFA is \$5,015,816. The underlying rationale for the purchase price is supported as follows.

#### Precedent ATRS Tax Credit Revenue Stream Purchase from 2016:

Effective discount rate for 2016 transaction	5.48%
UST interpolated 15-year rate in August 2016	1.74%
Arkansas premium (estimated)	0.25%
Effective premium	3.49%

In the above-referenced transaction, ATRS' effective discount rate reflected an approximate 3.50% premium relative to Arkansas state risk (as estimated by a spread to prevailing US Treasury rates at the time of the transaction).

Applying this same precedent transaction logic, expected payment dates and amounts of the Company's tax credit monetization transaction with DFA, prevailing US Treasury rates and a 1.50% premium for this transaction as compensation for the two-and-a-half-year Incentive Agreement compliance risks, the calculated price for the Company's tax credit monetization revenue stream with DFA is \$5,015,816 as illustrated below.

Proposed Transaction for Highland Pellets

Total credits to be sold by Highland Pellets to Arkansas DFA	\$ 6,940,000
Purchase Price by Arkansas DFA	80.0%
Nominal Payment Stream Total	\$ 5,552,000

**Arkansas DFA Payments and Dates**

Payment #1	\$ 4,000,000
Expected Date	6/30/2023
Payment #2	\$ 1,552,000
Expected Date	6/30/2024
ATRS Anticipated Purchase Date	12/21/2021

*Proposed Discount Rate for Payment #1*

UST current interpolated 18-month rate	0.45%
Arkansas premium (estimated)	0.25%
Precedent transaction premium	3.49%
Highland Pellet premium	1.50%
Total discount rate	5.69%

ATRS Proposed purchase price for Payment #1	\$ 3,676,482
---------------------------------------------	--------------

*Proposed Discount Rate for Payment #2*

UST current interpolated 30-month rate	0.77%
Arkansas premium (estimated)	0.25%
Precedent transaction premium	3.49%
Highland Pellet premium	1.50%
Total discount rate	6.01%

ATRS Proposed purchase price for Payment #2	\$ 1,339,333
---------------------------------------------	--------------

Total ATRS proposed purchase price	\$ 5,015,816
------------------------------------	--------------

GPP's recommendation is predicated on documentation of customary and transaction-specific terms and conditions deemed satisfactory by ATRS in its sole discretion.

GPP Statement

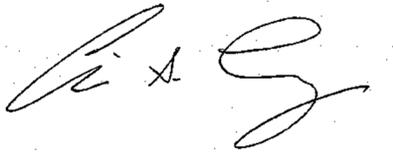
In performing its analysis and delivering this recommendation, GPP relied on Company-specific information and the draft Incentive Agreement as provided by the Company's management. GPP also relied on management representations made during interviews and question and answer sessions conducted by GPP. GPP has not independently verified the accuracy of such information and disclaims all liability based on its reliance on such information in performing its analysis and making its recommendation hereunder.

Arkansas Teacher Retirement System

December 4, 2021

Page 4

Very truly yours,

A handwritten signature in black ink, appearing to read "Ari Levy". The signature is written in a cursive style with a large, stylized "L" at the end.

Ari Levy  
Managing Director

**ARKANSAS TEACHER RETIREMENT SYSTEM  
1400 West Third Street  
Little Rock, Arkansas 72201**

**RESOLUTION  
No. 2021-68**

**Approving Purchase of Revenue Stream Generated by Tax  
Credits Associated with Highland Pellets  
with Imminent Need**

**WHEREAS**, the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) is authorized to invest and manage trust assets for the benefits of its plan participants; and

**WHEREAS**, the ATRS Board has reviewed the recommendation of its special investment consultant, Global Principal Partners, along with the recommendation of the Investment Committee and ATRS staff regarding the purchase of the revenue stream generated by tax credits associated with Highland Pellets to be issued by the state of Arkansas; and

**WHEREAS**, the ATRS Board approves an investment of up to \$5,015,816 million dollars (for up to approximately \$7 million dollars in tax credits producing a revenue stream of approximately \$5.6 million dollars) to purchase the revenue stream generated by the tax credits associated with Highland Pellets to be issued by the state of Arkansas; and

**WHEREAS**, the Board, after its review of the timing in which the closing of the investment to purchase the revenue stream generated by tax credits associated with Highland Pellets may need to occur, has determined that there is an imminent need to immediately enter into the agreement prior to the next scheduled meeting of the Arkansas Legislative Council. The Board also deems it financially appropriate to enter into the agreement and concludes that to forego the opportunity to promptly implement its investment directives under the prudent investor rule would be inconsistent with its fiduciary duty of care to the members and annuitants.

**NOW, THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$5,015,816.00 million dollars** to purchase the revenue stream generated by tax credits associated with Highland Pellets to be issued and agrees to immediately move to close and subscribe the approved purchase

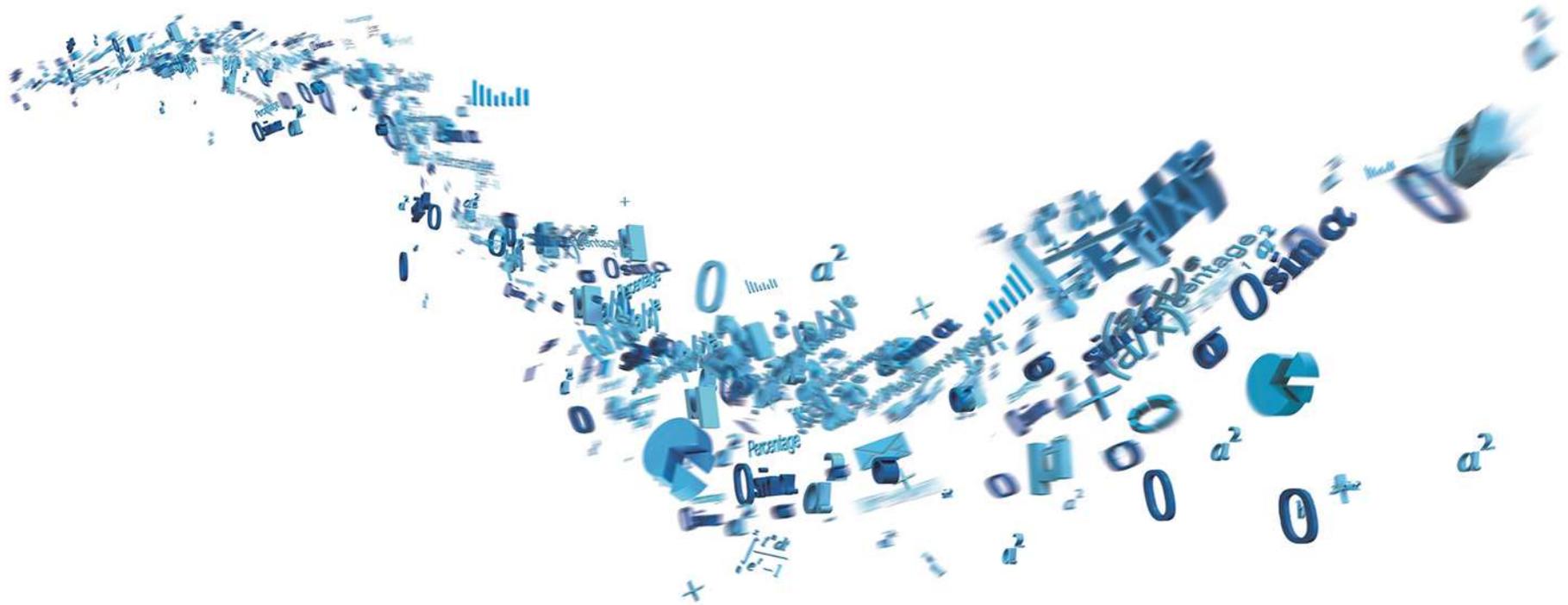
of the revenue stream generated by tax credits associated with Highland Pellets to be issued by the state of Arkansas; and

***FURTHER, BE IT RESOLVED***, that the ATRS staff is hereby authorized to take all necessary and proper steps to implement this investment using the Imminent Need process if acceptable terms are reached.

**Adopted this 6th day of December 2021**

---

**Mr. Danny Knight, *Chair***  
**Arkansas Teacher Retirement System**



Arkansas Teacher Retirement System | Third Quarter 2021

---

## Quarterly Investment Review

Visit the *Investments Thought Leadership Site* (<https://insights-north-america.aon.com/investment>); sharing our best thinking.

Visit our new video library with our views on key investment topics for this quarter using access code "aon!"  
(<https://site-494121.bcvp0rtal.com/category/videos/key-topics-by-investor-type>)

## Table of Contents

1	Executive Summary	1
2	Total Fund	5
3	Total Equity	27
4	Fixed Income	81
5	Opportunistic Alternatives	103
6	Private Equity	121
7	Real Assets	123
8	Fee Schedule	125
9	Disclaimers and Notes	129

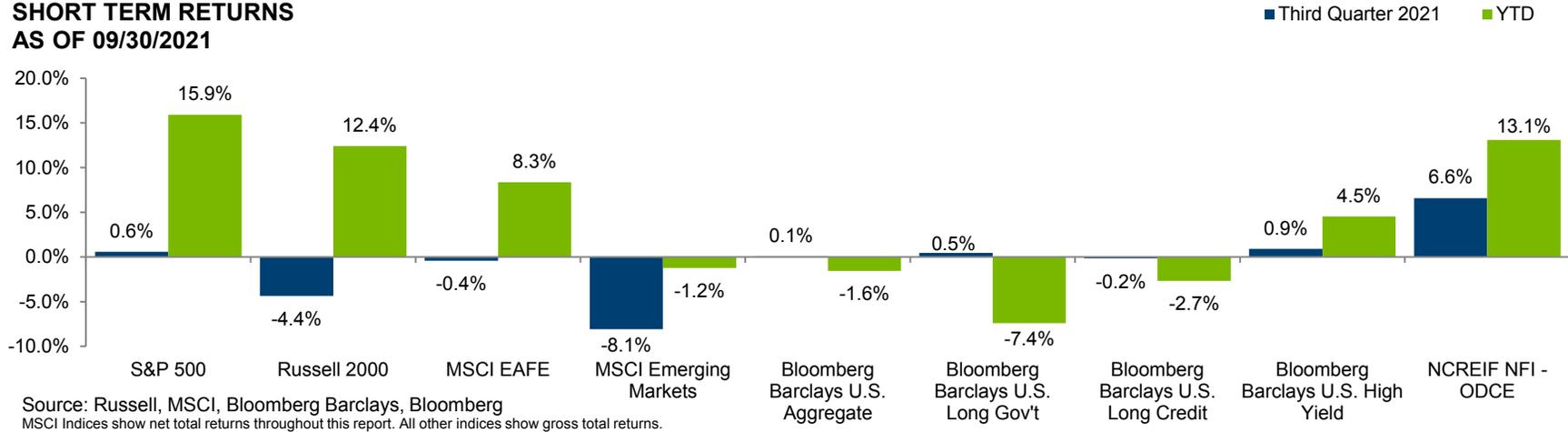


# Executive Summary

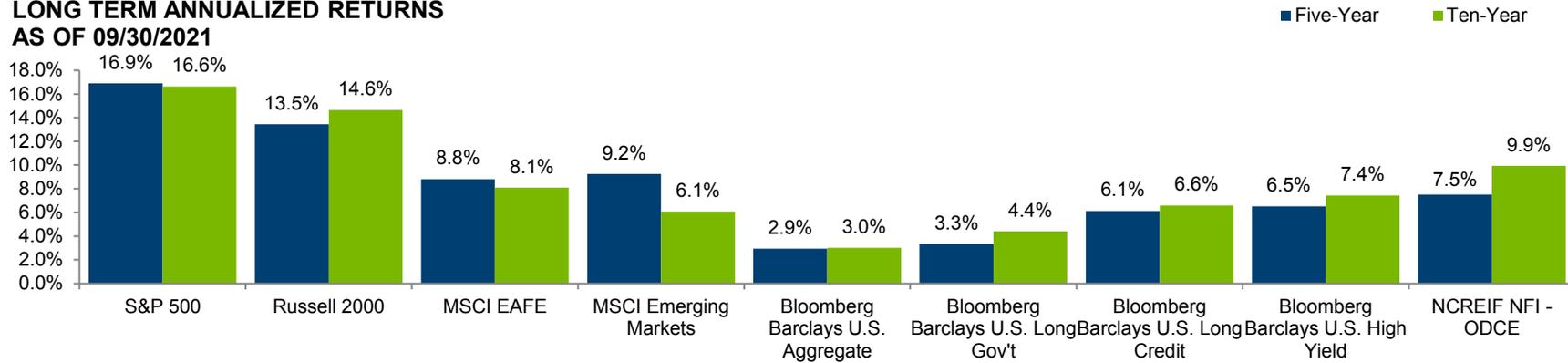
---

# Market Highlights

## SHORT TERM RETURNS AS OF 09/30/2021



## LONG TERM ANNUALIZED RETURNS AS OF 09/30/2021



Source: Russell, MSCI, Bloomberg Barclays, Bloomberg

**Aon**  
Proprietary & Confidential  
Investment advice and consulting services provided by Aon Investments USA Inc.

## Market Highlights

Returns of the Major Capital Markets							
Period Ending 09/30/2021	Third Quarter	YTD	1-Year	3-Year <sup>1</sup>	5-Year <sup>1</sup>	10-Year <sup>1</sup>	
<b>Equity</b>							
MSCI All Country World IMI	-1.11%	11.42%	28.92%	12.38%	13.06%	11.96%	
MSCI All Country World	-1.05%	11.12%	27.44%	12.58%	13.20%	11.90%	
Dow Jones U.S. Total Stock Market	-0.12%	15.13%	32.13%	15.95%	16.82%	16.56%	
Russell 3000	-0.10%	14.99%	31.88%	16.00%	16.85%	16.60%	
S&P 500	0.58%	15.92%	30.00%	15.99%	16.90%	16.63%	
Russell 2000	-4.36%	12.41%	47.68%	10.54%	13.45%	14.63%	
MSCI All Country World ex-U.S. IMI	-2.56%	6.77%	25.16%	8.34%	9.13%	7.74%	
MSCI All Country World ex-U.S.	-2.99%	5.90%	23.92%	8.03%	8.94%	7.48%	
MSCI EAFE	-0.45%	8.35%	25.73%	7.62%	8.81%	8.10%	
MSCI EAFE (Local Currency)	1.32%	14.23%	27.20%	7.16%	9.01%	10.10%	
MSCI Emerging Markets	-8.09%	-1.25%	18.20%	8.58%	9.23%	6.09%	
<b>Equity Factors</b>							
MSCI World Minimum Volatility (USD)	-0.09%	7.33%	13.56%	8.46%	9.27%	10.89%	
MSCI World High Dividend Yield	-1.88%	8.99%	21.90%	7.76%	8.72%	9.80%	
MSCI World Quality	0.12%	14.31%	26.34%	18.32%	17.92%	15.84%	
MSCI World Momentum	1.07%	8.60%	20.12%	14.97%	18.11%	15.99%	
MSCI World Enhanced Value	-0.80%	15.92%	36.99%	4.94%	8.53%	9.82%	
MSCI World Equal Weighted	-0.40%	11.94%	31.44%	9.78%	11.12%	11.24%	
MSCI World Index Growth	0.84%	12.21%	26.34%	19.56%	19.02%	16.01%	
<b>Fixed Income</b>							
Bloomberg Barclays Global Aggregate	-0.88%	-4.06%	-0.91%	4.24%	1.99%	1.86%	
Bloomberg Barclays U.S. Aggregate	0.05%	-1.55%	-0.90%	5.36%	2.94%	3.01%	
Bloomberg Barclays U.S. Long Gov't	0.46%	-7.40%	-10.13%	9.17%	3.34%	4.40%	
Bloomberg Barclays U.S. Long Credit	-0.18%	-2.66%	2.13%	10.20%	6.14%	6.59%	
Bloomberg Barclays U.S. Long Gov't/Credit	0.07%	-4.57%	-2.97%	10.12%	5.21%	5.76%	
Bloomberg Barclays U.S. TIPS	1.75%	3.51%	5.19%	7.45%	4.34%	3.12%	
Bloomberg Barclays U.S. High Yield	0.89%	4.53%	11.28%	6.91%	6.52%	7.42%	
Bloomberg Barclays Global Treasury ex U.S.	-1.56%	-6.81%	-2.47%	3.01%	0.61%	0.56%	
JP Morgan EMBI Global (Emerging Markets)	-0.53%	-1.53%	3.88%	5.64%	3.57%	5.48%	
<b>Commodities</b>							
Bloomberg Commodity Index	6.59%	29.13%	42.29%	6.86%	4.54%	-2.66%	
Goldman Sachs Commodity Index	5.22%	38.27%	58.30%	-1.49%	3.64%	-4.83%	
<b>Hedge Funds</b>							
HFRI Fund-Weighted Composite <sup>2</sup>	-0.03%	10.09%	22.09%	8.52%	7.31%	5.86%	
HFRI Fund of Funds <sup>2</sup>	1.37%	6.38%	15.00%	6.72%	5.93%	4.53%	
<b>Real Estate</b>							
NAREIT U.S. Equity REITS	0.98%	23.15%	37.39%	10.01%	6.83%	11.27%	
NCREIF NFI - ODCE	6.59%	13.09%	14.59%	7.05%	7.50%	9.92%	
FTSE Global Core Infrastructure Index	-1.20%	7.10%	14.84%	8.97%	8.79%	10.17%	
<b>Private Equity</b>							
Burgiss Private iQ Global Private Equity <sup>3</sup>			53.27%	20.13%	18.26%	14.59%	

MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

<sup>1</sup> Periods are annualized.

<sup>2</sup> Latest 5 months of HFR data are estimated by HFR and may change in the future.

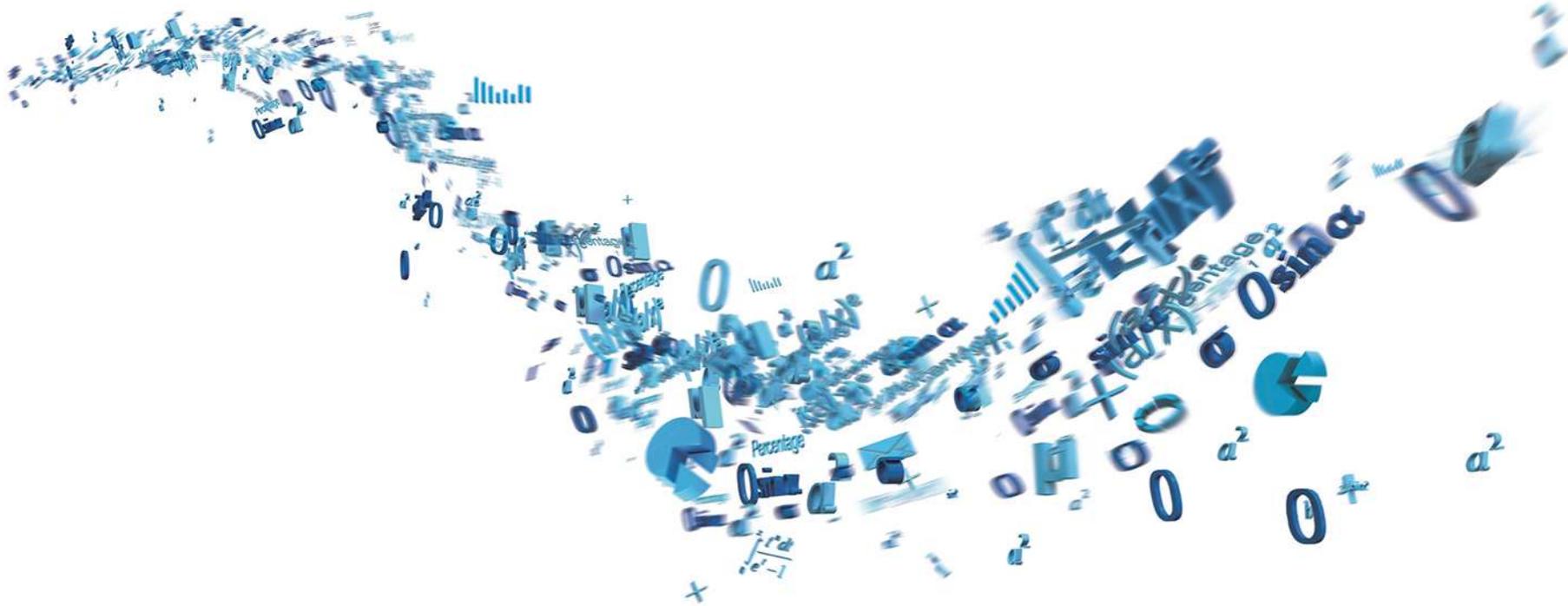
<sup>3</sup> Burgiss Private iQ Global Private Equity data is as at March 31, 2021

### Aon

Proprietary & Confidential

Investment advice and consulting services provided by Aon Investments USA Inc.

This Page Left Blank Intentionally

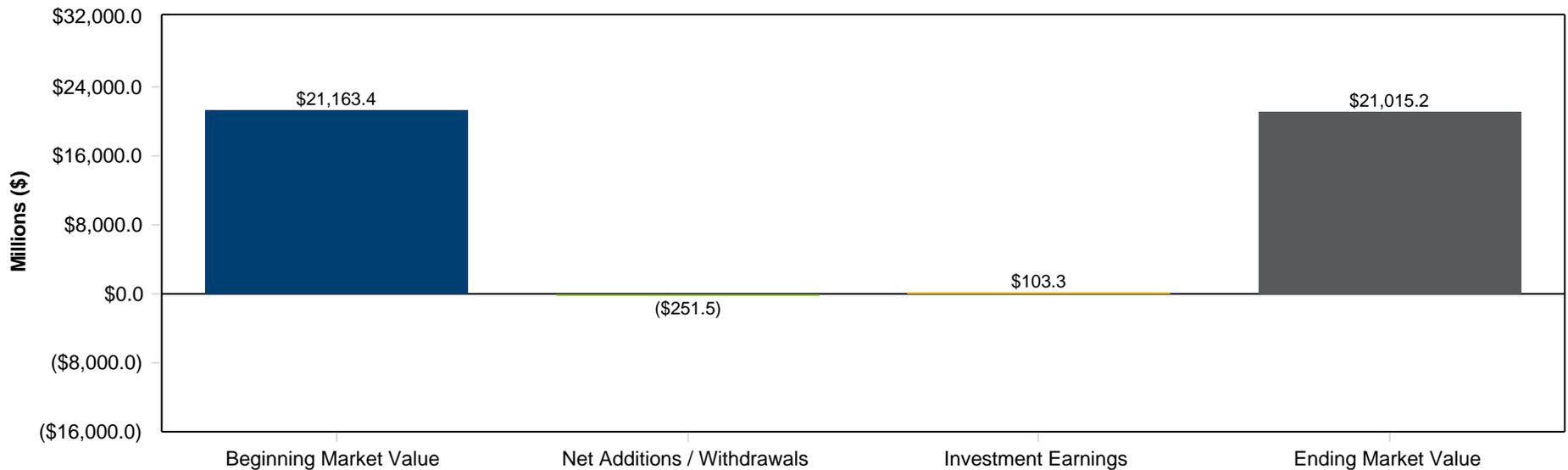


## Total Fund

---

**Total Plan Asset Summary**

**Change in Market Value  
From July 1, 2021 to September 30, 2021**

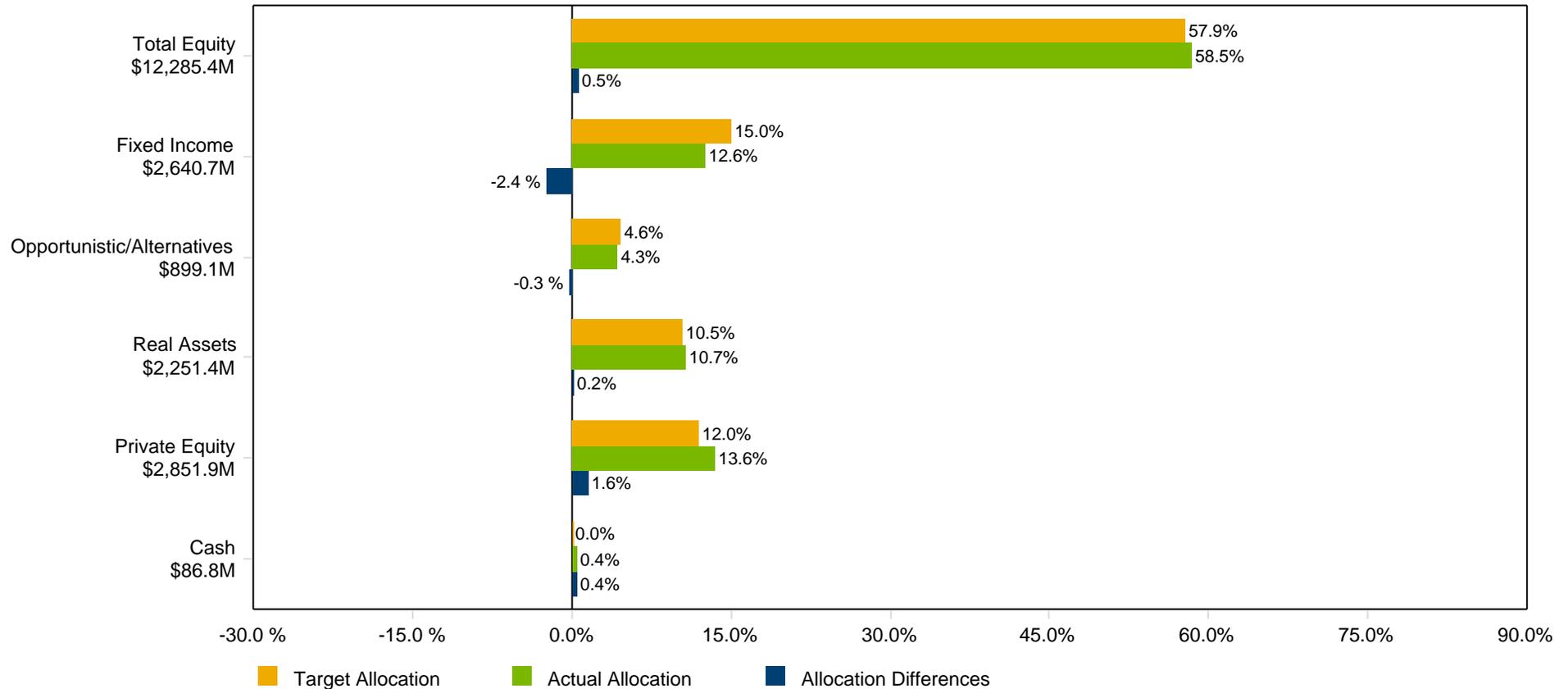


**Summary of Cash Flow**

	1 Quarter	Fiscal YTD	1 Year
Beginning Market Value	21,163,415,611	21,163,415,611	17,407,307,250
+ Additions / Withdrawals	-251,459,894	-251,459,894	-741,634,431
+ Investment Earnings	103,293,327	103,293,327	4,349,576,224
<b>= Ending Market Value</b>	<b>21,015,249,044</b>	<b>21,015,249,044</b>	<b>21,015,249,044</b>

Asset Allocation Compliance

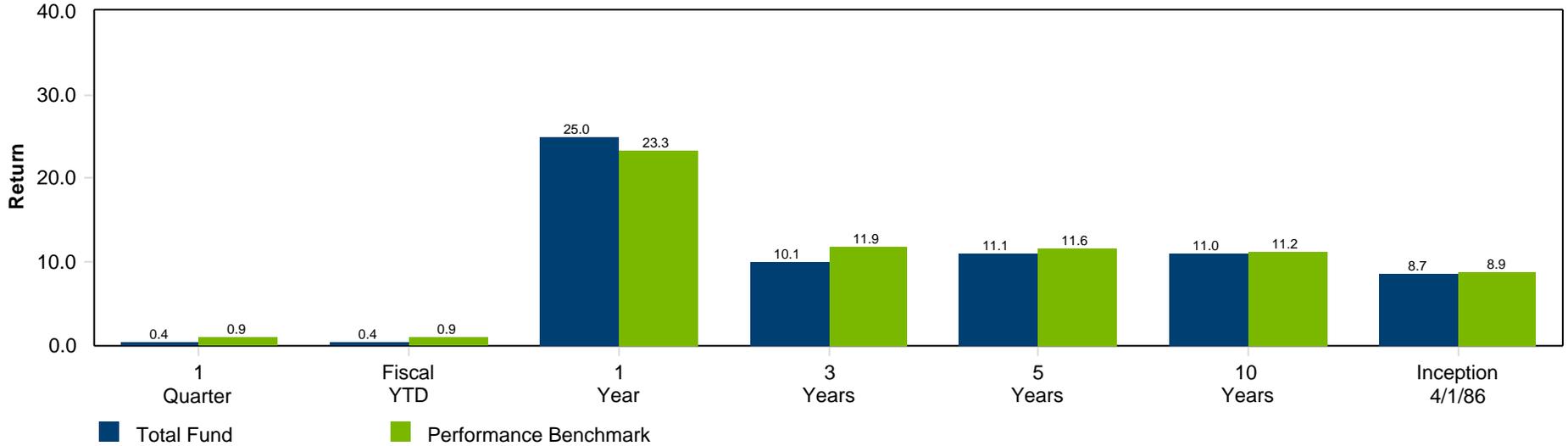
	Market Value (\$M)	Current Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)
Total Fund	21,015.2	100.00	100.00	N/A	N/A
Total Equity	12,285.4	58.46	57.92	50.00	60.00
Fixed Income	2,640.7	12.57	15.00	13.00	17.00
Opportunistic/Alternatives	899.1	4.28	4.58	0.00	7.00
Real Assets	2,251.4	10.71	10.50	10.00	15.00
Private Equity	2,851.9	13.57	12.00	9.50	14.50
Cash	86.8	0.41	0.00	0.00	5.00



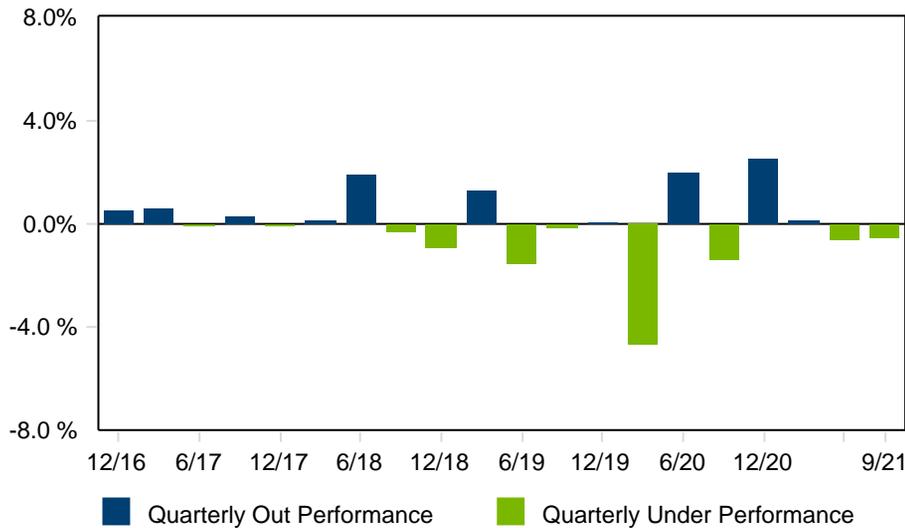
Market values and allocation percentages may not add to the sum total due to rounding.

**Total Plan Performance Summary**

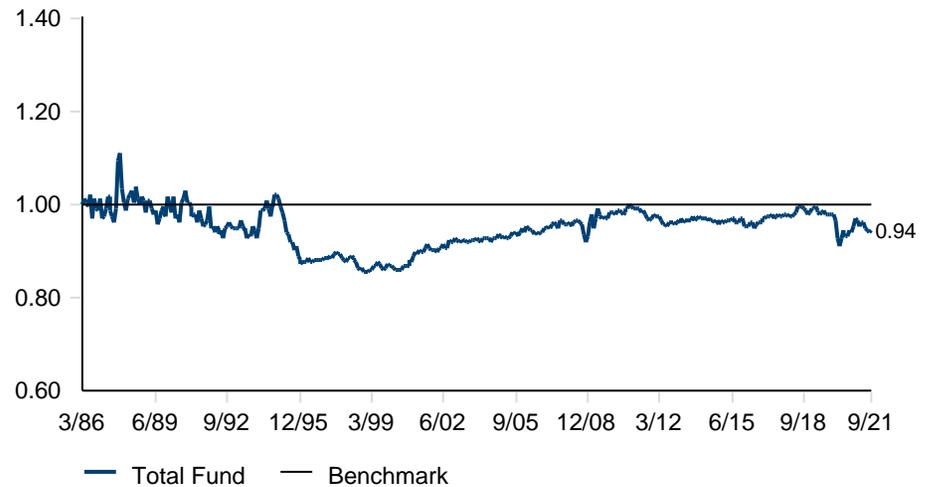
**Return Summary**



**Quarterly Excess Performance**

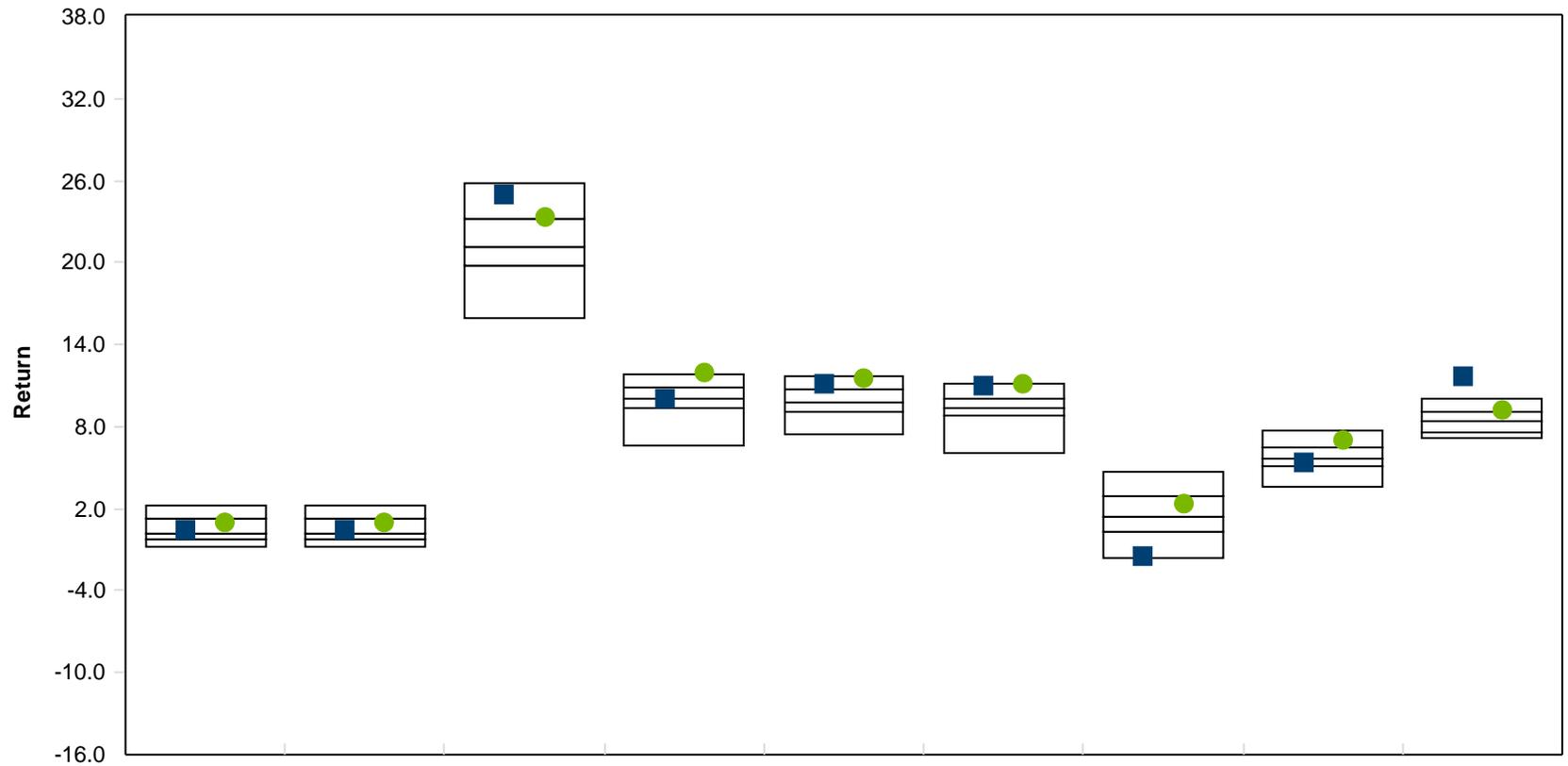


**Ratio of Cumulative Wealth - Since Inception**



Plan Sponsor Peer Group Analysis

All Public Plans > \$1B-Total Fund



	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018
■ Total Fund	0.4 (45)	0.4 (45)	25.0 (13)	10.1 (51)	11.1 (12)	11.0 (7)	-1.4 (94)	5.3 (66)	11.7 (3)
● Performance Benchmark	0.9 (34)	0.9 (34)	23.3 (22)	11.9 (5)	11.6 (6)	11.2 (4)	2.3 (35)	7.0 (12)	9.2 (24)
5th Percentile	2.2	2.2	25.8	11.8	11.7	11.2	4.7	7.7	10.1
1st Quartile	1.2	1.2	23.2	10.9	10.7	10.1	2.9	6.5	9.1
Median	0.2	0.2	21.2	10.1	9.8	9.4	1.4	5.7	8.3
3rd Quartile	-0.2	-0.2	19.8	9.3	9.1	8.7	0.3	5.1	7.6
95th Percentile	-0.8	-0.8	15.9	6.6	7.4	6.1	-1.6	3.6	7.1
Population	92	92	91	87	85	78	106	67	42

parentheses contain percentile rankings.

As of September 30, 2021

## Asset Allocation & Performance

	Allocation			Performance(%)							
	Market Value (\$)	%	Policy(%)	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Total Fund	21,015,249,044	100.0	100.0	0.4	0.4	25.0	10.1	11.1	11.0	8.7	04/01/1986
<i>Performance Benchmark</i>				0.9	0.9	23.3	11.9	11.6	11.2	8.9	
Total Equity	12,285,383,491	58.5	58.3	-1.0	-1.0	34.1	11.0	13.0	13.1	10.6	07/01/2015
<i>Total Equity Performance Benchmark</i>				-0.8	-0.8	29.9	13.5	14.2	13.7	11.9	
Fixed Income	2,640,670,781	12.6	15.0	-0.1	-0.1	1.6	5.1	4.2	4.2	5.3	07/01/1992
<i>Performance Benchmark</i>				0.1	0.1	0.2	5.6	3.3	3.5	5.5	
Opportunistic/Alternatives	899,090,982	4.3	4.3	-4.2	-4.2	3.7	-0.6	0.9	3.7	2.9	05/01/2011
<i>Custom Alternatives Benchmark</i>				0.1	0.1	10.0	3.4	3.3	2.7	2.2	
Real Assets	2,251,422,377	10.7	10.4	3.5	3.5	9.6	5.4	6.3		7.8	07/01/2013
<i>Total Real Assets Benchmark</i>				3.1	3.1	6.5	4.6	5.3		7.4	
Real Estate	1,378,539,922	6.6		3.3	3.3	6.8	3.4	5.3	8.2	8.4	12/01/1998
<i>NFI-ODCE (Net)</i>				3.7	3.7	7.1	4.6	5.6	8.7	8.6	
Timber	312,426,010	1.5		3.8	3.8	10.5	6.6	5.2	4.4	7.1	06/01/1998
<i>Timberland Property Benchmark</i>				1.7	1.7	3.1	2.3	2.3	3.7		
Agriculture	217,827,875	1.0		1.8	1.8	6.6	3.9	3.7	5.5	5.5	09/01/2011
<i>Agriculture Benchmark</i>				1.5	1.5	5.0	4.4	4.2	8.3		
Infrastructure	342,628,569	1.6		4.6	4.6	22.2	14.2			14.6	07/01/2018
<i>CPI + 5%</i>				2.2	2.2	10.6	7.9			7.8	
Private Equity	2,851,862,753	13.6	12.0	5.5	5.5	30.5	16.8	17.6	15.5	13.0	03/01/1997
<i>Private Equity Policy</i>				8.8	8.8	47.2	21.1	20.2	17.0	11.8	
Cash	86,818,660	0.4	0.0								

\*The Real Assets and Private Equity market values, returns and their benchmark returns are shown on a one-quarter lag. Market values have been adjusted for current quarter cash flows.

\*The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns.

For historical performance of the U.S. Equity and Global Equity asset classes please see page 151 of this report.

The inception date above for infrastructure reflects the inception date for the calculation and reporting of time-weighted returns. The Infrastructure program began in July 2014 and the full history of Infrastructure returns are included in Total Real Assets and Total Fund performance.

\*Market values and allocation percentages may not add to the sum total due to rounding.

150

As of September 30, 2021

## Asset Allocation & Performance

	Allocation		Performance(%)								Inception Date
	Market Value (\$)	%	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Since Inception		
<b>Total Fund</b>	21,015,249,044	100.0	0.4 (45)	0.4 (45)	25.0 (13)	10.1 (51)	11.1 (12)	11.0 (7)	8.7	04/01/1986	
<i>Performance Benchmark</i>			0.9 (34)	0.9 (34)	23.3 (22)	11.9 (5)	11.6 (6)	11.2 (4)	8.9		
<b>Total Equity</b>	12,285,383,491	58.5	-1.0 (60)	-1.0 (60)	34.1 (24)	11.0 (57)	13.0 (49)	13.1 (39)	10.6 (46)	07/01/2015	
<i>Total Equity Performance Benchmark</i>			-0.8 (56)	-0.8 (56)	29.9 (38)	13.5 (40)	14.2 (35)	13.7 (31)	11.9 (31)		
Jacobs Levy 130/30	944,037,989	4.5	1.2 (15)	1.2 (15)	48.6 (23)	14.3 (41)	17.4 (28)	18.5 (14)	11.7 (23)	01/01/2008	
<i>Russell 3000 Index</i>			-0.1 (40)	-0.1 (40)	31.9 (60)	16.0 (32)	16.9 (32)	16.6 (29)	10.5 (39)		
Kennedy Capital Management	767,854,958	3.7	-1.1 (34)	-1.1 (34)	64.2 (31)	9.7 (34)	11.2 (42)	14.8 (19)	12.5 (12)	01/01/1994	
<i>Russell 2000 Value Index</i>			-3.0 (78)	-3.0 (78)	63.9 (31)	8.6 (50)	11.0 (44)	13.2 (51)	10.0 (89)		
Stephens	668,895,549	3.2	1.4 (14)	1.4 (14)	37.1 (64)	14.4 (67)	18.5 (58)	16.1 (86)	11.8 (68)	08/01/2006	
<i>Russell 2000 Growth Index</i>			-5.7 (90)	-5.7 (90)	33.3 (78)	11.7 (83)	15.3 (88)	15.7 (89)	10.7 (81)		
Voya Absolute Return	767,234,903	3.7	-1.5 (72)	-1.5 (72)	28.2 (44)	11.9 (52)	12.7 (52)	14.8 (23)	11.3 (30)	10/01/2008	
<i>Performance Benchmark</i>			-1.1 (61)	-1.1 (61)	27.4 (50)	12.6 (46)	13.2 (47)	14.6 (25)	11.4 (29)		
Allianz (Nicholas Applegate)	1,054,128,910	5.0	-0.6 (51)	-0.6 (51)	26.8 (81)	23.2 (7)	20.2 (18)	15.7 (41)	11.6 (19)	12/01/1998	
<i>Performance Benchmark</i>			-0.5 (50)	-0.5 (50)	27.3 (78)	20.2 (14)	17.4 (28)	14.3 (59)	9.3 (60)		
Pershing Square International	1,238,401	0.0	0.0 (39)	0.0 (39)	18.1 (97)	26.0 (4)	18.5 (24)	12.6 (84)	11.8 (40)	07/01/2008	
<i>Dow Jones U.S. Total Stock Market Index</i>			-0.1 (41)	-0.1 (41)	32.1 (60)	16.0 (33)	16.8 (32)	16.6 (30)	11.9 (37)		
Pershing Square Holdings	258,507,567	1.2	-0.4 (49)	-0.4 (49)	33.9 (55)	35.5 (1)	22.1 (12)		9.6 (92)	01/01/2013	
<i>Dow Jones U.S. Total Stock Market Index</i>			-0.1 (41)	-0.1 (41)	32.1 (60)	16.0 (33)	16.8 (32)		15.6 (29)		
Trian Partners	85,364,374	0.4	-2.0	-2.0	16.4	12.1	10.2		9.5	11/01/2015	
<i>S&amp;P 500 Index</i>			0.6	0.6	30.0	16.0	16.9		15.3		
Trian Co-Investments	104,405,824	0.5	1.1	1.1	19.1	13.3			7.5	01/01/2017	
<i>S&amp;P 500 Index</i>			0.6	0.6	30.0	16.0			16.9		
SSgA Global Index	1,261,158,702	6.0	-1.1 (62)	-1.1 (62)	29.3 (40)	12.8 (45)	13.4 (45)	12.3 (50)	7.8 (48)	04/01/2008	
<i>MSCI AC World IMI (Net)</i>			-1.1 (62)	-1.1 (62)	28.9 (41)	12.4 (48)	13.1 (48)	12.0 (54)	7.4 (58)		

As of September 30, 2021

## Asset Allocation & Performance

	Allocation		Performance(%)								Inception Date
	Market Value (\$)	%	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Since Inception		
BlackRock MSCI ACWI IMI Fund	989,515,418	4.7	-1.1 (62)	-1.1 (62)	29.2 (40)	12.6 (46)	13.2 (46)	12.3 (51)	9.9 (51)	07/01/2011	
<i>MSCI AC World IMI (Net)</i>			-1.1 (62)	-1.1 (62)	28.9 (41)	12.4 (48)	13.1 (48)	12.0 (54)	9.5 (56)		
Wellington Global Perspectives	762,208,109	3.6	0.0 (35)	0.0 (35)	50.2 (7)	10.3 (61)	12.7 (52)	13.9 (29)	14.3 (22)	07/01/2009	
<i>Performance Benchmark</i>			-1.5 (72)	-1.5 (72)	40.6 (14)	11.1 (56)	12.2 (55)	12.2 (52)	12.3 (42)		
T. Rowe Price Global Equity	1,679,971,276	8.0	-0.4 (44)	-0.4 (44)	31.5 (32)	24.9 (4)	23.4 (4)	19.5 (5)	16.2 (7)	09/01/2009	
<i>MSCI AC World Index (Net)</i>			-1.1 (61)	-1.1 (61)	27.4 (50)	12.6 (46)	13.2 (47)	11.9 (56)	10.3 (62)		
<i>MSCI AC World Index Growth (net)</i>			-0.7 (53)	-0.7 (53)	23.8 (67)	18.3 (16)	17.8 (16)	14.7 (23)	13.0 (29)		
Lazard	816,940,010	3.9	-3.7 (91)	-3.7 (91)	27.8 (46)	13.7 (39)	13.9 (40)	11.9 (56)	10.7 (54)	09/01/2009	
<i>MSCI AC World Index (Net)</i>			-1.1 (61)	-1.1 (61)	27.4 (50)	12.6 (46)	13.2 (47)	11.9 (56)	10.3 (62)		
D.E. Shaw	936,976,289	4.5	-1.7 (75)	-1.7 (75)	26.2 (56)	10.0 (62)	12.7 (52)	13.3 (35)	11.6 (40)	09/01/2009	
<i>MSCI World Index (Net)</i>			0.0 (35)	0.0 (35)	28.8 (41)	13.1 (43)	13.7 (41)	12.7 (44)	10.9 (51)		
GMO Global All Country Equity	548,295,773	2.6	-3.0 (87)	-3.0 (87)	29.2 (40)	10.1 (62)	10.9 (67)		6.5 (79)	07/01/2014	
<i>MSCI AC World Index (Net)</i>			-1.1 (61)	-1.1 (61)	27.4 (50)	12.6 (46)	13.2 (47)		9.2 (47)		
<i>MSCI AC World Index Value (Net)</i>			-1.4 (69)	-1.4 (69)	31.3 (33)	6.5 (86)	8.4 (81)		5.2 (87)		
Harris Global Equity	638,576,047	3.0	-2.0 (78)	-2.0 (78)	45.2 (10)	11.7 (54)	12.8 (51)		8.4 (60)	06/01/2014	
<i>MSCI World Index (Net)</i>			0.0 (35)	0.0 (35)	28.8 (41)	13.1 (43)	13.7 (41)		9.9 (39)		
<i>MSCI World Value (Net)</i>			-0.8 (57)	-0.8 (57)	31.7 (31)	6.7 (85)	8.6 (80)		5.8 (85)		
Fixed Income	2,640,670,781	12.6	-0.1	-0.1	1.6	5.1	4.2	4.2	5.3	07/01/1992	
<i>Performance Benchmark</i>			0.1	0.1	0.2	5.6	3.3	3.5	5.5		
BlackRock	281,819,426	1.3	0.2 (35)	0.2 (35)	-0.2 (83)	5.9 (38)	3.4 (52)	3.7 (48)	4.6 (42)	10/01/2003	
<i>Performance Benchmark</i>			0.1 (52)	0.1 (52)	0.2 (72)	5.6 (44)	3.3 (53)	3.5 (52)	4.3 (47)		
Loomis Sayles	503,641,994	2.4	0.4 (25)	0.4 (25)	6.5 (21)	8.0 (11)	6.2 (10)	7.1 (8)	8.2 (8)	09/01/2008	
<i>Performance Benchmark</i>			0.3 (26)	0.3 (26)	3.1 (33)	6.4 (29)	4.4 (29)	4.7 (31)	5.7 (28)		
Putnam	380,650,000	1.8	-1.3 (70)	-1.3 (70)	1.5 (82)	1.9 (73)	3.1 (66)	2.5 (67)	2.8	08/01/2008	
<i>LIBOR</i>			0.0 (49)	0.0 (49)	0.2 (86)	1.5 (76)	1.4 (83)	0.9 (93)	0.9		
SSgA Aggregate Bond Index	469,109,989	2.2	0.1 (56)	0.1 (56)	-0.9 (92)	5.4 (48)	3.0 (61)	3.0 (61)	3.5 (59)	06/01/2010	
<i>Barclays Aggregate Index</i>			0.1 (58)	0.1 (58)	-0.9 (92)	5.4 (48)	2.9 (61)	3.0 (61)	3.5 (59)		
Wellington Global Total Return	355,602,572	1.7	0.2 (39)	0.2 (39)	1.7 (81)	2.7 (70)	2.9 (71)		2.0 (67)	05/01/2014	
<i>BofA Merrill Lynch 3 Month US T-Bill</i>			0.0 (50)	0.0 (50)	0.1 (86)	1.2 (80)	1.2 (84)		0.8 (74)		
Reams Core Plus Bond Fund	396,815,192	1.9	-0.1 (84)	-0.1 (84)	0.0 (80)	8.7 (9)	4.9 (23)		4.4 (26)	05/01/2014	
<i>Barclays Aggregate Index</i>			0.1 (58)	0.1 (58)	-0.9 (92)	5.4 (48)	2.9 (61)		3.3 (54)		
BRS Recycling Tax Credit	176,000,000	0.8									
BRS Recycling Tax Credit Phase 2	77,031,608	0.4									

As of September 30, 2021

Asset Allocation & Performance

	Allocation		Performance(%)							
	Market Value (\$)	%	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Opportunistic/Alternatives	899,090,982	4.3	-4.2	-4.2	3.7	-0.6	0.9	3.7	2.9	05/01/2011
<i>Custom Alternatives Benchmark</i>			0.1	0.1	10.0	3.4	3.3	2.7	2.2	
Anchorage	91,722,702	0.4	1.1	1.1	25.8	5.6	5.8	7.3	6.1	05/01/2011
<i>Credit Suisse Event Driven</i>			2.4	2.4	24.6	7.0	6.4	5.3	3.7	
York	9,725,123	0.0	-24.4	-24.4	-17.1	-25.3	-12.4	-3.5	-4.8	05/01/2011
<i>Credit Suisse Event Driven</i>			2.4	2.4	24.6	7.0	6.4	5.3	3.7	
Capula	80,790,771	0.4	0.6	0.6	2.5	5.8	5.7	5.7	5.9	05/01/2011
<i>HFR1 Macro (Total) Index</i>			-0.2	-0.2	13.4	5.8	3.4	2.0	1.5	
Graham	71,781,925	0.3	-1.2	-1.2	15.0	6.1	4.9	4.7	3.4	05/01/2011
<i>HFR1 Macro (Total) Index</i>			-0.2	-0.2	13.4	5.8	3.4	2.0	1.5	
Circumference Group Core Value	37,557,926	0.2	-1.3	-1.3	23.8	10.6	11.1		10.6	08/01/2015
<i>Russell 2000 Index</i>			-4.4	-4.4	47.7	10.5	13.5		11.3	
Aeolus Keystone Fund	187,987,588	0.9	-16.8	-16.8	-20.5	-7.7	-7.0		-4.2	12/01/2015
<i>Citigroup 3 Month T-Bill</i>			0.0	0.0	0.1	1.1	1.1		1.0	
<i>Eurekahedge ILS Advisers Index</i>			-0.7	-0.7	0.3	-0.3	-0.9		0.0	
Nephila Rubik Holdings	38,272,110	0.2	-6.6	-6.6	-14.0	-7.0	-5.5		-4.9	06/01/2016
<i>Citigroup 3 Month T-Bill</i>			0.0	0.0	0.1	1.1	1.1		1.1	
<i>Eurekahedge ILS Advisers Index</i>			-0.7	-0.7	0.3	-0.3	-0.9		-0.3	
Parametric Global Defensive Equity Fund	195,082,381	0.9	0.2	0.2	16.6	5.8			6.1	05/01/2017
<i>Performance Benchmark</i>			-0.5	-0.5	13.2	7.2			6.8	
<i>MSCI AC World Index</i>			-1.0	-1.0	28.0	13.1			13.2	
Man Alternative Risk Premia	94,767,476	0.5	1.3	1.3	7.5	-1.3			-1.4	06/01/2018
<i>SG Multi Alternative Risk Premia Index</i>			0.2	0.2	4.0	-2.6			-2.7	
CFM ISD Fund 1.5x	91,402,980	0.4	3.3	3.3	23.6	-1.9			-2.3	07/01/2018
<i>SG Multi Alternative Risk Premia Index</i>			0.2	0.2	4.0	-2.6			-2.7	

As of September 30, 2021

## Asset Allocation & Performance

	Allocation		Performance(%)							Inception Date
	Market Value (\$)	%	1 Quarter	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
Real Assets	2,251,422,377	10.7	3.5	3.5	9.6	5.4	6.3		7.8	07/01/2013
<i>Total Real Assets Benchmark</i>			3.1	3.1	6.5	4.6	5.3		7.4	
Real Estate	1,378,539,922	6.6	3.3	3.3	6.8	3.4	5.3	8.2	8.4	12/01/1998
<i>NFI-ODCE (Net)</i>			3.7	3.7	7.1	4.6	5.6	8.7	8.6	
Timber	312,426,010	1.5	3.8	3.8	10.5	6.6	5.2	4.4	7.1	06/01/1998
<i>Timberland Property Benchmark</i>			1.7	1.7	3.1	2.3	2.3	3.7		
BTG Timber Separate Account	109,998,325	0.5								
BTG U.S. Timberland Fund, L.P.	202,427,685	1.0								
Agriculture	217,827,875	1.0	1.8	1.8	6.6	3.9	3.7	5.5	5.5	09/01/2011
<i>Agriculture Benchmark</i>			1.5	1.5	5.0	4.4	4.2	8.3		
HFMS Farmland	161,965,644	0.8	2.0	2.0	7.5	4.1	3.5	5.6	5.5	09/01/2011
<i>HFMS custom NCREIF Farmland Index</i>			1.5	1.5	5.0	4.8	4.1	8.1		
UBS Agrivest Core Farmland Fund	55,862,231	0.3	1.5	1.5	4.2	3.5	4.0		4.5	07/01/2015
<i>UBS Agrivest custom NCREIF Farmland Index</i>			1.5	1.5	5.0	5.0	5.2		5.7	
Infrastructure	342,628,569	1.6	4.6	4.6	22.2	14.2			14.6	07/01/2018
<i>CPI + 5%</i>			2.2	2.2	10.6	7.9			7.8	
Private Equity	2,851,862,753	13.6	5.5	5.5	30.5	16.8	17.6	15.5	13.0	04/01/1997
<i>Private Equity Policy</i>			8.8	8.8	47.2	21.1	20.2	17.0	11.9	
Cash	86,818,660	0.4								

\*The Real Assets and Private Equity market values, returns and their benchmark returns are shown on a one-quarter lag. Market values have been adjusted for current quarter cash flows.

\*The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 151 of this report.

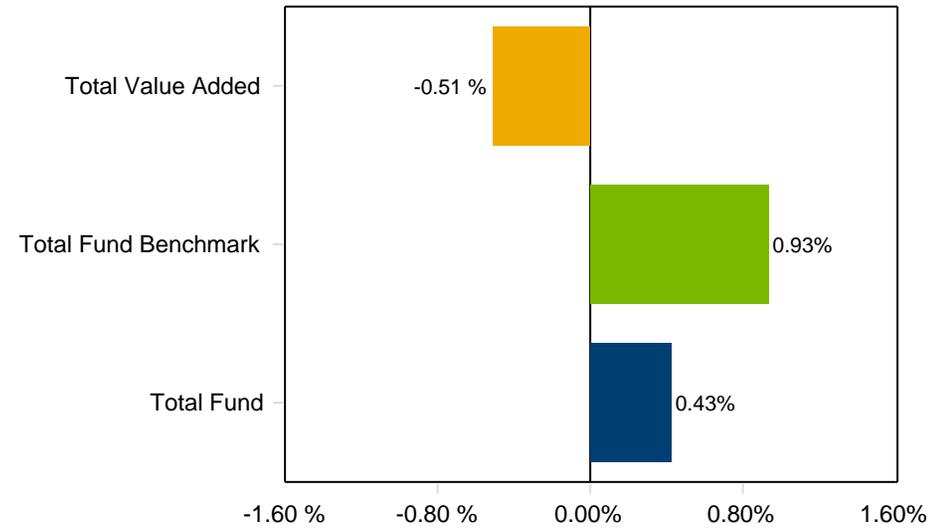
\*The inception date above for infrastructure reflects the inception date for the calculation and reporting of time-weighted returns. The Infrastructure program began in July 2014 and the full history of Infrastructure returns are included in Total Real Assets and Total Fund performance.

\*The BRS Recycling Tax Credit represents an annual income stream of \$16 million dollars over the next 14 years, which ATRS purchased for approximately \$162 million. This represents an approximate 9.9% yield for the 2017 fiscal year. The value shown above represents the year-end market value in accordance with GASB Statement 72, representing the 14 years of annual income, and has been incorporated into Total Fixed Income and Total Fund performance.

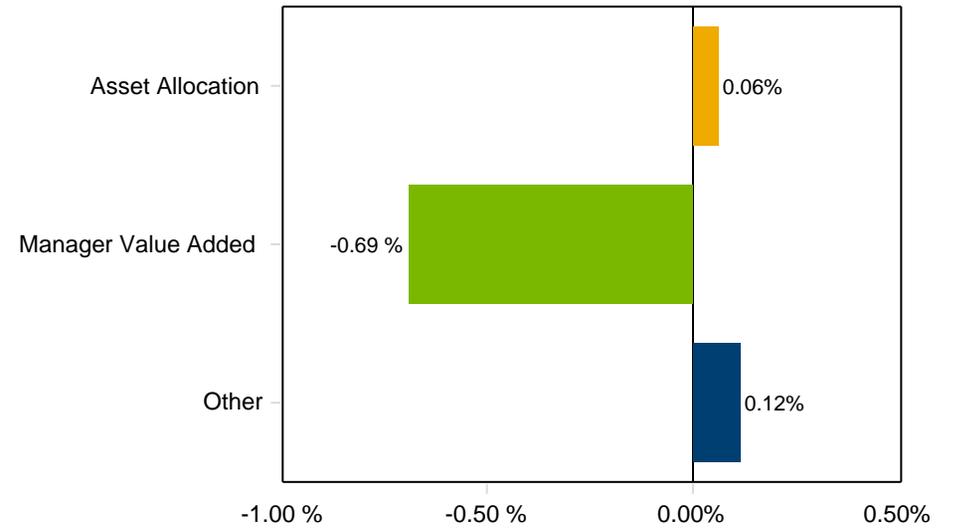
\*ATRS made a total commitment of \$100 million to the Triun Co-Investments Fund. As of 3/31/2021, there was an unfunded commitment value equal to \$18,287,776.

Total Fund Attribution

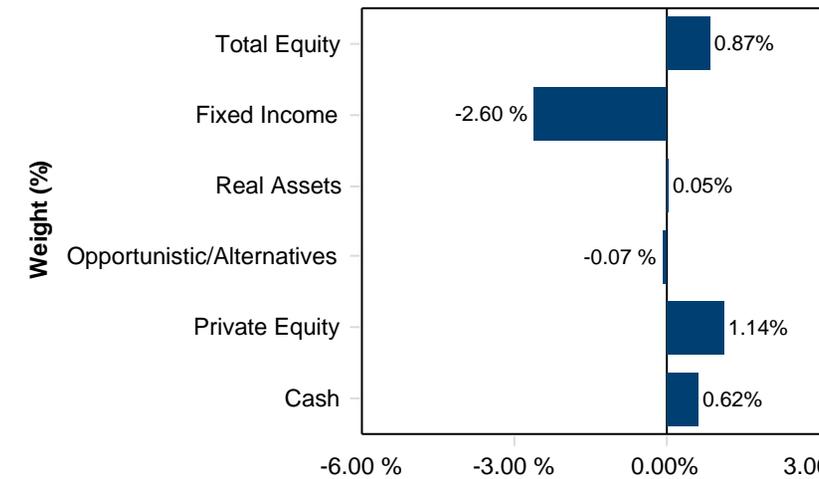
Total Fund Performance



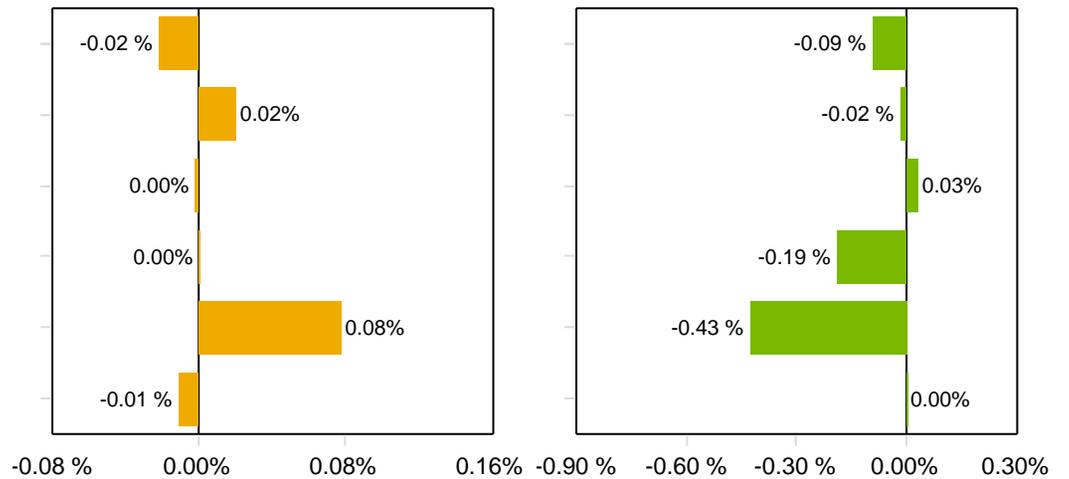
Total Value Added:-0.51 %



Total Asset Allocation:0.06%



Total Manager Value Added:-0.69 %



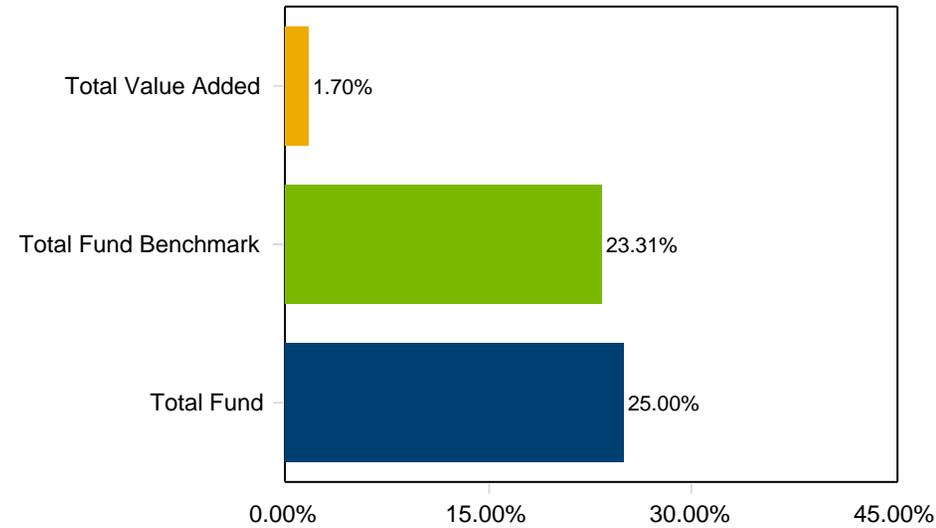
■ Average Active Weight

■ Asset Allocation Value Added

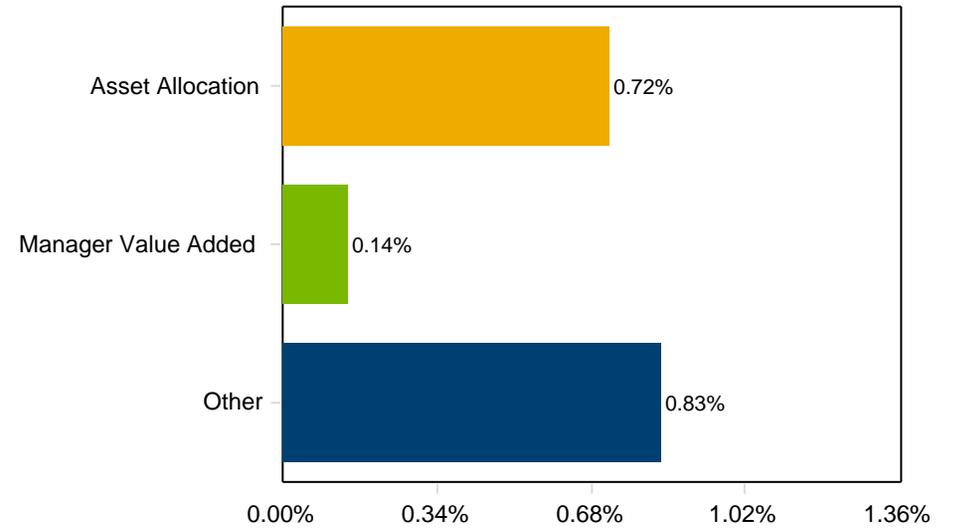
■ Manager Value Added

Total Fund Attribution

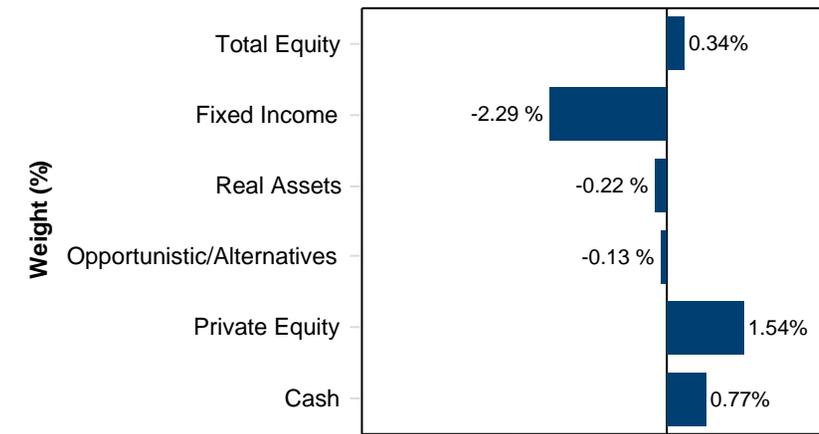
Total Fund Performance



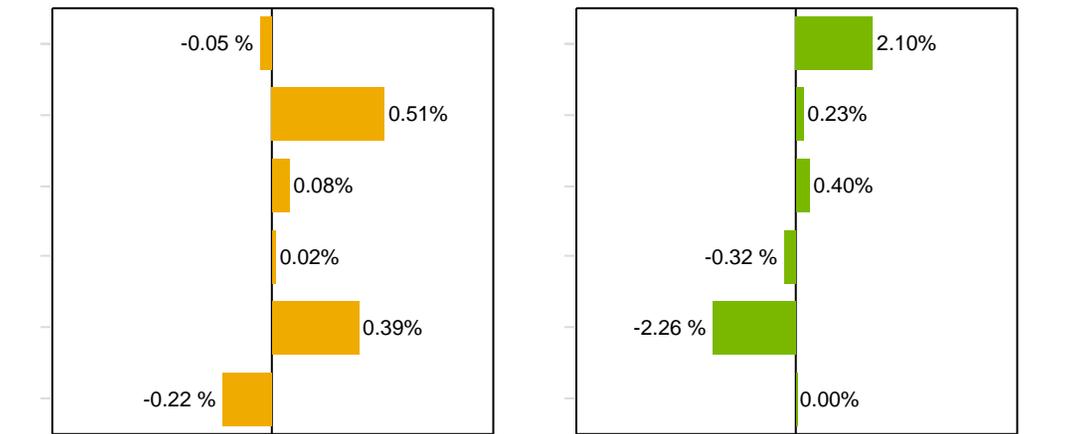
Total Value Added: 1.70%



Total Asset Allocation: 0.72%



Total Manager Value Added: 0.14%



Average Active Weight

Asset Allocation Value Added

Manager Value Added

As of September 30, 2021

## Calendar Year Performance

	Performance(%)									
	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012	Fiscal Year 2011
<b>Total Fund</b>	-1.4 (94)	5.3 (66)	11.7 (3)	16.1 (1)	-0.5 (82)	5.2 (9)	19.0 (5)	14.3 (13)	-1.0 (98)	22.4 (41)
<i>Performance Benchmark</i>	2.3 (35)	7.0 (12)	9.2 (24)	13.2 (28)	1.8 (5)	5.2 (9)	18.3 (14)	13.5 (20)	2.1 (17)	21.9 (51)
<b>Total Equity</b>	-6.4 (77)	4.1 (58)	13.4 (31)	22.1 (29)	-4.8 (57)	4.1 (32)	25.5 (34)	20.3 (31)	-6.3 (58)	31.5 (47)
<i>Total Equity Performance Benchmark</i>	2.7 (46)	5.9 (49)	12.2 (37)	19.0 (47)	-1.5 (38)	3.6 (36)	23.9 (48)	18.9 (42)	-1.8 (28)	31.2 (49)
Jacobs Levy 130/30	0.2 (46)	5.5 (50)	19.9 (23)	24.6 (18)	8.3 (4)	14.2 (7)	24.3 (53)	22.4 (49)	1.4 (41)	43.2 (16)
<i>Russell 3000 Index</i>	6.5 (32)	9.0 (32)	14.8 (45)	18.5 (56)	2.1 (22)	7.3 (43)	25.2 (44)	21.5 (56)	3.8 (25)	32.4 (57)
Kennedy Capital Management	-16.2 (52)	-7.8 (67)	12.2 (51)	24.2 (35)	-4.9 (62)	2.7 (52)	29.4 (9)	34.4 (6)	-4.2 (69)	33.9 (55)
<i>Russell 2000 Value Index</i>	-17.5 (60)	-6.2 (58)	13.1 (42)	24.9 (30)	-2.6 (39)	0.8 (66)	22.5 (72)	24.8 (62)	-1.4 (35)	31.4 (72)
Stephens	7.8 (50)	8.4 (32)	29.5 (27)	18.3 (83)	-7.8 (44)	5.1 (88)	18.4 (78)	18.7 (88)	3.0 (10)	46.7 (36)
<i>Russell 2000 Growth Index</i>	3.5 (58)	-0.5 (77)	21.9 (64)	24.4 (45)	-10.8 (61)	12.3 (38)	24.7 (37)	23.7 (57)	-2.7 (41)	43.5 (56)
Voya Absolute Return	0.1 (57)	4.0 (58)	9.9 (56)	20.3 (38)	1.9 (22)	7.8 (11)	26.9 (25)	19.7 (37)	6.0 (8)	30.5 (55)
<i>Performance Benchmark</i>	2.1 (48)	5.7 (50)	10.7 (50)	18.8 (48)	1.1 (24)	7.4 (11)	24.6 (40)	20.6 (30)	5.4 (8)	30.7 (53)
Allianz (Nicholas Applegate)	20.1 (11)	12.5 (15)	16.4 (36)	15.9 (73)	-7.1 (77)	4.4 (66)	23.1 (65)	19.4 (70)	-2.4 (65)	29.7 (74)
<i>Performance Benchmark</i>	15.3 (16)	7.8 (38)	12.0 (63)	16.8 (68)	-4.7 (64)	3.5 (72)	24.4 (52)	18.6 (76)	-3.2 (71)	22.5 (96)
Pershing Square International	28.0 (4)	30.7 (1)	2.8 (97)	8.2 (95)	-33.2 (100)	12.9 (10)	29.1 (16)	17.3 (80)	0.8 (45)	26.8 (87)
<i>Dow Jones U.S. Total Stock Market Index</i>	6.4 (32)	8.9 (33)	14.8 (45)	18.5 (56)	2.0 (22)	7.2 (44)	25.0 (46)	21.5 (56)	4.0 (24)	32.4 (56)
Pershing Square Holdings	36.5 (2)	21.7 (2)	-2.7 (100)	8.3 (95)	-49.1 (100)	15.2 (5)	30.4 (11)			
<i>Dow Jones U.S. Total Stock Market Index</i>	6.4 (32)	8.9 (33)	14.8 (45)	18.5 (56)	2.0 (22)	7.2 (44)	25.0 (46)			
Trian Partners	-2.3	13.1	2.8	9.5						
<i>S&amp;P 500 Index</i>	7.5	10.4	14.4	17.9						
SSgA Global Index	1.6 (50)	4.8 (55)	11.4 (44)	19.4 (43)	-3.4 (48)	1.2 (55)	23.8 (48)	17.5 (52)	-6.6 (59)	31.4 (47)
<i>MSCI AC World IMI (Net)</i>	1.2 (51)	4.6 (56)	11.1 (46)	19.0 (46)	-3.9 (50)	0.8 (59)	23.4 (52)	17.1 (56)	-6.9 (61)	31.0 (50)

As of September 30, 2021

## Calendar Year Performance

	Performance(%)									
	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012	Fiscal Year 2011
BlackRock MSCI ACWI IMI Fund	1.5 (50)	4.5 (56)	11.4 (44)	19.1 (46)	-3.4 (48)	1.2 (55)	23.9 (48)	17.7 (51)	-6.6 (59)	
<i>MSCI AC World IMI (Net)</i>	1.2 (51)	4.6 (56)	11.1 (46)	19.0 (46)	-3.9 (50)	0.8 (59)	23.4 (52)	17.1 (56)	-6.9 (61)	
Wellington Global Perspectives	-11.7 (90)	-3.8 (90)	15.7 (20)	24.8 (16)	-4.2 (52)	-1.4 (72)	33.1 (4)	30.7 (5)	-9.1 (74)	45.8 (3)
<i>Performance Benchmark</i>	-5.5 (75)	-3.0 (87)	13.8 (29)	20.5 (37)	-4.7 (56)	1.5 (53)	26.0 (31)	20.6 (30)	-9.9 (78)	35.8 (20)
T. Rowe Price Global Equity	22.8 (6)	8.0 (36)	21.3 (8)	28.8 (8)	-0.6 (33)	7.5 (11)	32.0 (6)	18.2 (47)	-7.7 (63)	28.2 (71)
<i>MSCI AC World Index (Net)</i>	2.1 (48)	5.7 (50)	10.7 (50)	18.8 (48)	-3.7 (49)	0.7 (59)	22.9 (54)	16.6 (61)	-6.5 (59)	30.1 (57)
<i>MSCI AC World Index Growth (net)</i>	16.6 (10)	7.2 (42)	16.1 (20)	18.6 (50)	-2.7 (44)	4.9 (26)	23.1 (53)	15.4 (67)	-5.3 (51)	32.0 (43)
Lazard	1.6 (50)	2.7 (67)	9.8 (56)	26.2 (13)	-10.7 (89)	7.3 (11)	23.3 (52)	15.8 (66)	-11.4 (84)	29.6 (60)
<i>MSCI AC World Index (Net)</i>	2.1 (48)	5.7 (50)	10.7 (50)	18.8 (48)	-3.7 (49)	0.7 (59)	22.9 (54)	16.6 (61)	-6.5 (59)	30.1 (57)
D.E. Shaw	0.1 (56)	2.6 (68)	15.8 (20)	19.2 (45)	0.0 (28)	3.9 (33)	25.6 (33)	19.3 (40)	-1.9 (29)	31.1 (50)
<i>MSCI World Index (Net)</i>	2.8 (46)	6.3 (46)	11.1 (47)	18.2 (51)	-2.8 (44)	1.4 (54)	24.0 (47)	18.6 (45)	-5.0 (48)	30.5 (55)
GMO Global All Country Equity	-2.3	3.5	6.8	20.0	-6.5	-4.5				
<i>MSCI AC World Index (Net)</i>	2.1	5.7	10.7	18.8	-3.7	0.7				
<i>MSCI AC World Index Value (Net)</i>	-11.8	4.3	5.4	19.0	-4.8	-3.4				
Harris Global Equity	-6.6	-2.0	5.0	38.9	-12.8	0.7				
<i>MSCI World Index (Net)</i>	2.8	6.3	11.1	18.2	-2.8	1.4				
<i>MSCI World Value (Net)</i>	-11.3	4.2	5.6	18.7	-3.7	-2.9				
Fixed Income	6.4	6.4	1.3	5.2	3.5	1.0	6.1	3.8	5.2	7.3
<i>Performance Benchmark</i>	7.9	8.1	-0.3	0.9	5.8	1.6	5.2	0.2	7.4	4.8
BlackRock	9.0 (17)	8.0 (25)	-0.3 (77)	0.3 (69)	6.0 (22)	2.4 (15)	5.2 (49)	0.3 (64)	8.0 (28)	6.3 (37)
<i>Performance Benchmark</i>	7.9 (27)	8.1 (23)	-0.3 (75)	0.9 (55)	5.8 (24)	1.6 (36)	5.2 (49)	0.2 (67)	7.4 (37)	4.8 (51)
Loomis Sayles	7.6 (30)	7.4 (36)	1.8 (26)	8.1 (16)	1.9 (68)	1.1 (55)	12.0 (9)	10.7 (7)	4.4 (70)	15.7 (9)
<i>Performance Benchmark</i>	6.6 (38)	8.2 (20)	0.5 (49)	4.0 (26)	5.0 (35)	1.0 (60)	6.8 (33)	2.8 (30)	8.4 (23)	7.8 (28)
Putnam	0.1 (55)	3.7 (32)	4.1 (36)	7.9 (29)	-3.6 (70)	-0.7 (53)	3.7 (71)	5.5 (29)	-1.8 (62)	4.6 (55)
LIBOR	2.1 (35)	2.6 (41)	1.5 (59)	0.8 (83)	0.4 (42)	0.2 (42)	0.3 (85)	0.4 (83)	0.4 (49)	0.4 (88)
SSgA Aggregate Bond Index	8.7 (20)	7.9 (26)	-0.4 (78)	-0.3 (82)	6.0 (22)	1.9 (27)	4.3 (60)	-0.6 (84)	7.4 (36)	3.9 (65)
<i>Barclays Aggregate Index</i>	8.7 (20)	7.9 (26)	-0.4 (78)	-0.3 (83)	6.0 (22)	1.9 (28)	4.4 (59)	-0.7 (86)	7.5 (35)	3.9 (64)
Wellington Global Total Return	2.1 (36)	5.3 (14)	5.1 (32)	-0.7 (85)	1.3 (32)	0.5 (38)				
<i>BoFA Merrill Lynch 3 Month US T-Bill</i>	1.6 (41)	2.3 (45)	1.4 (60)	0.5 (83)	0.2 (42)	0.0 (45)				
Reams Core Plus Bond Fund	15.3	8.6	0.0	0.0	6.1	1.5				
<i>Barclays Aggregate Index</i>	8.7	7.9	-0.4	-0.3	6.0	1.9				
BRS Recycling Tax Credit										
BRS Recycling Tax Credit Phase 2										

As of September 30, 2021

## Calendar Year Performance

	Performance(%)									
	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012	Fiscal Year 2011
Opportunistic/Alternatives	-5.3	-0.2	0.6	6.8	-1.7	5.8	10.2	12.9	-1.0	
<i>Custom Alternatives Benchmark</i>	-2.5	2.1	3.4	2.8	-3.7	1.7	6.3	7.1	-3.9	
Anchorage	-5.4	1.4	6.2	5.9	-3.9	3.8	18.9	19.4	-1.0	
<i>Credit Suisse Event Driven</i>	-6.9	1.9	3.8	9.3	-10.4	-2.0	14.1	14.5	-7.2	
York	-45.2	-5.9	12.2	14.3	-12.9	-7.2	22.4	19.4	-0.8	
<i>Credit Suisse Event Driven</i>	-6.9	1.9	3.8	9.3	-10.4	-2.0	14.1	14.5	-7.2	
Capula	9.8	6.3	3.8	7.8	6.1	8.9	7.9	4.0	3.4	
<i>HFR1 Macro (Total) Index</i>	0.8	2.4	1.1	-2.4	1.8	4.2	1.5	-0.1	-2.8	
Graham	-5.6	2.1	6.5	-3.2	-1.0	23.9	2.7	5.9	-8.3	
<i>HFR1 Macro (Total) Index</i>	0.8	2.4	1.1	-2.4	1.8	4.2	1.5	-0.1	-2.8	
Circumference Group Core Value	5.0	2.7	15.9	14.0						
<i>Russell 2000 Index</i>	-6.6	-3.3	17.6	24.6						
Aeolus Keystone Fund	5.1	-5.8	-17.9	11.2						
<i>Citigroup 3 Month T-Bill</i>	1.6	2.3	1.3	0.5						
<i>Eurekahedge ILS Advisers Index</i>	2.9	-5.5	-6.6	5.0						
Nephila Rubik Holdings	3.1	-6.9	-7.7	2.2						
<i>Citigroup 3 Month T-Bill</i>	1.6	2.3	1.3	0.5						
<i>Eurekahedge ILS Advisers Index</i>	2.9	-5.5	-6.6	5.0						
Parametric Global Defensive Equity Fund	-4.2	3.9	5.8							
<i>Performance Benchmark</i>	2.4	4.4	6.0							
<i>MSCI AC World Index</i>	2.6	6.3	11.3							
Man Alternative Risk Premia	-7.9	1.8								
<i>SG Multi Alternative Risk Premia Index</i>	-11.6	0.4								
CFM ISD Fund 1.5x	-26.1	2.8								
<i>SG Multi Alternative Risk Premia Index</i>	-11.6	0.4								

As of September 30, 2021

## Calendar Year Performance

	Performance(%)									
	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012	Fiscal Year 2011
Real Assets	3.9	5.6	9.4	7.5	9.5	11.7	9.0			
<i>Total Real Assets Benchmark</i>	4.1	5.7	6.2	6.6	10.0	11.5	11.4			
Real Estate	2.0	5.7	11.1	6.9	12.0	13.4	12.1	7.9	9.8	17.7
<i>NFI-ODCE (Net)</i>	3.9	6.5	7.1	7.4	12.6	12.4	12.7	10.5	13.4	16.0
Timber	12.2	-0.3	1.2	8.0	0.4	9.4	-1.1	6.8	-5.3	4.8
<i>Timberland Property Benchmark</i>	3.1	0.1	2.6	3.7	2.5	10.5	7.7	6.9	-2.9	-0.4
BTG Timber Separate Account										
BTG U.S. Timberland Fund, L.P.										
Agriculture	1.8	3.5	3.3	4.3	9.8	2.5	11.0	11.5		
<i>Agriculture Benchmark</i>	3.3	5.4	3.5	4.5	5.6	6.5	12.8	20.9		
HFMS Farmland	1.4	3.4	2.9	3.9	10.7	2.5	11.0	11.5		
<i>HFMS custom NCREIF Farmland Index</i>	4.6	4.9	2.0	4.0	4.8	6.5	12.8	20.9		
UBS Agrivest Core Farmland Fund	3.1	4.0	4.5	5.0	6.2					
<i>UBS Agrivest custom NCREIF Farmland Index</i>	4.7	6.2	5.0	5.5	8.4					
Infrastructure	7.2	14.6								
<i>CPI + 5%</i>	5.7	6.7								
Private Equity	4.9	12.8	22.3	16.7	7.7	11.9	20.6	12.5	12.5	16.0
<i>Private Equity Policy</i>	-7.5	10.8	16.1	20.4	1.6	14.5	25.0	16.8	9.4	20.1
Cash	3.8	6.5	1.2	5.0	3.2					

\*The Real Assets and Private Equity returns and their benchmark returns are shown on a one-quarter lag.

\*The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 151 of this report.

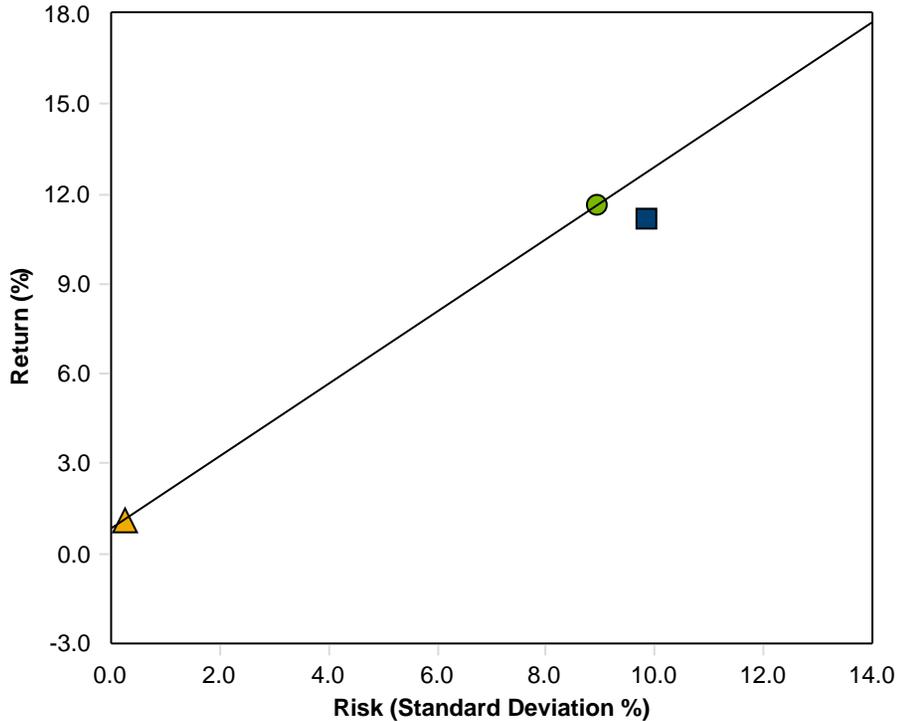
\*The inception date above for infrastructure reflects the inception date for the calculation and reporting of time-weighted returns. The Infrastructure program began in July 2014 and the full history of Infrastructure returns are included in Total Real Assets and Total Fund performance.

\*The BRS Recycling Tax Credit represents an annual income stream of \$16 million dollars over the next 14 years, which ATRS purchased for approximately \$162 million. This represents an approximate 9.9% yield for the 2017 fiscal year. The value shown above represents the year-end market value in accordance with GASB Statement 72, representing

the 14 years of annual income, and has been incorporated into Total Fixed Income and Total Fund performance.

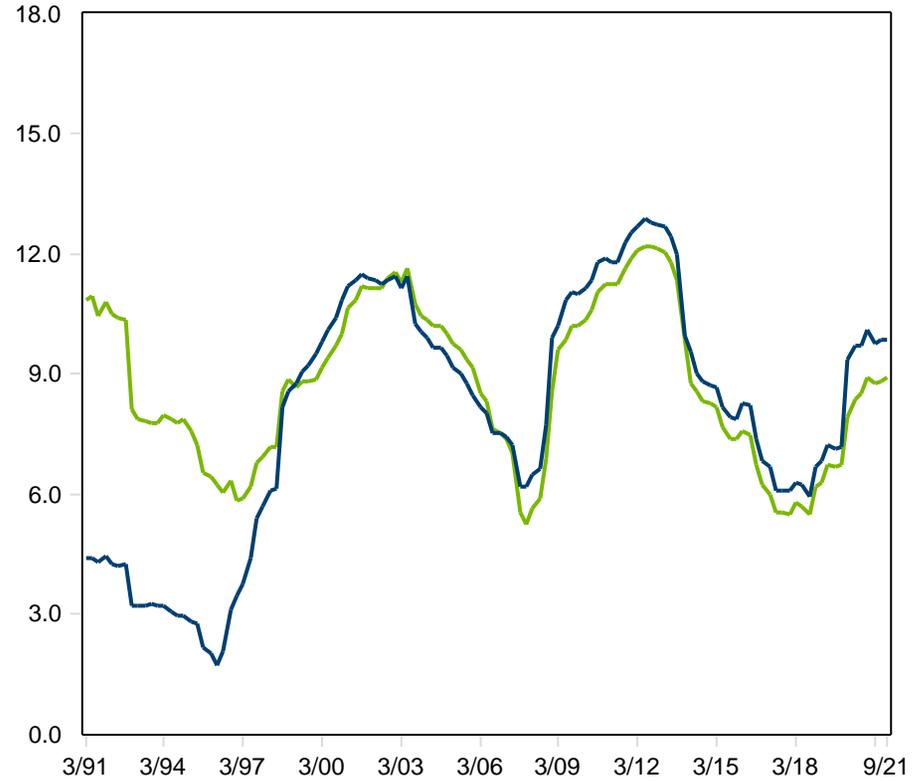
**Total Fund Risk Profile**

**Annualized Return vs. Annualized Standard Deviation 5 Years**



■ Total Fund      ● Performance Benchmark  
▲ FTSE 3 Month T-Bill

**Rolling 5 Years Standard Deviation**



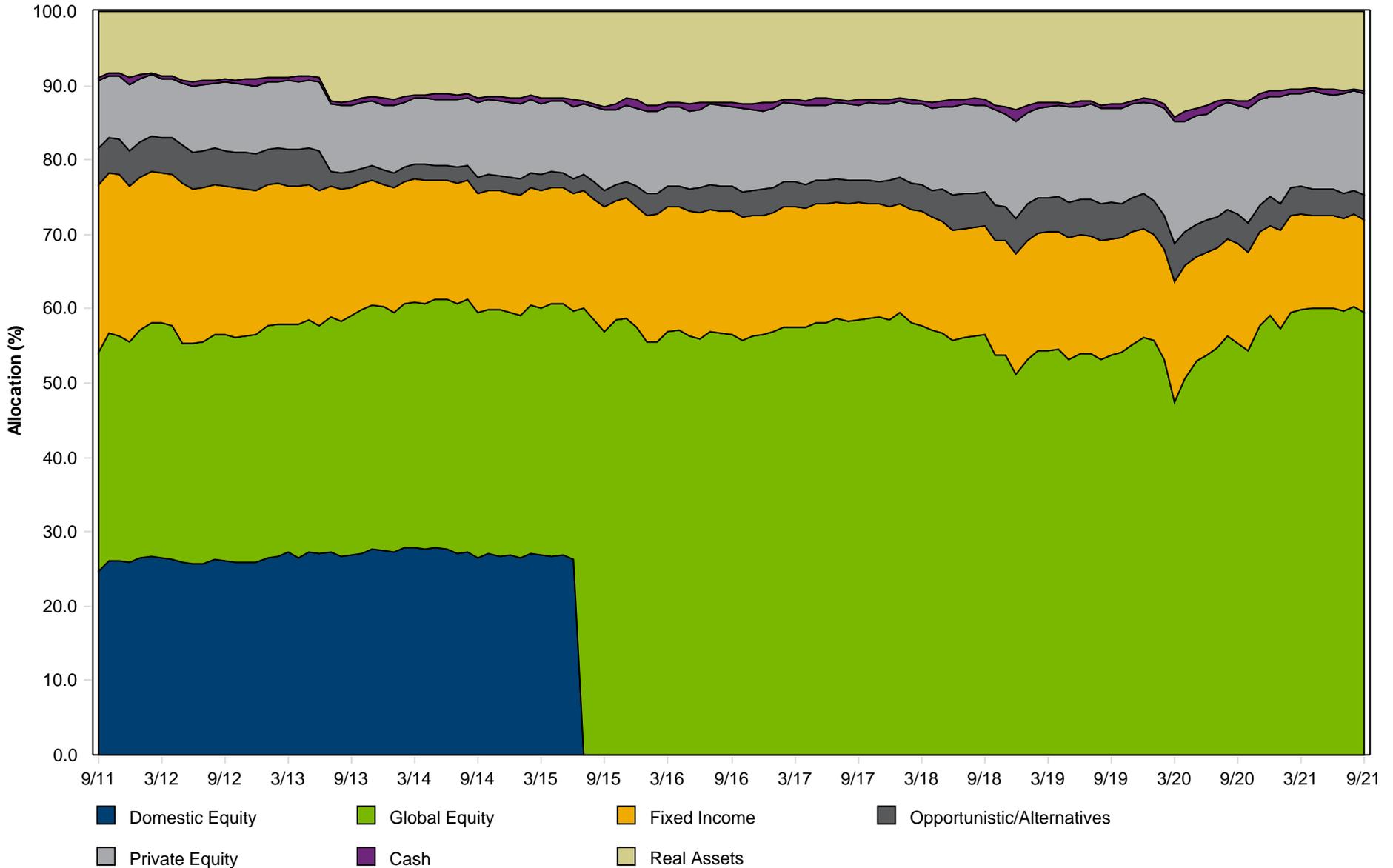
— Total Fund      — Performance Benchmark

**5 Years Historical Statistics**

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Total Fund	-0.32	3.05	-0.11	0.91	1.01	-0.92	1.05	11.15	9.86	0.95
Performance Benchmark	0.00	0.00	N/A	1.00	1.15	0.00	1.00	11.61	8.92	1.00
FTSE 3 Month T-Bill	-10.30	8.97	-1.15	0.05	N/A	1.20	-0.01	1.13	0.25	-0.22

Historical Asset Allocation by Segment

Total Fund



Asset Allocation as of 9/30/2021							Values in \$1,000		
	Total Equity	U.S. Bond	Real Estate	Private Equity	Cash	Total	Percent of Total	Interim Policy	Long-Term Target
Jacobs Levy 130/30	\$944,038.0	--	--	--	--	\$944,038.0	4.49%		
Kennedy Capital Management	\$767,855.0	--	--	--	--	\$767,855.0	3.65%		
Stephens	\$668,895.5	--	--	--	--	\$668,895.5	3.18%		
Voya Absolute Return	\$767,234.9	--	--	--	--	\$767,234.9	3.65%		
Allianz (Nicholas Applegate)	\$1,054,128.9	--	--	--	--	\$1,054,128.9	5.02%		
Pershing Square International	\$1,238.4	--	--	--	--	\$1,238.4	0.01%		
Pershing Square Holdings	\$258,507.6	--	--	--	--	\$258,507.6	1.23%		
SSgA Global Index	\$1,261,158.7	--	--	--	--	\$1,261,158.7	6.00%		
BlackRock MSCI ACWI IMI Fund	\$989,515.4	--	--	--	--	\$989,515.4	4.71%		
Wellington Global Perspectives	\$762,208.1	--	--	--	--	\$762,208.1	3.63%		
T. Rowe Price Global Equity	\$1,679,971.3	--	--	--	--	\$1,679,971.3	7.99%		
Lazard	\$816,940.0	--	--	--	--	\$816,940.0	3.89%		
D.E. Shaw	\$936,976.3	--	--	--	--	\$936,976.3	4.46%		
GMO Global All Country Equity	\$548,295.8	--	--	--	--	\$548,295.8	2.61%		
Harris Global Equity	\$638,576.0	--	--	--	--	\$638,576.0	3.04%		
Triam Partners	\$85,364.4	--	--	--	--	\$85,364.4	0.41%		
Triam Partners Co-Investments	\$104,405.8	--	--	--	--	\$104,405.8	0.50%		
Capital Guardian & Knight Vinke	\$73.4	--	--	--	--	\$73.4	0.00%		
<b>Total Equity</b>						<b>\$12,285,383.5</b>	<b>58.46%</b>	<b>58.08%</b>	<b>53.00%</b>
BlackRock	--	\$281,819.4	--	--	--	\$281,819.4	1.34%		
Loomis Sayles	--	\$503,642.0	--	--	--	\$503,642.0	2.40%		
Putnam	--	\$380,650.0	--	--	--	\$380,650.0	1.81%		
SSgA Aggregate Bond Index	--	\$469,110.0	--	--	--	\$469,110.0	2.23%		
Wellington Global Total Return	--	\$355,602.6	--	--	--	\$355,602.6	1.69%		
Reams Core Plus Bond Fund	--	\$396,815.2	--	--	--	\$396,815.2	1.89%		
BRS Recycling Tax Credit	--	\$176,000.0	--	--	--	\$176,000.0	0.84%		
BRS Recycling Tax Credit Phase 2	--	\$77,031.6	--	--	--	\$77,031.6	0.37%		
<b>Total Fixed Income</b>						<b>\$2,640,670.8</b>	<b>12.57%</b>	<b>15.00%</b>	<b>15.00%</b>
Anchorage	--	--	--	\$91,722.7	--	\$91,722.7	0.44%		
Capula	--	--	--	\$80,790.8	--	\$80,790.8	0.38%		
Graham	--	--	--	\$71,781.9	--	\$71,781.9	0.34%		
York	--	--	--	\$9,725.1	--	\$9,725.1	0.05%		
Circumference Group Core Value	--	--	--	\$37,557.9	--	\$37,557.9	0.18%		
Aeolus Keystone Fund	--	--	--	\$187,987.6	--	\$187,987.6	0.89%		
Nephila Rubik Holdings	--	--	--	\$38,272.1	--	\$38,272.1	0.18%		
Parametric Global Defensive Equity	--	--	--	\$195,082.4	--	\$195,082.4	0.93%		
Man Alternative Risk Premia	--	--	--	\$94,767.5	--	\$94,767.5	0.45%		
CFM ISD Fund 1.5x	--	--	--	\$91,403.0	--	\$91,403.0	0.43%		
<b>Total Opportunistic/Alternatives</b>						<b>\$899,091.0</b>	<b>4.28%</b>	<b>4.46%</b>	<b>5.00%</b>
<b>Real Estate</b>			\$1,378,539.9			\$1,378,539.9	6.56%		
<b>Timber</b>			\$312,426.0			\$312,426.0	1.49%		
<b>Agriculture</b>			\$217,827.9			\$217,827.9	1.04%		
<b>Infrastructure</b>			\$342,628.6			\$342,628.6	1.63%		
<b>Total Real Assets</b>						<b>\$2,251,422.4</b>	<b>10.71%</b>	<b>10.46%</b>	<b>15.00%</b>
<b>Total Private Equity</b>				\$2,851,862.8		\$2,851,862.8	13.57%	12.00%	12.00%
<b>Total Cash</b>					\$86,818.7	\$86,818.7	0.41%	0.00%	0.00%
<b>Total Fund</b>	<b>\$12,285,383.5</b>	<b>\$2,640,670.8</b>	<b>\$2,251,422.4</b>	<b>\$3,750,953.7</b>	<b>\$86,818.7</b>	<b>\$21,015,249.0</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

\*Note: The market values for the Real Assets and Private Equity investments shown above are lagged one quarter and adjusted for the current quarter's cash flows. Market values and allocation percentages may not add to the sum total due to rounding.

Asset Allocation as of 9/30/2021				Values in \$1,000			
	Real Estate	Percent of Real Estate	Percent of Total Fund		Real Estate	Percent of Real Estate	Percent of Total Fund
Almanac Realty Securities Fund V	\$87.1	0.01%	0.00%	LaSalle Asia Opportunity Fund V	\$10,323.2	0.75%	0.05%
Almanac Realty Securities Fund VI	\$3,928.4	0.28%	0.02%	LaSalle Income & Growth Fund VI	\$5,303.9	0.38%	0.03%
Almanac Realty Securities Fund VII	\$15,353.7	1.11%	0.07%	LaSalle Income & Growth Fund VII	\$15,002.6	1.09%	0.07%
Almanac Realty Securities Fund VIII	\$9,364.8	0.68%	0.04%	LaSalle Income & Growth Fund VIII	\$12,934.2	0.94%	0.06%
American Center	\$27,453.7	1.99%	0.13%	Lone Star Real Estate Fund IV	\$6,667.6	0.48%	0.03%
AR Insurance	\$2,260.7	0.16%	0.01%	Long Wharf Real Estate Partners V	\$19,375.5	1.41%	0.09%
AR Teachers Retirement Building	\$5,376.0	0.39%	0.03%	Long Wharf Real Estate Partners VI	\$14,867.6	1.08%	0.07%
Blackstone Real Estate Partners VII	\$20,405.7	1.48%	0.10%	Metropolitan RE Co-Investments	\$8,037.9	0.58%	0.04%
Blackstone RE Europe VI	\$21,672.8	1.57%	0.10%	Met Life Commercial Mtg Inc Fund	\$48,705.9	3.53%	0.23%
Carlyle Realty Partners VII	\$9,715.8	0.70%	0.05%	New Boston Fund VII	\$2,676.8	0.19%	0.01%
Carlyle Realty VIII	\$9,568.7	0.69%	0.05%	O'Connor NAPP II	\$8,534.1	0.62%	0.04%
CBREI SP U.S. Opportunity V	\$540.8	0.04%	0.00%	PRISA	\$280,955.4	20.38%	1.34%
CBREI SP VIII	\$22,146.6	1.61%	0.11%	Recoveries Land	\$70.0	0.01%	0.00%
CBREI SP IX	\$11,322.3	0.82%	0.05%	Rockwood Capital RE Partners IX	\$5,756.2	0.42%	0.03%
Cerberus Institutional RE Partners III	\$11,407.5	0.83%	0.05%	Rockwood Capital RE XI	\$17,049.8	1.24%	0.08%
Chenal Retirement Village	\$0.0	0.00%	0.00%	Rose Law Firm	\$4,295.0	0.31%	0.02%
Calmwater	\$18,527.6	1.34%	0.09%	Texarkana DHS	\$1,627.7	0.12%	0.01%
Fletcher Properties	\$1,162.2	0.08%	0.01%	Torchlight Debt Opportunity Fund IV	\$4,367.5	0.32%	0.02%
FPA Core Plus IV	\$30,356.7	2.20%	0.14%	Torchlight Debt Opportunity Fund V	\$4,952.6	0.36%	0.02%
GCP GLP IV	\$16,699.6	1.21%	0.08%	Torchlight Debt Opportunity Fund VI	\$20,723.9	1.50%	0.10%
Harbert European Real Estate	\$16,538.4	1.20%	0.08%	Torchlight Debt Opportunity Fund VII	\$12,645.7	0.92%	0.06%
Heitman European Property IV	\$1,556.7	0.11%	0.01%	UBS Trumbull Property Fund	\$173,608.4	12.59%	0.83%
JP Morgan Strategic Property Fund	\$287,084.5	20.83%	1.37%	UBS Trumbull Property Income Fund	\$53,008.6	3.85%	0.25%
Kayne Anderson V	\$23,354.1	1.69%	0.11%	Victory	\$32,775.7	2.38%	0.16%
Kayne Anderson VI	\$1,392.4	0.10%	0.01%	Walton Street Real Estate Debt II	\$11,676.7	0.85%	0.06%
Landmark Fund VI	\$1,591.2	0.12%	0.01%	West Mphs. DHS	\$2,330.4	0.17%	0.01%
Landmark Real Estate VIII	\$7,935.4	0.58%	0.04%	Westbrook IX	\$10,045.2	0.73%	0.05%
LaSalle Asia Opportunity Fund IV	\$2,377.6	0.17%	0.01%	Westbrook Real Estate Fund X	\$11,040.8	0.80%	0.05%
<b>Total Real Estate</b>					<b>\$1,378,539.9</b>	<b>100.00%</b>	<b>6.56%</b>

\*Note: The market values for the real estate investments shown above are lagged one quarter and adjusted for the current quarter's cash flows. Market values and allocation percentages may not add to the sum total due to rounding.

Asset Allocation as of 9/30/2021				Values in \$1,000			
	Private Equity	Percent of Private Equity	Percent of Total Fund		Private Equity	Percent of Private Equity	Percent of Total Fund
Arlington Capital IV	\$33,075.5	1.16%	0.16%	JF Lehman III	\$15,152.8	0.53%	0.07%
Arlington Capital V	\$13,319.0	0.47%	0.06%	JF Lehman IV	\$33,022.9	1.16%	0.16%
Advent GPE VI	\$4,150.3	0.15%	0.02%	JF Lehman V	\$15,510.6	0.54%	0.07%
Altus Capital II	\$6,146.6	0.22%	0.03%	KPS III	\$187.8	0.01%	0.00%
American Industrial Partners VI	\$22,851.7	0.80%	0.11%	KPS IV	\$19,047.5	0.67%	0.09%
American Industrial Partners VII	\$13,993.4	0.49%	0.07%	KPS X	\$10,210.8	0.36%	0.05%
Altaris Constellation Partners	\$28,301.3	0.99%	0.13%	KPS Mid-Cap	\$8,284.0	0.29%	0.04%
Altaris Health Partners IV	\$23,927.0	0.84%	0.11%	Levine Leichtman V	\$19,558.4	0.69%	0.09%
Atlas Capital II	\$13,387.9	0.47%	0.06%	Lime Rock III	\$16,597.8	0.58%	0.08%
Audax Mezzanine III	\$2,825.5	0.10%	0.01%	LLR III	\$2,997.7	0.11%	0.01%
Big River - Equity	\$1,910.1	0.07%	0.01%	LLR VI	\$6,651.6	0.23%	0.03%
Big River - Holdings Note 2023	\$13,965.9	0.49%	0.07%	Mason Wells III	\$2,610.8	0.09%	0.01%
Big River - Holdings Note 3/16/23	\$5,899.3	0.21%	0.03%	NGP IX	\$1,467.7	0.05%	0.01%
Bison V	\$31,832.6	1.12%	0.15%	NGP X	\$4,582.2	0.16%	0.02%
Boston Ventures VII	\$5,377.7	0.19%	0.03%	NGP XI	\$21,057.5	0.74%	0.10%
Boston Ventures IX	\$29,311.1	1.03%	0.14%	NGP XII	\$19,548.2	0.69%	0.09%
Boston Ventures X	\$5,212.7	0.18%	0.02%	One Rock Capital Partners II	\$37,121.4	1.30%	0.18%
BV VIII	\$19,127.0	0.67%	0.09%	PineBridge	\$6,851.1	0.24%	0.03%
Castlake II	\$17,824.8	0.63%	0.08%	Riverside IV	\$234.4	0.01%	0.00%
Castlake III	\$17,427.7	0.61%	0.08%	Riverside V	\$27,806.6	0.98%	0.13%
Clearlake V	\$44,890.6	1.57%	0.21%	Riverside VI	\$13,888.0	0.49%	0.07%
Clearlake VI	\$26,274.9	0.92%	0.13%	Siris III	\$18,504.5	0.65%	0.09%
Court Square III	\$37,075.3	1.30%	0.18%	Siris IV	\$22,144.0	0.78%	0.11%
CSFB-ATRS 2005-1 Series	\$47,917.9	1.68%	0.23%	SK Capital V	\$20,596.8	0.72%	0.10%
CSFB-ATRS 2006-1 Series	\$67,170.4	2.36%	0.32%	Sycamore Partners II	\$13,093.4	0.46%	0.06%
Diamond State Ventures II	\$2,697.6	0.09%	0.01%	Sycamore Partners III	\$11,060.3	0.39%	0.05%
Doughty Hanson Tech I	-\$50.1	0.00%	0.00%	TA XI	\$26,651.5	0.93%	0.13%
DW Healthcare III	\$11,076.2	0.39%	0.05%	Tennenbaum VI	\$12,070.4	0.42%	0.06%
DW Healthcare IV	\$29,577.6	1.04%	0.14%	Thoma Bravo Discover	\$22,603.6	0.79%	0.11%
DW Healthcare V	\$11,806.5	0.41%	0.06%	Thoma Bravo Discover II	\$24,988.1	0.88%	0.12%
EnCap IX	\$11,271.4	0.40%	0.05%	Thoma Bravo Discover III	\$9,733.1	0.34%	0.05%
EnCap VIII	\$14,399.5	0.50%	0.07%	Thoma Bravo Explore I	\$11,499.4	0.40%	0.05%
EnCap X	\$25,819.2	0.91%	0.12%	Thoma Bravo XI	\$36,568.6	1.28%	0.17%
EnCap XI	\$13,985.9	0.49%	0.07%	Thoma Bravo XII	\$49,277.6	1.73%	0.23%
Franklin Park Series	\$1,172,471.6	41.11%	5.58%	Thoma Bravo XIII	\$40,820.4	1.43%	0.19%
Greenbriar V	\$2,285.6	0.08%	0.01%	Thoma Bravo XIV	\$12,536.2	0.44%	0.06%
GCG IV	\$27,710.5	0.97%	0.13%	Vista Equity III	\$5,246.3	0.18%	0.02%
GCG V	\$3,993.9	0.14%	0.02%	Vista Foundation II	\$16,127.6	0.57%	0.08%
GTLA Holdings	\$40,000.0	1.40%	0.19%	Vista Foundation III	\$29,176.5	1.02%	0.14%
Highland	\$211,174.2	7.40%	1.00%	Wellspring V	\$13,263.8	0.47%	0.06%
Insight Equity II	\$18,171.2	0.64%	0.09%	Wicks IV	\$34,090.2	1.20%	0.16%
Insight Mezzanine I	\$1,678.8	0.06%	0.01%	WNG II	\$8,155.2	0.29%	0.04%
<b>Total Private Equity</b>					<b>\$2,851,862.8</b>	<b>100.00%</b>	<b>13.57%</b>

\*Note: The market values for the private equity investments shown above are lagged one quarter and adjusted for the current quarter's cash flows. Market values and allocation percentages may not add to the sum total due to rounding.

This Page Left Blank Intentionally



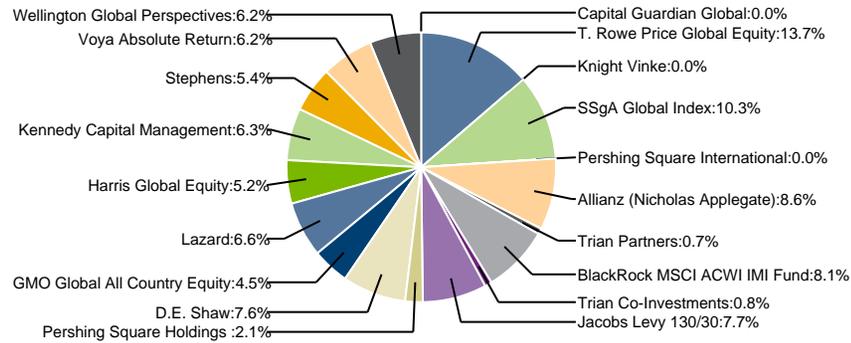
## Total Equity

---

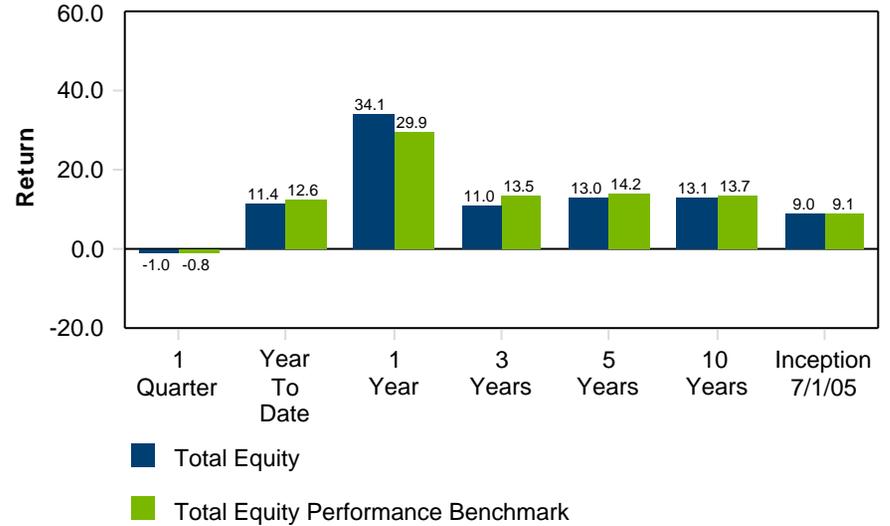
**Total Equity Portfolio Overview**

**Current Allocation**

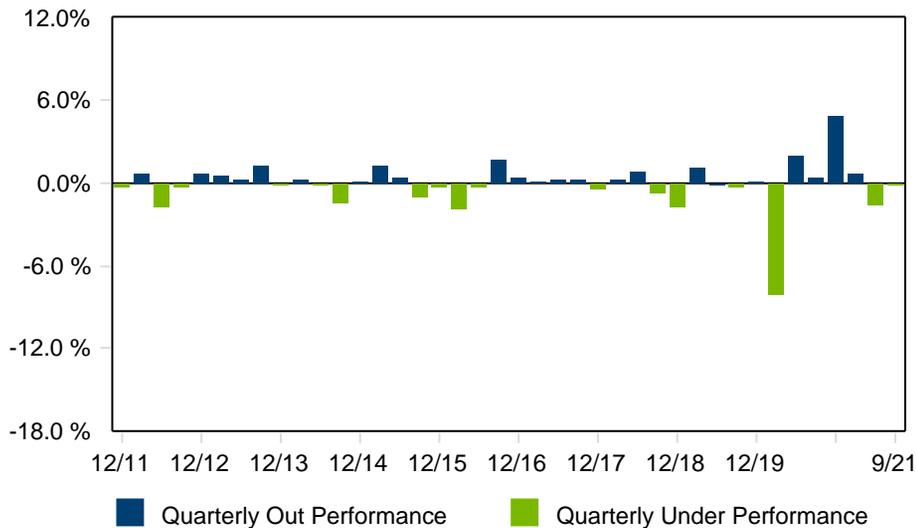
September 30, 2021 : \$12,285M



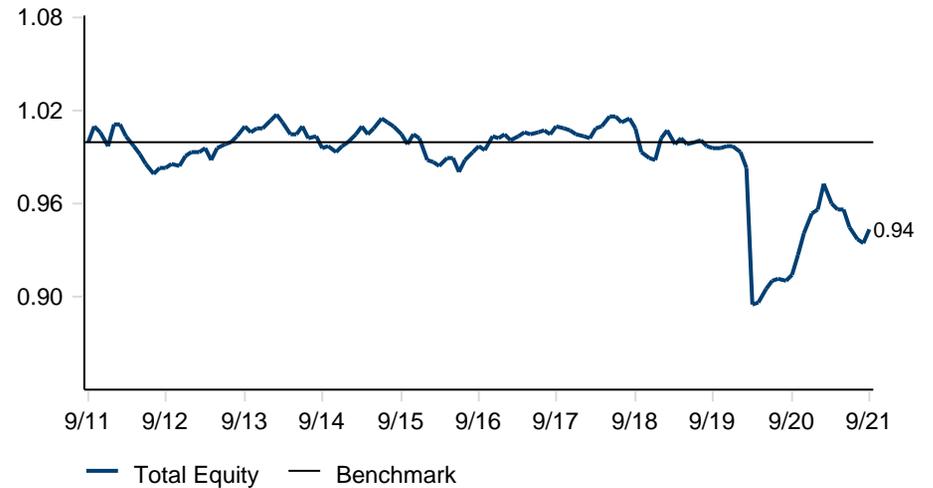
**Return Summary**



**Quarterly Excess Performance**



**Ratio of Cumulative Wealth - 10 Years**

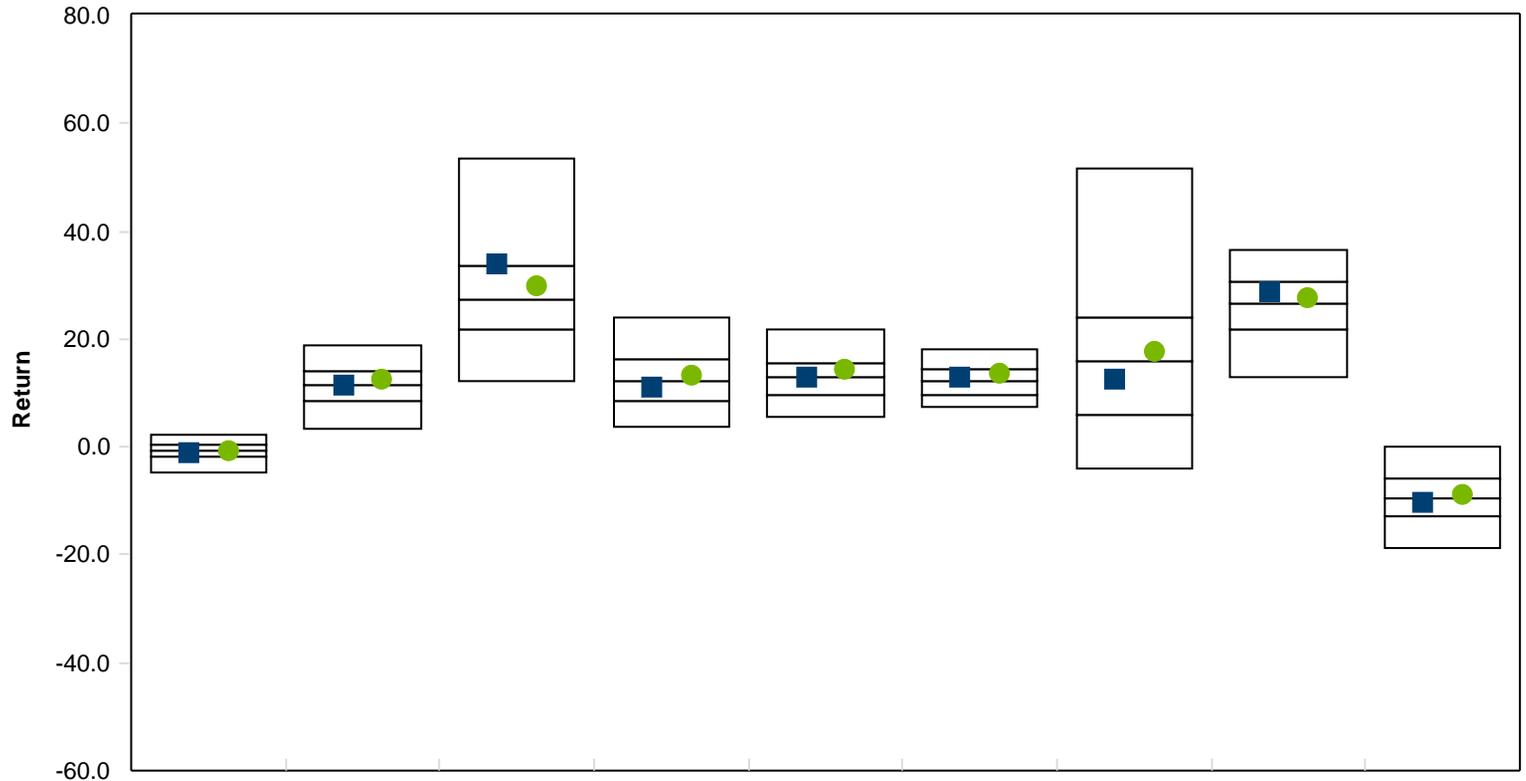


The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 151 of this report.

As of September 30, 2021

## Peer Group Analysis

### IM Global Equity (SA+CF)

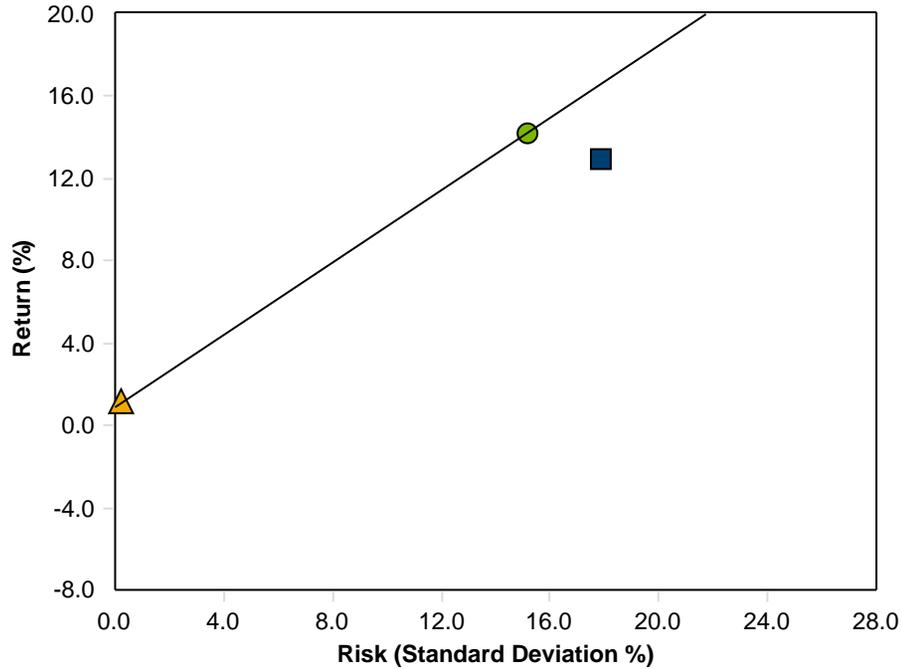


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Total Equity	-1.0 (59)	11.4 (49)	34.1 (25)	11.0 (57)	13.0 (49)	13.1 (39)	12.4 (60)	29.0 (37)	-10.2 (58)
● Total Equity Performance Benchmark	-0.8 (55)	12.6 (39)	29.9 (38)	13.5 (40)	14.2 (35)	13.7 (30)	17.6 (43)	27.8 (44)	-8.7 (46)
5th Percentile	2.3	18.9	53.4	24.1	21.8	18.3	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	14.6	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	12.3	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	9.8	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	7.3	-4.0	12.8	-18.9
Population	345	343	336	317	286	179	382	408	417

parentheses contain percentile rankings.

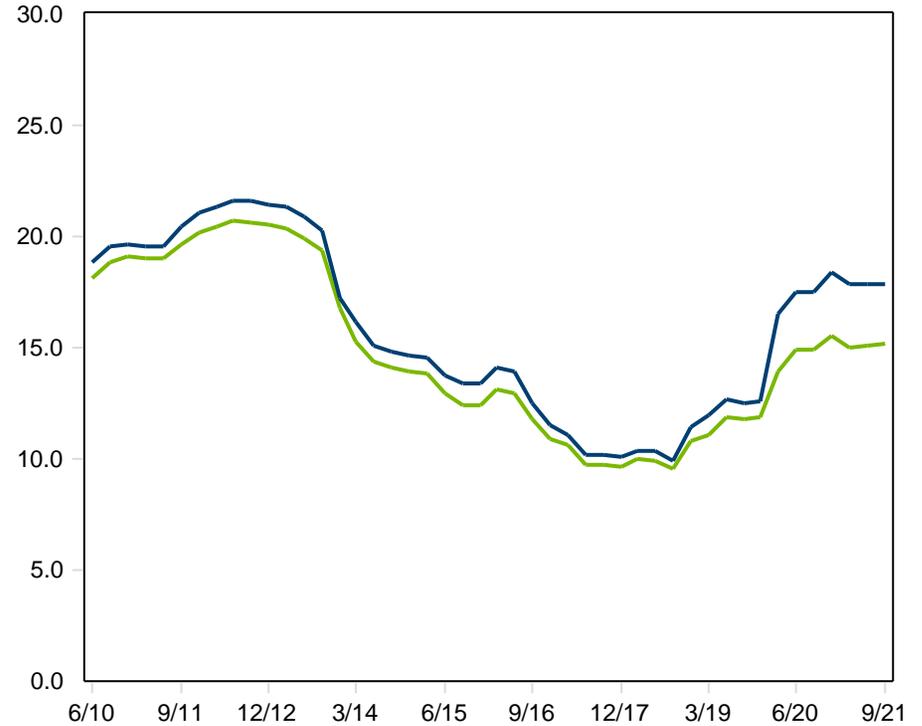
Total Equity Risk Profile

Annualized Return vs. Annualized Standard Deviation  
5 Years



- Total Equity
- Total Equity Performance Benchmark
- ▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



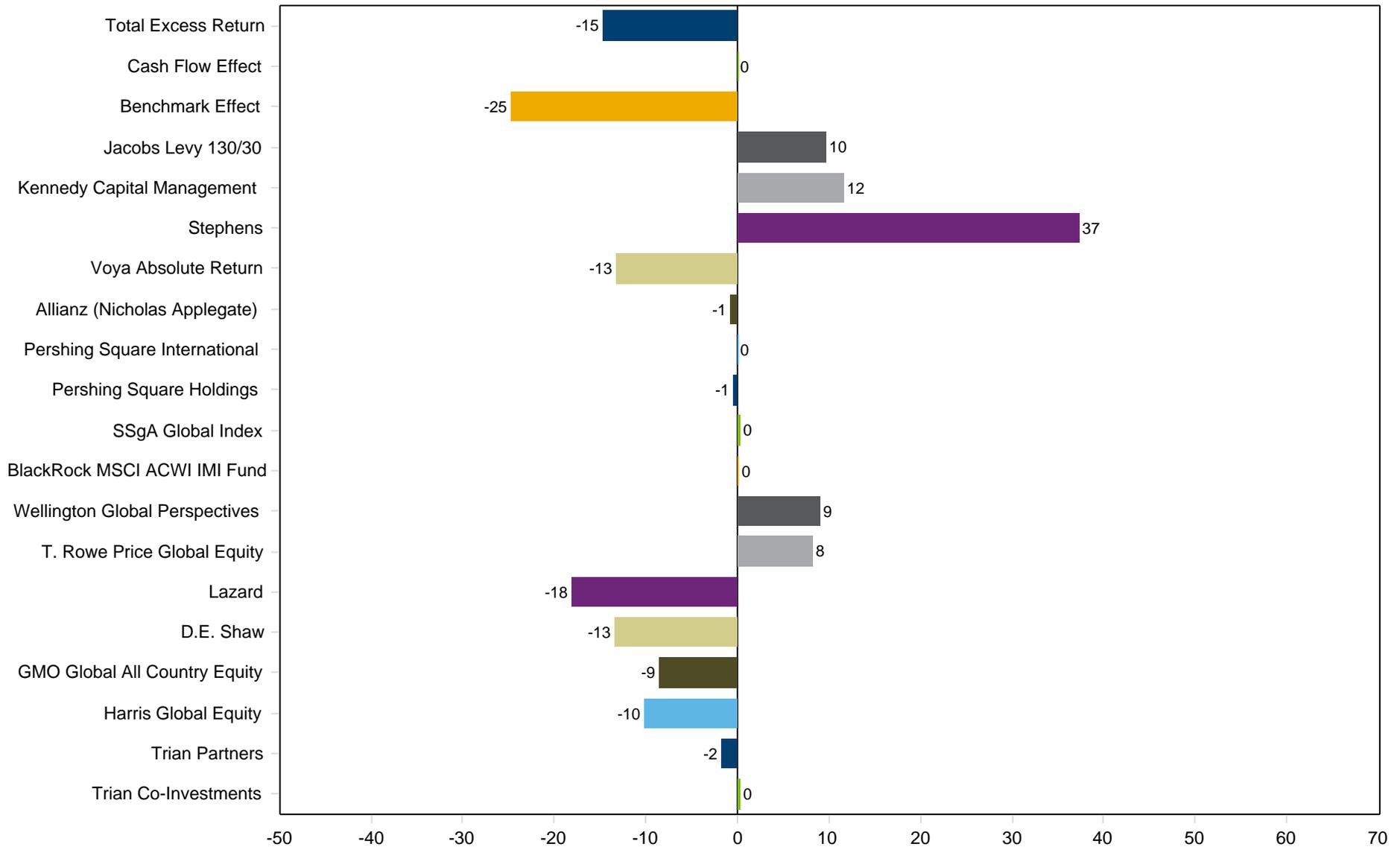
- Total Equity
- Total Equity Performance Benchmark

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Total Equity	-0.62	4.20	-0.15	0.96	0.71	-2.81	1.15	12.98	17.87	0.98
Total Equity Performance Benchmark	0.00	0.00	N/A	1.00	0.88	0.00	1.00	14.24	15.20	1.00
FTSE 3 Month T-Bill	-13.41	15.25	-0.88	0.04	N/A	1.18	0.00	1.13	0.25	-0.21

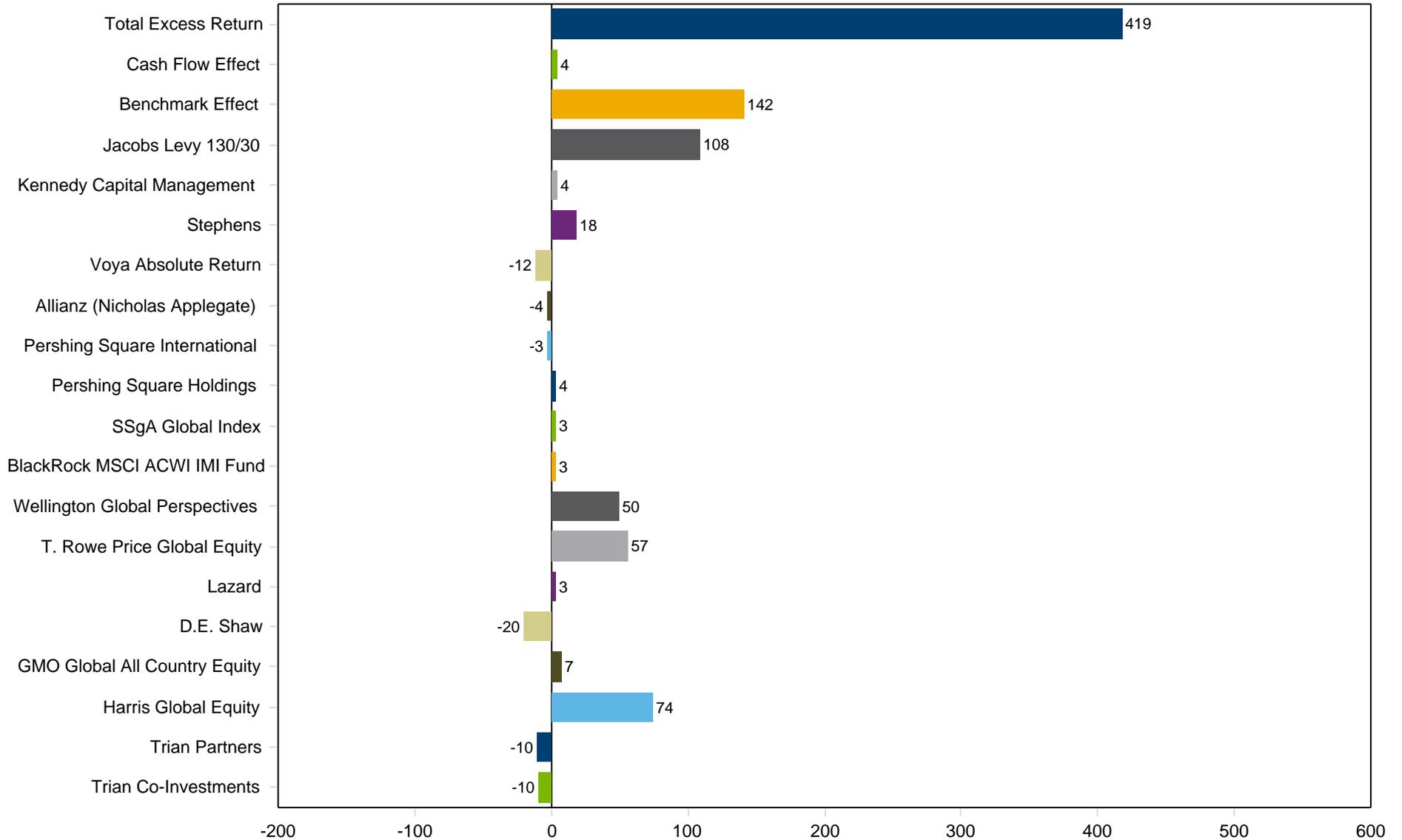
Asset Class Attribution

1 Quarter



Asset Class Attribution

1 Year

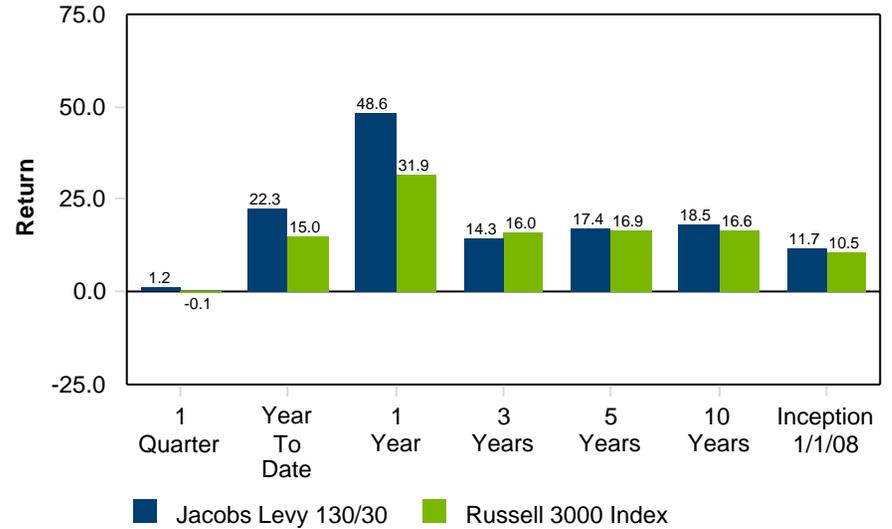


Jacobs Levy 130/30 Performance Summary

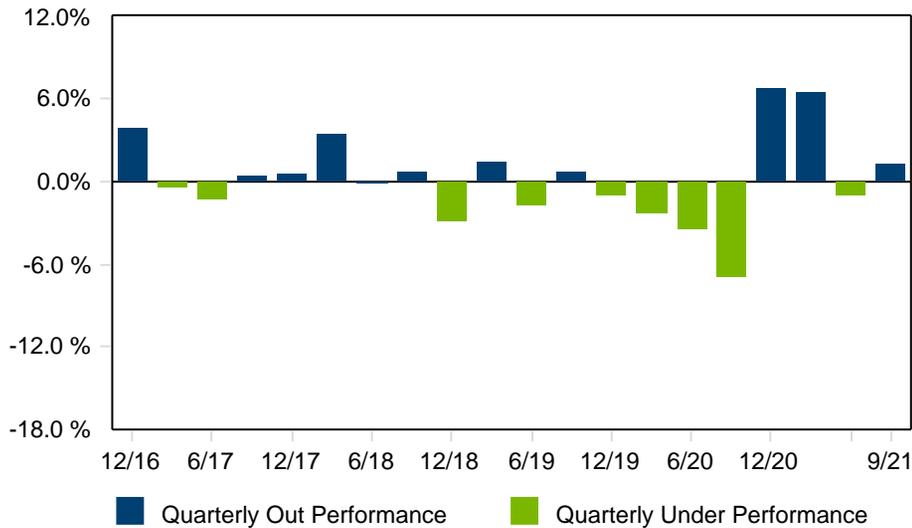
Account Information

Account Name: Jacobs Levy 130/30  
 Inception Date: 12/31/2007  
 Account Structure: Commingled Fund  
 Asset Class: US Equity  
 Benchmark: Russell 3000 Index  
 Peer Group: IM U.S. Equity (SA+CF)

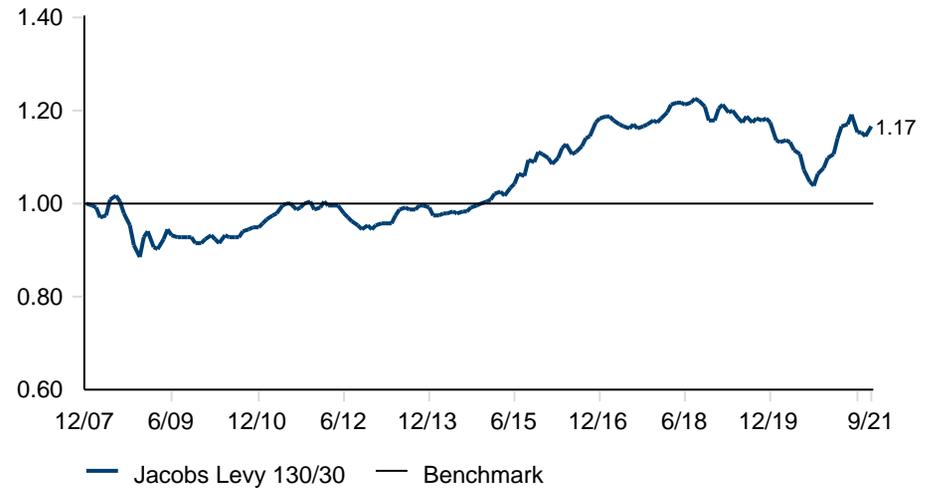
Return Summary



Quarterly Excess Performance

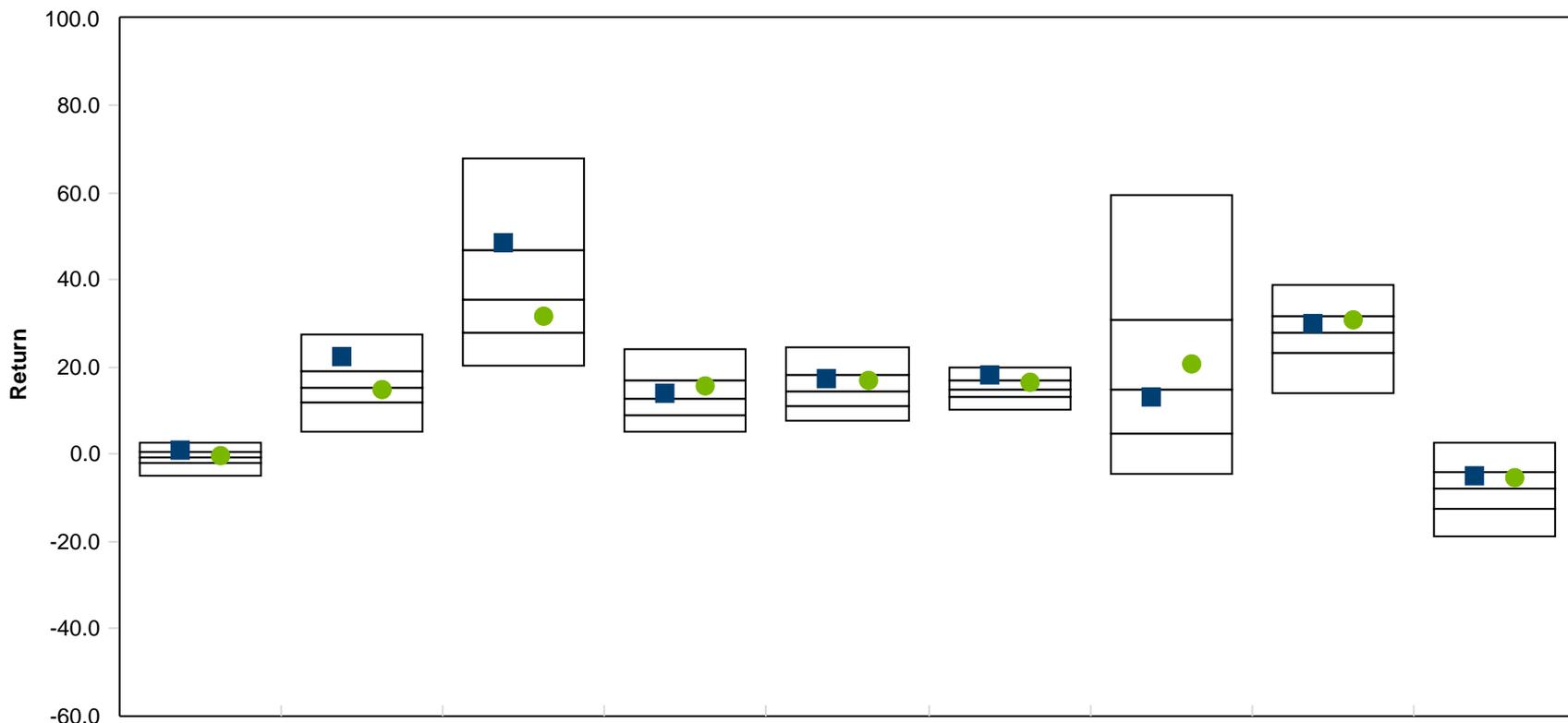


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Equity (SA+CF)

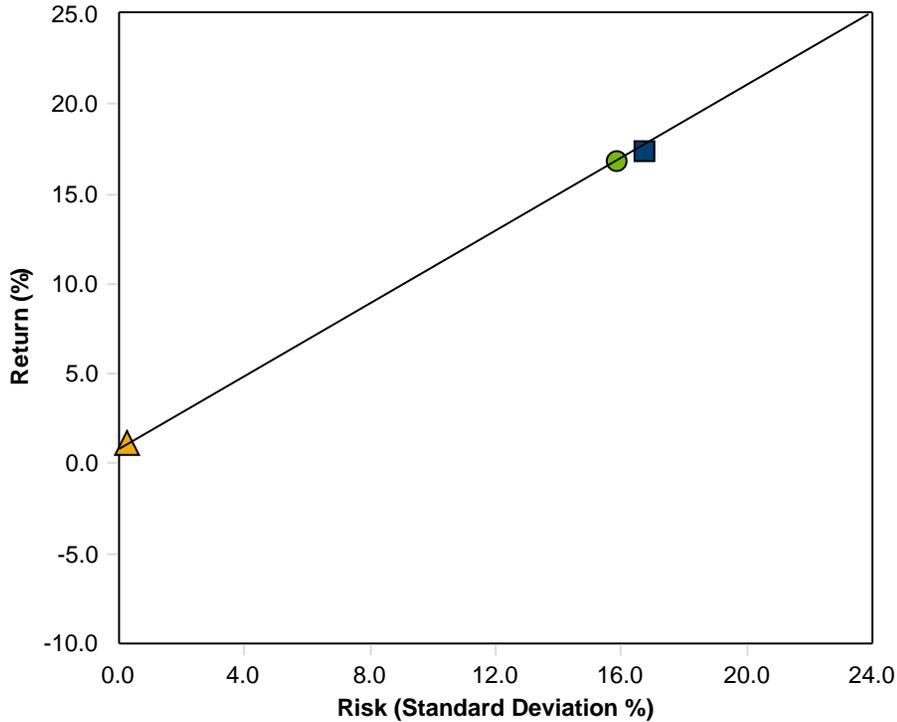


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Jacobs Levy 130/30	1.2 (15)	22.3 (14)	48.6 (23)	14.3 (41)	17.4 (28)	18.5 (14)	13.2 (55)	30.2 (35)	-4.7 (31)
● Russell 3000 Index	-0.1 (40)	15.0 (54)	31.9 (60)	16.0 (32)	16.9 (32)	16.6 (29)	20.9 (38)	31.0 (30)	-5.2 (35)
5th Percentile	2.8	27.6	67.9	24.1	24.6	19.9	59.6	38.9	2.7
1st Quartile	0.5	19.3	47.2	17.2	18.1	17.0	30.9	31.8	-3.8
Median	-0.5	15.5	35.6	12.7	14.4	15.0	15.0	27.9	-7.7
3rd Quartile	-2.0	11.9	28.2	9.2	11.2	13.3	4.7	23.4	-12.5
95th Percentile	-4.7	5.2	20.3	5.4	7.7	10.1	-4.4	14.2	-18.9
Population	1,411	1,407	1,398	1,349	1,264	1,038	1,722	1,836	1,912

parentheses contain percentile rankings.

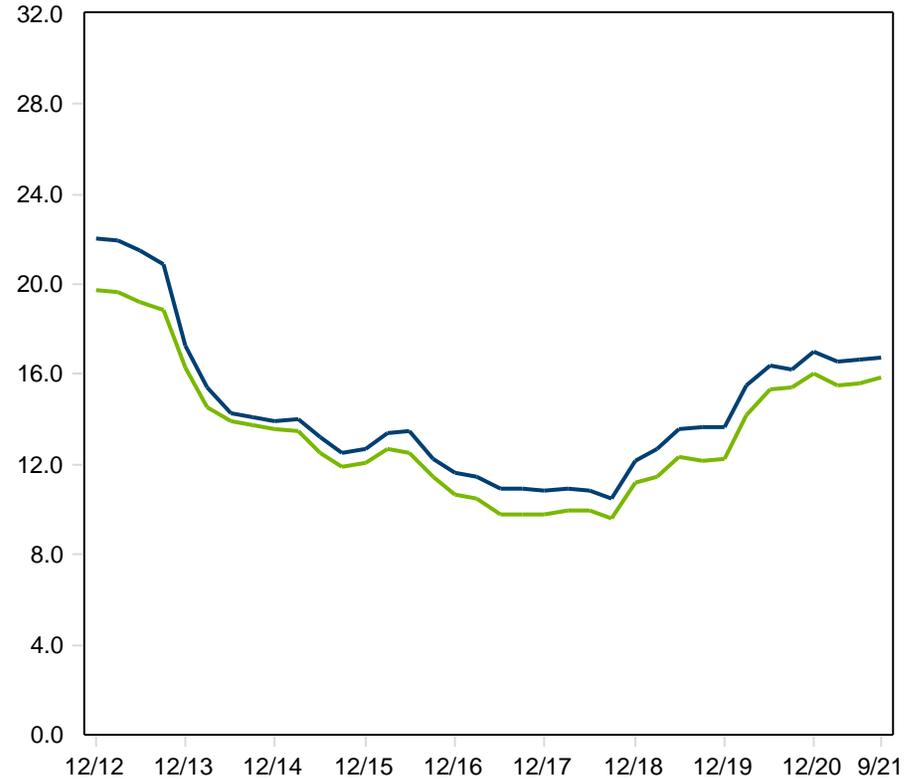
Jacobs Levy 130/30 Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Jacobs Levy 130/30    ● Russell 3000 Index  
 ▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



— Jacobs Levy 130/30    — Russell 3000 Index

5 Years Historical Statistics

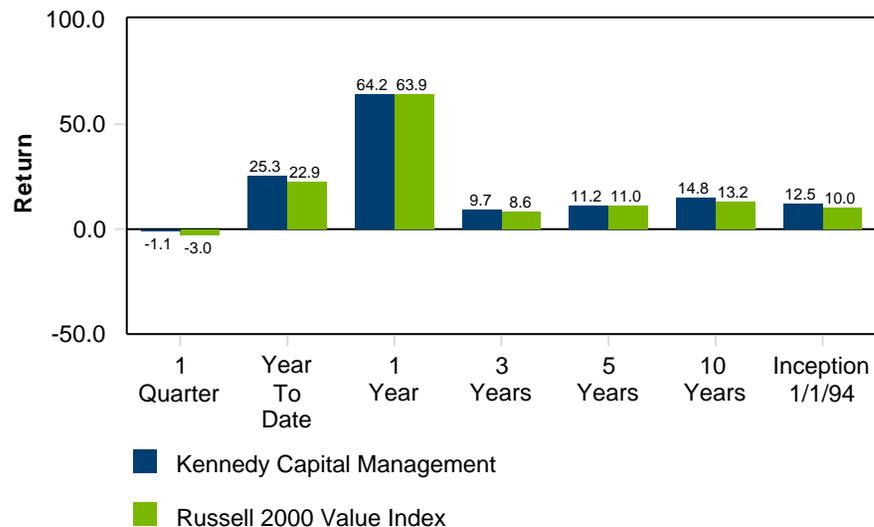
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Jacobs Levy 130/30	0.62	4.89	0.13	0.91	0.98	0.43	1.01	17.41	16.74	0.96
Russell 3000 Index	0.00	0.00	N/A	1.00	0.99	0.00	1.00	16.85	15.83	1.00
FTSE 3 Month T-Bill	-15.79	15.88	-0.99	0.03	N/A	1.18	0.00	1.13	0.25	-0.19

**Kennedy Capital Management Performance Summary**

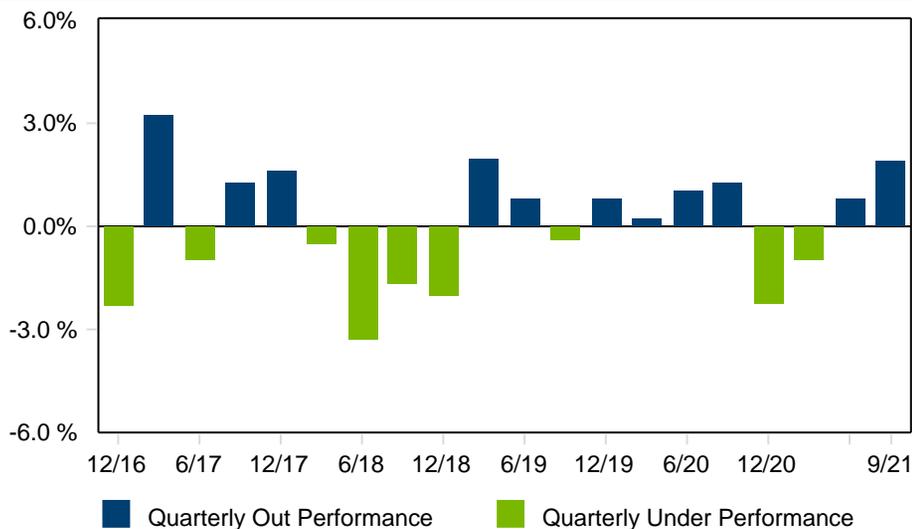
**Account Information**

Account Name: Kennedy Capital Management  
 Inception Date: 12/31/1993  
 Account Structure: Separate Account  
 Asset Class: US Equity  
 Benchmark: Russell 2000 Value Index  
 Peer Group: IM U.S. Small Cap Value Equity (SA+CF)

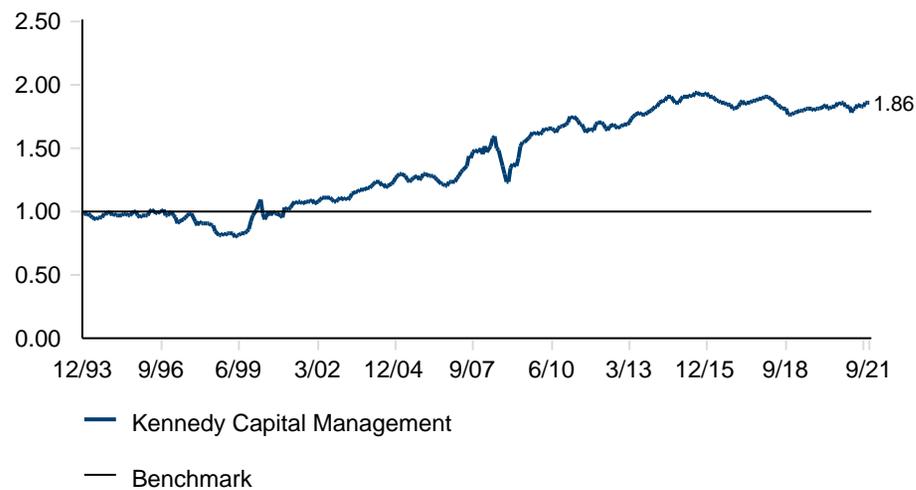
**Return Summary**



**Quarterly Excess Performance**

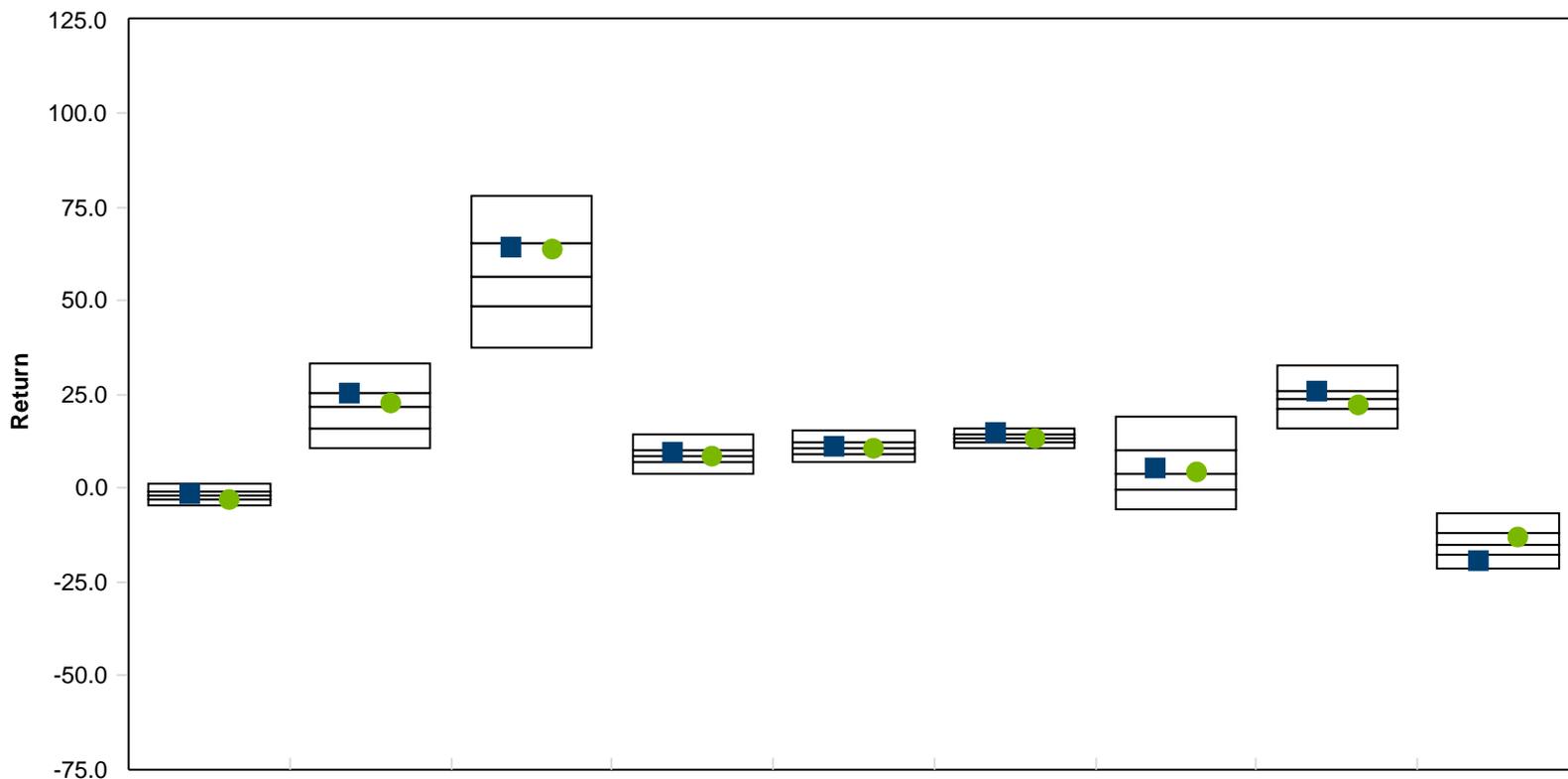


**Ratio of Cumulative Wealth - Since Inception**



Peer Group Analysis

IM U.S. Small Cap Value Equity (SA+CF)

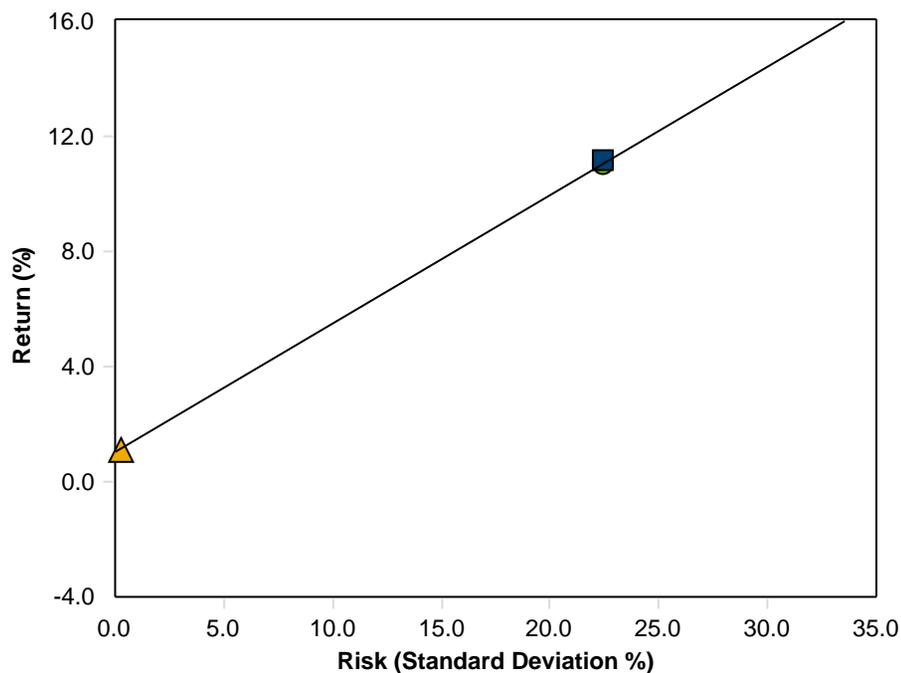


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Kennedy Capital Management	-1.1 (34)	25.3 (26)	64.2 (31)	9.7 (34)	11.2 (42)	14.8 (19)	5.4 (43)	25.9 (30)	-19.4 (84)
● Russell 2000 Value Index	-3.0 (78)	22.9 (46)	63.9 (31)	8.6 (50)	11.0 (44)	13.2 (51)	4.6 (47)	22.4 (64)	-12.9 (33)
5th Percentile	1.1	33.2	78.2	14.7	15.3	15.8	19.2	32.8	-6.4
1st Quartile	-0.6	25.5	65.6	10.5	12.3	14.3	10.0	26.2	-11.9
Median	-1.6	21.6	56.6	8.6	10.9	13.2	4.0	23.9	-14.9
3rd Quartile	-2.9	16.2	48.9	7.1	9.3	12.3	-0.1	21.3	-17.8
95th Percentile	-4.3	11.0	37.7	4.0	7.3	10.7	-5.4	15.8	-21.4
Population	139	139	138	133	126	112	172	179	195

parentheses contain percentile rankings.

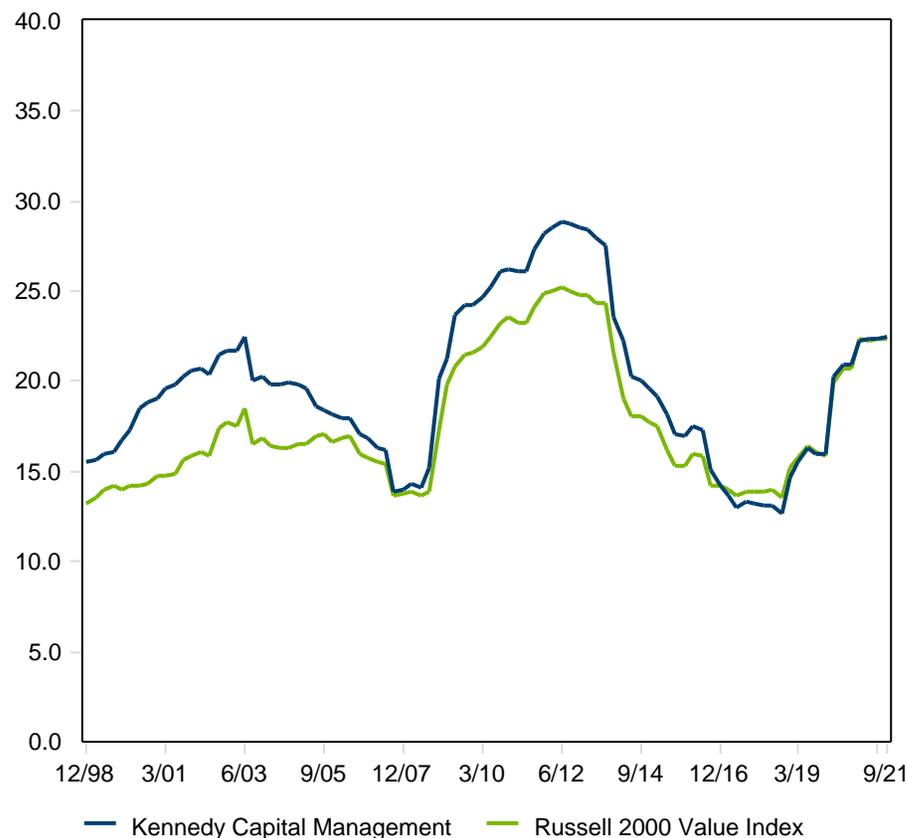
**Kennedy Capital Management Risk Profile**

**Annualized Return vs. Annualized Standard Deviation  
5 Years**



- Kennedy Capital Management
- Russell 2000 Value Index
- ▲ FTSE 3 Month T-Bill

**Rolling 5 Years Standard Deviation**



**5 Years Historical Statistics**

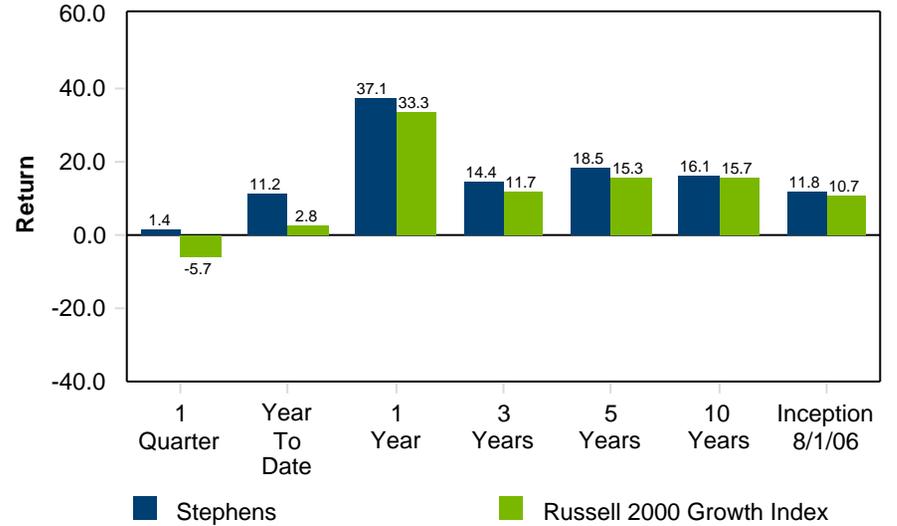
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Kennedy Capital Management	0.17	3.44	0.05	0.98	0.54	0.30	0.99	11.17	22.43	0.99
Russell 2000 Value Index	0.00	0.00	N/A	1.00	0.53	0.00	1.00	11.03	22.39	1.00
FTSE 3 Month T-Bill	-11.94	22.46	-0.53	0.07	N/A	1.17	0.00	1.13	0.25	-0.26

Stephens Performance Summary

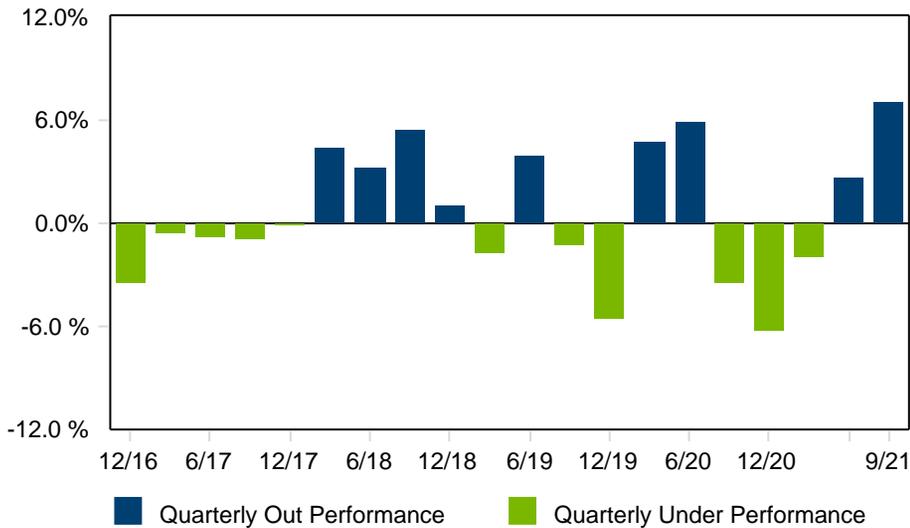
Account Information

Account Name: Stephens  
 Inception Date: 07/31/2006  
 Account Structure: Separate Account  
 Asset Class: US Equity  
 Benchmark: Russell 2000 Growth Index  
 Peer Group: IM U.S. Small Cap Growth Equity (SA+CF)

Return Summary



Quarterly Excess Performance

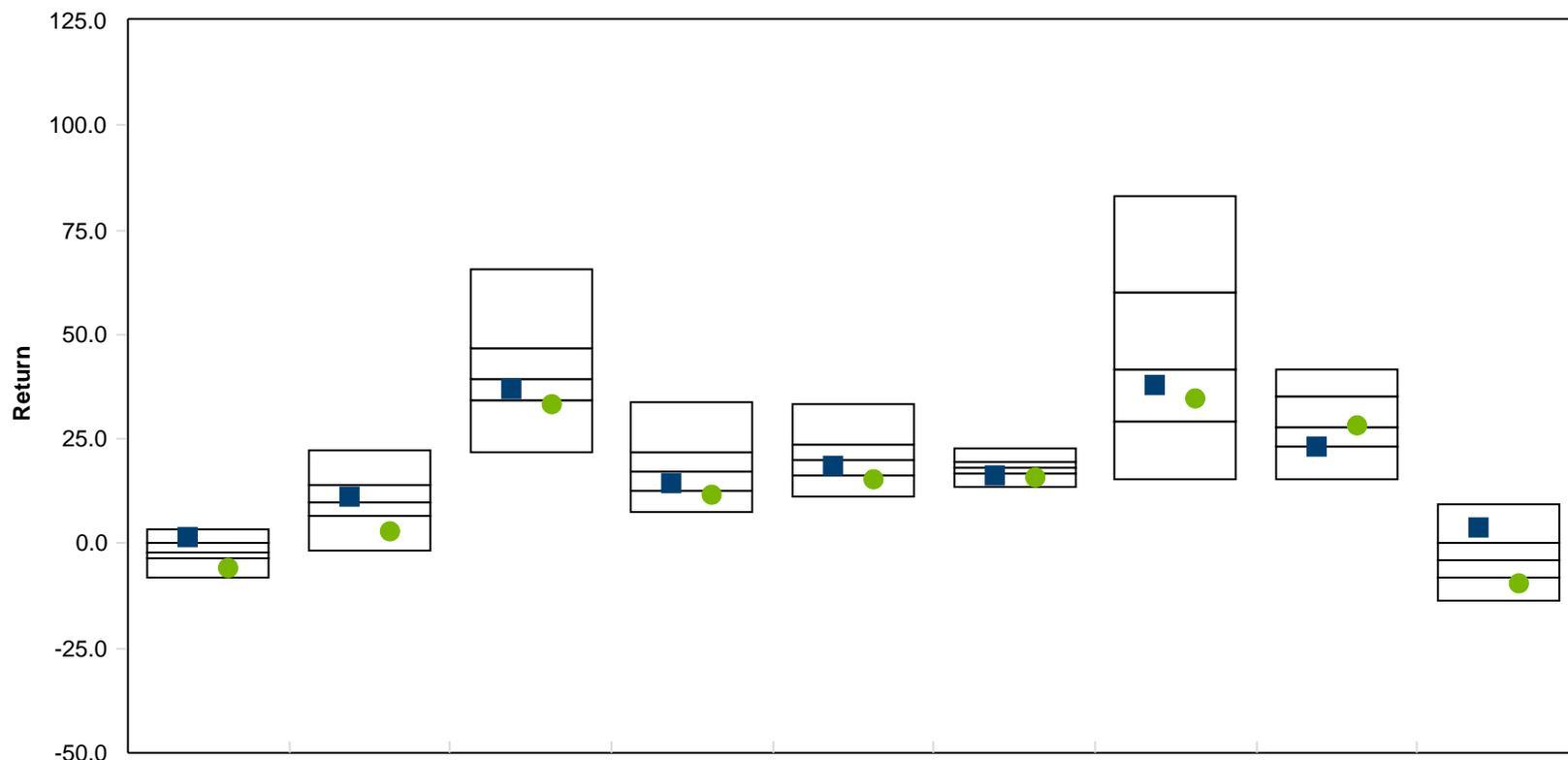


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Small Cap Growth Equity (SA+CF)

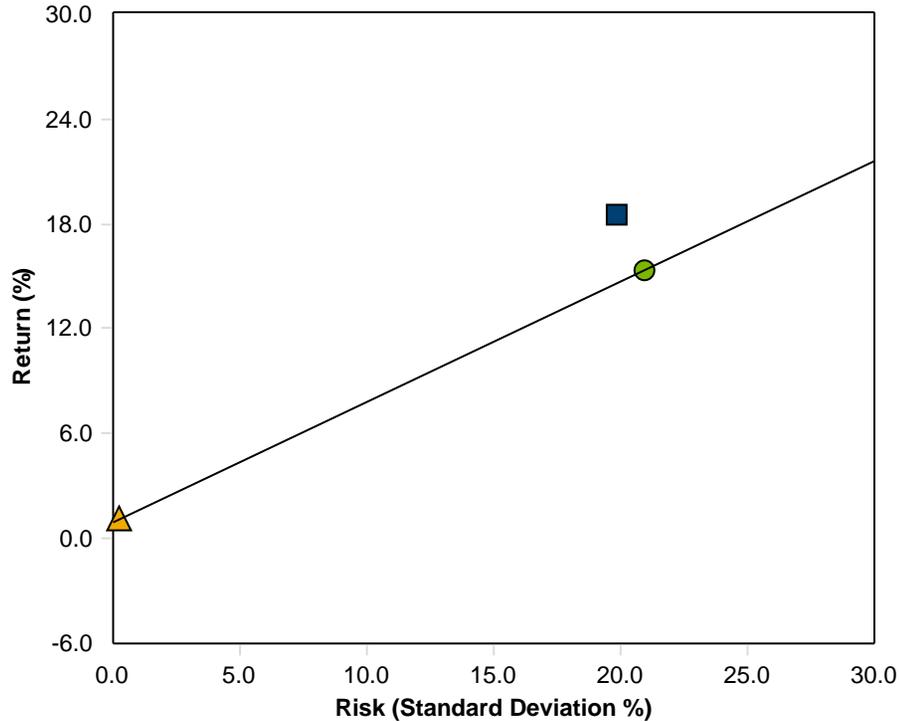


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Stephens	1.4 (14)	11.2 (42)	37.1 (64)	14.4 (67)	18.5 (58)	16.1 (86)	37.8 (59)	23.2 (76)	3.7 (13)
● Russell 2000 Growth Index	-5.7 (90)	2.8 (88)	33.3 (78)	11.7 (83)	15.3 (88)	15.7 (89)	34.6 (65)	28.5 (48)	-9.3 (79)
5th Percentile	3.4	22.4	65.5	34.0	33.5	22.7	83.0	41.5	9.4
1st Quartile	0.0	13.9	46.7	21.9	23.8	19.3	59.9	35.0	0.4
Median	-2.0	10.1	39.5	17.0	19.9	18.2	41.5	28.1	-4.0
3rd Quartile	-3.5	6.8	34.2	12.7	16.5	16.7	29.1	23.3	-8.0
95th Percentile	-8.1	-1.7	22.1	7.7	11.5	13.8	15.2	15.2	-13.6
Population	112	112	112	108	102	88	134	141	148

parentheses contain percentile rankings.

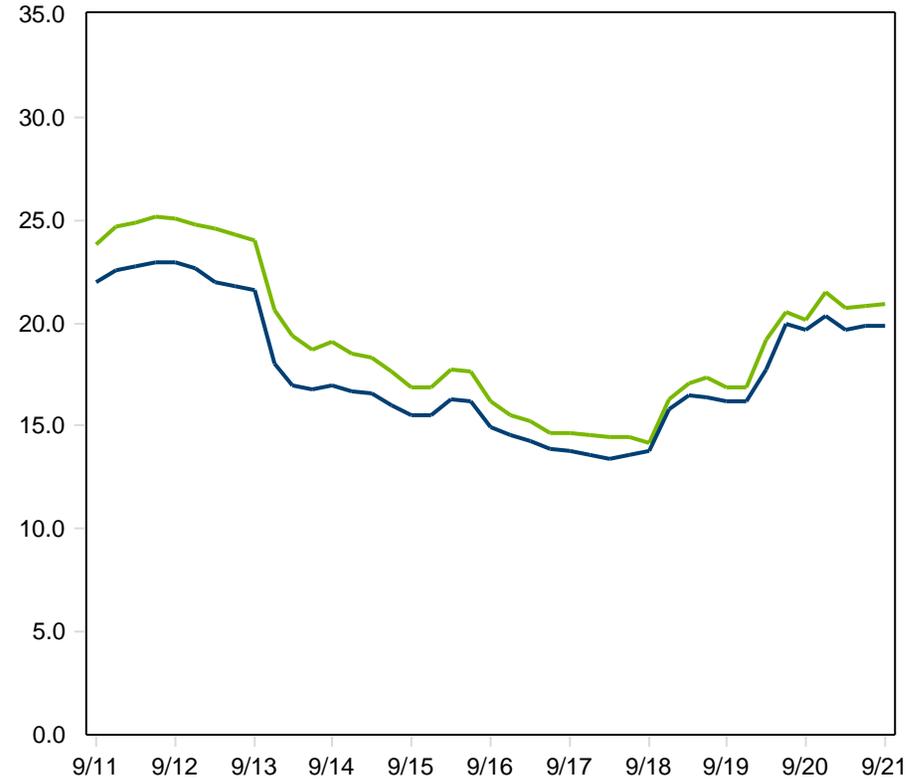
Stephens Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Stephens      ● Russell 2000 Growth Index  
 ▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



— Stephens      — Russell 2000 Growth Index

5 Years Historical Statistics

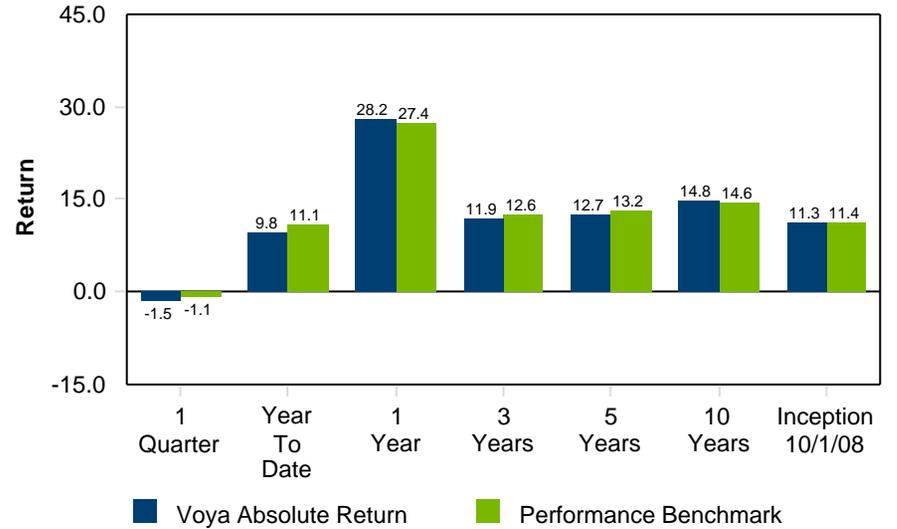
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Stephens	2.51	6.74	0.37	0.90	0.90	4.29	0.90	18.52	19.85	0.95
Russell 2000 Growth Index	0.00	0.00	N/A	1.00	0.73	0.00	1.00	15.34	20.95	1.00
FTSE 3 Month T-Bill	-15.42	21.00	-0.73	0.04	N/A	1.17	0.00	1.13	0.25	-0.19

Voya Absolute Return Performance Summary

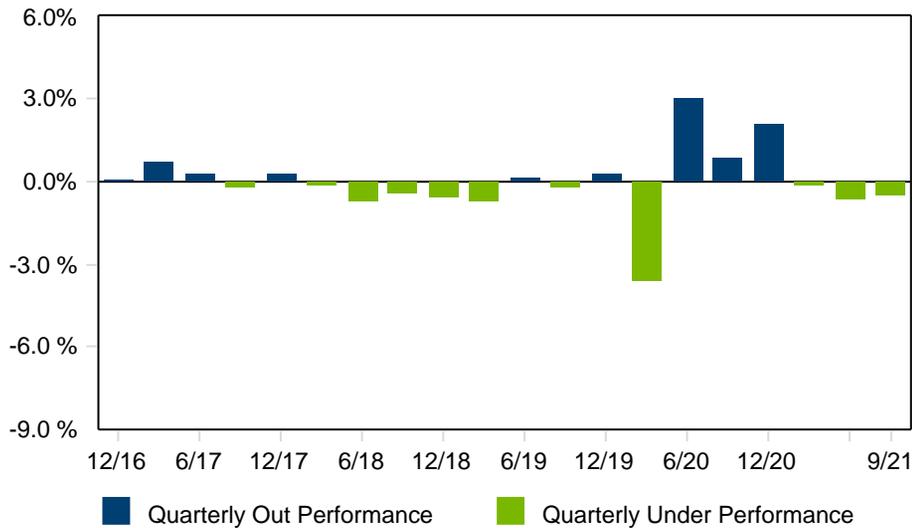
Account Information

Account Name: Voya Absolute Return  
 Inception Date: 09/30/2008  
 Account Structure: Commingled Fund  
 Asset Class: Global Equity  
 Benchmark: Performance Benchmark  
 Peer Group: IM Global Equity (MF)

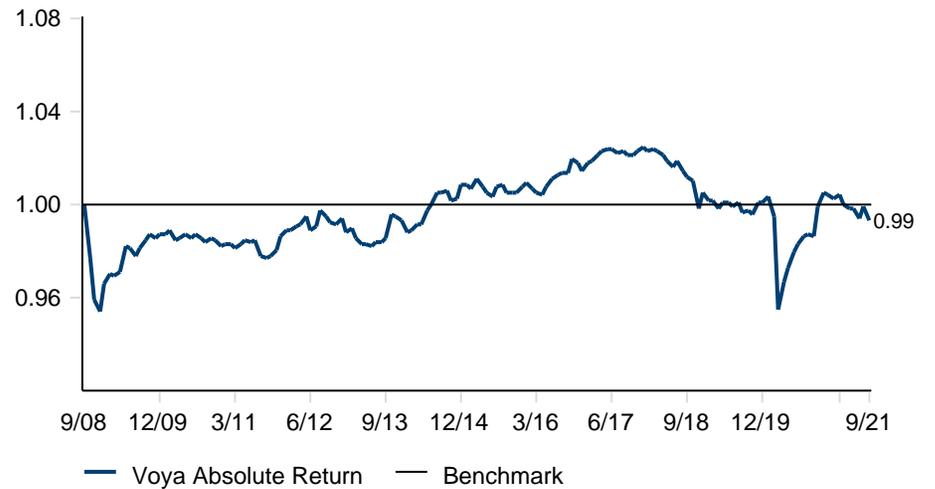
Return Summary



Quarterly Excess Performance

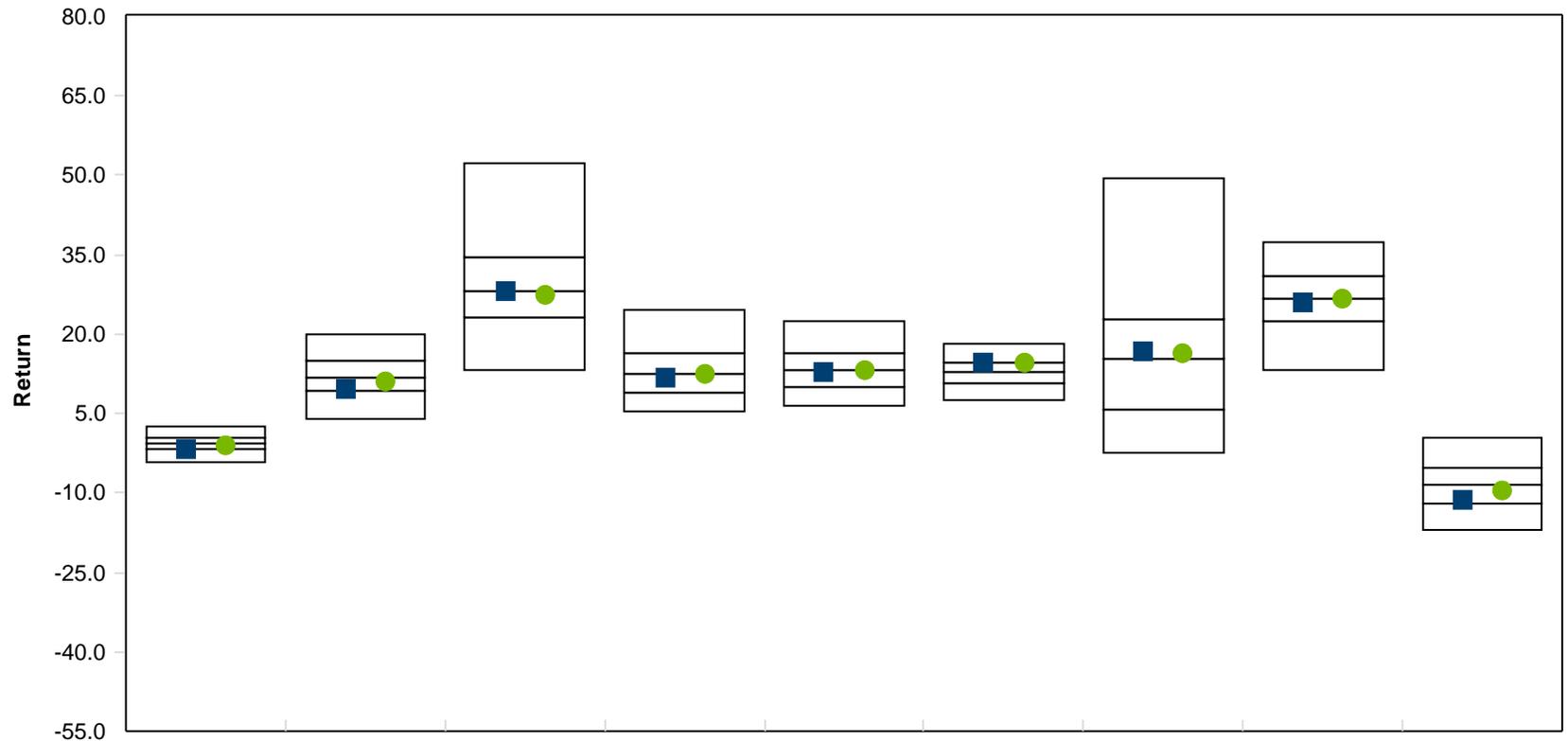


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Global Equity (SA+CF)

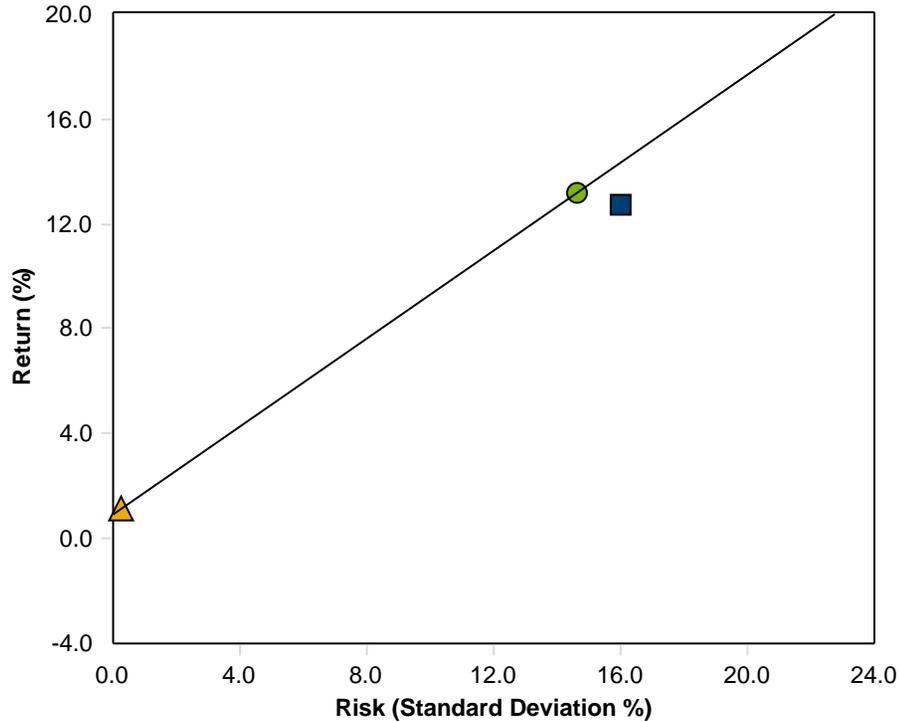


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Voya Absolute Return	-1.5 (73)	9.8 (71)	28.2 (49)	11.9 (53)	12.7 (54)	14.8 (24)	16.8 (45)	26.0 (57)	-11.1 (69)
● Performance Benchmark	-1.1 (63)	11.1 (59)	27.4 (55)	12.6 (50)	13.2 (51)	14.6 (26)	16.3 (47)	26.6 (52)	-9.4 (57)
5th Percentile	2.5	20.1	52.1	24.5	22.3	18.3	49.4	37.5	0.3
1st Quartile	0.5	14.9	34.4	16.4	16.2	14.6	23.0	31.0	-5.3
Median	-0.5	12.0	28.1	12.5	13.3	13.0	15.3	26.8	-8.6
3rd Quartile	-1.7	9.1	23.2	9.0	9.8	10.8	5.8	22.4	-12.1
95th Percentile	-4.2	4.0	13.1	5.4	6.3	7.5	-2.6	13.2	-17.1
Population	446	444	438	421	385	262	515	553	578

parentheses contain percentile rankings.

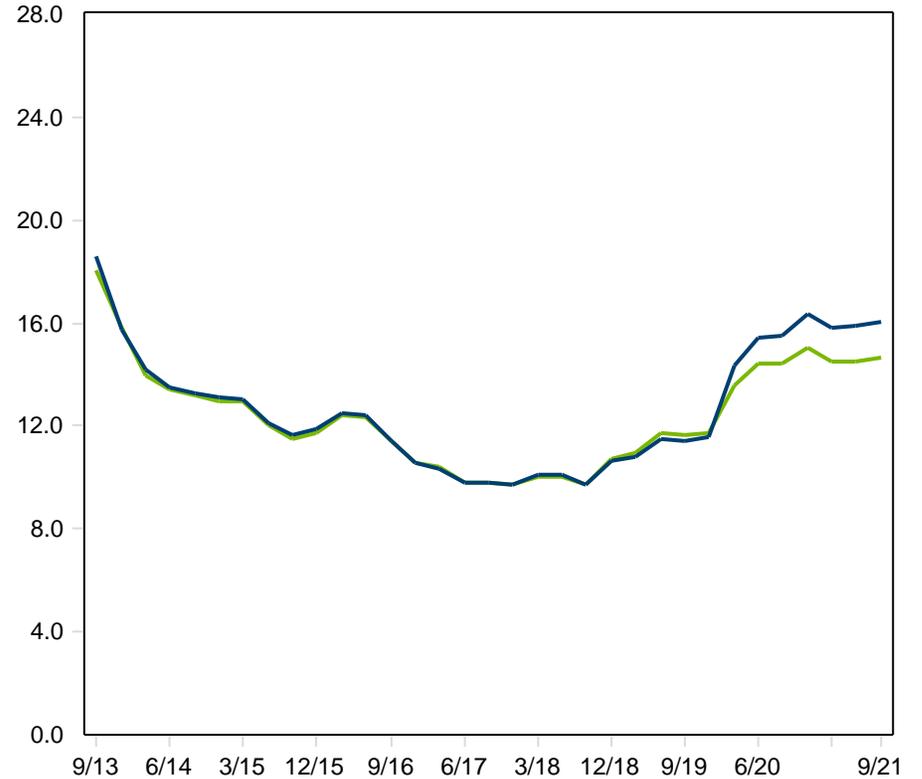
Voya Absolute Return Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Voya Absolute Return     ● Performance Benchmark  
▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



— Voya Absolute Return     — Performance Benchmark

5 Years Historical Statistics

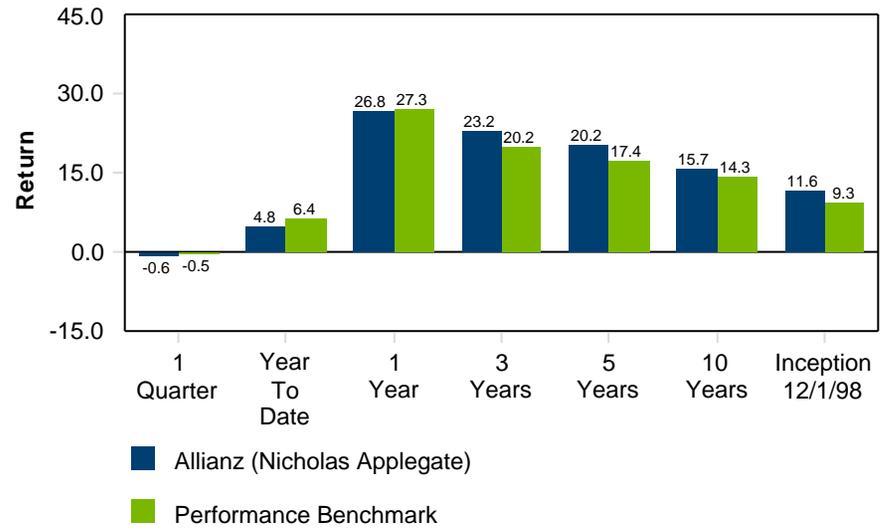
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Voya Absolute Return	-0.19	2.18	-0.09	0.99	0.76	-1.36	1.09	12.74	16.03	0.99
Performance Benchmark	0.00	0.00	N/A	1.00	0.84	0.00	1.00	13.20	14.65	1.00
FTSE 3 Month T-Bill	-12.40	14.71	-0.84	0.04	N/A	1.18	0.00	1.13	0.25	-0.21

Allianz (Nicholas Applegate) Performance Summary

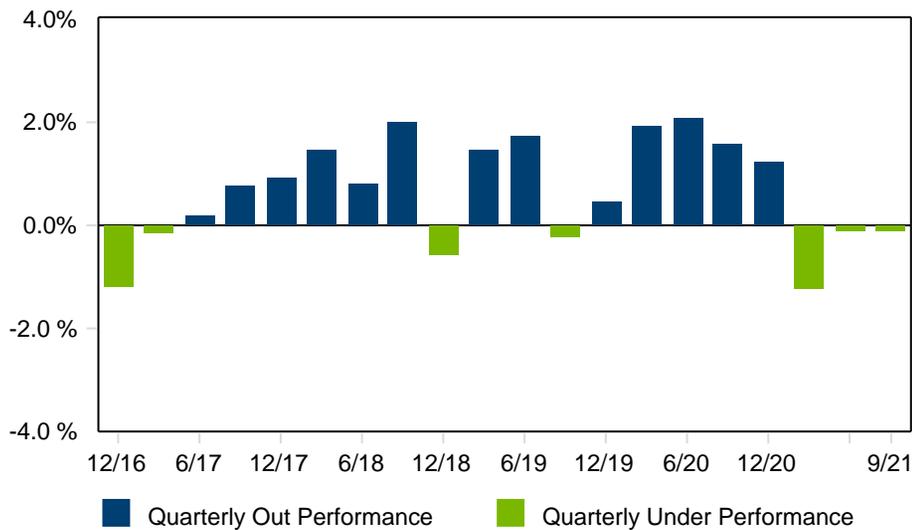
Account Information

Account Name: Allianz (Nicholas Applegate)  
 Inception Date: 11/30/1998  
 Account Structure: Separate Account  
 Asset Class: US Equity  
 Benchmark: Performance Benchmark  
 Peer Group: IM U.S. Equity (SA+CF)

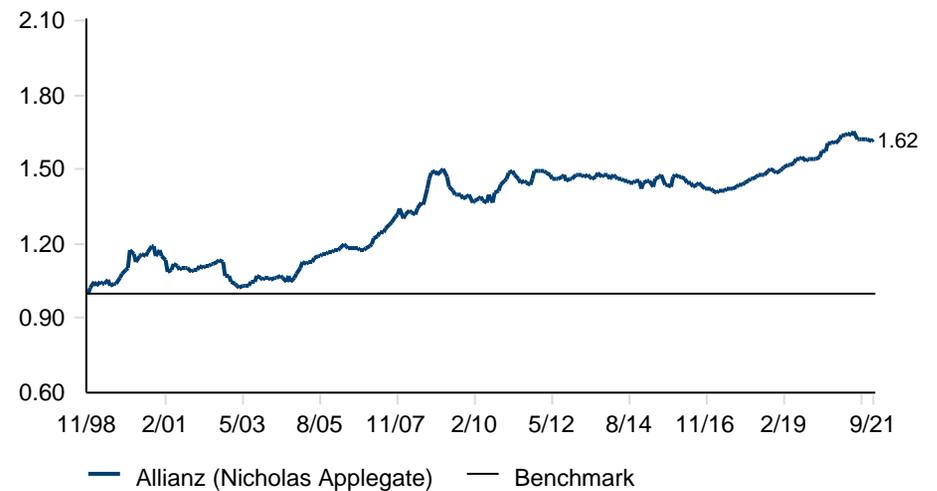
Return Summary



Quarterly Excess Performance

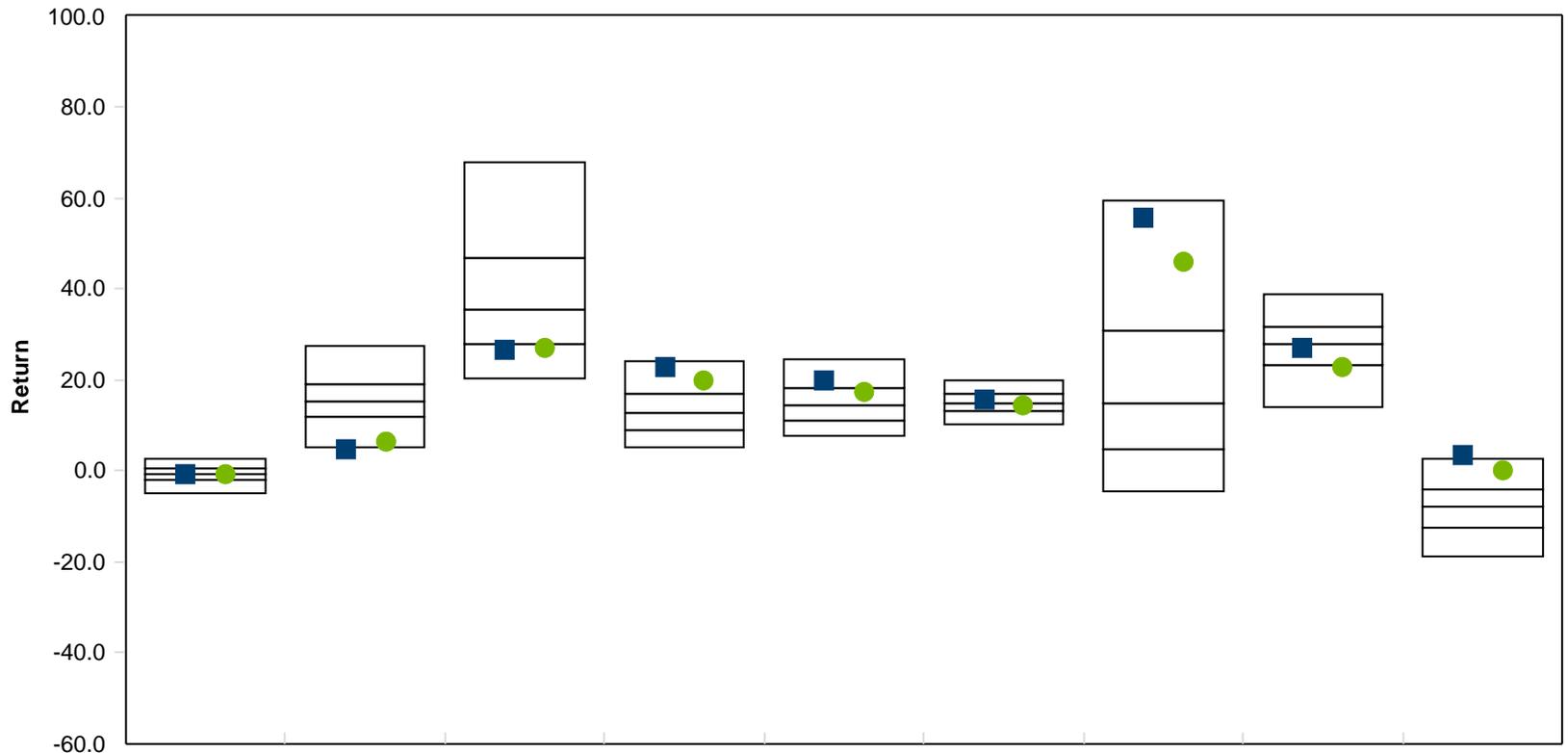


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Equity (SA+CF)

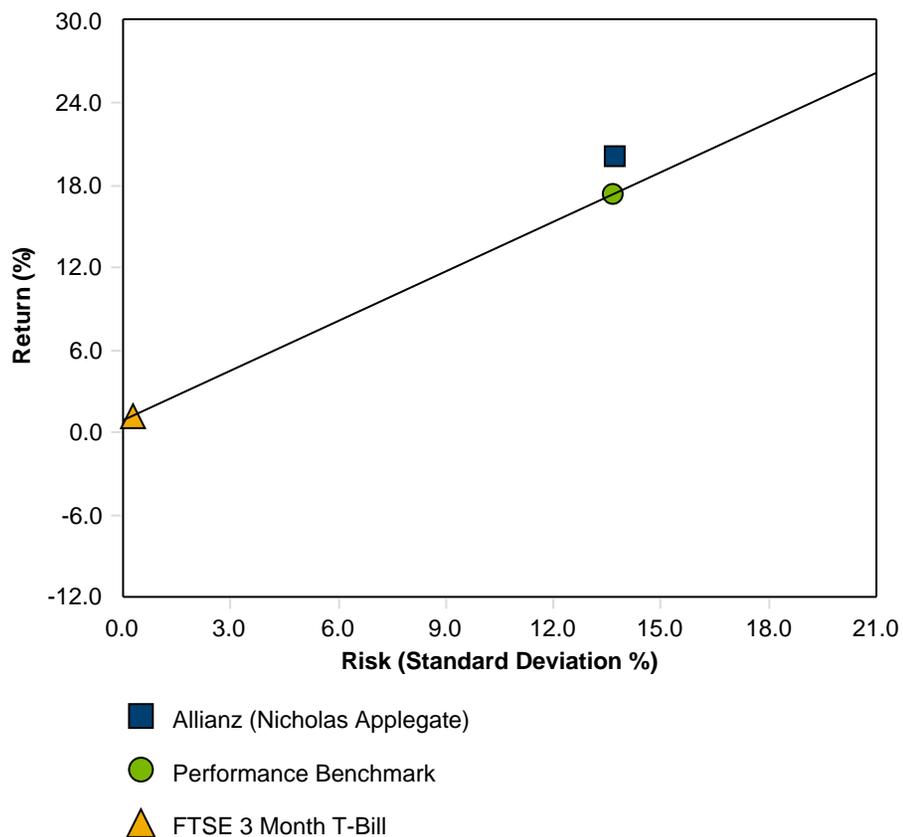


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Allianz (Nicholas Applegate)	-0.6 (51)	4.8 (96)	26.8 (81)	23.2 (7)	20.2 (18)	15.7 (41)	55.7 (6)	27.0 (56)	3.7 (5)
● Performance Benchmark	-0.5 (50)	6.4 (94)	27.3 (78)	20.2 (14)	17.4 (28)	14.3 (59)	46.2 (10)	23.1 (77)	0.2 (11)
5th Percentile	2.8	27.6	67.9	24.1	24.6	19.9	59.6	38.9	2.7
1st Quartile	0.5	19.3	47.2	17.2	18.1	17.0	30.9	31.8	-3.8
Median	-0.5	15.5	35.6	12.7	14.4	15.0	15.0	27.9	-7.7
3rd Quartile	-2.0	11.9	28.2	9.2	11.2	13.3	4.7	23.4	-12.5
95th Percentile	-4.7	5.2	20.3	5.4	7.7	10.1	-4.4	14.2	-18.9
Population	1,411	1,407	1,398	1,349	1,264	1,038	1,722	1,836	1,912

parentheses contain percentile rankings.

**Allianz (Nicholas Applegate) Risk Profile**

**Annualized Return vs. Annualized Standard Deviation  
5 Years**



**Rolling 5 Years Standard Deviation**



**5 Years Historical Statistics**

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Allianz (Nicholas Applegate)	2.42	2.20	1.10	0.97	1.33	2.61	0.99	20.19	13.68	0.99
Performance Benchmark	0.00	0.00	N/A	1.00	1.16	0.00	1.00	17.36	13.64	1.00
FTSE 3 Month T-Bill	-15.90	13.69	-1.16	0.04	N/A	1.20	0.00	1.13	0.25	-0.21

Pershing Square International Performance Summary

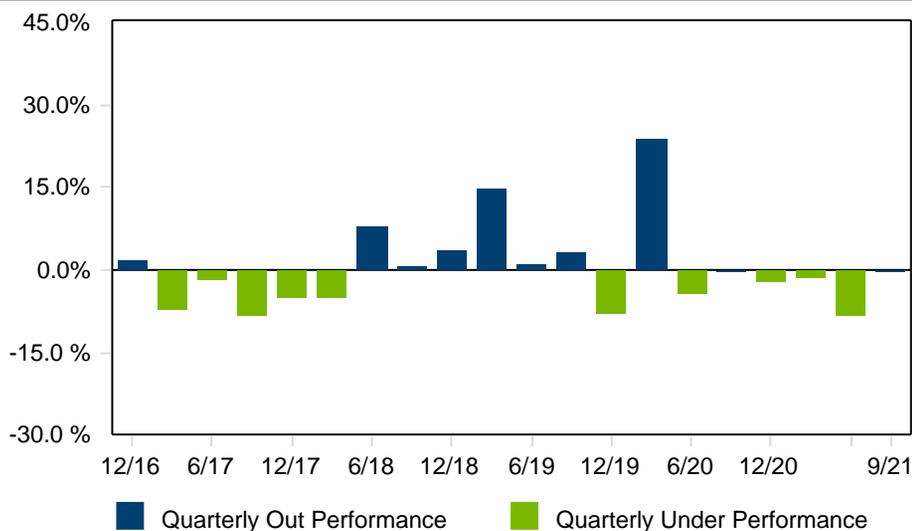
Account Information

Account Name: Pershing Square International  
 Inception Date: 06/30/2008  
 Account Structure: Commingled Fund  
 Asset Class: US Equity  
 Benchmark: Dow Jones U.S. Total Stock Market Index  
 Peer Group: IM U.S. Equity (SA+CF)

Return Summary



Quarterly Excess Performance

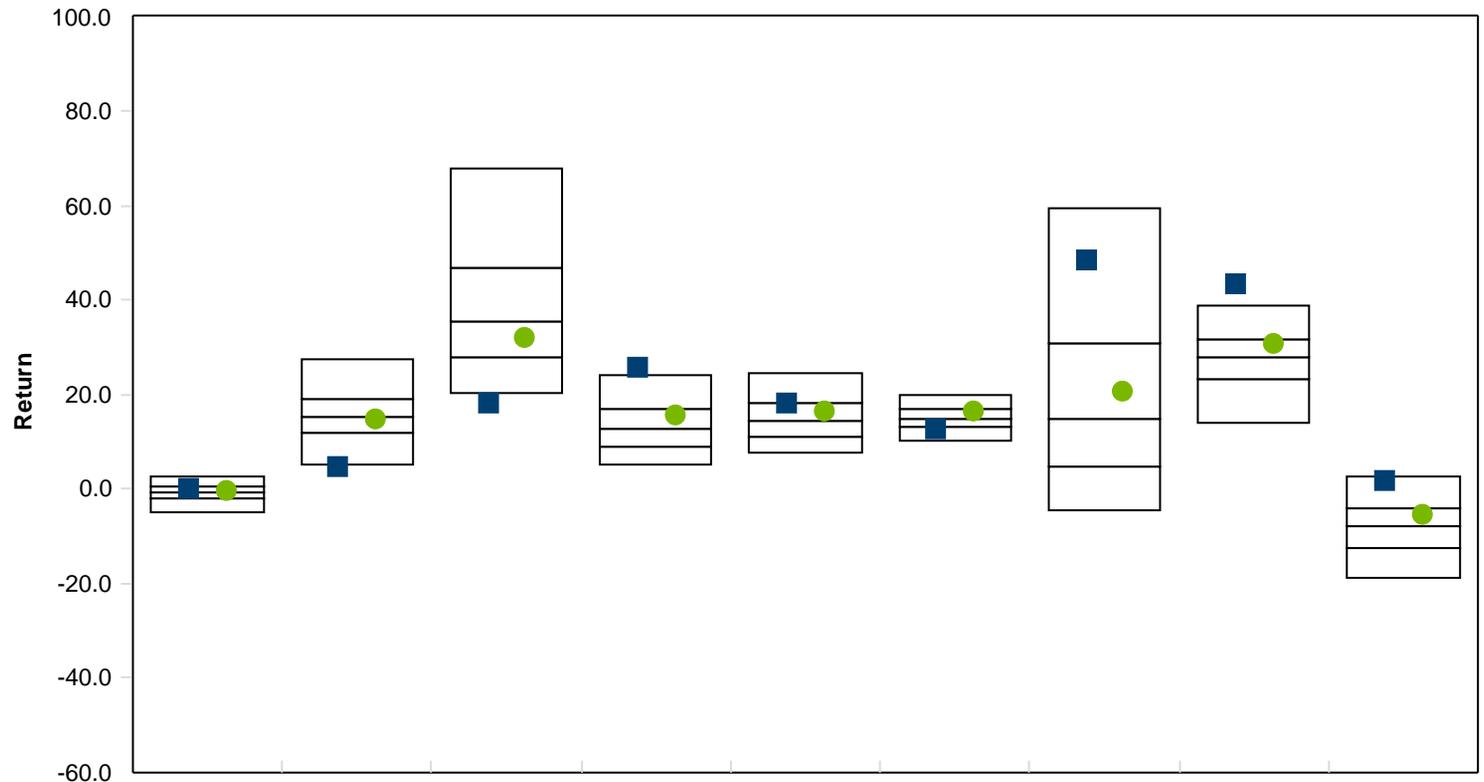


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Equity (SA+CF)

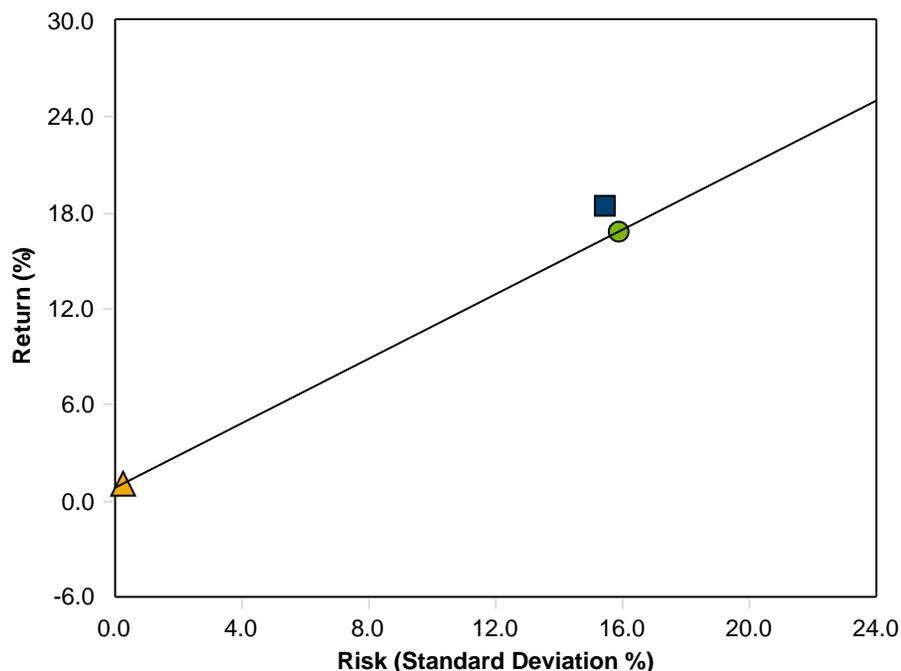


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Pershing Square International	0.0 (39)	4.9 (96)	18.1 (97)	26.0 (4)	18.5 (24)	12.6 (84)	48.8 (9)	43.5 (2)	1.8 (7)
● Dow Jones U.S. Total Stock Market Index	-0.1 (41)	15.1 (53)	32.1 (60)	16.0 (33)	16.8 (32)	16.6 (30)	20.8 (38)	30.9 (31)	-5.3 (35)
5th Percentile	2.8	27.6	67.9	24.1	24.6	19.9	59.6	38.9	2.7
1st Quartile	0.5	19.3	47.2	17.2	18.1	17.0	30.9	31.8	-3.8
Median	-0.5	15.5	35.6	12.7	14.4	15.0	15.0	27.9	-7.7
3rd Quartile	-2.0	11.9	28.2	9.2	11.2	13.3	4.7	23.4	-12.5
95th Percentile	-4.7	5.2	20.3	5.4	7.7	10.1	-4.4	14.2	-18.9
Population	1,411	1,407	1,398	1,349	1,264	1,038	1,722	1,836	1,912

parentheses contain percentile rankings.

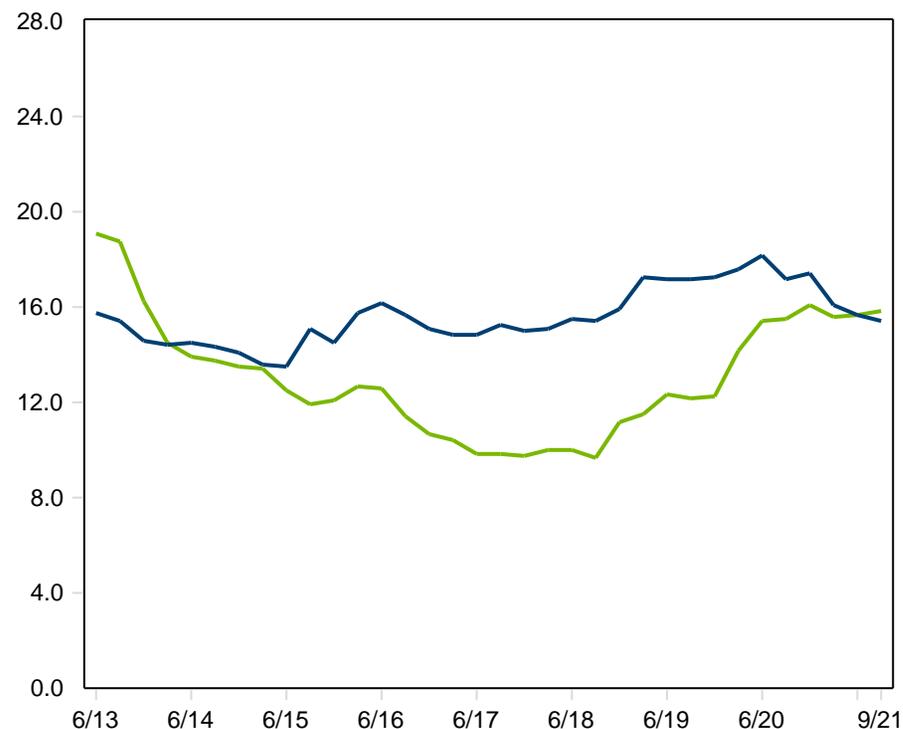
Pershing Square International Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



- Pershing Square International
- Dow Jones U.S. Total Stock Market Index
- ▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



- Pershing Square International
- Dow Jones U.S. Total Stock Market Index

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Pershing Square International	1.34	14.37	0.09	0.33	1.11	9.06	0.56	18.48	15.45	0.58
Dow Jones U.S. Total Stock Market Index	0.00	0.00	N/A	1.00	0.99	0.00	1.00	16.82	15.85	1.00
FTSE 3 Month T-Bill	-15.77	15.90	-0.99	0.03	N/A	1.18	0.00	1.13	0.25	-0.19

Pershing Square Holdings Performance Summary

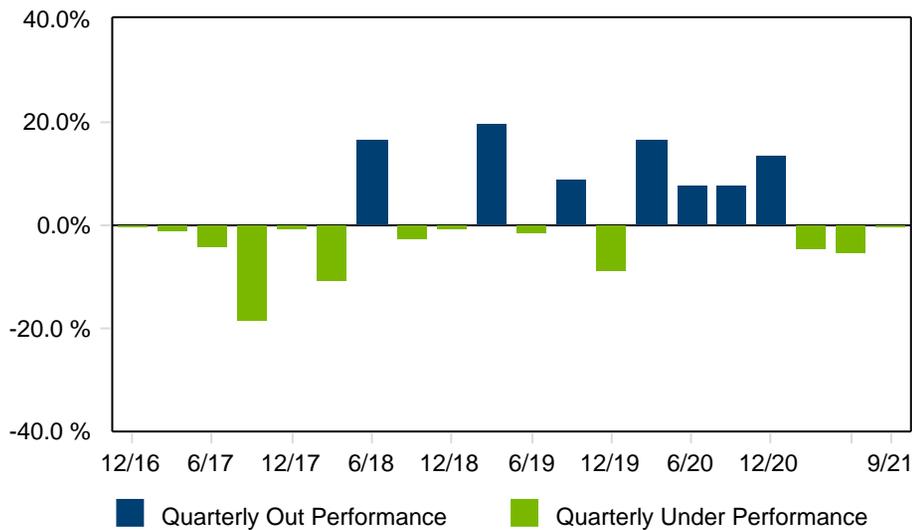
Account Information

Account Name: Pershing Square Holdings  
 Inception Date: 12/31/2012  
 Account Structure: Commingled Fund  
 Asset Class: US Equity  
 Benchmark: Dow Jones U.S. Total Stock Market Index  
 Peer Group: IM U.S. Equity (SA+CF)

Return Summary



Quarterly Excess Performance

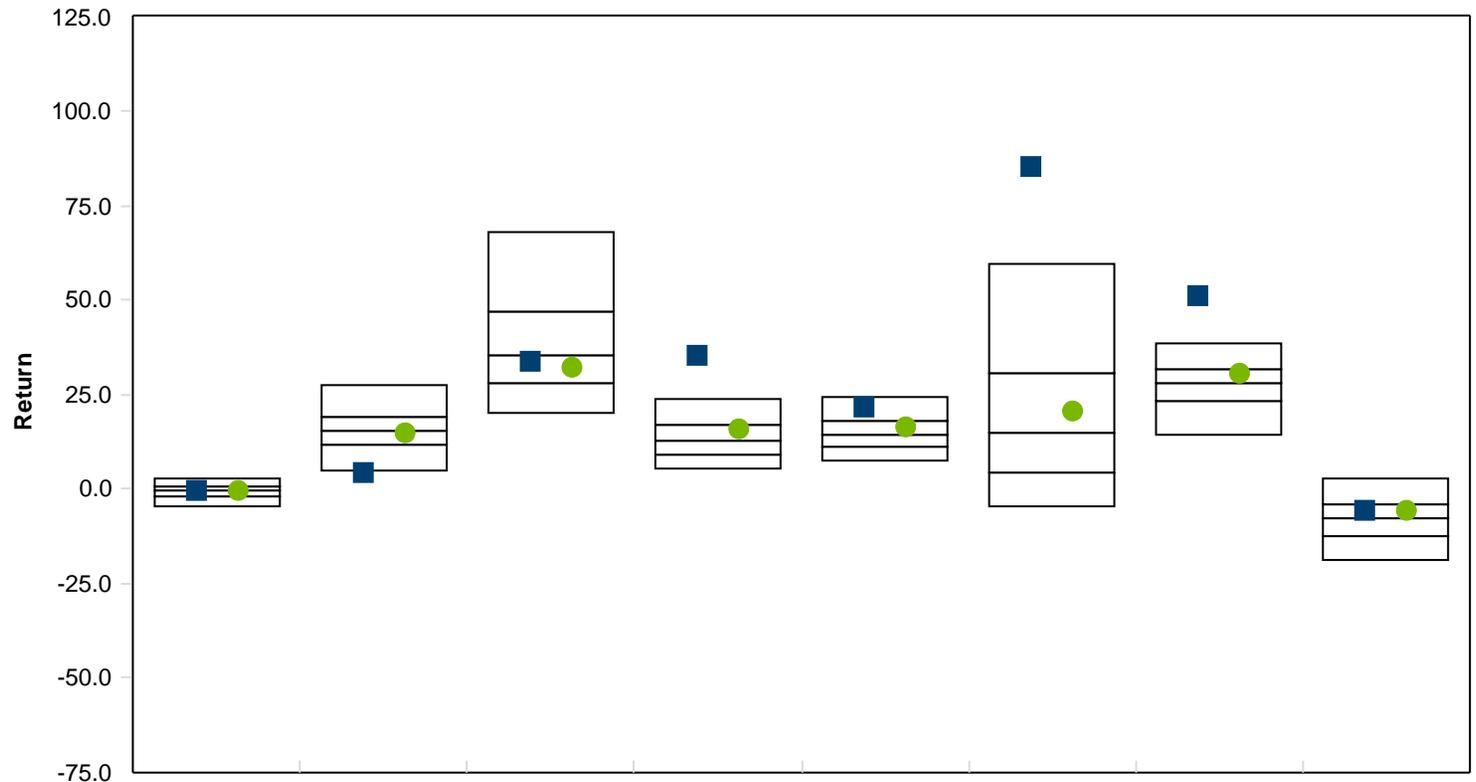


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Equity (SA+CF)

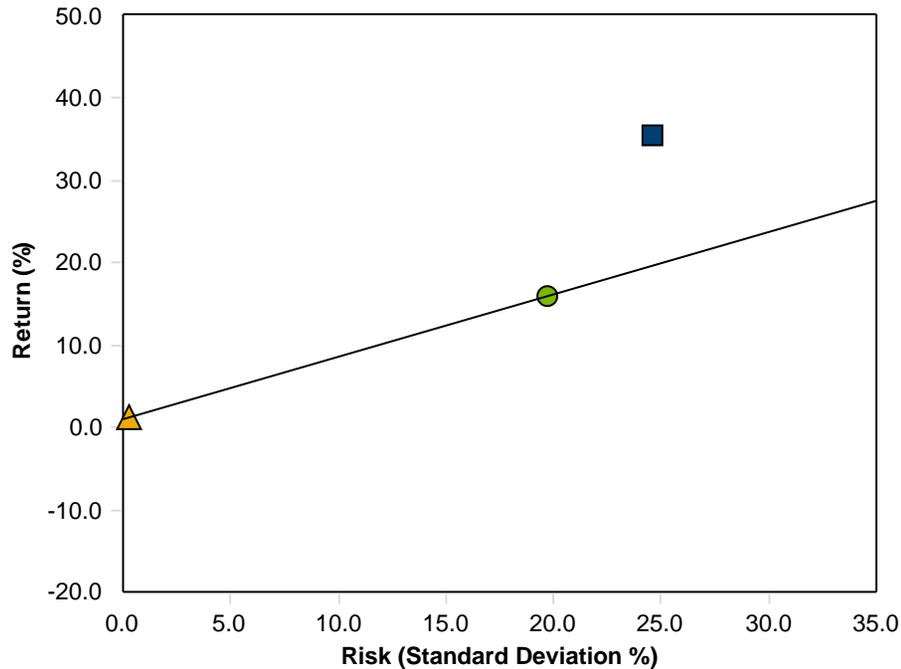


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	2020	2019	2018
■ Pershing Square Holdings	-0.4 (49)	4.3 (97)	33.9 (55)	35.5 (1)	22.1 (12)	85.7 (2)	51.3 (1)	-5.3 (36)
● Dow Jones U.S. Total Stock Market Index	-0.1 (41)	15.1 (53)	32.1 (60)	16.0 (33)	16.8 (32)	20.8 (38)	30.9 (31)	-5.3 (35)
5th Percentile	2.8	27.6	67.9	24.1	24.6	59.6	38.9	2.7
1st Quartile	0.5	19.3	47.2	17.2	18.1	30.9	31.8	-3.8
Median	-0.5	15.5	35.6	12.7	14.4	15.0	27.9	-7.7
3rd Quartile	-2.0	11.9	28.2	9.2	11.2	4.7	23.4	-12.5
95th Percentile	-4.7	5.2	20.3	5.4	7.7	-4.4	14.2	-18.9
Population	1,411	1,407	1,398	1,349	1,264	1,722	1,836	1,912

Paraphrases contain percentile rankings.

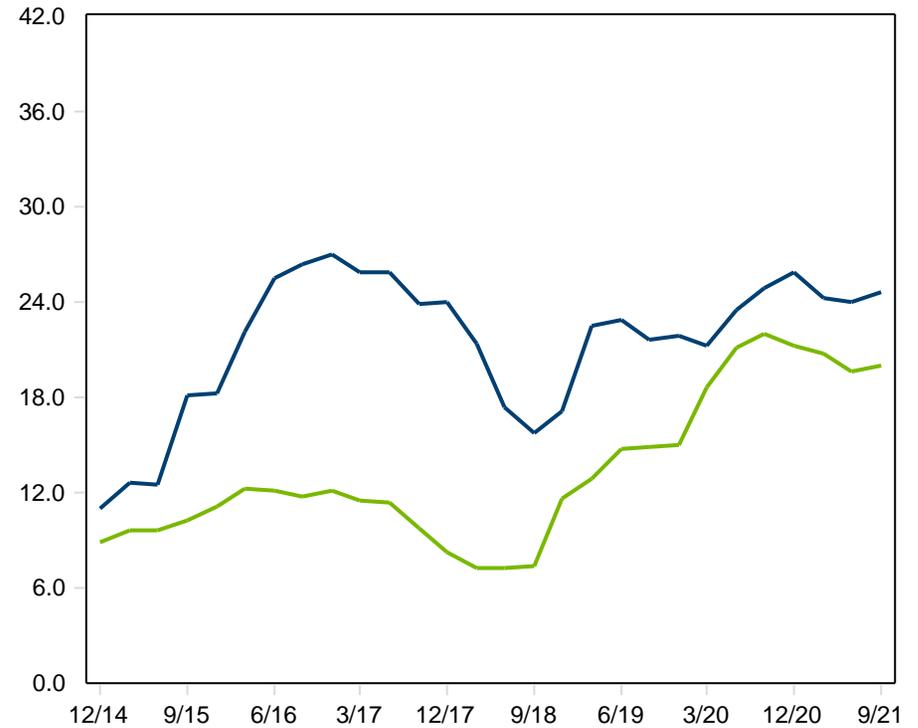
**Pershing Square Holdings Risk Profile**

**Annualized Return vs. Annualized Standard Deviation  
3 Years**



- Pershing Square Holdings
- Dow Jones U.S. Total Stock Market Index
- ▲ FTSE 3 Month T-Bill

**Rolling 2 Years Standard Deviation**



- Pershing Square Holdings
- Dow Jones U.S. Total Stock Market Index

**3 Years Historical Statistics**

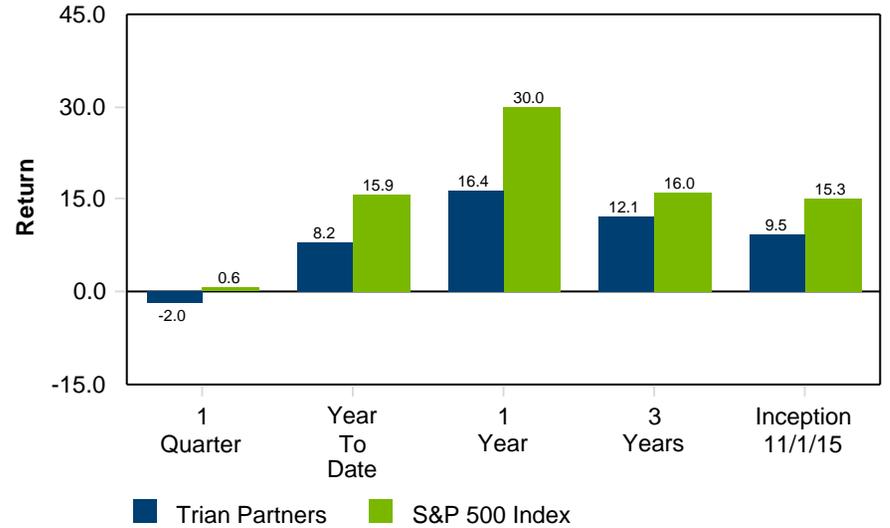
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Pershing Square Holdings	16.72	16.78	1.00	0.54	1.32	19.74	0.91	35.45	24.56	0.73
Dow Jones U.S. Total Stock Market Index	0.00	0.00	N/A	1.00	0.79	0.00	1.00	15.95	19.71	1.00
FTSE 3 Month T-Bill	-15.66	19.77	-0.79	0.05	N/A	1.20	0.00	1.14	0.30	-0.21

Trian Partners Performance Summary

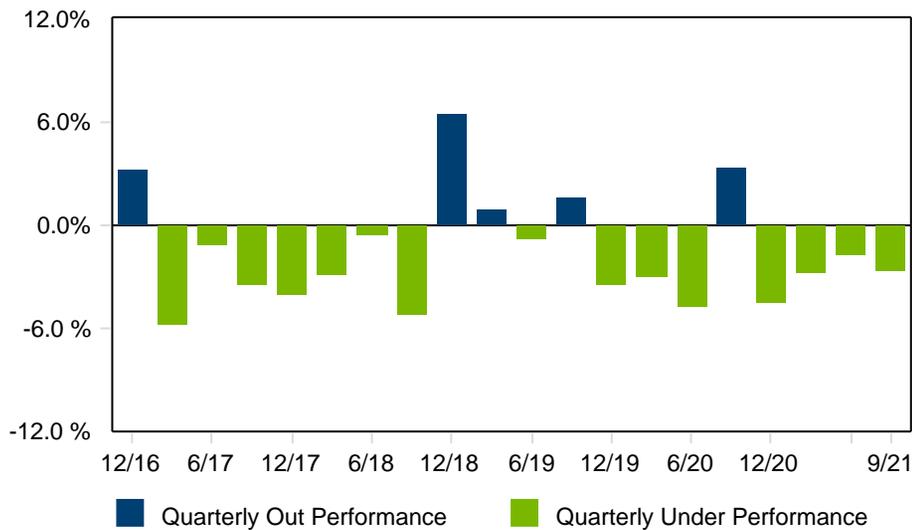
Account Information

Account Name: Trian Partners  
 Inception Date: 11/01/2015  
 Account Structure: Commingled Fund  
 Asset Class: US Equity  
 Benchmark: S&P 500 Index  
 Peer Group:

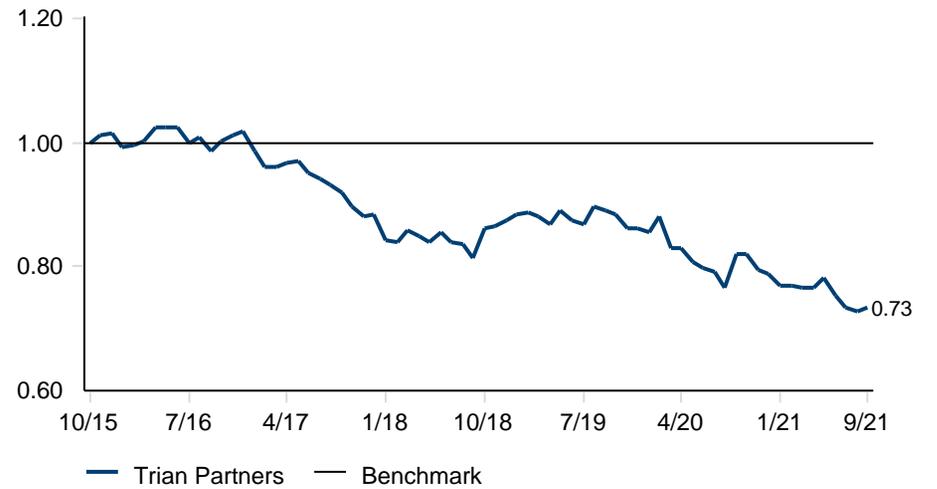
Return Summary



Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

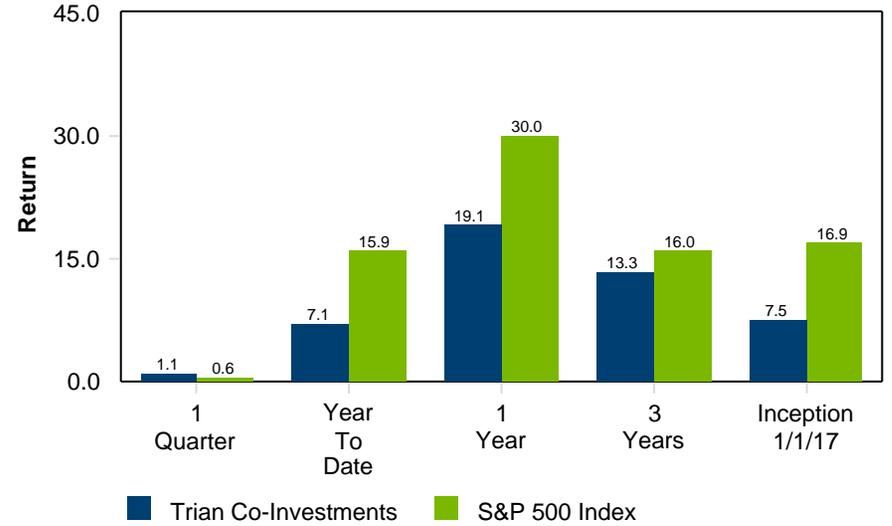


Trian Co-Investments Performance Summary

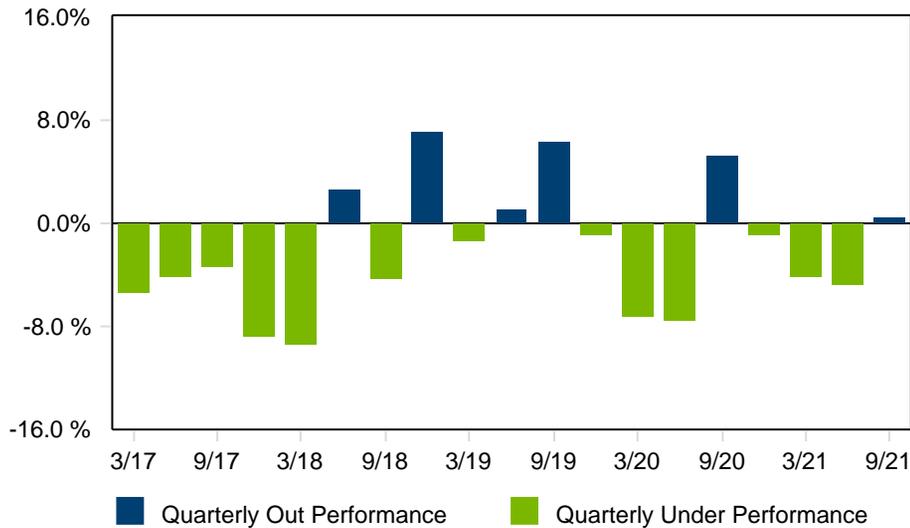
Account Information

Account Name: Trian Co-Investments  
 Inception Date: 01/01/2017  
 Account Structure: Commingled Fund  
 Asset Class: US Equity  
 Benchmark: S&P 500 Index  
 Peer Group:

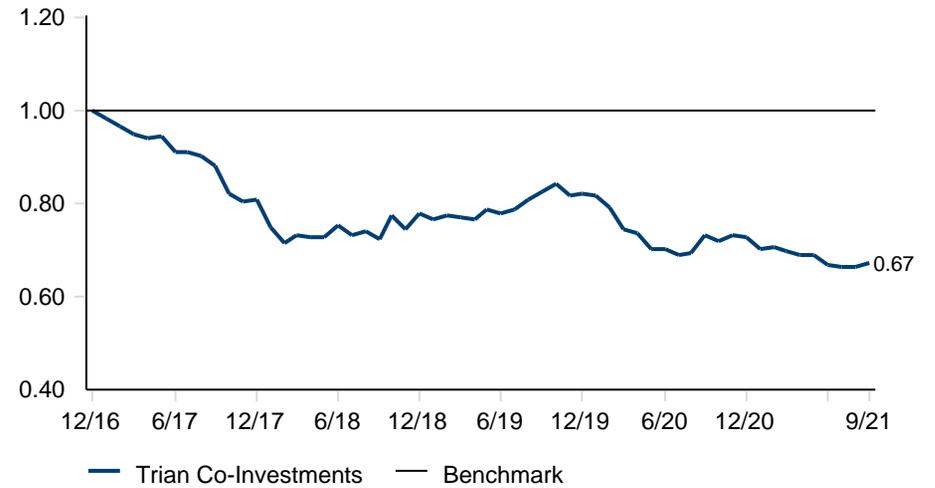
Return Summary



Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

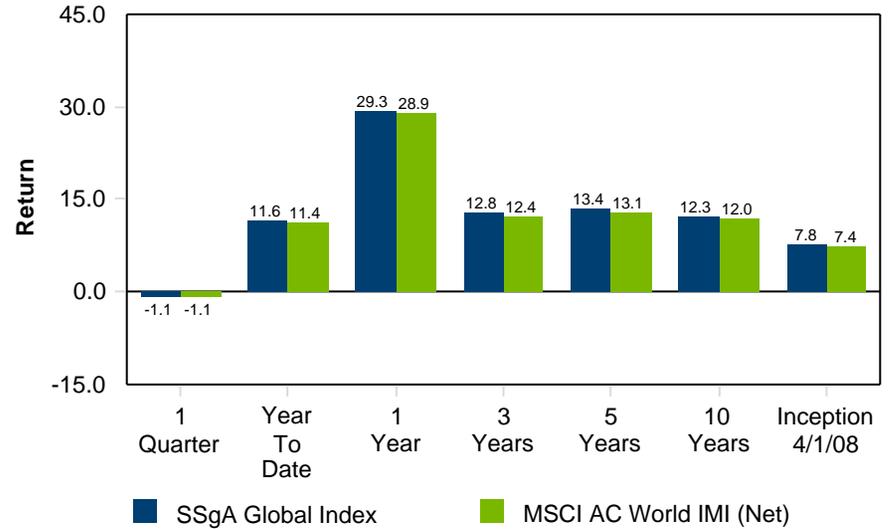


SSgA Global Index Performance Summary

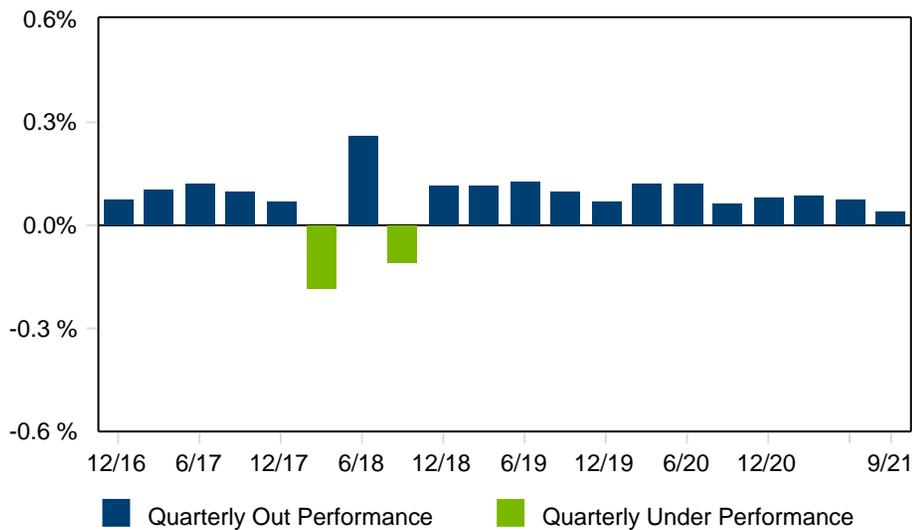
Account Information

Account Name: SSgA Global Index  
 Inception Date: 03/31/2008  
 Account Structure: Commingled Fund  
 Asset Class: Global Equity  
 Benchmark: MSCI AC World IMI (Net)  
 Peer Group: IM Global Equity (SA+CF)

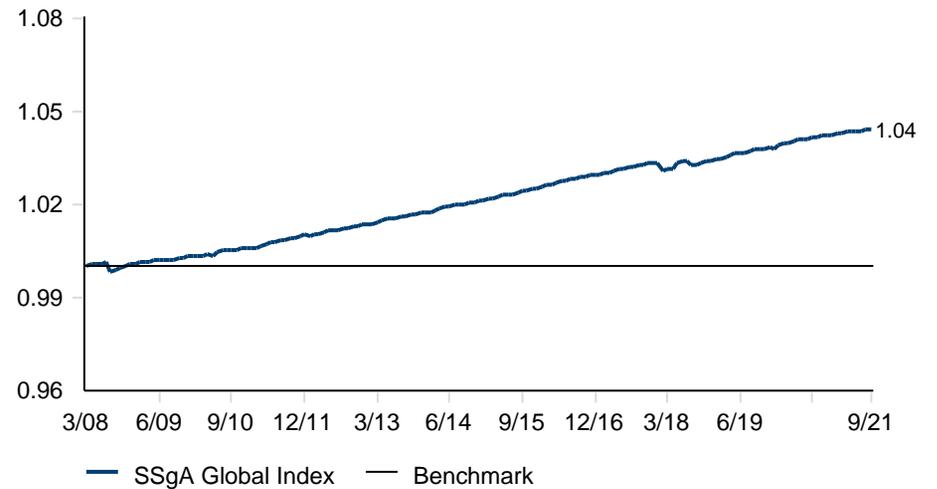
Return Summary



Quarterly Excess Performance

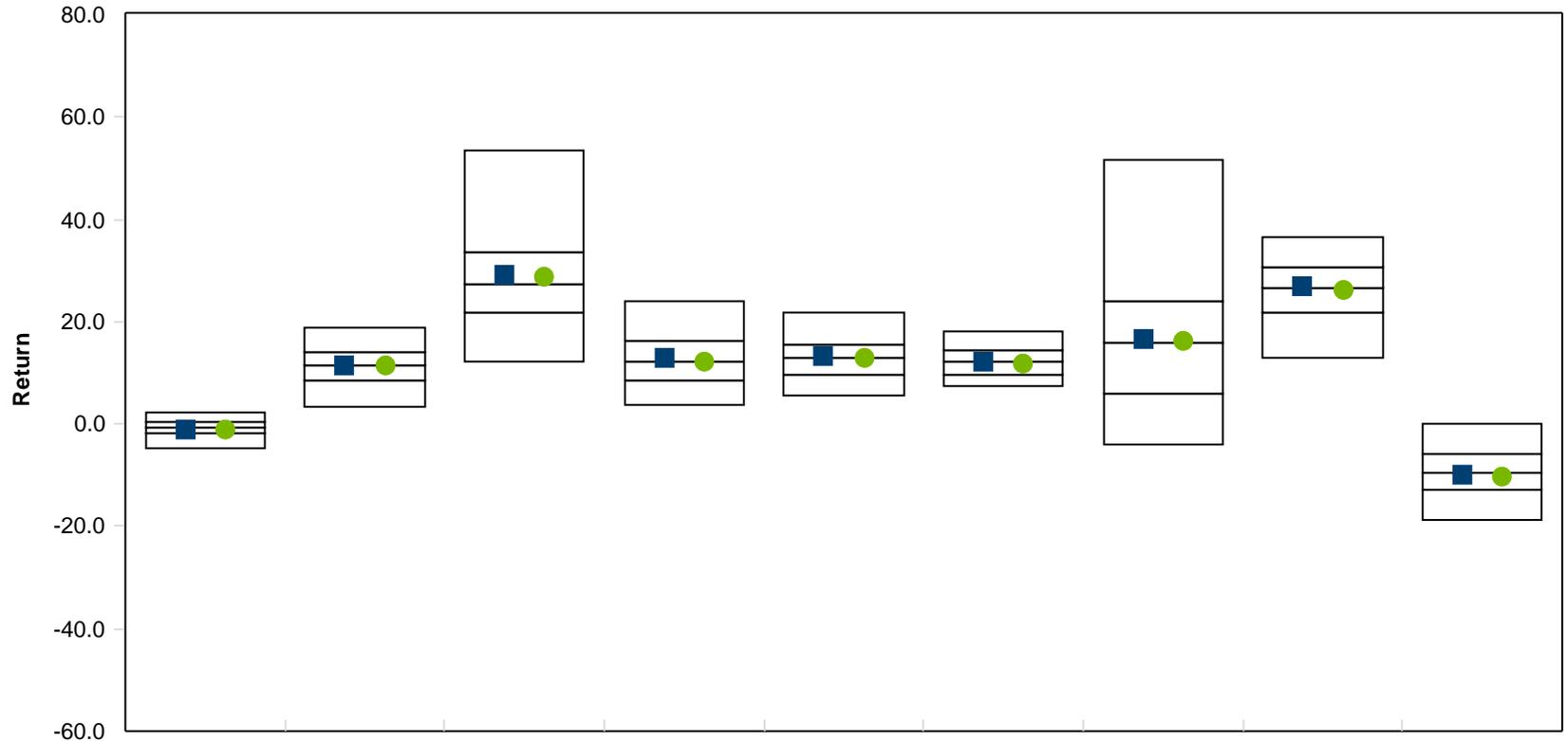


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Global Equity (SA+CF)

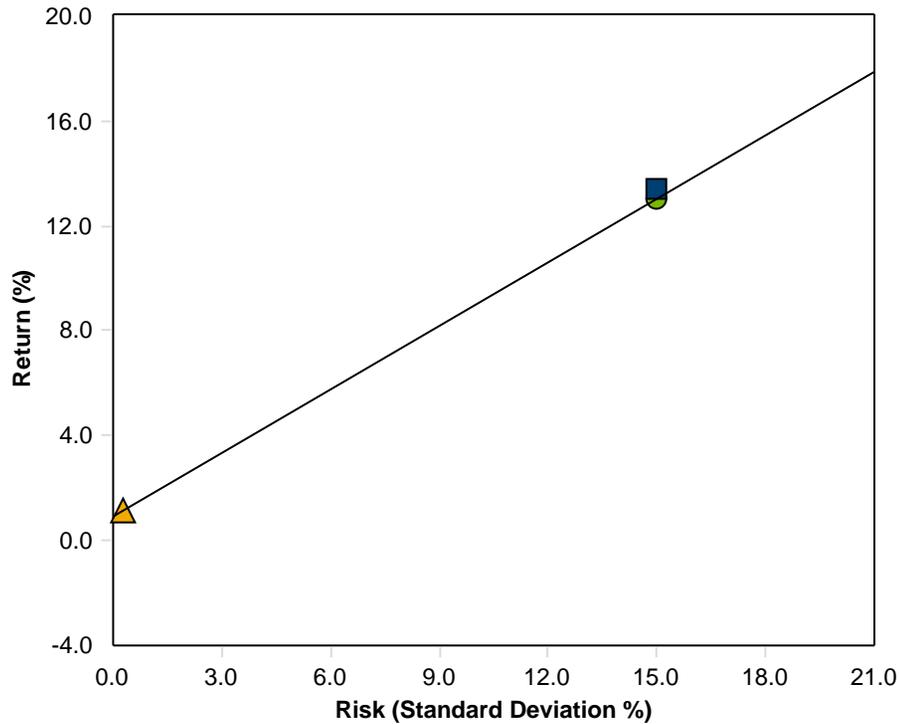


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ SSgA Global Index	-1.1 (61)	11.6 (47)	29.3 (40)	12.8 (46)	13.4 (45)	12.3 (50)	16.7 (47)	26.8 (50)	-10.0 (57)
● MSCI AC World IMI (Net)	-1.1 (61)	11.4 (50)	28.9 (41)	12.4 (49)	13.1 (48)	12.0 (54)	16.3 (49)	26.4 (52)	-10.1 (58)
5th Percentile	2.3	18.9	53.4	24.1	21.8	18.3	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	14.6	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	12.3	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	9.8	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	7.3	-4.0	12.8	-18.9
Population	345	343	336	317	286	179	382	408	417

parentheses contain percentile rankings.

SSgA Global Index Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ SSgA Global Index    ● MSCI AC World IMI (Net)  
 ▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



5 Years Historical Statistics

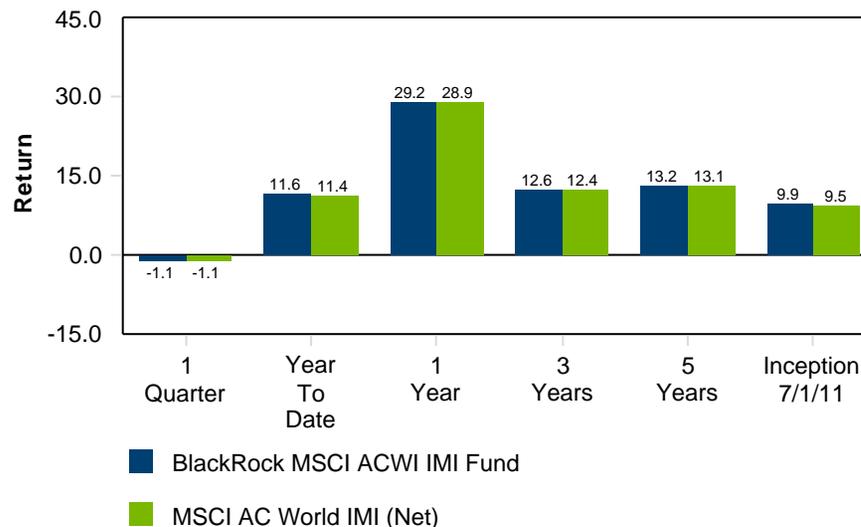
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
SSgA Global Index	0.30	0.18	1.73	1.00	0.84	0.31	1.00	13.40	15.00	1.00
MSCI AC World IMI (Net)	0.00	0.00	N/A	1.00	0.82	0.00	1.00	13.06	15.00	1.00
FTSE 3 Month T-Bill	-12.34	15.06	-0.82	0.05	N/A	1.18	0.00	1.13	0.25	-0.22

## BlackRock MSCI ACWI IMI Fund Performance Summary

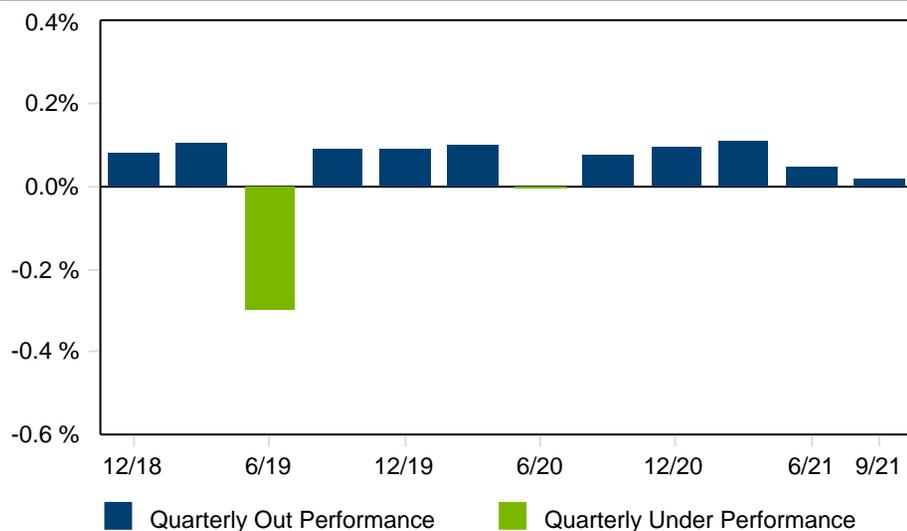
### Account Information

Account Name: BlackRock MSCI ACWI IMI Fund  
 Inception Date: 06/30/2011  
 Account Structure: Commingled Fund  
 Asset Class: Global Equity  
 Benchmark: MSCI AC World IMI (Net)  
 Peer Group: IM Global Equity (SA+CF)

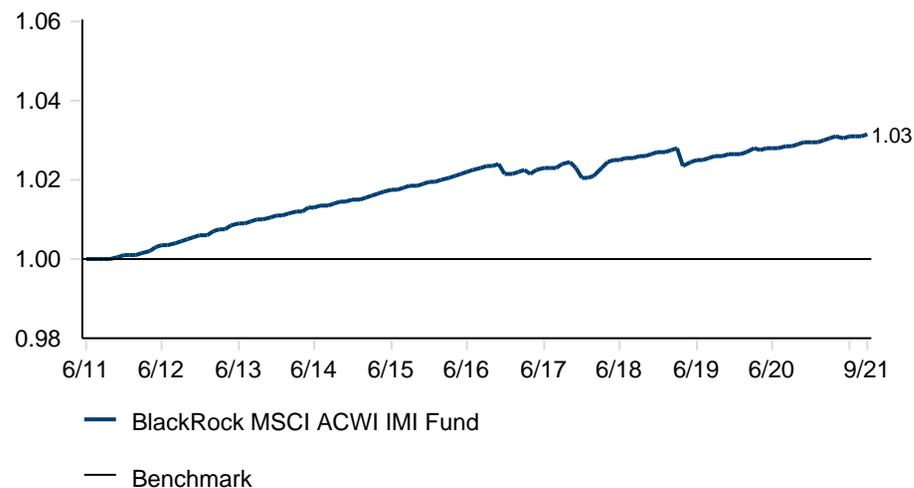
### Return Summary



### Quarterly Excess Performance

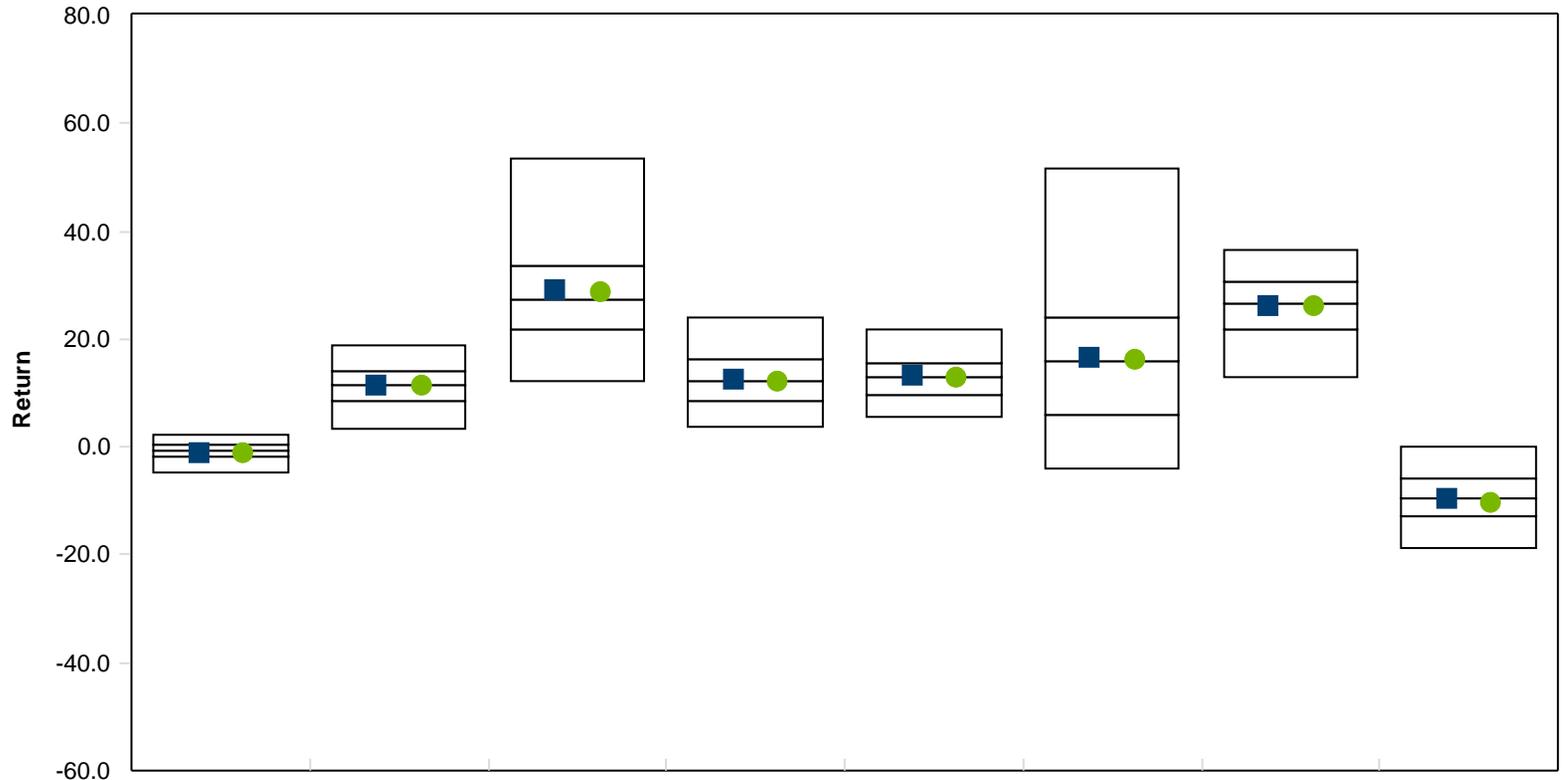


### Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Global Equity (SA+CF)

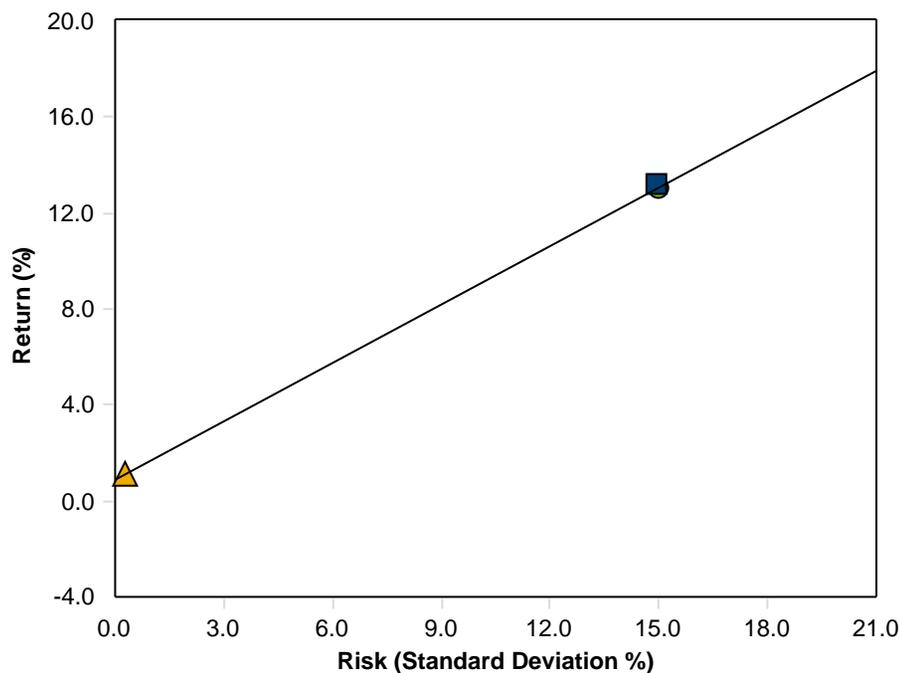


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	2020	2019	2018
■ BlackRock MSCI ACWI IMI Fund	-1.1 (61)	11.6 (47)	29.2 (40)	12.6 (47)	13.2 (46)	16.6 (48)	26.3 (52)	-9.5 (53)
● MSCI AC World IMI (Net)	-1.1 (61)	11.4 (50)	28.9 (41)	12.4 (49)	13.1 (48)	16.3 (49)	26.4 (52)	-10.1 (58)
5th Percentile	2.3	18.9	53.4	24.1	21.8	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	-4.0	12.8	-18.9
Population	345	343	336	317	286	382	408	417

parentheses contain percentile rankings.

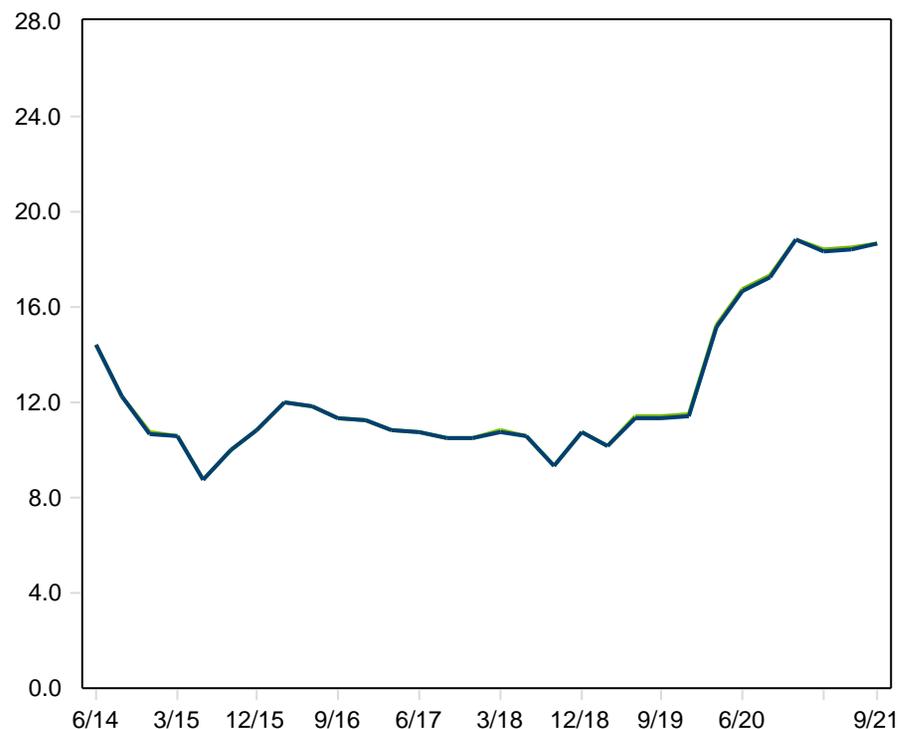
**BlackRock MSCI ACWI IMI Fund Risk Profile**

**Annualized Return vs. Annualized Standard Deviation  
5 Years**



- BlackRock MSCI ACWI IMI Fund
- MSCI AC World IMI (Net)
- ▲ FTSE 3 Month T-Bill

**Rolling 3 Years Standard Deviation**



- BlackRock MSCI ACWI IMI Fund
- MSCI AC World IMI (Net)

**5 Years Historical Statistics**

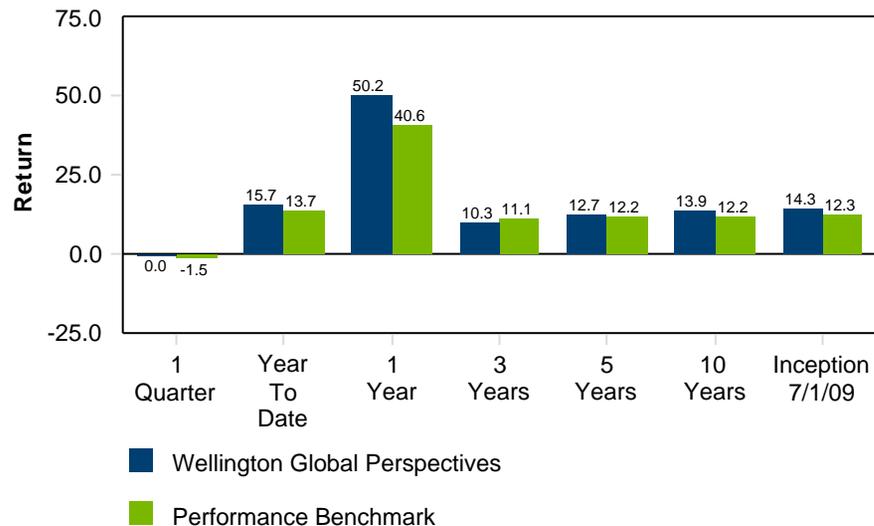
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
BlackRock MSCI ACWI IMI Fund	0.15	0.32	0.47	1.00	0.83	0.20	1.00	13.24	14.95	1.00
MSCI AC World IMI (Net)	0.00	0.00	N/A	1.00	0.82	0.00	1.00	13.06	15.00	1.00
FTSE 3 Month T-Bill	-12.34	15.06	-0.82	0.05	N/A	1.18	0.00	1.13	0.25	-0.22

**Wellington Global Perspectives Performance Summary**

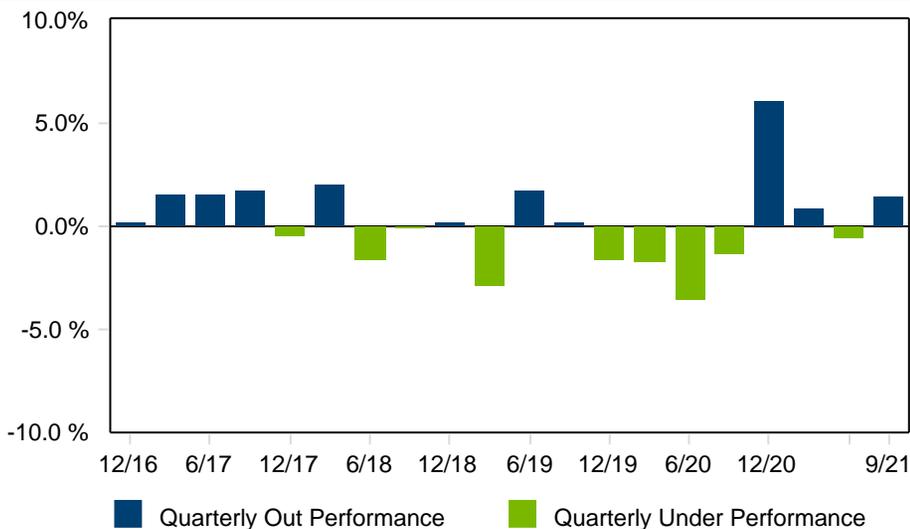
**Account Information**

Account Name: Wellington Global Perspectives  
 Inception Date: 06/30/2009  
 Account Structure: Separate Account  
 Asset Class: Global Equity  
 Benchmark: Performance Benchmark  
 Peer Group: IM Global Equity (SA+CF)

**Return Summary**



**Quarterly Excess Performance**

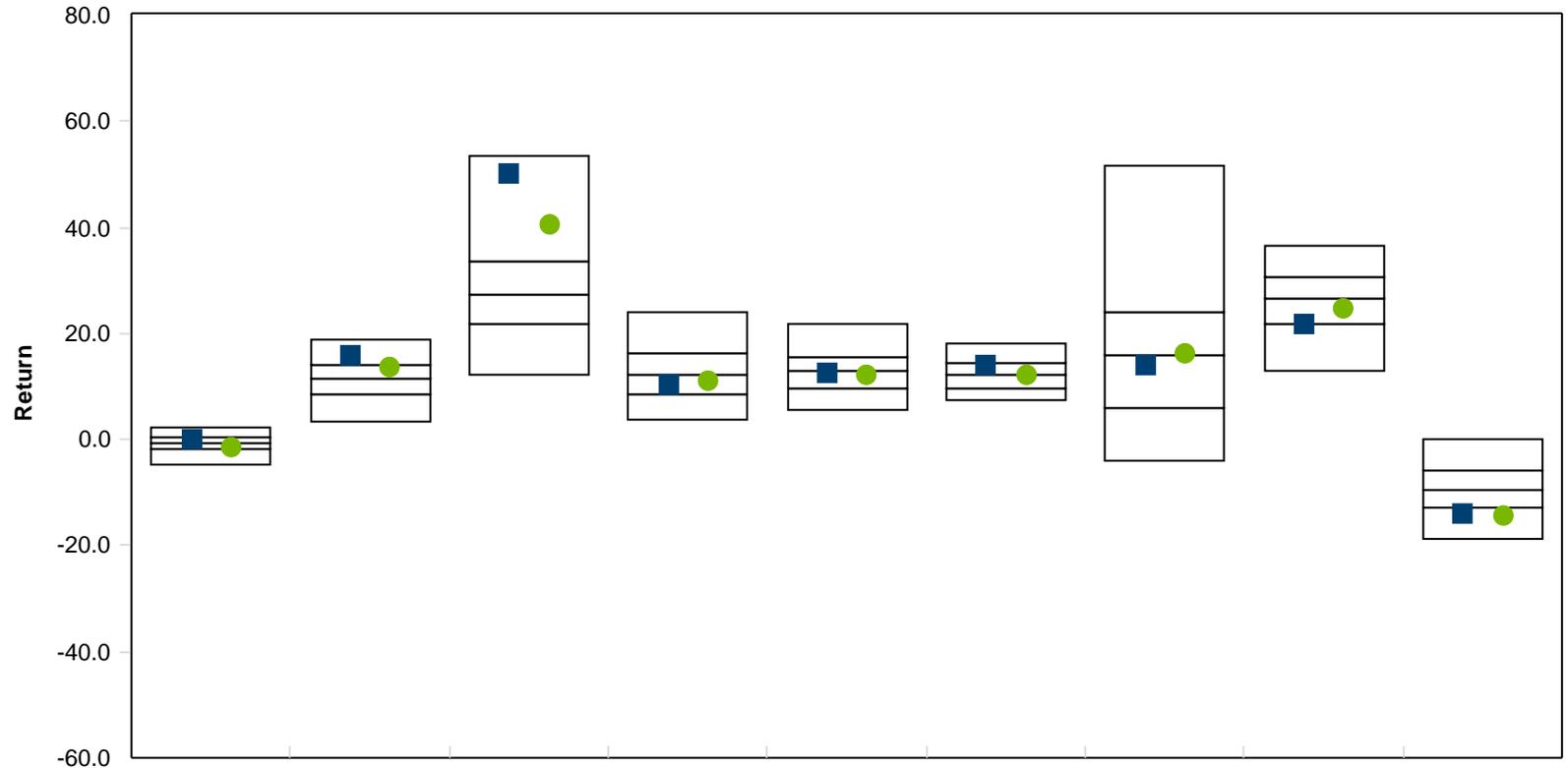


**Ratio of Cumulative Wealth - Since Inception**



Peer Group Analysis

IM Global Equity (SA+CF)

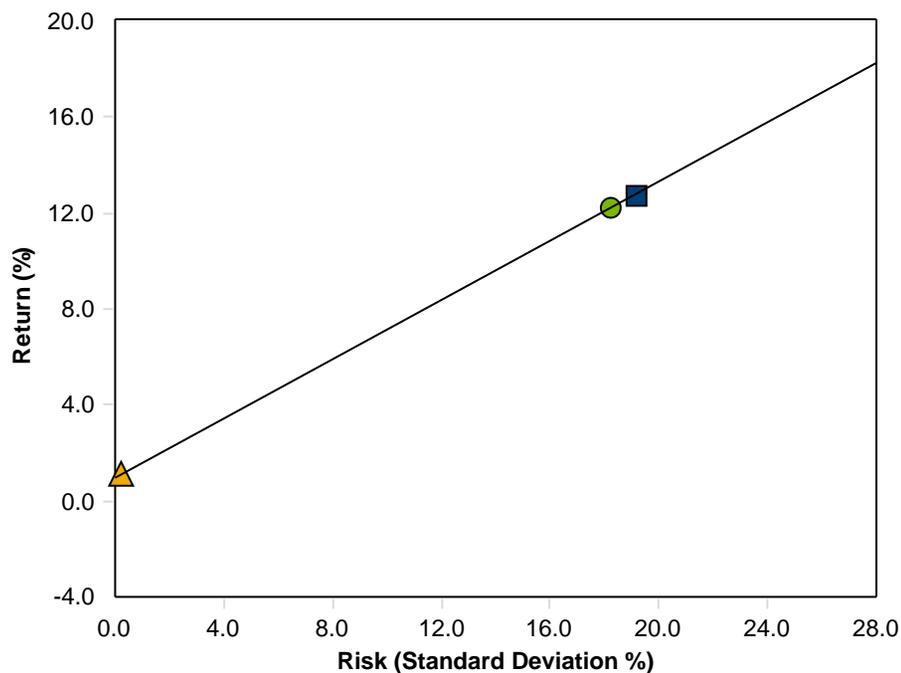


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
Wellington Global Perspectives	0.0 (35)	15.7 (18)	50.2 (7)	10.3 (61)	12.7 (52)	13.9 (28)	14.1 (56)	21.9 (76)	-14.0 (81)
Performance Benchmark	-1.5 (70)	13.7 (29)	40.6 (14)	11.1 (56)	12.2 (55)	12.2 (52)	16.3 (49)	24.7 (64)	-14.4 (83)
5th Percentile	2.3	18.9	53.4	24.1	21.8	18.3	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	14.6	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	12.3	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	9.8	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	7.3	-4.0	12.8	-18.9
Population	345	343	336	317	286	179	382	408	417

parentheses contain percentile rankings.

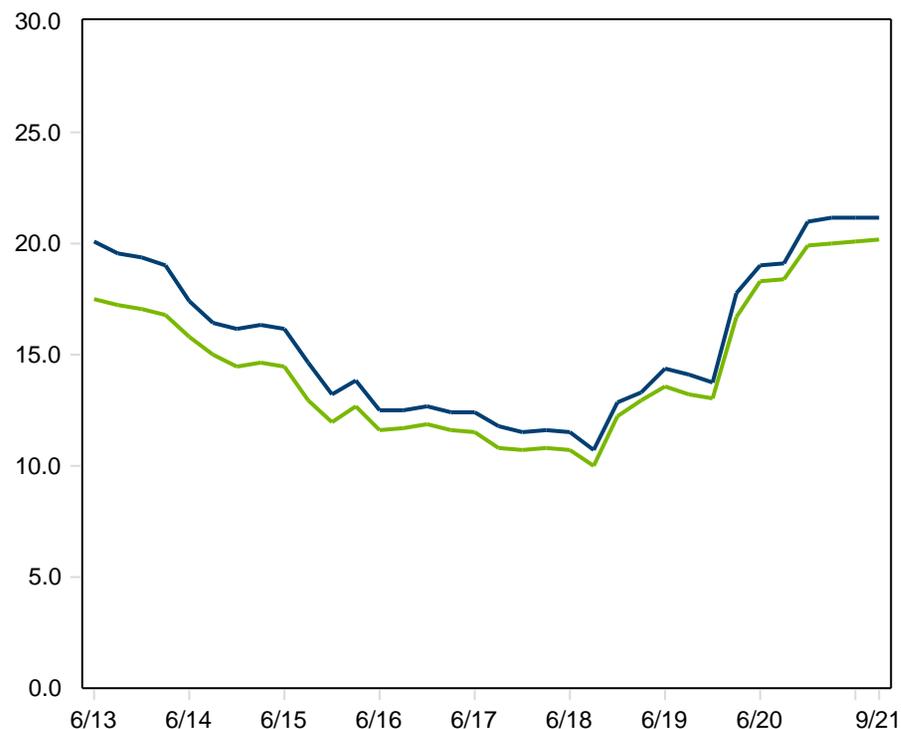
Wellington Global Perspectives Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



- Wellington Global Perspectives
- Performance Benchmark
- ▲ FTSE 3 Month T-Bill

Rolling 4 Years Standard Deviation



- Wellington Global Perspectives
- Performance Benchmark

5 Years Historical Statistics

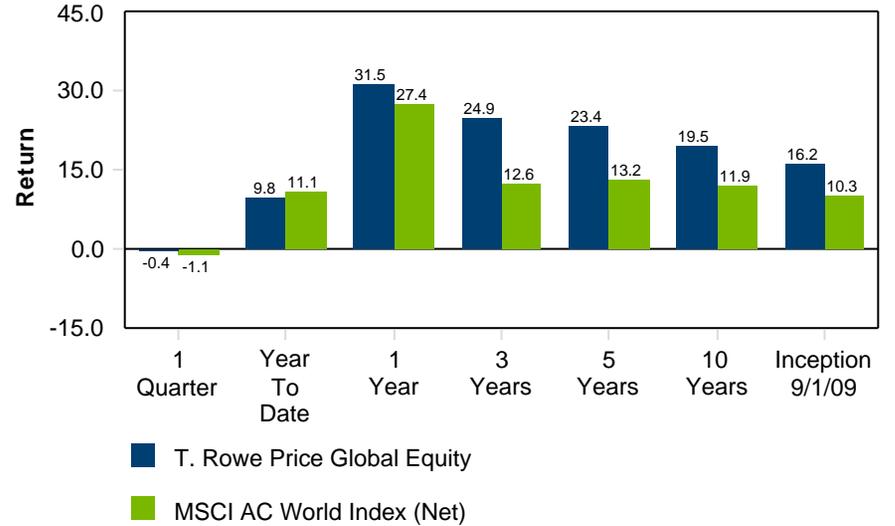
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Wellington Global Perspectives	0.67	3.31	0.20	0.97	0.67	0.18	1.04	12.73	19.15	0.99
Performance Benchmark	0.00	0.00	N/A	1.00	0.66	0.00	1.00	12.20	18.20	1.00
FTSE 3 Month T-Bill	-12.13	18.27	-0.66	0.07	N/A	1.18	0.00	1.13	0.25	-0.26

T. Rowe Price Global Equity Performance Summary

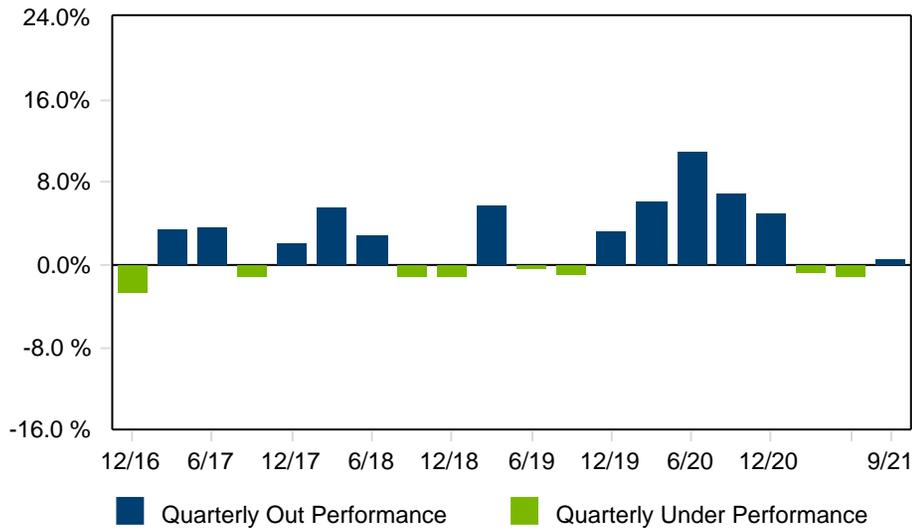
Account Information

Account Name: T. Rowe Price Global Equity  
 Inception Date: 08/31/2009  
 Account Structure: Separate Account  
 Asset Class: Global Equity  
 Benchmark: MSCI AC World Index (Net)  
 Peer Group: IM Global Equity (SA+CF)

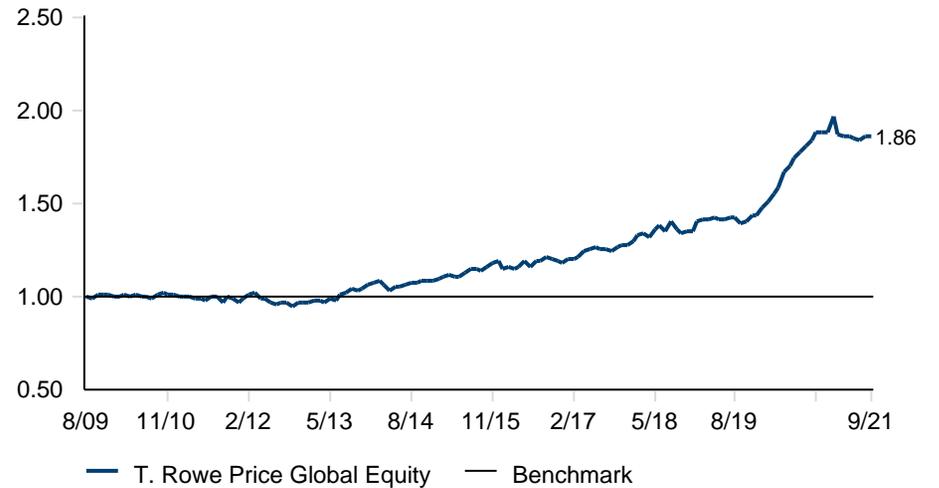
Return Summary



Quarterly Excess Performance

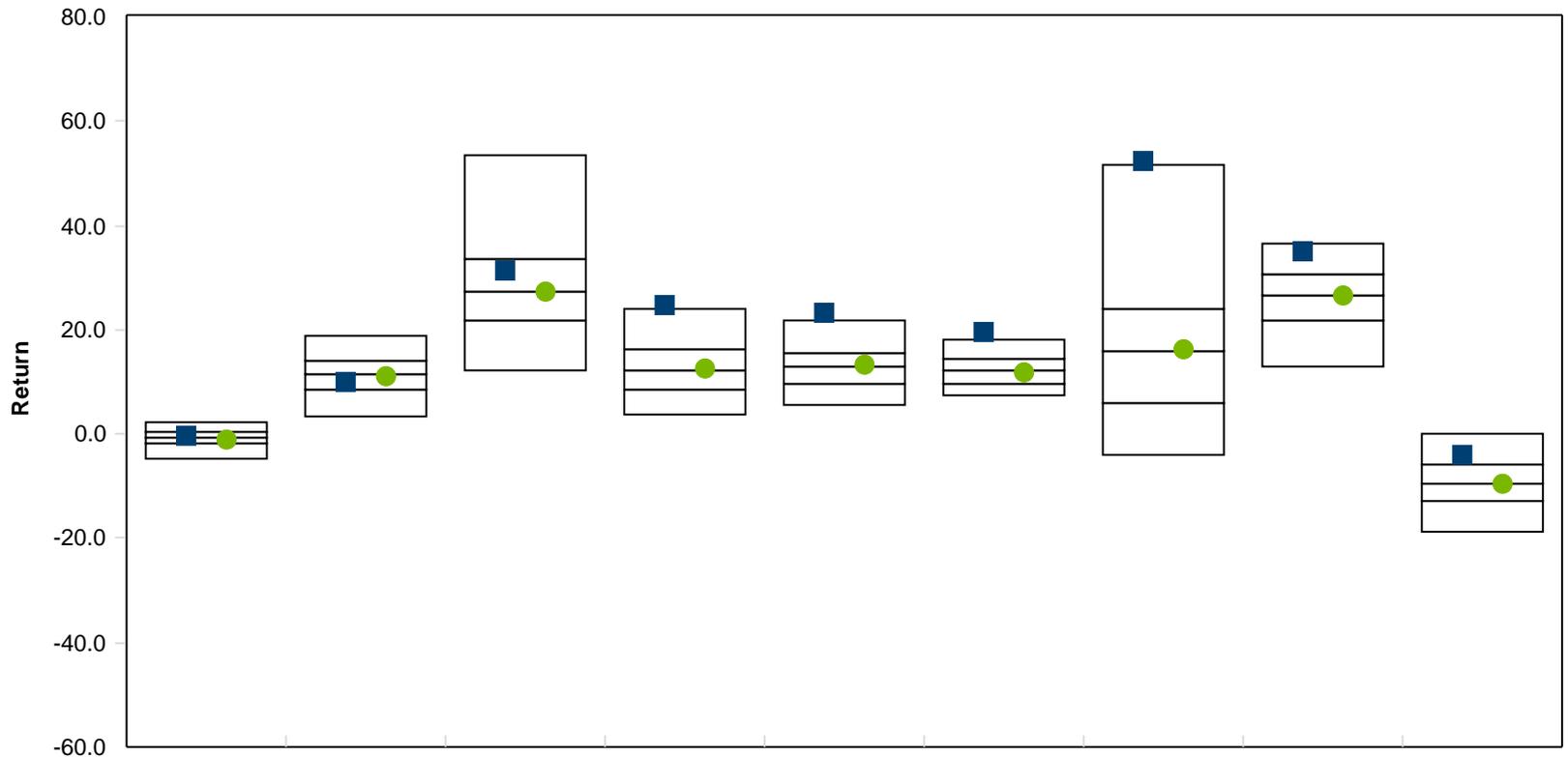


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Global Equity (SA+CF)

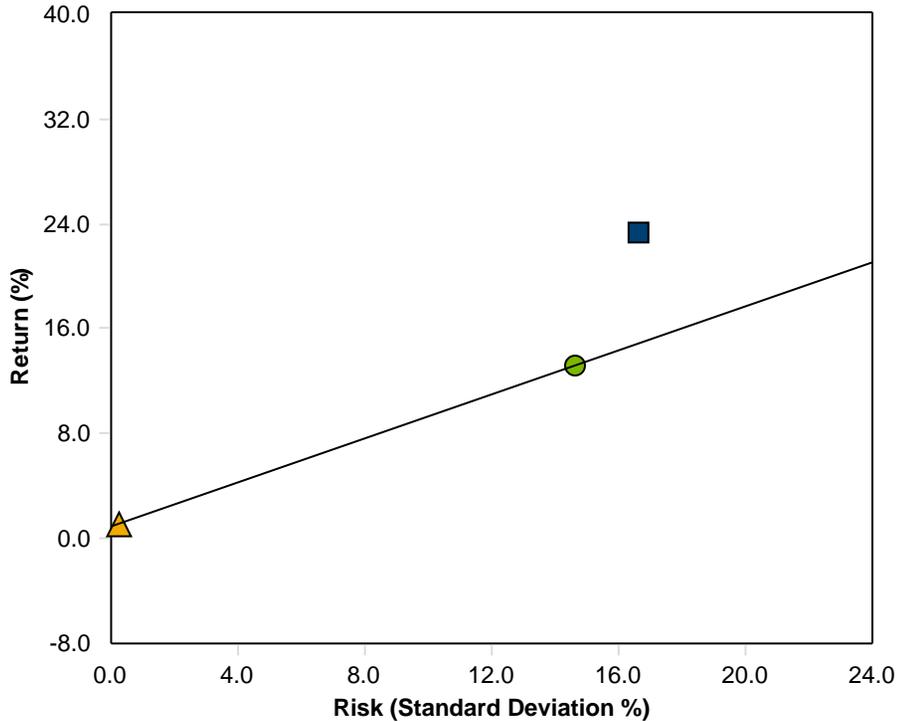


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ T. Rowe Price Global Equity	-0.4 (43)	9.8 (64)	31.5 (32)	24.9 (4)	23.4 (4)	19.5 (5)	52.2 (5)	35.2 (10)	-4.0 (18)
● MSCI AC World Index (Net)	-1.1 (60)	11.1 (51)	27.4 (50)	12.6 (47)	13.2 (47)	11.9 (56)	16.3 (49)	26.6 (51)	-9.4 (51)
5th Percentile	2.3	18.9	53.4	24.1	21.8	18.3	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	14.6	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	12.3	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	9.8	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	7.3	-4.0	12.8	-18.9
Population	345	343	336	317	286	179	382	408	417

parentheses contain percentile rankings.

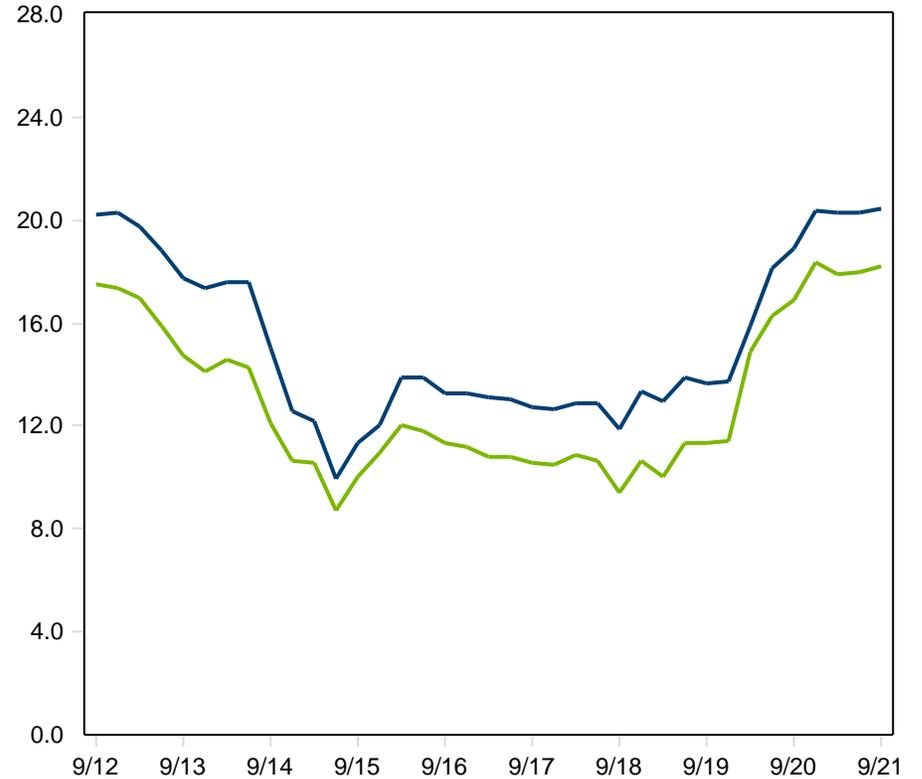
T. Rowe Price Global Equity Risk Profile

Annualized Return vs. Annualized Standard Deviation  
5 Years



■ T. Rowe Price Global Equity    ● MSCI AC World Index (Net)  
▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



— T. Rowe Price Global Equity    — MSCI AC World Index (Net)

5 Years Historical Statistics

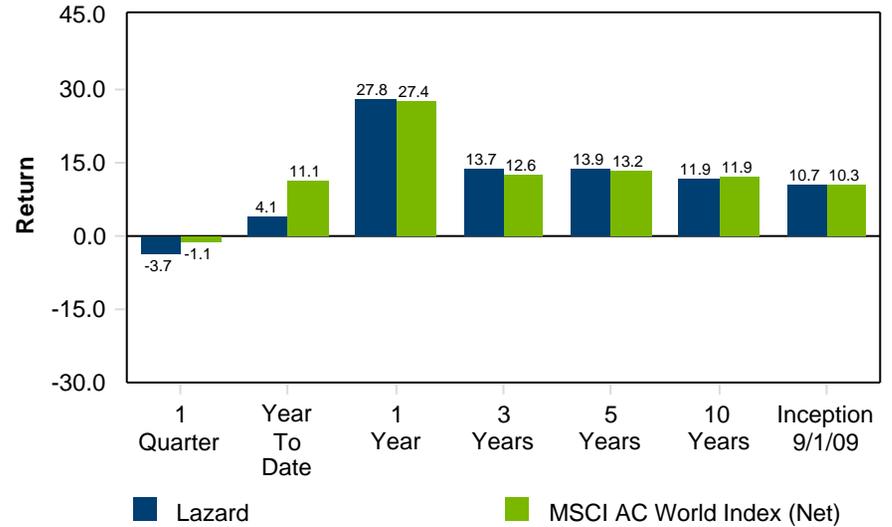
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
T. Rowe Price Global Equity	9.01	6.24	1.44	0.86	1.29	8.65	1.05	23.39	16.60	0.93
MSCI AC World Index (Net)	0.00	0.00	N/A	1.00	0.84	0.00	1.00	13.20	14.65	1.00
FTSE 3 Month T-Bill	-12.40	14.71	-0.84	0.04	N/A	1.18	0.00	1.13	0.25	-0.21

## Lazard Performance Summary

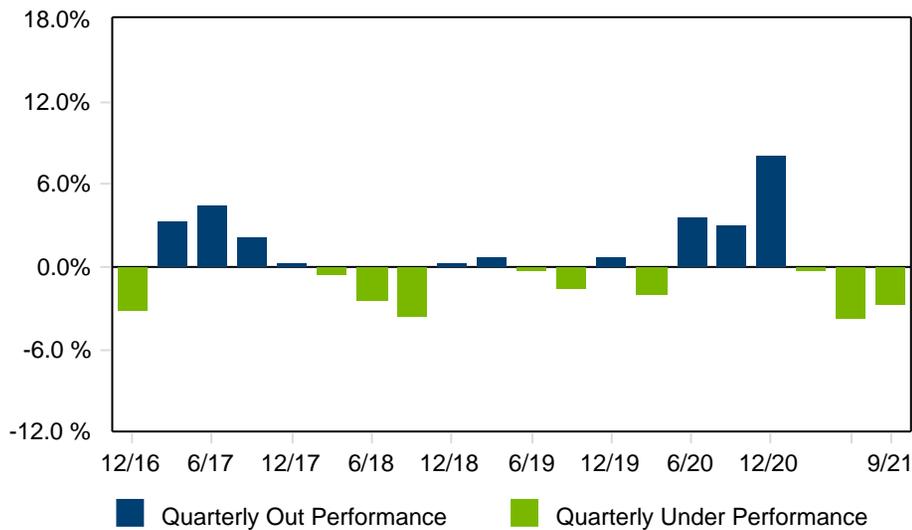
### Account Information

Account Name: Lazard  
 Inception Date: 08/31/2009  
 Account Structure: Separate Account  
 Asset Class: Global Equity  
 Benchmark: MSCI AC World Index (Net)  
 Peer Group: IM Global Equity (SA+CF)

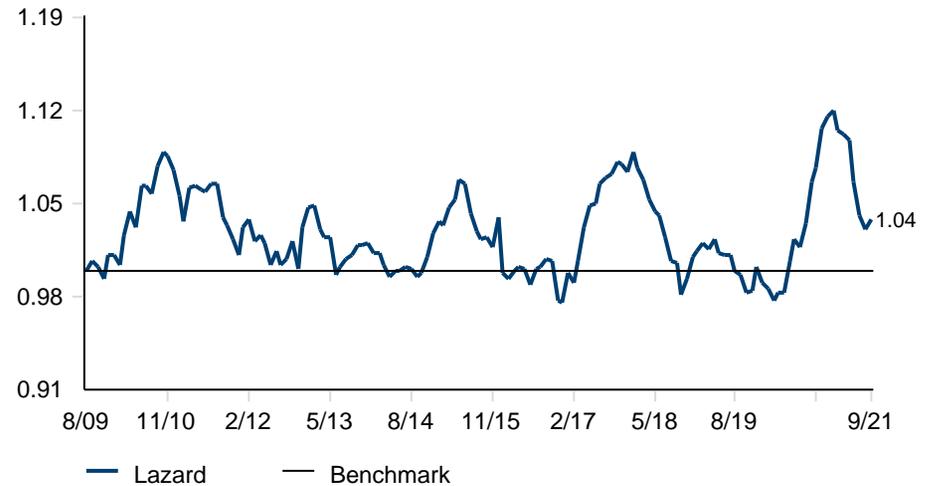
### Return Summary



### Quarterly Excess Performance

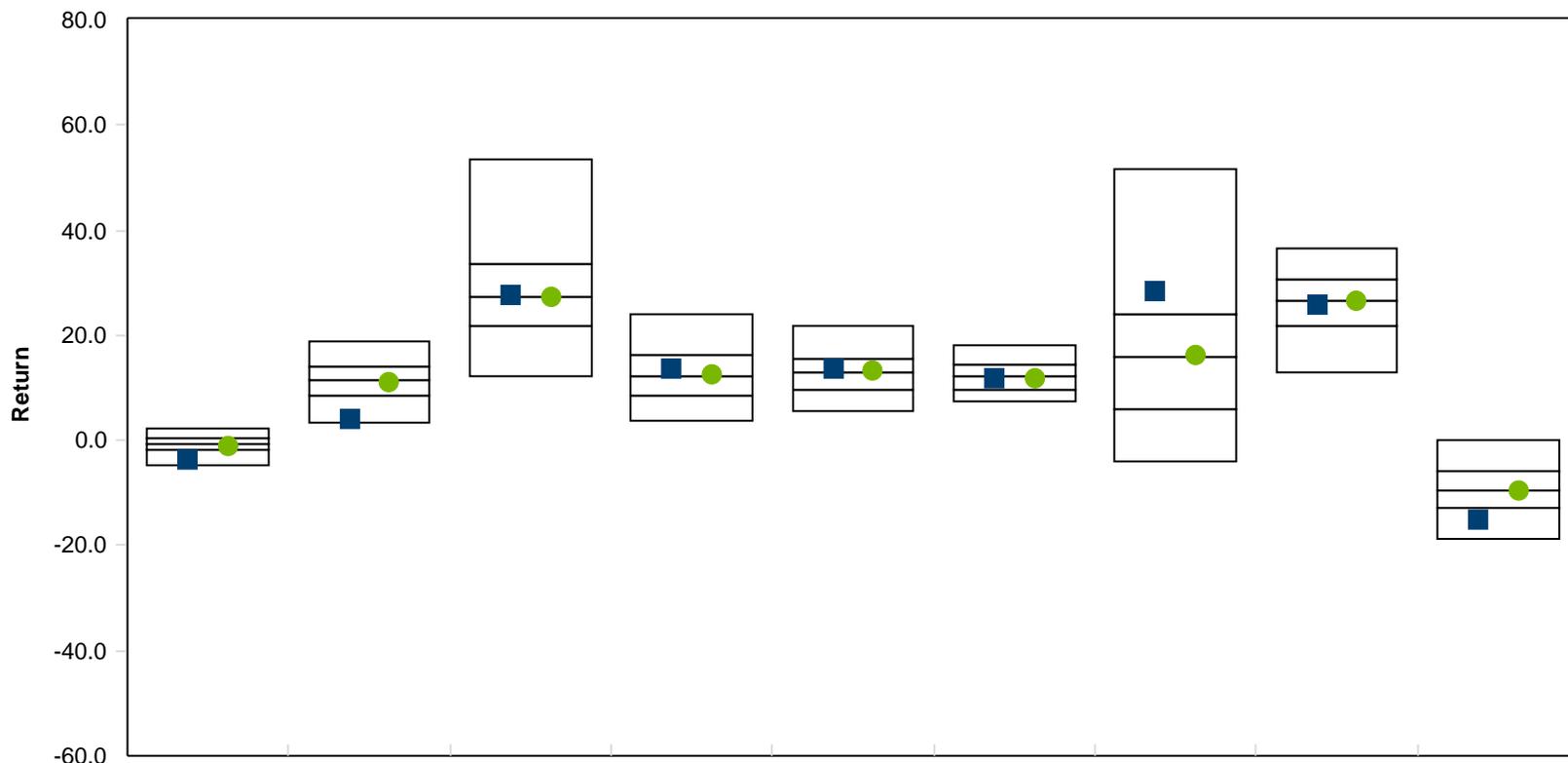


### Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Global Equity (SA+CF)



	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Lazard	-3.7 (91)	4.1 (93)	27.8 (46)	13.7 (39)	13.9 (40)	11.9 (56)	28.4 (21)	25.7 (56)	-14.9 (85)
● MSCI AC World Index (Net)	-1.1 (60)	11.1 (51)	27.4 (50)	12.6 (47)	13.2 (47)	11.9 (56)	16.3 (49)	26.6 (51)	-9.4 (51)
5th Percentile	2.3	18.9	53.4	24.1	21.8	18.3	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	14.6	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	12.3	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	9.8	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	7.3	-4.0	12.8	-18.9
Population	345	343	336	317	286	179	382	408	417

parentheses contain percentile rankings.

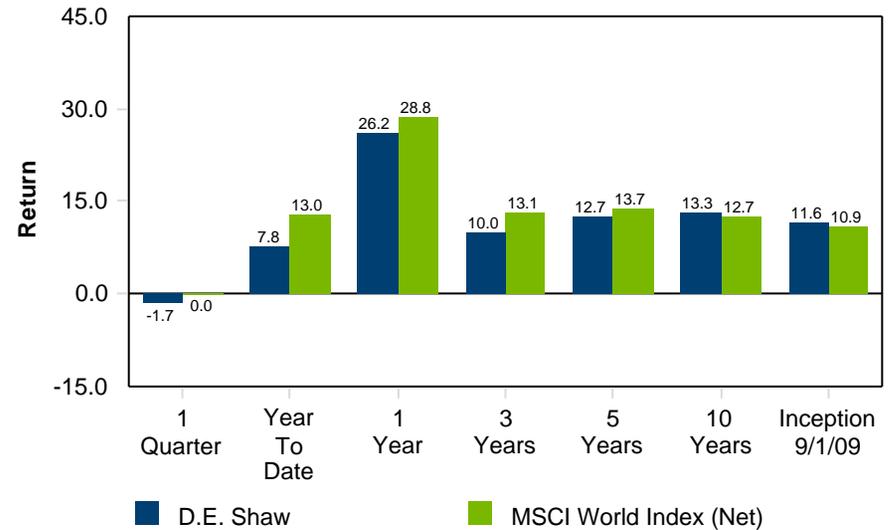


## D.E. Shaw Performance Summary

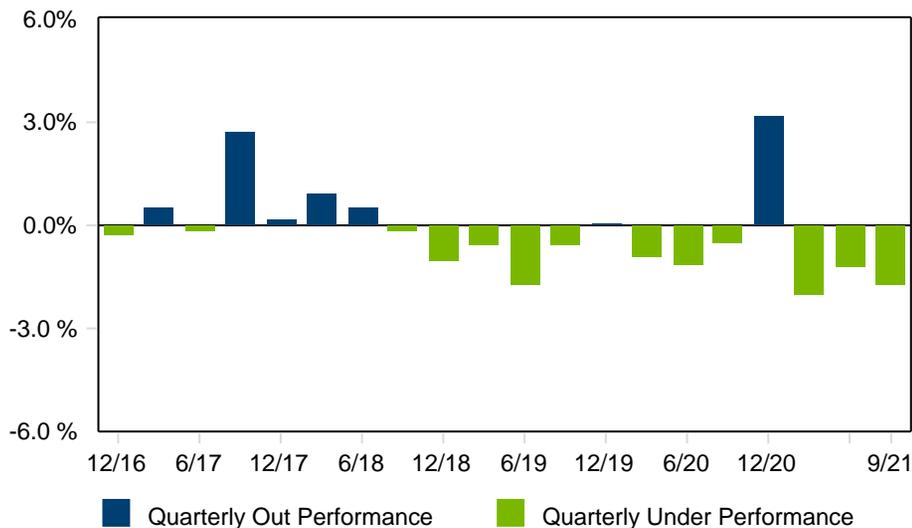
### Account Information

Account Name: D.E. Shaw  
 Inception Date: 08/31/2009  
 Account Structure: Commingled Fund  
 Asset Class: Global Equity  
 Benchmark: MSCI World Index (Net)  
 Peer Group: IM Global Equity (SA+CF)

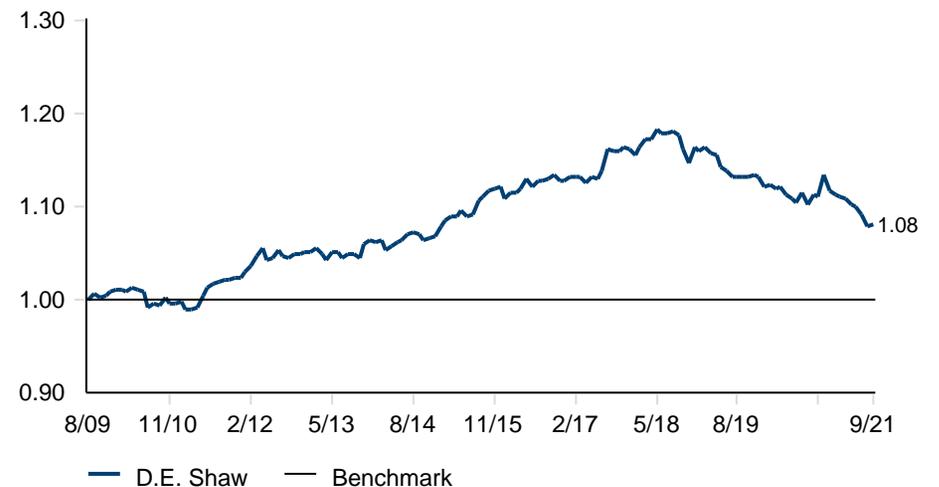
### Return Summary



### Quarterly Excess Performance

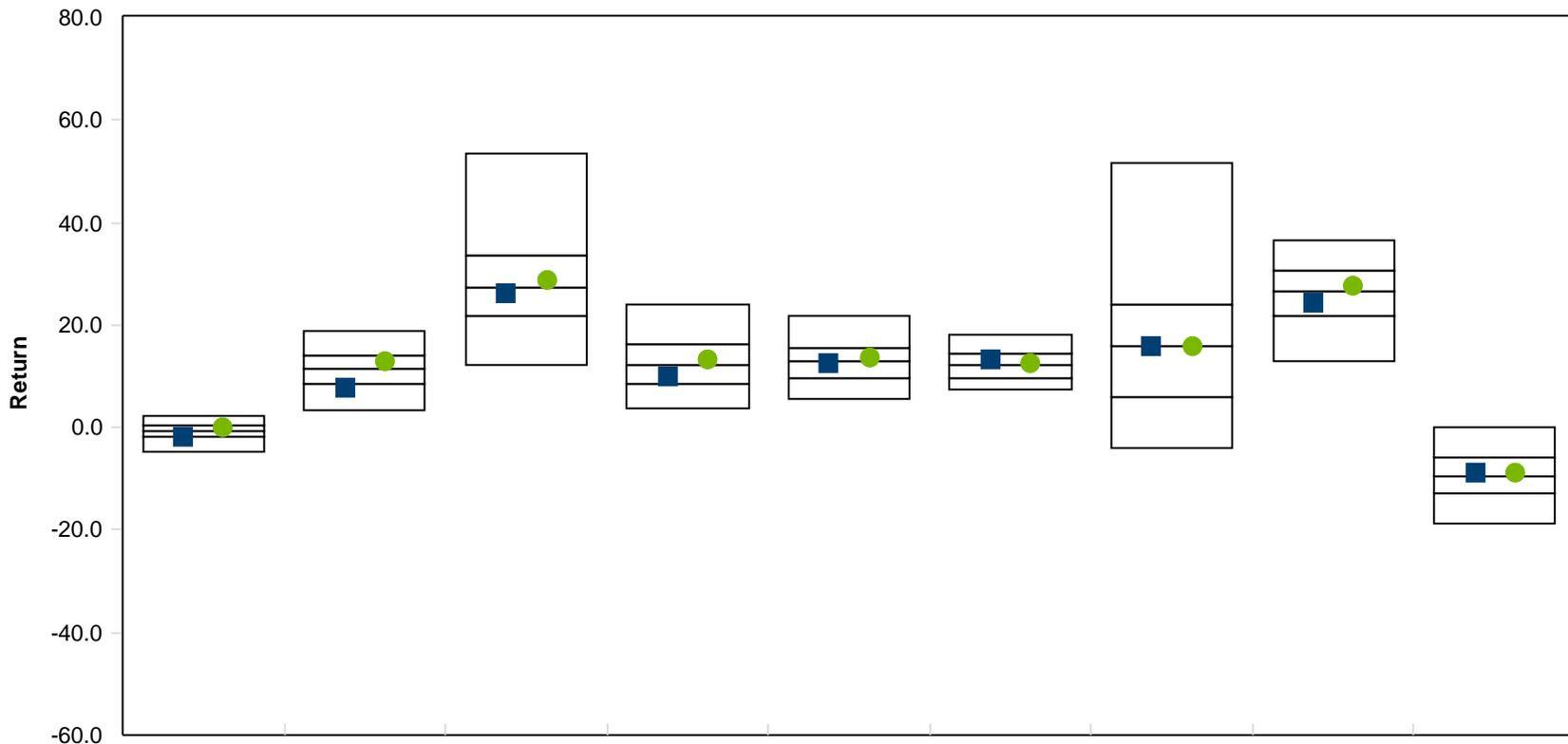


### Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Global Equity (SA+CF)

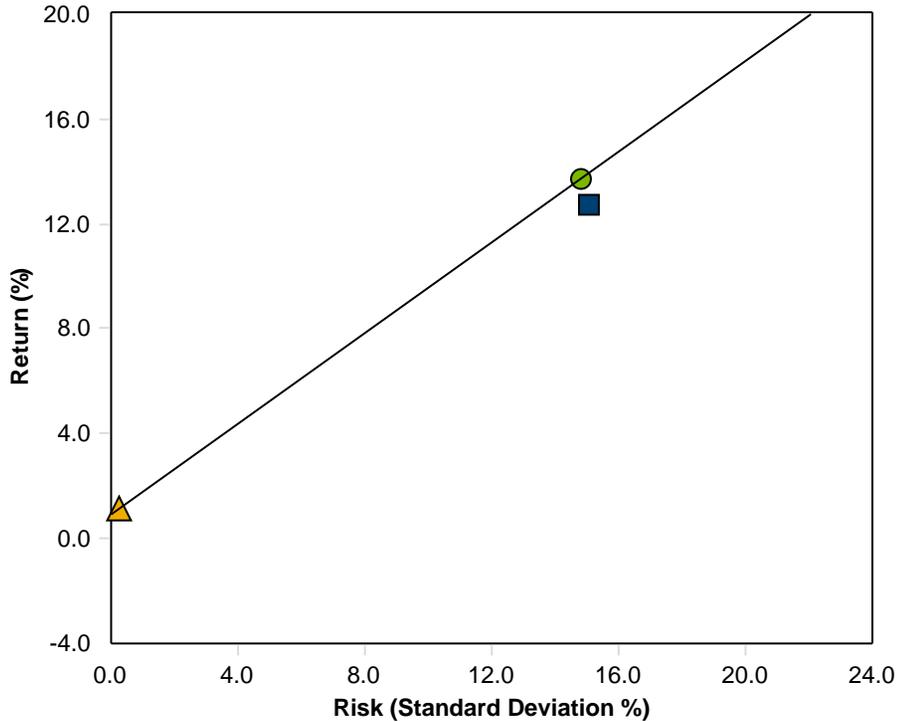


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ D.E. Shaw	-1.7 (74)	7.8 (80)	26.2 (57)	10.0 (62)	12.7 (52)	13.3 (34)	16.1 (51)	24.2 (66)	-8.6 (46)
● MSCI World Index (Net)	0.0 (34)	13.0 (35)	28.8 (41)	13.1 (43)	13.7 (40)	12.7 (44)	15.9 (51)	27.7 (45)	-8.7 (47)
5th Percentile	2.3	18.9	53.4	24.1	21.8	18.3	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	14.6	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	12.3	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	9.8	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	7.3	-4.0	12.8	-18.9
Population	345	343	336	317	286	179	382	408	417

parentheses contain percentile rankings.

D.E. Shaw Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ D.E. Shaw      ● MSCI World Index (Net)  
▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



— D.E. Shaw      — MSCI World Index (Net)

5 Years Historical Statistics

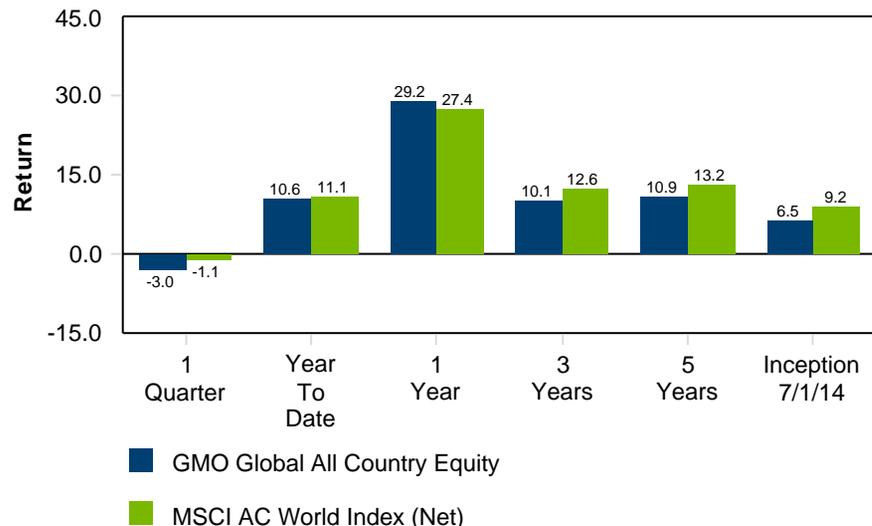
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
D.E. Shaw	-0.87	2.45	-0.36	0.97	0.80	-0.91	1.00	12.72	15.06	0.99
MSCI World Index (Net)	0.00	0.00	N/A	1.00	0.87	0.00	1.00	13.74	14.81	1.00
FTSE 3 Month T-Bill	-12.91	14.87	-0.87	0.04	N/A	1.18	0.00	1.13	0.25	-0.20

**GMO Global All Country Equity Performance Summary**

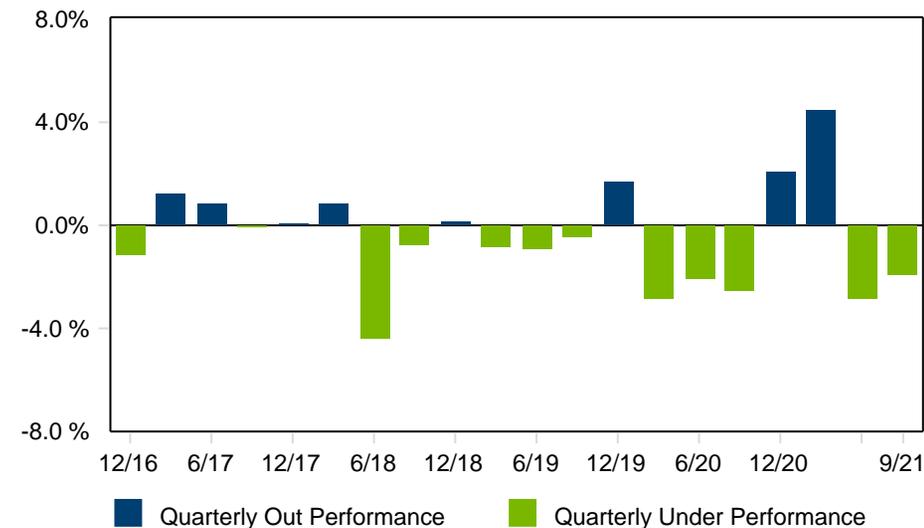
**Account Information as of 09/30/21**

Product Name : GMO:Global Eq All;III (GMGEX)  
 Fund Family : GMO  
 Ticker : GMGEX  
 Peer Group : IM Global Multi-Cap Core Equity (MF)  
 Benchmark : MSCI AC World Index (Net)  
 Fund Inception : 11/26/1996  
 Portfolio Manager : Team Managed  
 Total Assets : \$1,683.40 Million  
 Total Assets Date : 10/31/2021  
 Gross Expense : 0.57%  
 Net Expense : 0.56%  
 Turnover : 20%

**Return Summary**



**Quarterly Excess Performance**

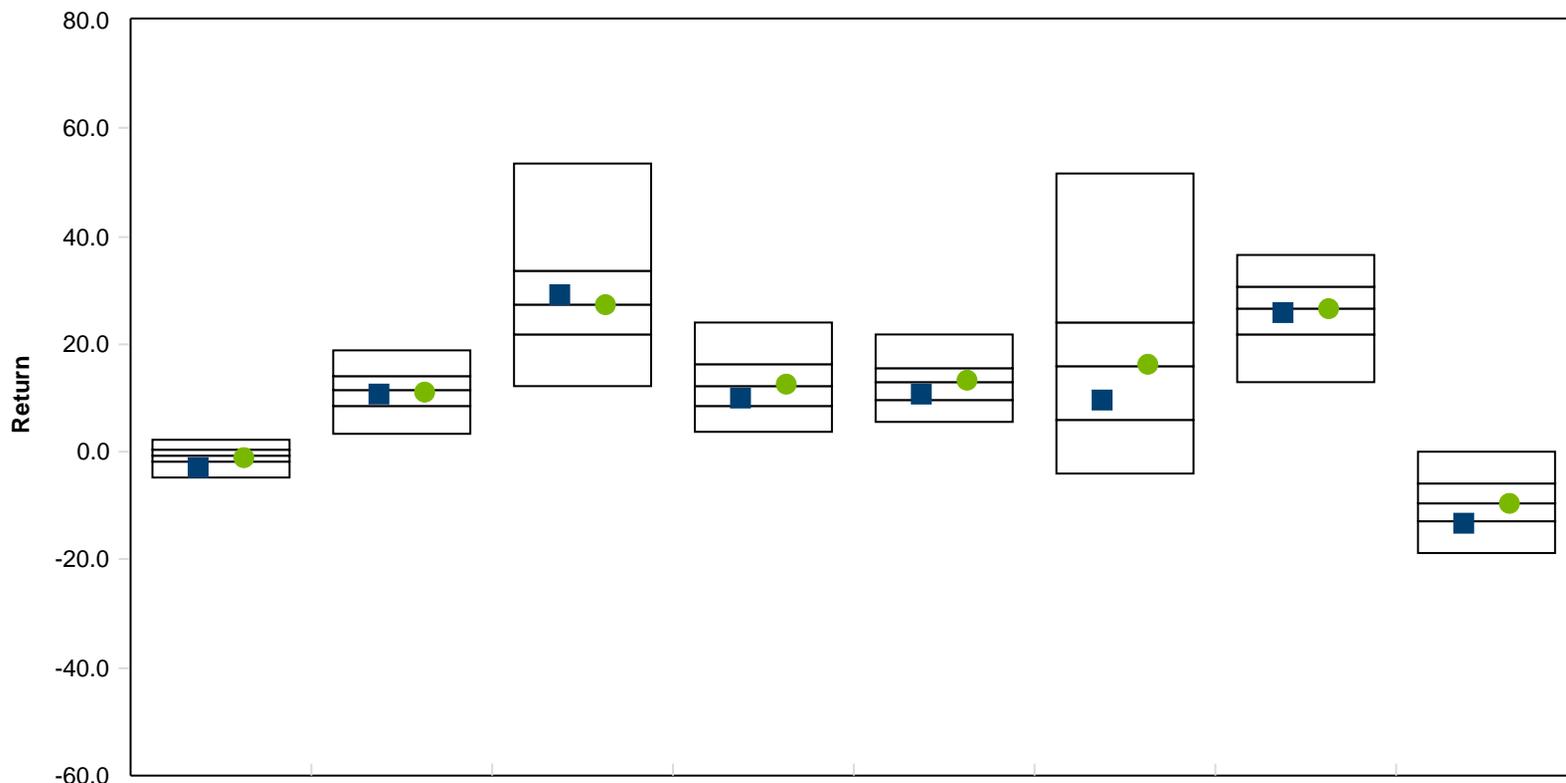


**Ratio of Cumulative Wealth - Since Inception**



Peer Group Analysis

IM Global Equity (SA+CF)



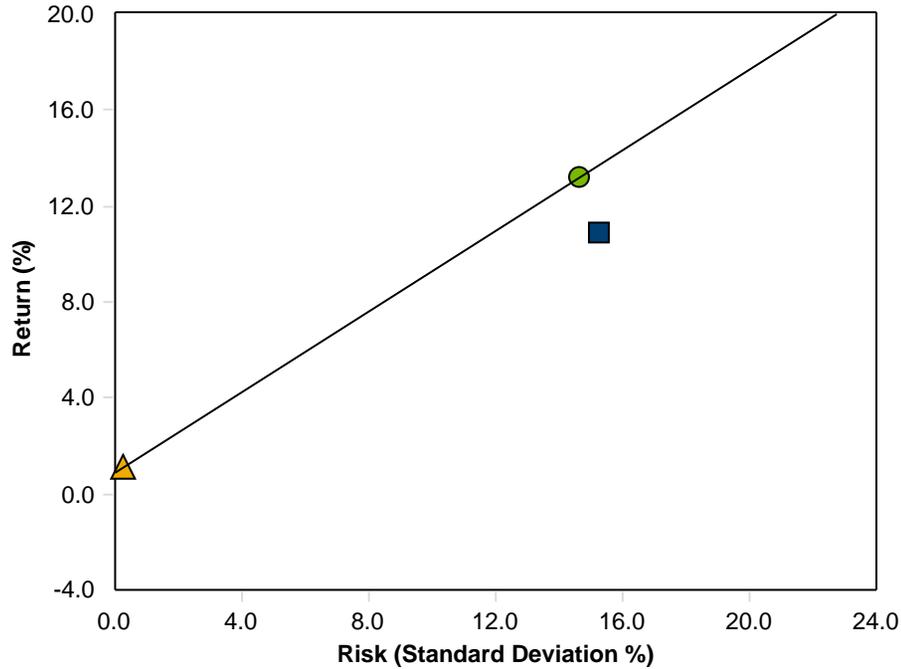
	1 Quarter	Year To Date	1 Year	3 Years	5 Years	2020	2019	2018
■ GMO Global All Country Equity	-3.0 (86)	10.6 (57)	29.2 (40)	10.1 (62)	10.9 (67)	9.5 (67)	25.8 (56)	-13.1 (77)
● MSCI AC World Index (Net)	-1.1 (60)	11.1 (51)	27.4 (50)	12.6 (47)	13.2 (47)	16.3 (49)	26.6 (51)	-9.4 (51)
5th Percentile	2.3	18.9	53.4	24.1	21.8	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	-4.0	12.8	-18.9
Population	345	343	336	317	286	382	408	417

Parenteses contain percentile rankings.

2021

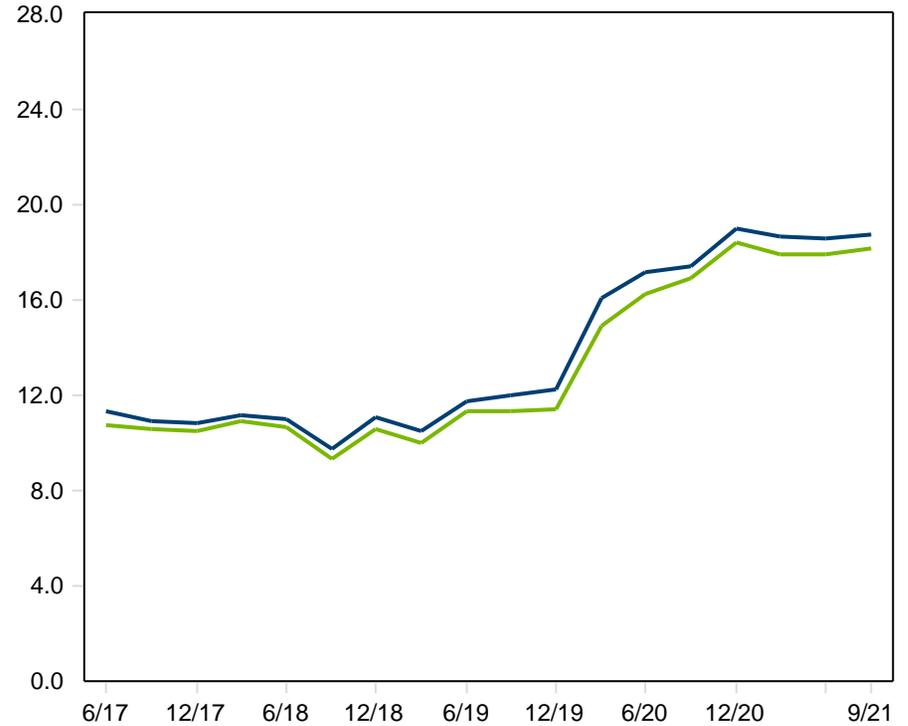
**GMO Global All Country Equity Risk Profile**

**Annualized Return vs. Annualized Standard Deviation  
5 Years**



- GMO Global All Country Equity
- MSCI AC World Index (Net)
- ▲ FTSE 3 Month T-Bill

**Rolling 3 Years Standard Deviation**



- GMO Global All Country Equity
- MSCI AC World Index (Net)

**5 Years Historical Statistics**

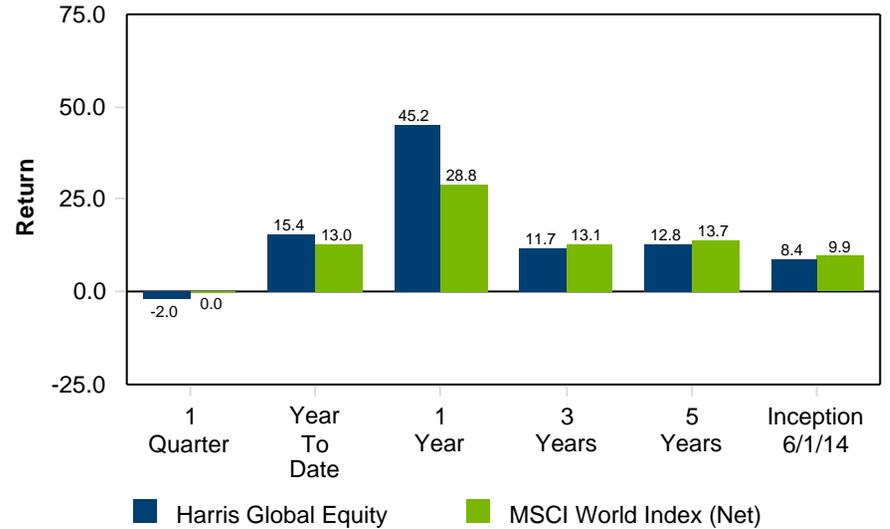
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
GMO Global All Country Equity	-2.01	3.88	-0.52	0.94	0.68	-2.09	1.01	10.86	15.27	0.97
MSCI AC World Index (Net)	0.00	0.00	N/A	1.00	0.84	0.00	1.00	13.20	14.65	1.00
FTSE 3 Month T-Bill	-12.40	14.71	-0.84	0.04	N/A	1.18	0.00	1.13	0.25	-0.21

Harris Global Equity Performance Summary

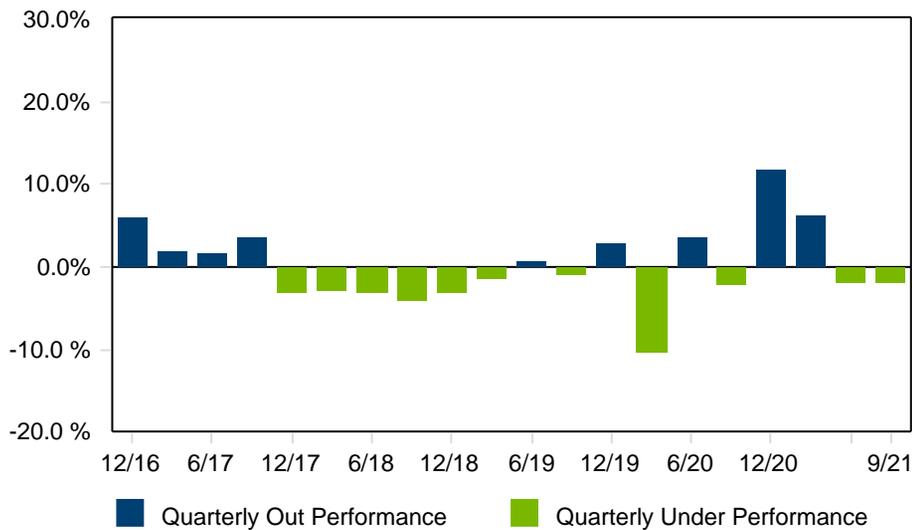
Account Information

Account Name: Harris Global Equity  
 Inception Date: 06/01/2014  
 Account Structure: Separate Account  
 Asset Class: Global Equity  
 Benchmark: MSCI World Index (Net)  
 Peer Group: IM Global Equity (SA+CF)

Return Summary



Quarterly Excess Performance

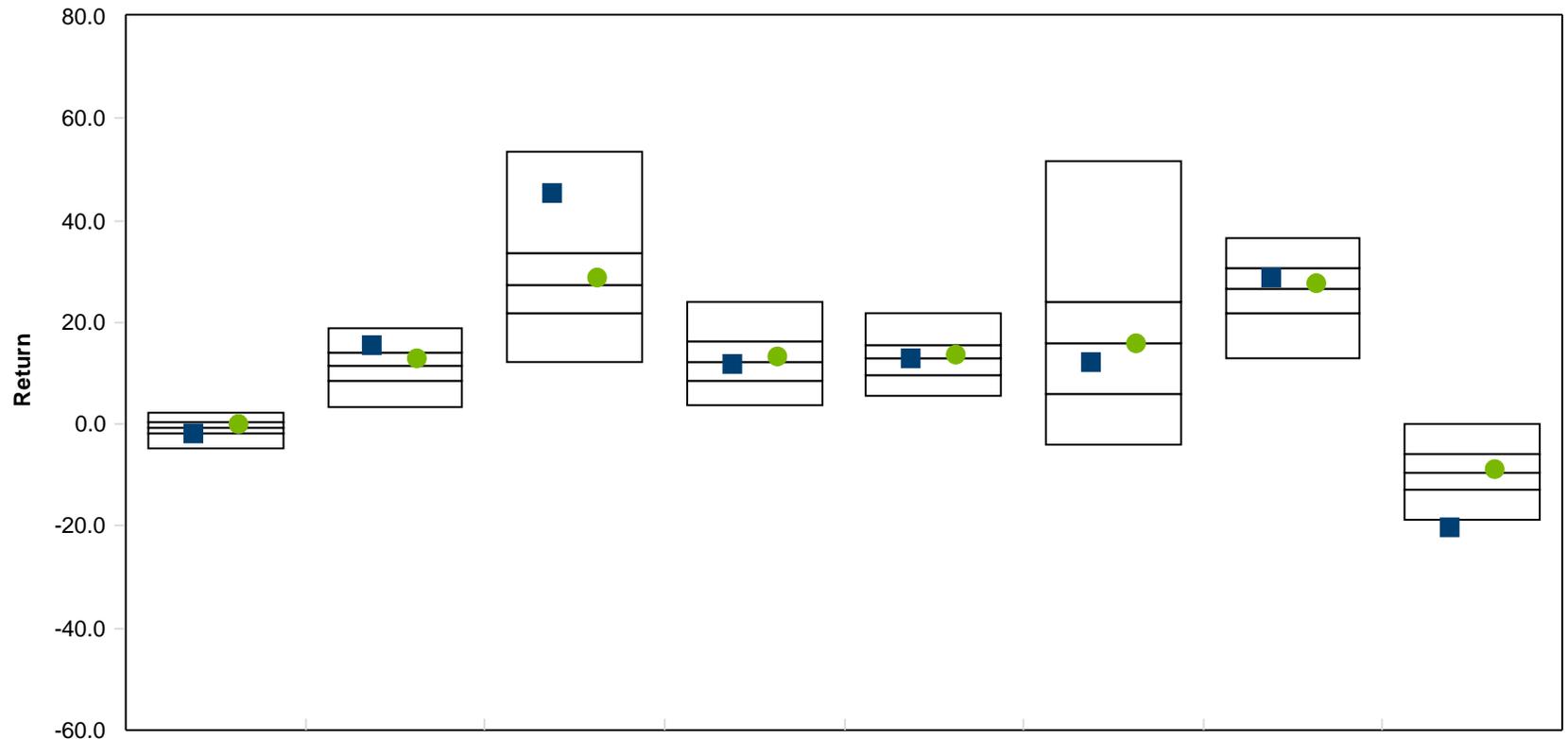


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Global Equity (SA+CF)

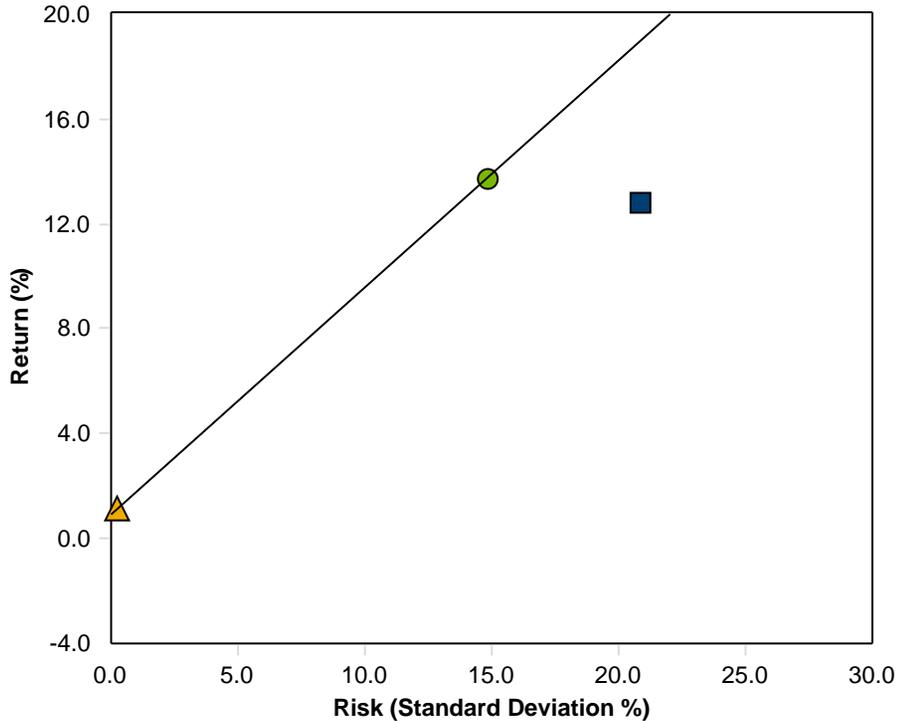


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	2020	2019	2018
■ Harris Global Equity	-2.0 (76)	15.4 (20)	45.2 (10)	11.7 (55)	12.8 (51)	12.1 (60)	28.9 (37)	-20.4 (97)
● MSCI World Index (Net)	0.0 (34)	13.0 (35)	28.8 (41)	13.1 (43)	13.7 (40)	15.9 (51)	27.7 (45)	-8.7 (47)
5th Percentile	2.3	18.9	53.4	24.1	21.8	51.7	36.7	-0.1
1st Quartile	0.4	14.2	33.6	16.2	15.7	23.9	30.7	-5.8
Median	-0.7	11.3	27.3	12.2	12.9	16.1	26.6	-9.4
3rd Quartile	-1.9	8.5	21.7	8.5	9.5	5.8	21.9	-12.9
95th Percentile	-4.6	3.4	12.3	3.9	5.7	-4.0	12.8	-18.9
Population	345	343	336	317	286	382	408	417

parentheses contain percentile rankings.

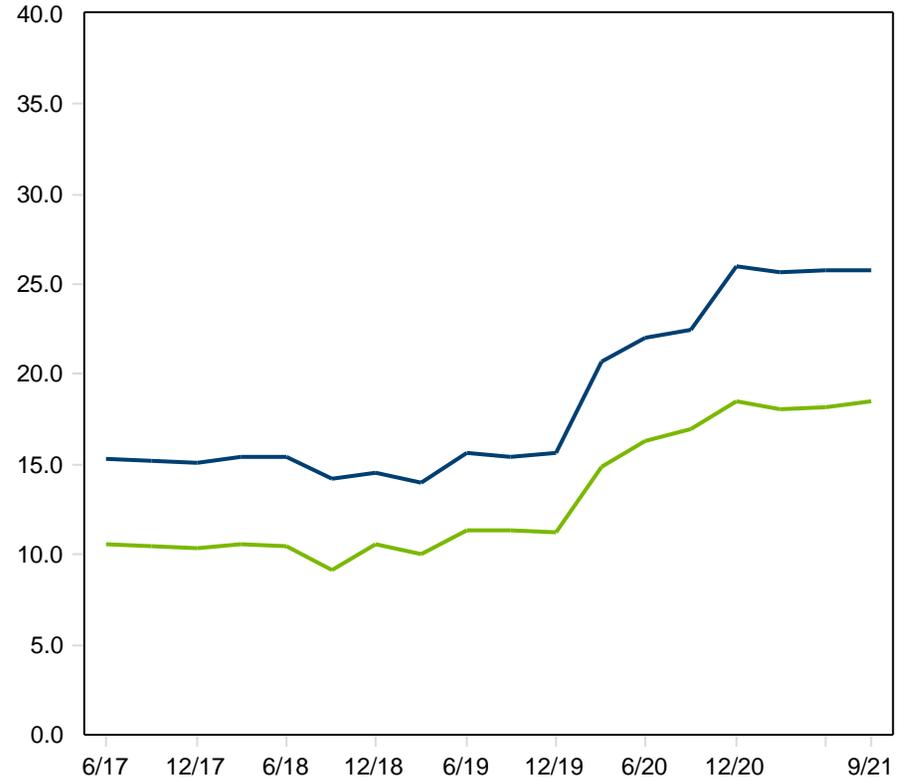
Harris Global Equity Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Harris Global Equity     ● MSCI World Index (Net)  
▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



— Harris Global Equity     — MSCI World Index (Net)

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Harris Global Equity	0.22	8.77	0.02	0.87	0.63	-4.12	1.31	12.79	20.84	0.93
MSCI World Index (Net)	0.00	0.00	N/A	1.00	0.87	0.00	1.00	13.74	14.81	1.00
FTSE 3 Month T-Bill	-12.91	14.87	-0.87	0.04	N/A	1.18	0.00	1.13	0.25	-0.20

This Page Left Blank Intentionally



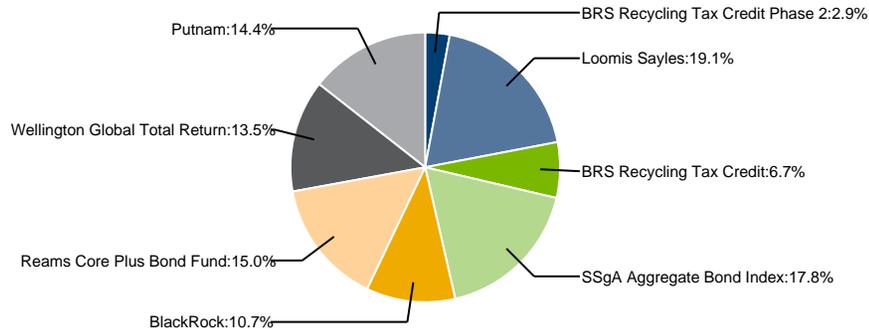
# Fixed Income

---

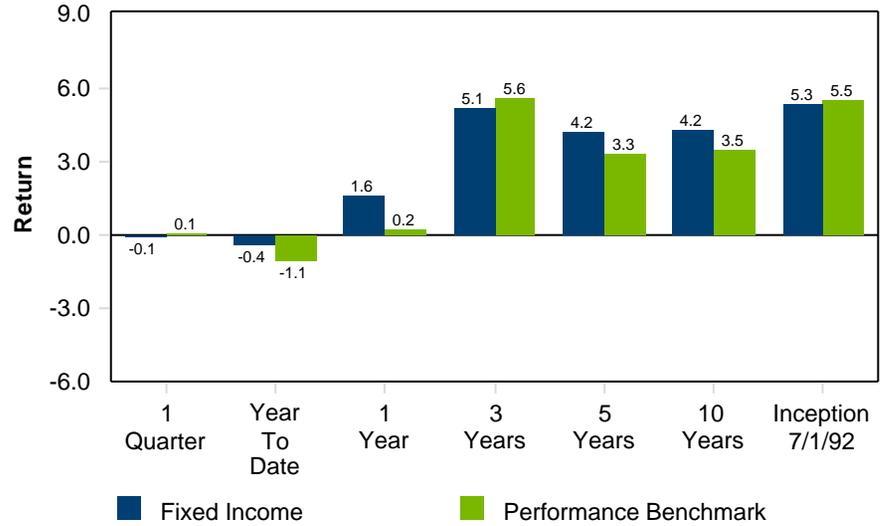
Fixed Income Portfolio Overview

Current Allocation

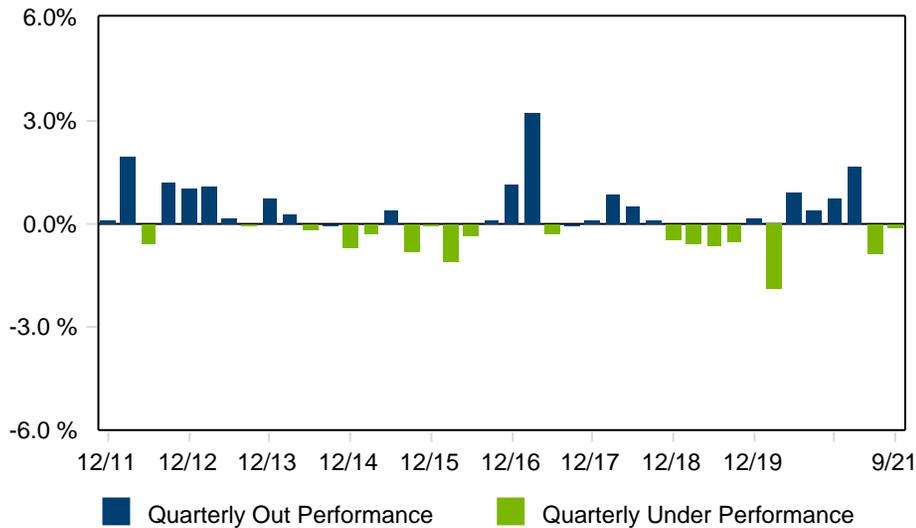
September 30, 2021 : \$2,641M



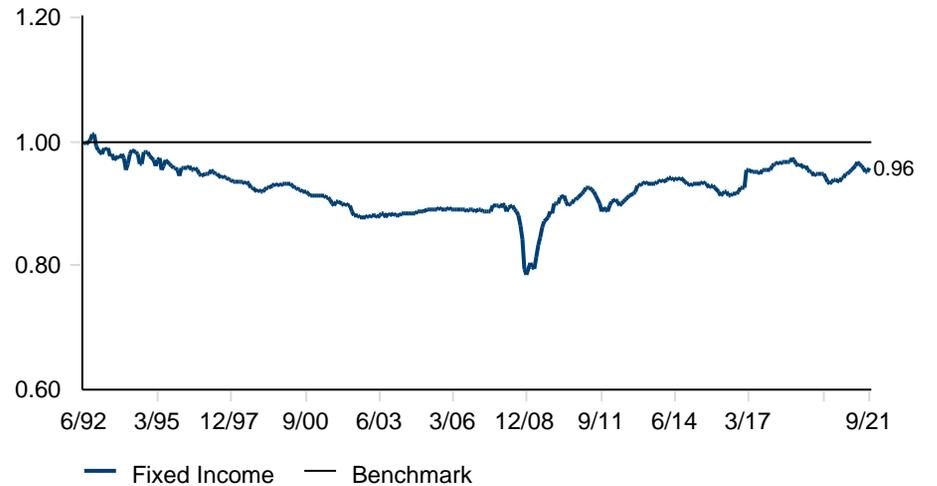
Return Summary



Quarterly Excess Performance

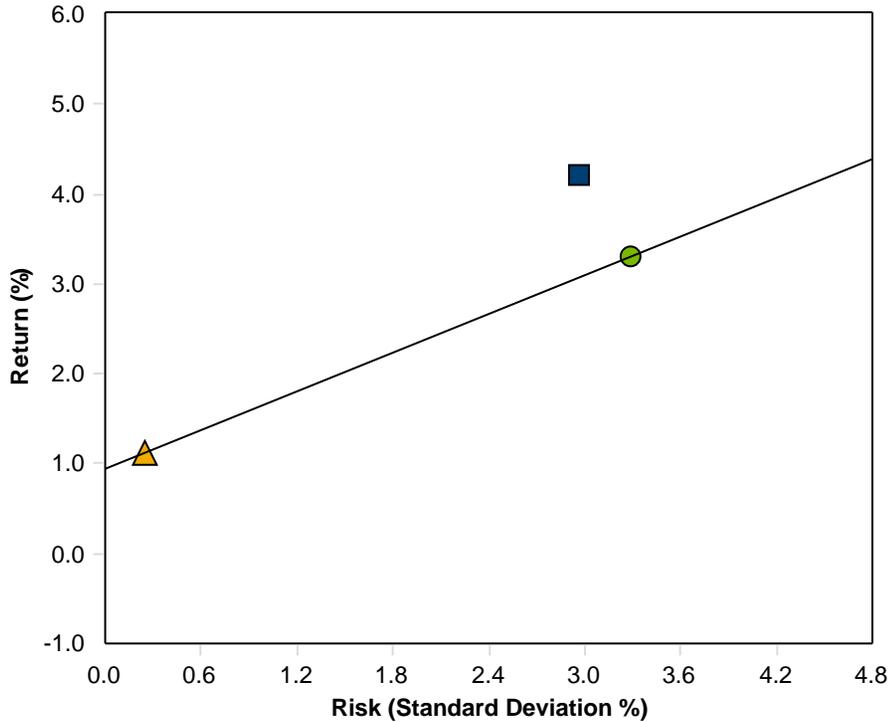


Ratio of Cumulative Wealth - Since Inception



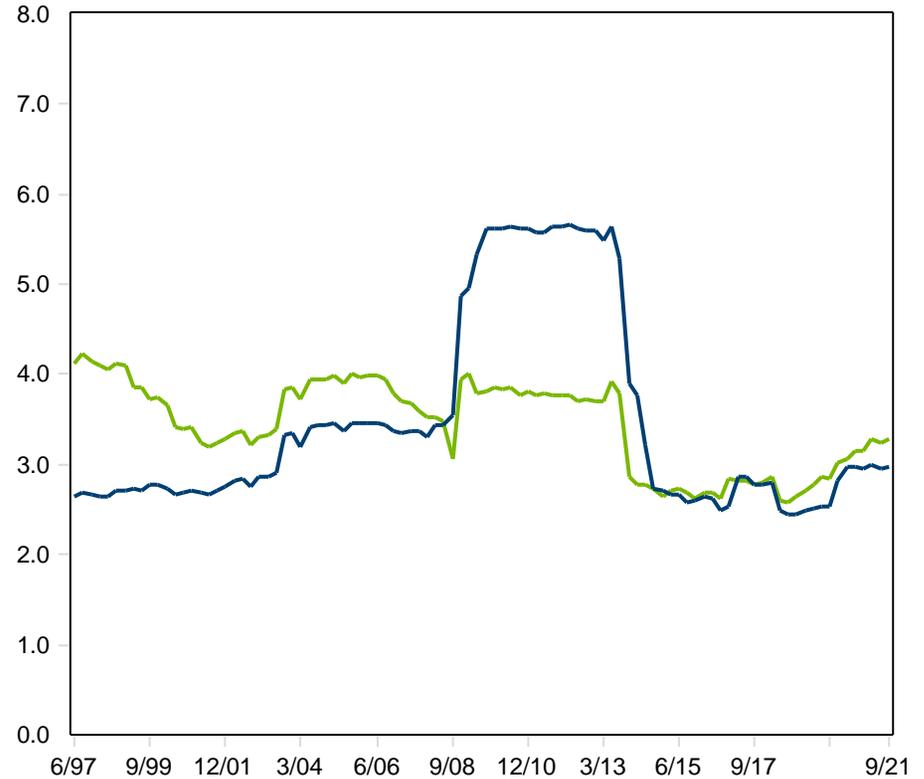
Fixed Income Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Fixed Income      ● Performance Benchmark  
▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



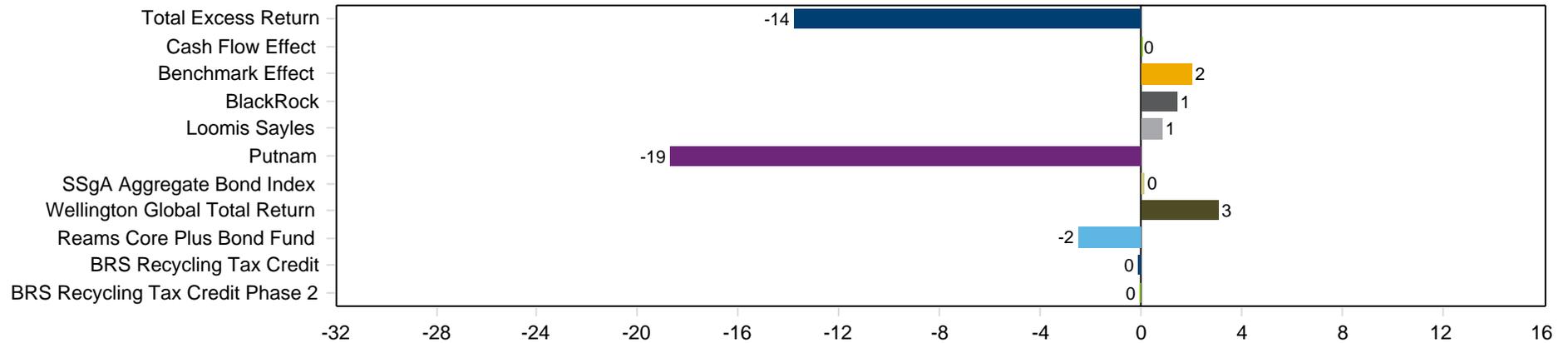
— Fixed Income      — Performance Benchmark

5 Years Historical Statistics

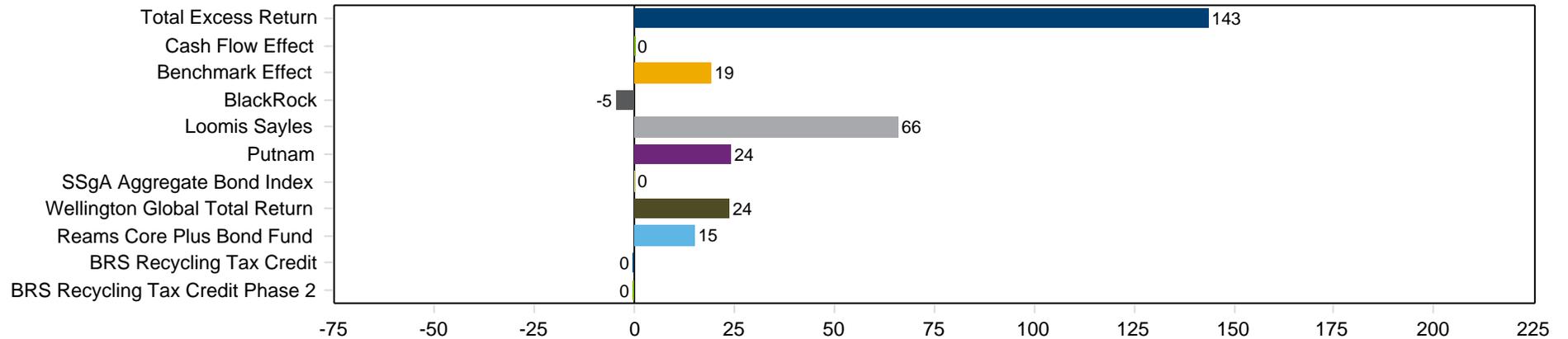
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Fixed Income	0.88	1.86	0.48	0.69	1.03	1.72	0.75	4.22	2.97	0.83
Performance Benchmark	0.00	0.00	N/A	1.00	0.67	0.00	1.00	3.30	3.28	1.00
FTSE 3 Month T-Bill	-2.18	3.23	-0.67	0.06	N/A	1.07	0.02	1.13	0.25	0.23

Asset Class Attribution

1 Quarter



1 Year



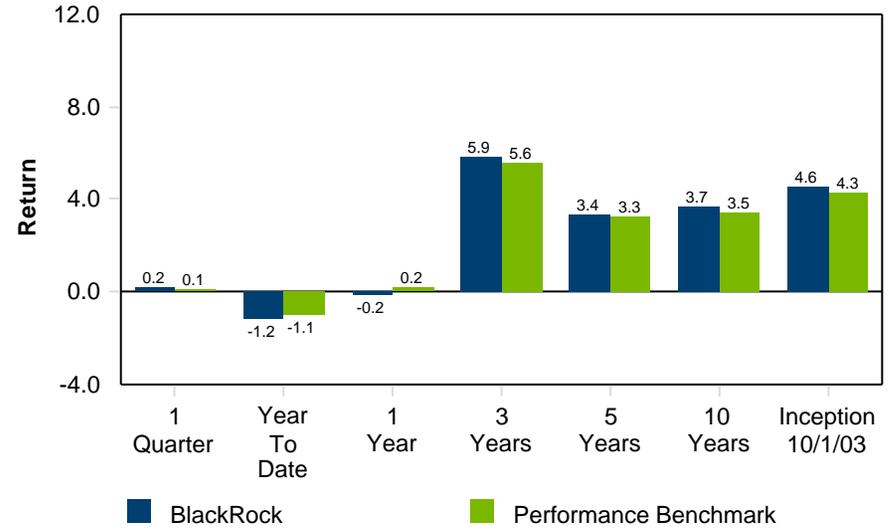
\*The BRS Recycling Tax Credit represents an annual income stream of \$16 million dollars over the next 14 years, which ATRS purchased for approximately \$162 million. This represents an approximate 9.9% yield for the 2017 fiscal year. The value shown above represents the year-end market value in accordance with GASB Statement 72, representing the 14 years of annual income, and has been incorporated into Total Fixed Income and Total Fund performance.

## BlackRock Performance Summary

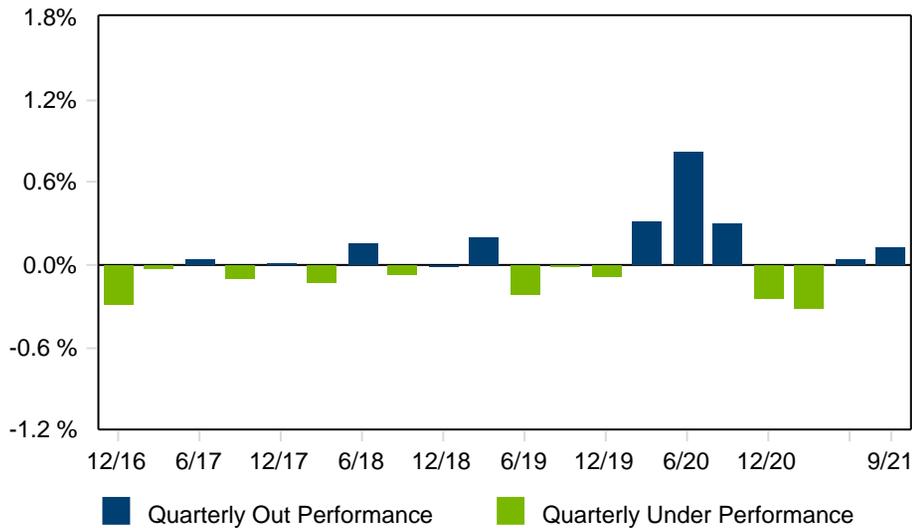
### Account Information

Account Name: BlackRock  
 Inception Date: 09/30/2003  
 Account Structure: Separate Account  
 Asset Class: US Fixed Income  
 Benchmark: Performance Benchmark  
 Peer Group: IM U.S. Fixed Income (SA+CF)

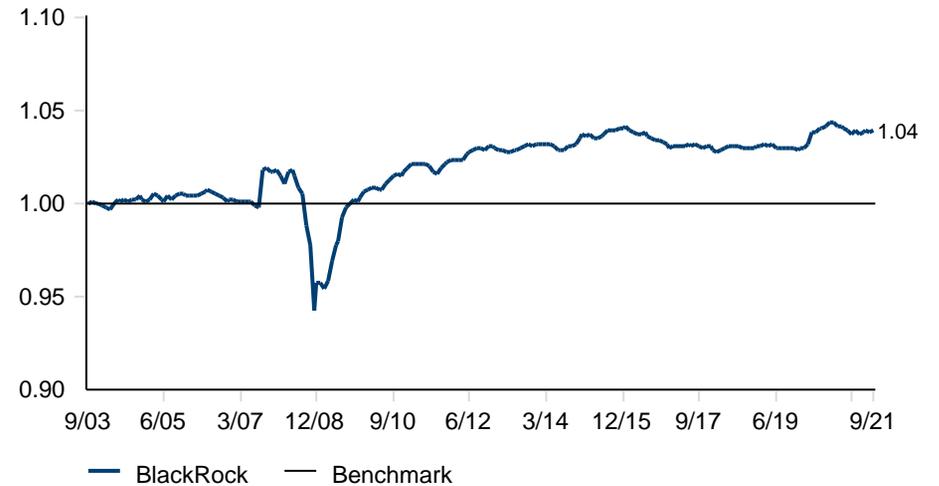
### Return Summary



### Quarterly Excess Performance

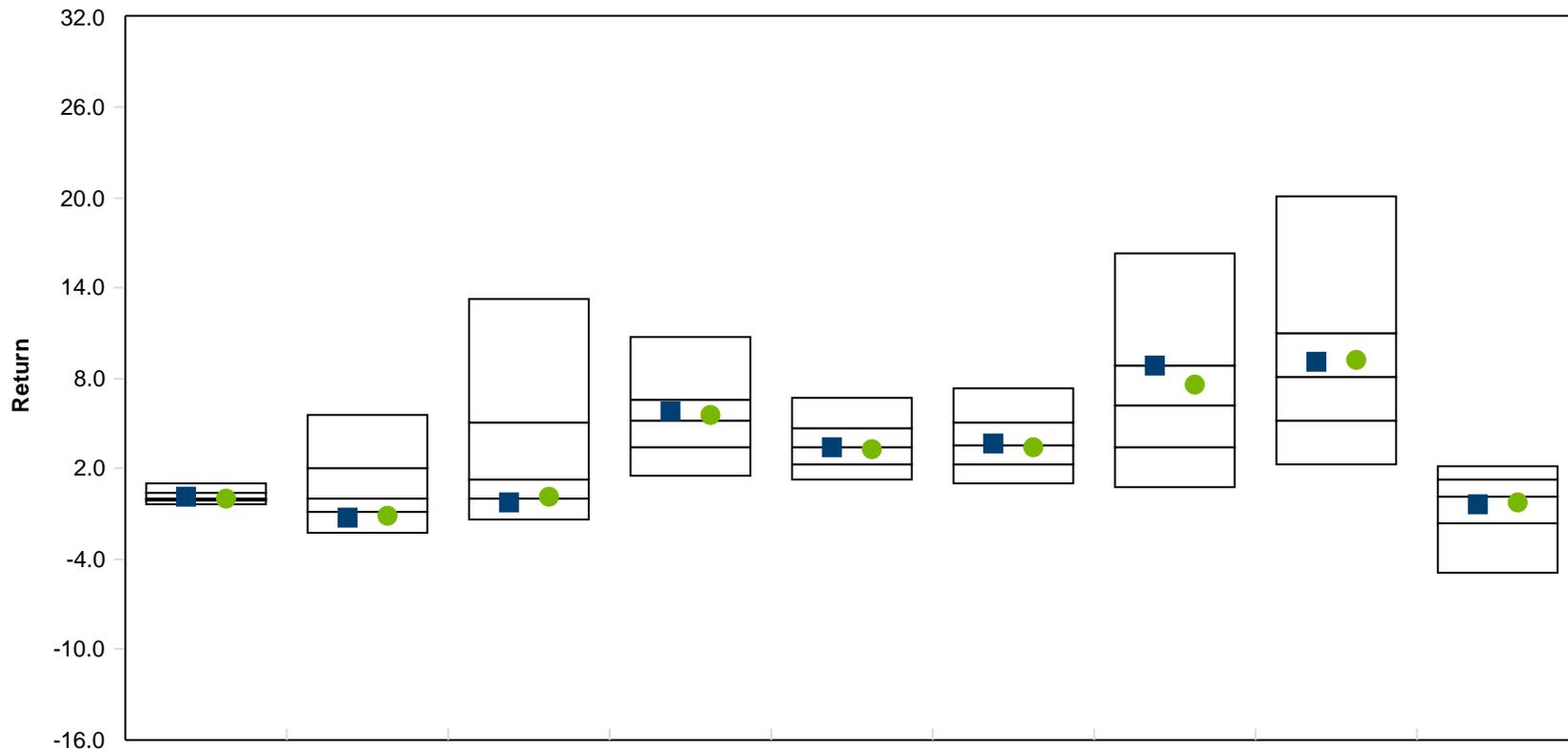


### Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Fixed Income (SA+CF)

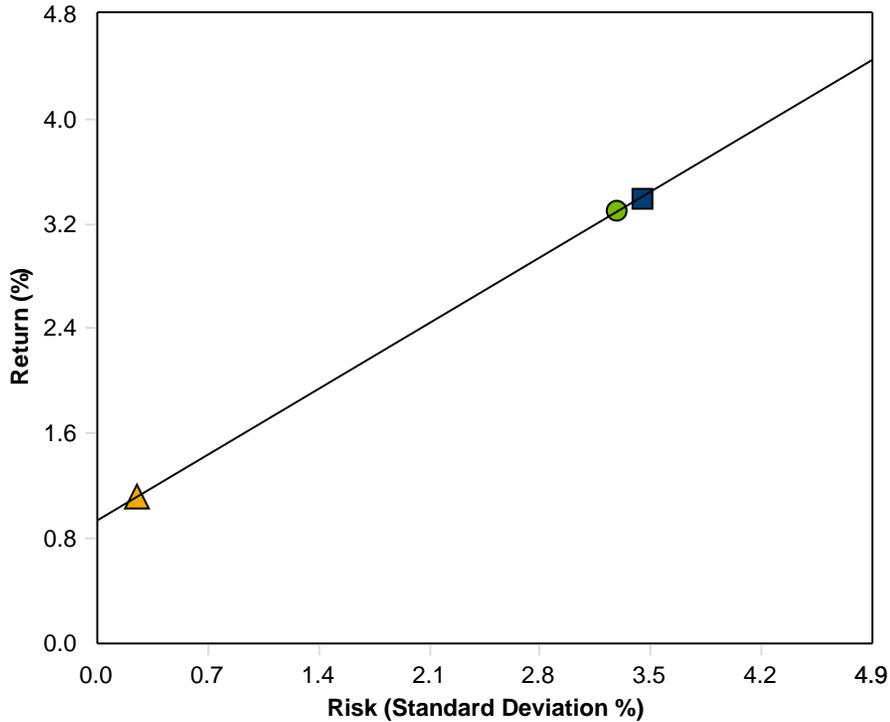


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ BlackRock	0.2 (35)	-1.2 (84)	-0.2 (83)	5.9 (38)	3.4 (52)	3.7 (48)	8.8 (26)	9.2 (39)	-0.3 (59)
● Performance Benchmark	0.1 (52)	-1.1 (81)	0.2 (72)	5.6 (44)	3.3 (53)	3.5 (52)	7.6 (37)	9.3 (37)	-0.3 (58)
5th Percentile	1.1	5.6	13.3	10.8	6.7	7.4	16.3	20.2	2.2
1st Quartile	0.4	2.1	5.1	6.6	4.7	5.1	8.8	11.1	1.3
Median	0.1	0.0	1.2	5.2	3.4	3.6	6.2	8.2	0.1
3rd Quartile	0.0	-0.8	0.1	3.4	2.3	2.4	3.5	5.3	-1.6
95th Percentile	-0.3	-2.3	-1.3	1.5	1.3	1.0	0.8	2.4	-4.9
Population	818	815	812	776	734	624	1,006	1,045	1,094

Parenteses contain percentile rankings.

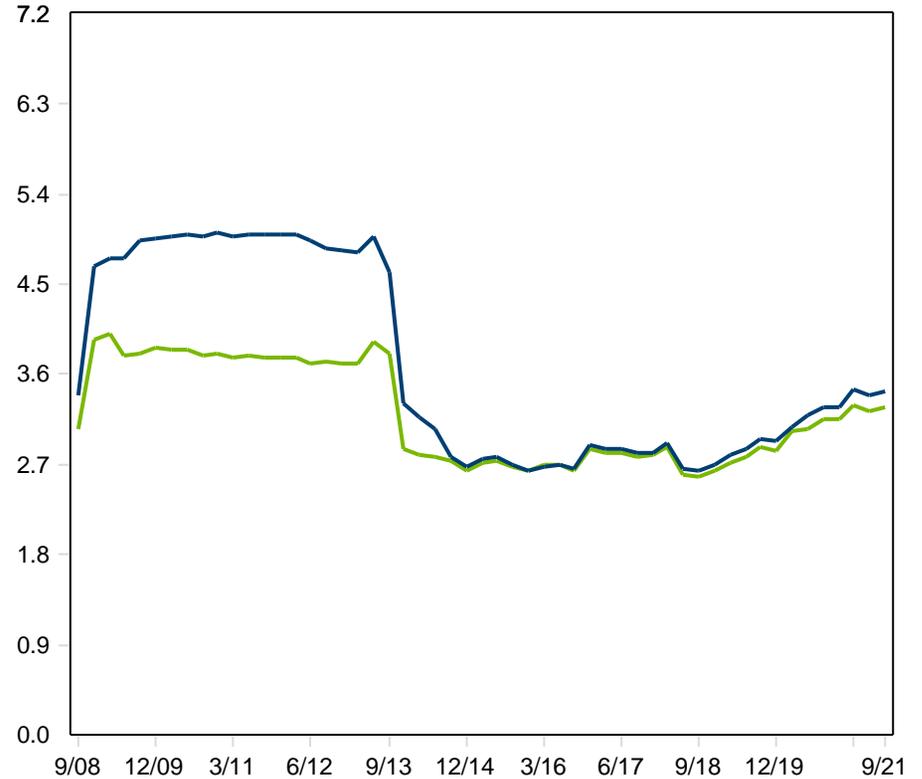
**BlackRock Risk Profile**

**Annualized Return vs. Annualized Standard Deviation 5 Years**



■ BlackRock      ● Performance Benchmark  
▲ FTSE 3 Month T-Bill

**Rolling 5 Years Standard Deviation**



— BlackRock      — Performance Benchmark

**5 Years Historical Statistics**

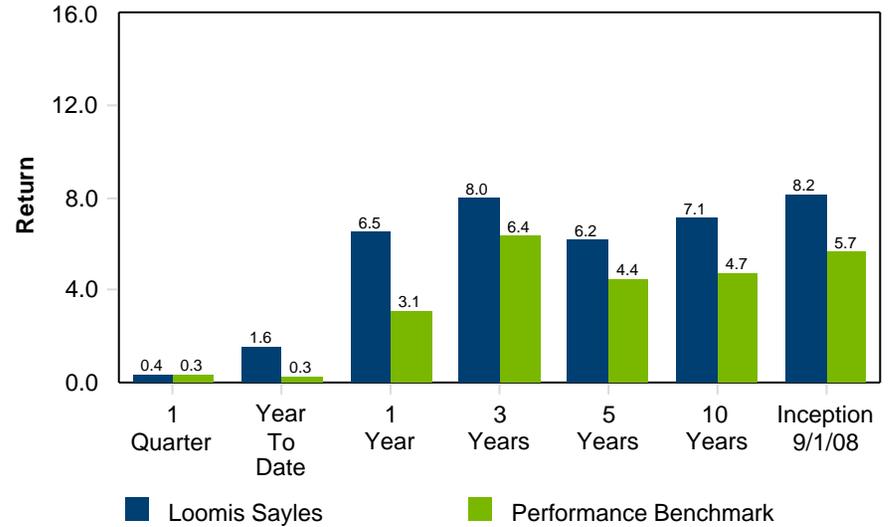
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
BlackRock	0.10	0.43	0.23	0.99	0.67	-0.04	1.04	3.39	3.44	0.99
Performance Benchmark	0.00	0.00	N/A	1.00	0.67	0.00	1.00	3.30	3.28	1.00
FTSE 3 Month T-Bill	-2.18	3.23	-0.67	0.06	N/A	1.07	0.02	1.13	0.25	0.23

Loomis Sayles Performance Summary

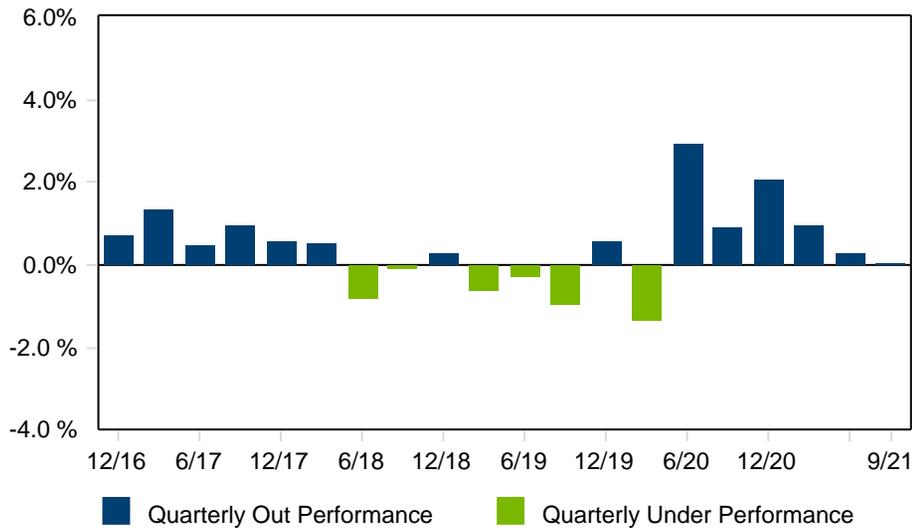
Account Information

Account Name: Loomis Sayles  
 Inception Date: 06/30/2008  
 Account Structure: Separate Account  
 Asset Class: US Fixed Income  
 Benchmark: Performance Benchmark  
 Peer Group: IM U.S. Fixed Income (SA+CF)

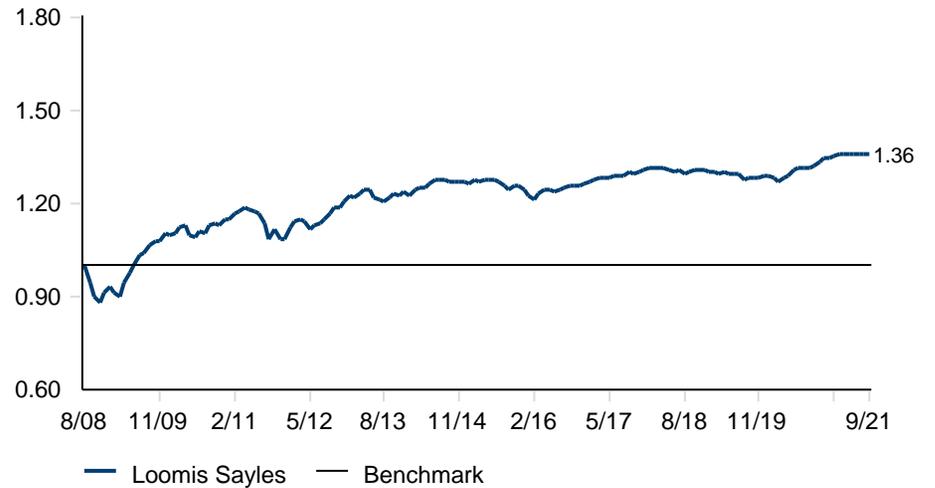
Return Summary



Quarterly Excess Performance

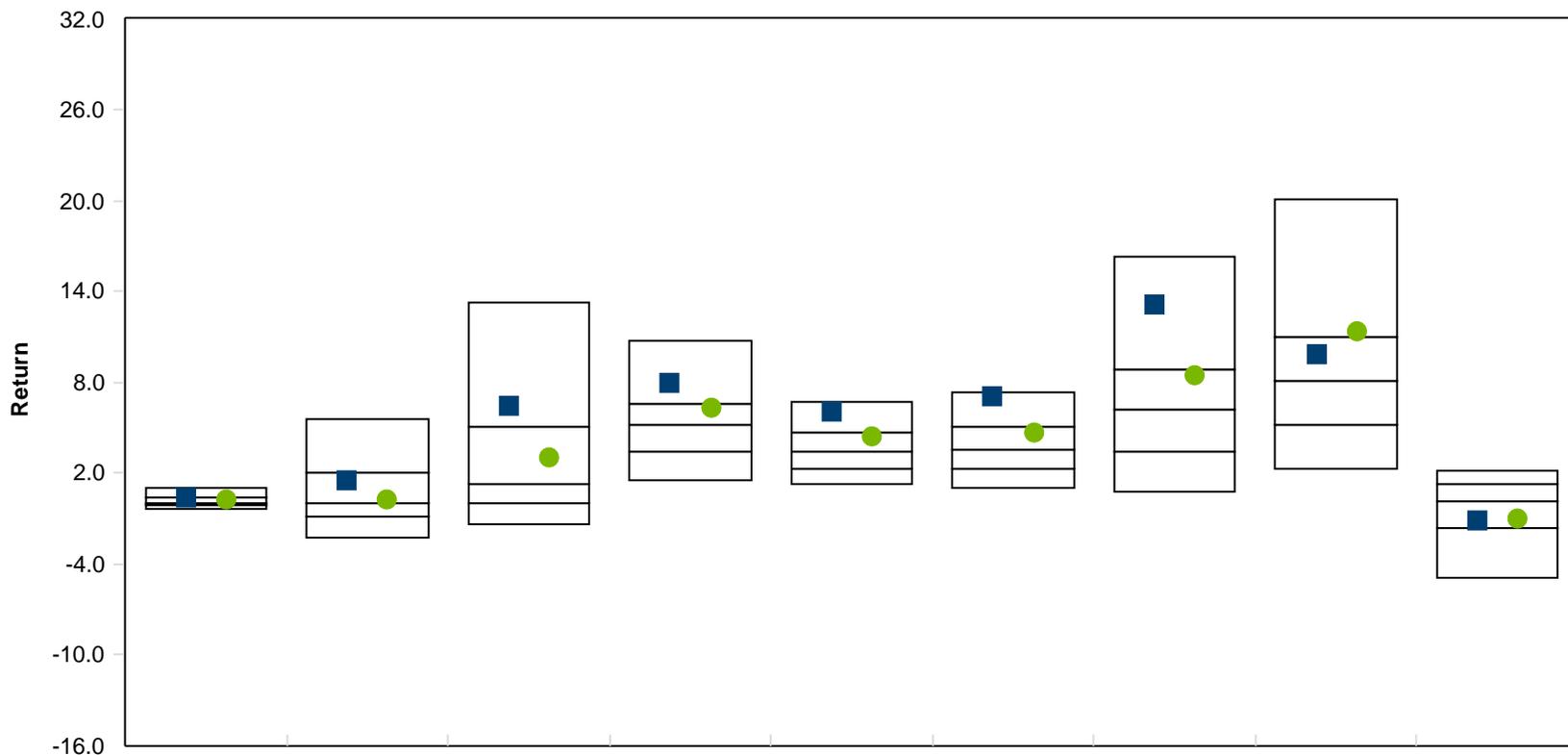


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Fixed Income (SA+CF)

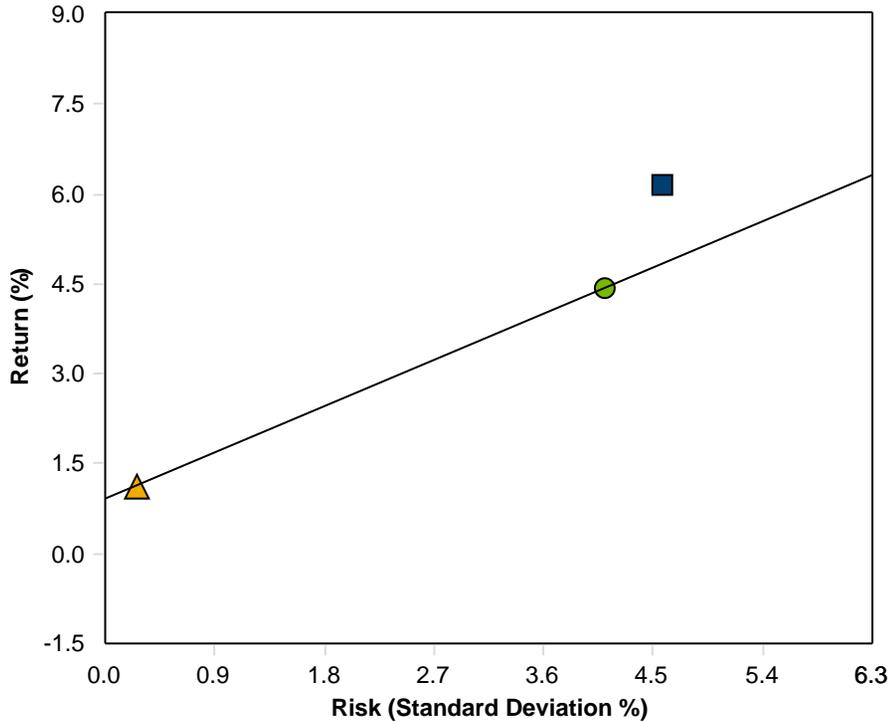


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Loomis Sayles	0.4 (25)	1.6 (28)	6.5 (21)	8.0 (11)	6.2 (10)	7.1 (8)	13.1 (9)	10.0 (31)	-1.1 (71)
● Performance Benchmark	0.3 (26)	0.3 (41)	3.1 (33)	6.4 (29)	4.4 (29)	4.7 (31)	8.5 (27)	11.4 (25)	-1.0 (69)
5th Percentile	1.1	5.6	13.3	10.8	6.7	7.4	16.3	20.2	2.2
1st Quartile	0.4	2.1	5.1	6.6	4.7	5.1	8.8	11.1	1.3
Median	0.1	0.0	1.2	5.2	3.4	3.6	6.2	8.2	0.1
3rd Quartile	0.0	-0.8	0.1	3.4	2.3	2.4	3.5	5.3	-1.6
95th Percentile	-0.3	-2.3	-1.3	1.5	1.3	1.0	0.8	2.4	-4.9
Population	818	815	812	776	734	624	1,006	1,045	1,094

Parenteses contain percentile rankings.

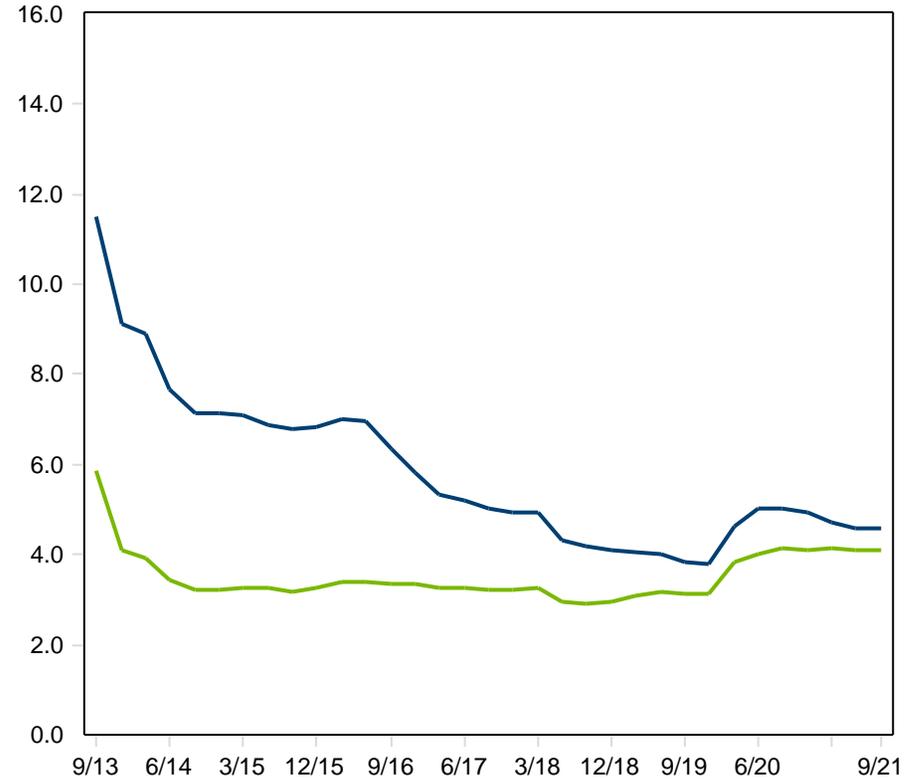
Loomis Sayles Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Loomis Sayles      ● Performance Benchmark  
▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



— Loomis Sayles      — Performance Benchmark

5 Years Historical Statistics

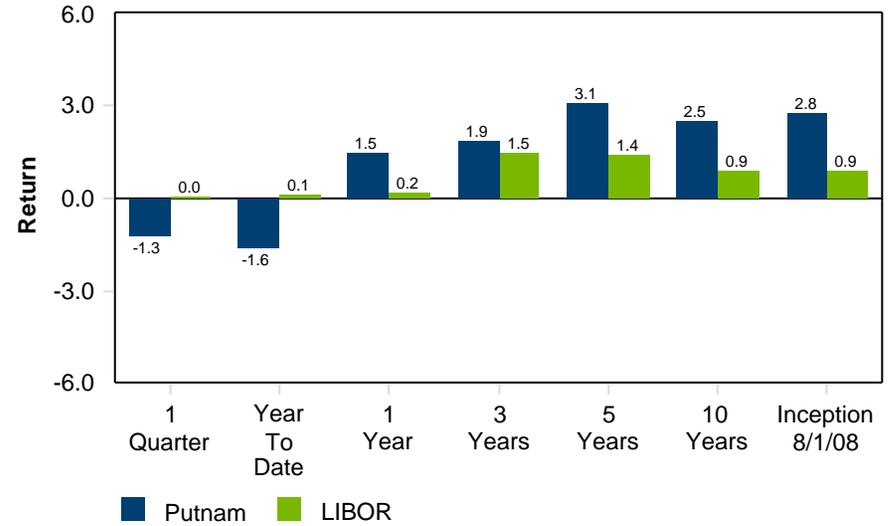
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Loomis Sayles	1.65	1.56	1.06	0.89	1.08	1.44	1.05	6.15	4.58	0.94
Performance Benchmark	0.00	0.00	N/A	1.00	0.81	0.00	1.00	4.44	4.10	1.00
FTSE 3 Month T-Bill	-3.31	4.09	-0.81	0.00	N/A	1.11	0.00	1.13	0.25	0.07

Putnam Performance Summary

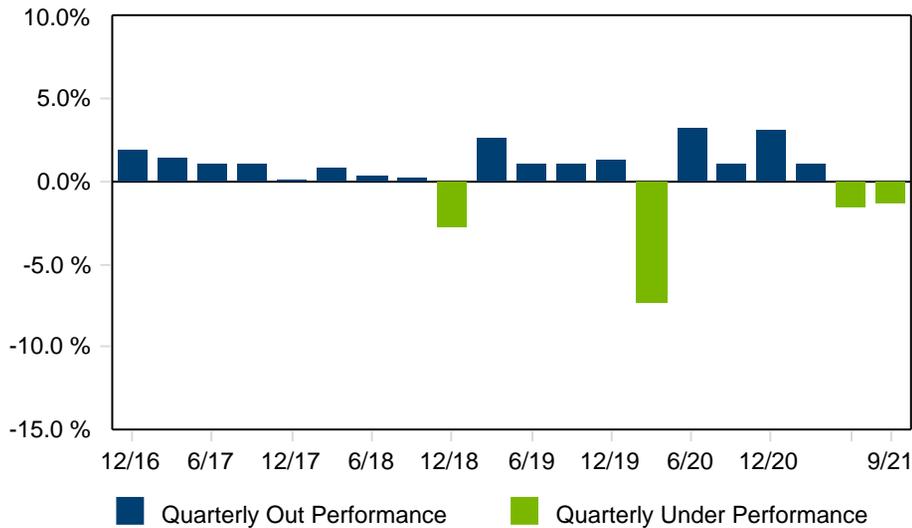
Account Information

Account Name: Putnam  
 Inception Date: 06/30/2008  
 Account Structure: Commingled Fund  
 Asset Class: US Fixed Income  
 Benchmark: LIBOR  
 Peer Group: IM U.S. Fixed Income (SA+CF)

Return Summary



Quarterly Excess Performance

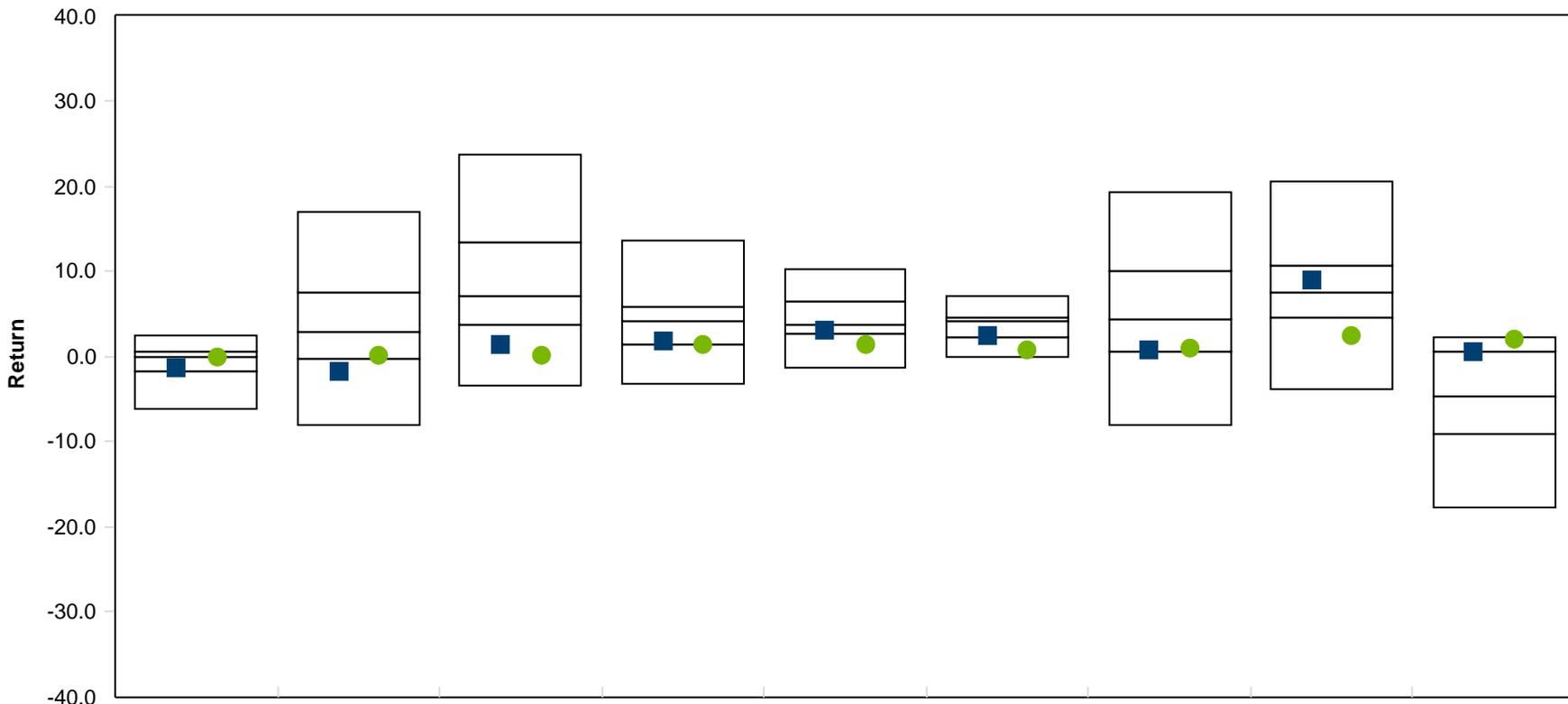


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Absolute Return (MF)

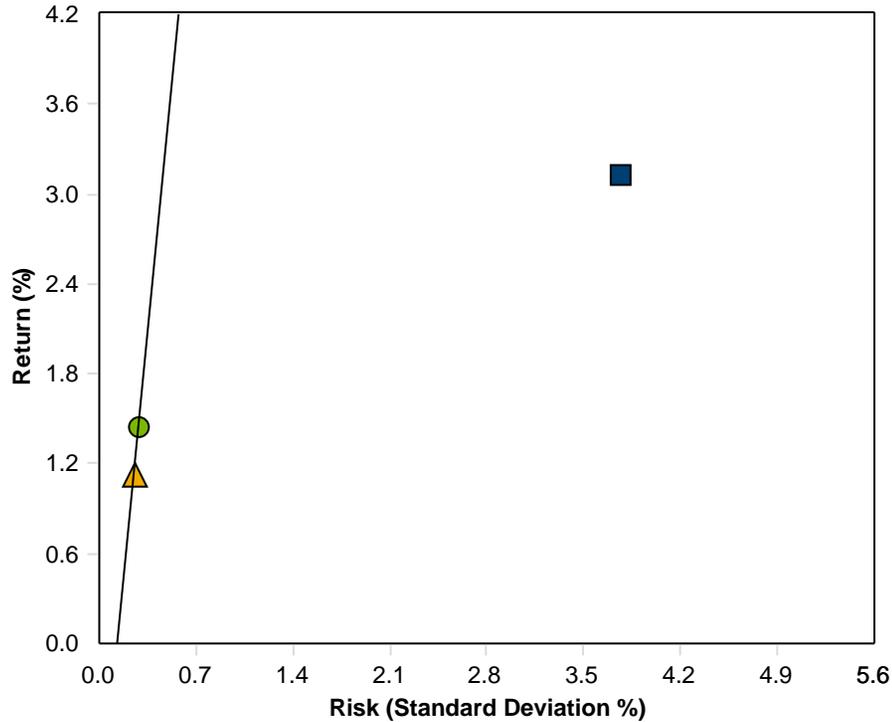


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	10 Years	2020	2019	2018
■ Putnam	-1.3 (70)	-1.6 (84)	1.5 (82)	1.9 (73)	3.1 (66)	2.5 (67)	0.9 (73)	9.0 (31)	0.7 (23)
● LIBOR	0.0 (49)	0.1 (74)	0.2 (86)	1.5 (76)	1.4 (83)	0.9 (93)	1.1 (72)	2.6 (84)	2.1 (6)
5th Percentile	2.5	17.0	23.8	13.7	10.4	7.3	19.4	20.7	2.4
1st Quartile	0.5	7.5	13.4	6.0	6.5	4.7	10.1	10.7	0.5
Median	0.0	3.0	7.1	4.3	3.8	4.2	4.4	7.7	-4.6
3rd Quartile	-1.7	-0.2	3.8	1.5	2.7	2.3	0.6	4.6	-9.0
95th Percentile	-6.1	-8.0	-3.3	-3.2	-1.2	0.0	-8.0	-3.8	-17.6
Population	34	34	34	34	34	11	34	40	49

Parenteses contain percentile rankings.

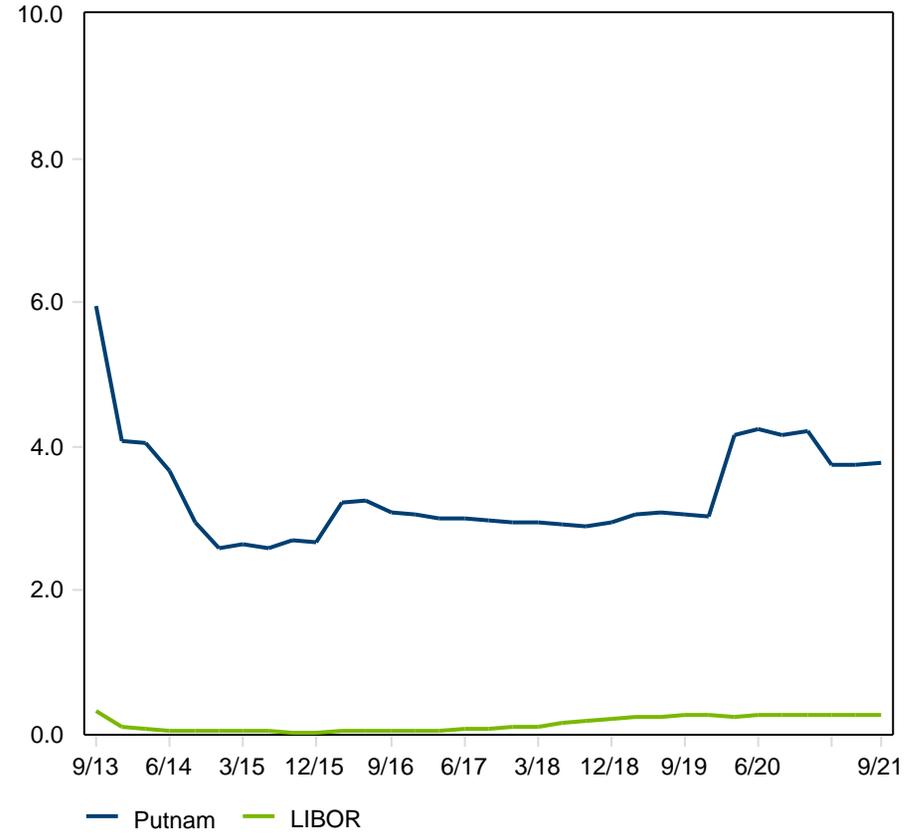
Putnam Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Putnam      ● LIBOR  
▲ FTSE 3 Month T-Bill

Rolling 5 Years Standard Deviation



5 Years Historical Statistics

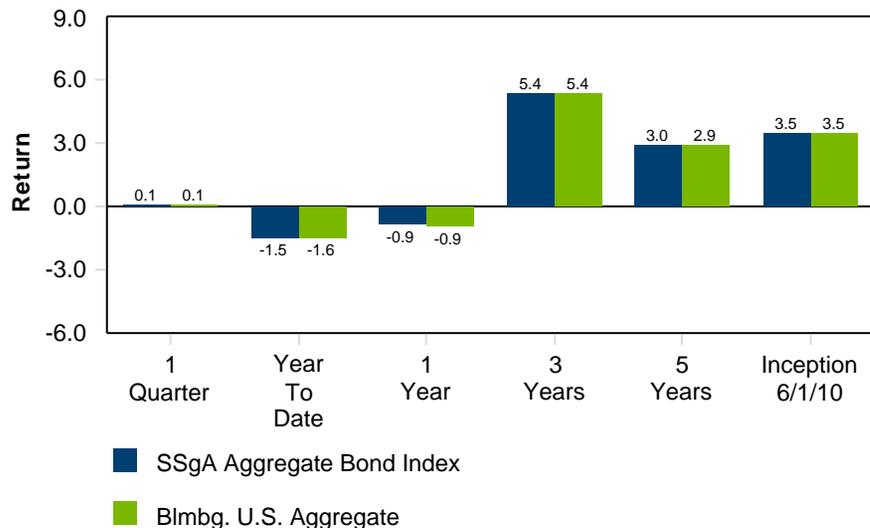
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Putnam	1.72	3.75	0.46	0.01	0.54	1.06	1.46	3.12	3.77	0.11
LIBOR	0.00	0.00	N/A	1.00	2.61	0.00	1.00	1.44	0.29	1.00
FTSE 3 Month T-Bill	-0.31	0.12	-2.61	0.83	N/A	-0.03	0.81	1.13	0.25	0.91

SSgA Aggregate Bond Index Performance Summary

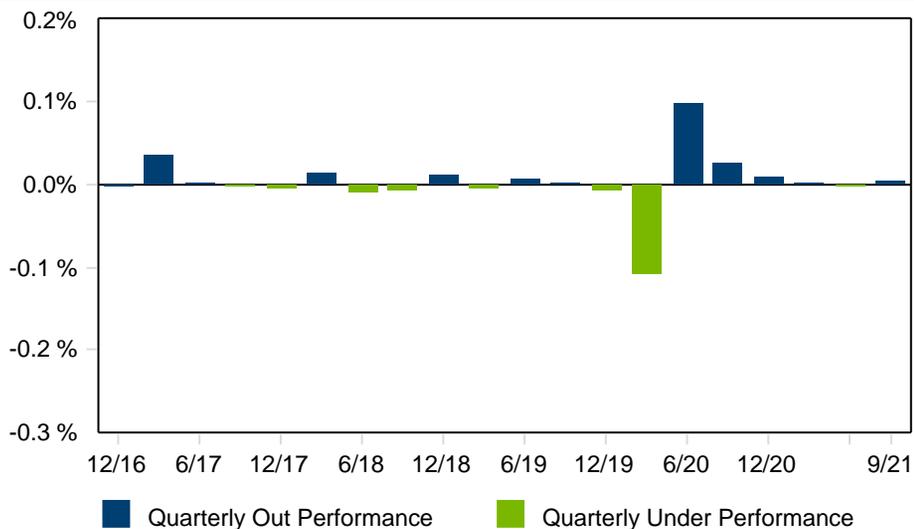
Account Information

Account Name: SSgA Aggregate Bond Index  
 Inception Date: 01/01/1901  
 Account Structure: Commingled Fund  
 Asset Class: US Fixed Income  
 Benchmark: Blmbg. U.S. Aggregate  
 Peer Group: IM U.S. Fixed Income (SA+CF)

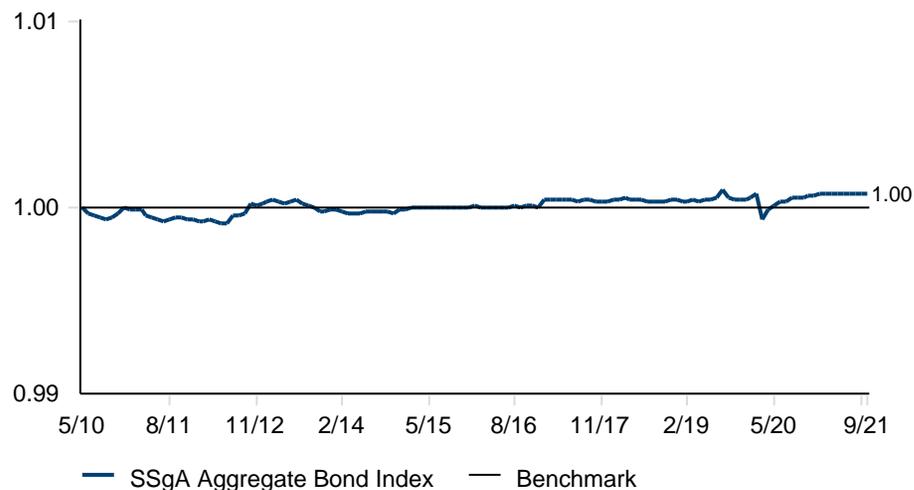
Return Summary



Quarterly Excess Performance

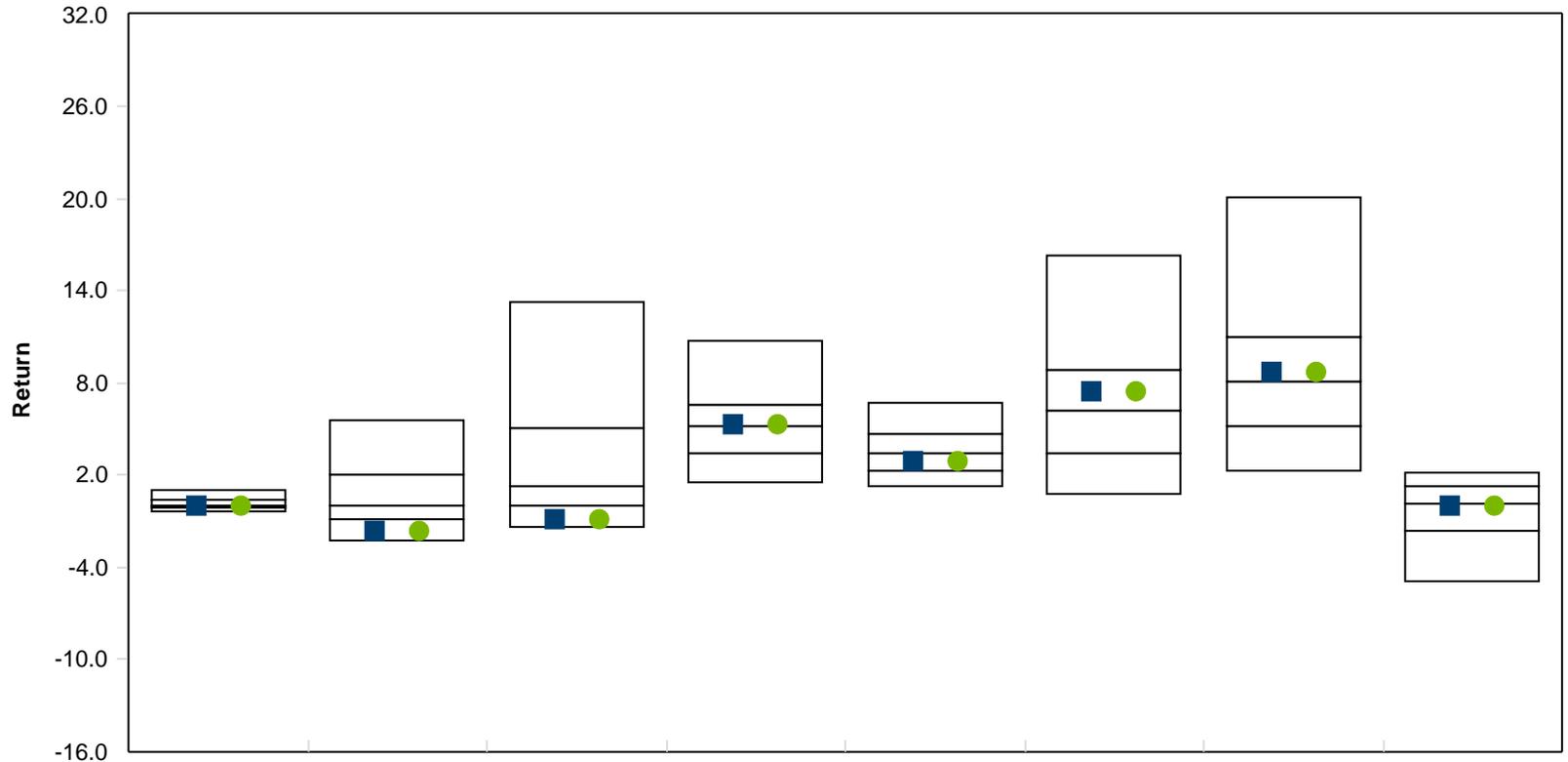


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Fixed Income (SA+CF)



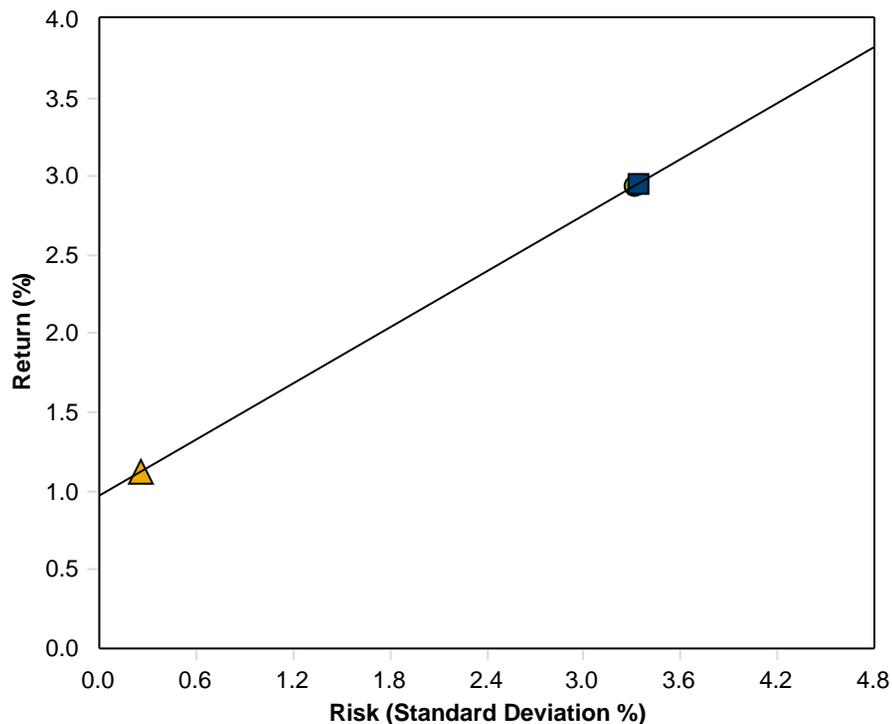
	1 Quarter	Year To Date	1 Year	3 Years	5 Years	2020	2019	2018
■ SSgA Aggregate Bond Index	0.1 (56)	-1.5 (89)	-0.9 (92)	5.4 (48)	3.0 (61)	7.5 (37)	8.7 (45)	0.0 (52)
● Blmbg. U.S. Aggregate	0.1 (58)	-1.6 (89)	-0.9 (92)	5.4 (48)	2.9 (61)	7.5 (38)	8.7 (45)	0.0 (52)
5th Percentile	1.1	5.6	13.3	10.8	6.7	16.3	20.2	2.2
1st Quartile	0.4	2.1	5.1	6.6	4.7	8.8	11.1	1.3
Median	0.1	0.0	1.2	5.2	3.4	6.2	8.2	0.1
3rd Quartile	0.0	-0.8	0.1	3.4	2.3	3.5	5.3	-1.6
95th Percentile	-0.3	-2.3	-1.3	1.5	1.3	0.8	2.4	-4.9
Population	818	815	812	776	734	1,006	1,045	1,094

221

parentheses contain percentile rankings.

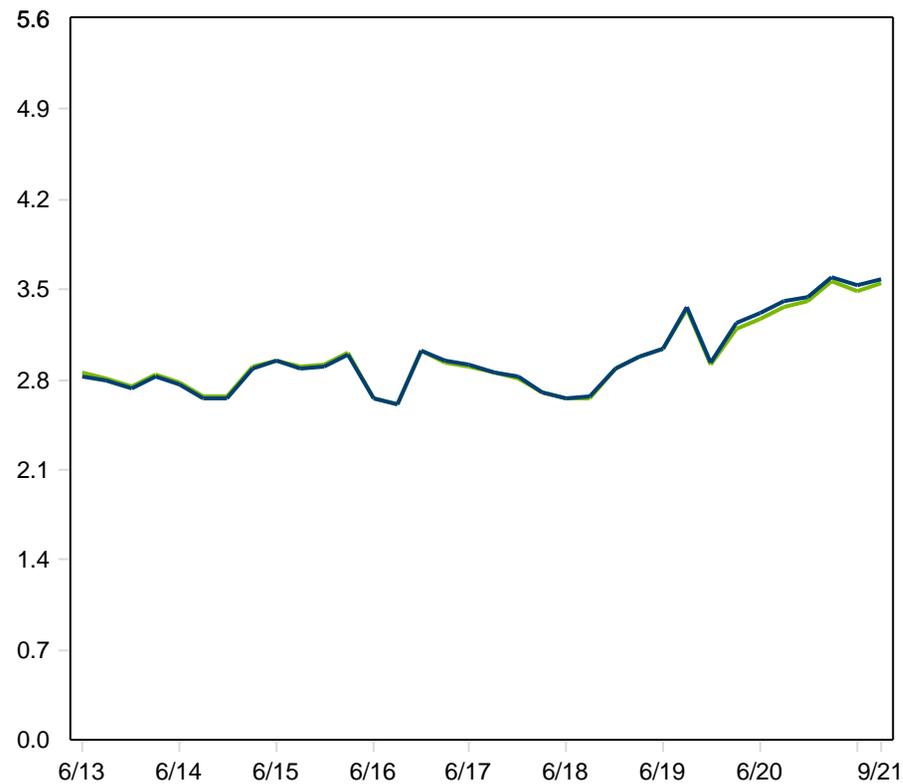
SSgA Aggregate Bond Index Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ SSgA Aggregate Bond Index    ● Blmbg. U.S. Aggregate  
 ▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



— SSgA Aggregate Bond Index    — Blmbg. U.S. Aggregate

5 Years Historical Statistics

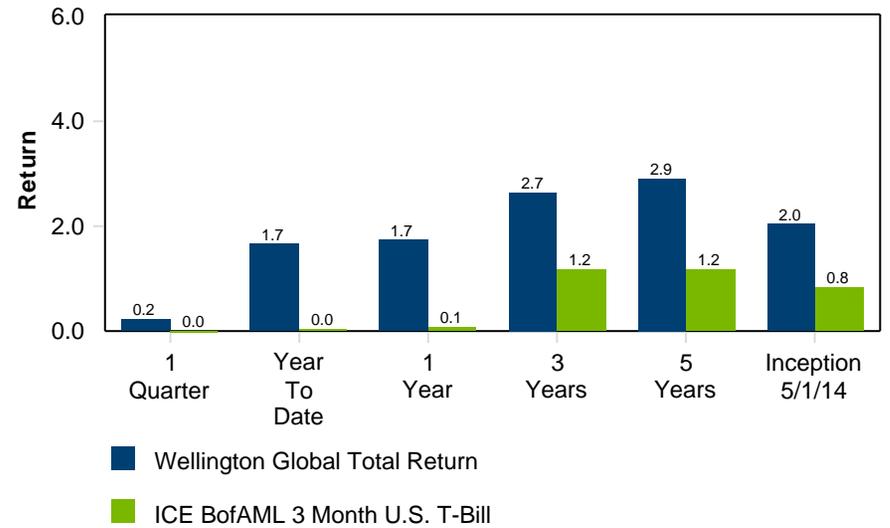
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
SSgA Aggregate Bond Index	0.02	0.08	0.19	1.00	0.57	-0.01	1.01	2.96	3.34	1.00
Blmbg. U.S. Aggregate	0.00	0.00	N/A	1.00	0.57	0.00	1.00	2.94	3.31	1.00
FTSE 3 Month T-Bill	-1.83	3.24	-0.57	0.09	N/A	1.06	0.02	1.13	0.25	0.30

Wellington Global Total Return Performance Summary

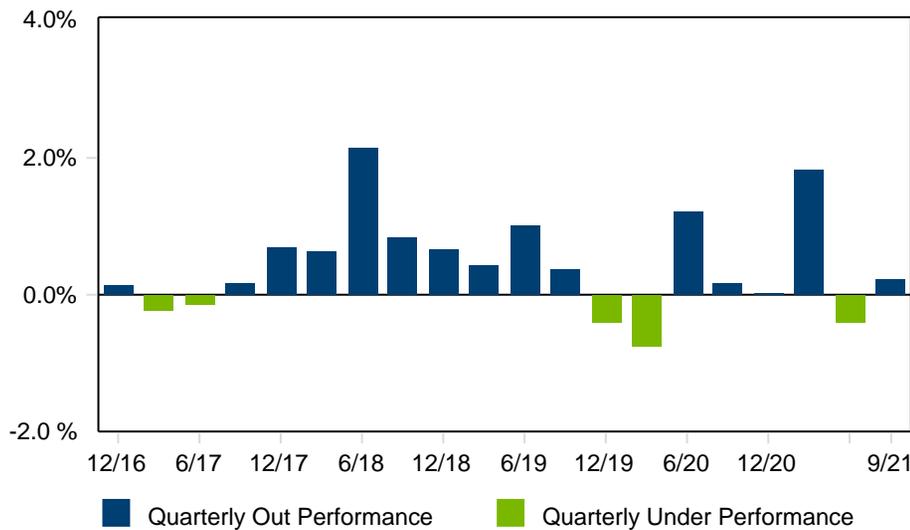
Account Information

Account Name: Wellington Global Total Return  
 Inception Date: 05/13/2014  
 Account Structure: Commingled Fund  
 Asset Class: Global Fixed Income  
 Benchmark: ICE BofAML 3 Month U.S. T-Bill  
 Peer Group: IM Absolute Return (MF)

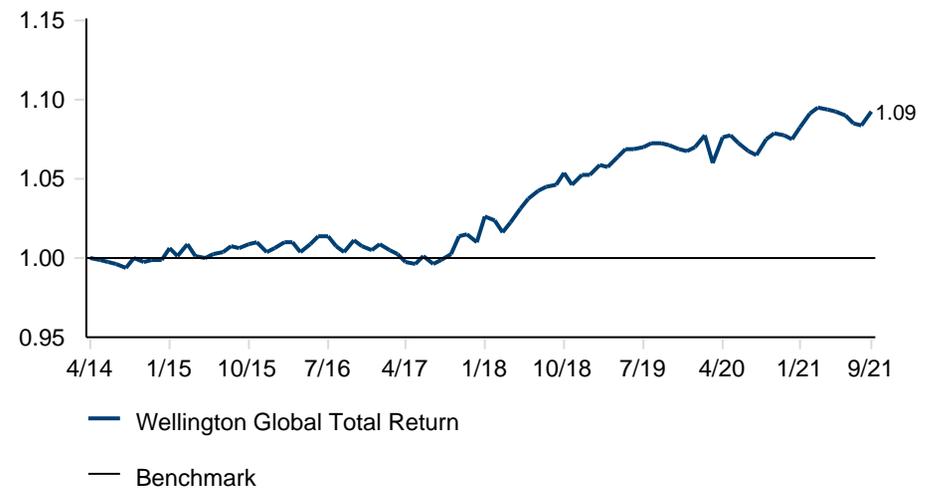
Return Summary



Quarterly Excess Performance

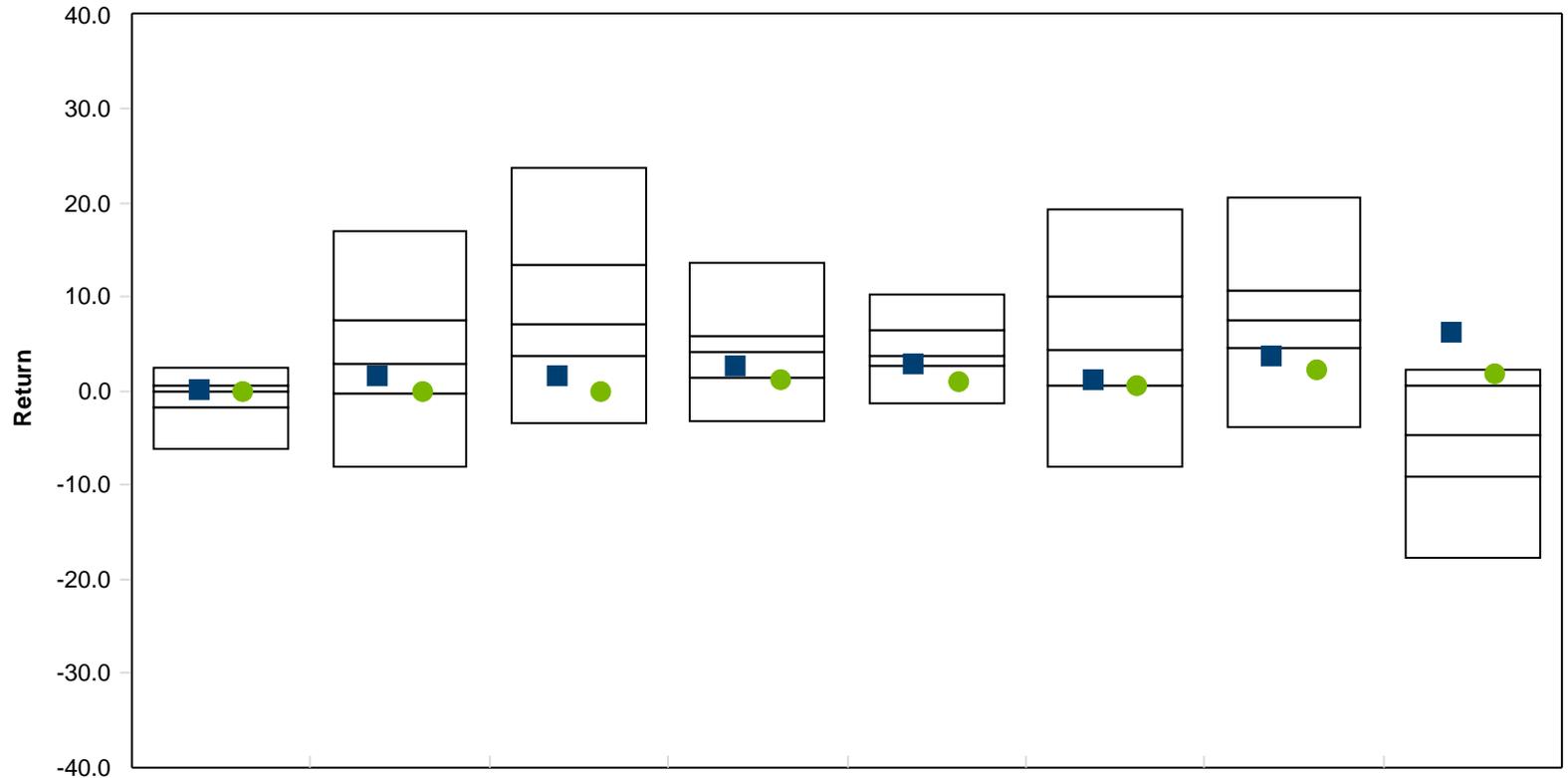


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM Absolute Return (MF)

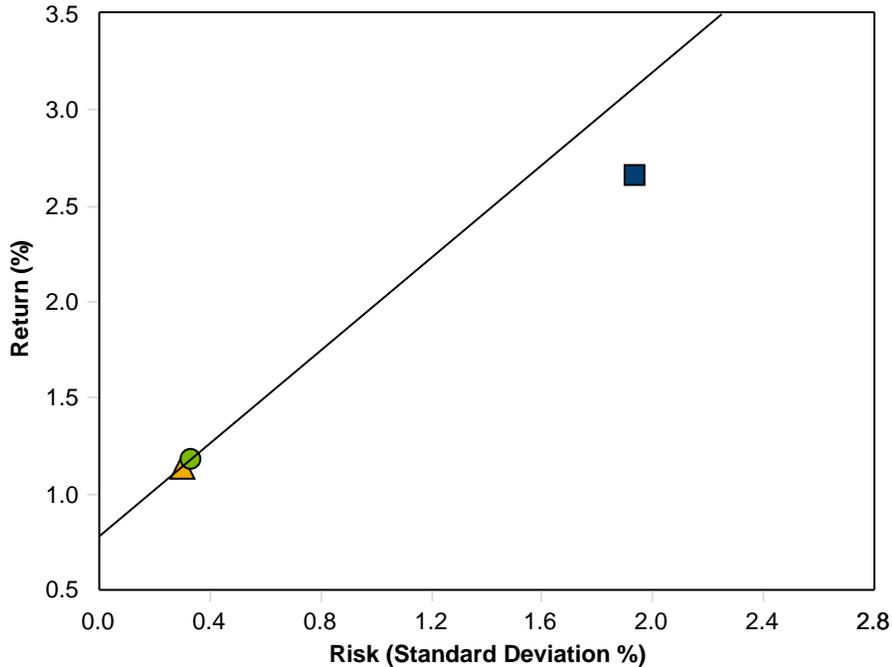


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	2020	2019	2018
Wellington Global Total Return	0.2 (39)	1.7 (68)	1.7 (81)	2.7 (70)	2.9 (71)	1.4 (72)	3.7 (83)	6.2 (4)
ICE BofAML 3 Month U.S. T-Bill	0.0 (50)	0.0 (75)	0.1 (86)	1.2 (80)	1.2 (84)	0.7 (75)	2.3 (84)	1.9 (6)
5th Percentile	2.5	17.0	23.8	13.7	10.4	19.4	20.7	2.4
1st Quartile	0.5	7.5	13.4	6.0	6.5	10.1	10.7	0.5
Median	0.0	3.0	7.1	4.3	3.8	4.4	7.7	-4.6
3rd Quartile	-1.7	-0.2	3.8	1.5	2.7	0.6	4.6	-9.0
95th Percentile	-6.1	-8.0	-3.3	-3.2	-1.2	-8.0	-3.8	-17.6
Population	34	34	34	34	34	34	40	49

parentheses contain percentile rankings.

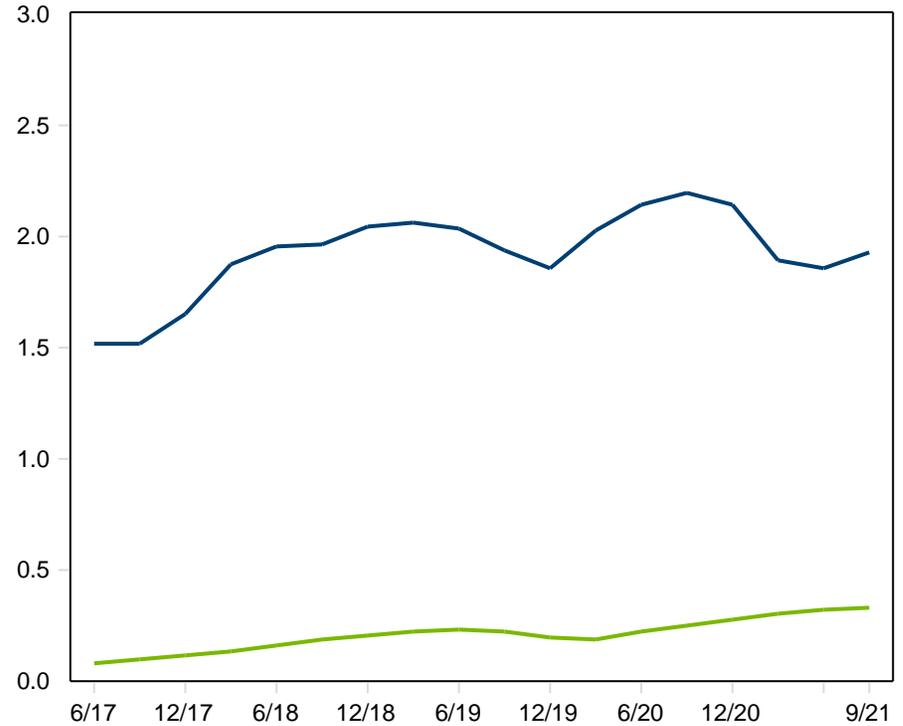
Wellington Global Total Return Risk Profile

Annualized Return vs. Annualized Standard Deviation 3 Years



- Wellington Global Total Return
- ICE BofAML 3 Month U.S. T-Bill
- ▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



- Wellington Global Total Return
- ICE BofAML 3 Month U.S. T-Bill

3 Years Historical Statistics

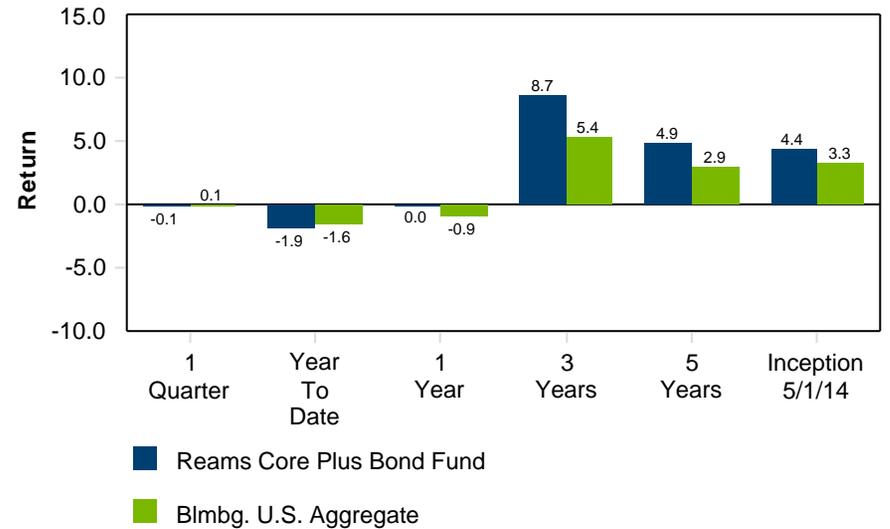
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Wellington Global Total Return	1.47	1.97	0.75	0.00	0.80	2.81	-0.11	2.66	1.93	-0.02
ICE BofAML 3 Month U.S. T-Bill	0.00	0.00	N/A	1.00	0.33	0.00	1.00	1.18	0.33	1.00
FTSE 3 Month T-Bill	-0.04	0.11	-0.33	0.88	N/A	0.14	0.85	1.14	0.30	0.94

Reams Core Plus Bond Fund Performance Summary

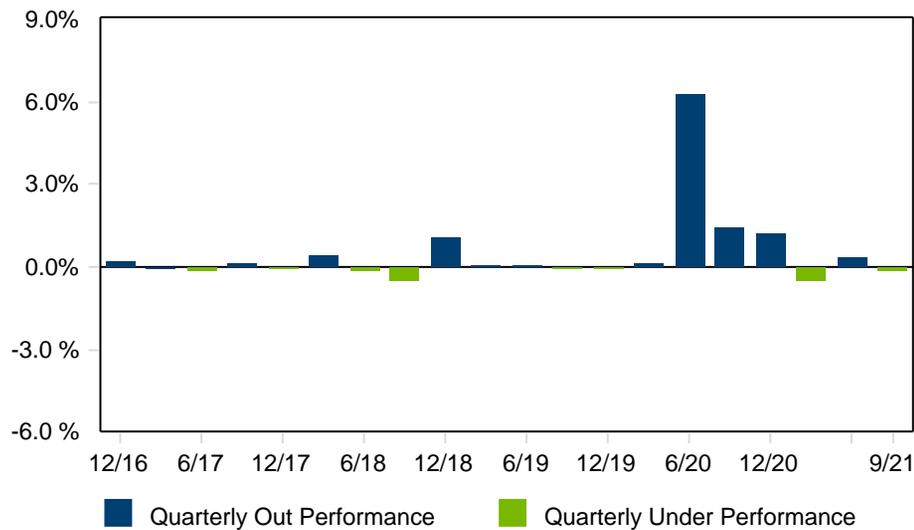
Account Information

Account Name: Reams Core Plus Bond Fund  
 Inception Date: 05/08/2014  
 Account Structure: Commingled Fund  
 Asset Class: US Fixed Income  
 Benchmark: Blmbg. U.S. Aggregate  
 Peer Group: IM U.S. Fixed Income (SA+CF)

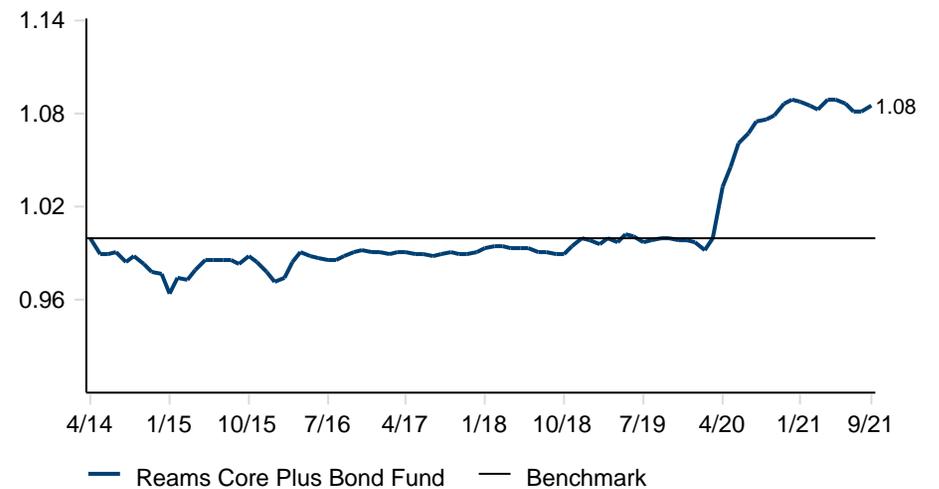
Return Summary



Quarterly Excess Performance

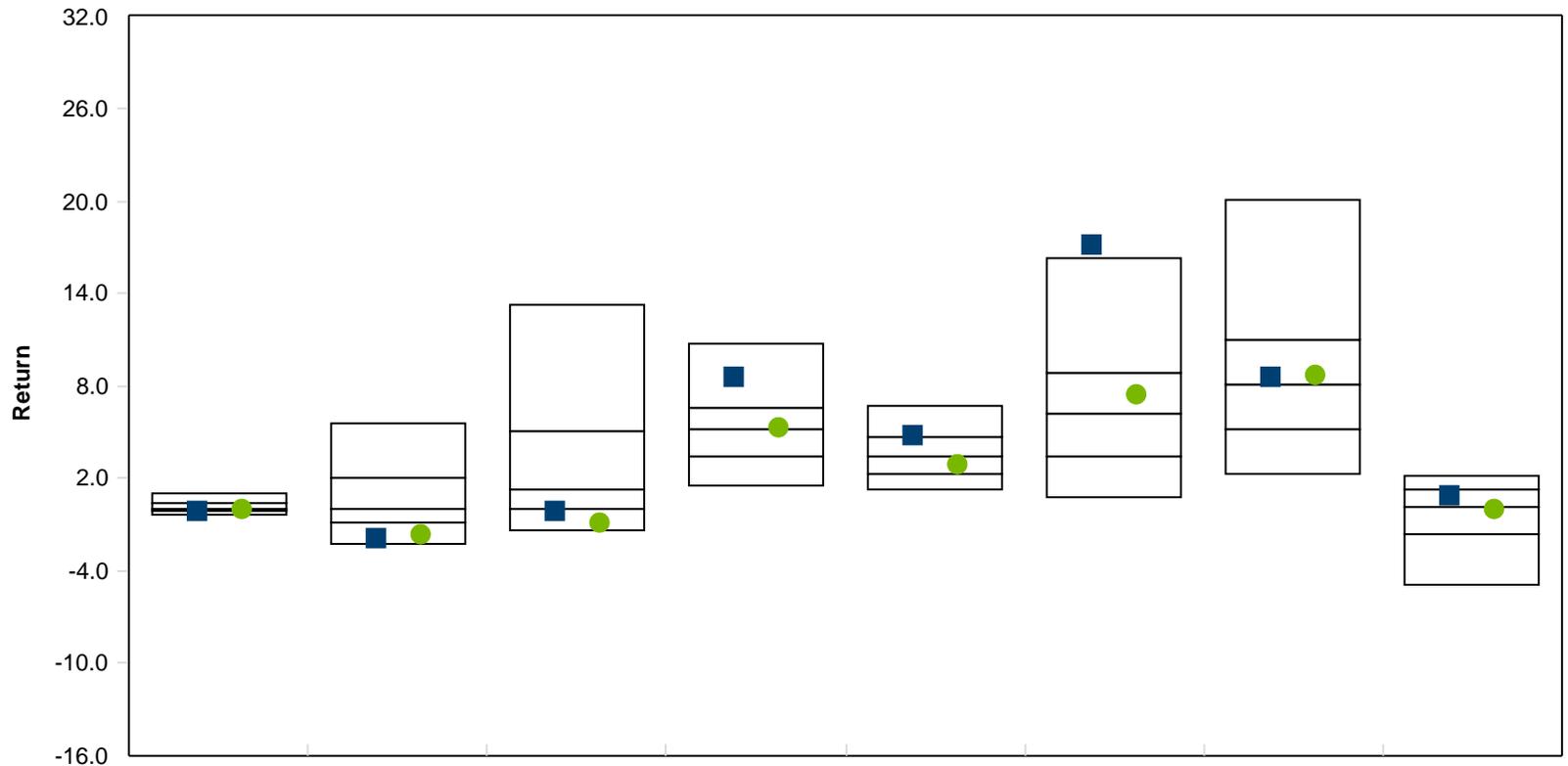


Ratio of Cumulative Wealth - Since Inception



Peer Group Analysis

IM U.S. Fixed Income (SA+CF)

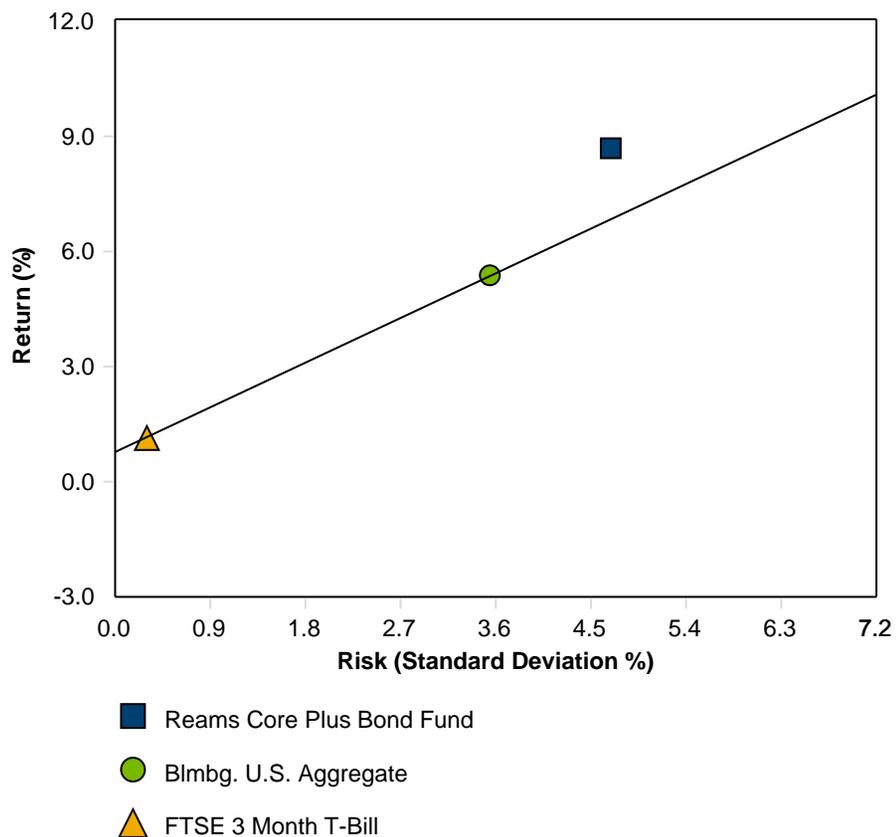


	1 Quarter	Year To Date	1 Year	3 Years	5 Years	2020	2019	2018
■ Reams Core Plus Bond Fund	-0.1 (84)	-1.9 (94)	0.0 (80)	8.7 (9)	4.9 (23)	17.2 (4)	8.6 (46)	0.9 (36)
● Blmbg. U.S. Aggregate	0.1 (58)	-1.6 (89)	-0.9 (92)	5.4 (48)	2.9 (61)	7.5 (38)	8.7 (45)	0.0 (52)
5th Percentile	1.1	5.6	13.3	10.8	6.7	16.3	20.2	2.2
1st Quartile	0.4	2.1	5.1	6.6	4.7	8.8	11.1	1.3
Median	0.1	0.0	1.2	5.2	3.4	6.2	8.2	0.1
3rd Quartile	0.0	-0.8	0.1	3.4	2.3	3.5	5.3	-1.6
95th Percentile	-0.3	-2.3	-1.3	1.5	1.3	0.8	2.4	-4.9
Population	818	815	812	776	734	1,006	1,045	1,094

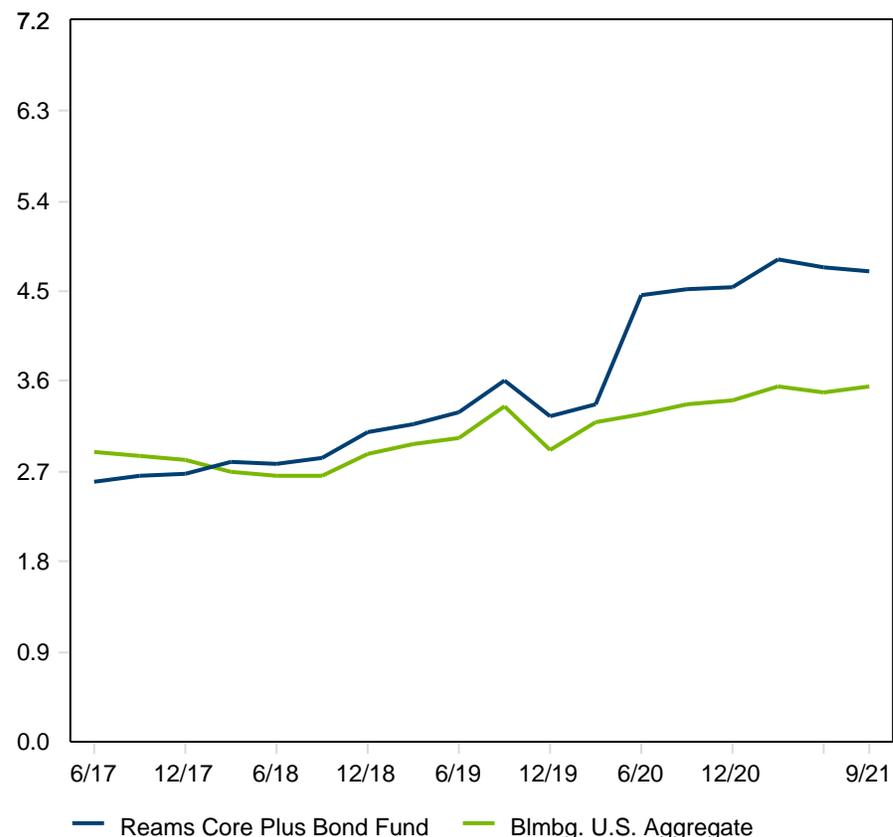
parentheses contain percentile rankings.

Reams Core Plus Bond Fund Risk Profile

Annualized Return vs. Annualized Standard Deviation 3 Years

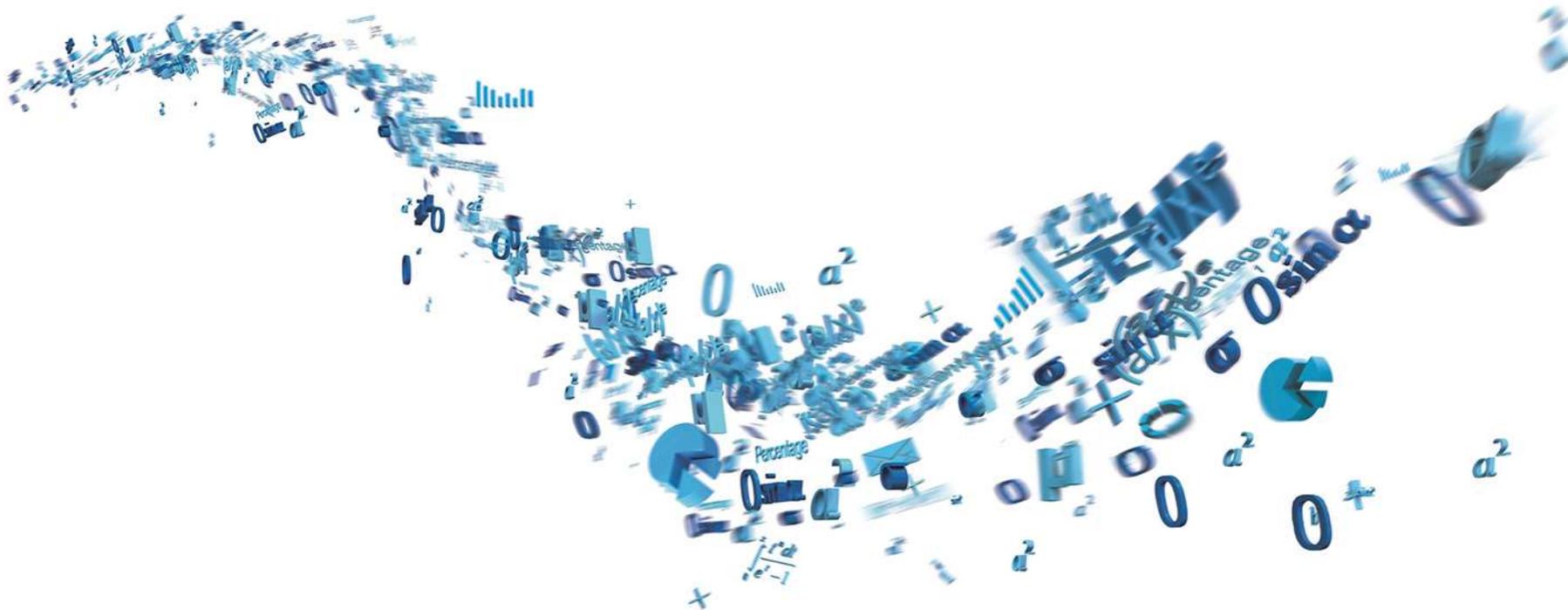


Rolling 3 Years Standard Deviation



3 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Reams Core Plus Bond Fund	3.16	2.42	1.31	0.75	1.57	2.42	1.14	8.67	4.69	0.86
Blmbg. U.S. Aggregate	0.00	0.00	N/A	1.00	1.21	0.00	1.00	5.35	3.54	1.00
FTSE 3 Month T-Bill	-4.15	3.45	-1.21	0.13	N/A	0.98	0.03	1.14	0.30	0.36



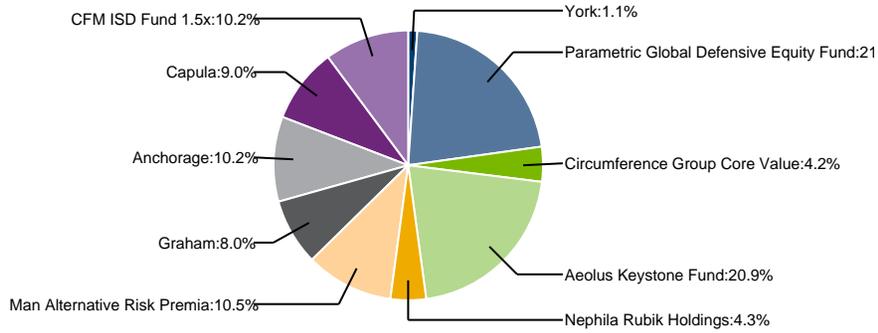
## Opportunistic/Alternatives

---

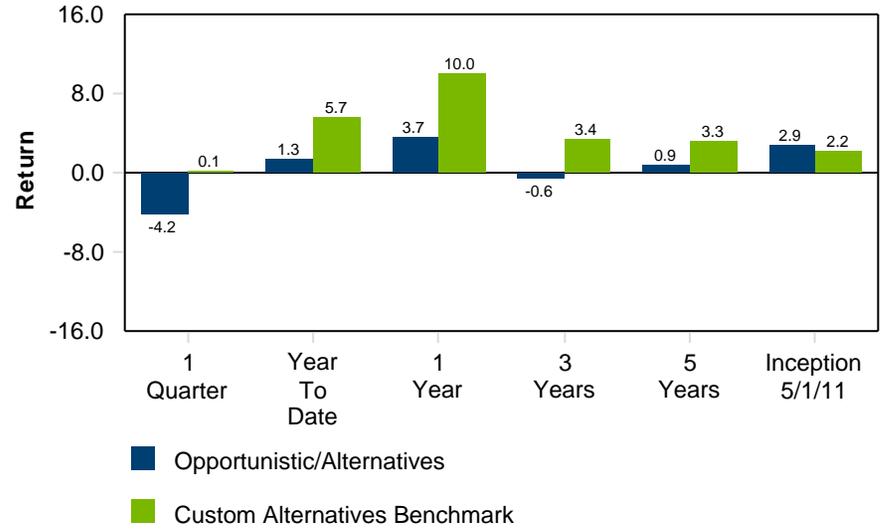
Opportunistic/Alternatives Portfolio Overview

Current Allocation

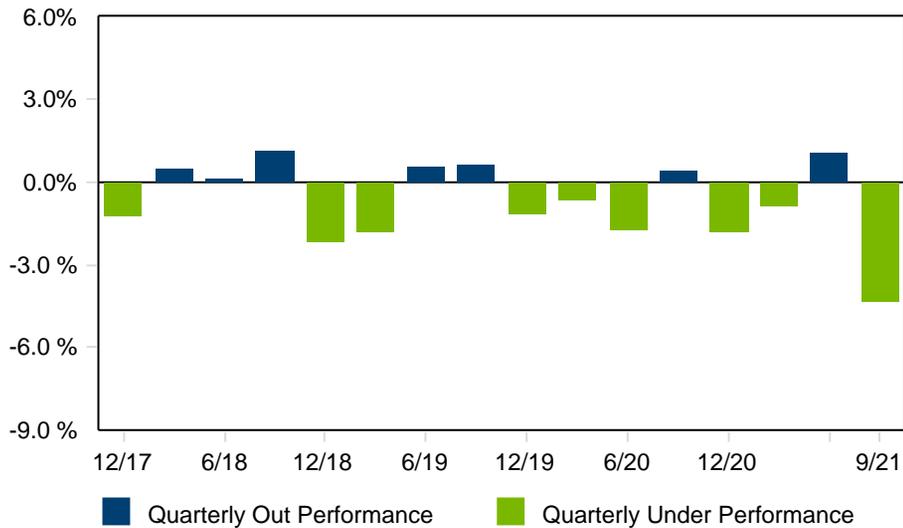
September 30, 2021 : \$899M



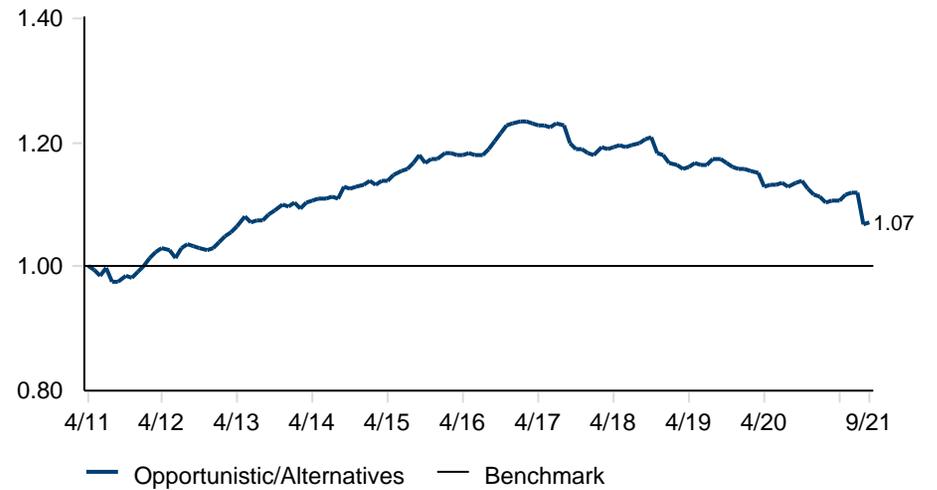
Return Summary



Quarterly Excess Performance

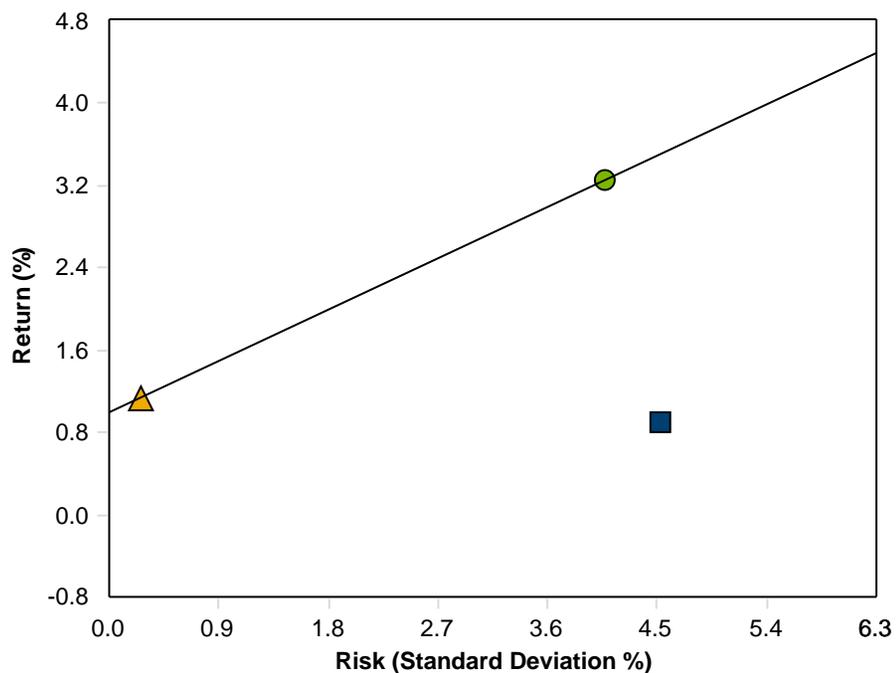


Ratio of Cumulative Wealth - Since Inception



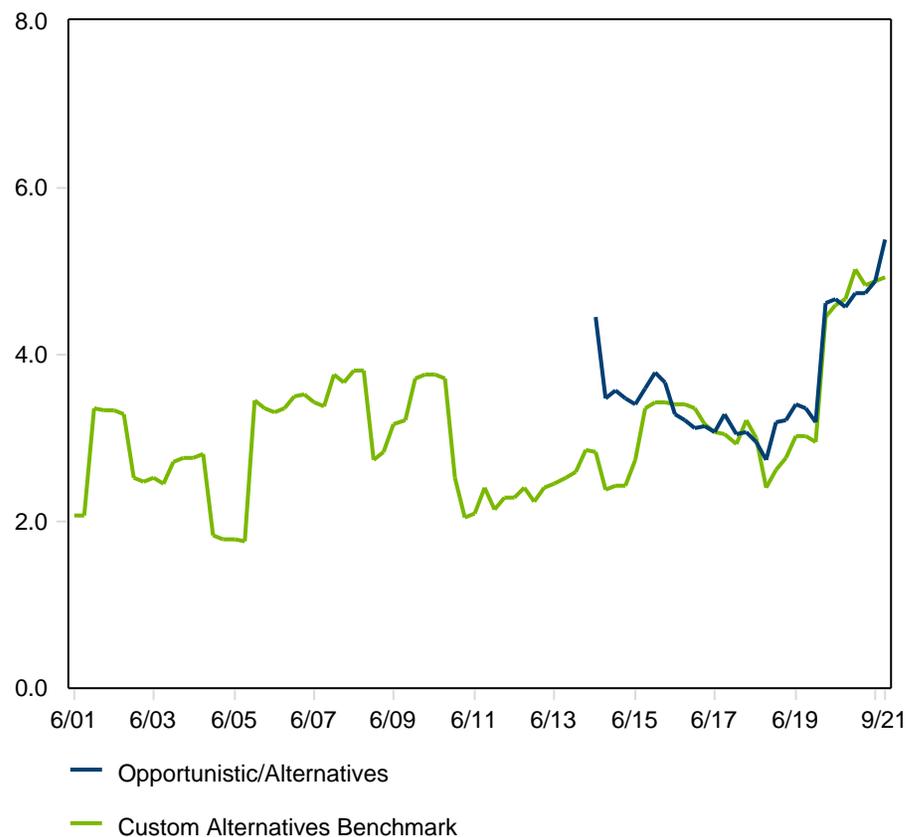
Opportunistic/Alternatives Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



- Opportunistic/Alternatives
- Custom Alternatives Benchmark
- ▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation

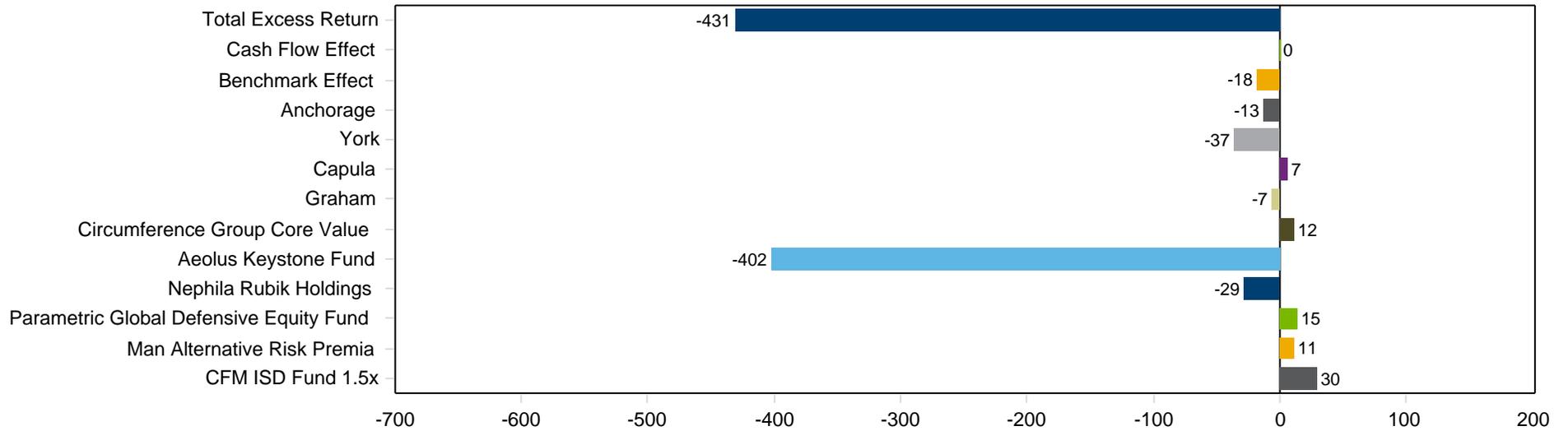


5 Years Historical Statistics

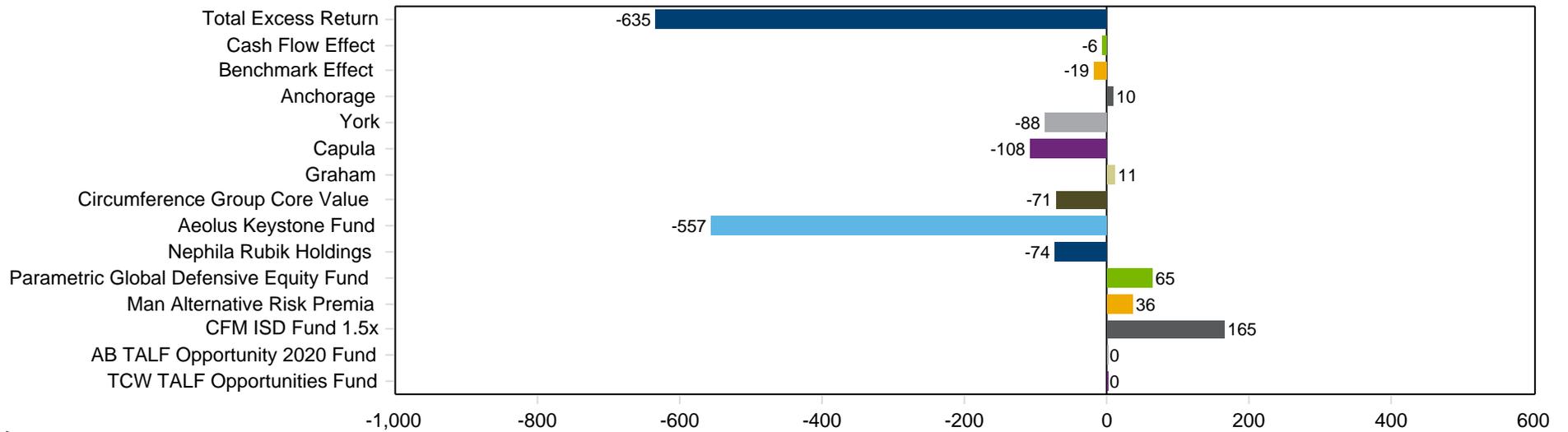
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Opportunistic/Alternatives	-2.30	3.13	-0.73	0.55	-0.03	-1.70	0.82	0.89	4.53	0.74
Custom Alternatives Benchmark	0.00	0.00	N/A	1.00	0.52	0.00	1.00	3.25	4.07	1.00
FTSE 3 Month T-Bill	-2.17	4.13	-0.52	0.04	N/A	1.17	-0.01	1.13	0.25	-0.21

Asset Class Attribution

1 Quarter



1 Year

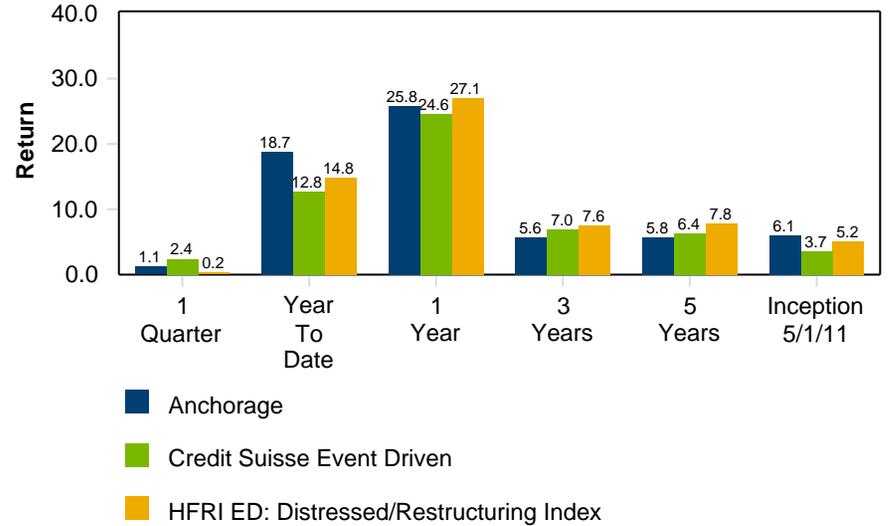


## Anchorage Performance Summary

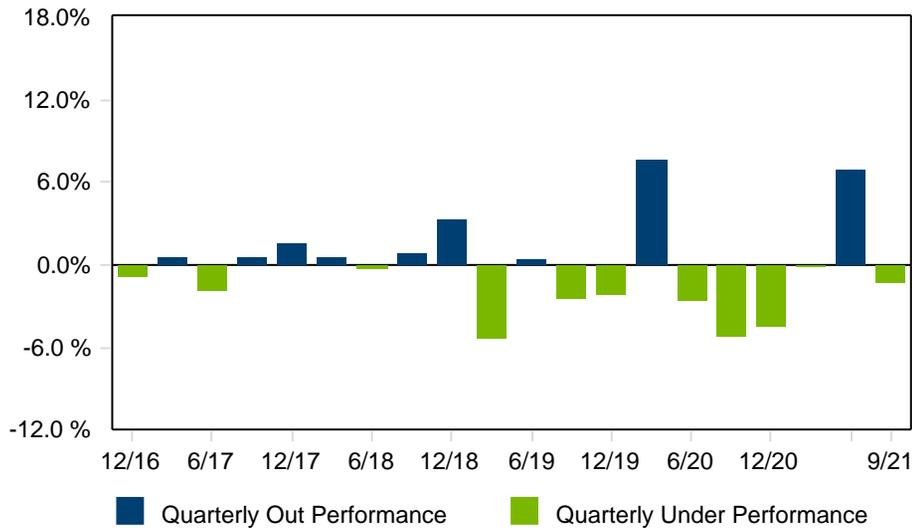
### Account Information

Account Name: Anchorage  
 Inception Date: 05/01/2011  
 Account Structure: Hedge Fund  
 Asset Class: US Hedge Fund  
 Benchmark: Credit Suisse Event Driven  
 Peer Group:

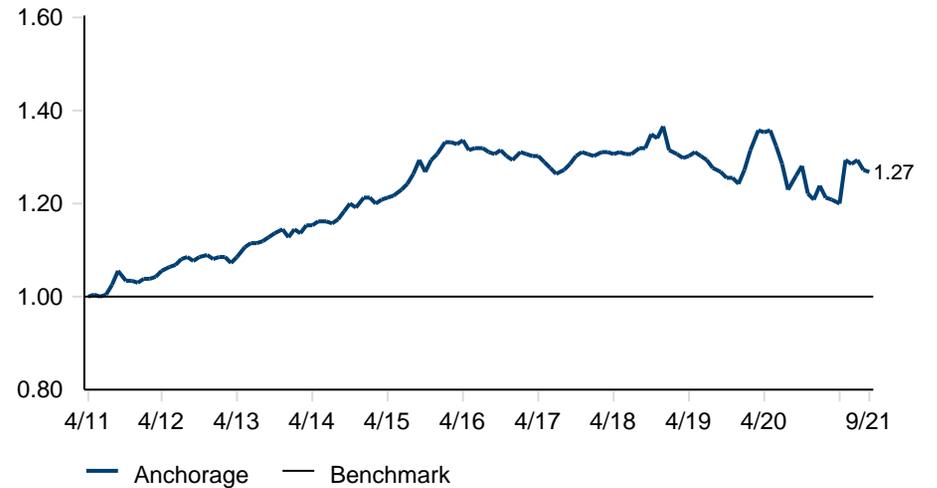
### Return Summary



### Quarterly Excess Performance

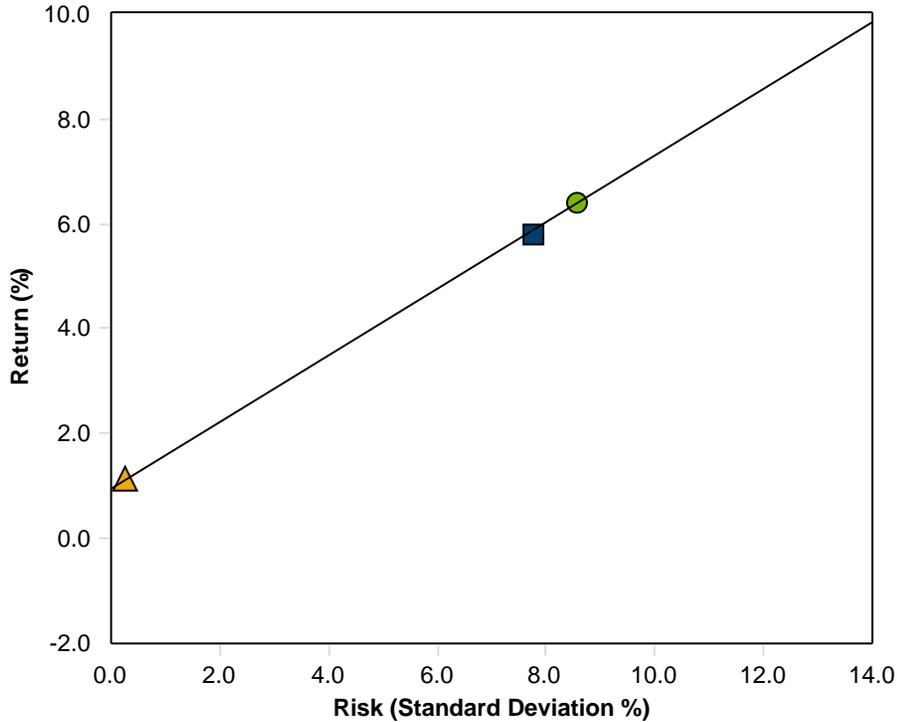


### Ratio of Cumulative Wealth - Since Inception



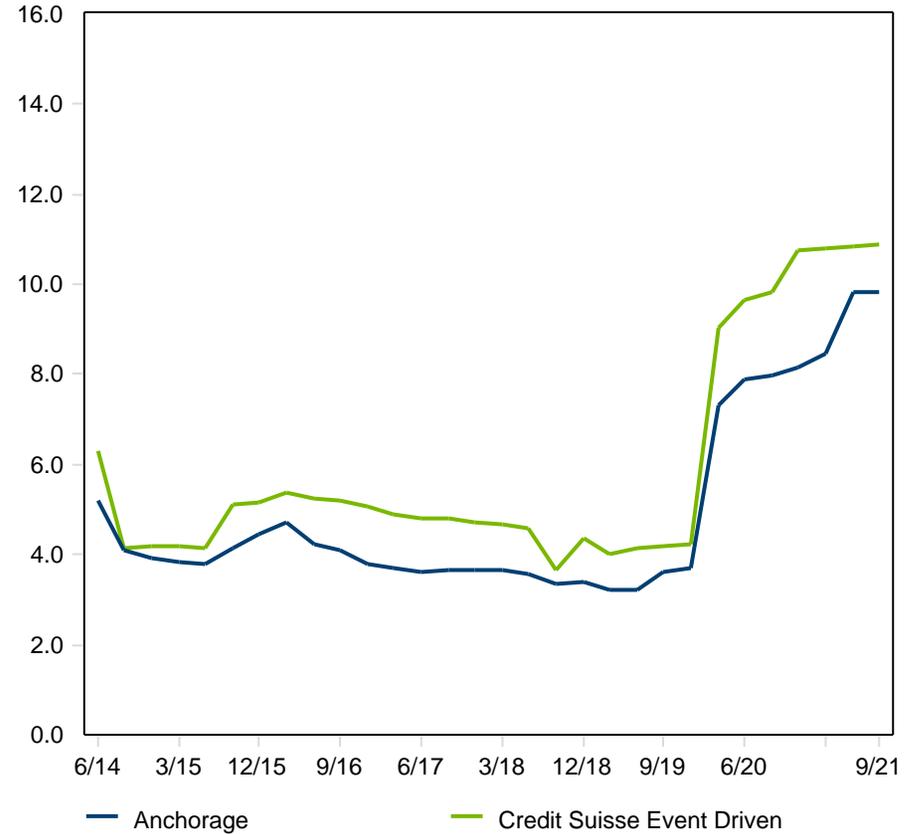
Anchorage Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Anchorage      ● Credit Suisse Event Driven  
▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



5 Years Historical Statistics

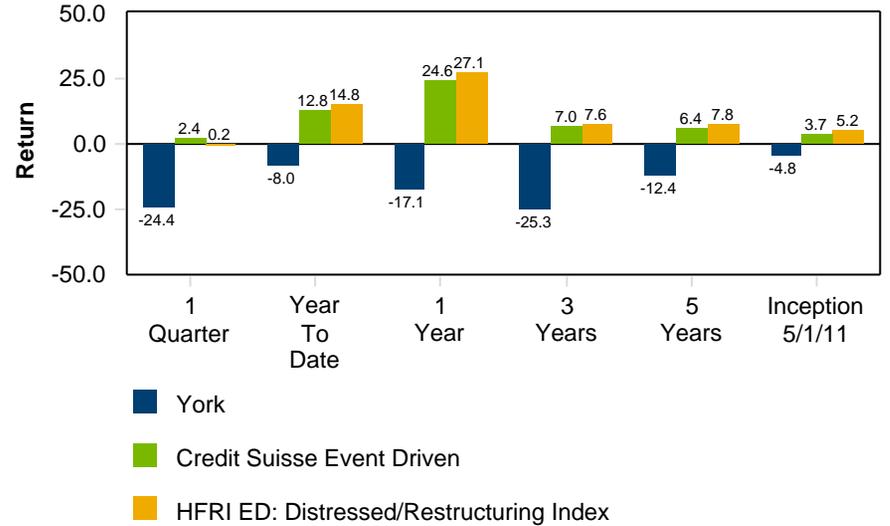
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Anchorage	-0.64	6.49	-0.10	0.47	0.61	1.85	0.62	5.80	7.78	0.69
Credit Suisse Event Driven	0.00	0.00	N/A	1.00	0.63	0.00	1.00	6.40	8.56	1.00
FTSE 3 Month T-Bill	-5.47	8.64	-0.63	0.10	N/A	1.19	-0.01	1.13	0.25	-0.31

York Performance Summary

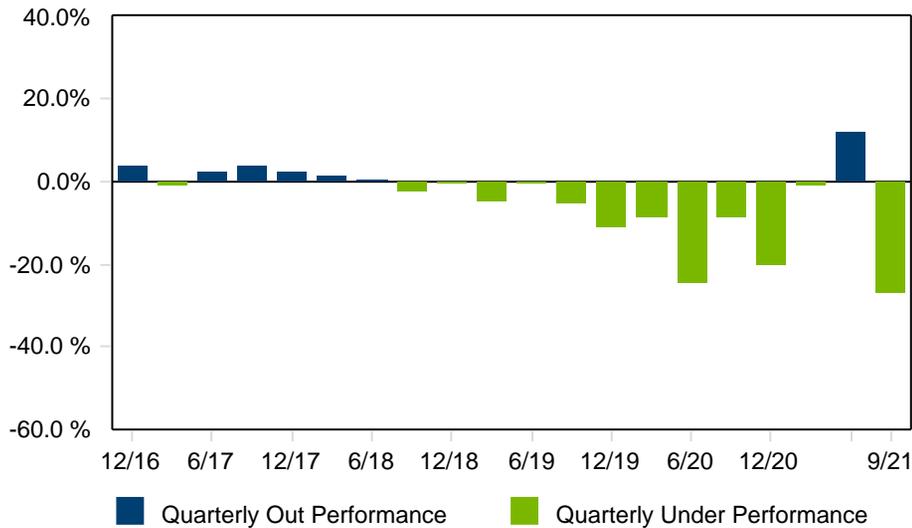
Account Information

Account Name: York  
 Inception Date: 05/01/2011  
 Account Structure: Hedge Fund  
 Asset Class: US Hedge Fund  
 Benchmark: Credit Suisse Event Driven  
 Peer Group:

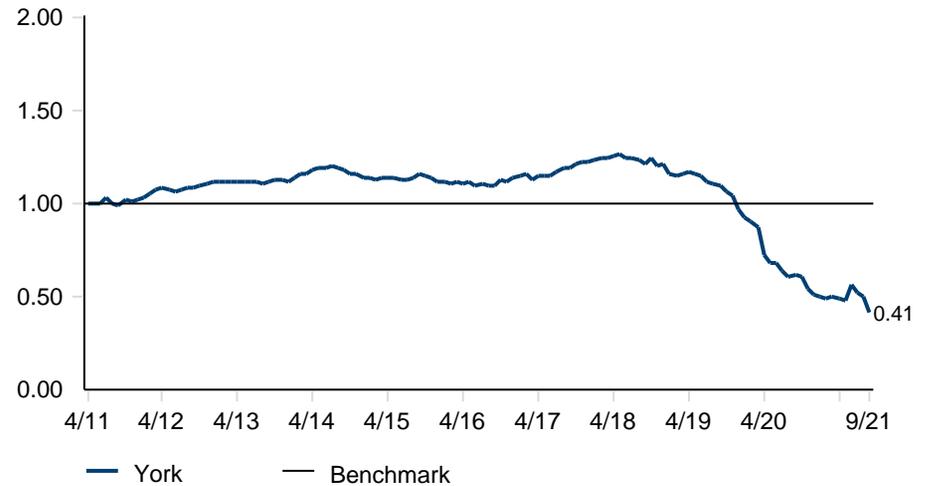
Return Summary



Quarterly Excess Performance

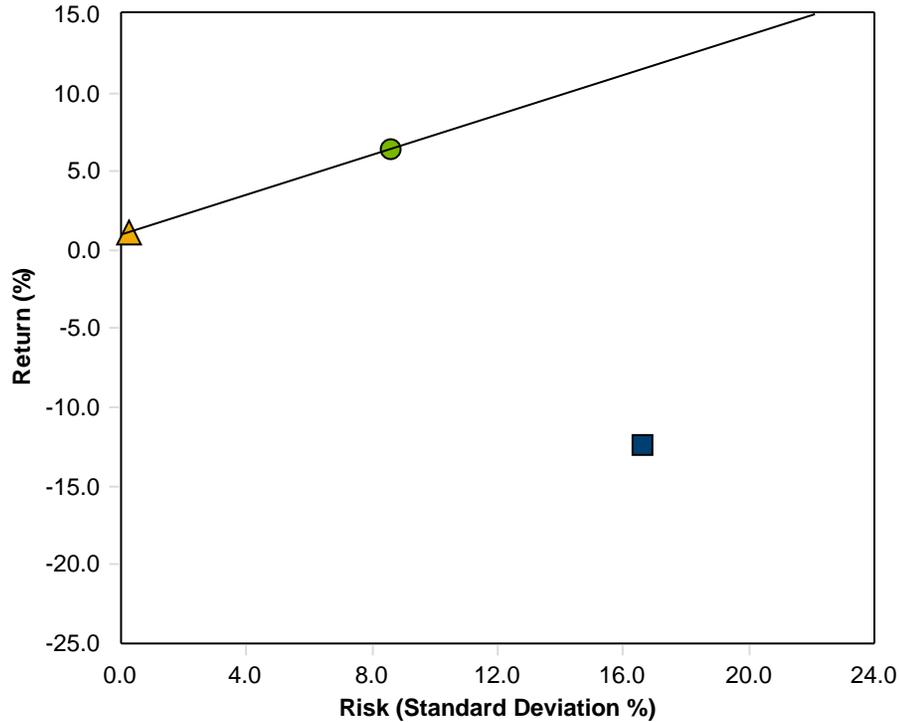


Ratio of Cumulative Wealth - Since Inception



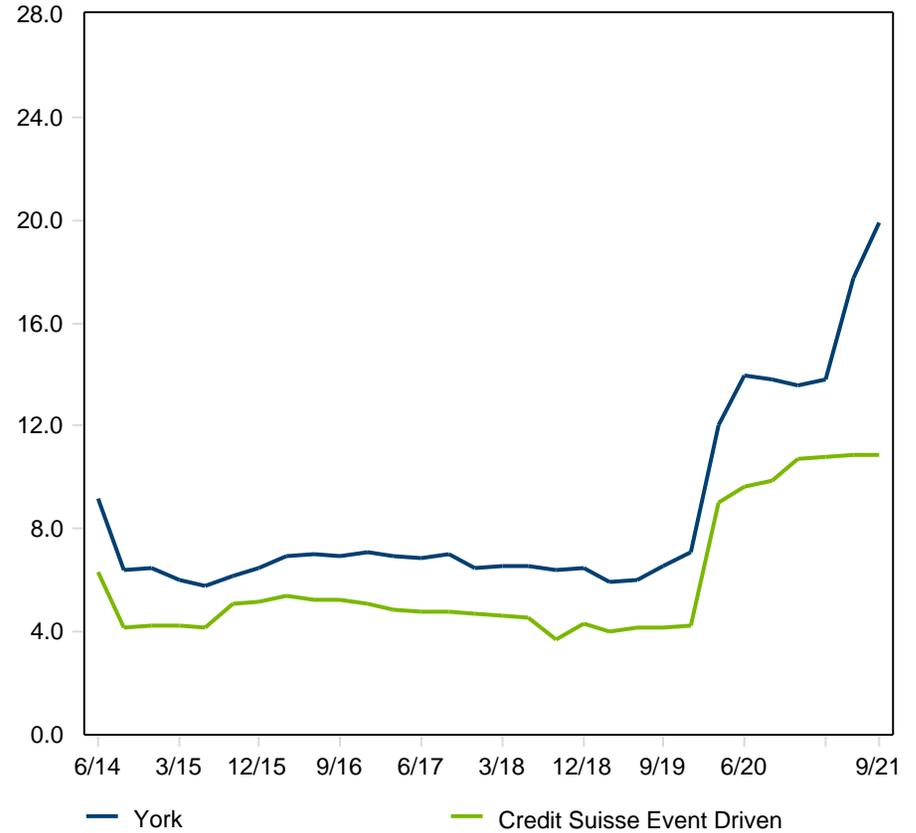
York Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ York  
● Credit Suisse Event Driven  
▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



5 Years Historical Statistics

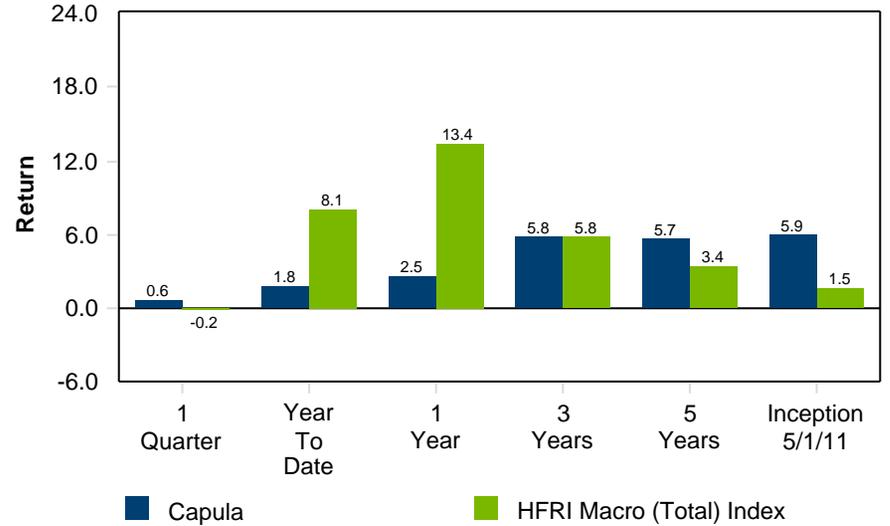
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
York	-18.40	16.41	-1.12	0.08	-0.78	-14.31	0.54	-12.43	16.58	0.28
Credit Suisse Event Driven	0.00	0.00	N/A	1.00	0.63	0.00	1.00	6.40	8.56	1.00
FTSE 3 Month T-Bill	-5.47	8.64	-0.63	0.10	N/A	1.19	-0.01	1.13	0.25	-0.31

Capula Performance Summary

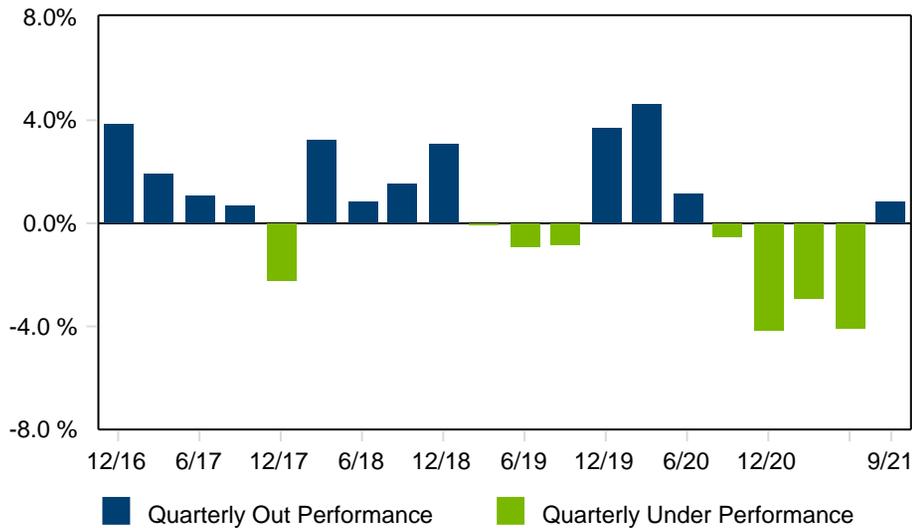
Account Information

Account Name: Capula  
 Inception Date: 05/01/2011  
 Account Structure: Hedge Fund  
 Asset Class: US Hedge Fund  
 Benchmark: HFRI Macro (Total) Index  
 Peer Group:

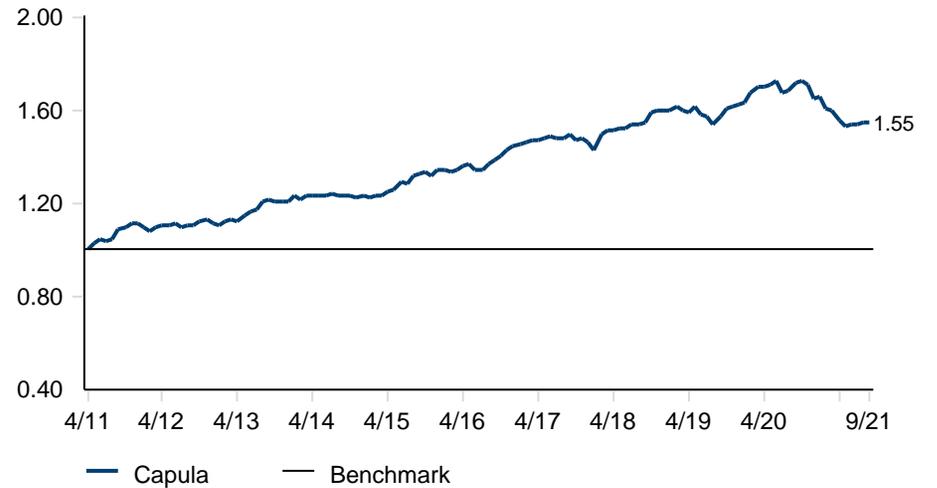
Return Summary



Quarterly Excess Performance

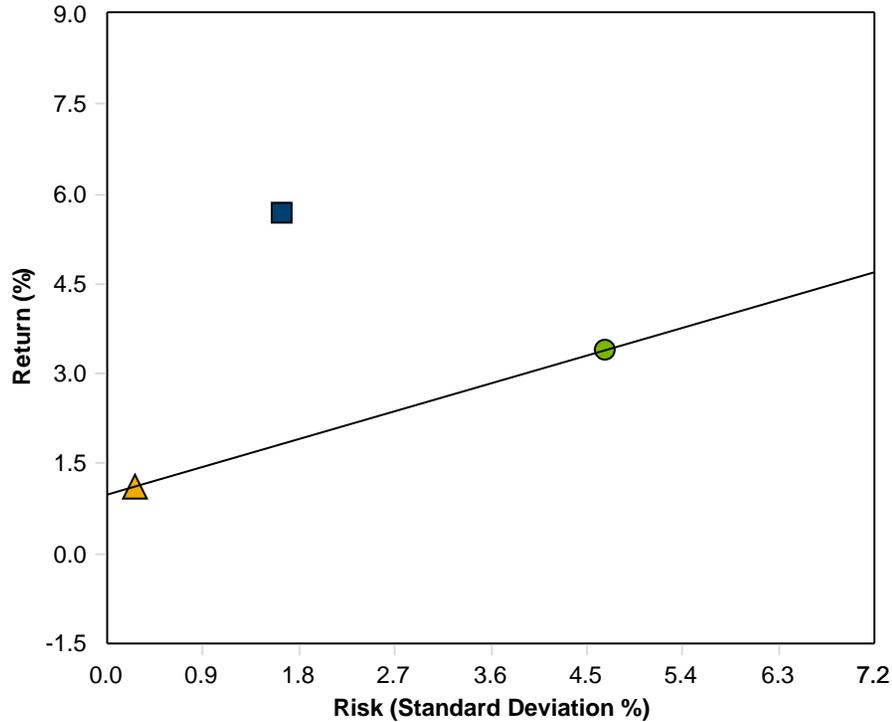


Ratio of Cumulative Wealth - Since Inception



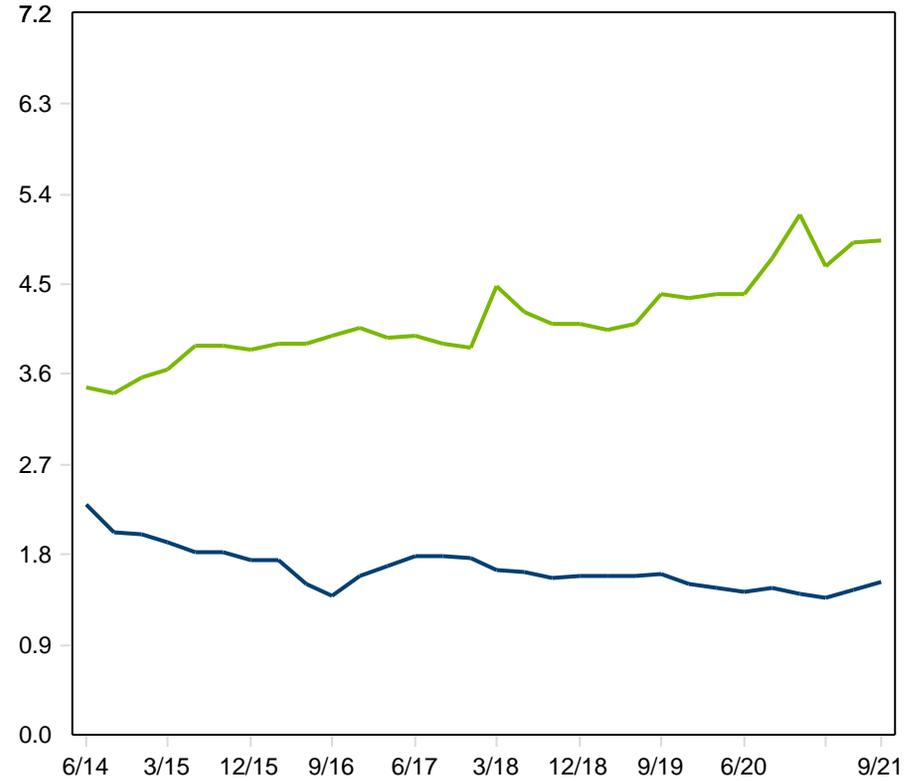
Capula Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Capula                      ● HFRI Macro (Total) Index  
▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



— Capula                      — HFRI Macro (Total) Index

5 Years Historical Statistics

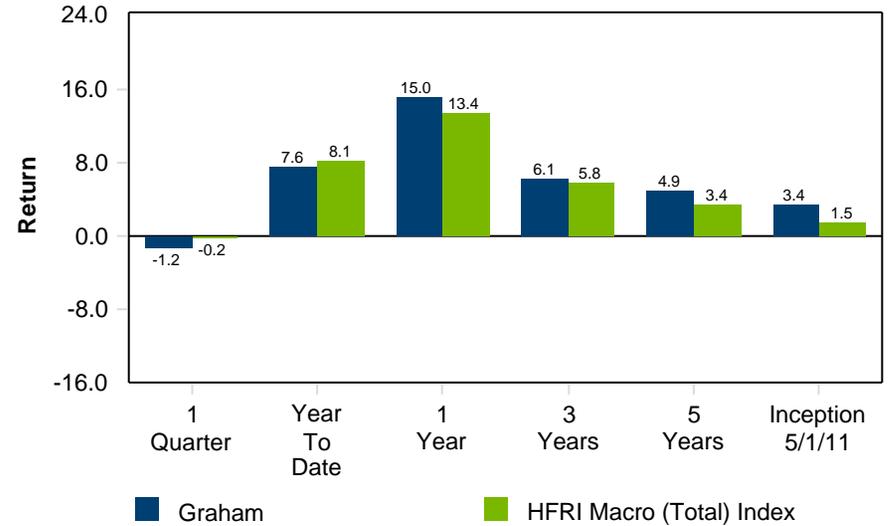
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Capula	2.11	5.10	0.41	0.01	2.76	5.84	-0.04	5.69	1.63	-0.11
HFRI Macro (Total) Index	0.00	0.00	N/A	1.00	0.49	0.00	1.00	3.39	4.66	1.00
FTSE 3 Month T-Bill	-2.32	4.70	-0.49	0.02	N/A	1.15	-0.01	1.13	0.25	-0.13

## Graham Performance Summary

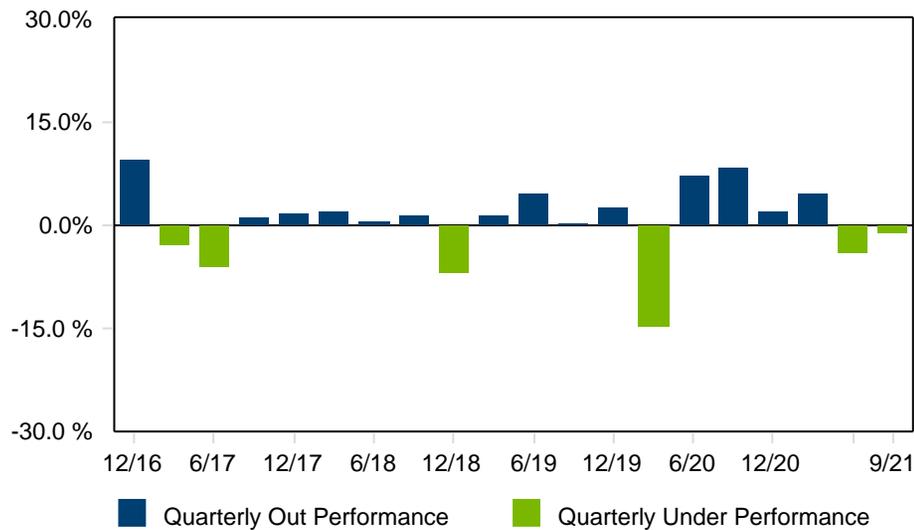
### Account Information

Account Name: Graham  
 Inception Date: 05/01/2011  
 Account Structure: Hedge Fund  
 Asset Class: Hedge Fund  
 Benchmark: HFRI Macro (Total) Index  
 Peer Group:

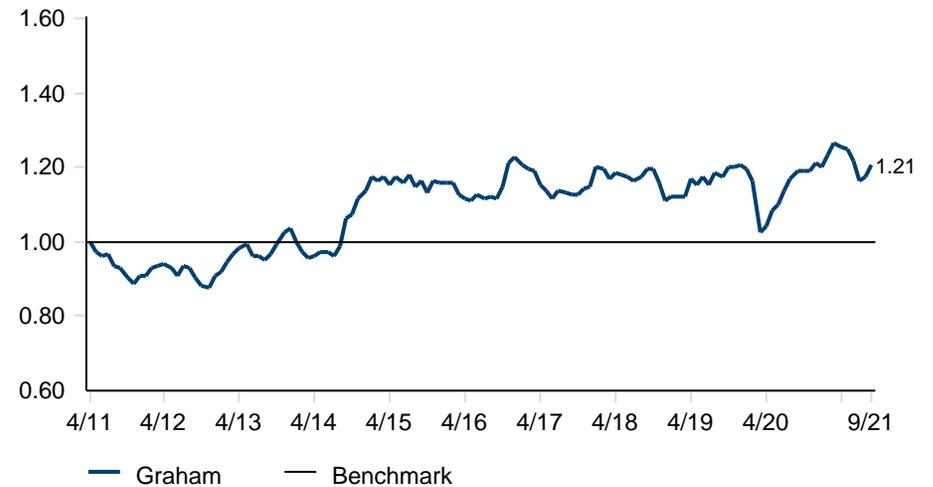
### Return Summary



### Quarterly Excess Performance

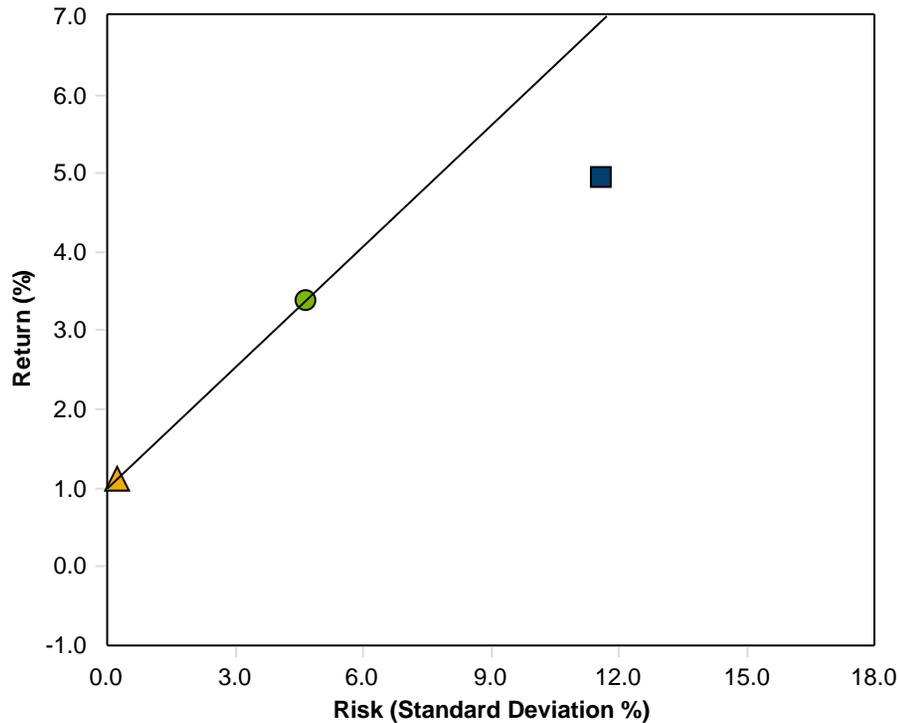


### Ratio of Cumulative Wealth - Since Inception



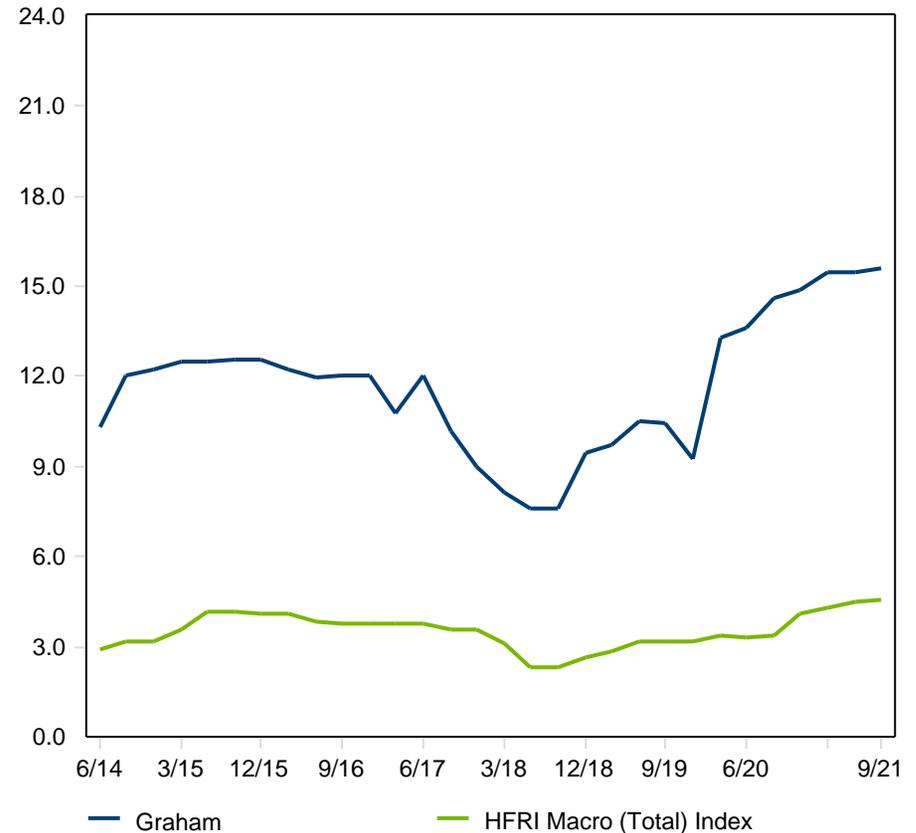
Graham Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



■ Graham      ● HFRI Macro (Total) Index  
 ▲ FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



5 Years Historical Statistics

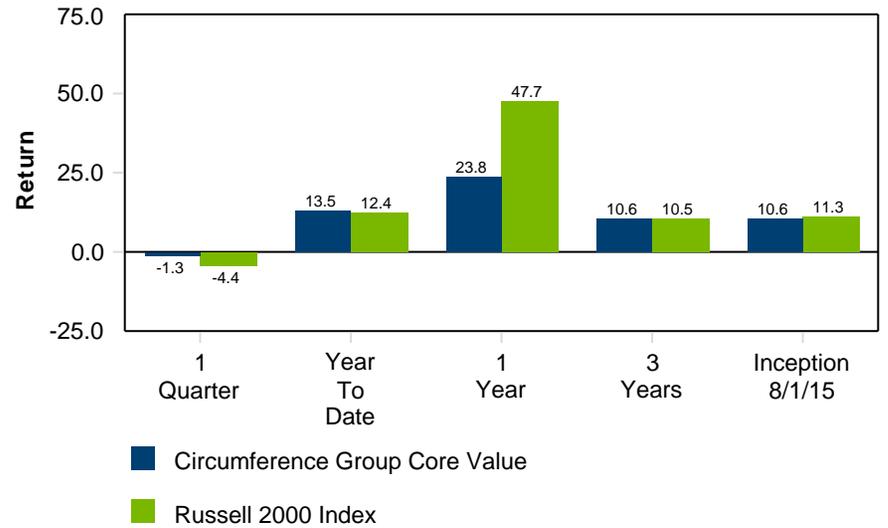
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Graham	2.06	9.21	0.22	0.43	0.38	-0.09	1.62	4.95	11.56	0.66
HFRI Macro (Total) Index	0.00	0.00	N/A	1.00	0.49	0.00	1.00	3.39	4.66	1.00
FTSE 3 Month T-Bill	-2.32	4.70	-0.49	0.02	N/A	1.15	-0.01	1.13	0.25	-0.13

Circumference Group Core Value Performance Summary

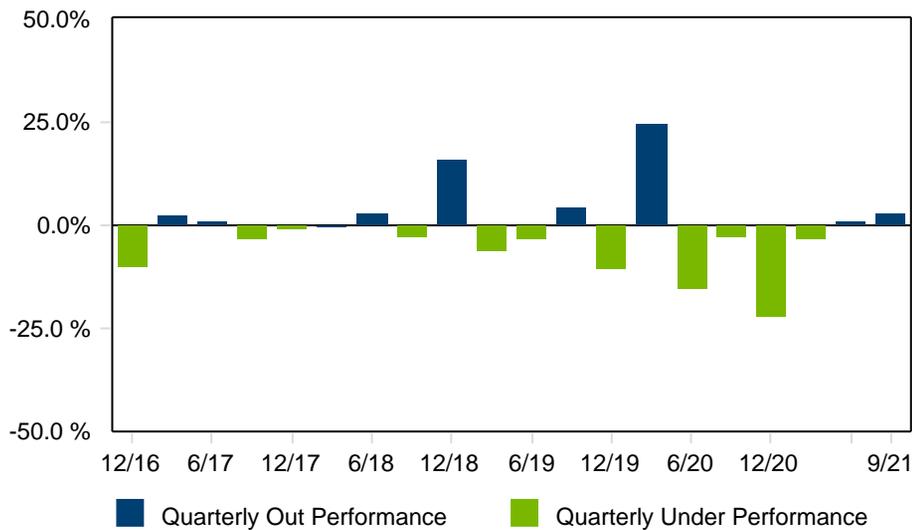
Account Information

Account Name: Circumference Group Core Value  
 Inception Date: 08/31/2015  
 Account Structure: Hedge Fund  
 Asset Class: US Hedge Fund  
 Benchmark: Russell 2000 Index  
 Peer Group:

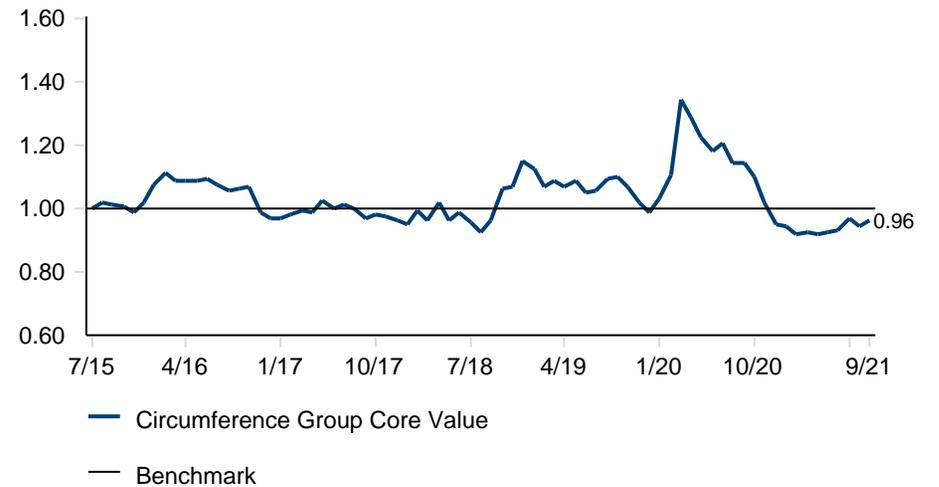
Return Summary



Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

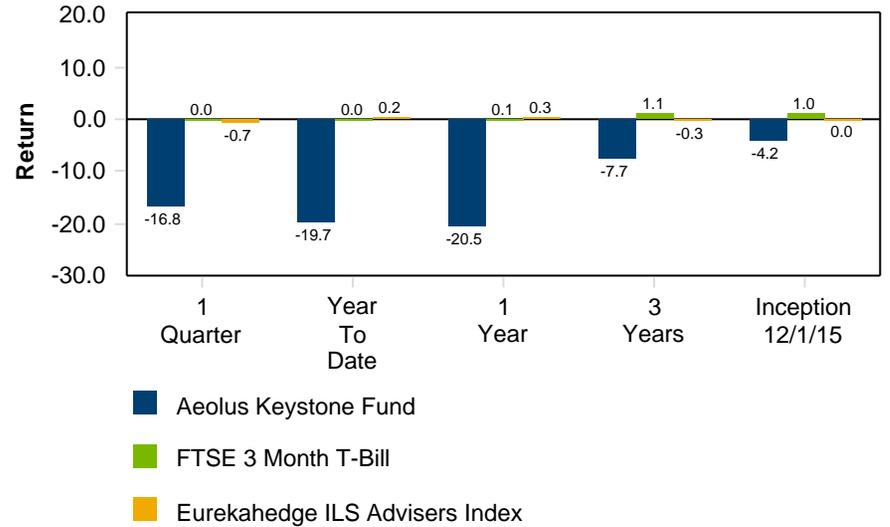


**Aeolus Keystone Fund Performance Summary**

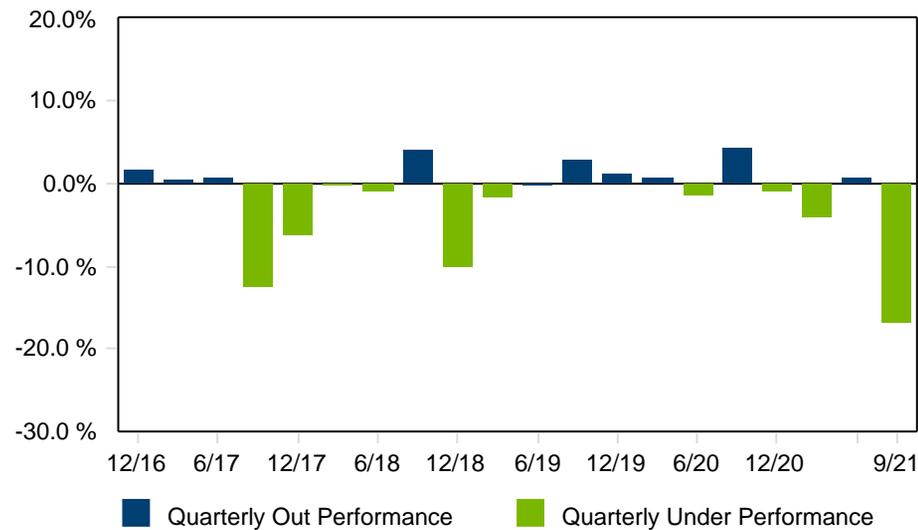
**Account Information**

Account Name: Aeolus Keystone Fund  
 Inception Date: 12/01/2015  
 Account Structure: Hedge Fund  
 Asset Class: Hedge Fund  
 Benchmark: FTSE 3 Month T-Bill  
 Peer Group:

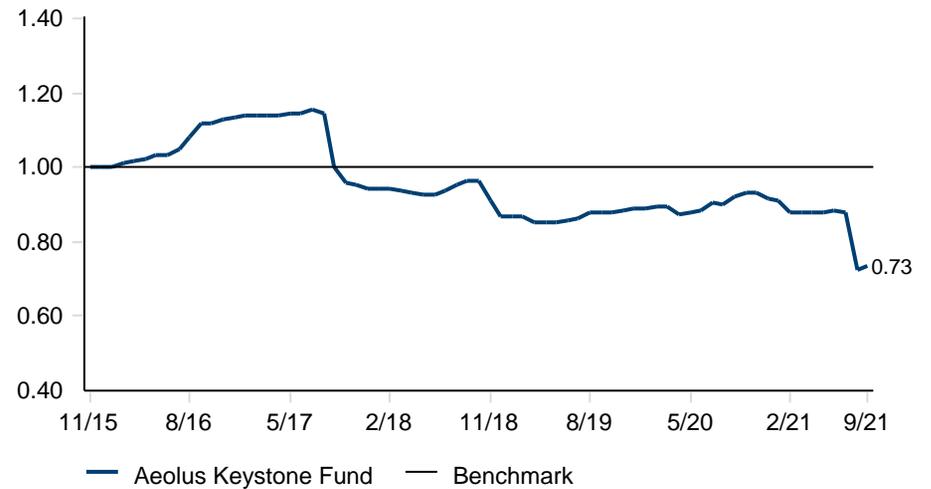
**Return Summary**



**Quarterly Excess Performance**



**Ratio of Cumulative Wealth - Since Inception**

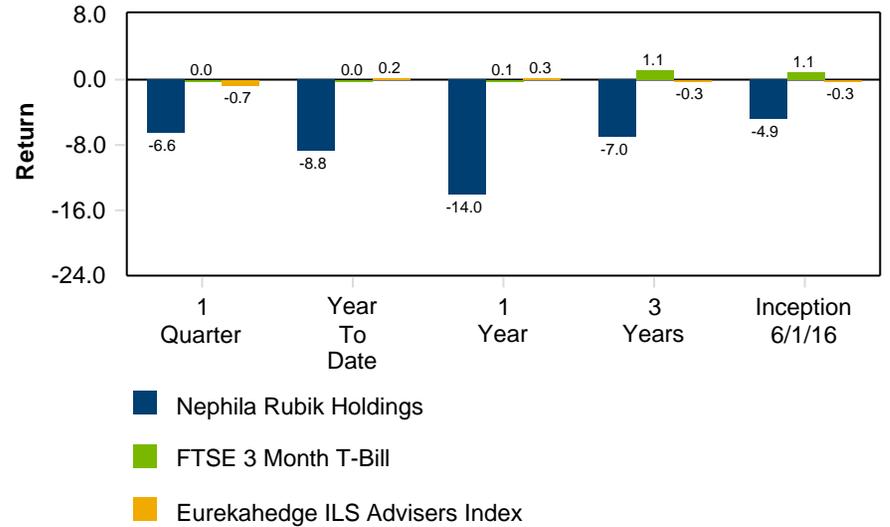


Nephila Rubik Holdings Performance Summary

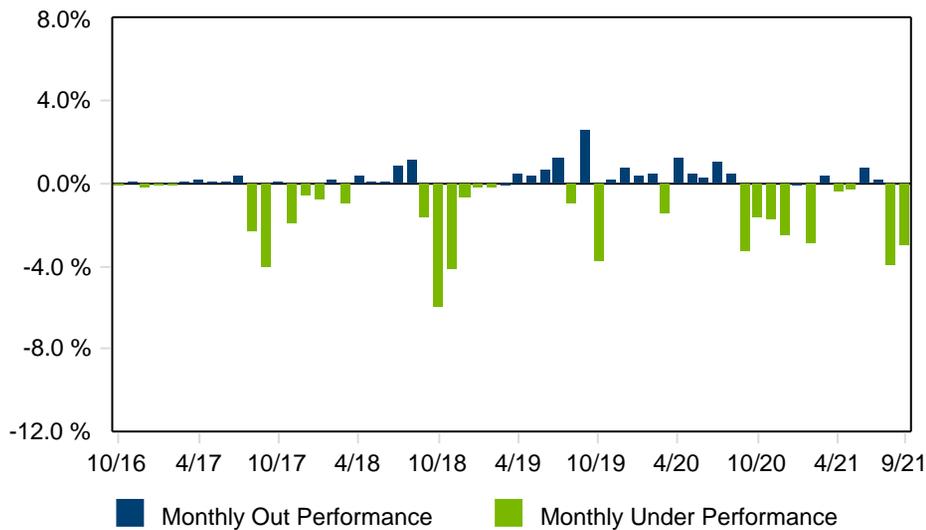
Account Information

Account Name: Nephila Rubik Holdings  
 Inception Date: 06/01/2016  
 Account Structure:  
 Asset Class: Hedge Fund  
 Benchmark: FTSE 3 Month T-Bill  
 Peer Group:

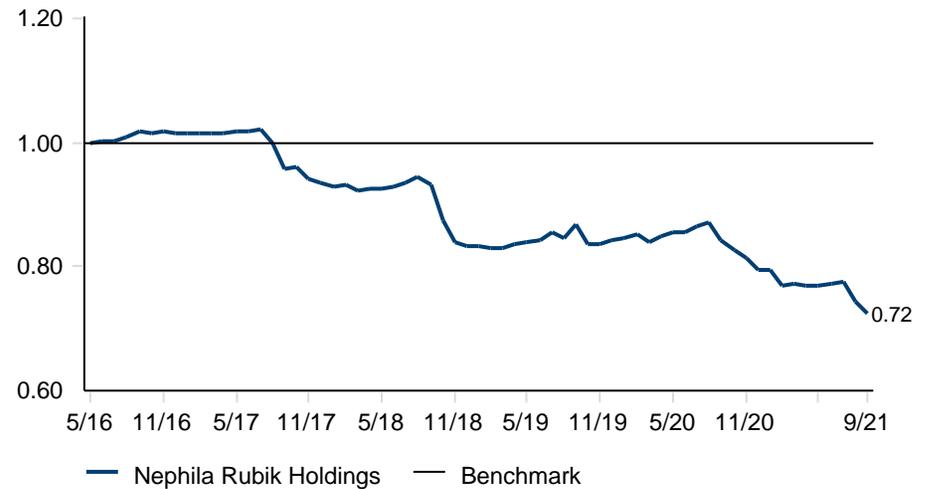
Return Summary



Monthly Excess Performance



Ratio of Cumulative Wealth - Since Inception

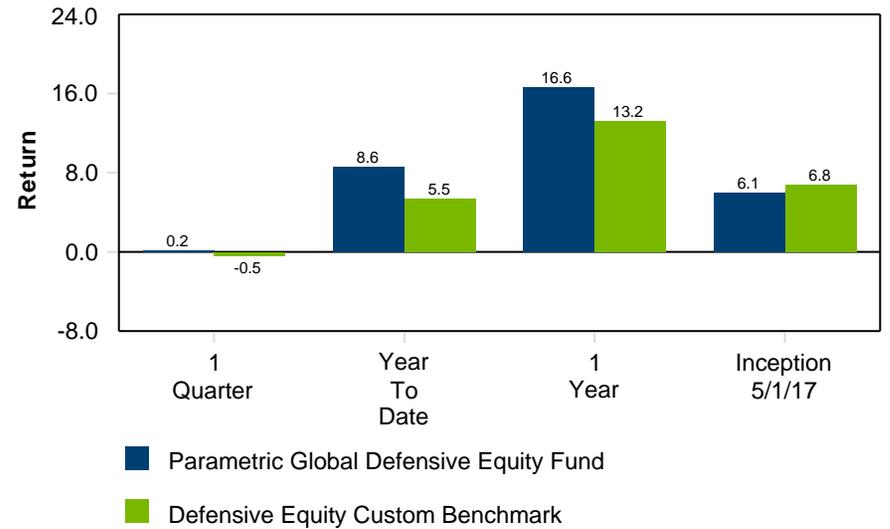


Parametric Global Defensive Equity Fund Performance Summary

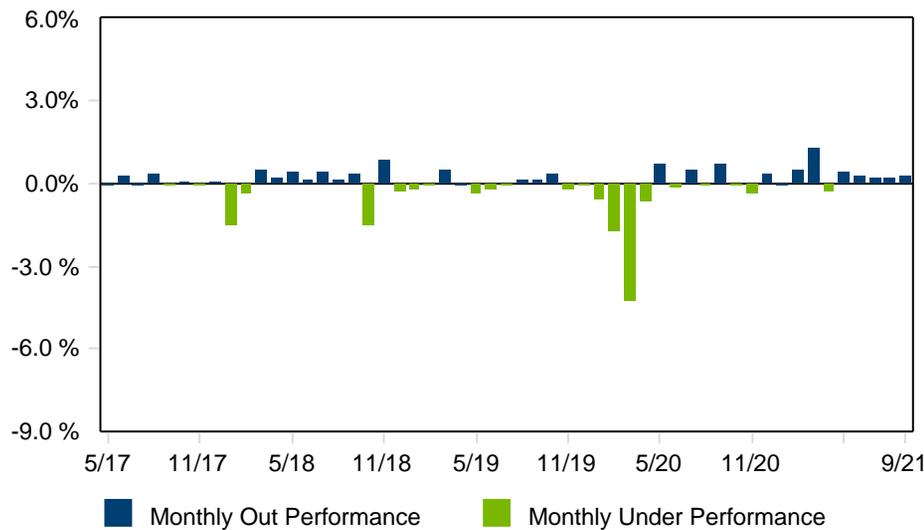
Account Information

Account Name: Parametric Global Defensive Equity Fund  
 Inception Date: 06/01/2017  
 Account Structure: Commingled Fund  
 Asset Class: Global Equity  
 Benchmark: Defensive Equity Custom Benchmark  
 Peer Group:

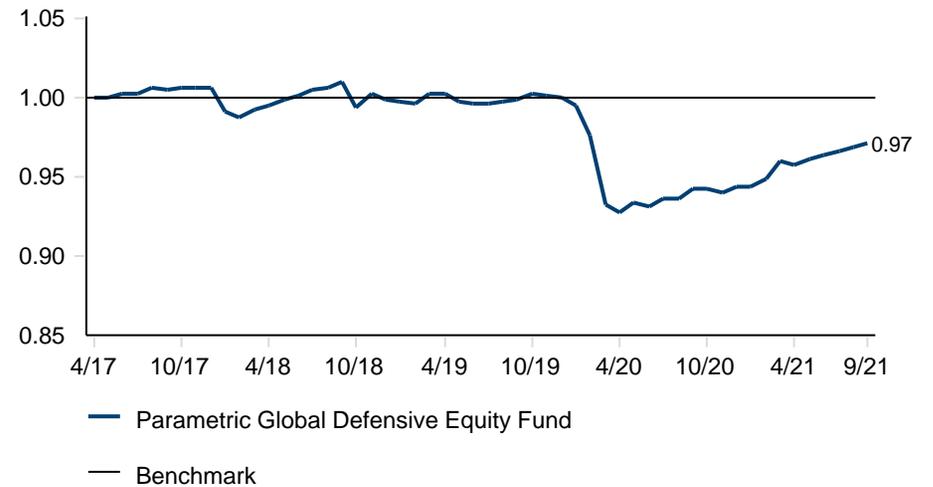
Return Summary



Monthly Excess Performance



Ratio of Cumulative Wealth - Since Inception

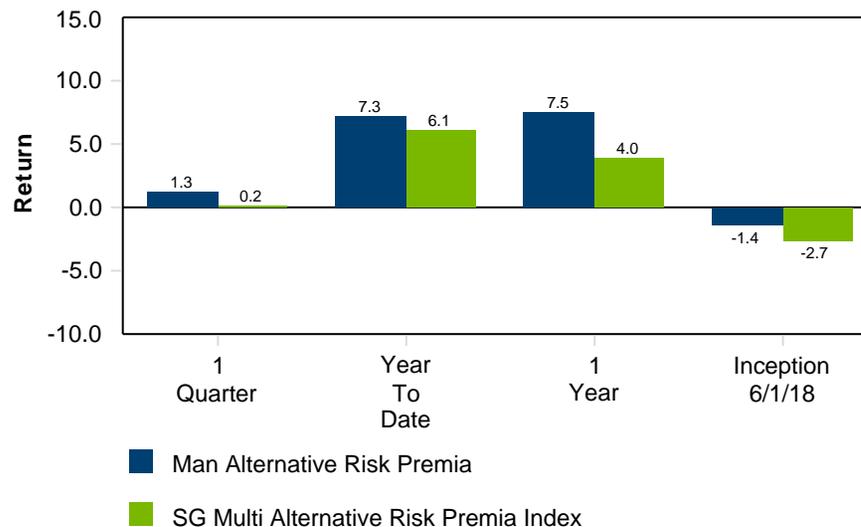


## Man Alternative Risk Premia Performance Summary

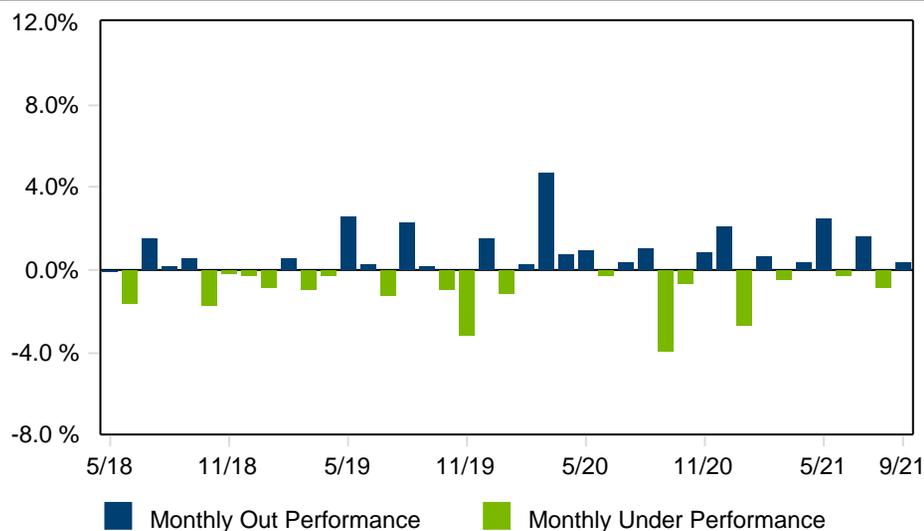
### Account Information

Account Name: Man Alternative Risk Premia  
 Inception Date: 06/01/2018  
 Account Structure: Commingled Fund  
 Asset Class: US Equity  
 Benchmark: SG Multi Alternative Risk Premia Index  
 Peer Group:

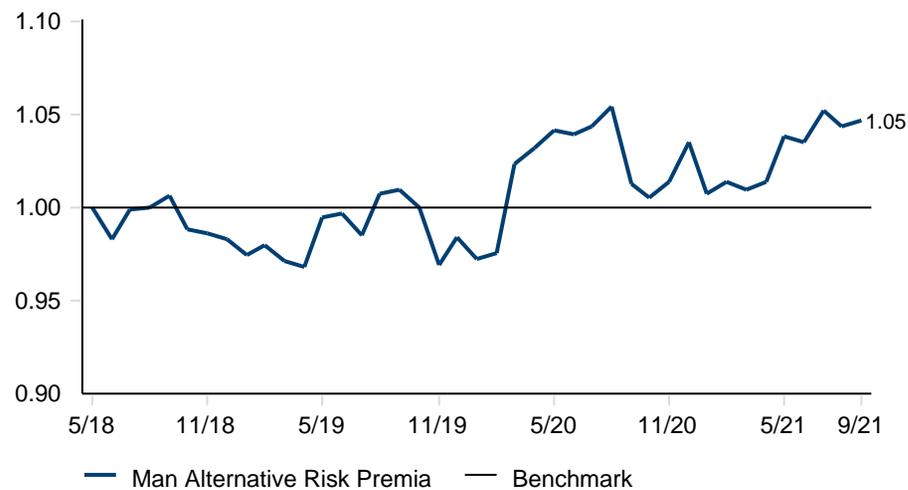
### Return Summary



### Monthly Excess Performance



### Ratio of Cumulative Wealth - Since Inception

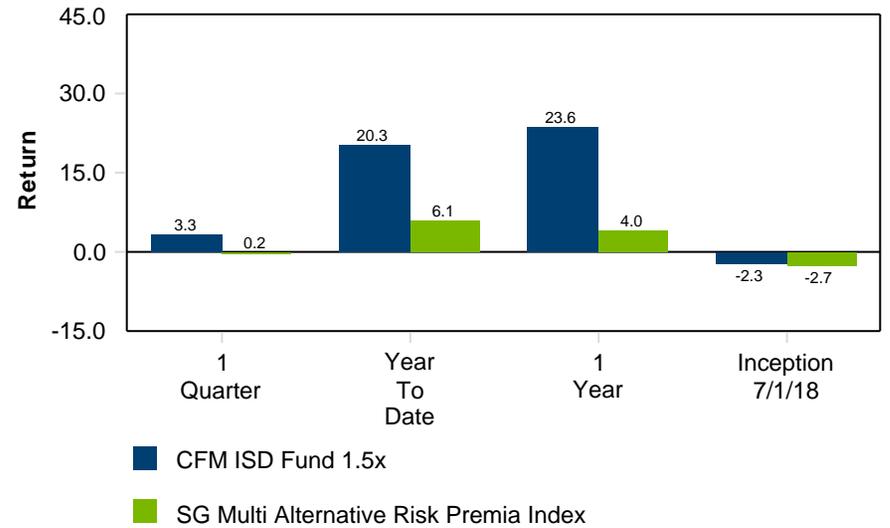


CFM ISD Fund 1.5x Performance Summary

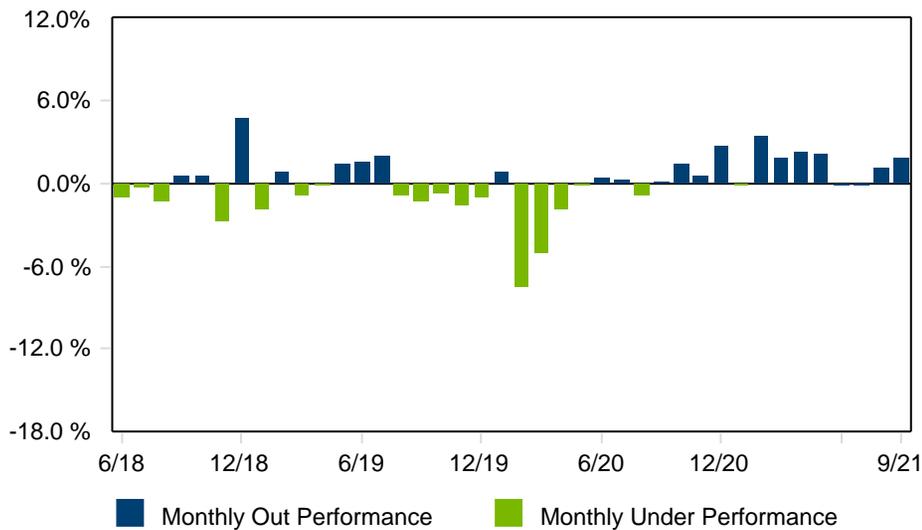
Account Information

Account Name: CFM ISD Fund 1.5x  
 Inception Date: 07/01/2018  
 Account Structure: Commingled Fund  
 Asset Class: US Equity  
 Benchmark: SG Multi Alternative Risk Premia Index  
 Peer Group:

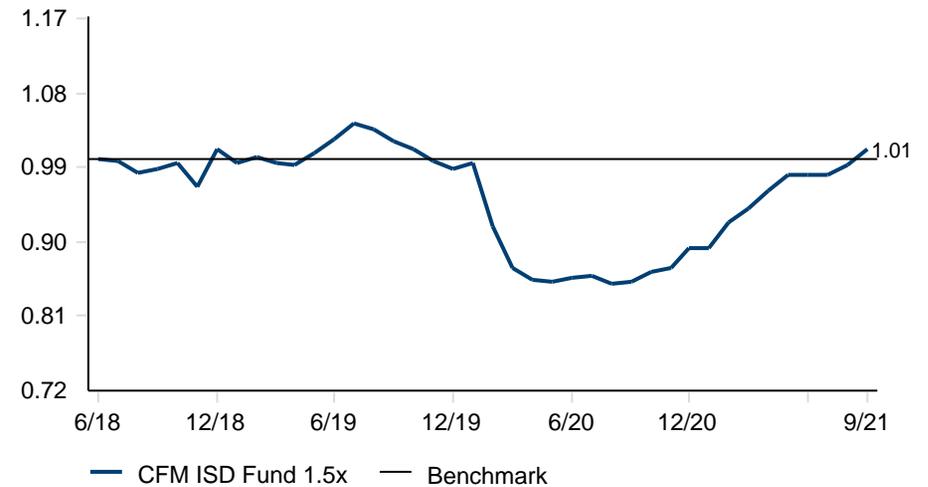
Return Summary



Monthly Excess Performance



Ratio of Cumulative Wealth - Since Inception





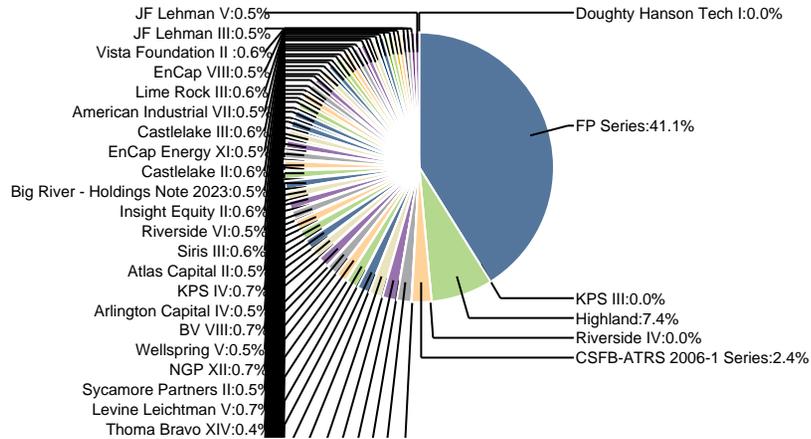
# Private Equity

---

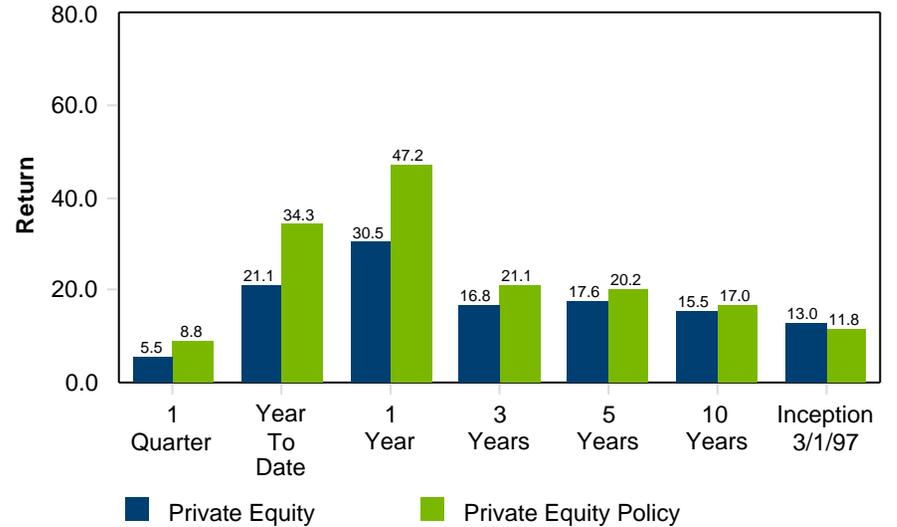
Private Equity Portfolio Overview

Current Allocation

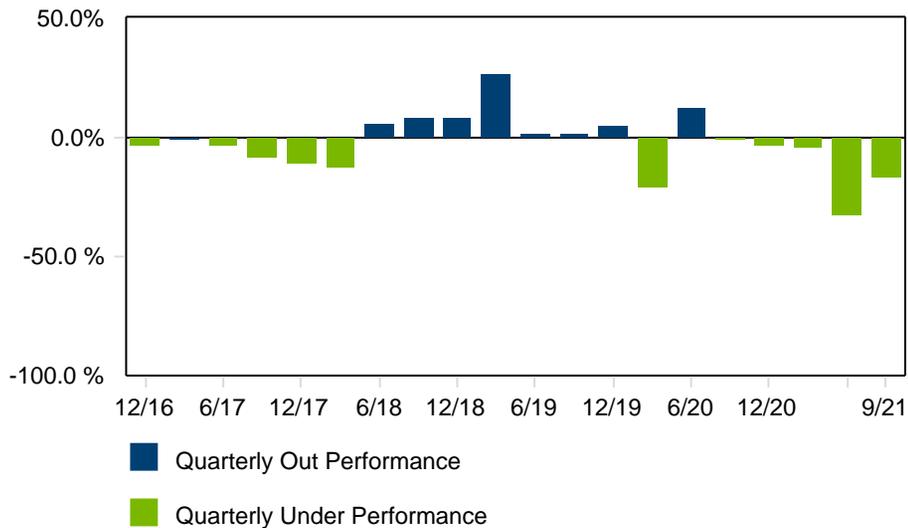
September 30, 2021 : \$2,852M



Return Summary



Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception





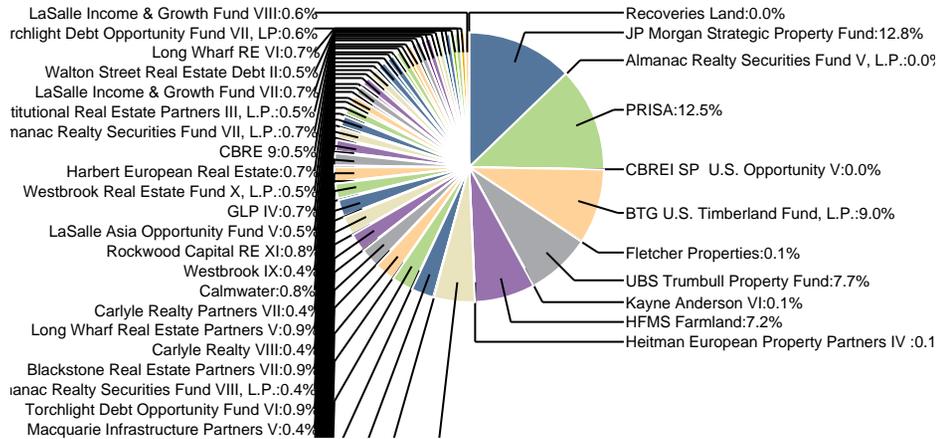
# Real Assets

---

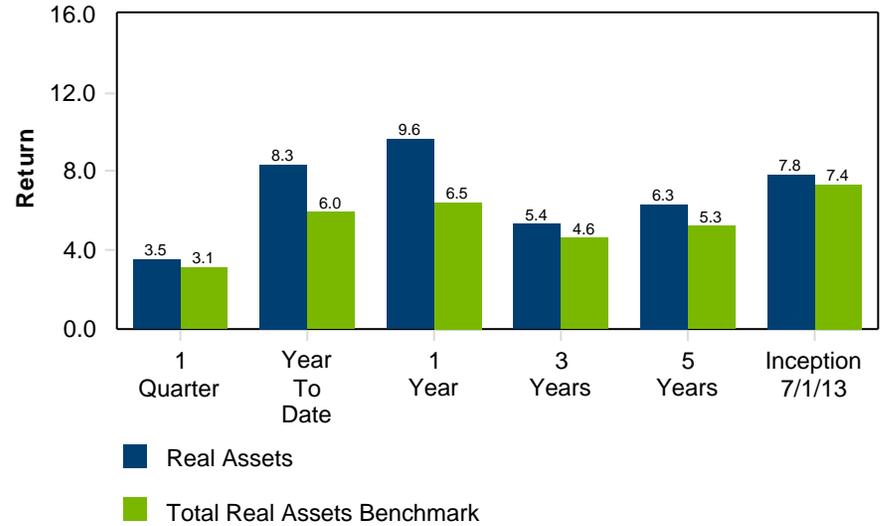
Real Assets Portfolio Overview

Current Allocation

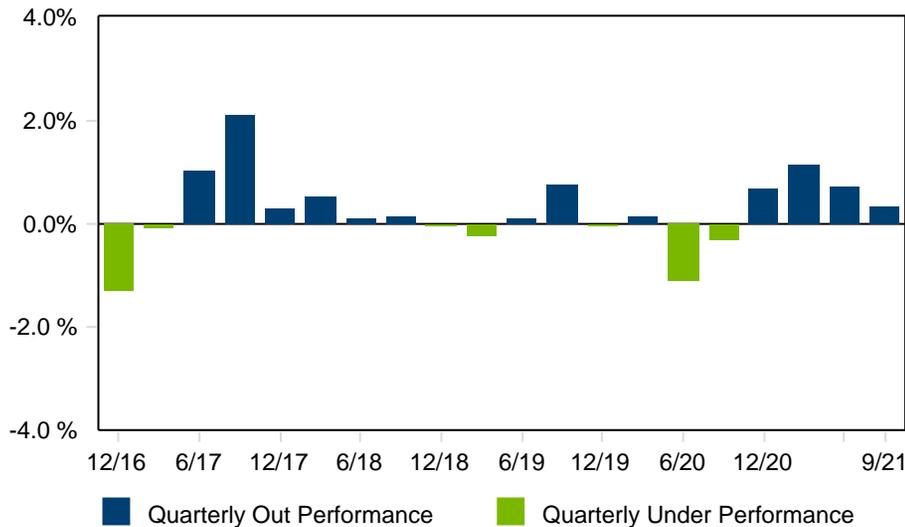
September 30, 2021 : \$2,251M



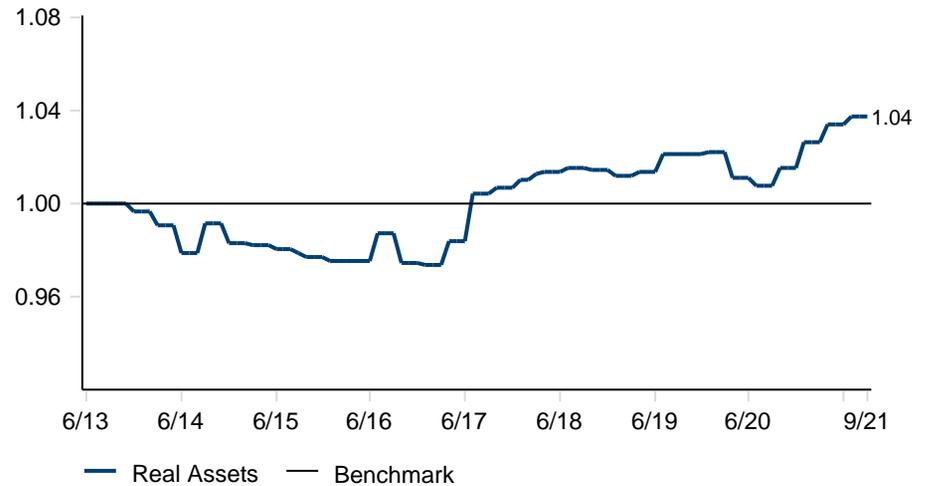
Return Summary



Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception





## Fee Schedule

---

Total Equity

As of September 30, 2021

Fee Schedule

	Fee Schedule	Market Value As of 09/30/2021 \$000	Estimated Annual Fee \$000	Estimated Annual Fee (%)
<b>Total Equity</b>		<b>12,285,383</b>	<b>56,836</b>	<b>0.46</b>
Jacobs Levy 130/30	0.60 % of First \$200 M 0.35 % of Next \$300 M 0.30 % Thereafter	944,038	3,582	0.38
Kennedy Capital Management	0.60 % of First \$100 M 0.50 % Thereafter	767,855	3,939	0.51
Stephens	0.75 % of First \$150 M 0.70 % of Next \$50 M 0.65 % Thereafter	668,896	4,523	0.68
Voya Absolute Return	0.60 % of First \$250 M 0.40 % Thereafter	767,235	3,569	0.47
Allianz (Nicholas Applegate)	0.40 % of First \$100 M 0.30 % of Next \$100 M 0.25 % of Next \$100 M 0.20 % Thereafter	1,054,129	2,458	0.23
Pershing Square International	1.50 % of Assets	1,238	19	1.50
Pershing Square Holdings	1.50 % of Assets	258,508	3,878	1.50
Triam Partners	1.50 % of Assets	85,364	1,280	1.50
Triam Co-Investments	0.50 % of Assets	104,406	522	0.50
SSgA Global Index	0.04 % of First \$1000 M 0.03 % Thereafter	1,261,159	478	0.04
BlackRock MSCI ACWI IMI Fund	0.05 % of First \$250 M 0.04 % Thereafter	989,515	421	0.04
Wellington Global Perspectives	0.80 % of Assets	762,208	6,098	0.80
T. Rowe Price Global Equity	0.43 % of First \$500 M 0.40 % Thereafter	1,679,971	6,845	0.41
Lazard	0.68 % of First \$300 M 0.65 % Thereafter	816,940	5,400	0.66
D.E. Shaw	0.84 % of First \$100 M 0.80 % of Next \$100 M 0.76 % Thereafter	936,976	7,241	0.77
GMO Global All Country Equity	0.64 % of Assets	548,296	3,509	0.64
Harris Global Equity	0.60 % of First \$100 M 0.50 % of Next \$100 M 0.45 % Thereafter	638,576	3,074	0.48

252 Above fees reflect only the current base management fee and excludes any performance fee arrangement.

## Total Equity

As of September 30, 2021

## Fee Schedule

	Fee Schedule	Market Value As of 09/30/2021 \$000	Estimated Annual Fee \$000	Estimated Annual Fee (%)
<b>Fixed Income</b>		<b>2,640,671</b>	<b>5,390</b>	<b>0.20</b>
BlackRock	0.20 % of First \$200 M 0.15 % of Next \$200 M 0.10 % of Next \$400 M 0.08 % Thereafter	281,819	523	0.19
Loomis Sayles	0.50 % of First \$20 M 0.40 % of Next \$30 M 0.30 % Thereafter	503,642	1,581	0.31
Putnam	0.40 % of First \$100 M 0.35 % of Next \$150 M 0.30 % of Next \$250 M 0.25 % Thereafter	380,650	1,317	0.35
SSgA Aggregate Bond Index	0.04 % of First \$100 M 0.02 % Thereafter	469,110	109	0.02
Wellington Global Total Return	0.30 % of Assets	355,603	1,067	0.30
Reams Core Plus Bond Fund	0.20 % of Assets	396,815	794	0.20
BRS Recycling Tax Credit		176,000	-	-
BRS Recycling Tax Credit Phase 2		77,032	-	-
<b>Opportunistic/Alternatives</b>		<b>899,091</b>	<b>12,041</b>	<b>1.34</b>
Anchorage	2.00 % of Assets	91,723	1,834	2.00
York	1.50 % of Assets	9,725	146	1.50
Capula	2.00 % of Assets	80,791	1,616	2.00
Graham	2.00 % of Assets	71,782	1,436	2.00
Circumference Group Core Value	1.50 % of Assets	37,558	563	1.50
Aeolus Keystone Fund	2.00 % of Assets	187,988	3,760	2.00
Nephila Rubik Holdings	1.50 % of Assets	38,272	574	1.50
Parametric Global Defensive Equity Fund	0.40 % of First \$150 M 0.35 % Thereafter	195,082	758	0.39
Man Alternative Risk Premia	0.85 % of Assets	94,767	806	0.85
CFM ISD Fund 1.5x	0.60 % of Assets	91,403	548	0.60

253 Above fees reflect only the current base management fee and excludes any performance fee arrangement.

*(This Page Left Blank Intentionally)*



# Disclaimers and Notes

---

## Arkansas Teacher Retirement System

## Appendix

## Description of Benchmarks

**Total Fund** - The Performance Benchmark for the Total Fund reflects a weighted average of the underlying asset class benchmarks, weighted as follows: Opportunistic/Alternatives and Real Assets at the weight of the previous month's ending market values, Fixed Income at its long-term Policy Target of 15%, and Total Equity at its long-term Policy Target of 55% plus the balance of the unfunded or uncommitted assets of the Opportunistic/Alternatives and Real Assets categories. These targets can be found on page 21 of this report. From October 2007 to July 2013, the Performance Benchmark was the performance of the asset class benchmarks as a weighted average of the previous month's ending market values. The historical components of the benchmark are shown in the table below. Returns prior to September 30, 1996, consist of the actual allocations to the seven different asset classes included in the Arkansas Teacher Retirement System over time. The historical benchmarks used for each asset class are noted below.

Date	DJ Total Stock Market Index	Russell 3000 Index	MSCI ACW ex-U.S. Index	MSCI All Country World Index	BC Universal Bond Index	BC Aggregate Bond Index	Alternative Policy*
03/2004-9/2007	40.0 %	--	17.5 %	--	25.0 %	--	17.5 %
06/2003-02/2004	40.0	--	17.5	--	--	25.0 %	17.5
10/2001-07/2003	--	40.0 %	17.5	--	--	25.0	17.5
08/1998-09/2001	--	40.0	17.0	--	--	28.0	15.0
10/1996-07/1998	--	40.0	20.0	--	--	28.0	12.0

\*Historically, the Alternative Policy was comprised of the weighted averages of the Private Equity, Real Estate, and Alternatives policy benchmarks. Prior to July 31, 2003 the alternative benchmark consisted of 57.0% of the Russell 3000 + a 2% Premium per year, 8.5% of the NCREIF Southeast Timberland Index, 28.5% of the Real Estate Index, 6% of the EnnisKnupp STIF Index.

## Benchmark Descriptions

**Total Equity** - A weighted average of the Dow Jones U.S. Total Stock Market Index and the MSCI All Country World IMI Index based on weights of the underlying investment manager allocations. As of September 1, 2021, the Total Equity Performance Benchmark was comprised of 31.1% DJ U.S. Total Stock Market Index and 68.9% MSCI ACWI IMI.

**Fixed Income** - The Barclays U.S. Universal Bond Index as of March 1, 2004.

**Opportunistic/Alternatives** - A custom benchmark consisting of 25% DJ/CS Event-Driven Index, 25% HFR Macro Index, and 50% South Timberland NCREIF Index until June 30, 2013; 60% HFRI Macro Index and 40% DJ/CS Event-Driven Index until July 31, 2015; 56% HFRI Macro Index, 38% DJ/CS Event-Driven Index, and 6% Russell 2000 Index until March 31, 2016; 45% HFRI Macro Index, 30% DJ/CS Event-Driven Index, 5% Russell 2000 Index, and 20% Citigroup 3 Month T-bill until May 31, 2016; 37% HFRI Macro Index, 25% DJ/CS Event-Driven Index, 5% Russell 2000 Index, and 33% Citigroup 3 Month T-bill until May 31, 2017; 28% HFRI Macro Index, 20% DJ/CS Event-Driven Index, 4% Russell 2000 Index, 25% Citigroup 3 Month T-bill, and 23% Parametric Performance Benchmark thereafter.

**Real Assets** - A custom benchmark consisting of a weighted average of the net asset values at previous month's end of the sub-categories' benchmarks, defined as Real Estate Benchmark, Timber Benchmark, Agriculture Benchmark and Infrastructure Benchmark.

**Real Estate- NFI-ODCE** - NCREIF Fund Index Open-end Diversified Core Equity Index is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy; underlying funds are leveraged with gross and net returns available.

**Timber Property Benchmark** - NCREIF Timberland Property Index (NTPI) weighted according to ATRS' regional exposure based on net asset value.

**Agriculture Benchmark** - NCREIF Farmland Index (NFI) weighted according to ATRS' regional and crop type exposure based on net asset value.

**Infrastructure Benchmark** - Consumer Price Index (CPI) plus 500 basis points annually.

**Private Equity** - The Dow Jones U.S. Total Stock Market Index + a 2% premium per year.

**Cash Equivalents** - The Citigroup 90 day T-bill.

## Benchmark Descriptions

**Allianz (Convertibles) Performance Benchmark** - On January 1, 2005, the benchmark for the portfolio was changed to the Merrill Lynch Convertible Bond (All Quality) Index. Prior to January 1, 2005, the performance benchmark for the Allianz (previously Nicholas Applegate) portfolio was the CSFB Convertible Securities Index. Prior to May 1, 2004, the performance benchmark consisted of 90% CSFB Convertible Securities Index and 10% Salomon High Yield Index.

**BlackRock Performance Benchmark** - The Barclays Universal Bond Index as of March 1, 2004. Previously it was the Barclays Aggregate Bond Index.

**Jacobs Levy Performance Benchmark** - On January 1, 2008, the benchmark for the portfolio was changed to the Russell 3000 Index. Prior to January 1, 2008, the portfolio benchmark was the Russell 1000 Growth Index.

**Loomis Sayles Performance Benchmark** - An Index that splices 65% of the Barclays Government/Credit Index and 35% Barclays High Yield Index.

**Nicholas Applegate Performance Benchmark** - On January 1, 2005, the benchmark for the portfolio was changed to the Merrill Lynch Convertible Bond (All Quality) Index. Prior to January 1, 2005, the performance benchmark for the Nicholas Applegate portfolio was the CSFB Convertible Securities Index. Prior to May 1, 2004, the performance benchmark consisted of 90% CSFB Convertible Securities Index and 10% Salomon High Yield Index.

**Parametric Performance Benchmark** - 50% MSCI All Country World Index (net) and 50% Citigroup 90 day T-Bill Index as of June 1, 2017.

**Wellington Global Performance Benchmark** - As of July 1, 2012 the benchmark was changed to MSCI All Country World Small Cap Index. Prior to July 1, 2012, the benchmark was MSCI All Country World Small/Mid Cap Index.

**Voya Absolute Return Performance Benchmark** - As of December 1, 2015 the benchmark was changed to MSCI All Country World Index. Prior to December 1, 2015, the benchmark was the S&P 500 Stock Index.

**Barclays Aggregate Bond Index** - A market-value weighted index consisting of the Barclays Corporate, Government and Mortgage-Backed Securities Indices. The Index also includes credit card-, auto- and home equity loan-backed securities, and is the broadest available measure of the aggregate U.S. fixed income market.

**Barclays Government/Credit Index** - The Barclays Government/Credit Index measures the investment return of all medium and larger public issues of U.S. Treasury, agency, investment-grade corporate, and investment-grade international dollar-denominated bonds.

**Barclays High Yield Index** - The Barclays High Yield Index covers the universe of fixed rate, non-investment grade debt. Pay-in-kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

**Barclays U.S. Universal Bond Index** - A market-value weighted index consisting of the components of the Barclays Aggregate Bond Index, plus EuroDollar bonds, emerging markets bonds, 144A fixed income securities, and U.S. corporate high yield securities.

## Benchmark Descriptions

**Barclays Mortgage Index** - A market value-weighted index consisting of the mortgage pass-through securities of Ginnie Mae (GNMA), Fannie Mae (FNMA) and Freddie Mac (FHLMC).

**Citigroup 90 day T-bill Index** - Treasury bill rates of return, as reported by Citigroup (Salomon Smith Barney), for bills with a maximum time remaining to maturity of 90 days.

**Dow Jones U.S. Total Stock Market Index** - A capitalization-weighted stock index representing all U.S. common stocks traded regularly on the organized exchanges. The Index is the broadest measure of the aggregate U.S. stock market.

**FTSE Europe** - A tradable index, designed to represent the performance of the 100 most highly capitalized blue chip companies in Europe.

**Merrill Lynch Convertible Bond (All Quality) Index** - The Merrill Lynch All Convertibles All Qualities Index is a widely used index that measures convertible securities' performance. It measures the performance of U.S. dollar-denominated convertible securities not currently in bankruptcy with a total market value greater than \$50 million at issuance.

**MSCI All Country World ex-U.S. Index** - A capitalization-weighted index consisting of 22 developed and 23 emerging countries, but excluding the U.S. Covers approximately 85% of global equity opportunity set outside of the U.S.

**MSCI All Country World Index** - A capitalization-weighted index of stocks representing 46 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America.

**MSCI All Country World IMI Index** - A capitalization-weighted index representing large and small cap stock from 46 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America.

**MSCI Europe, Australasia, Far East (EAFE) Non-U.S. Stock Index** - A capitalization-weighted index of stocks representing 21 developed and emerging country markets in Europe, Australia, Asia and the Far East.

**MSCI World Index** - A capitalization-weighted index of stocks representing 22 developed stock markets in Europe, Asia and Canada.

**NFI-ODCE Index** - NCREIF Fund Index Open-end Diversified Core Equity Index is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy; underlying funds are leveraged with gross and net returns available

**DJ/CS Event-Driven Index** - Event driven funds typically invest in various asset classes and seek to profit from potential mispricing of securities related to a specific corporate or market event. Such events can include: mergers, bankruptcies, financial or operational stress, restructurings, asset sales, recapitalizations, spin-offs, litigation, regulatory and legislative changes as well as other types of corporate events. Event driven funds can invest in equities, fixed income instruments (investment grade, high yield, bank debt, convertible debt and distressed), options and various other derivatives. Many event driven fund managers use a combination of strategies and adjust exposures based on the opportunity sets in each subsector.

## Benchmark Descriptions

**LIBOR Index** - London Interbank Offered Rate. A filtered average of the world's most creditworthy banks' interbank deposit rates with maturities between overnight and one full year.

**Russell 3000 Index** - An index that measures the performance of the 3,000 stocks that make up the Russell 1000 and Russell 2000 Indices.

**Russell 1000 Index** - An index that measures the performance of the largest 1,000 stocks contained in the Russell 3000 Index.

**Russell 1000 Value Index** - An index that measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower I/B/E/S growth forecasts.

**Russell 2000 Index** - An index that measures the performance of the smallest 2,000 companies contained in the Russell 3000 Index.

**Russell 2000 Growth Index** - An index that measures the performance of those Russell 2000 companies with greater price-to-book ratios and greater I/B/E/S growth forecasts.

**Russell 2000 Value Index** - An index that measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower I/B/E/S growth forecasts.

**Russell Mid Cap Value Index** - An index that measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

**S&P 500 Stock Index** - A capitalization-weighted stock index consisting of the 500 largest publicly traded U.S. stocks.

**South Timberland Index** - The largest regional subindex of the NCREIF Timberland Index, consisting of timberland properties held in the U.S. South. This includes close to 300 properties with more than 10 million cumulative acres of timberland in the following states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. Calculations are based on quarterly returns at the individual property level. Performance is reported on an all-cash, unlevered basis, gross of investment management fees.

**HFR Macro Index** - Macro: Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Primary investment thesis is predicated on predicted or future movements in the underlying instruments.

**HFR Distressed/Restructuring Index** - Distressed Restructuring Strategies employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Distressed Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure. Hedge Fund Research, Inc. (HFR) utilizes a UCITSIII compliant methodology to construct the HFR Hedge Fund Indices. The methodology is based on defined and predetermined rules and objective criteria to select and rebalance components to maximize representation of the Hedge Fund Universe.

## Arkansas Teacher Retirement System

## Appendix

## Historical U.S. Equity and Global Equity composite returns

<b>As of June 30, 2015</b>	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>Since Inception</b>	<b>Inception Date</b>
U.S. Equity	6.7	18.1	16.4	9.4	10.5	04/01/1986
Dow Jones U.S. Total Stock Market Index	7.2	17.6	17.5	8.3	-	
Global Equity	1.8	14.6	12.1	-	2.5	11/01/2007
MSCI AC World Index (Net)	0.7	13.0	11.9	6.4	2.1	

In June 2015, the ATRS Board approved the combination of the U.S. and Global equity asset classes to a single Total Equity asset class. Total Equity performance reporting began in July 2015. In the table above, we show the historical returns for the U.S. Equity and Global Equity asset classes since inception through June 2015. Performance for the Total Equity asset class prior to July 2015 represents a weighted average of the U.S. Equity and Global Equity historical performance.

## Benchmark Descriptions

**Bloomberg Barclays Corporate High Yield Bond Index** - An index that covers the U.S.D-dominated, non-investment grade, fixed rate, taxable corporate bond market. Debt issues from emerging market countries are excluded. Securities are classified as high-yield if the middle rating is Ba1/BB+ or below.

**Bloomberg Barclays Emerging Markets Index** - An unmanaged index that tracks total returns for external-currency-denominated debt instruments of the emerging markets.

**Bloomberg Barclays Global Aggregate** - Provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and U.S.D investment grade 144A securities.

**Bloomberg Barclays Global Treasury Ex-U.S.** - The Barclays Global Treasury ex U.S. Index is a subset of the flagship Global Treasury Index that does not have any exposure to U.S. debt. This multi-currency benchmark includes investment grade, fixed-rate bonds issued by governments in their native currencies.

**Bloomberg Barclays Inflation Index** - Measures the performance of the U.S. Treasury Inflation Protected Securities ("TIPS") market.

**Bloomberg Barclays Universal Index** - A market value-weighted index which is the union of the U.S. Aggregate Index, U.S. High Yield Corporate Index, Eurodollar Index, U.S. Emerging Markets Index and the CMBS High Yield Index. The Index is appropriate for core plus fixed income mandates.

**Bloomberg Barclays U.S. Aggregate Bond Index** - A market value-weighted index consisting of government bonds, SEC-registered corporate bonds and mortgage-related and asset-backed securities with at least one year to maturity and an outstanding par value of \$250 M or greater. This index is a broad measure of the performance of the investment grade U.S. fixed income market.

**Bloomberg Barclays U.S. Government/Credit Index** - A subcomponent of the Barclays Capital Aggregate Index, this benchmark includes treasury securities, government related issues, and high quality corporate bonds with an outstanding par value of \$250 M or greater and at least one year of maturity remaining.

**Bloomberg Barclays U.S. Government Index** - A market value weighted index of U.S. government and government agency securities (other than mortgage securities) with maturities of one year or more.

**Bloomberg Barclays U.S. High Yield Index** - An index composed of non-investment grade corporate debt denominated in U.S. dollars. The issues have to have an outstanding par value of \$150 M or greater and at least one year of maturity remaining.

**Bloomberg Barclays U.S. Intermediate Aggregate Bond Index** - A market value-weighted index consisting of U.S. Treasury securities, corporate bonds and mortgage-related and asset-backed securities with one to ten years to maturity and an outstanding par value of \$250 M or greater.

**Bloomberg Barclays U.S. Intermediate Government Bond Index** - An unmanaged index considered representative of intermediate-term fixed-income obligations issued by the U.S. Treasury, government agencies and quasi-federal corporations.

**Bloomberg Barclays U.S. Intermediate Government/Credit Index** - A market-value weighted index consisting of U.S. government bonds and SEC-registered corporate bonds with one to ten years to maturity and an outstanding par value of \$150 M or greater.

**Bloomberg Barclays U.S. Intermediate Treasury** - An unmanaged index considered representative of intermediate-term fixed-income obligations issued by the U.S. Treasury.

**Bloomberg Barclays U.S. Long Credit Bond Index** - An unmanaged index considered representative of long-term fixed-income obligations issued by U.S. corporate, specified foreign debentures, and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered.

## Benchmark Descriptions

**Bloomberg Barclays U.S. Long Gov't/Credit Index** - The Barclays Capital U.S. Government/ Credit Bond Index measures performance of U.S. dollar denominated U.S. treasuries, government-related, and investment grade U.S. corporate securities that have a remaining maturity of greater than or equal to 1 year. In addition, the securities have \$250 M or more of outstanding face value, and must be fixed rate and non-convertible.

**Bloomberg Barclays U.S. Long Government Bond Index** - An unmanaged index considered representative of long-term fixed- income obligations issued by the U.S. Treasury, government agencies and quasi-federal corporations.

**Bloomberg Barclays U.S. TIPS** - A market value-weighted index consisting of U.S. Treasury Inflation Protected Securities with one or more years remaining until maturity with total outstanding issue size of \$500m or more.

**Bloomberg Barclays U.S. Treasury 20-30 Year STRIPS Index** - A subcomponent of the Barclays Aggregate Index, this benchmark includes long-term treasury STRIPS.

**Bloomberg Commodity Index** - Consists of 22 exchange-traded futures on physical commodities, which are weighted to account for economic significance and market liquidity. Performance is calculated on an excess return basis and reflects commodity future price movements.

**BofA Merrill Lynch 3 Month Treasury Bill** - An index that measures the average return of the last three-month U.S. Treasury Bill issues.

**BofA Merrill Lynch High Yield Master** - A market-capitalization weighted index that tracks the performance of U.S. dollar- denominated, below investment grade corporate debt publicly issued in the U.S. domestic market.

**Citigroup 90-Day T-Bill Index** - An index that measures the average return of the last three-month U.S. Treasury Bill issues.

**Credit Suisse Leveraged Loan Index** - Designed to mirror the investable universe of the U.S. dollar denominated leveraged loan market.

**CRSP U.S. Large Cap Index** - an index comprised of nearly 640 U.S. large cap companies and includes securities traded on NYSE, NYSE Market, NASDAQ, or ARCA, representing nearly 85% of the U.S. investable equity market. The index is reconstituted quarterly after the market close on the third Fridays of March, June, September, and December.

**CRSP U.S. Total Market Index** - an index comprised of nearly 4,000 constituents across mega, large, small, and micro capitalizations and includes securities traded on NYSE, NYSE Market, NASDAQ, or ARCA, representing nearly 100% of the U.S. investable equity market. The index is reconstituted quarterly after the market close on the third Fridays of March, June, September, and December.

**DJ U.S. Completion Total Stock Market Index** - A capitalization-weighted index that consists of the stocks in the Dow Jones U.S. Total Stock Market Index less the stocks in the S&P 500 Stock Index.

**DJ U.S. Total Stock Market Index** - A capitalization-weighted stock index representing all domestic common stocks traded regularly on the organized exchanges. The index is the broadest measure of the aggregate domestic stock market and includes approximately 5,000 stocks.

**FTSE 4Good U.S. Select Index** - a socially responsible investment (SRI) index of U.S. stocks that excludes companies with certain business activities such as weapons, tobacco, gambling, alcohol, nuclear power, and adult entertainment.

**FTSE All-World ex-U.S. Index** - A capitalization-weighted stock index representing 46 developed market countries and emerging market countries excluding the U.S.

## Benchmark Descriptions

**FTSE EPRA NAREIT Global ex-U.S. Index** - Designed to represent general trends in eligible real estate equities worldwide. Relevant real estate activities are defined as the ownership, disposal and development of income-producing real estate.

**FTSE Global All Cap ex U.S. Index** - a market-capitalization weighted index representing the performance of roughly 5350 large, mid and small cap companies in 46 Developed and Emerging markets worldwide, excluding the USA.

**FTSE Global Core Infrastructure Index** - Represents the performance of infrastructure and infrastructure-related securities companies in a set of industries that FTSE defines as being involved in infrastructure. The series is based on the FTSE Global Equity Index Series and both developed and emerging markets are included.

**FTSE NAREIT U.S. Equity REITS** - Free float adjusted, market capitalization weighted index of U.S. based equity real estate investment trusts (REITs).

**Goldman Sachs Commodity Index** - A composite index of commodity sector returns which represents a broadly diversified, unleveraged, long-only position in commodity futures.

**HFRI Fund-of-Fund Index** - This index is equal-weighted including 800 constituents. It includes both domestic and offshore accounts and is valued in U.S. dollars. Only fund-of-fund products are included in the index that have at least \$50 M under managements and have been actively trading for at least one year. All funds report net monthly returns.

**HFRI Fund Weighted Composite Index** - The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in U.S. Dollar and have a minimum of \$50 M under management or a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

**Hueler Stable Value Index** - The Hueler Analytics Stable Value Pooled Fund Comparative Universe represents investment strategies of \$96 billion in stable value assets, across 24 pooled funds, invested in contracts universe across a universe of 16 general account issuers and 14 synthetic wrap providers. The allocation of pooled fund assets is dominated by synthetic contracts issued by insurance companies and banks.

**iMoneyNet All Taxable Money Funds Index** - An index made up of the entire universe of money market mutual funds. The index currently represents over 1,300 funds, or approximately 99 percent of all money fund assets.

**iMoneyNet Money Fund Average** - An index made up of the entire universe of money market mutual funds. The index currently represents over 1,300 funds, or approximately 99 percent of all money fund assets.

**J.P. Morgan EMBI Global Diversified** - Comprised of dollar-denominated Brady bonds, traded loans and Eurobonds issued by emerging market sovereign and quasi-sovereign entities. The Diversified version limits the weights of the index countries by only including a specified portion of those countries' eligible current face amounts of debt outstanding, providing for a more even distribution of weights within the countries in the index.

**MSCI All Country World ex-U.S. Index** - A capitalization-weighted index of stocks representing 44 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America. Index consists of 23 developed and 21 emerging countries, but excludes the U.S.

**MSCI All Country World ex-U.S. Index IMI** - A capitalization-weighted index of large, mid and small cap stocks representing 22 developed (excluding the United States) and 24 emerging market countries. The index is the broadest measure of the aggregate non-U.S. stock market, covering approximately 99% of the global equity investment opportunity set outside of the United States.

## Benchmark Descriptions

**MSCI All Country World ex-U.S. Small Cap Index** - Covers all investable small cap securities with a market capitalization below that of the companies in the MSCI Standard Indices (excluding U.S.), and target approximately 14% of each market's free-float adjusted market capitalization.

**MSCI All Country World Index** - A capitalization-weighted index of stocks representing 46 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America.

**MSCI All Country World Index IMI** - A capitalization-weighted index of large, mid and small cap stocks representing 23 developed and 24 emerging market countries. The index is the broadest measure of the aggregate global stock market, covering approximately 99% of the global equity investment opportunity set.

**MSCI EAFE Growth Index** - A capitalization-weighted index of 21 stock markets in Europe, Australia, Asia and the Far East designed to capture the growth-oriented companies.

**MSCI EAFE Index** - A capitalization-weighted index of stocks representing 22 developed countries in Europe, Australia, Asia, and the Far East.

**MSCI EAFE Small Cap Index** - A capitalization-weighted index of small cap stocks representing 23 developed country markets in Europe, Australia, Asia, and the Far East.

**MSCI EAFE Value Index** - A capitalization-weighted index of 21 stock markets in Europe, Australia, Asia and the Far East designed to capture the value-oriented companies.

**MSCI Emerging Markets Index** - A capitalization-weighted index of stocks representing 22 emerging country markets.

**MSCI Emerging Markets Value Index** - A capitalization-weighted index considered representative of value stocks across 46 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America.

**MSCI U.S. Broad Market Index** - A capitalization-weighted stock index that aggregates the MSCI U.S. Large Cap 300, Mid Cap 450, Small Cap 1,750 and Micro Cap Indices. This index represents approximately 99.5% of the capitalization of the U.S. Equity market and includes approximately 3,562 companies.

**MSCI U.S. REIT Index** - A broad index that fairly represents the equity REIT opportunity set with proper investability screens to ensure that the index is investable and replicable. The index represents approximately 85% of the U.S. REIT universe.

**MSCI World Index** - A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets, representing 24 developed market country indices.

**NCREIF Property Index** - A capitalization-weighted index of privately owned investment grade income-producing properties representing approximately \$269 billion in assets.

**NFI ODCE Index** - A capitalization weighted index comprised of open-end, Core funds investing in commercial real estate properties. The funds that constitute the index are subject to certain geographic and property type diversification requirements as well as leverage restrictions. The index reflects the impact of leverage on investment results. The returns shown in this report are net of management fees of the respective funds included in the index.

**Rolling 3-year Constant Maturity Treasury Index** - An index published by the Federal Reserve Board based on the monthly average yield of a range of Treasury securities, all adjusted to the equivalent of a three-year maturity.

**Russell 1000 Growth Index** - An index that measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher I/B/E/S growth forecasts.

**Russell 1000 Index** - A capitalization-weighted index of the 1,000 largest publicly traded U.S. stocks by capitalization.

## Benchmark Descriptions

**Russell 1000 Value Index** - An index that measures the performance of those stocks included in the Russell 1000 Index with lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.

**Russell 2000 Growth Index** - A capitalization-weighted index of those stocks in the Russell 2000 Index with higher price-to-book ratios and higher I/B/E/S earnings growth forecasts.

**Russell 2000 Index** - A capitalization-weighted index of the smallest 2,000 stocks in the Russell 3000 Index. The index excludes the largest- and smallest-capitalization issues in the domestic stock market.

**Russell 2000 Value Index** - An index that measures the performance of those stocks included in the Russell 2000 Index with lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.

**Russell 2500 Growth Index** - A capitalization-weighted index representing those companies within the Russell 2500 Index with higher price-to-book ratios and higher I/B/E/S earnings growth forecasts.

**Russell 2500 Index** - The Index is constructed by first identifying the 3,000 largest-capitalization U.S. stocks and ranking them by market capitalizations, choosing the bottom 2,500 names on the list.

**Russell 2500 Value Index** - An index that measures the performance of those stocks included in the Russell 2500 Index with lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.

**Russell 3000 Growth Index** - A capitalization-weighted index consisting of those Russell 3000 Index stocks that have higher price-to-book ratios and higher I/B/E/S earnings growth forecasts.

**Russell 3000 Index** - A capitalization-weighted index consisting of the 3,000 largest publicly traded U.S. stocks by capitalization. This index is a broad measure of the performance of the aggregate domestic equity market.

**Russell 3000 Value Index** - A capitalization-weighted index consisting of those Russell 3000 Index stocks that have lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.

**Russell Mid Cap Growth Index** - A capitalization-weighted index representing those stocks in the Russell MidCap Index with higher price-to-book ratios and higher I/B/E/S earnings growth forecasts.

**Russell Mid Cap Index** - A capitalization-weighted index of the 800 smallest stocks in the Russell 1000 Index. This index is a broad measure of mid-capitalization stocks.

**Russell Mid Cap Value Index** - A capitalization-weighted index consisting of those Russell MidCap Index stocks that have lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.

**S&P 500 Index** - A capitalization-weighted index representing stocks chosen by Standard & Poor's, Inc. for their size, liquidity, stability and industry group representation. The companies in the S&P 500 Index are generally among the largest in their industries.

## Benchmark Descriptions

**S&P Completion Index** -The S&P Completion Index is a sub-index of the S&P Total Market Index, including all stocks eligible for the S&P TMI and excluding all current constituents of the S&P 500. The index covers approximately 4,000 constituents, offering investors broad exposure to mid, small, and micro cap companies.

**S&P Leverage Loan Index** - A daily total return index that uses LSTA/LPC Mark-to-Market Pricing to calculate market value change.

**S&P MidCap 400 Index** - A market-capitalization-weighted index of stocks in all major industries in the mid-range of the U.S. stock market.

**Wilshire REIT** - A measure of the types of U.S. real estate securities that represent the ownership and operation of commercial or residential real estate. To be included in the index, a company must have a market capitalization of \$200 M and have at least 75% of the total revenue derived from the ownership and operation of the real estate assets.

- Indices cannot be invested in directly. Unmanaged index returns assume reinvestment of any and all distributions and do not reflect our fees or expenses.
- Past performance is no guarantee of future results.
- Please feel free to contact us at [retirement@aon.com](mailto:retirement@aon.com) for more index information.

## Thought Leadership Highlights – Public Funds

Aon United	Health Solutions Survey on Vaccination Trends	<a href="#">Link</a>
Aon United	Operational Diligence: Due for a Change? (Part 1)	<a href="#">Link</a>
Market View	Prospects for Equities: Fading slowly but surely	<a href="#">Link</a>
Market View	Recent Developments in China: Three Questions with Lucinda Downing	<a href="#">Link</a>
Market View	Quarterly Market Review and Outlook Video (access code 'aon!')	<a href="#">Link to Video</a>
Market View	Biden's Climate Agenda and the Implications for Investments	<a href="#">Link</a>
Market View	A Look at The Biden Infrastructure Proposal	<a href="#">Link</a>
Market View	U.S. Month in Markets	<a href="#">Link</a>
Market View	Quarterly Investment Outlook	<a href="#">Link</a>
Annual Outlook	6 Key Themes for Public Retirement Plans	<a href="#">Link</a>
Quarterly Outlook	Key Topic for Public Funds in Q4 2021 (3-minute video, access code 'aon!')	<a href="#">Link to Video</a>
Plan Design	Expected Return Assumptions for Public Funds: Three Questions with John Sullivan	<a href="#">Link</a>
Plan Design	ESG Engagement: Three Questions with Connie Johnson	<a href="#">Link</a>
Plan Design	White Paper: The Benefits of ESG Integration	<a href="#">Link</a>
Plan Design	Designing, Monitoring and Evaluating Hedge Funds: 3 Questions with Chris Walvoord	<a href="#">Link</a>
Plan Design	White Paper on Pension Obligation Bonds	<a href="#">Link</a>
Plan Design	Inflation-Protecting Assets: 3 Questions with Sheila Noonan	<a href="#">Link</a>
Plan Design	Global Invested Capital Markets – Updated White Paper	<a href="#">Link</a>
Plan Design	Trust the Process -- Public Pension Investment Strategy	<a href="#">Link</a>
Strategy Review	Resurgence of SPACs: Three Questions with Bruce Ingram and Peter Dracopoulos	<a href="#">Link</a>
Strategy Review	3 Ways Retirement Plans Are Evolving	<a href="#">Link</a>
Strategy Review	Diverse Manager Investing Survey Report	<a href="#">Link</a>
Strategy Review	Video: Demand Increasing for ESG and Responsible Investment (access code 'aon!')	<a href="#">Link to video</a>
Legal & Compliance	Legal & Compliance quarterly update newsletter (6 minute audio summary, access code 'aon!')	<a href="#">Link to Article</a> <a href="#">Link to Audio Summary</a>

## Notes

- The rates of return contained in this report are shown on an after-fees basis unless otherwise noted. They are geometric and time-weighted. Returns for periods longer than one year are annualized.
- Universe percentiles are based upon an ordering system in which 1 is the best ranking and 100 is the worst ranking.
- Due to rounding throughout the report, percentage totals displayed may not sum to 100%. Additionally, individual fund totals in dollar terms may not sum to the plan total.

## Disclaimer

### Past performance is not necessarily indicative of future results.

Unless otherwise noted, performance returns presented reflect the respective fund's performance as indicated. Returns may be presented on a before-fees basis (gross) or after-fees basis (net). After-fee performance is net of each respective sub-advisors' investment management fees and include the reinvestment of dividends and interest as indicated on the notes page within this report or on the asset allocation and performance summary pages. Actual returns may be reduced by Aon Investments' investment advisory fees or other trust payable expenses you may incur as a client. Aon Investments' advisory fees are described in Form ADV Part 2A. Portfolio performance, characteristics and volatility also may differ from the benchmark(s) shown.

The information contained herein is confidential and proprietary and provided for informational purposes only. It is not complete and does not contain certain material information about making investments in securities including important disclosures and risk factors. All securities transactions involve substantial risk of loss. Under no circumstances does the information in this report represent a recommendation to buy or sell stocks, limited partnership interests, or other investment instruments.

The data contained in these reports is compiled from statements provided by custodian(s), record-keeper(s), and/or other third-party data provider(s). This document is not intended to provide, and shall not be relied upon for, accounting and legal or tax advice. Aon Investments has not conducted additional audits and cannot warrant its accuracy or completeness. We urge you to carefully review all custodial statements and notify Aon Investments with any issues or questions you may have with respect to investment performance or any other matter set forth herein.

The mutual fund information found in this report is provided by Thomson Reuters Lipper and Aon Investments cannot warrant its accuracy or timeliness. Thomson Reuters Lipper Global Data Feed provides comprehensive coverage of mutual fund information directly to Investment Metrics, Aon Investments' performance reporting vendor, via the PARis performance reporting platform. Thomson Reuters Lipper is the data provider chosen by Investment Metrics, and as such, Aon Investments has no direct relationship with Thomson Reuters Lipper.

Refer to Hedge Fund Research, Inc. [www.hedgefundresearch.com](http://www.hedgefundresearch.com) for information on HFR indices.

FTSE International Limited ("FTSE") © FTSE 2017. "FTSE®" and "FTSE4Good®" are trademarks of the London Stock Exchange Group companies and are used by FTSE International Limited under license. The FTSE indices are calculated by FTSE International Limited in conjunction with Indonesia Stock Exchange, Bursa Malaysia Berhad, The Philippine Stock Exchange, Inc., Singapore Exchange Securities Trading Limited and the Stock Exchange of Thailand (the "Exchanges"). All intellectual property rights in the FTSE/ASEAN Index vest in FTSE and the Exchanges. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE indices and / or FTSE ratings or underlying data. No further distribution of FTSE Data is permitted without FTSE's express written consent.

Aon Investments USA Inc. ("Aon Investments") is a federally registered investment advisor with the U.S. Securities and Exchange Commission ("SEC"). Aon Investments is also registered with the Commodity Futures Trade Commission as a commodity pool operator and a commodity trading advisor, and is a member of the National Futures Association. The Aon Investments ADV Form Part 2A disclosure statement is available upon written request to:

Aon Investments USA Inc.  
200 East Randolph Street  
Suite 700  
Chicago, IL 60601  
ATTN: Aon Investments Compliance Officer



Arkansas Teacher Retirement System | October 31, 2021

---

## Monthly Investment Review

*All information presented in this report should be considered preliminary.*

*Finalized data will be available on the next Quarterly Investment Report after the close of the quarter.*

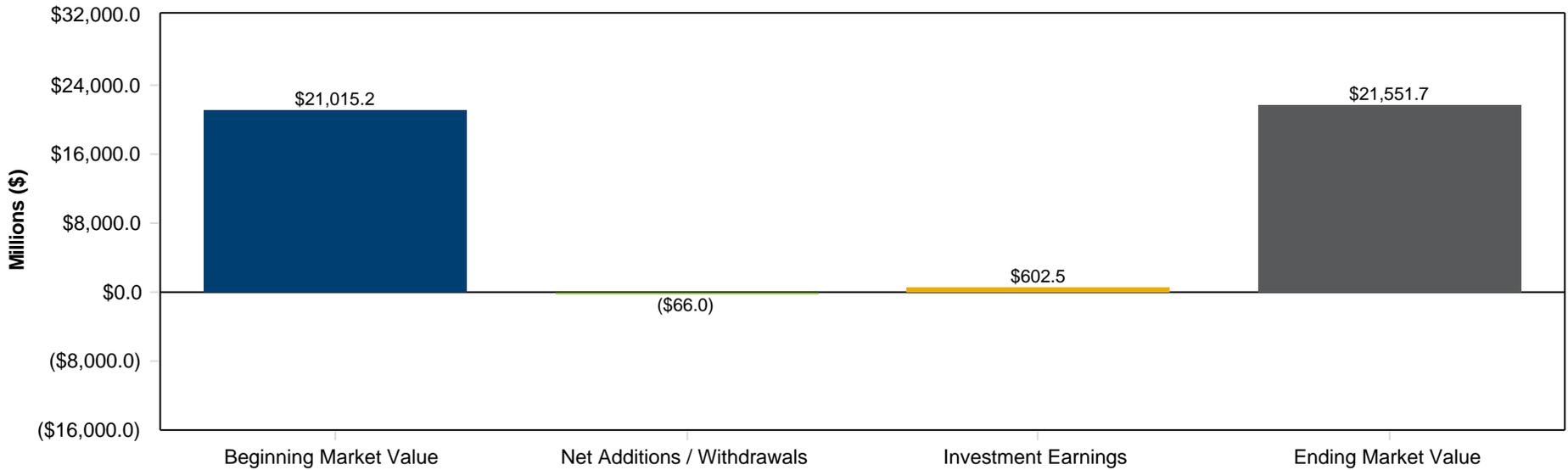
As of October 31, 2021

## Market Environment

	Performance(%)						
	1 Month	Fiscal YTD	Year To Date	1 Year	3 Years	5 Years	10 Years
Dow Jones U.S. Total Stock Market Index	6.7	6.6	22.9	44.1	21.6	18.9	16.0
S&P 500 Index	7.0	7.6	24.0	42.9	21.5	18.9	16.2
Russell 1000 Index	6.9	7.2	23.2	43.5	22.0	19.2	16.3
Russell 1000 Value Index	5.1	4.3	22.0	43.8	13.9	12.4	12.8
Russell 1000 Growth Index	8.7	9.9	24.2	43.2	29.4	25.5	19.4
Russell 2000 Index	4.3	-0.3	17.2	50.8	16.5	15.5	13.5
Russell 2000 Value Index	3.8	0.7	27.6	64.3	13.4	12.6	12.1
Russell 2000 Growth Index	4.7	-1.2	7.6	38.5	18.6	17.9	14.6
MSCI AC World IMI (Net)	4.9	3.7	16.8	38.2	17.3	14.6	11.3
MSCI AC World ex USA IMI (Net)	2.3	-0.4	9.2	30.9	12.4	10.0	6.9
MSCI EAFE Index (Net)	2.5	2.0	11.0	34.2	11.5	9.8	7.4
MSCI Emerging Markets Index (Net)	1.0	-7.2	-0.3	17.0	12.3	9.4	4.9
Blmbg. U.S. Universal Index	-0.1	0.0	-1.2	0.5	5.8	3.4	3.4
Blmbg. U.S. Aggregate	0.0	0.0	-1.6	-0.5	5.6	3.1	3.0
Blmbg. U.S. Government	-0.1	0.0	-2.5	-2.4	5.0	2.5	2.3
Blmbg. Barc. Credit Bond Index	0.2	0.2	-1.1	1.9	7.7	4.6	4.5
Blmbg. U.S. Mortgage Backed Securities	-0.2	-0.1	-0.9	-0.6	4.0	2.2	2.4
Blmbg. U.S. Corp: High Yield	-0.2	0.7	4.4	10.5	7.4	6.4	6.8
Citigroup 90-Day T-Bill	0.0	0.0	0.1	0.1	1.1	1.1	0.6

**Total Plan Asset Summary**

**Change in Market Value  
From October 1, 2021 to October 31, 2021**



**Summary of Cash Flow**

	1 Month	Year To Date	1 Year
Beginning Market Value	21,015,249,044	19,449,264,888	17,567,693,959
+ Additions / Withdrawals	-66,019,863	-630,503,920	-817,805,067
+ Investment Earnings	602,509,752	2,732,977,965	4,801,850,041
<b>= Ending Market Value</b>	<b>21,551,738,933</b>	<b>21,551,738,933</b>	<b>21,551,738,933</b>

As of October 31, 2021

## Asset Allocation & Performance

	Allocation			Performance(%)								
	Market Value (\$)	%	Policy(%)	1 Month	Fiscal YTD	Year To Date	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Total Fund</b>	<b>21,551,738,933</b>	<b>100.0</b>	<b>100.0</b>	<b>2.8</b>	<b>3.3</b>	<b>14.0</b>	<b>27.5</b>	<b>12.8</b>	<b>12.0</b>	<b>10.5</b>	<b>8.8</b>	<b>04/01/1986</b>
<i>Performance Benchmark</i>				3.4	4.4	15.7	28.2	14.8	12.5	10.9	9.0	
<b>Total Equity</b>	<b>12,797,807,904</b>	<b>59.4</b>	<b>57.9</b>	<b>4.8</b>	<b>3.8</b>	<b>16.8</b>	<b>41.7</b>	<b>16.4</b>	<b>14.6</b>	<b>12.3</b>	<b>11.2</b>	<b>07/01/2015</b>
<i>Total Equity Performance Benchmark</i>				5.5	4.6	18.7	40.0	18.6	15.9	13.1	12.6	
<b>Fixed Income</b>	<b>2,631,211,117</b>	<b>12.2</b>	<b>15.0</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.7</b>	<b>1.2</b>	<b>5.2</b>	<b>4.2</b>	<b>4.1</b>	<b>5.3</b>	<b>07/01/1992</b>
<i>Performance Benchmark</i>				-0.1	0.0	-1.2	0.5	5.8	3.4	3.4	5.5	
<b>Opportunistic/Alternatives</b>	<b>913,546,725</b>	<b>4.2</b>	<b>4.3</b>	<b>2.1</b>	<b>-2.2</b>	<b>3.4</b>	<b>6.4</b>	<b>0.6</b>	<b>1.2</b>	<b>3.8</b>	<b>3.1</b>	<b>05/01/2011</b>
<i>Custom Alternatives Benchmark</i>				0.7	0.9	6.4	11.5	4.3	3.6	2.8	2.3	
<b>Real Assets</b>	<b>2,231,439,336</b>	<b>10.4</b>	<b>10.8</b>									
Real Estate	1,360,484,823	6.3										
Timber	312,606,782	1.5										
Agriculture	217,745,778	1.0										
Infrastructure	340,601,953	1.6										
Private Equity	2,823,799,226	13.1	12.0									
Cash	153,934,625	0.7	0.0									

**\*Preliminary Results**

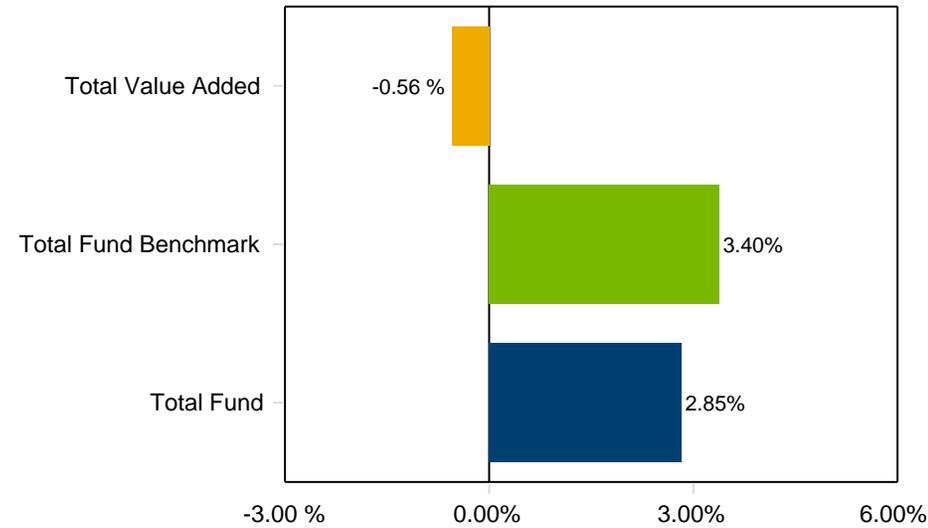
\*Policy % is the interim target used for benchmarking purposes. See page 17 for long-term targets. Beginning July 1, 2013, an updated Investment Policy was adopted which includes the new Real Assets category, which includes Real Estate, Timber, Agriculture and Infrastructure.

\*Real Assets and Private Equity are valued on a quarterly basis and reported on a quarter lag. Market values have been adjusted for the current month's cash flows. Updated results for these portfolios are not yet available and will be included in the quarterly performance report.

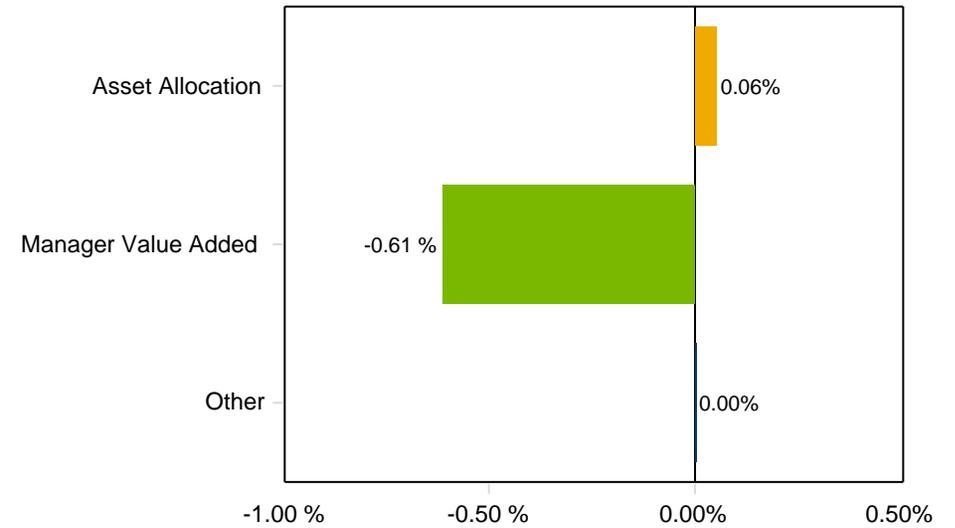
\*The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 21 of this report.

Total Fund Attribution

Total Fund Performance

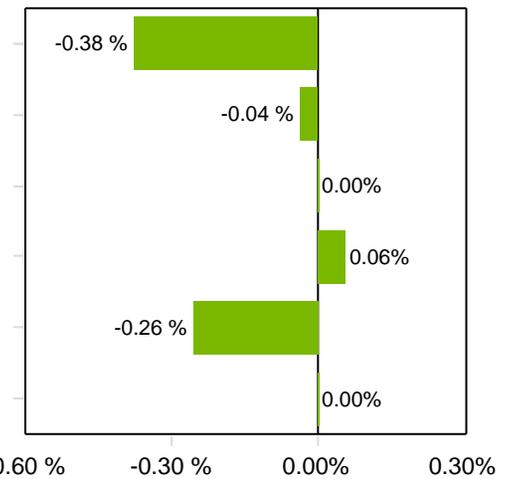
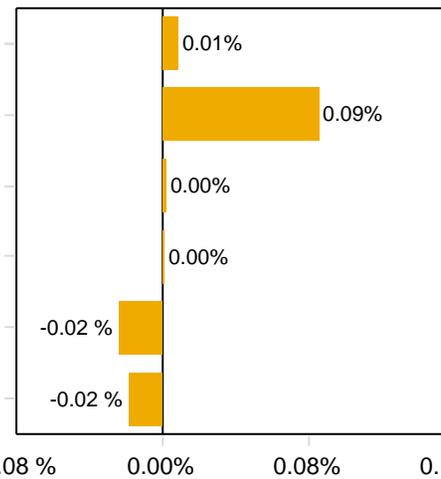
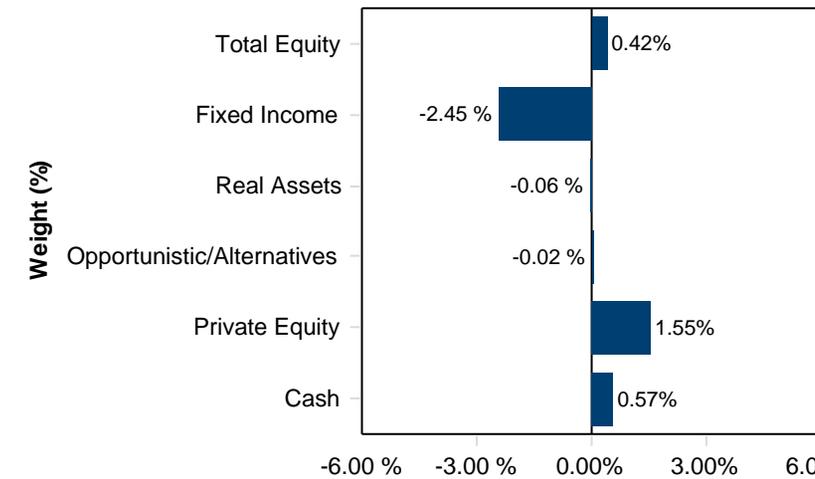


Total Value Added:-0.56 %



Total Asset Allocation:0.06%

Total Manager Value Added:-0.61 %



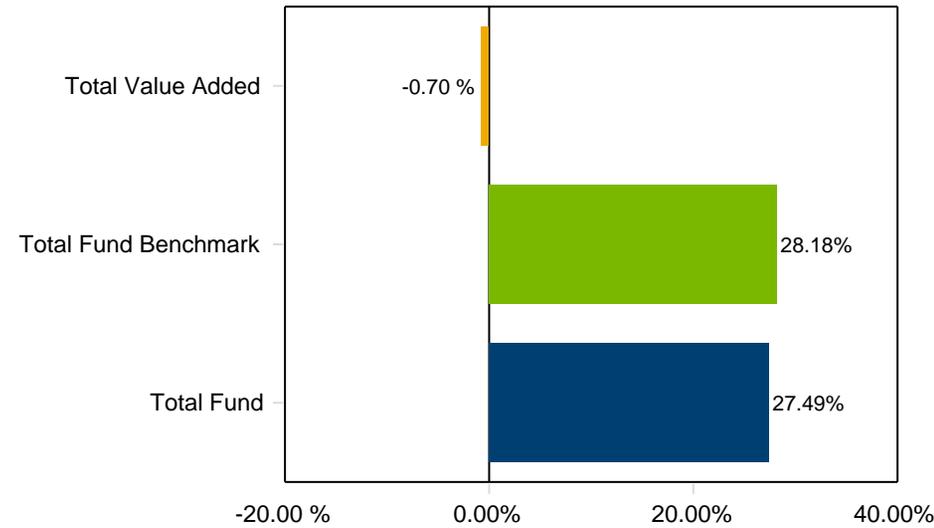
■ Average Active Weight

■ Asset Allocation Value Added

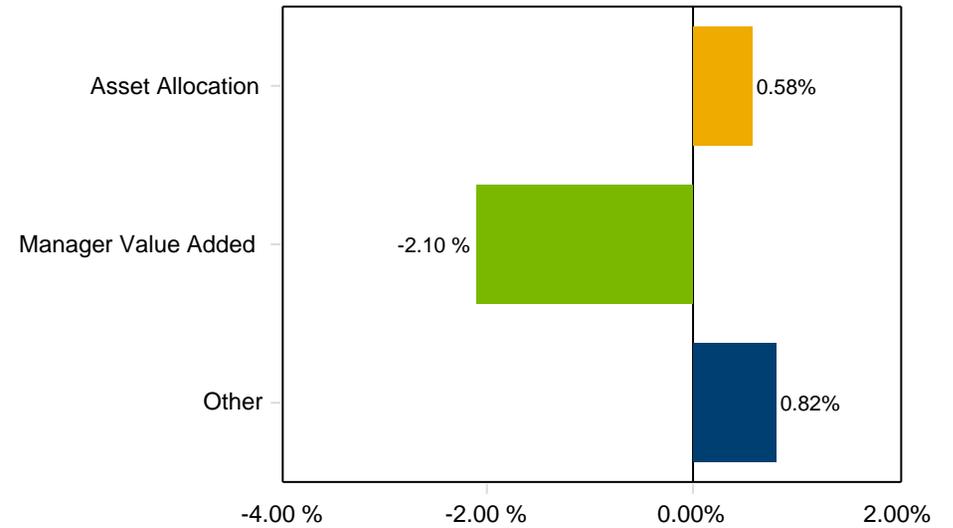
■ Manager Value Added

Total Fund Attribution

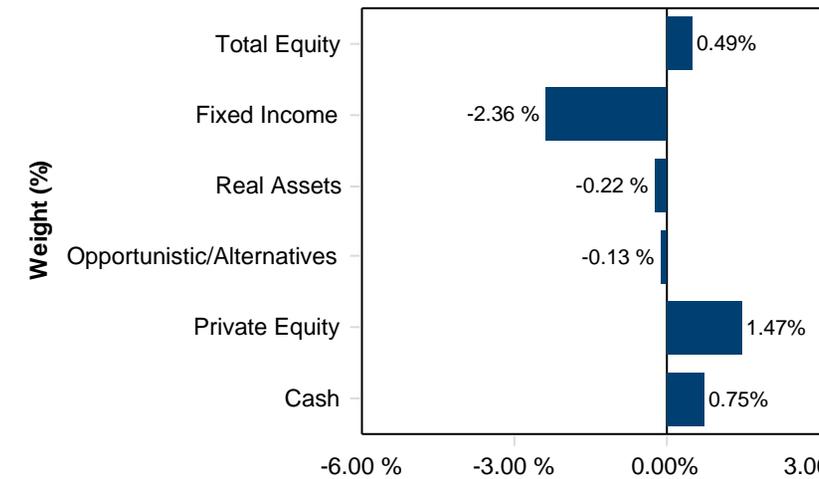
Total Fund Performance



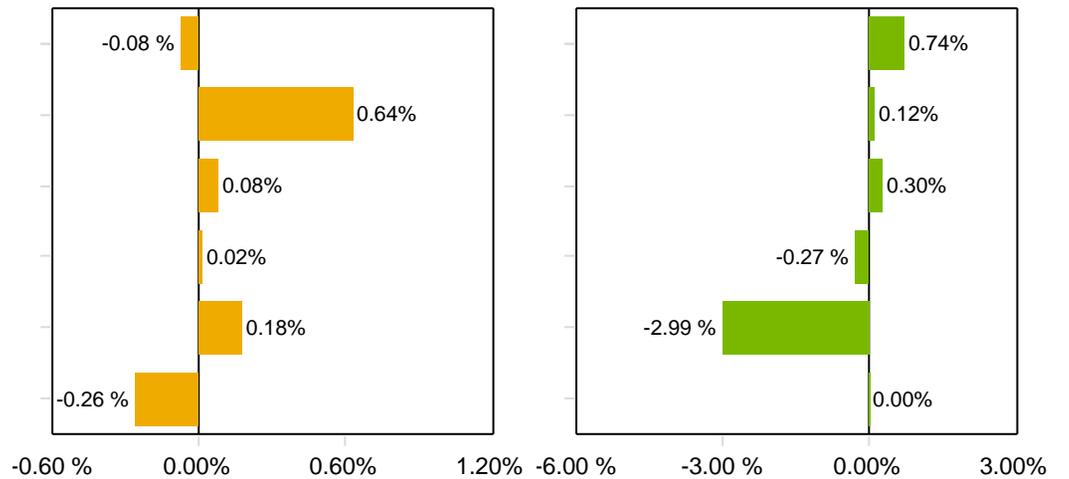
Total Value Added:-0.70 %



Total Asset Allocation:0.58%



Total Manager Value Added:-2.10 %



Average Active Weight

Asset Allocation Value Added

Manager Value Added

As of October 31, 2021

## Asset Allocation & Performance

	Allocation		Performance(%)							
	Market Value (\$)	%	1 Month	Fiscal YTD	Year To Date	1 Year	3 Years	5 Years	Since Inception	Inception Date
Total Equity	12,797,807,904	100.0	4.8	3.8	16.8	41.7	16.4	14.6	11.2	07/01/2015
<i>Total Equity Performance Benchmark</i>			5.5	4.6	18.7	40.0	18.6	15.9	12.6	
Jacobs Levy 130/30	994,309,608	7.8	5.3	6.6	28.8	56.1	19.7	19.1	12.1	01/01/2008
<i>Russell 3000 Index</i>			6.8	6.7	22.8	43.9	21.6	18.9	10.9	
Kennedy Capital Management	812,896,344	6.4	5.8	4.7	32.6	67.6	16.2	13.3	12.7	01/01/1994
<i>Russell 2000 Value Index</i>			3.8	0.7	27.6	64.3	13.4	12.6	10.1	
Stephens	713,108,880	5.6	6.6	8.0	18.5	46.7	21.7	21.5	12.2	08/01/2006
<i>Russell 2000 Growth Index</i>			4.7	-1.2	7.6	38.5	18.6	17.9	11.0	
Voya Absolute Return	809,362,829	6.3	5.5	3.8	15.8	38.7	16.9	14.2	11.7	10/01/2008
<i>Performance Benchmark Voya Absolute Return</i>			5.1	4.0	16.8	37.3	17.5	14.7	11.7	
Allianz (Nicholas Applegate)	1,104,294,156	8.6	4.7	4.1	9.8	33.1	27.9	22.0	11.8	12/01/1998
<i>Performance Benchmark</i>			3.6	3.1	10.2	33.0	24.2	18.6	9.4	
Pershing Square International	1,238,401	0.0	0.0	0.0	4.9	19.9	29.1	19.4	11.7	07/01/2008
<i>Dow Jones U.S. Total Stock Market Index</i>			6.7	6.6	22.9	44.1	21.6	18.9	12.4	
Pershing Square Holdings	286,357,829	2.2	11.1	10.6	15.8	51.7	43.1	25.5	10.8	01/01/2013
<i>Dow Jones U.S. Total Stock Market Index</i>			6.7	6.6	22.9	44.1	21.6	18.9	16.3	
SSgA Global Index	1,242,462,061	9.7	4.9	3.8	17.1	38.5	17.7	14.9	8.1	04/01/2008
<i>MSCI AC World IMI (Net)</i>			4.9	3.7	16.8	38.2	17.3	14.6	7.8	
BlackRock MSCI ACWI IMI Fund	1,037,843,170	8.1	4.9	3.7	17.1	38.5	17.5	14.8	10.3	07/01/2011
<i>MSCI AC World IMI (Net)</i>			4.9	3.7	16.8	38.2	17.3	14.6	9.9	

277

Preliminary Results

The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 21 of this report.

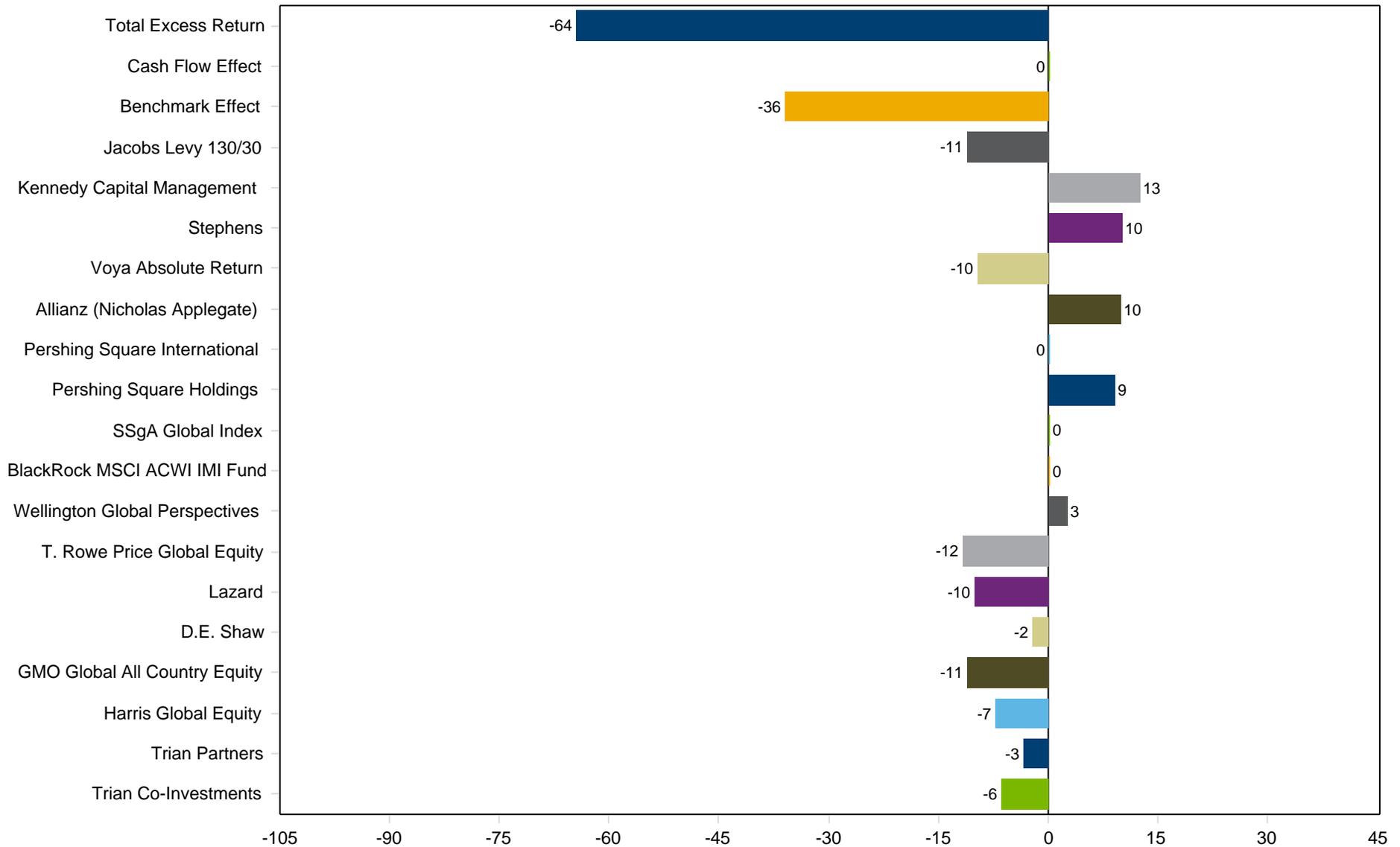
As of October 31, 2021

## Asset Allocation & Performance

	Allocation		Performance(%)							
	Market Value (\$)	%	1 Month	Fiscal YTD	Year To Date	1 Year	3 Years	5 Years	Since Inception	Inception Date
Wellington Global Perspectives	790,433,479	6.2	3.6	3.6	19.9	50.9	15.4	14.2	14.5	07/01/2009
<i>Performance Benchmark</i>			3.2	1.6	17.3	45.2	16.3	13.7	12.5	
T. Rowe Price Global Equity	1,751,779,489	13.7	4.2	3.8	14.5	37.6	30.6	25.0	16.5	08/01/2009
<i>MSCI AC World Index (Net)</i>			5.1	4.0	16.8	37.3	17.5	14.7	11.0	
<i>MSCI AC World Index Growth (Net)</i>			6.1	5.4	16.2	34.7	24.7	19.9	13.6	
Lazard	846,637,819	6.6	3.6	-0.3	7.8	31.6	19.1	15.1	10.7	08/01/2009
<i>MSCI AC World Index (Net)</i>			5.1	4.0	16.8	37.3	17.5	14.7	11.0	
D.E. Shaw	987,404,329	7.7	5.4	3.5	13.6	36.0	15.3	14.3	12.0	09/01/2009
<i>MSCI World Index (Net)</i>			5.7	5.7	19.4	40.4	18.2	15.5	11.4	
GMO Global All Country Equity	562,706,333	4.4	2.6	-0.4	13.5	35.4	14.1	11.8	6.8	07/01/2014
<i>MSCI AC World Index (Net)</i>			5.1	4.0	16.8	37.3	17.5	14.7	9.9	
<i>MSCI AC World Index Value (Net)</i>			4.0	2.6	17.1	39.9	10.0	9.3	5.7	
Harris Global Equity	666,047,018	5.2	4.3	2.2	20.3	54.4	16.8	13.2	8.9	06/01/2014
<i>MSCI World Index (Net)</i>			5.7	5.7	19.4	40.4	18.2	15.5	10.6	
<i>MSCI World Value (Net)</i>			4.5	3.7	18.9	41.6	10.3	9.7	6.3	
Triam Partners	87,109,298	0.7	2.0	0.0	10.4	21.9	13.4	10.7	9.7	11/01/2015
<i>S&amp;P 500 Index</i>			7.0	7.6	24.0	42.9	21.5	18.9	16.4	
Triam Co-Investments	103,743,559	0.8	-0.6	0.4	6.5	24.2	13.1		7.3	01/01/2017
<i>S&amp;P 500 Index</i>			7.0	7.6	24.0	42.9	21.5		18.3	

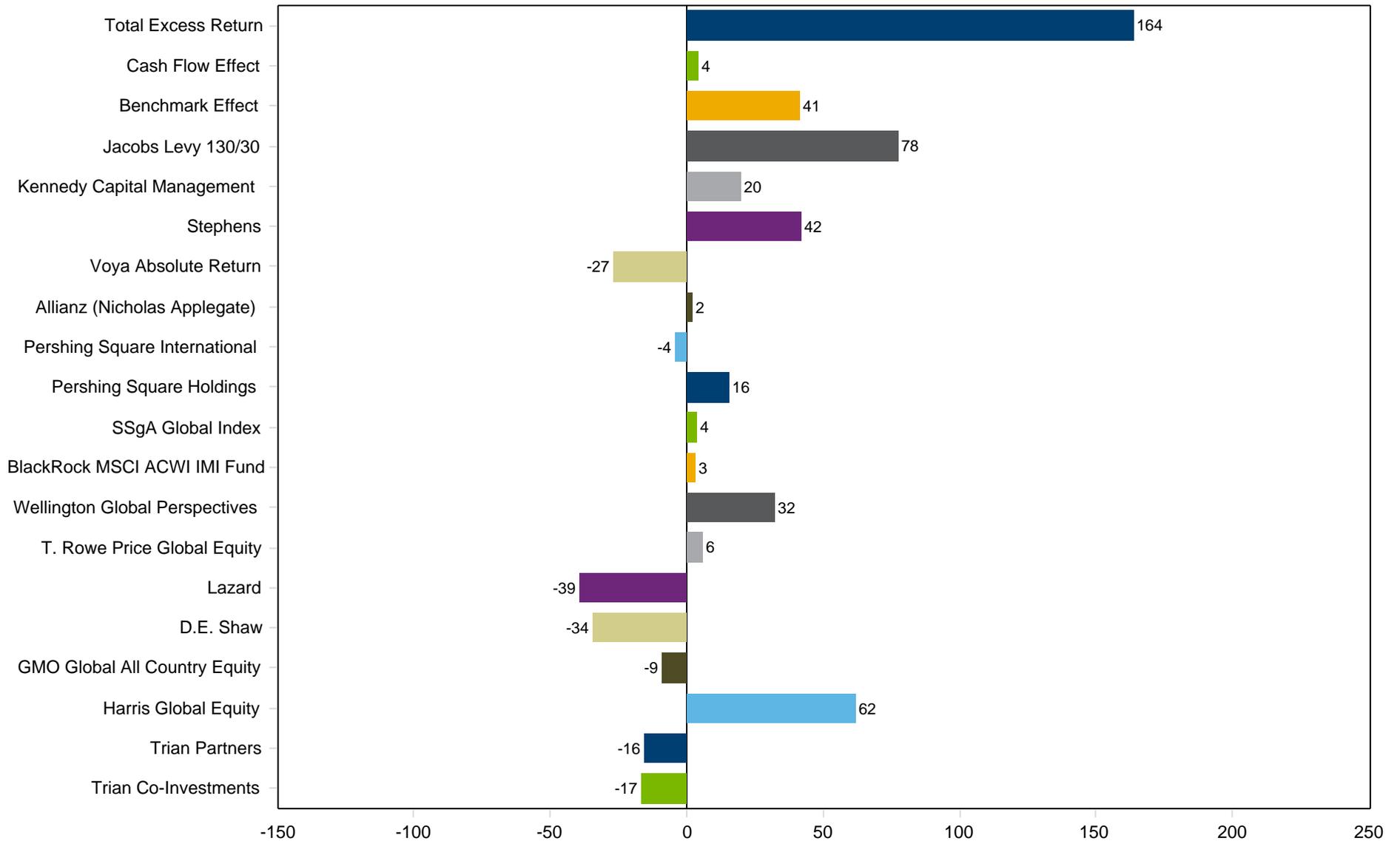
Asset Class Attribution

1 Month



Asset Class Attribution

1 Year



As of October 31, 2021

## Asset Allocation & Performance

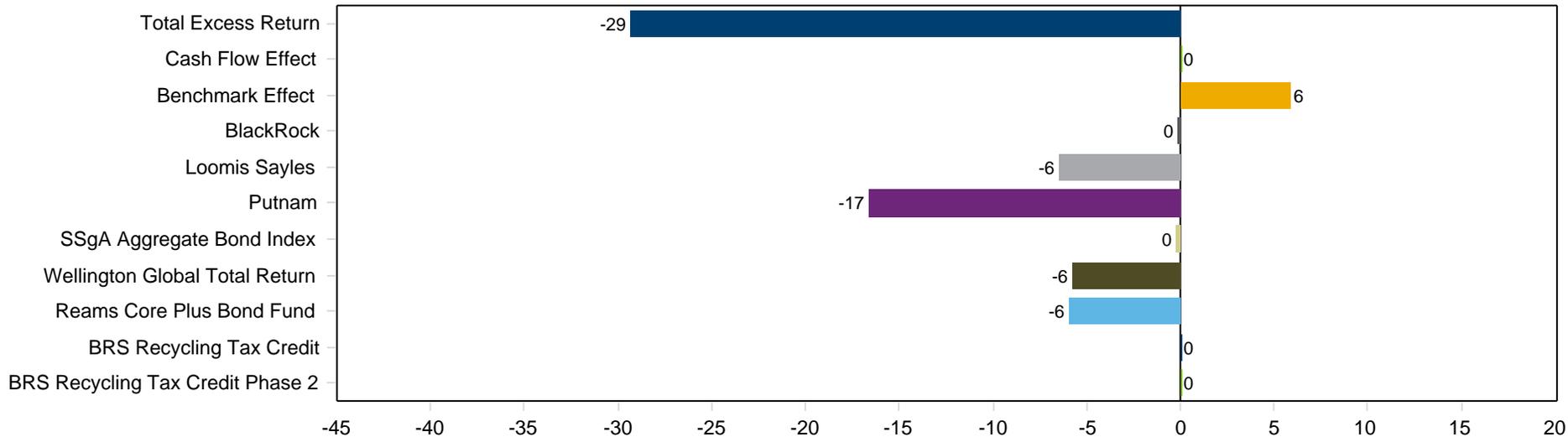
	Allocation		Performance(%)							
	Market Value (\$)	%	1 Month	Fiscal YTD	Year To Date	1 Year	3 Years	5 Years	Since Inception	Inception Date
Fixed Income	2,631,211,117	100.0	-0.4	-0.4	-0.7	1.2	5.2	4.2	5.3	07/01/1992
<i>Performance Benchmark</i>			-0.1	0.0	-1.2	0.5	5.8	3.4	5.5	
BlackRock	281,576,793	10.7	-0.1	0.1	-1.3	0.0	6.2	3.5	4.5	10/01/2003
<i>Performance Benchmark</i>			-0.1	0.0	-1.2	0.5	5.8	3.4	4.3	
Loomis Sayles	501,921,328	19.1	-0.4	0.0	1.2	6.0	8.0	6.1	8.1	09/01/2008
<i>Performance Benchmark</i>			0.0	0.3	0.3	3.3	6.8	4.5	5.6	
Putnam	376,400,000	14.3	-1.1	-2.4	-2.7	-0.1	1.7	2.7	2.7	08/01/2008
LIBOR			0.0	0.0	0.2	0.2	1.4	1.4	0.9	
SSgA Aggregate Bond Index	468,920,745	17.8	0.0	0.0	-1.6	-0.5	5.6	3.1	3.5	06/01/2010
<i>Blmbg. U.S. Aggregate</i>			0.0	0.0	-1.6	-0.5	5.6	3.1	3.5	
Wellington Global Total Return	354,152,853	13.5	-0.4	-0.2	1.2	0.9	2.2	2.6	2.0	06/01/2014
<i>ICE BofAML 3 Month U.S. T-Bill</i>			0.0	0.0	0.0	0.1	1.1	1.2	0.8	
Reams Core Plus Bond Fund	395,207,790	15.0	-0.4	-0.5	-2.3	-0.3	8.8	4.9	4.3	06/01/2014
<i>Blmbg. U.S. Aggregate</i>			0.0	0.0	-1.6	-0.5	5.6	3.1	3.1	
BRS Recycling Tax Credit	176,000,000	6.7								
BRS Recycling Tax Credit Phase 2	77,031,608	2.9								

\*Preliminary Results

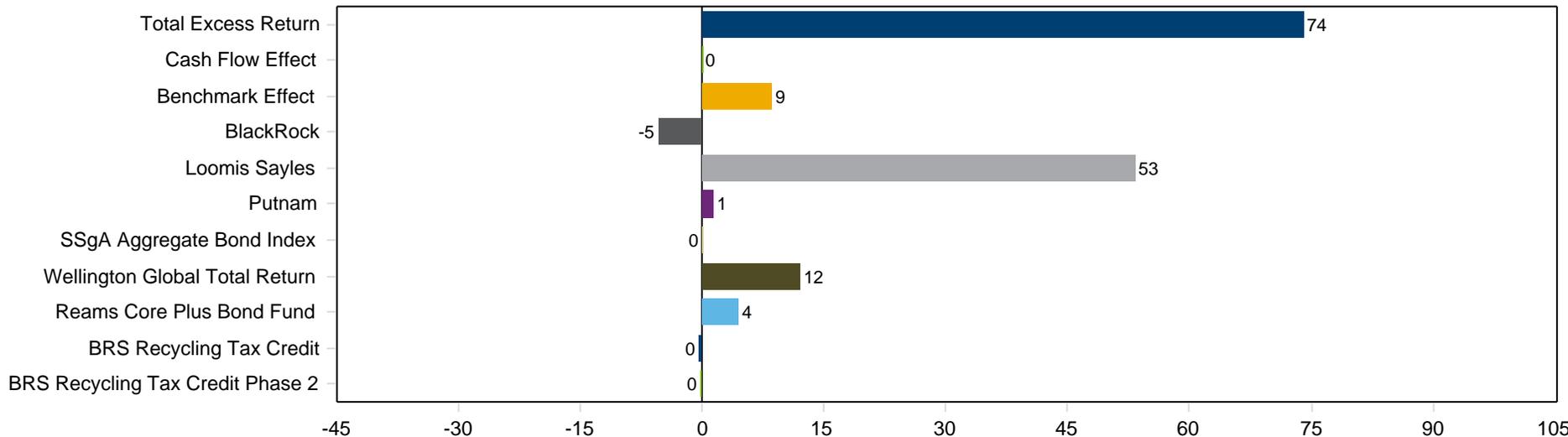
\*The BRS Recycling Tax Credit represents an annual income stream of \$16 million dollars over the next 14 years, which ATRS purchased for approximately \$162 million. The value shown above represents the year-end market value in accordance with GASB Statement 72, representing the 14 years of annual income, and has been incorporated into Total Fixed Income and Total Fund performance.

Asset Class Attribution

1 Month



1 Year



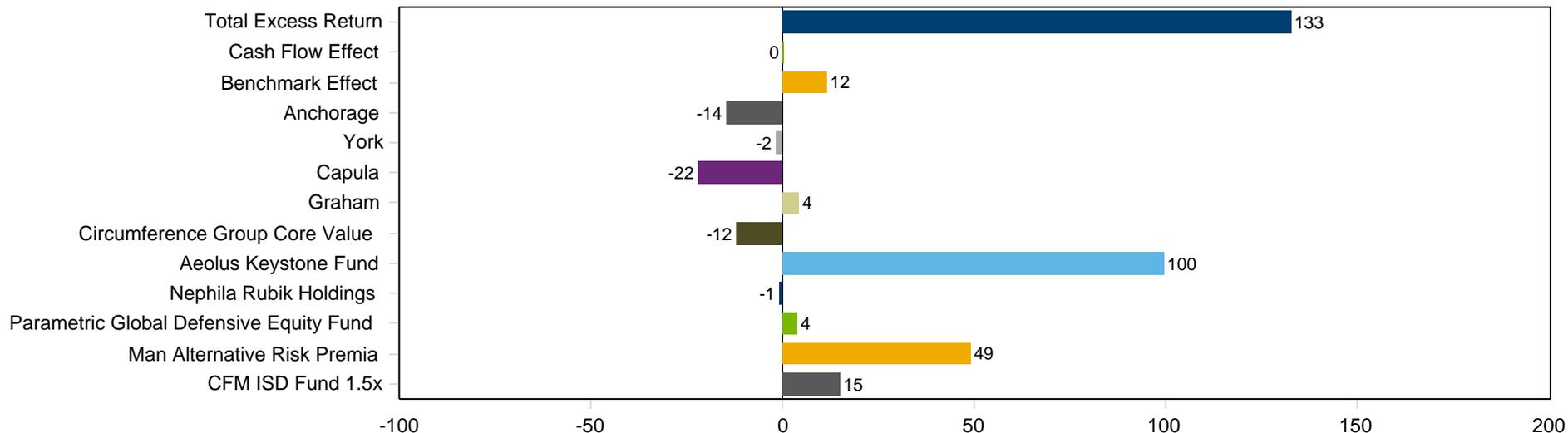
As of October 31, 2021

## Asset Allocation & Performance

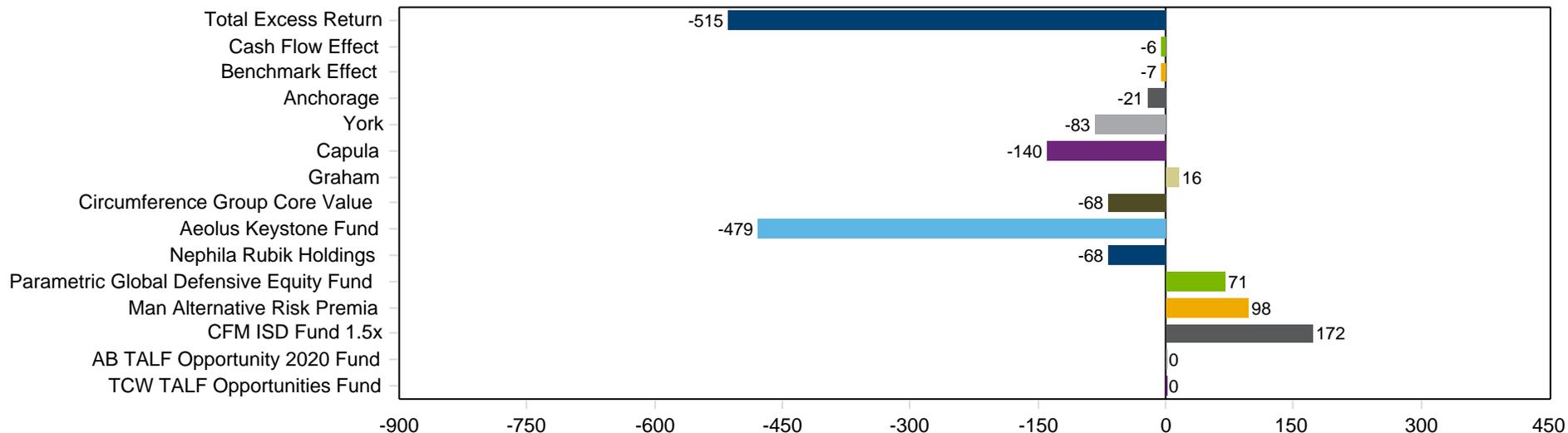
	Allocation		Performance(%)									
	Market Value (\$)	%	1 Month	Fiscal YTD	Year To Date	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
<b>Opportunistic/Alternatives</b>	<b>913,546,725</b>	<b>100.0</b>	<b>2.1</b>	<b>-2.2</b>	<b>3.4</b>	<b>6.4</b>	<b>0.6</b>	<b>1.2</b>	<b>3.8</b>	<b>3.1</b>	<b>05/01/2011</b>	
<i>Custom Alternatives Benchmark</i>			0.7	0.9	6.4	11.5	4.3	3.6	2.8	2.3		
<b>Anchorage</b>	<b>91,983,489</b>	<b>10.1</b>	<b>0.3</b>	<b>1.4</b>	<b>19.0</b>	<b>24.4</b>	<b>6.0</b>	<b>5.7</b>	<b>7.2</b>	<b>6.0</b>	<b>05/01/2011</b>	
<i>Credit Suisse Event Driven</i>			1.7	4.2	14.7	27.1	8.6	6.8	5.2	3.8		
<i>HFRI ED: Distressed/Restructuring Index</i>			0.5	0.7	15.4	28.2	8.4	7.7	6.1	5.1		
<b>York</b>	<b>9,725,123</b>	<b>1.1</b>	<b>0.0</b>	<b>-24.4</b>	<b>-8.0</b>	<b>-14.6</b>	<b>-25.2</b>	<b>-12.9</b>	<b>-4.0</b>	<b>-4.7</b>	<b>05/01/2011</b>	
<i>Credit Suisse Event Driven</i>			1.7	4.2	14.7	27.1	8.6	6.8	5.2	3.8		
<i>HFRI ED: Distressed/Restructuring Index</i>			0.5	0.7	15.4	28.2	8.4	7.7	6.1	5.1		
<b>Capula</b>	<b>79,972,685</b>	<b>8.8</b>	<b>-1.0</b>	<b>-0.4</b>	<b>0.8</b>	<b>1.4</b>	<b>5.3</b>	<b>5.5</b>	<b>5.6</b>	<b>5.8</b>	<b>05/01/2011</b>	
<i>HFRI Macro (Total) Index</i>			1.5	1.2	9.7	15.5	7.0	3.9	2.3	1.7		
<b>Graham</b>	<b>73,207,790</b>	<b>8.0</b>	<b>2.0</b>	<b>0.7</b>	<b>9.7</b>	<b>17.7</b>	<b>7.5</b>	<b>5.1</b>	<b>5.3</b>	<b>3.5</b>	<b>05/01/2011</b>	
<i>HFRI Macro (Total) Index</i>			1.5	1.2	9.7	15.5	7.0	3.9	2.3	1.7		
<b>Circumference Group Core Value</b>	<b>38,083,760</b>	<b>4.2</b>	<b>1.4</b>	<b>0.0</b>	<b>15.1</b>	<b>28.4</b>	<b>11.6</b>	<b>12.4</b>		<b>10.7</b>	<b>08/01/2015</b>	
<i>Russell 2000 Index</i>			4.3	-0.3	17.2	50.8	16.5	15.5		11.9		
<b>Aeolus Keystone Fund</b>	<b>192,887,819</b>	<b>21.1</b>	<b>4.8</b>	<b>-12.8</b>	<b>-15.8</b>	<b>-17.3</b>	<b>-6.2</b>	<b>-6.2</b>		<b>-3.4</b>	<b>12/01/2015</b>	
<i>FTSE 3 Month T-Bill</i>			0.0	0.0	0.0	0.1	1.1	1.1		1.0		
<i>Eurekahedge ILS Advisers Index</i>			0.3	-0.4	0.5	0.7	0.0	-0.9		0.0		
<b>Nephila Rubik Holdings</b>	<b>38,199,179</b>	<b>4.2</b>	<b>-0.2</b>	<b>-6.7</b>	<b>-9.0</b>	<b>-12.8</b>	<b>-5.2</b>	<b>-5.6</b>		<b>-4.8</b>	<b>06/01/2016</b>	
<i>FTSE 3 Month T-Bill</i>			0.0	0.0	0.0	0.1	1.1	1.1		1.1		
<i>Eurekahedge ILS Advisers Index</i>			0.3	-0.4	0.5	0.7	0.0	-0.9		-0.3		
<b>Parametric Global Defensive Equity Fund</b>	<b>200,424,450</b>	<b>21.9</b>	<b>2.7</b>	<b>3.0</b>	<b>11.6</b>	<b>21.3</b>	<b>8.6</b>			<b>6.8</b>	<b>06/01/2017</b>	
<i>Performance Benchmark</i>			2.6	2.0	8.2	17.5	9.4			7.4		
<i>MSCI AC World Index</i>			5.1	4.1	17.2	37.9	18.1			13.9		
<b>Man Alternative Risk Premia</b>	<b>97,721,888</b>	<b>10.7</b>	<b>3.1</b>	<b>4.4</b>	<b>10.6</b>	<b>14.0</b>	<b>0.7</b>			<b>-0.5</b>	<b>06/01/2018</b>	
<i>SG Multi Alternative Risk Premia Index</i>			-1.6	-1.4	4.4	4.5	-2.8			-3.1		
<b>CFM ISD Fund 1.5x</b>	<b>91,340,542</b>	<b>10.0</b>	<b>-0.1</b>	<b>3.2</b>	<b>20.3</b>	<b>24.3</b>	<b>-1.7</b>			<b>-2.3</b>	<b>07/01/2018</b>	
<i>SG Multi Alternative Risk Premia Index</i>			-1.6	-1.4	4.4	4.5	-2.8			-3.1		

Asset Class Attribution

1 Month



1 Year



Asset Allocation as of 10/31/2021								Values in \$1,000	
	Total Equity	U.S. Bond	Real Estate	Private Equity	Cash	Total	Percent of Total	Interim Policy	Long-Term Target
Jacobs Levy 130/30	\$994,309.6	--	--	--	--	\$994,309.6	4.61%		
Kennedy Capital Management	\$812,896.3	--	--	--	--	\$812,896.3	3.77%		
Stephens	\$713,108.9	--	--	--	--	\$713,108.9	3.31%		
Voya Absolute Return	\$809,362.8	--	--	--	--	\$809,362.8	3.76%		
Allianz (Nicholas Applegate)	\$1,104,294.2	--	--	--	--	\$1,104,294.2	5.12%		
Pershing Square International	\$1,238.4	--	--	--	--	\$1,238.4	0.01%		
Pershing Square Holdings	\$286,357.8	--	--	--	--	\$286,357.8	1.33%		
SSgA Global Index	\$1,242,462.1	--	--	--	--	\$1,242,462.1	5.77%		
BlackRock MSCI ACWI IMI Fund	\$1,037,843.2	--	--	--	--	\$1,037,843.2	4.82%		
Wellington Global Perspectives	\$790,433.5	--	--	--	--	\$790,433.5	3.67%		
T. Rowe Price Global Equity	\$1,751,779.5	--	--	--	--	\$1,751,779.5	8.13%		
Lazard	\$846,637.8	--	--	--	--	\$846,637.8	3.93%		
D.E. Shaw	\$987,404.3	--	--	--	--	\$987,404.3	4.58%		
GMO Global All Country Equity	\$562,706.3	--	--	--	--	\$562,706.3	2.61%		
Harris Global Equity	\$666,047.0	--	--	--	--	\$666,047.0	3.09%		
Triam Partners	\$87,109.3	--	--	--	--	\$87,109.3	0.40%		
Triam Partners Co-Investments	\$103,743.6	--	--	--	--	\$103,743.6	0.48%		
Capital Guardian & Knight Vinke	\$73.3	--	--	--	--	\$73.3	0.00%		
<b>Total Equity</b>						<b>\$12,797,807.9</b>	<b>59.38%</b>	<b>58.08%</b>	<b>53.00%</b>
BlackRock	--	\$281,576.8	--	--	--	\$281,576.8	1.31%		
Loomis Sayles	--	\$501,921.3	--	--	--	\$501,921.3	2.33%		
Putnam	--	\$376,400.0	--	--	--	\$376,400.0	1.75%		
SSgA Aggregate Bond Index	--	\$468,920.7	--	--	--	\$468,920.7	2.18%		
Wellington Global Total Return	--	\$354,152.9	--	--	--	\$354,152.9	1.64%		
Reams Core Plus Bond Fund	--	\$395,207.8	--	--	--	\$395,207.8	1.83%		
BRS Recycling Tax Credit	--	\$176,000.0	--	--	--	\$176,000.0	0.82%		
BRS Recycling Tax Credit Phase 2	--	\$77,031.6	--	--	--	\$77,031.6	0.36%		
<b>Total Fixed Income</b>						<b>\$2,631,211.1</b>	<b>12.21%</b>	<b>15.00%</b>	<b>15.00%</b>
Anchorage	--	--	--	\$91,983.5	--	\$91,983.5	0.43%		
Capula	--	--	--	\$79,972.7	--	\$79,972.7	0.37%		
Graham	--	--	--	\$73,207.8	--	\$73,207.8	0.34%		
York	--	--	--	\$9,725.1	--	\$9,725.1	0.05%		
Circumference Group Core Value	--	--	--	\$38,083.8	--	\$38,083.8	0.18%		
Aeolus Keystone Fund	--	--	--	\$192,887.8	--	\$192,887.8	0.89%		
Nephila Rubik Holdings	--	--	--	\$38,199.2	--	\$38,199.2	0.18%		
Parametric Global Defensive Equity	--	--	--	\$200,424.5	--	\$200,424.5	0.93%		
Man Alternative Risk Premia	--	--	--	\$97,721.9	--	\$97,721.9	0.45%		
CFM ISD Fund 1.5x	--	--	--	\$91,340.5	--	\$91,340.5	0.42%		
<b>Total Opportunistic/Alternatives</b>						<b>\$913,546.7</b>	<b>4.24%</b>	<b>4.46%</b>	<b>5.00%</b>
<b>Real Estate</b>			\$1,360,484.8			\$1,360,484.8	6.31%		
<b>Timber</b>			\$312,606.8			\$312,606.8	1.45%		
<b>Agriculture</b>			\$217,745.8			\$217,745.8	1.01%		
<b>Infrastructure</b>			\$340,602.0			\$340,602.0	1.58%		
<b>Total Real Assets</b>						<b>\$2,231,439.3</b>	<b>10.35%</b>	<b>10.46%</b>	<b>15.00%</b>
<b>Total Private Equity</b>				\$2,823,799.2		<b>\$2,823,799.2</b>	<b>13.10%</b>	<b>12.00%</b>	<b>12.00%</b>
<b>Total Cash</b>					\$153,934.6	<b>\$153,934.6</b>	<b>0.71%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>Total Fund</b>	<b>\$12,797,807.9</b>	<b>\$2,631,211.1</b>	<b>\$2,231,439.3</b>	<b>\$3,737,346.0</b>	<b>\$153,934.6</b>	<b>\$21,551,738.9</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

\*Note: The market values for the Real Assets and Private Equity investments shown above are lagged one quarter and adjusted for the current quarter's cash flows. Market values and allocation percentages may not add to the sum total due to rounding.

Asset Allocation as of 10/31/2021				Values in \$1,000			
	Real Estate	Percent of Real Estate	Percent of Total Fund		Real Estate	Percent of Real Estate	Percent of Total Fund
Almanac Realty Securities Fund V	\$87.1	0.01%	0.00%	LaSalle Asia Opportunity Fund V	\$10,323.2	0.76%	0.05%
Almanac Realty Securities Fund VI	\$3,928.4	0.29%	0.02%	LaSalle Income & Growth Fund VI	\$5,303.9	0.39%	0.02%
Almanac Realty Securities Fund VII	\$15,754.1	1.16%	0.07%	LaSalle Income & Growth Fund VII	\$14,164.3	1.04%	0.07%
Almanac Realty Securities Fund VIII	\$10,329.3	0.76%	0.05%	LaSalle Income & Growth Fund VIII	\$12,934.2	0.95%	0.06%
American Center	\$27,453.7	2.02%	0.13%	Lone Star Real Estate Fund IV	\$6,667.6	0.49%	0.03%
AR Insurance	\$2,260.7	0.17%	0.01%	Long Wharf Real Estate Partners V	\$18,210.1	1.34%	0.08%
AR Teachers Retirement Building	\$5,376.0	0.40%	0.02%	Long Wharf Real Estate Partners VI	\$10,903.2	0.80%	0.05%
Blackstone Real Estate Partners VII	\$19,550.1	1.44%	0.09%	Metropolitan RE Co-Investments	\$8,033.1	0.59%	0.04%
Blackstone RE Europe VI	\$21,678.6	1.59%	0.10%	Met Life Commercial Mtg Inc Fund	\$48,185.3	3.54%	0.22%
Carlyle Realty Partners VII	\$9,715.8	0.71%	0.05%	New Boston Fund VII	\$2,555.1	0.19%	0.01%
Carlyle Realty VIII	\$9,568.7	0.70%	0.04%	O'Connor NAPP II	\$8,534.1	0.63%	0.04%
CBREI SP U.S. Opportunity V	\$540.8	0.04%	0.00%	PRISA	\$280,955.4	20.65%	1.30%
CBREI SP VIII	\$21,250.2	1.56%	0.10%	Recoveries Land	\$70.0	0.01%	0.00%
CBREI SP IX	\$11,322.3	0.83%	0.05%	Rockwood Capital RE Partners IX	\$5,756.2	0.42%	0.03%
Cerberus Institutional RE Partners III	\$11,407.5	0.84%	0.05%	Rockwood Capital RE XI	\$20,068.3	1.48%	0.09%
Chenal Retirement Village	\$0.0	0.00%	0.00%	Rose Law Firm	\$4,295.0	0.32%	0.02%
Calmwater	\$16,170.4	1.19%	0.08%	Texarkana DHS	\$1,627.7	0.12%	0.01%
Fletcher Properties	\$1,162.2	0.09%	0.01%	Torchlight Debt Opportunity Fund IV	\$4,367.5	0.32%	0.02%
FPA Core Plus IV	\$30,356.7	2.23%	0.14%	Torchlight Debt Opportunity Fund V	\$4,952.6	0.36%	0.02%
GCP GLP IV	\$16,699.6	1.23%	0.08%	Torchlight Debt Opportunity Fund VI	\$20,723.9	1.52%	0.10%
Harbert European Real Estate	\$16,538.4	1.22%	0.08%	Torchlight Debt Opportunity Fund VII	\$12,645.7	0.93%	0.06%
Heitman European Property IV	\$1,556.7	0.11%	0.01%	UBS Trumbull Property Fund	\$173,178.3	12.73%	0.80%
JP Morgan Strategic Property Fund	\$284,949.1	20.94%	1.32%	UBS Trumbull Property Income Fund	\$44,441.2	3.27%	0.21%
Kayne Anderson V	\$23,354.1	1.72%	0.11%	Victory	\$32,775.7	2.41%	0.15%
Kayne Anderson VI	\$1,392.4	0.10%	0.01%	Walton Street Real Estate Debt II	\$11,676.7	0.86%	0.05%
Landmark Fund VI	\$1,591.2	0.12%	0.01%	West Mphs. DHS	\$2,330.4	0.17%	0.01%
Landmark Real Estate VIII	\$7,935.4	0.58%	0.04%	Westbrook IX	\$10,045.2	0.74%	0.05%
LaSalle Asia Opportunity Fund IV	\$1,790.5	0.13%	0.01%	Westbrook Real Estate Fund X	\$11,040.8	0.81%	0.05%
<b>Total Real Estate</b>					<b>\$1,360,484.8</b>	<b>100.00%</b>	<b>6.31%</b>

\*Note: The market values for the real estate investments shown above are lagged one quarter and adjusted for the current quarter's cash flows. Market values and allocation percentages may not add to the sum total due to rounding.

Asset Allocation as of 10/31/2021				Values in \$1,000			
	Private Equity	Percent of Private Equity	Percent of Total Fund		Private Equity	Percent of Private Equity	Percent of Total Fund
Arlington Capital IV	\$33,801.8	1.20%	0.16%	JF Lehman III	\$15,152.8	0.54%	0.07%
Arlington Capital V	\$15,400.3	0.55%	0.07%	JF Lehman IV	\$33,022.9	1.17%	0.15%
Advent GPE VI	\$4,150.3	0.15%	0.02%	JF Lehman V	\$15,510.6	0.55%	0.07%
Altus Capital II	\$6,146.6	0.22%	0.03%	KPS III	\$187.8	0.01%	0.00%
American Industrial Partners VI	\$22,851.7	0.81%	0.11%	KPS IV	\$13,080.7	0.46%	0.06%
American Industrial Partners VII	\$16,619.9	0.59%	0.08%	KPS X	\$10,210.8	0.36%	0.05%
Altaris Constellation Partners	\$28,301.3	1.00%	0.13%	KPS Mid-Cap	\$8,284.0	0.29%	0.04%
Altaris Health Partners IV	\$23,927.0	0.85%	0.11%	Levine Leichtman V	\$16,266.7	0.58%	0.08%
Atlas Capital II	\$13,387.9	0.47%	0.06%	Lime Rock III	\$16,597.8	0.59%	0.08%
Audax Mezzanine III	\$2,793.5	0.10%	0.01%	LLR III	\$2,997.7	0.11%	0.01%
Big River - Equity	-\$18,299.4	-0.65%	-0.08%	LLR VI	\$6,632.9	0.23%	0.03%
Big River - Holdings Note 2023	\$13,965.9	0.49%	0.06%	Mason Wells III	\$2,610.8	0.09%	0.01%
Big River - Holdings Note 3/16/23	\$5,899.3	0.21%	0.03%	NGP IX	\$1,467.7	0.05%	0.01%
Bison V	\$27,816.2	0.99%	0.13%	NGP X	\$4,582.2	0.16%	0.02%
Boston Ventures VII	\$5,377.7	0.19%	0.02%	NGP XI	\$21,057.5	0.75%	0.10%
Boston Ventures IX	\$29,115.3	1.03%	0.14%	NGP XII	\$19,825.6	0.70%	0.09%
Boston Ventures X	\$12,018.6	0.43%	0.06%	One Rock Capital Partners II	\$37,121.4	1.31%	0.17%
BV VIII	\$18,741.2	0.66%	0.09%	PineBridge	\$6,851.1	0.24%	0.03%
Castlake II	\$17,743.0	0.63%	0.08%	Riverside IV	\$234.4	0.01%	0.00%
Castlake III	\$17,397.8	0.62%	0.08%	Riverside V	\$27,806.6	0.98%	0.13%
Clearlake V	\$44,890.6	1.59%	0.21%	Riverside VI	\$13,888.0	0.49%	0.06%
Clearlake VI	\$30,225.2	1.07%	0.14%	Siris III	\$18,504.5	0.66%	0.09%
Court Square III	\$37,135.0	1.32%	0.17%	Siris IV	\$22,144.0	0.78%	0.10%
CSFB-ATRS 2005-1 Series	\$47,917.9	1.70%	0.22%	SK Capital V	\$20,631.0	0.73%	0.10%
CSFB-ATRS 2006-1 Series	\$67,170.4	2.38%	0.31%	Sycamore Partners II	\$13,093.4	0.46%	0.06%
Diamond State Ventures II	\$2,697.6	0.10%	0.01%	Sycamore Partners III	\$9,744.9	0.35%	0.05%
Doughty Hanson Tech I	-\$50.1	0.00%	0.00%	TA XI	\$26,651.5	0.94%	0.12%
DW Healthcare III	\$11,076.2	0.39%	0.05%	Tennenbaum VI	\$12,070.4	0.43%	0.06%
DW Healthcare IV	\$29,577.6	1.05%	0.14%	Thoma Bravo Discover	\$22,603.6	0.80%	0.10%
DW Healthcare V	\$11,806.5	0.42%	0.05%	Thoma Bravo Discover II	\$24,988.1	0.88%	0.12%
EnCap IX	\$11,271.4	0.40%	0.05%	Thoma Bravo Discover III	\$9,733.1	0.34%	0.05%
EnCap VIII	\$14,399.5	0.51%	0.07%	Thoma Bravo Explore I	\$11,499.4	0.41%	0.05%
EnCap X	\$23,304.1	0.83%	0.11%	Thoma Bravo XI	\$36,568.6	1.30%	0.17%
EnCap XI	\$14,304.9	0.51%	0.07%	Thoma Bravo XII	\$49,277.6	1.75%	0.23%
Franklin Park Series	\$1,159,828.3	41.07%	5.38%	Thoma Bravo XIII	\$40,820.4	1.45%	0.19%
Greenbriar V	\$7,356.5	0.26%	0.03%	Thoma Bravo XIV	\$17,029.4	0.60%	0.08%
GCG IV	\$23,976.4	0.85%	0.11%	Vista Equity III	\$5,246.3	0.19%	0.02%
GCG V	\$3,993.9	0.14%	0.02%	Vista Foundation II	\$16,127.6	0.57%	0.07%
GTLA Holdings	\$40,000.0	1.42%	0.19%	Vista Foundation III	\$29,176.5	1.03%	0.14%
Highland	\$211,174.2	7.48%	0.98%	Wellspring V	\$13,191.6	0.47%	0.06%
Insight Equity II	\$18,171.2	0.64%	0.08%	Wicks IV	\$34,090.2	1.21%	0.16%
Insight Mezzanine I	\$1,678.8	0.06%	0.01%	WNG II	\$8,155.2	0.29%	0.04%
				<b>Total Private Equity</b>	<b>\$2,823,799.2</b>	<b>100.00%</b>	<b>13.10%</b>

\*Note: The market values for the private equity investments shown above are lagged one quarter and adjusted for the current quarter's cash flows. Market values and allocation percentages may not add to the sum total due to rounding.

## Arkansas Teacher Retirement System

## Appendix

## Description of Benchmarks

**Total Fund** - The Performance Benchmark for the Total Fund reflects a weighted average of the underlying asset class benchmarks, weighted as follows: Opportunistic/Alternatives and Real Assets at the weight of the previous month's ending market values, Fixed Income and Private Equity at their long-term Policy Targets of 15% and 12%, respectively, and Total Equity at its long-term Policy Target of 50% plus the balance of the unfunded or uncommitted assets of the Opportunistic/Alternatives and Real Assets categories. These targets can be found on page 14 of the this report. From October 2007 to July 2013, the Performance Benchmark was the performance of the asset class benchmarks as a weighted average of the previous month's ending market values. The historical components of the benchmark are shown in the table below. Returns prior to September 30, 1996, consist of the actual allocations to the seven different asset classes included in the Arkansas Teacher Retirement System over time. The historical benchmarks used for each asset class are noted below.

Date	DJ Total Stock Market Index	Russell 3000 Index	MSCI ACW ex-U.S. Index	MSCI All Country World Index	BC Universal Bond Index	BC Aggregate Bond Index	Alternative Policy*
03/2004-9/2007	40.0 %	—	17.5 %	—	25.0 %	—	17.5 %
06/2003-02/2004	40.0	—	17.5	—	—	25.0 %	17.5
10/2001-07/2003	—	40.0 %	17.5	—	—	25.0	17.5
08/1998-09/2001	—	40.0	17.0	—	—	28.0	15.0
10/1996-07/1998	—	40.0	20.0	—	—	28.0	12.0

\*Historically, the Alternative Policy was comprised of the weighted averages of the Private Equity, Real Estate, and Alternatives policy benchmarks. Prior to July 31, 2003 the alternative benchmark consisted of 57.0% of the Russell 3000 + a 2% Premium per year, 8.5% of the NCREIF Southeast Timberland Index, 28.5% of the Real Estate Index, 6% of the EnnisKnupp STIF Index.

## Arkansas Teacher Retirement System

### Appendix

**Total Equity** -A weighted average of the Dow Jones U.S. Total Stock Market Index and the MSCI All Country World IMI Index based on weights of the underlying investment manager allocations. As of October 1, 2021, the Total Equity Performance Benchmark was comprised of 31.6% DJ U.S. Total Stock Market Index and 68.4% MSCI ACWI IMI.

**Fixed Income** - The Barclays Capital Universal Bond Index as of March 1, 2004.

**Opportunistic/Alternatives** - A custom benchmark consisting of 25% DJ/CS Event-Driven Index, 25% HFR Macro Index, and 50% South Timberland NCREIF Index until June 30,2013; 60% HFRI Macro Index and 40% DJ/CS Event-Driven Index until July 31, 2015; 56% HFRI Macro Index, 38% DJ/CS Event-Driven Index, and 6% Russell 2000 Index until March 31, 2016; 45% HFRI Macro Index, 30% DJ/CS Event-Driven Index, 5% Russell 2000 Index, and 20% FTSE 3 Month T-bill until May 31, 2016; 37% HFRI Macro Index, 25% DJ/CS Event-Driven Index, 5% Russell 2000 Index, and 33% FTSE 3 Month T-bill until May 31, 2017; 28% HFRI Macro Index, 20% DJ/CS Event-Driven Index, 4% Russell 2000 Index, 25% FTSE 3 Month T-bill, and 23% Parametric Performance Benchmark Until May 31, 2018. 22% HFRI Macro Index, 18% DJ/CS Event-Driven Index, 3% Russell 2000 Index, 27% FTSE 3 Month T-bill, 18.50% Parametric Performance Benchmark, and 11.5% SG Multi-Alternative Risk Premia Until June 30, 2018. 20% HFRI Macro Index, 15% DJ/CS Event-Driven Index, 3.5% Russell 2000 Index, 25% FTSE 3 Month T-bill, 16.5% Parametric Performance Benchmark, and 20% SG Multi-Alternative Risk Premia Until August 31, 2018. 17% HFRI Macro Index, 15% DJ/CS Event-Driven Index, 3.5% Russell 2000 Index, 28% FTSE 3 Month T-bill, 16.5% Parametric Performance Benchmark, and 20% SG Multi-Alternative Risk Premia Until November 30, 2018. 15% HFRI Macro Index, 15% DJ/CS Event-Driven Index, 3.5% Russell 2000 Index, 30% FTSE 3 Month T-bill, 16.5% Parametric Performance Benchmark, and 20% SG Multi-Alternative Risk Premia thereafter.

**Real Assets** - A custom benchmark consisting of a weighted average of the net asset values at previous month's end of the sub-categories' benchmarks, defined as Real Estate Benchmark, Timber Benchmark, Agriculture Benchmark and Infrastructure Benchmark.

**Real Estate**-The NCREIF Index.

**Timberland Property Benchmark** - NCREIF Timberland Property Index (NTPI) weighted according to ATRS' regional exposure based on net asset value.

**Agriculture Benchmark** - NCREIF Farmland Index (NFI) weighted according to ATRS' regional and crop type exposure based on net asset value.

**Infrastructure Benchmark** - Consumer Price Index (CPI) plus 500 basis points annually.

**Private Equity** - The Dow Jones U.S. Total Stock Market Index + a 2% premium per year.

**Cash Equivalents** - The Citigroup 90 day T-bill.

## Arkansas Teacher Retirement System

### Appendix

#### Description of Benchmarks

**FTSE 90 day T-bill Index** - Treasury bill rates of return, as reported by Citigroup (Salomon Smith Barney), for bills with a maximum time remaining to maturity of 90 days.

**Bloomberg Barclays Aggregate Bond Index** - A market-value weighted index consisting of the Barclays Capital Corporate, Government and Mortgage-Backed Securities Indices. The Index also includes credit card-, auto- and home equity loan-backed securities, and is the broadest available measure of the aggregate U.S. fixed income market.

**Bloomberg Barclays Universal Bond Index** - A market-value weighted index consisting of the components of the Barclays Capital Bond Index, plus EuroDollar bonds, emerging markets bonds, 144A fixed income securities, and U.S. credit high yield securities.

**Bloomberg Barclays Mortgage Index** - A market value-weighted index consisting of the mortgage pass-through securities of Ginnie Mae (GNMA), Fannie Mae (FNMA) and Freddie Mac (FHLMC).

**MSCI All Country World ex-U.S. Index** - A capitalization-weighted index consisting of 22 developed and 23 emerging countries, but excluding the U.S. Covers approximately 85% of global equity opportunity set outside of the U.S.

**MSCI All Country World Index** - A capitalization-weighted index of stocks representing 46 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America.

**MSCI All Country World IMI Index** - A capitalization-weighted index representing large and small cap stock from 46 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America.

**FTSE Europe** - A tradable index, designed to represent the performance of the 100 most highly capitalized blue chip companies in Europe.

**MSCI Europe, Australasia, Far East (EAFE) Non-U.S. Stock Index** - A capitalization-weighted index of stocks representing 21 developed and emerging country markets in Europe, Australia, Asia and the Far East.

**NCREIF Index** - The National Council of Real Estate Investment Fiduciaries (NCREIF) Net Property Index is an unlevered, market-value weighted Index consisting of \$128 billion in domestic institutional real estate assets. The Index is representative of the national real estate market, across all property types and regions.

**Nicholas Applegate Performance Benchmark** - On January 1, 2005, the benchmark for the portfolio was changed to the Merrill Lynch Convertible Bond (All Quality) Index. Prior to January 1, 2005, the performance benchmark for the Nicholas Applegate portfolio was the CSFB Convertible Securities Index. Prior to May 1, 2004, the performance benchmark consisted of 90% CSFB Convertible Securities Index and 10% Salomon High Yield Index.

**Wellington Global Performance Benchmark**- As of July 1, 2012 the benchmark was changed to MSCI All Country World Small Cap Index. Prior to July 1, 2012, the benchmark was MSCI All Country World Small/Mid Cap Index.

As of October 31, 2021

## Arkansas Teacher Retirement System

### Appendix

**BlackRock Performance Benchmark** - The Barclays Capital Universal Bond Index as of March 1, 2004.

**Voya Absolute Return Performance Benchmark** - As of December 1, 2015 the benchmark was changed to MSCI All Country World Index. Prior to December 1, 2015, the benchmark was the S&P 500 Stock Index.

**LIBOR Index** - London Interbank Offered Rate. A filtered average of the world's most creditworthy banks' interbank deposit rates with maturities between overnight and one full year.

**Russell 3000 Index** - An index that measures the performance of the 3000 stocks that make up the Russell 1000 and Russell 2000 Indices.

**Russell 1000 Index** - An index that measures the performance of the largest 1,000 stocks contained in the Russell 3000 Index.

**Russell 1000 Value Index** - An index that measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower I/B/E/S growth forecasts.

**Russell 2000 Index** - An index that measures the performance of the smallest 2000 companies contained in the Russell 3000 Index.

**Russell 2000 Growth Index** - An index that measures the performance of those Russell 2000 companies with greater price-to-book ratios and greater I/B/E/S growth forecasts.

**Russell 2000 Value Index** - An index that measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower I/B/E/S growth forecasts.

**Russell Mid Cap Value Index** - An index that measure the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

**S&P 500 Stock Index** - A capitalization-weighted stock index consisting of the 500 largest publicly traded U.S. stocks.

**HFR Macro Index** - Macro: Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Primary investment thesis is predicated on predicted or future movements in the underlying instruments.

**HFR Distressed/Restructuring Index** - Distressed Restructuring Strategies employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Distressed Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

**Parametric Performance Benchmark** - 50% MSCI All Country World Index and 50% Citigroup 90 day T-Bill Index as of June 1, 2017.

**SG Multi Alternative Risk Premia Index** - An equally weighted index composed of risk premia managers who employ investment programs diversified across multiple asset classes while utilizing multiple risk premia factors.

## Arkansas Teacher Retirement System

## Appendix

## Historical U.S. Equity and Global Equity composite returns

<b>As of June 30, 2015</b>	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>Since Inception</b>	<b>Inception Date</b>
U.S. Equity	6.7	18.1	16.4	9.4	10.5	04/01/1986
Dow Jones U.S. Total Stock Market Index	7.2	17.6	17.5	8.3	-	
Global Equity	1.8	14.6	12.1	-	2.5	11/01/2007
MSCI AC World Index (Net)	0.7	13.0	11.9	6.4	2.1	

In June 2015, the ATRS Board approved the combination of the U.S. and Global equity asset classes to a single Total Equity asset class. Total Equity performance reporting began in July 2015. In the table above, we show the historical returns for the U.S. Equity and Global Equity asset classes since inception through June 2015. Performance for the Total Equity asset class prior to July 2015 represents a weighted average of the U.S. Equity and Global Equity historical performance.

## Notes

- The rates of return contained in this report are shown on an after-fees basis unless otherwise noted. They are geometric and time-weighted. Returns for periods longer than one year are annualized.
- Universe percentiles are based upon an ordering system in which 1 is the best ranking and 100 is the worst ranking.
- Due to rounding throughout the report, percentage totals displayed may not sum to 100%. Additionally, individual fund totals in dollar terms may not sum to the plan total.
- All information presented in this report should be considered preliminary. Finalized data will be available on next Quarterly Investment Report after the close of the quarter.

## Disclaimer

### Past performance is not necessarily indicative of future results.

Unless otherwise noted, performance returns presented reflect the respective fund's performance as indicated. Returns may be presented on a before-fees basis (gross) or after-fees basis (net). After-fee performance is net of each respective sub-advisors' investment management fees and include the reinvestment of dividends and interest as indicated on the notes page within this report or on the asset allocation and performance summary pages. Actual returns may be reduced by Aon Investments' investment advisory fees or other trust payable expenses you may incur as a client. Aon Investments' advisory fees are described in Form ADV Part 2A. Portfolio performance, characteristics and volatility also may differ from the benchmark(s) shown.

The information contained herein is confidential and proprietary and provided for informational purposes only. It is not complete and does not contain certain material information about making investments in securities including important disclosures and risk factors. All securities transactions involve substantial risk of loss. Under no circumstances does the information in this report represent a recommendation to buy or sell stocks, limited partnership interests, or other investment instruments.

The data contained in these reports is compiled from statements provided by custodian(s), record-keeper(s), and/or other third-party data provider(s). This document is not intended to provide, and shall not be relied upon for, accounting and legal or tax advice. Aon Investments has not conducted additional audits and cannot warrant its accuracy or completeness. We urge you to carefully review all custodial statements and notify Aon Investments with any issues or questions you may have with respect to investment performance or any other matter set forth herein.

The mutual fund information found in this report is provided by Thomson Reuters Lipper and Aon Investments cannot warrant its accuracy or timeliness. Thomson Reuters Lipper Global Data Feed provides comprehensive coverage of mutual fund information directly to Investment Metrics, Aon Investments' performance reporting vendor, via the PARis performance reporting platform. Thomson Reuters Lipper is the data provider chosen by Investment Metrics, and as such, Aon Investments has no direct relationship with Thomson Reuters Lipper.

Refer to Hedge Fund Research, Inc. [www.hedgefundresearch.com](http://www.hedgefundresearch.com) for information on HFR indices.

FTSE International Limited ("FTSE") © FTSE 2017. "FTSE®" and "FTSE4Good®" are trademarks of the London Stock Exchange Group companies and are used by FTSE International Limited under license. The FTSE indices are calculated by FTSE International Limited in conjunction with Indonesia Stock Exchange, Bursa Malaysia Berhad, The Philippine Stock Exchange, Inc., Singapore Exchange Securities Trading Limited and the Stock Exchange of Thailand (the "Exchanges"). All intellectual property rights in the FTSE/ASEAN Index vest in FTSE and the Exchanges. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE indices and / or FTSE ratings or underlying data. No further distribution of FTSE Data is permitted without FTSE's express written consent.

Aon Investments USA Inc. ("Aon Investments") is a federally registered investment advisor with the U.S. Securities and Exchange Commission ("SEC"). Aon Investments is also registered with the Commodity Futures Trade Commission as a commodity pool operator and a commodity trading advisor, and is a member of the National Futures Association. The Aon Investments ADV Form Part 2A disclosure statement is available upon written request to:

Aon Investments USA Inc.  
200 East Randolph Street  
Suite 700  
Chicago, IL 60601  
ATTN: Aon Investments Compliance Officer



**TOWNSEND**<sup>®</sup>  
GROUP

an Aon company

# Arkansas Teachers Retirement System Second Quarter 2021 Real Assets Performance Review

PROPRIETARY & CONFIDENTIAL  
November 2021

**THIS PAGE LEFT BLANK INTENTIONALLY**

## Agenda

<b>Section 1</b>	<b>Executive Summary</b>
Section 2	Market Overview
Section 3	Real Assets Portfolio Update
Section 4	Glossary

**THIS PAGE LEFT BLANK INTENTIONALLY**

## Real Assets Markets Performance and Overview

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)		10 Year (%)	
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
NFI-ODCE Value Weight	3.9	3.7	8.0	7.1	5.5	4.6	6.6	5.6	9.6	8.6
NCREIF Property Index "NPI"	3.6		7.4		5.5		6.1		8.8	
NCREIF Farmland Property Index "NFI"	1.5		5.0		4.8		5.5		10.2	
NCREIF Timberland Property Index "NTI"	1.7		3.1		2.2		2.7		4.7	

- In the second quarter of 2021, the NFI-ODCE (net) returned 3.7%, up 179 basis points quarter-over-quarter. NFI-ODCE returns have fallen below long-term expectations of 7% to 9% gross due to the maturity of the real estate cycle, as well as distress created by the COVID-19 pandemic.
- The NCREIF Farmland Index ("NFI") returned 1.5%, up 61 basis points from the prior quarter. Row crops drove performance with a returns of 2.2%, while permanent crops returned 36 basis points.
- The NCREIF Timberland Index ("NTI") returned 1.7% for the quarter and 3.1% for the trailing one-year return. The quarterly total return was driven by appreciation, while the one-year was driven by income. Regionally, the Northeast was the NTI's top performer while the Lake States lagged for the quarter.

## Portfolio Funding Status and Composition

As of June 30, 2021	ATRS' Portfolio \$ in Millions
Number of Investments	71
Total Commitments	3,079.2
Unfunded Commitments	578.5
Total Paid-In Capital	2,692.6
Total Distributions	1,907.7
Net Asset Value	2,274.1
Gross Asset Value	3,297.0
DPI	0.7x
TVPI	1.5x
Since Inception IRR	7.1%
<i>*Active and Liquidated</i>	

PORTFOLIO COMPOSITION TO TARGETS (As of 6/30/2021)		
	Target	Actual Funded
<b>Target Real Asset Allocation</b>	15%	10.7%
<b>Portfolio Style Composition</b>		
<b>Real Estate</b>	10%	6.6%
<b>Core*</b>	50%-70%	67.0%
<b>Non-Core</b>	30%-50%	33.0%
<b>Value-Added**</b>	N/A	18.7%
<b>Opportunistic**</b>	N/A	14.2%
<b>Agriculture</b>	1%	0.8%
<b>Timber</b>	2%	1.5%
<b>Infrastructure</b>	2%	1.6%
<b>Leverage</b>	50%	31.0%

\* Includes Arkansas Investments

\*\* No stated targets

- Recent infrastructure and real estate commitments will help the portfolio continue to move towards its target allocation irrespective of liquidating investments
- In general, the portfolio is in compliance with its Statement of Investment Policy. There are a few exceptions:
  - An overallocation to hotels though still less than 5% of the real estate portfolio
  - Timber geographic concentration remains out of compliance though significantly improved with recent BTG OEF commitment
  - Infrastructure is currently overweight Non-U.S., however Townsend and Staff are actively pursuing US focused managers

## ATRS' Real Assets Performance

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)		10 Year (%)		Net IRR	Equity Multiple
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET		
ATRS Total Portfolio	3.8	3.4	10.9	9.1	6.7	5.3	7.9	6.4	9.3	8.6	7.1	1.5
Total Real Assets Benchmark		3.1		6.4		4.6		5.3		7.7		

- The table shows the returns for ATRS' Total Real Assets Portfolio and the Real Assets Benchmark.
- ATRS is outperforming the benchmark over the near- and medium-term measurement periods.

## ATRS' Real Estate Performance

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)		10 Year (%)		Net IRR	Equity Multiple
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET		
Real Estate	3.7	3.3	8.4	6.7	4.7	3.4	6.9	5.6	9.9	8.5	7.7	1.5
NFI-ODCE Value Weight	3.9	3.7	8.0	7.1	5.5	4.6	6.6	5.6	9.6	8.6		

- The table shows the time-weighted, net of fee returns for ATRS' Total Real Estate Portfolio and the NFI-ODCE benchmark.
- There are a number of Non-Core Funds that have exited the J-curve and performance is expected to have a more meaningful impact as newer funds' investments are realized.
- The real estate portfolio underperformed the benchmark for the quarter, as well as over the 1- and 3-Year periods largely due in part to market distress caused by the global pandemic, relative underperformance of UBS TPF, and a cash out refinance from an Arkansas Investment property during Q2 2020 that decreased net asset value and consequently effected the return.

## ATRS' Timberland and Agriculture Performance

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)		10 Year (%)		Net IRR	Equity Multiple
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET		
Timberland	4.0	3.8	11.5	10.5	7.7	6.7	6.1	5.2	5.2	4.4	5.3	1.9
Timberland Property Benchmark*	1.7		3.1		2.3		2.3		3.7			
Agriculture	2.1	1.8	7.8	6.6	5.1	3.9	4.8	3.7	6.8	5.5	5.1	1.3
Agriculture Benchmark*	1.5		5.0		4.7		4.4		8.4			

- The timber portfolio is outperforming the benchmark over all measurable time periods.
- The agriculture portfolio is outperforming the benchmark over all measurable time periods, except the 10-year.

## ATRS' Infrastructure Performance

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)		10 Year (%)		Net IRR	Equity Multiple
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET		
Infrastructure	5.2	4.6	24.8	21.4	16.5	13.9	19.3	15.5	N/A	N/A	13.7	1.4
Infrastructure Benchmark*	3.3		8.5		7.0		7.1		N/A			

- The infrastructure portfolio outperformed the Infrastructure benchmark over the quarter, primarily driven by strong performance from Antin Infrastructure Partners Fund II (21.6% net).
- ATRS' Infrastructure portfolio is outperforming the Infrastructure benchmark over all measurement periods.

## ATRS' Real Assets Portfolio Highlights

- Commitment activity update
  - ATRS made the following commitments during the quarter or subsequent to quarter end
    - Carlyle Realty Partners IX: \$35 million
    - GLP Capital Partners IV: \$50 million
    - LaSalle Asia Opportunity VI: \$50 million
    - Almanac Realty Securities IX: \$55 million
    - LBA Logistics Value IX: \$55 million
  - ATRS approved a \$140 million partial redemption of JP Morgan SPF, which will be reallocated as follows
    - Morgan Stanley Prime Property: \$70 million
    - RREEF Core Plus Industrial: \$70 million
  - ATRS is in the queue for a partial redemption of UBS TPF
    - As of November 2021, the TPF redemption queue is \$7.0 billion and expect full repayment by YE23

## Significant Events

- During the quarter, UBS appointed Tiffany Gherlone as Head of Asset Management for the Trumbull Property Fund. Tiffany replaces Jim-Fishman, Co-Head of Asset Management, who retired, and Tom Enger, Co-Head of Asset Management, who now oversees UBS's ESG program full-time. Townsend has reviewed this and is comfortable with the change in leadership.
- During the quarter, CBRE announced the appointment of Helen Gurfel as the new Head of Global Sustainability and Innovation as an Executive Committee member.
- Subsequent to quarter end, Al Rabil will replace Mike Levitt as CEO of KACALP. Mr. Rabil will remain the CEO of Kayne Anderson Real Estate, an indirect, wholly owned subsidiary of KACALP. Mr. Levitt has assumed the role of CEO of Core Scientific, a company he co-founded, as it prepares to become a public company. Townsend has reviewed this and is comfortable with the change in leadership.
- Two real estate funds (Kayne Anderson Real Estate Partners VI and PGIM Real Estate Capital VII) and one infrastructure fund (AxInfra NA II LP) made their first capital calls during the second quarter of 2021.

**THIS PAGE LEFT BLANK INTENTIONALLY**

## Agenda

Section 1	Executive Summary
<b>Section 2</b>	<b>Market Overview</b>
Section 3	Real Assets Portfolio Update
Section 4	Glossary

**THIS PAGE LEFT BLANK INTENTIONALLY**

# United States Real Estate Market Update (2Q21)

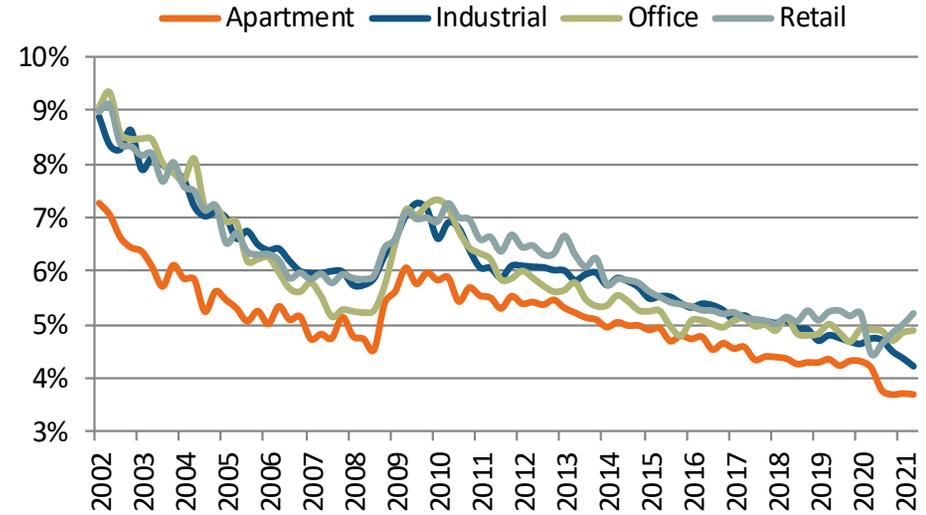
## General

- As a result of the COVID-19 pandemic, national, state and local governments across the world implemented stay-at-home orders, which caused a near complete halt of the world economy in the 1<sup>st</sup> half 2020. Governments dramatically expanded expenditures in order to protect people and businesses from large-scale disruption. In 2Q21, equity markets continued to bounce back from the March 2020 rout and continued to exceed prior highs, the S&P 500 produced a gross total return of 8.6%, bringing the first half of 2021 total return to 15.3%. The MSCI US REIT index continued to rebound and produced a return of 8.7% and returned to pre-COVID levels.
- The U.S. entered a recession in February 2020, but the economy has since rebounded with the accelerated development and continued rollout of vaccines. In the 2<sup>nd</sup> quarter, U.S. GDP grew at an annualized rate of 6.5%. The unemployment rate peaked in April at 14.7% and has since declined to 5.9% at quarter end 2Q21, falling an additional 10 bps from the end of 1Q21. The Federal Reserve continues to act aggressively, thus far financial markets have stabilized. The world economy shrunk by -3.5% in 2020 but is forecasted to grow 6.1% in 2021.

## Commercial Real Estate

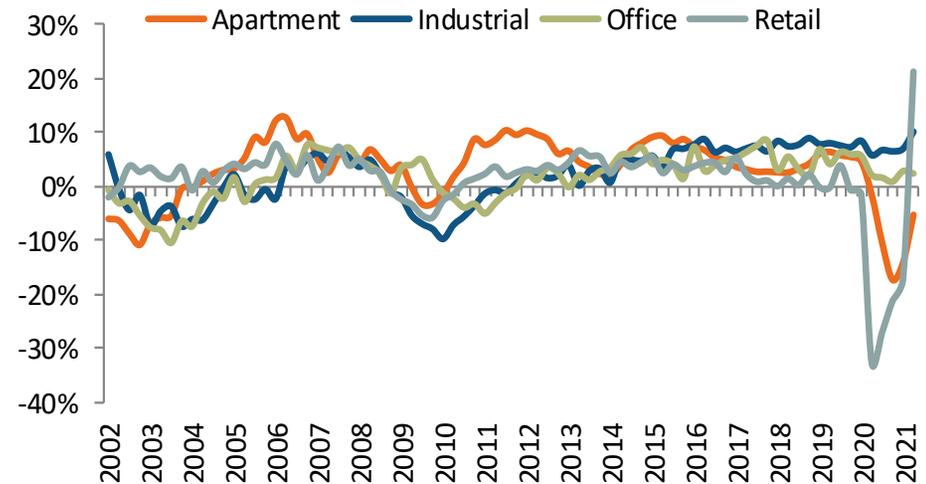
- Through the second quarter of 2021, total transaction activity for the quarter was up 199% YoY, after significantly rebounding from a broad-based COVID-19 induced slowdown. Transaction volume has been the strongest in the apartment and industrial sectors.
- Transaction cap rates (5.2%) compressed -68 bps during the quarter. Current valuation cap rates declined for industrial (-15 bps) and apartment (-2 bps). The office (+4 bps) and retail (+21 bps) property sectors experienced cap rate expansion.
- NOI growth has substantially diverged between property sectors due to the impacts of COVID-19. Retail NOI has expanded substantially (+21%) YoY as the sector recovers from decreased rent collections and retailer shutdowns early last year. Apartment NOI contracted (-5%) YoY, primarily driven by declines in CBD effective market rents, though slowly recovering.
- In the second quarter of 2021, \$24 bn of aggregate capital was raised by real estate funds. There continues to be substantial dry powder, ~\$363 billion, seeking exposure to private real estate.
- 10-year treasury bond yields dropped 30 bps to 1.45% during the quarter, signaling disinflation rather than inflation which many expected to observe.

Current Value Cap Rates by Property Type



Source: NCREIF

4 Qtr Rolling NOI Growth



Source: NCREIF

# United States Property Matrix (2Q21)



## INDUSTRIAL

- In 2Q21, industrial properties were the highest returning sector at 8.8% and outperformed the NPI by 520 bps.
- Transaction volumes rose to \$32.1 billion in the second quarter of the year, resulting in a 156% increase year-over-year. Individual asset sales increased 174% year-over-year, while portfolio purchases turned in a year-over-year volume increase of 111%. At slightly over \$32.1 billion, the industrial sector increased a significant \$9.7 billion quarter-over-quarter.
- The industrial sector turned in NOI growth of 10.0% over the past year, a substantial increase from the prior periods TTM growth of 6.8% in 1Q21.
- Vacancy decreased by 30 bps year-over-year to 3.1%. Vacancy in the sector decreased 40 bps from last quarter, reaching all-time historic lows. E-commerce continues to drive demand across the sector.
- Industrial cap rates compressed approximately 50 bps from a year ago, to 4.2%. Industrial overall fundamentals still top all property sectors.

## MULTIFAMILY

- The apartment sector delivered a 3.6% return during the quarter, performing in line with the NPI.
- Transaction volume in the second quarter of 2021 rose to \$57.9 billion, resulting in an increase of 271% year-over-year. This volume continues to make multifamily the most actively traded sector for the sixteenth straight quarter.
- Cap rates remained steady at 3.7% quarter-over-quarter, compressing 50 bps year-over-year. Multifamily cap rates remain at the lowest level observed in years, driven by continued increases in valuation.
- The multifamily sector saw increasing vacancy rates throughout the entirety of 2020 due to the global pandemic. Halfway through 2021, the sector appears to have shaken the trend as vacancy rates decreased 140 bps quarter-over-quarter, now 170 bps lower than a year ago and back to pre-pandemic levels. The aging millennials have begun shifting their desires to suburban living, but continued home price appreciation has deterred the full effect of this migratory trend.

## OFFICE

- The office sector returned 1.4% in 2Q21, 220 bps below the NPI return over the period.
- Transaction volumes increased by 105% year-over-year in the second quarter. Transaction volume equaled \$27.8 billion for the quarter, an increase of \$6.2 billion quarter-over-quarter. Single asset transactions accounted for 75.4% of volume.
- Office sector vacancy rates have expanded since the beginning of the pandemic due to work from home orders and uncertainty revolving around the future of office space. Office continues to be the highest vacancy property type at close to 12.7%, expanding 30 bps from last quarter.
- NOI growth in the office sector fell quarter-over-quarter by 40 bps but appears to have begun its slow recovery to pre-pandemic values as it has increased 20 bps since the same period last year.
- Office cap rates remained flat from a year ago, sitting at approximately 4.8%. Office-using job growth was stunted significantly throughout 2020 due to many work from home orders. Though we are observing a slow but steady flow back to in-office work, there is still uncertainty in the sector as many companies remain hesitant.

## RETAIL

- As of 2Q21, the retail sector delivered a quarterly return of 0.9%, performing 270 bps below the NPI.
- Transaction volumes totaled \$15.0 billion in the second quarter, increasing 177% year-over-year. Single asset transactions accounted for just over 86.5% of all sales volume for the quarter.
- Cap rates have expanded approximately 80 bps within the sector over the last year, to 5.2%. The current valuation cap rate did expand quarter-over-quarter by 20 bps due to slight downward valuation adjustments made across the sector in general.
- NOI growth significantly increased, +21.1% over the last year. This is a 38.4% increase from last quarter. Retail has begun its slow recovery as vaccine rollouts increase store openings and foot traffic.
- Retail vacancy rates compressed over the quarter by 20 bps, though still up 180 bps over the past year to 9.7%. Many big box stores have closed as the need for retail space shrinks, translating to a negative outlook for rent growth. Paired with the global economic crisis, which has had a significant negative impact on this sector.

# Global Real Estate Market Update (2Q21)

- With vaccinations ramping up and economies reopening worldwide, global investment activity during the second quarter of 2021 has experienced a robust rebound 2Q21 to US \$260.4 billion, a 98% growth year over year. During 2Q21, transaction volumes recovered significantly in the APAC regions while the emerging markets continued to experience significant depression.

- Increased availability of the vaccine has driven an uptick in investor appetite, specifically in regions that were among the first to be affected by the virus such as APAC. Interest in the quarter was concentrated primarily in industrial and multifamily properties.

- Investment activity in the Americas witnessed an extreme surge to by 161% year-over-year. Transaction volume in the US increased 176% relative to 1Q21.

- In the Asia Pacific region, volumes grew by 99% year-over-year with vaccination rates picking up in the region and activity largely returning to normal. Mainland China (+117%), India (+354%), and Hong Kong (+270%) saw the most improvements in deal activity year over year in 2Q21.

- Large ticket transactions contributed greatly to investment activity dropped in the EMEA region. Deals of US \$1 billion or more accounted for 25% of the region's investment volume. Additionally, cross-border transactions grew 65% year over year in Q2

- In the office sector, global leasing activity improved by 44% year-over-year and vacancy rates increased by 60 bps to 14.3%. Office re-entry rates have varied significantly by country and a multi-speed recovery is emerging dependent on vaccination rates, outbreaks and societal restrictions in place. This adds to the long-term uncertainty with long term space planning for occupiers. US coastal markets have been more affected than lower-cost and high-growth markets. Across the main European markets, office rents across Europe grew (+0.3%) over the quarter. On an annual basis rents are now just (-0.2%) year over year. In the APAC region, net absorption increased by 20% year over year.

- Globally, retail foot traffic and sales continue to increase from COVID-19 pandemic lows with increased vaccination rates and easing of restrictions. Retailers have expanded omnichannel strategies such as click-and-collect, curbside pickup and ship-from-store. In many cases, retailers are implementing a hybrid store model that fully integrates retail with logistics. As online sales grow, retailers will reevaluate their store portfolios in terms of store size, location and use. The overall level of occupied retail space will continue to shrink in some U.S. and European markets, while APAC markets will be relatively unchanged.

- With the multifamily market recording the quarter's only increase in investments globally, the sector remains the most liquid in commercial real estate highlighting its attractiveness. Throughout the world, the re-opening of businesses and returns to the office has contributed to a pickup in urban demand, leading to a growth in asking rents, as the number of tours and leases increased during the quarter.

- Industrial yields continued to compress due to strong market fundamentals and heightened demand. US vacancy rates fell to 4.8% in 2Q21. EMEA vacancy rates declined to 3.6% for the quarter, while the Asia Pacific region saw a rise to 18.0%.

**Global Total Commercial Real Estate Volume - 2020 - 2021**

\$ US Billions	Q2 2021	Q2 2020	% Change		% Change	
			Q2 21 - Q2 20	H1 2021	H1 2020	H1 21 - H1 20
Americas	260	132	98%	459	399	15%
EMEA	83	58	42%	41	46	-11%
Asia Pacific	41	21	99%	69	46	51%
<b>Total</b>	<b>384</b>	<b>211</b>	<b>83%</b>	<b>569</b>	<b>491</b>	<b>16%</b>

Source: Real Capital Analytics, Inc., Q2' 21

**Global Outlook - GDP (Real) Growth % pa, 2021-2023**

	2021	2022	2023
<b>Global</b>	<b>6.0</b>	<b>4.5</b>	<b>3.4</b>
<b>Asia Pacific</b>	<b>6.4</b>	<b>5.1</b>	<b>4.6</b>
Australia	5.0	3.2	3.0
China	8.5	5.6	5.5
India	9.3	7.0	
Japan	2.6	2.7	1.2
<b>North America</b>	<b>6.5</b>	<b>4.0</b>	<b>2.3</b>
US	6.6	4.1	2.3
<b>Middle East</b>	<b>2.9</b>	<b>4.3</b>	<b>3.3</b>
<b>European Union</b>	<b>4.8</b>	<b>4.5</b>	<b>2.2</b>
France	5.7	4.0	2.1
Germany	3.4	4.5	1.9
UK	4.0	3.8	3.6

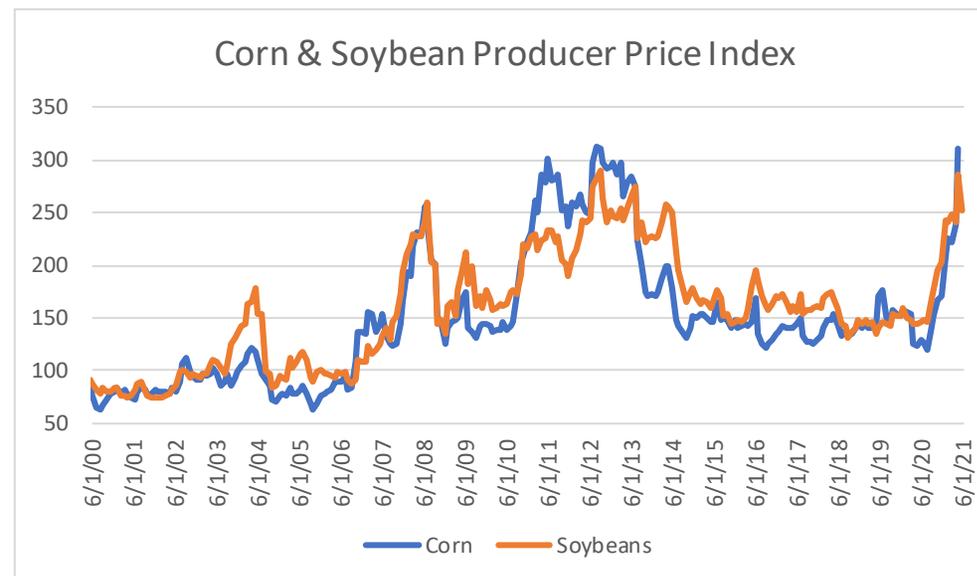
Source: Bloomberg

# Farmland – Second Quarter 2021 Market Update

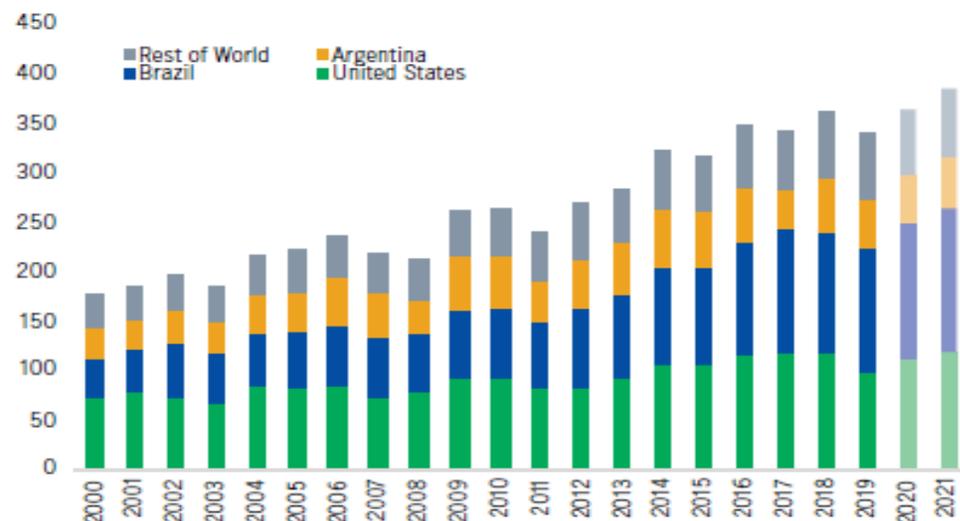
## FARMLAND MARKETS

- The agricultural industry had a very strong quarter as many experienced the best market conditions since 2013, as prices for many major crops continued to reach multi-year highs. **(FIGURE 1)**
- Despite continued uncertainty from trade logistics, labor reform and other factors, permanent crops (eg, Fruit & tree nuts) and other specialty crops (eg, vegetables) have performed well through the pandemic and into 2021.
- This has primarily been driven by strong consumer demand due to a surge in healthy eating at home during the pandemic. Tree nut exports have also been resilient in the face of complicated trade logistics, with exports reaching an all-time high in early 2021.
- In Brazil, soybean production set to reach another record with exports reaching record highs during the prior quarter. Brazil's soybean prices have continued climbing as result of significant demand from China. **(FIGURE 2)**
- Australian agriculture continued to grow through mid-year 2021 as the gross value of ag production will reach a record of over \$66 billion, an 8% increase from the prior year, although exports are expected to decline 3%, driven by falling livestock export volumes.

**FIGURE 1: Corn & Soybean Producer Prices 2021**



**Figure 2: Global soybean production to reach new record in 2021 marketing year according to June WASDE**

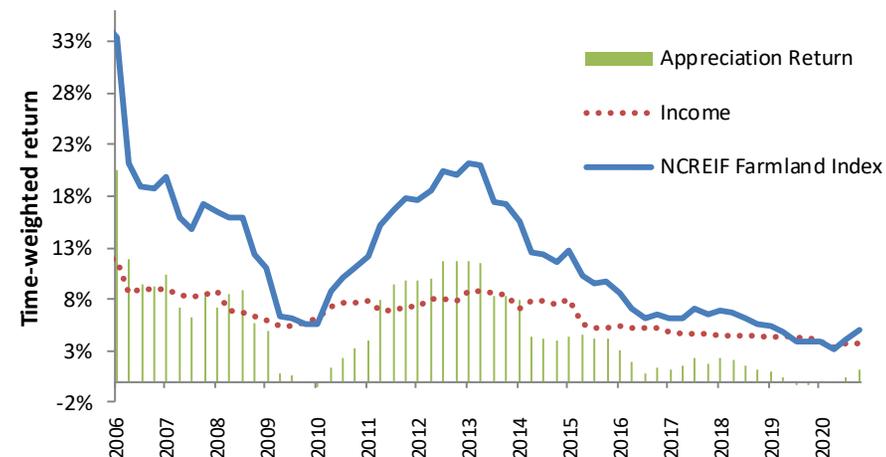


# Farmland – Second Quarter 2021 Market Update

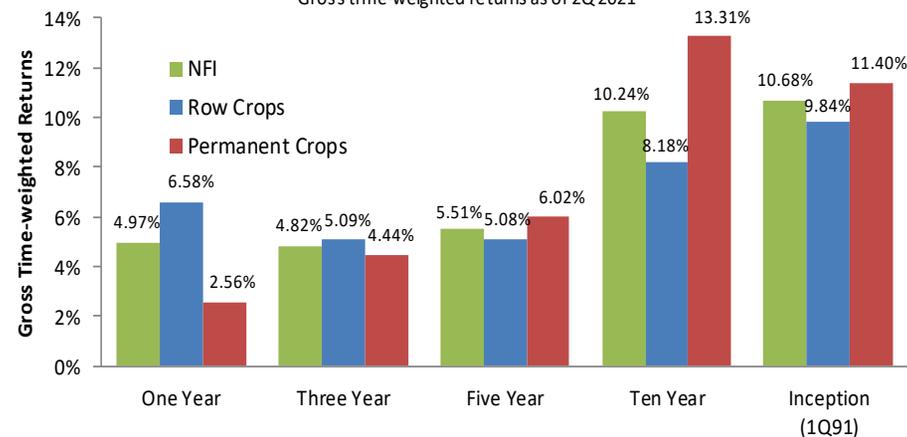
## FARMLAND PERFORMANCE

- The NCREIF Farmland Index (“NFI”) returned 1.47% for 2Q21, up from last quarter’s 0.86% return and the prior year’s same quarter return of 0.61%. The return consisted of a 0.60% income return and appreciation of 0.86%.
- Annual cropland outperformed during the quarter with a return of 2.20% versus 0.36% for permanent cropland, with strong income and appreciation returns during the quarter; row crop appreciation of 1.42% versus permanent crops of 0.03% - Row crops income of 0.78% versus 0.34%.
- All ten NCREIF regions registered positive total returns during the quarter, with the Northern Plains leading with a 4.9% 2Q21 return, followed by the Pacific Northwest [4.03%] and the Corn Belt [3.84%].
- Over the rolling 12-month period row crops returned 6.57%, compared to 2.56% for permanent crops.
- Performance between farm types continues to converge and since the last commodity markets peak in 2012/2013. Permanent crops remain an outperformer over longer periods however, with the exception of the one-year period and three-year period in which row crops over-took permanent crops as the top performer.
- Permanent crops have been driven by an overweight to two primary crop types, almonds and wine grapes, both of which have underperformed in recent years due to various factors, including trade issues, weather related, and supply factors.

**NCREIF Farmland Index Performance**  
(Rolling 1-year total returns through 2Q 2021)



**NCREIF Farmland Index Farm Type Returns**  
Gross time-weighted returns as of 2Q 2021

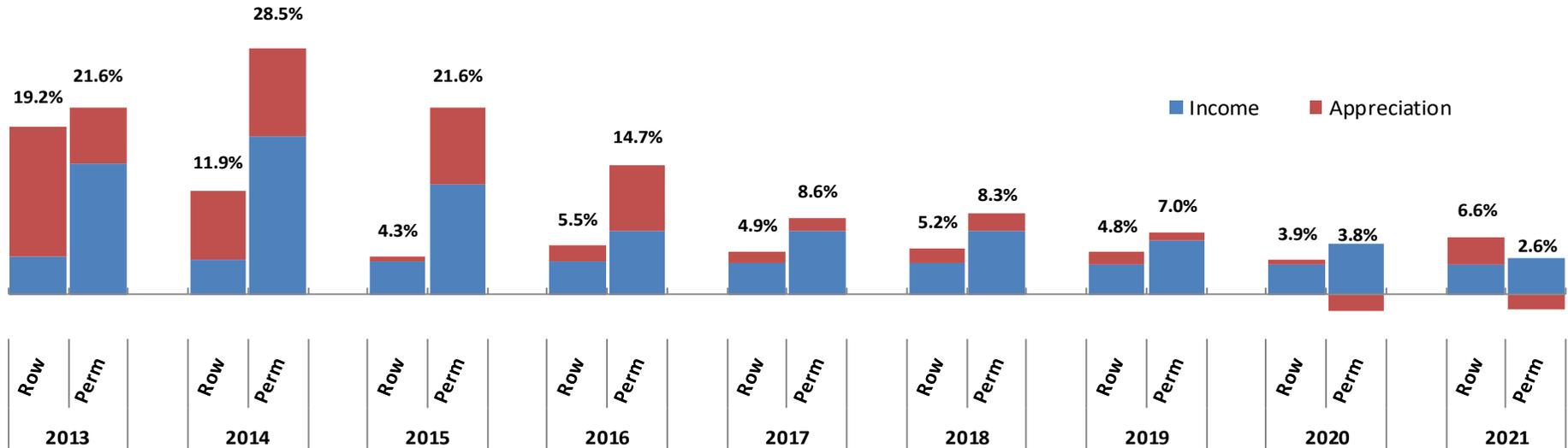


# Farmland – Second Quarter 2021 Market Update

## FARMLAND PERFORMANCE

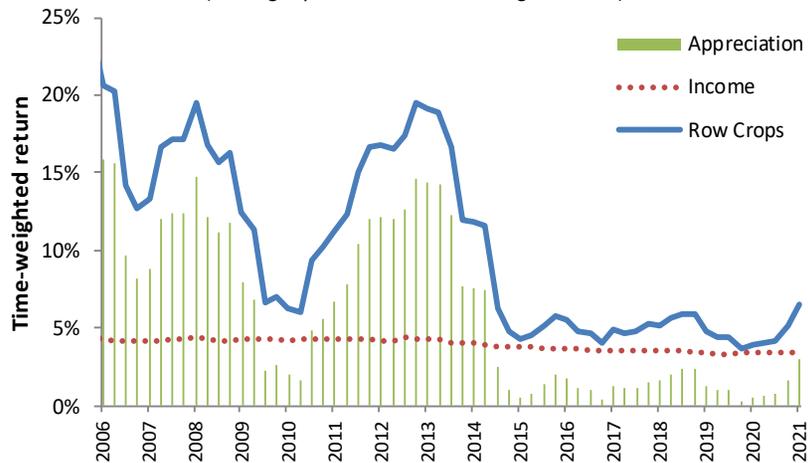
**NCREIF Farm Type Performance Attribution 2013-2021**

12-Mos returns as of 2Q 2021



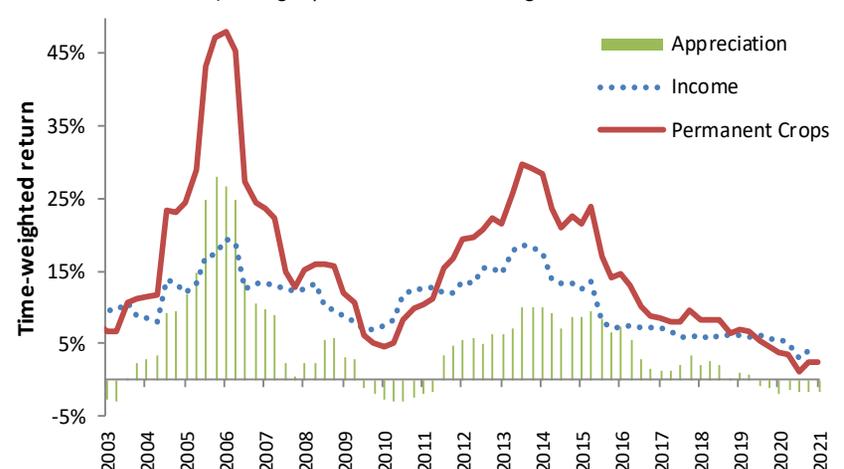
**NCREIF Row Crop Performance**

(Rolling 1-year total returns through 2Q 2021)



**NCREIF Permanent Crop Performance**

(Rolling 1-year total returns through 2Q 2021)



# Infrastructure – Second Quarter 2021 Market Update

## General

- Infrastructure transaction activity continued its decline for the second straight quarter, with the number of transactions falling by 17% quarter-over-quarter. Despite the number of individual transactions declining, the aggregate value of these deals increased 33% quarter-over-quarter, reaching highs not seen since before the global pandemic. In terms of fundraising, 38 funds reached their final close during Q2 2021; an increase of 19% quarter-over-quarter and a decrease of 17% since the highs reached in Q4 2019. Aggregate capital raised during Q2 2021 ramped up to around \$38 billion, an increase of 58% quarter-over-quarter. We continue to observe a positive trend since the lows reached at the onset of the pandemic.

## Europe

- Notable transactions for the quarter were headlined by the sale of Suez, a France-based infrastructure company that develops, owns, and operates a portfolio of water treatment, wastewater treatment, waste collection, and waste recovery facilities globally. In April 2021, a 70% ownership stake was acquired for \$22.3 billion. One additional transaction of note occurred during the quarter, the sale of Autostrade per l'Italia, a European concessionaire for toll motorway construction, operation and management, and other related transport services. A consortium of investors successfully acquired an 88% stake from Atlantia for \$11.3 billion.

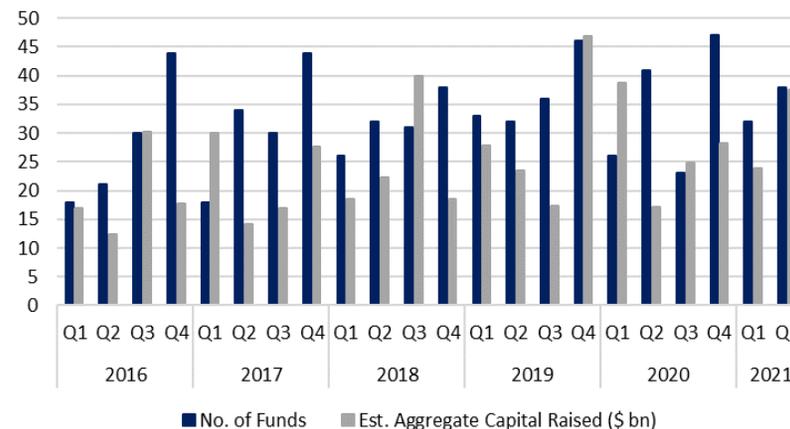
## North America

- QTS Realty Trust, a US-based telecommunications company that builds, owns, and operates a portfolio of data centers across the US and the Netherlands, was fully acquired for \$10.0 billion, subsequently taken private. Two additional note-worthy transactions occurred during the quarter, the acquisition of First Student & First Transit, both providers of essential transportation services to schools and communities in North America, for \$4.6 billion and the acquisition of Atlantic Aviation, which operates fixed base operations on leased land at airports across the US, for \$4.8 billion.

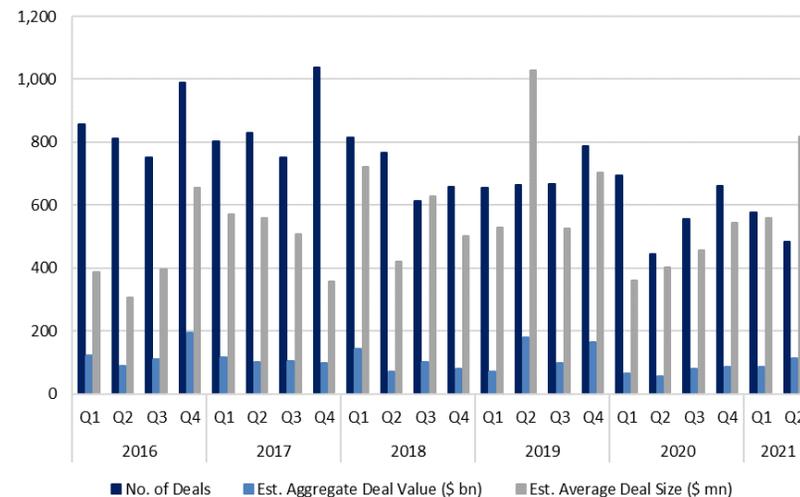
## Asia Pacific

- In Q2 2021, it is worth highlighting the sale of SB Energy India, an India-based renewable energy company that owns and operates a portfolio of solar, wind, and solar-wind hybrid energy projects with a total capacity of 4,954 MW. SB Green Energy was acquired for a total of \$3.5 billion.

Infrastructure Fundraising



Infrastructure Deals Completed

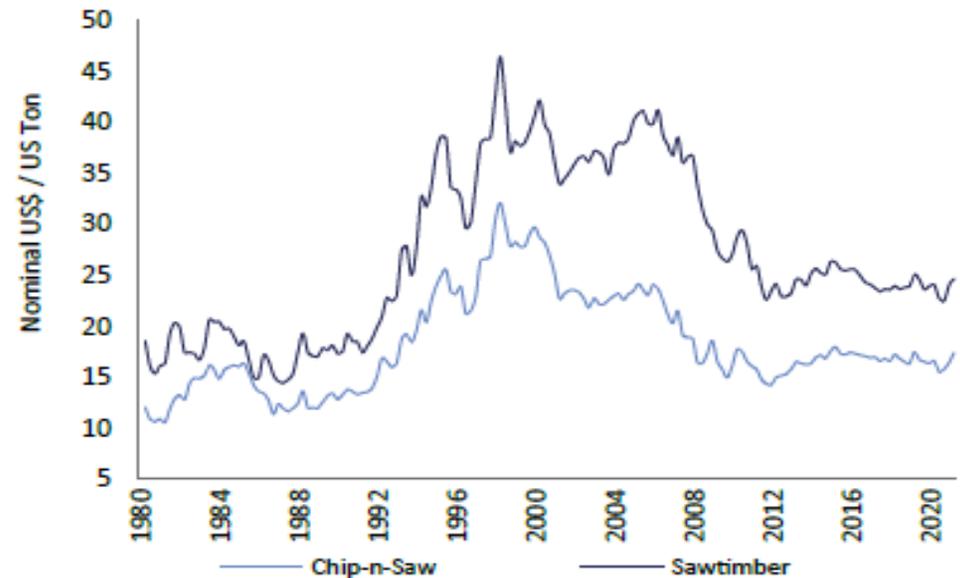


# Timberland – Second Quarter 2021 Market Update

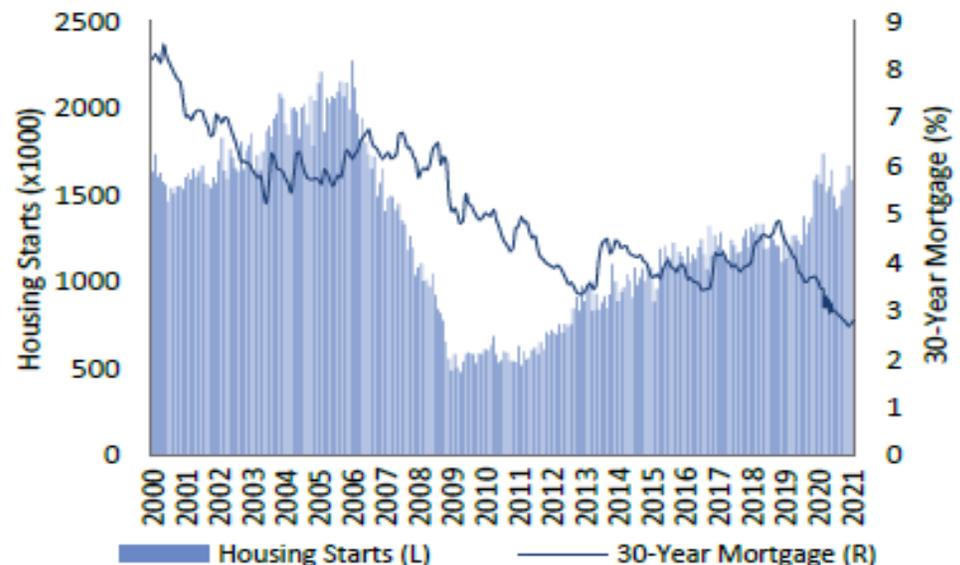
## TIMBERLAND MARKETS

- The extent of the COVID-19 impact on forest products continued to remain subdued during the quarter, as the U.S. sector was bolstered by continued strength in the housing market along with repair and remodel activity.
- Lumber and panel prices reached new all-time highs during in May 2021, up 160% and 280%, respectively year-over-year but then fell by 40% relative to the May peak by quarter-end. There has also been a slight uptick in timber prices, but nowhere near the levels seen in the lumber markets.
- In the US South, timber prices were uniformly stronger across the board in 2Q2021, with mixed pine sawtimber increasing 3.0% from 1Q21. **(FIGURE 1)** Pacific Northwest demand from domestic and Asian markets remained strong, keeping prices for sawlogs elevated.
- Housing activity during the quarter continued strong after a notably strong 1Q21; In June, housing starts were at a seasonally adjusted annual rate (SAAR) of 1.6M units, down 4.8% from March 2021 but up by almost 30% compared to June 2020's 1.3M units. **(FIGURE 2)**
- Australian softwood and hardwood roundwood prices increased along with softwood and hardwood chip prices, while export log prices in New Zealand increased by 13% during the quarter.

**FIGURE 1: U.S. South Timber Prices**



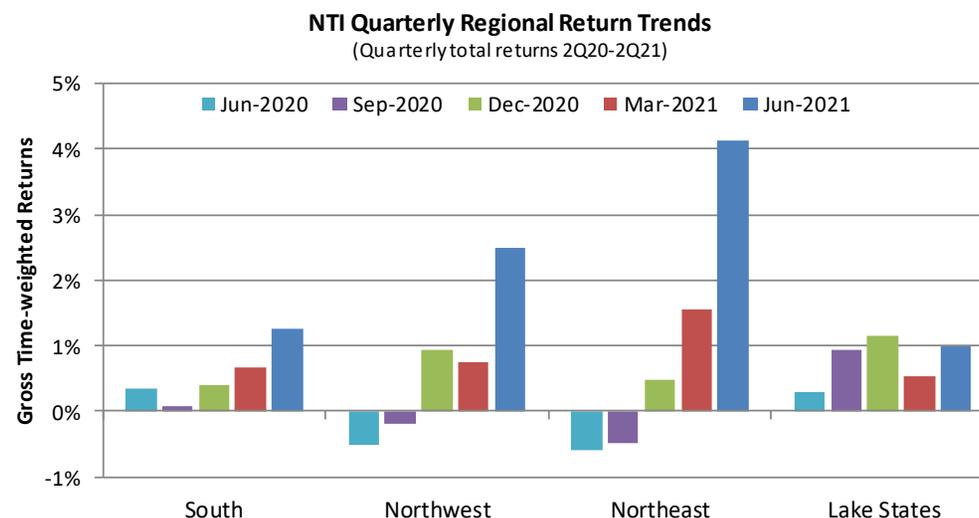
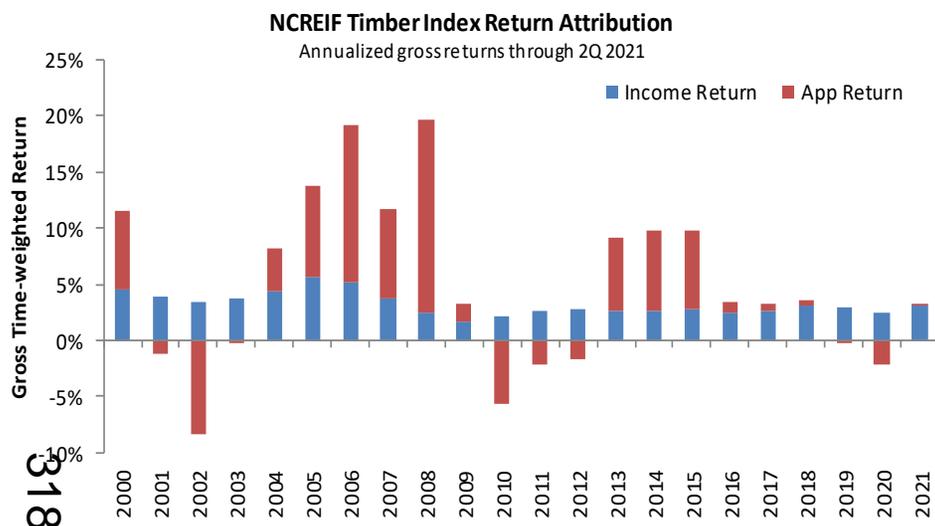
**FIGURE 2: U.S. Housing Starts SAAR<sup>1</sup> and 30-year Mortgage Rates**



# Timberland – Second Quarter 2021 Market Update

## TIMBERLAND PERFORMANCE

- The NCREIF Timberland Index (“NTI”) returned 1.7% for the quarter, up over last quarter’s 0.76% return and 2Q20’s 0.08% return - comprised of a 0.79% income return and a 0.91% appreciation return. The positive quarterly appreciation breaks the seven-quarter streak of value declines. The quarterly performance also marks the fourth consecutive quarter-over-quarter improvement in total return.
- The NFI’s largest timberland region - the U.S. South – returned 1.25% for the quarter consisting of a 0.70% income return and a 0.54% appreciation return as land values continue a modest recovery post COVID pandemic restrictions as forestry activity has continued to increase driven by increased demands from the housing industry and transaction activity.
- The South continues to remain relatively resilient with only one negative quarterly return since 2011 coupled with consistent income returns averaging 2.5% per year over the last ten years.
- The Northwest returned 2.49% for the quarter, up significantly from the previous quarter’s return of 0.76%. The return consisted of 1.09% income and 1.39% appreciation. This marks the third straight quarter of positive returns after five quarters of negative total returns.
- Timberland per acre values improved by a modest 57 bps, with all but the Lake States region posting an increase in land values.

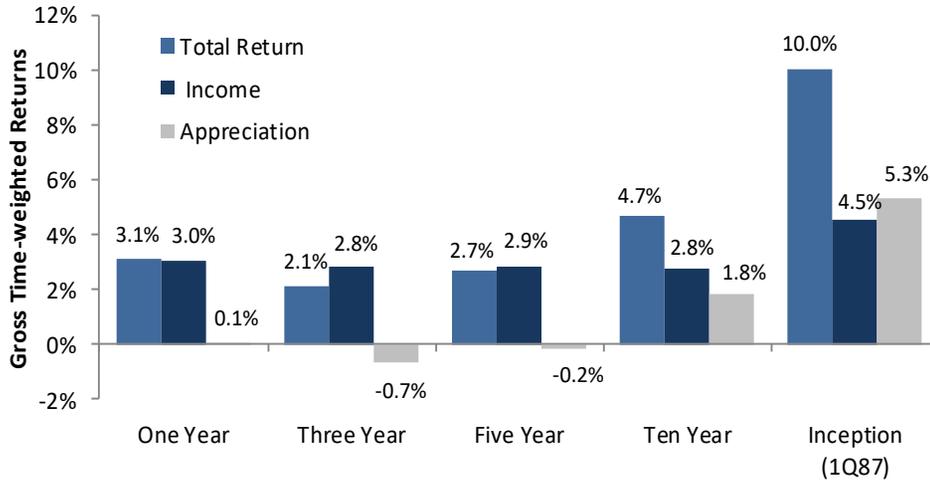


# Timberland – Second Quarter 2021 Market Update

## TIMBERLAND PERFORMANCE

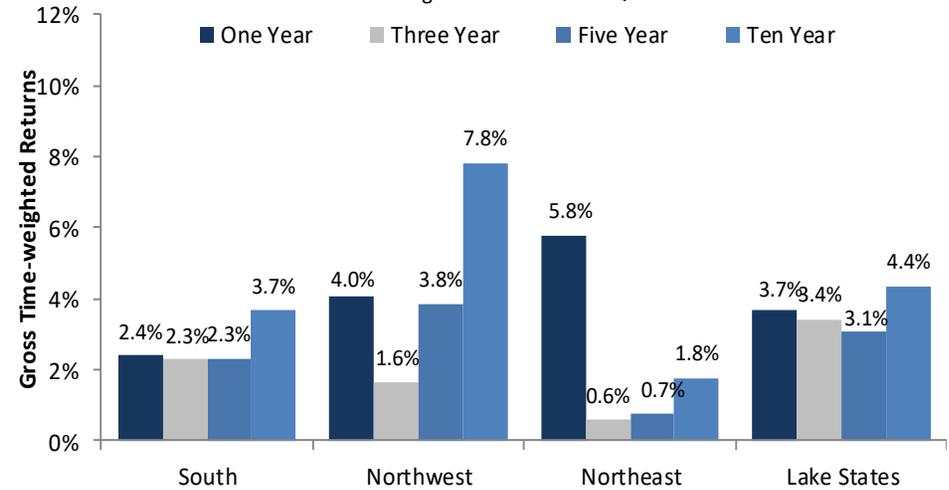
### NCREIF Timber Index Returns

Gross time-weighted returns as of 2Q 2021



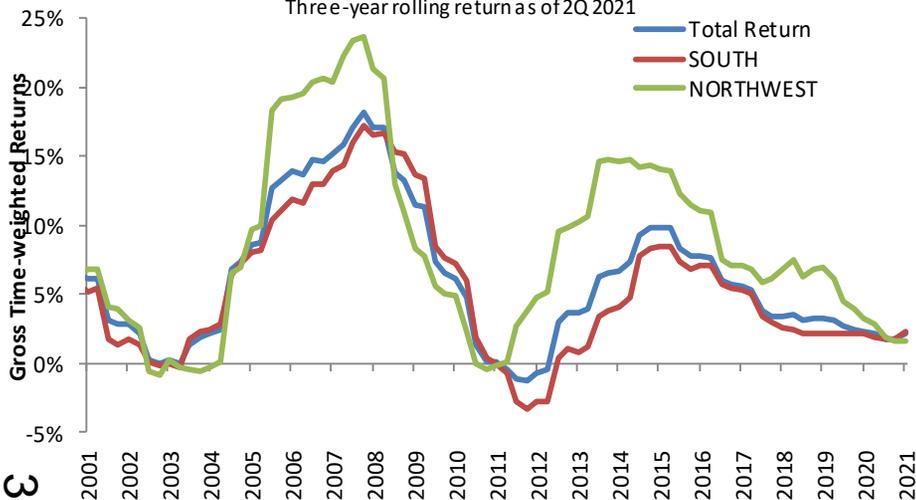
### NCREIF Timber Index Regional Returns

Gross time-weighted returns as of 2Q 2021



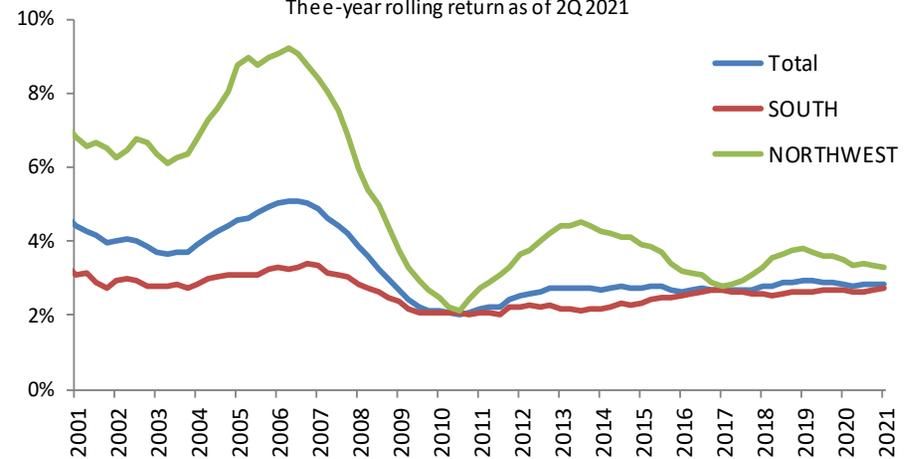
### Total Returns by Region

Three-year rolling return as of 2Q 2021



### EBITDA Returns by Region

Three-year rolling return as of 2Q 2021



## Agenda

Section 1	Executive Summary
<b>Section 2</b>	Market Overview
<b>Section 3</b>	<b>Real Assets Portfolio Update</b>
Section 4	Glossary

**THIS PAGE LEFT BLANK INTENTIONALLY**

# ATRS' Real Estate Performance: Core Portfolio

As of 6/30/2021

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
<b>Core</b>								
Arkansas Investments	2007	142,694,200	144,624,546	0	196,785,652	77,727,419	3.4	2.7
JP Morgan Strategic Property Fund	2006	170,000,000	170,000,000	0	76,161,263	288,985,103	12.7	10.1
Metlife Commercial Mortgage Income Fund	2018	50,000,000	50,000,000	0	4,470,500	49,249,832	2.2	1.7
PRISA SA	2005	170,000,000	184,182,196	0	114,661,678	283,423,512	12.5	9.9
UBS Trumbull Property Fund	2005	170,000,000	190,587,980	0	153,435,100	187,738,072	8.3	6.6
UBS Trumbull Property Income Fund	2016	50,000,000	50,000,000	0	6,158,285	53,443,086	2.4	1.9
<b>Core</b>	<b>2005</b>	<b>752,694,200</b>	<b>789,394,722</b>	<b>0</b>	<b>551,672,478</b>	<b>940,567,024</b>	<b>41.4</b>	<b>32.9</b>

Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
<b>Core</b>																									
Arkansas Investments	0.0	1.7	1.7	1.7	0.0	5.5	5.5	5.5	0.0	-2.6	-2.6	-2.6	0.0	7.1	7.1	7.1	0.0	7.1	7.1	7.1	7.4	7.4	1Q08	8.2	1.9
JP Morgan Strategic Property Fund	0.9	2.1	2.9	2.7	3.4	3.3	6.8	6.0	3.7	1.1	4.8	3.9	3.9	2.1	6.0	5.1	4.5	4.8	9.4	8.5	6.2	5.3	2Q07	6.4	2.1
Metlife Commercial Mortgage Income Fund	1.3	0.3	1.6	1.4	5.5	0.3	5.8	4.9													4.6	3.8	3Q19	3.8	1.1
PRISA SA	1.0	2.9	3.9	3.7	3.9	4.2	8.2	7.4	4.1	2.3	6.5	5.6	4.3	2.8	7.1	6.3	4.7	5.1	10.0	9.2	7.1	6.2	3Q05	6.4	2.2
UBS Trumbull Property Fund	1.0	1.9	2.9	2.7	3.9	-1.9	2.0	1.3	4.3	-3.9	0.3	-0.4	4.4	-1.6	2.8	2.0	4.8	2.0	6.8	5.9	5.4	4.5	2Q06	5.2	1.8
UBS Trumbull Property Income Fund	0.9	2.7	3.6	3.4	3.7	2.8	6.6	5.8	3.8	1.5	5.3	4.5									5.7	4.9	3Q17	4.9	1.2
<b>Core</b>	<b>0.9</b>	<b>2.2</b>	<b>3.1</b>	<b>2.9</b>	<b>3.5</b>	<b>2.5</b>	<b>6.0</b>	<b>5.3</b>	<b>3.6</b>	<b>-0.1</b>	<b>3.5</b>	<b>2.8</b>	<b>3.7</b>	<b>2.0</b>	<b>5.8</b>	<b>5.0</b>	<b>4.0</b>	<b>4.4</b>	<b>8.5</b>	<b>7.7</b>	<b>7.8</b>	<b>7.0</b>	<b>3Q05</b>	<b>6.3</b>	<b>1.9</b>

Note: Arkansas Investments are included in Core portfolio

# ATRS' Real Estate Performance: Value-Add Portfolio

As of 6/30/2021

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
<b>Value Added</b>								
Almanac Realty Securities V, LP	2008	50,000,000	21,787,314	0	48,380,466	87,050	0.0	0.0
Almanac Realty Securities VI	2012	30,000,000	19,102,008	0	21,006,051	3,928,393	0.2	0.1
Almanac Realty Securities VII	2015	30,000,000	28,976,584	6,948,434	23,099,815	15,684,000	0.7	0.8
Almanac Realty Securities VIII	2018	30,000,000	8,955,072	21,044,928	466,918	9,163,355	0.4	1.1
Calmwater Real Estate Credit Fund III	2017	30,000,000	23,113,383	7,427,676	6,374,707	21,554,036	0.9	1.0
CBRE Strategic Partners U.S. Value 8	2016	25,000,000	22,826,523	2,173,477	7,576,028	22,146,592	1.0	0.9
CBRE Strategic Partners U.S. Value 9	2020	50,000,000	15,309,173	37,325,463	2,643,024	11,969,962	0.5	1.7
FPA Core Plus Fund IV	2018	30,000,000	30,000,000	0	1,847,028	30,512,373	1.3	1.1
Harbert European Real Estate Fund IV	2016	25,011,918	23,920,550	1,804,220	11,671,370	19,272,455	0.8	0.7
LaSalle Income & Growth Fund VI	2013	20,000,000	19,047,619	952,381	22,379,425	5,303,895	0.2	0.2
LaSalle Income & Growth Fund VII	2017	20,000,000	19,571,839	2,244,082	8,323,514	15,002,584	0.7	0.6
LaSalle Income & Growth Fund VIII	2018	50,000,000	12,727,447	38,067,871	795,319	13,519,708	0.6	1.8
Long Wharf Real Estate Partners V	2016	30,000,000	29,828,371	0	17,341,841	20,814,958	0.9	0.7
Long Wharf Real Estate Partners VI, L.P.	2020	50,000,000	16,608,801	33,349,851	5,748,266	13,123,263	0.6	1.6
PGIM Real Estate Capital VII ("PRECap VII")	2021	42,563,606	2,638,846	39,899,845	0	2,676,780	0.1	1.5
Rockwood Capital Real Estate Partners Fund IX	2012	30,000,000	27,422,960	2,577,040	31,097,878	5,963,722	0.3	0.3
Rockwood Capital Real Estate Partners Fund XI	2019	40,000,000	15,660,249	24,339,751	0	17,076,242	0.8	1.5
Walton Street Real Estate Debt Fund II, L.P.	2019	40,000,000	15,447,300	28,518,997	3,977,613	12,129,536	0.5	1.4
Westbrook Real Estate Fund IX	2012	40,000,000	46,260,228	3,603,488	45,995,329	10,013,089	0.4	0.5
Westbrook Real Estate Fund X	2015	25,000,000	24,076,948	2,016,766	16,131,579	12,932,409	0.6	0.5
<b>Value Added</b>	<b>2007</b>	<b>687,575,524</b>	<b>423,281,215</b>	<b>252,294,270</b>	<b>274,856,171</b>	<b>262,874,402</b>	<b>11.6</b>	<b>18.0</b>



# ATRS' Real Estate Performance: Value-Add Portfolio (Cont.)

## Time Weighted Returns:

Returns (%)	Quarter				1 Year				3 Year				5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
<b>Value Added</b>																					
Almanac Realty Securities V, LP	-13.9	2.8	-11.1	-11.1	-41.3	10.1	-34.1	-34.3	-13.4	0.3	-12.3	-13.1	3.5	-5.1	0.2	-0.9	6.8	5.3	4Q09	11.9	2.2
Almanac Realty Securities VI	0.1	9.0	9.1	8.8	-2.5	7.3	4.6	3.4	5.7	-15.5	-10.3	-11.2	6.3	-9.8	-3.8	-4.6	5.3	3.7	1Q13	9.5	1.3
Almanac Realty Securities VII	1.4	-0.5	0.9	0.6	7.1	2.1	9.3	8.1	8.1	3.1	11.4	10.1	8.3	6.1	14.8	12.7	15.1	12.1	3Q15	12.6	1.3
Almanac Realty Securities VIII	1.6	2.4	4.0	2.9	6.2	29.5	37.0	28.9									33.8	-54.5	1Q19	7.1	1.1
Calmwater Real Estate Credit Fund III	2.7	0.0	2.7	1.9	11.3	0.0	11.3	7.8	11.5	0.0	11.5	7.3					11.4	7.5	1Q18	7.4	1.2
CBRE Strategic Partners U.S. Value 8	2.2	0.5	2.7	2.4	7.8	2.1	10.0	9.0	6.9	2.3	9.3	8.5					11.5	10.0	2Q17	9.3	1.3
CBRE Strategic Partners U.S. Value 9	2.0	2.8	4.7	3.4													7.5	3.2	4Q20	-5.8	1.0
FPA Core Plus Fund IV	0.5	3.3	3.8	3.6	3.5	4.5	8.2	7.5									5.5	4.7	4Q18	4.9	1.1
Harbert European Real Estate Fund IV	3.1	-2.2	0.9	0.6	3.8	3.5	7.5	6.2	7.1	-4.3	2.9	3.8	5.3	2.5	8.1	6.8	8.1	6.8	3Q16	7.0	1.3
LaSalle Income & Growth Fund VI	0.9	-0.5	0.4	0.6	4.2	-11.1	-7.2	-5.3	3.4	-8.0	-4.8	-3.5	4.2	-2.5	1.5	1.6	7.6	6.6	4Q13	10.5	1.5
LaSalle Income & Growth Fund VII	0.3	4.0	4.3	4.0	0.9	5.6	6.6	5.1	0.3	5.3	5.6	4.1					7.7	6.2	3Q17	7.1	1.2
LaSalle Income & Growth Fund VIII	0.2	19.7	19.9	17.5	1.9	36.3	38.7	29.7									26.2	17.8	2Q20	12.9	1.1
Long Wharf Real Estate Partners V	0.5	3.6	4.0	3.7	1.8	8.7	10.5	9.1	1.5	7.8	9.3	8.1	2.1	8.7	10.9	8.3	10.7	7.5	1Q16	8.5	1.3
Long Wharf Real Estate Partners VI, L.P.	0.9	16.4	17.3	11.8	2.0	76.7	80.1	56.2									53.9	33.5	2Q20	22.2	1.1
PGIM Real Estate Capital VII ("PRECap VII")	1.2	3.0	4.2	3.2													4.2	3.2	2Q21	1.3	1.0
Rockwood Capital Real Estate Partners Fund IX	0.8	5.7	6.5	5.8	3.5	7.9	11.6	8.8	2.9	-7.9	-5.3	-8.1	2.8	-1.1	1.6	-1.0	9.6	6.5	4Q13	10.6	1.4
Rockwood Capital Real Estate Partners Fund XI	2.4	8.5	10.9	10.0	-10.4	-30.6	-44.1	0.3									-71.2	-6.9	1Q20	18.7	1.1
Walton Street Real Estate Debt Fund II, L.P.	2.6	-0.3	2.3	2.0	12.4	-3.2	8.9	7.3									9.3	7.3	3Q19	7.7	1.0
Westbrook Real Estate Fund IX	-0.1	0.3	0.2	-0.1	-0.6	-8.3	-8.9	-10.0	-0.7	-7.4	-8.1	-9.3	-0.2	0.1	0.0	-1.3	6.4	3.5	3Q13	7.5	1.2
Westbrook Real Estate Fund X	0.0	2.8	2.8	2.5	0.2	13.0	13.3	11.9	-0.2	12.3	12.1	10.4					16.1	9.6	4Q16	10.8	1.2
<b>Value Added</b>	<b>1.4</b>	<b>3.3</b>	<b>4.6</b>	<b>3.9</b>	<b>4.2</b>	<b>7.8</b>	<b>12.2</b>	<b>9.2</b>	<b>4.5</b>	<b>2.4</b>	<b>7.0</b>	<b>4.8</b>	<b>4.7</b>	<b>5.1</b>	<b>9.9</b>	<b>7.5</b>	<b>6.9</b>	<b>4.5</b>	<b>2Q07</b>	<b>6.9</b>	<b>1.3</b>

# ATRS' Real Estate Performance: Opportunistic Portfolio

As of 6/30/2021

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
<b>Opportunistic</b>								
Blackstone Real Estate Partners Europe VI	2019	49,096,184	17,339,158	35,309,890	48,563	19,611,554	0.9	1.9
Blackstone Real Estate Partners VII	2011	50,000,000	64,581,709	5,608,725	82,403,873	20,545,799	0.9	0.9
Carlyle Realty Partners VII	2014	30,000,000	28,646,984	14,406,050	31,849,131	10,668,738	0.5	0.9
Carlyle Realty Partners VIII	2018	25,000,000	13,357,342	17,223,478	6,099,374	10,454,918	0.5	1.0
CBRE Strategic Partners U.S. Opportunity 5	2008	50,000,000	48,619,340	1,643,033	67,097,529	761,687	0.0	0.1
Cerberus Institutional Real Estate Partners III	2013	30,000,000	37,777,980	7,307,395	43,578,169	11,407,518	0.5	0.7
Heitman European Property Partners IV	2009	44,089,700	34,546,944	2,397,255	25,820,543	1,556,694	0.1	0.1
Kayne Anderson Real Estate Partners V	2018	25,000,000	22,000,000	4,095,149	1,095,149	26,852,057	1.2	1.1
Kayne Anderson Real Estate Partners VI	2021	50,000,000	1,999,996	48,000,004	0	1,392,405	0.1	1.7
Landmark Real Estate Fund VI	2010	40,000,000	35,090,608	4,909,392	52,753,910	1,591,179	0.1	0.2
Landmark Real Estate Fund VIII	2017	25,000,000	11,911,815	16,838,185	5,778,471	8,519,378	0.4	0.9
LaSalle Asia Opportunity Fund IV	2014	30,000,000	28,674,871	2,013,173	38,913,010	2,377,596	0.1	0.2
LaSalle Asia Opportunity V	2016	30,000,000	22,604,406	14,782,208	15,612,695	11,854,249	0.5	0.9
Lone Star Real Estate Fund IV	2015	24,260,817	19,445,848	4,814,970	19,495,892	6,951,147	0.3	0.4
Metropolitan Real Estate Partners Co-Investments Fund	2015	20,000,000	19,132,876	867,124	15,045,535	10,625,209	0.5	0.4
O'Connor North American Property Partners II, L.P.	2008	50,000,000	58,299,613	5,000,000	40,199,561	8,534,143	0.4	0.5
Torchlight Debt Fund VII, LP	2020	50,000,000	10,000,000	40,000,000	0	10,145,706	0.4	1.8
Torchlight Debt Opportunity Fund IV	2013	30,000,000	29,369,211	0	37,327,322	4,875,715	0.2	0.2
Torchlight Debt Opportunity Fund V	2015	25,000,000	20,001,024	5,000,000	19,738,779	6,105,426	0.3	0.4
Torchlight Debt Opportunity Fund VI	2017	25,000,000	23,494,557	1,485,001	191,034	25,063,549	1.1	0.9
<b>Opportunistic</b>	<b>1998</b>	<b>702,446,701</b>	<b>546,894,282</b>	<b>231,701,032</b>	<b>503,048,540</b>	<b>199,894,667</b>	<b>8.8</b>	<b>15.1</b>



# ATRS' Real Estate Performance: Opportunistic Portfolio (Cont.)

## Time Weighted Returns:

Returns (%)	Quarter				1 Year				3 Year				5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
<b>Opportunistic</b>																					
Blackstone Real Estate Partners Europe VI	-0.2	12.2	12.0	8.1	0.3	35.7	36.0	24.2									10.2	2.1	1Q20	16.4	1.1
Blackstone Real Estate Partners VII	0.1	8.2	8.2	6.3	0.9	11.7	12.7	9.0	2.4	-3.2	-0.8	-1.4	3.0	2.4	5.6	3.6	15.6	10.9	2Q12	14.7	1.6
Carlyle Realty Partners VII	11.7	-4.7	7.1	8.2	16.8	-0.6	16.8	15.8	22.8	-6.9	15.3	15.7	17.0	0.0	17.4	14.9	17.8	12.9	1Q15	14.6	1.5
Carlyle Realty Partners VIII	9.6	16.8	26.4	18.9	23.0	27.8	54.8	34.6									31.2	15.3	4Q18	18.7	1.2
CBRE Strategic Partners U.S. Opportunity 5	-0.6	-1.2	-1.8	-1.8	-2.1	15.7	13.3	13.3	-1.0	9.8	8.7	8.6	2.0	4.9	7.3	6.8	-10.0	-11.7	4Q08	5.4	1.4
Cerberus Institutional Real Estate Partners III	-0.1	3.0	2.9	2.3	-0.3	16.7	16.3	13.7	-0.2	13.5	13.3	9.9	-0.1	10.5	10.4	7.8	16.2	11.6	4Q13	12.1	1.5
Heitman European Property Partners IV	-1.2	1.8	0.6	0.6	-8.8	4.8	-4.0	-4.0	1.0	-16.6	-15.5	-16.4	3.1	-14.1	-11.2	-12.4	-4.3	-5.7	1Q11	-3.7	0.8
Kayne Anderson Real Estate Partners V	0.8	4.2	5.0	3.6	3.7	24.2	28.6	18.3	2.9	15.8	19.0	12.5					19.0	12.5	3Q18	12.8	1.3
Kayne Anderson Real Estate Partners V	N/M	N/M	N/M	N/M													N/M	N/M	3Q21	-31.3	0.7
Landmark Real Estate Fund VI	-1.5	-0.8	-2.3	-2.6	3.5	-14.7	-10.6	-11.6	-2.2	-12.3	-11.6	-12.6	5.2	-13.6	-6.5	-7.6	26.4	23.8	3Q10	18.8	1.5
Landmark Real Estate Fund VIII	1.0	3.9	4.9	3.7	15.6	3.8	20.0	14.6	15.7	-4.5	12.0	6.5					24.3	16.3	3Q17	11.8	1.2
LaSalle Asia Opportunity Fund IV	-1.1	1.2	0.1	-0.1	-9.1	22.0	11.9	11.1	-14.0	11.6	0.2	-11.9	-2.7	11.0	11.0	2.3	19.4	11.1	4Q14	32.8	1.4
LaSalle Asia Opportunity V	-1.4	10.7	9.4	8.7	-9.2	34.2	24.5	21.3	-5.2	25.3	20.3	15.0					16.7	10.0	4Q16	13.9	1.2
Lone Star Real Estate Fund IV	-1.2	0.7	-0.5	-0.6	2.8	8.3	11.2	9.4	9.3	-6.3	2.9	0.2	11.5	-1.1	10.6	8.6	10.3	8.0	4Q15	12.5	1.4
Metropolitan Real Estate Partners Co-Investments Fund	0.0	1.4	1.4	1.0	1.2	-2.3	-1.1	-1.7	0.9	3.0	4.0	2.9	0.8	6.9	7.8	6.1	7.3	5.4	1Q16	10.0	1.3
O'Connor North American Property Partners II, L.P.	0.0	0.0	0.0	-0.2	1.1	-14.7	-13.8	-14.5	0.2	-11.0	-10.8	-11.5	1.2	-8.1	-7.0	-8.0	-5.6	-8.4	2Q08	-3.2	0.8
Torchlight Debt Fund VII, LP	1.4	-0.2	1.2	-0.1													14.0	6.6	4Q20	2.3	1.0
Torchlight Debt Opportunity Fund IV	0.9	0.8	1.7	1.4	2.3	-2.6	-0.3	2.1	4.3	-7.8	-3.8	0.6	6.5	-1.3	5.1	5.7	7.7	7.5	4Q13	9.7	1.4
Torchlight Debt Opportunity Fund V	2.1	2.1	4.3	2.9	4.7	8.3	13.3	9.9	6.8	-0.3	6.5	5.9	10.4	4.4	15.0	11.3	14.4	8.9	3Q15	10.4	1.3
Torchlight Debt Opportunity Fund VI	1.4	0.5	2.0	1.7	5.7	3.4	9.3	8.0	11.6	-0.3	11.5	4.0					13.2	4.8	2Q18	4.4	1.1
<b>Opportunistic</b>	<b>1.5</b>	<b>4.3</b>	<b>5.7</b>	<b>4.4</b>	<b>3.8</b>	<b>11.7</b>	<b>15.9</b>	<b>11.3</b>	<b>5.1</b>	<b>3.1</b>	<b>8.3</b>	<b>5.4</b>	<b>6.0</b>	<b>3.5</b>	<b>9.6</b>	<b>6.5</b>	<b>9.2</b>	<b>6.9</b>	<b>1Q98</b>	<b>10.2</b>	<b>1.3</b>

# ATRS' Timberland, Agriculture, and Infrastructure Performance

As of 6/30/2021

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
<b>Agriculture</b>								
Agrivest Farmland Fund	2013	50,000,000	50,000,000	0	7,320,345	56,053,792	2.5	2.0
US Agriculture, LLC	2011	125,000,000	160,019,470	14,696,915	50,229,476	161,045,644	7.1	6.3
<b>Agriculture</b>	<b>2011</b>	<b>175,000,000</b>	<b>210,019,470</b>	<b>14,696,915</b>	<b>57,549,821</b>	<b>217,099,436</b>	<b>9.6</b>	<b>8.3</b>
<b>Timber</b>								
BTG Pactual Open Ended Core U.S. Timberland Fund, LP	2019	182,930,629	182,930,628	0	5,774,301	202,427,685	8.9	7.2
BTG Timber Separate Account	1998	133,069,371	156,176,961	0	315,750,000	109,817,843	4.8	3.9
<b>Timber</b>	<b>1998</b>	<b>316,000,000</b>	<b>339,107,589</b>	<b>0</b>	<b>321,524,301</b>	<b>312,245,528</b>	<b>13.7</b>	<b>11.1</b>

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
<b>Infrastructure - Core</b>								
AxInfra NA II LP	2021	50,000,000	50,047,415	0	96,454	51,108,772	2.2	1.8
DIF Infrastructure V	2018	47,762,784	35,908,950	14,246,864	4,670,301	39,377,181	1.7	1.9
IFM Global Infrastructure	2017	50,000,000	50,000,000	0	2,009,550	63,321,443	2.8	2.3
Macquarie Infrastructure Partners III	2015	50,000,000	48,862,583	6,379,161	38,784,619	43,766,348	1.9	1.8
Macquarie Infrastructure Partners V	2013	50,000,000	9,808,821	40,191,179	0	9,200,515	0.4	1.8
<b>Infrastructure - Core</b>	<b>2015</b>	<b>247,762,784</b>	<b>194,627,769</b>	<b>60,817,204</b>	<b>45,560,924</b>	<b>206,774,259</b>	<b>9.1</b>	<b>9.5</b>
<b>Infrastructure - Non-Core</b>								
Antin Infrastructure Partners Fund II	2014	47,696,920	35,953,565	5,394,830	46,425,272	21,517,242	0.9	1.0
Global Energy & Power Infrastructure Fund II	2014	50,000,000	53,214,297	2,350,248	43,376,201	27,088,268	1.2	1.0
Global Infrastructure Partners III	2016	50,000,000	45,486,488	9,661,110	10,128,191	45,927,801	2.0	2.0
KKR Global Infrastructure Investors II	2014	50,000,000	54,622,376	1,574,384	53,551,294	40,149,609	1.8	1.5
<b>Infrastructure - Non-Core</b>	<b>2014</b>	<b>197,696,920</b>	<b>189,276,726</b>	<b>18,980,572</b>	<b>153,480,958</b>	<b>134,682,920</b>	<b>5.9</b>	<b>5.5</b>
<b>Infrastructure</b>	<b>2014</b>	<b>445,459,704</b>	<b>383,904,495</b>	<b>79,797,776</b>	<b>199,041,882</b>	<b>341,457,179</b>	<b>15.0</b>	<b>15.0</b>

# ATRS' Timberland, Agriculture, and Infrastructure Performance (Cont.)

## Time Weighted Returns:

Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple					
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET								
<b>Agriculture</b>																														
Agrivest Farmland Fund	0.8	1.0	1.8	1.5	3.0	2.2	5.2	4.2	3.2	1.3	4.5	3.5	3.4	1.7	5.1	4.0														
US Agriculture, LLC	1.6	0.7	2.3	2.0	3.9	4.6	8.7	7.4	3.7	1.5	5.3	4.0	3.7	0.9	4.6	3.5	3.9	2.9	6.8	5.5	6.8	5.5	3Q11	5.3	1.3					
<b>Agriculture</b>	<b>1.4</b>	<b>0.7</b>	<b>2.1</b>	<b>1.8</b>	<b>3.7</b>	<b>4.0</b>	<b>7.8</b>	<b>6.6</b>	<b>3.6</b>	<b>1.5</b>	<b>5.1</b>	<b>3.9</b>	<b>3.6</b>	<b>1.1</b>	<b>4.8</b>	<b>3.7</b>	<b>3.8</b>	<b>2.9</b>	<b>6.8</b>	<b>5.5</b>	<b>6.8</b>	<b>5.5</b>	<b>3Q11</b>	<b>5.1</b>	<b>1.3</b>					
Agriculture Benchmark*			1.5				5.0				4.7				4.4				8.4		8.4		3Q11							
<b>Timber</b>																														
BTG Pactual Open Ended Core U.S. Timberland Fund, LP	-0.3	4.3	4.0	3.7	-0.3	12.9	12.7	11.5													10.2	9.1	1Q20	9.1	1.1					
BTG Timber Separate Account	1.7	2.4	4.1	4.0	5.0	4.3	9.5	8.7	17.4	-19.7	5.2	4.4	11.4	-12.0	4.7	3.8	6.5	-5.0	4.5	3.7	7.4	6.6	2Q98	5.2	2.7					
<b>Timber</b>	<b>0.4</b>	<b>3.6</b>	<b>4.0</b>	<b>3.8</b>	<b>1.6</b>	<b>9.8</b>	<b>11.5</b>	<b>10.5</b>	<b>15.8</b>	<b>-16.3</b>	<b>7.7</b>	<b>6.7</b>	<b>10.5</b>	<b>-9.7</b>	<b>6.1</b>	<b>5.2</b>	<b>6.0</b>	<b>-3.8</b>	<b>5.2</b>	<b>4.4</b>	<b>7.7</b>	<b>6.9</b>	<b>2Q98</b>	<b>5.3</b>	<b>1.9</b>					
Timberland Property Benchmark*			1.7				3.1				2.3				2.3				3.7		5.2		2Q98							

Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple					
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET								
<b>Infrastructure – Core</b>																														
AxInfra NA II LP	0.6	9.4	10.0	9.6																	10.0	9.6	2Q21	11.2	1.0					
DIF Infrastructure V	1.7	3.6	5.2	4.8	6.4	13.2	20.1	17.8	4.6	8.2	13.0	9.8									13.0	9.8	3Q18	10.9	1.2					
IFM Global Infrastructure	3.4	4.0	7.4	6.0	5.5	10.9	16.9	14.7													12.4	10.4	4Q18	10.4	1.3					
Macquarie Infrastructure Partners III	-0.1	10.4	10.4	8.1	0.4	41.9	42.3	32.1	0.5	22.6	23.2	17.4	1.2	20.5	21.9	16.0					20.5	15.2	2Q15	15.3	1.7					
Macquarie Infrastructure Partners V	-0.3	0.3	0.1	-1.2																	-0.2	-2.7	1Q21	-6.6	0.9					
<b>Infrastructure - Core</b>	<b>1.7</b>	<b>5.8</b>	<b>7.5</b>	<b>6.2</b>	<b>3.5</b>	<b>21.0</b>	<b>25.0</b>	<b>20.3</b>	<b>2.7</b>	<b>12.9</b>	<b>15.9</b>	<b>12.3</b>	<b>2.4</b>	<b>14.8</b>	<b>17.5</b>	<b>12.8</b>					<b>17.0</b>	<b>12.6</b>	<b>2Q15</b>	<b>13.0</b>	<b>1.3</b>					
<b>Infrastructure - Non-Core</b>																														
Antin Infrastructure Partners Fund II	-0.1	21.9	21.9	21.6	2.4	45.7	49.3	48.1	1.9	20.4	22.6	21.8	2.2	18.1	20.6	19.6					17.1	15.4	4Q14	13.0	1.9					
Global Energy & Power Infrastructure Fund II	0.8	-8.1	-7.3	-6.9	4.7	-10.1	-5.8	-7.0	9.4	-5.6	4.1	1.8	18.6	-2.9	25.1	19.0					17.8	8.1	1Q15	17.6	1.3					
Global Infrastructure Partners III	1.5	1.6	3.1	2.7	4.1	21.0	25.7	23.3	4.7	5.4	10.6	8.4									11.2	6.7	4Q16	7.4	1.2					
KKR Global Infrastructure Investors II	9.9	-9.4	0.5	1.5	14.0	15.5	32.6	29.7	17.9	2.5	25.2	23.9	8.5	8.9	20.9	18.8					20.5	16.0	1Q15	18.1	1.7					
<b>Infrastructure - Non-Core</b>	<b>3.9</b>	<b>-1.4</b>	<b>2.5</b>	<b>2.7</b>	<b>7.2</b>	<b>16.1</b>	<b>24.3</b>	<b>22.2</b>	<b>10.0</b>	<b>5.5</b>	<b>16.4</b>	<b>14.8</b>	<b>9.6</b>	<b>9.0</b>	<b>19.9</b>	<b>16.8</b>					<b>16.3</b>	<b>12.4</b>	<b>4Q14</b>	<b>14.1</b>	<b>1.5</b>					
<b>Infrastructure</b>	<b>2.7</b>	<b>2.6</b>	<b>5.2</b>	<b>4.6</b>	<b>5.2</b>	<b>18.9</b>	<b>24.8</b>	<b>21.4</b>	<b>6.7</b>	<b>9.2</b>	<b>16.5</b>	<b>13.9</b>	<b>6.8</b>	<b>11.7</b>	<b>19.3</b>	<b>15.5</b>					<b>16.0</b>	<b>11.6</b>	<b>4Q14</b>	<b>13.7</b>	<b>1.4</b>					
Infrastructure Benchmark*			3.3				8.5				7.0				7.1						6.8		4Q14							

\*The Timberland Property Benchmark was comprised of the NCREIF Timberland returns weighted according to ATRS' regional exposure based on Net Asset Value prior to 3Q20, gross of fees. The Agriculture Benchmark was comprised of the NCREIF Farmland returns weighted according to ATRS' regional and crop type exposure based on Net Asset Value prior to 3Q20, gross of fees. As of 3Q20, the Timberland and Agriculture benchmarks going forward will no longer be weighted and are just the NCREIF Timberland and NCREIF Farmland returns, gross of fees. Additionally, the Infrastructure Benchmark of CPI plus 500 bps has been adjusted to CPI plus 300 bps as of 3Q20 and the new Infrastructure Benchmark will be a blend of the two going forward.



## Portfolio Performance Detail: By Vintage Year

As of 6/30/2021

Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
1997	75,000,000	80,737,536	0	120,795,230	0	0.0	0.0
1998	233,069,371	269,039,610	0	463,689,777	109,817,843	4.8	3.8
1999	178,794,401	189,842,518	0	316,052,650	0	0.0	0.0
2000	209,242,960	228,396,220	0	289,418,462	355,396	0.0	0.0
2005	340,000,000	374,770,177	0	268,096,777	471,161,583	20.7	16.5
2006	220,000,000	219,970,569	0	140,360,625	288,985,103	12.7	10.1
2007	197,694,200	198,972,143	0	245,512,000	77,727,419	3.4	2.7
2008	220,000,000	195,151,044	9,866,941	245,582,520	9,382,880	0.4	0.6
2009	44,089,700	34,546,944	2,397,255	25,820,543	1,556,694	0.1	0.1
2010	40,000,000	35,090,608	4,909,392	52,753,910	1,591,179	0.1	0.2
2011	175,000,000	224,601,178	20,305,639	132,633,348	181,591,442	8.0	7.1
2012	130,000,000	130,563,176	13,487,923	141,677,428	31,312,722	1.4	1.6
2013	150,000,000	147,279,413	7,331,542	105,811,711	109,999,750	4.8	4.1
2014	157,696,920	146,489,717	24,164,301	160,563,614	61,651,843	2.7	3.0
2015	204,260,817	196,084,026	21,221,678	164,404,735	113,262,758	5.0	4.7
2016	180,011,918	164,837,967	28,421,015	51,146,570	152,644,182	6.7	6.3
2017	150,000,000	128,091,594	27,994,944	22,677,276	133,460,990	5.9	5.7
2018	257,762,784	172,948,811	94,678,290	19,444,589	179,129,424	7.9	9.6
2019	312,026,813	231,377,335	88,168,638	9,800,477	251,245,018	11.1	11.9
2020	250,000,000	101,774,209	150,866,494	8,487,744	95,548,218	4.2	8.6
2021	103,981,107	4,638,842	87,899,849	0	4,069,185	0.1	1.5
<b>Total Portfolio (Including Current &amp; Historical Activity)</b>							
	<b>3,828,630,991</b>	<b>3,475,203,637</b>	<b>581,713,901</b>	<b>2,984,729,986</b>	<b>2,274,493,629</b>	<b>100</b>	<b>100</b>

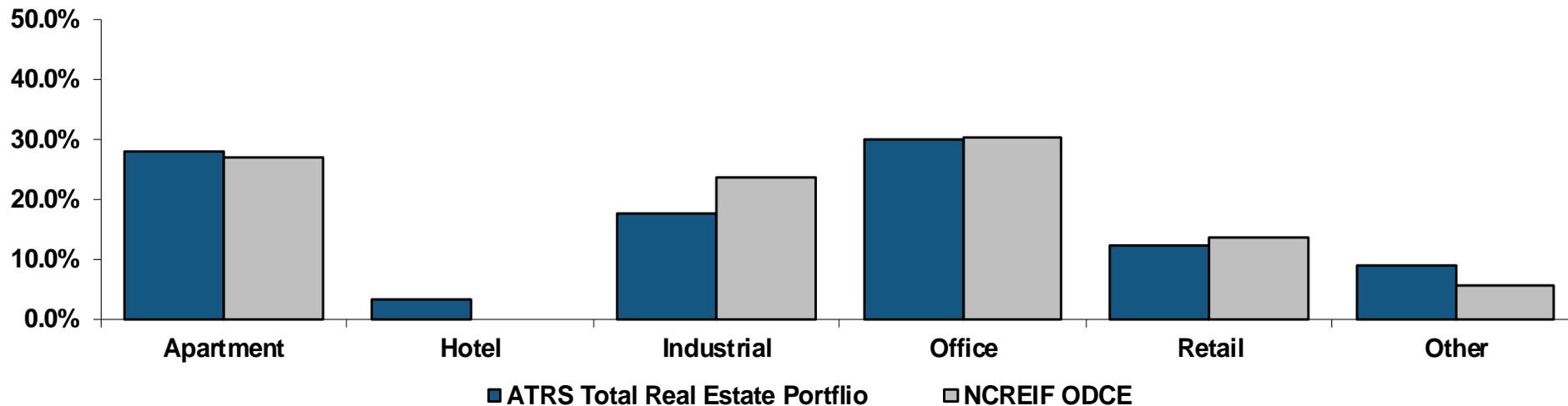
## Portfolio Performance Detail: By Vintage Year (Cont.)

### Time Weighted Returns:

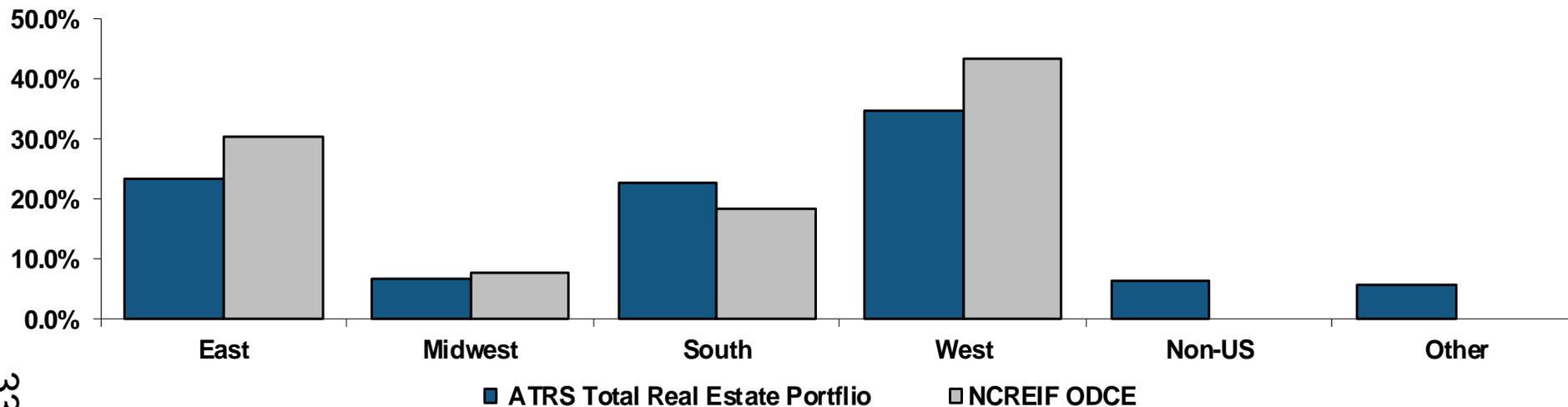
Investment Vintage Year	Quarter				1 Year				3 Year				5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
1997																	3.9	3.4	1Q98	13.4	1.5
1998	1.7	2.4	4.1	4.0	5.0	4.3	9.5	8.7	17.4	-19.7	5.2	4.4	11.4	-12.0	4.7	3.8	7.4	6.4	2Q98	5.6	2.1
1999																			4Q99	15.9	1.7
2000									0.0	-6.0	-6.0	-6.0	0.0	-8.8	-8.8	-8.8	2.5	1.5	4Q00	8.5	1.3
2005	1.0	2.5	3.5	3.3	3.9	1.7	5.6	4.8	4.2	-0.5	3.7	2.9	4.4	0.8	5.2	4.3	6.6	5.8	3Q05	5.8	2.0
2006	0.9	2.1	2.9	2.7	3.4	3.3	6.8	6.0	3.7	1.1	4.8	3.9	3.9	2.1	6.0	5.1	5.9	4.9	2Q07	5.9	2.0
2007	0.0	1.7	1.7	1.7	0.0	5.5	5.5	5.5	0.4	-2.7	-2.3	-2.3	0.4	5.4	5.8	5.8	6.3	6.1	1Q08	6.2	1.6
2008	-0.2	-0.1	-0.3	-0.5	0.0	-2.6	-2.5	-3.1	0.1	-1.6	-1.5	-2.1	3.4	-2.1	1.3	0.3	0.9	-2.0	2Q08	5.1	1.3
2009	-1.2	1.8	0.6	0.6	-8.8	4.8	-4.0	-4.0	1.0	-16.6	-15.5	-16.4	3.1	-14.1	-11.2	-12.4	-4.3	-5.7	1Q11	-3.7	0.8
2010	-1.5	-0.8	-2.3	-2.6	3.5	-14.7	-10.6	-11.6	-2.2	-12.3	-11.6	-12.6	5.2	-13.6	-6.5	-7.6	26.4	23.8	3Q10	18.8	1.5
2011	1.4	1.5	2.9	2.4	3.5	5.4	9.1	7.6	3.5	1.0	4.6	3.4	3.7	1.8	5.5	4.1	9.8	7.4	3Q11	7.4	1.4
2012	0.1	3.3	3.4	2.9	0.0	5.9	5.9	3.6	1.1	-1.3	-0.2	-2.5	1.4	2.5	3.9	1.9	11.4	7.6	1Q13	10.0	1.3
2013	0.5	4.6	5.0	4.0	2.0	16.2	18.4	14.3	2.3	8.2	10.7	8.3	3.2	8.4	11.8	9.0	12.8	10.1	4Q13	9.3	1.5
2014	2.5	1.7	4.2	4.5	5.8	10.2	16.5	15.4	7.6	4.6	12.6	10.5	10.5	7.6	19.1	15.9	18.1	13.9	4Q14	16.0	1.5
2015	4.0	-2.3	1.7	1.8	6.9	9.8	17.3	15.3	10.1	3.8	15.0	13.6	7.9	7.5	16.3	13.9	17.5	11.8	1Q15	13.2	1.4
2016	1.4	2.0	3.4	3.0	3.5	9.9	13.6	12.1	4.5	3.3	7.9	6.8	4.1	4.0	8.3	5.6	8.3	5.6	3Q16	7.1	1.2
2017	2.4	2.6	5.0	4.1	6.7	6.4	13.4	11.0	6.2	4.8	11.2	8.3					15.0	11.0	3Q17	8.6	1.2
2018	1.6	4.4	6.0	5.0	5.9	12.0	18.4	14.3	3.4	6.5	10.0	5.8					10.0	5.8	3Q18	8.4	1.1
2019	0.0	5.0	5.0	4.4	0.3	14.1	14.4	12.5									10.9	6.6	3Q19	9.6	1.1
2020	0.9	5.5	6.4	4.8	-0.7	21.3	20.4	6.9									11.5	-1.4	2Q20	6.3	1.0
2021	1.2	3.0	4.2	3.2													4.2	3.2	2Q21	-17.9	0.9

# Portfolio Diversification – Real Estate

**Property Type Diversification  
(As of 06/30/2021)**

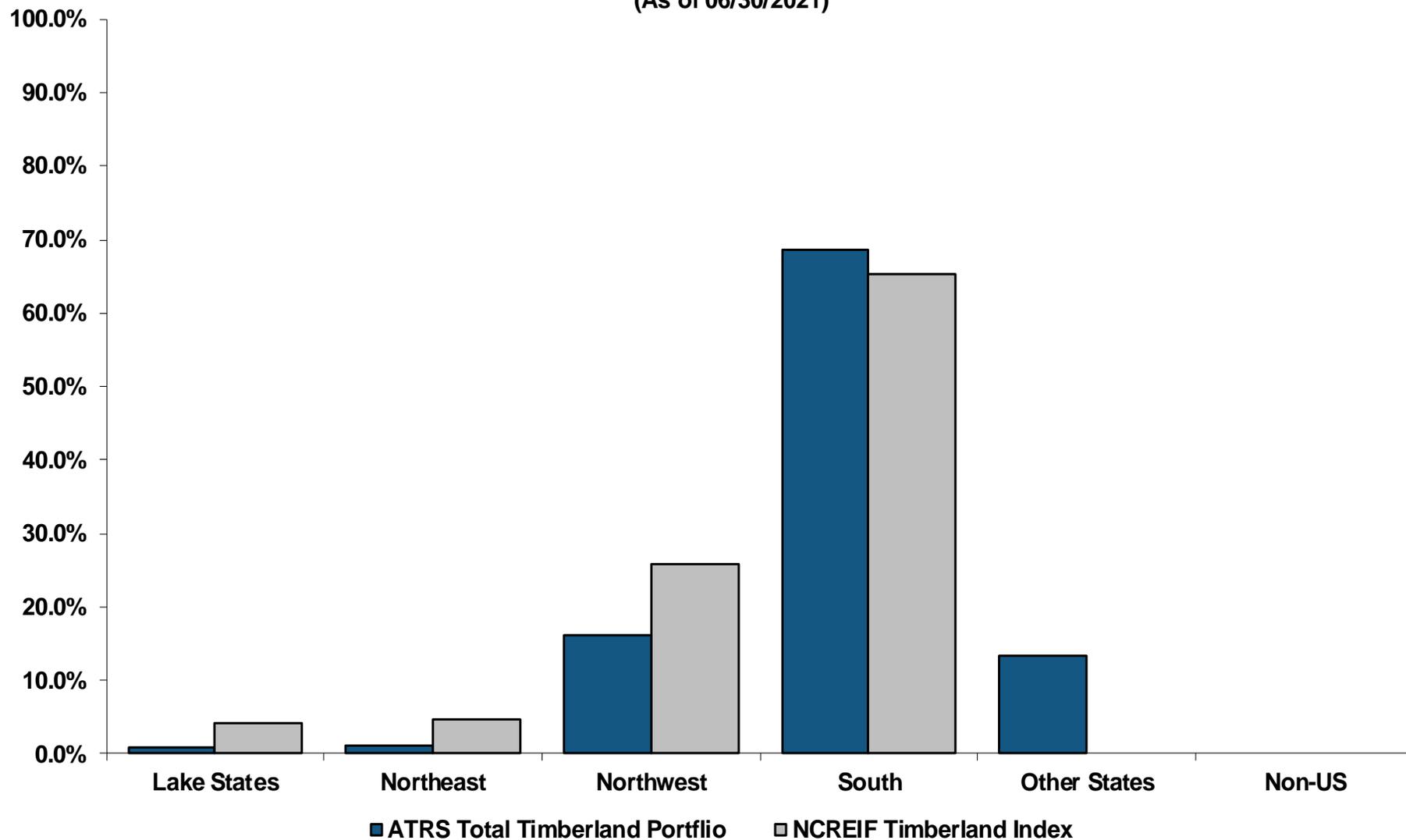


**Geographic Type Diversification  
(As of 06/30/2021)**



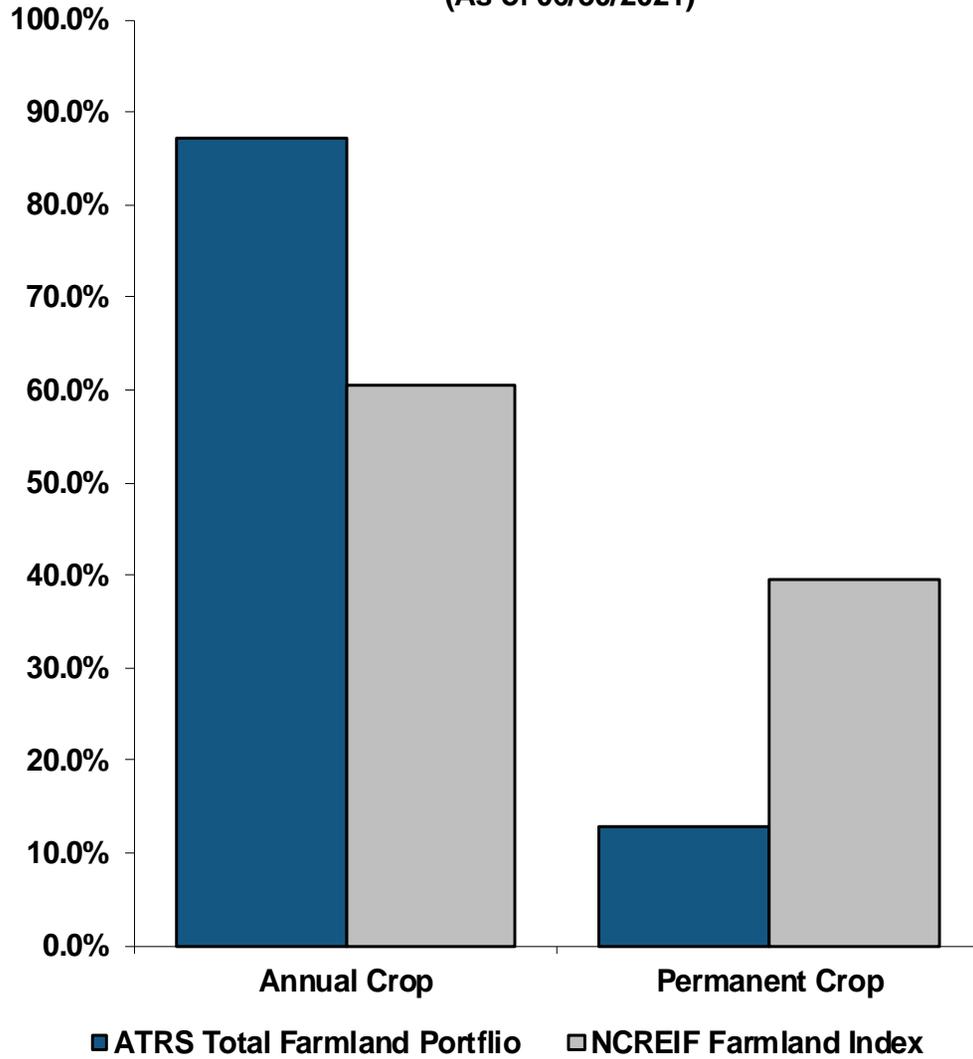
# Portfolio Diversification – Timberland

Geographic Type Diversification  
(As of 06/30/2021)

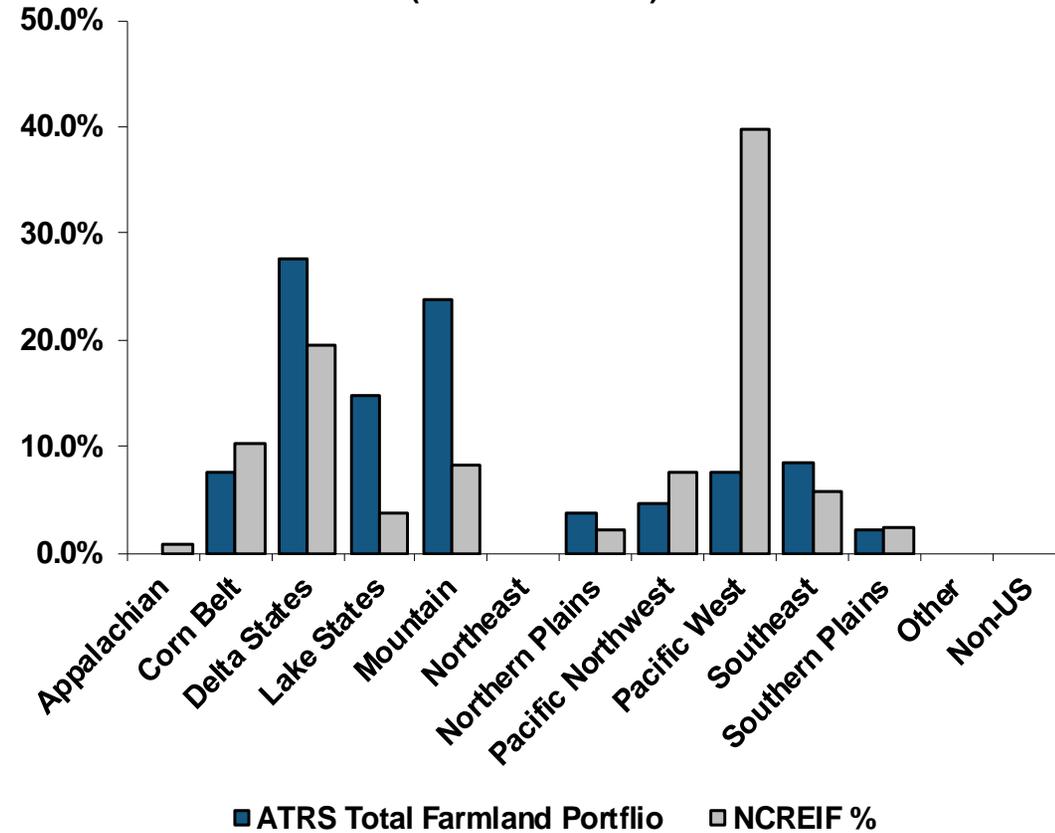


# Portfolio Diversification – Agriculture

**Crop Type Diversification  
(As of 06/30/2021)**

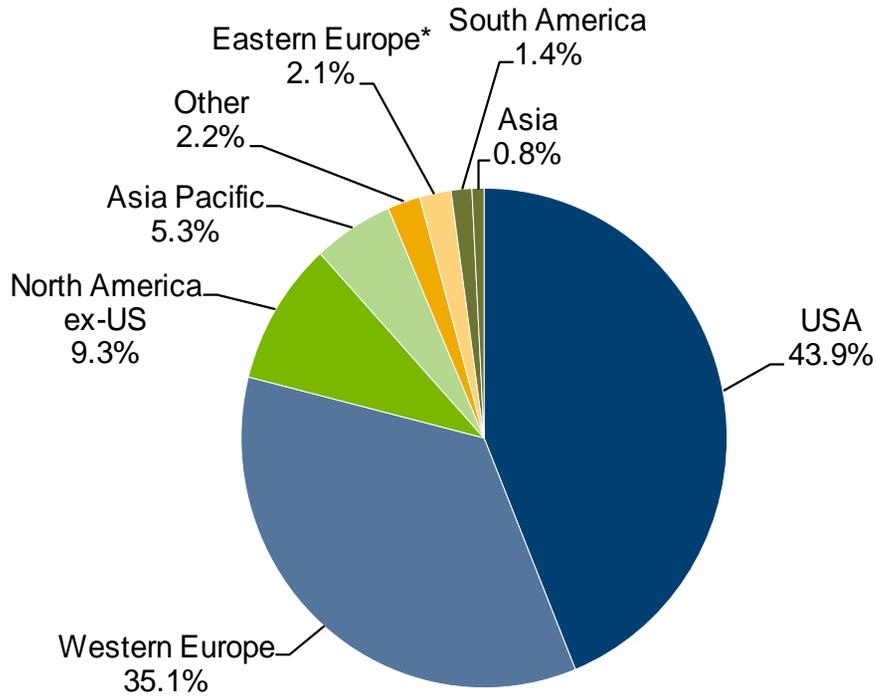


**Geographic Type Diversification  
(As of 06/30/2021)**

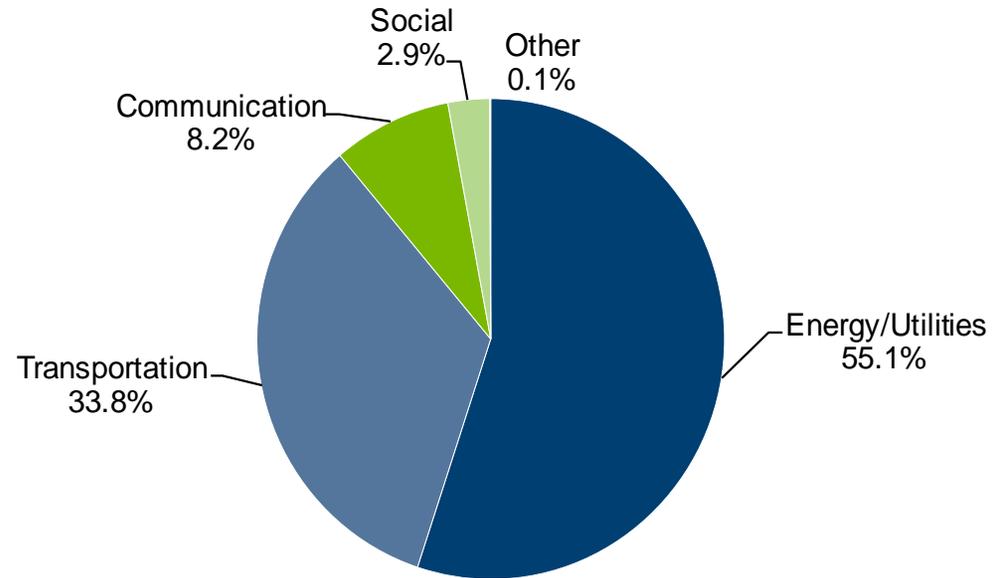


# Portfolio Diversification – Infrastructure

**Geographic Diversification  
as % of Portfolio Company Value**

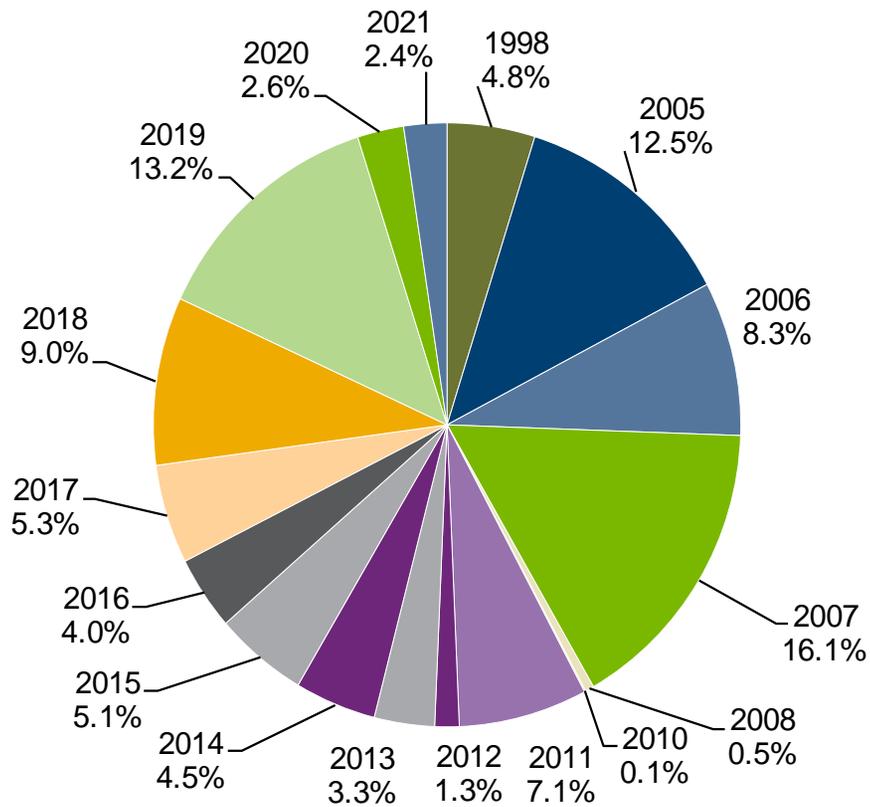


**Industry Diversification  
as % of Portfolio Company Value**

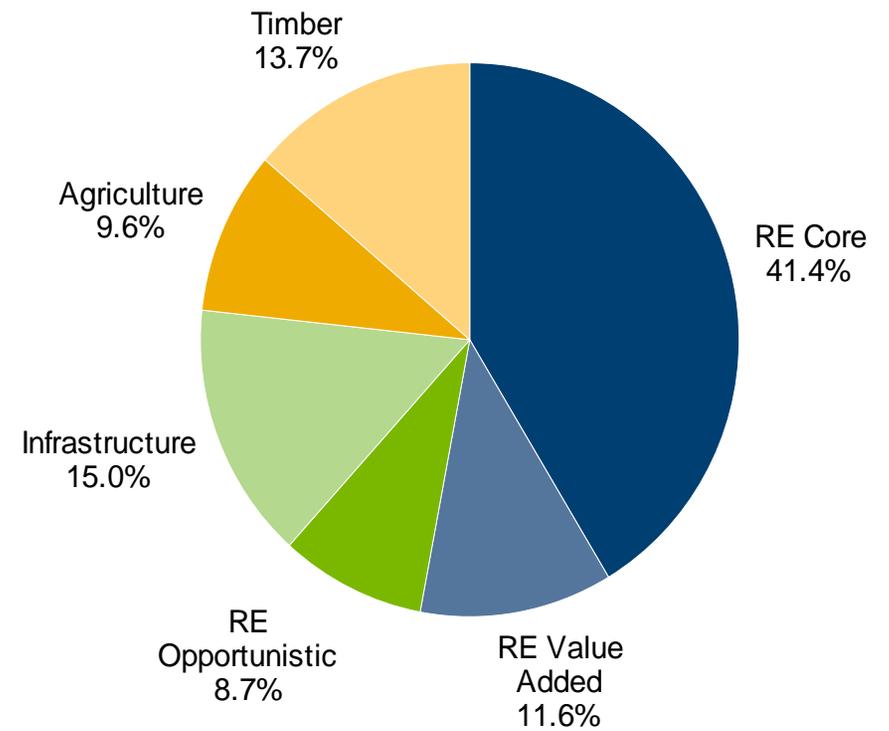


## Portfolio Diversification (cont'd)

**Vintage Year Diversification by Net Asset Value  
(As of 06/30/2021)**

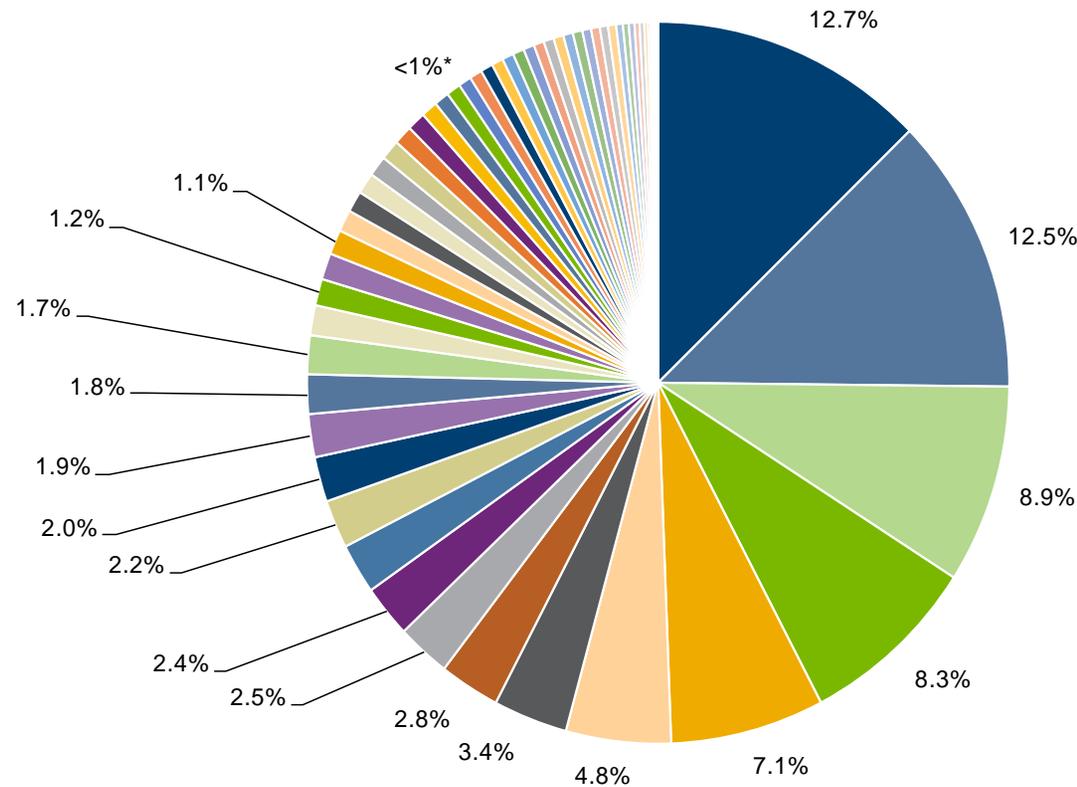


**Style Diversification by Net Asset Value  
(As of 06/30/2021)**



Note: Arkansas Investments are included in Core portfolio

# Manager Diversification



\*each manager represents less than 1% of NAV

- JP Morgan Strategic Property Fund
- PRISA SA
- BTG Pactual Open Ended Core U.S. Timberland Fund, LP
- UBS Trumbull Property Fund
- HFMS Farmland Separate Account
- BTG Timber Separate Account
- Arkansas Investments
- IFM Global Infrastructure
- Agrivest Farmland Fund
- UBS Trumbull Property Income Fund
- AxInfra NA II LP
- Metlife Commercial Mortgage Income Fund
- Global Infrastructure Partners III
- Macquarie Infrastructure Partners III
- KKR Global Infrastructure Investors II
- DIF Infrastructure V
- FPA Core Plus Fund IV
- Global Energy & Power Infrastructure Fund II
- Kayne Anderson Real Estate Partners V
- Torchlight Debt Opportunity Fund VI
- CBRE Strategic Partners U.S. Value 8
- Calmwater Real Estate Credit Fund III
- Antin Infrastructure Partners Fund II
- Long Wharf Real Estate Partners V
- Blackstone Real Estate Partners VII
- Blackstone Real Estate Partners Europe VI (EURO Vehicle)
- Harbert European Real Estate Fund IV
- Rockwood Capital Real Estate Partners Fund XI
- Almanac Realty Securities VII
- LaSalle Income & Growth Fund VII
- LaSalle Income & Growth Fund VIII
- Long Wharf Real Estate Partners VI, L.P.
- Westbrook Real Estate Fund X
- Walton Street Real Estate Debt Fund II, L.P.
- CBRE Strategic Partners U.S. Value 9
- LaSalle Asia Opportunity V
- Cerberus Institutional Real Estate Partners III
- Carlyle Realty Partners VII
- Metropolitan Real Estate Partners Co-Investments Fund, L.P.
- Carlyle Realty Partners VIII
- Torchlight Debt Fund VII, LP
- Westbrook Real Estate Fund IX
- Macquarie Infrastructure Partners V
- Almanac Realty Securities VIII
- O'Connor North American Property Partners II, L.P.
- Landmark Real Estate Fund VIII
- Lone Star Real Estate Fund IV
- Torchlight Debt Opportunity Fund V
- Rockwood Capital Real Estate Partners Fund IX
- LaSalle Income & Growth Fund VI
- Torchlight Debt Opportunity Fund IV
- Almanac Realty Securities VI
- PGIM Real Estate Capital VII ("PRECap VII")
- LaSalle Asia Opportunity Fund IV
- Landmark Real Estate Fund VI
- Heitman European Property Partners IV
- Kayne Anderson Real Estate Partners VI
- CBRE Strategic Partners U.S. Opportunity 5
- Almanac Realty Securities V, LP

# Management Fees

Partnership Name	Current Quarter Management Fees	YTD Management Fees
<b>Core</b>		
Arkansas Investments	0	0
JP Morgan Strategic Property Fund	-580,329	-1,154,692
Metlife Commercial Mortgage Income Fund	-100,000	-200,000
PRISA SA	-547,606	-1,089,737
UBS Trumbull Property Fund	-328,620	-672,445
UBS Trumbull Property Income Fund	-102,167	-206,094
<b>Core</b>	<b>-1,658,722</b>	<b>-3,322,968</b>
<b>Value Added</b>		
Almanac Realty Securities V, LP	0	0
Almanac Realty Securities VI	-11,141	-22,159
Almanac Realty Securities VII	-43,992	-86,400
Almanac Realty Securities VIII	-93,493	-185,959
Calmwater Real Estate Credit Fund III	-81,067	-161,243
CBRE Strategic Partners U.S. Value 8	-48,894	-98,118
CBRE Strategic Partners U.S. Value 9	-156,249	-312,498
FPA Core Plus Fund IV	-42,252	-74,056
Harbert European Real Estate Fund IV	-61,866	-124,844
LaSalle Income & Growth Fund VI	-10,268	-25,148
LaSalle Income & Growth Fund VII	-49,684	-99,975
LaSalle Income & Growth Fund VIII	-124,658	-247,945
Long Wharf Real Estate Partners V	-71,862	-142,867
Long Wharf Real Estate Partners VI, L.P.	-186,986	-371,918
PGIM Real Estate Capital VII ("PRECap VII")	-25,417	-50,666
Rockwood Capital Real Estate Partners Fund IX	-38,622	-77,064
Rockwood Capital Real Estate Partners Fund XI	-125,177	-235,596
Walton Street Real Estate Debt Fund II, L.P.	-27,071	-49,385
Westbrook Real Estate Fund IX	-31,758	-63,167
Westbrook Real Estate Fund X	-41,729	-85,361
<b>Value Added</b>	<b>-1,246,768</b>	<b>-2,463,703</b>

## Management Fees (cont'd)

Partnership Name	Current Quarter Management Fees	YTD Management Fees
<b>Opportunistic</b>		
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	-195,637	-389,185
Blackstone Real Estate Partners VII	-63,402	-125,311
Carlyle Realty Partners VII	-39,789	-79,578
Carlyle Realty Partners VIII	-86,781	-173,562
Cerberus Institutional Real Estate Partners III	-4,579	-15,464
Kayne Anderson Real Estate Partners V	-109,375	-218,750
Kayne Anderson Real Estate Partners VI		
Landmark Real Estate Fund VI	-4,612	-9,254
Landmark Real Estate Fund VIII	-62,500	-125,000
LaSalle Asia Opportunity Fund IV	-3,862	-7,681
LaSalle Asia Opportunity V	-76,680	-146,968
Lone Star Real Estate Fund IV	-5,923	-12,062
Metropolitan Real Estate Partners Co-Investments Fund, L.P.	-23,733	-47,165
O'Connor North American Property Partners II, L.P.	-17,423	-34,847
Torchlight Debt Fund VII, LP	-137,500	-275,000
Torchlight Debt Opportunity Fund IV	-15,092	-28,350
Torchlight Debt Opportunity Fund V	-20,951	-42,512
Torchlight Debt Opportunity Fund VI	-79,688	-159,376
<b>Opportunistic</b>	<b>-1,326,428</b>	<b>-2,294,214</b>
<b>Real Estate</b>	<b>-4,231,918</b>	<b>-8,080,885</b>

## Management Fees (cont'd)

Partnership Name	Current Quarter Management Fees	YTD Management Fees
<b>Infrastructure - Core</b>		
AxInfra NA II LP	-47,337	-47,337
DIF Infrastructure V	-167,446	-332,955
IFM Global Infrastructure	-120,691	-232,623
Macquarie Infrastructure Partners III	-97,863	-193,056
Macquarie Infrastructure Partners V	-113,279	-218,152
<b>Infrastructure - Core</b>	<b>-546,617</b>	<b>-1,024,123</b>
<b>Infrastructure - Non-Core</b>		
Antin Infrastructure Partners Fund II	-44,236	-87,880
Global Energy & Power Infrastructure Fund II	-216,849	-387,387
Global Infrastructure Partners III	-218,101	-429,045
KKR Global Infrastructure Investors II	-111,323	-195,705
<b>Infrastructure - Non-Core</b>	<b>-590,509</b>	<b>-1,100,017</b>
<b>Infrastructure</b>	<b>-1,137,126</b>	<b>-2,124,140</b>
<b>Agriculture</b>		
Agrivest Farmland Fund	-139,205	-276,994
US Agriculture, LLC	-458,161	-458,161
<b>Agriculture</b>	<b>-611,988</b>	<b>-1,207,938</b>
<b>Timber</b>		
BTG Pactual Open Ended Core U.S. Timberland Fund, LP	-507,455	-1,001,469
BTG Timber Separate Account	-180,482	-358,277
<b>Timber</b>	<b>-687,937</b>	<b>-1,359,747</b>
<b>Total Real Assets</b>	<b>-2,437,051</b>	<b>-4,691,825</b>
<b>Total Portfolio</b>		
<b>Arkansas Teachers Retirement System</b>	<b>-6,668,969</b>	<b>-12,772,710</b>

# Compliance Matrix

RISK MANAGEMENT						
Property Type - Real Estate	NFI-ODCE	Target/Constraint	Minimum	Maximum	Actual	Compliant?
Office	30.20	NFI-ODCE +/- 50%	15.10	45.30	30.17	Yes
Retail	13.60	NFI-ODCE +/- 50%	6.80	20.40	12.23	Yes
Industrial	23.60	NFI-ODCE +/- 50%	11.80	35.40	17.55	Yes
Multifamily	27.10	NFI-ODCE +/- 50%	13.55	40.65	27.86	Yes
Lodging/Hotel	0.00	NFI-ODCE +/- 50%	0.00	0.00	3.22	No
Other	5.50	n/a	0.00	20.00	8.96	Yes
Geography - Real Estate	NFI-ODCE	Target/Constraint	Minimum	Maximum	Actual	Compliant?
West	43.30	NFI-ODCE +/- 50%	21.65	64.95	34.73	Yes
East	30.50	NFI-ODCE +/- 50%	15.25	45.75	23.52	Yes
Midwest	7.70	NFI-ODCE +/- 50%	3.85	11.55	6.89	Yes
South	18.50	NFI-ODCE +/- 50%	9.25	27.75	22.85	Yes
Other	0.00	n/a	n/a	n/a	5.68	Yes
Non-U.S.	0.00	n/a	0.00	40.00	6.33	Yes
Geography - Timber	NCREIF Timberland	Target/Constraint	Minimum	Maximum	Actual	Compliant?
Lake States	4.27	NCREIF Timberland +/- 15%	0.64	4.92	0.87	Yes
Northeast	4.72	NCREIF Timberland +/- 15%	0.71	5.43	1.15	Yes
Northwest	25.78	NCREIF Timberland +/- 15%	3.87	29.65	16.06	Yes
South	65.22	NCREIF Timberland +/- 15%	9.78	75.00	68.65	Yes
Other	0.00	NCREIF Timberland +/- 15%	0.00	0.00	13.27	No

## Compliance Matrix (cont'd)

RISK MANAGEMENT						
<b>Geography - Agriculture</b>	<b>NCREIF Farmland</b>	<b>Target/Constraint</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Actual</b>	<b>Compliant?</b>
Appalachian	0.73		0.00	50.00	0.00	Yes
Corn Belt	10.32		0.00	50.00	7.47	Yes
Delta States	19.54		0.00	50.00	27.58	Yes
Lake States	3.65		0.00	50.00	14.77	Yes
Mountain	8.23		0.00	50.00	23.69	Yes
Northeast	0.00		0.00	50.00	0.00	Yes
Northern Plains	2.15		0.00	50.00	3.83	Yes
Pacific Northwest	7.52		0.00	50.00	4.58	Yes
Pacific West	39.81		0.00	50.00	7.51	Yes
Southeast	5.70		0.00	50.00	8.41	Yes
Southern Plains	2.36		0.00	50.00	2.15	Yes
Other	0.00		0.00	50.00	0.00	Yes
Non-U.S.	0.00		0.00	50.00	0.00	Yes
<b>Geography - Infrastructure</b>	<b>Target/Constraint</b>		<b>Minimum</b>	<b>Maximum</b>	<b>Actual</b>	<b>Compliant?</b>
U.S.			n/a	n/a	43.90	No
Non-U.S.			0.00	50.00	56.10	No
<b>Asset Type - Infrastructure</b>	<b>Target/Constraint</b>		<b>Minimum</b>	<b>Maximum</b>	<b>Actual</b>	<b>Compliant?</b>
Energy/Utilities			0.00	70.00	55.00	Yes
Transportation			0.00	70.00	33.80	Yes
Social			0.00	70.00	2.90	Yes
Communications			0.00	70.00	8.20	Yes
Other			0.00	70.00	0.10	Yes
<b>Manager</b>	<b>Target/Constraint</b>		<b>Minimum</b>	<b>Maximum</b>	<b>Max</b>	<b>Compliant?</b>
			0.00	30.00	13.74	Yes
<b>Style - Real Estate</b>	<b>Target/Constraint</b>		<b>Minimum</b>	<b>Maximum</b>	<b>Actual</b>	<b>Compliant?</b>
Core			50.00	70.00	67.02	Yes
Non-Core			30.00	50.00	32.98	Yes

## Agenda

Section 1	Executive Summary
Section 2	Market Overview
Section 3	Real Assets Portfolio Update
<b>Section 4</b>	<b>Glossary</b>

**THIS PAGE LEFT BLANK INTENTIONALLY**

## Glossary of Terms

- Catch-up - The provision that dictates how cash flows from the fund will be allocated between the investors and the manager in order for the manager to receive their performance fee. This allocation of cash flows occurs once the investors have collected their capital and preferred return
- Core - The most conservative institutional real estate investing style
- Core-Plus - A style whereby investments have a slightly higher level of risk and expected return than Core, primarily through use of leverage
- Development - The construction of buildings from breaking the ground through building completion. This may also include entitlement of the land and the pursuit of permits prior to construction
- DPI – Distributions to Paid In; the ratio of distributions from investments to total invested capital
- First Closing - The point at which a manager receives and executes the subscription documents and can begin drawing capital from investors
- Final Closing - The final date at which new investors can subscribe to a fund
- Internal Rate of Return (IRR) - A method of measuring the performance of a portfolio from inception through a particular point in time. This method weights returns according to the dollars invested at each point in time. Hence, this is known as dollar-weighted return. This is a better measure when the manager controls when dollars must be invested and is the most commonly used method of real estate performance evaluation; Gross IRR is gross of fee and Net IRR is net of fee
- NFI-ODCE – NCREIF Fund Index Open-end Diversified Core Equity Index is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy; underlying funds are leveraged with gross and net returns available
  - NCREIF changed the basis of diversification for the NFI ODCE from NREA to GRE effective 1Q20
- NPI – NCREIF Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only; it is reported unlevered and gross of fee

## Glossary of Terms (Cont'd)

- FTSE-NAREIT Equity REIT – An unmanaged capitalization-weighted index of all equity real estate investment trusts
- FTSE EPRA/NAREIT Global REIT – An unmanaged market-weighted total return index, which consists of many companies from Global markets whose floats are larger than \$100 million and derive more than half of their revenue from property-related activities
- Opportunistic - A style that is the riskiest form of real estate investing. The name derives from when such funds were formed after the early 1990s real estate market crash to take advantage of opportunities in unwanted properties. Such investments include ground-up development, highly-leveraged purchases, or transactions involving highly complicated legal or environmental situations
- Pre-Specified Deals – Investments that are purchased for a fund before its final close. The assets are typically warehoused on a line of credit
- Promote (Carried Interest) -The performance fee a manager receives once the investors have received their return of capital and the preferred return (return promised by the manager)
- RVPI – Residual Value to Paid In; the ratio of the residual value of an investment to total invested capital
- Time-Weighted Return - A method of measuring the performance of a portfolio over a particular period of time. Effectively, it is the return of one dollar invested in the portfolio at the beginning of the measurement period. This is a better return measure when the manager does not control when the dollars must be invested
- TVPI – Total value to paid-in ratio; the ratio of total value from an investment, including distributions, to total invested capital
- Value-Added - A style that represents moderate-risk real estate. A manager typically increases the future value of the investment by undertaking activities such as leasing, improving an existing building, or taking some risk through operating intensive assets, such as hotels or self-storage
- Vintage Year - The year in which a fund has its final closing. Typically coincides with the year a fund begins making investments

## Glossary of Terms (Cont'd)

- NCREIF Timberland Index- The National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only.
- NCREIF Farmland Index- The National Council of Real Estate Investment Fiduciaries (NCREIF) Farmland Index is a quarterly time series composite return measure of investment performance of a large pool of individual agricultural properties acquired in the private market for investment purposes only.

## Disclosures

This presentation (the “Presentation”) is being furnished on a confidential basis to a limited number of sophisticated individuals meeting the definition of a Qualified Purchaser under the Investment Advisors Act of 1940 for informational and discussion purposes only and does not constitute an offer to sell or a solicitation of an offer to purchase any security.

This document has been prepared solely for informational purposes and is not to be construed as investment advice or an offer or solicitation for the purchase or sale of any financial instrument. While reasonable care has been taken to ensure that the information contained herein is not untrue or misleading at the time of preparation, The Townsend Group makes no representation that it is accurate or complete. Some information contained herein has been obtained from Fourth-party sources that are believed to be reliable. The Townsend Group makes no representations as to the accuracy or the completeness of such information and has no obligation to revise or update any statement herein for any reason. Any opinions are subject to change without notice and may differ or be contrary to opinions expressed by other divisions of The Townsend Group as a result of using different assumptions and criteria. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Statements contained in this Presentation that are not historical facts and are based on current expectations, estimates, projections, opinions and beliefs of the general partner of the Fund and upon materials provided by underlying investment funds, which are not independently verified by the general partner. Such statements involve known and unknown risks, uncertainties and other factors, and undue reliance should not be placed thereon. Additionally, this Presentation contains “forward-looking statements.” Actual events or results or the actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements.

Material market or economic conditions may have had an effect on the results portrayed.

Neither Townsend nor any of its affiliates have made any representation or warranty, express or implied, with respect to the fairness, correctness, accuracy, reasonableness or completeness of any of the information contained herein (including but not limited to information obtained from Fourth parties unrelated to them), and they expressly disclaim any responsibility or liability therefore. Neither Townsend nor any of its affiliates have any responsibility to update any of the information provided in this summary document. The products mentioned in this document may not be eligible for sale in some states or countries, nor suitable for all types of investors; their value and the income they produce may fluctuate and/or be adversely affected by exchange rates, interest rates, or other factors. Prospective investors in the Fund should inform themselves as to the legal requirements and tax consequences of an investment in the Fund within the countries of their citizenship, residence, domicile and place of business.

There can be no assurance that any account will achieve results comparable to those presented. Past performance is not indicative of future results.

## Memorandum

**To:** Arkansas Teacher Retirement System (“ATRS”)  
**From:** Chae Hong  
**CC:** PJ Kelly; Jack Dowd  
**Date:** December 6, 2021  
**Re:** Landmark Real Estate Partners IX – \$50 million Commitment Recommendation

---

### Background and Recommendation

Landmark Partners, LLC (“Landmark”, or the “Firm”) is sponsoring Landmark Real Estate Fund IX (“Fund IX”, or the “Fund”) to continue the investment strategy it has employed throughout its fund series, acquiring institutionally held positions in real estate through secondary market transactions, forming a broadly diversified portfolio of underlying real estate exposures. The Fund return target is 13-16% net IRR utilizing up to 70% leverage. The Fund’s strategy is to acquire and hold a portfolio of real estate secondaries – mostly minority LP positions in US value-add and opportunistic commingled real estate funds, but may include positions in joint ventures, non-traded REIT vehicles, operating companies, as well as recaps of whole funds and special situation structured transactions. The portfolio of interests will be purposefully diversified by property type, geography, manager, and vintage year.

Aon Investments, USA is satisfied with the strategy of the Fund and its appropriateness for ATRS. Additionally, we believe that the merits of this offering outweigh its risks. A Fund IX Investment Summary is attached in the following Appendix for reference. We recommend that ATRS invest \$50 million in the Fund to fulfill ATRS’ 2021 non-core real estate allocation, in accordance with the previously approved 2021 ATRS Real Asset Pacing Schedule. Additionally, Fund IX may provide investors with various investment vehicles. Townsend recommends ATRS consult with its tax and legal counsel to determine the most appropriate vehicle for the Plan.

# Appendix



## Real Estate Investment Summary

# LANDMARK REAL ESTATE FUND IX

A fund of fund interests acquired in the secondary market

September 2021

# EXECUTIVE SUMMARY

## OVERVIEW

Date	Rating	Prior Fund Rating
September 2021	<b>Buy</b>	Buy

Landmark Partners, LLC (“Landmark”, or the “Firm”) is sponsoring Landmark Real Estate Fund IX (“Fund IX”, or the “Fund”) to continue the investment strategy it has employed throughout its fund series, acquiring institutionally held positions in real estate through secondary market transactions, forming a broadly diversified portfolio of underlying real estate exposures. The Fund return target is 13-16% net IRR utilizing up to 70% leverage.

The Townsend Group, an Aon Company. (“Townsend”) has reviewed and performed an in-depth analysis of the above categories which includes, but is not limited to:

- Retention of Limited Partners
- Institutional Investor Representation
- Management Company Ownership
- Consistency/ Volatility of Returns
- Write-offs
- Transaction Experience in Strategy
- Organization Expenses
- Management Fee
- Incentive Fees/Waterfall Distribution
- Fund Size
- Sponsor Commitment
- Ability to Create Value in Deals
- Valuation Discipline
- Reporting Transparency
- Back-Office Resources
- Investment Period
- Fund Term
- Key Person Provision
- Turnover/Tenure
- GP Attribution Concentration
- Fault Provisions
- Advisory Board
- Priority of Distributions
- Alignment of Partner Interest
- Firm Leadership

In addition, Aon Investments, USA’s Operational Due Diligence team has reviewed the Firm from an operating perspective and has given Landmark a Pass rating.

## RECOMMENDATION

Aon Investments, USA is satisfied with the strategy of the Fund and its appropriateness for ATRS. Additionally, we believe that the merits of this offering outweigh its risks. We recommend that ATRS invest \$50 million in the Fund to fulfill ATRS’ 2021 non-core real estate allocation, in accordance with the previously approved 2021 ATRS Real Asset Pacing Schedule. Additionally, Fund IX may provide investors with various investment vehicles. Townsend recommends ATRS consult with its tax and legal counsel to determine the most appropriate vehicle for the Plan.

### Sponsor:

<b>HQ Location</b>	Simsbury, CT	<b>Parent</b>	Ares Management Corporation*
<b>Ownership</b>	Public company parent (100%)	<b>Founded</b>	1989
<b>Gross AUM (Dec 31, 2020)</b>	\$28.7 billion	<b>Employees</b>	150

**Organization:** Landmark is comprised of several wholly owned affiliated investment advisors by asset class, including Landmark Realty Advisors LLC (the “Manager”), its advisor for Real Estate Fund IX. Asset class teams are supported by the Firm’s shared infrastructure, comprised of finance & operations, investor relations, legal & compliance, research, IT and HR.

\*The Firm announced its sale to Ares Management Corporation (NYSE:ARES) in March and closed in June 2021. Under the terms of the definitive agreement, Landmark becomes a wholly owned indirect subsidiary of Ares.

### Fund/Portfolio Characteristics:

<b>Vehicle Structure</b>	Closed-end commingled fund	<b>Risk Segment</b>	Opportunistic
<b>Targeted Size</b>	\$3.5 billion (no cap set yet)	<b>Sponsor Co-Invest</b>	1%

<b>Fund Term</b>	Longer of 10yrs or underlying fund wind-downs	<b>Investment Period</b>	4 years from the final close
<b>Avg Deal Size</b>	\$100M	<b>Typical Business Plan</b>	5-7 year hold to liquidation
<i>Fees</i>			
<b>Management Fee</b>	1% on Committed during the Investment Period; 1% on NAV thereafter.	<b>Incentive Fees</b>	12% subject to 8% pref and 60% GP/40% LP catch-up.

*Primary Strategy:* Acquire and hold a portfolio of real estate secondaries – mostly minority LP positions in US value-add and opportunistic commingled real estate funds, but may include positions in joint ventures, non-traded REIT vehicles, operating companies, as well as recaps of whole funds and special situation structured transactions. The portfolio of interests will be purposefully diversified by property type, geography, manager, and vintage year.

## SPONSOR

### OVERVIEW

*Background:* Founded in 1989 by Stanley Alfeld (1945-2005). The firm initially focused on PE starting with its inception in 1989, and expanded into real estate in 1996 when it bought the State of Connecticut’s real estate portfolio, and infrastructure in 2014. Mr. Alfeld sold down his ownership over time to employees to effectuate his retirement and the succession planning for the company.

The Firm’s partners sold a 55% interest to Religare Enterprises Ltd in 2010 for \$171M. In 2016, OM Asset Management (“OMAM”) bought the 55% interest along with 5% additional from partners for a 60% interest that cost \$240M. OMAM advised the scaling up of the business, increased marketing and capital raising efforts, and provided growth capital to support additional hiring. OMAM (now called the Brightsphere Investment Group) re-sold its interest along with the remaining 40% partners interest to ARES in March 2021<sup>1</sup>.

Ownership: Ares Management Corporation (NYSE: ARES)

- Initially a privately held Private Equity Credit firm founded in 1997; Listed on NYSE in 2014.
- Today, a Los Angeles headquartered global alternative asset manager; Comprised of 1,600 employees across 25 locations with \$227 billion in AUM (including Landmark). Operates across 5 groups: Credit, Private Equity, Real Estate, Secondaries, and a Strategic Initiatives group.

AUM (as of Dec 31, 2020): \$28.7 billion gross market value of committed capital.

- Private equity (66%), Real Estate (29%), and Infrastructure & Real Assets (5%)

Staffing: 148 people across asset classes and functions, operating out of six offices.

Private Equity	Real Estate	Research	Investor Relations/ Business Development	Finance & Operations	Legal & Compliance	IT & HR	Admins
23	16	22	14	47	5	9	12

Location:	Simsbury, CT (HQ)	Boston	Dallas	NYC	London	Hong Kong
Employees:	79	24	5	22	12	1
Functions:	Private Equity Real Estate Research Investor Relations Operations Compliance IT & HR	Private Equity Real Estate Research Investor Relations Operations IT	Private Equity Research Investor Relations	Private Equity Research Investor Relations Operations Legal	Private Equity Real Estate Investor Relations Compliance IT	Investor Relations

<sup>1</sup> OMAM/Brightspere acquired a 60% interest in 2016 for \$240M. It sold its interest to Ares in 2021 for \$690M in cash. Ares also bought out Brightspere’s remaining fund positions for \$34M and bought the 18 Landmark partners remaining 40% for \$390M.

Real Estate Team:

- 17 dedicated employees in Boston (11), Simsbury (2), and London (4)
- 4 Partners, 1 Managing Directors, 2 Directors, 2 VPs, 7 Associates, and 1 Analyst.

About Townsend Group – An Aon Company

*Founded in 1983, The Townsend Group provides custom real asset solutions that help clients worldwide achieve their unique investment goals. As an Aon company, The Townsend Group is now part of one of the top three outsourced chief investment officer (OCIO) providers in the world measured by global assets under management. Aon's Investment organization, including Townsend, manages more than \$130 billion of worldwide assets under management and has advised on more than \$240 billion of real estate assets.*

Disclaimer

This document has been prepared by Townsend Holdings LLC ("Townsend"), a division of Aon plc., and is appropriate solely for qualified investors. Nothing in this document should be treated as an authoritative statement of the law on any particular aspect or in any specific case. It should not be taken as financial advice and action should not be taken as a result of this document alone. The information contained herein is given as of the date hereof and does not purport to give information as of any other date. The delivery at any time shall not, under any circumstances, create any implication that there has been a change in the information set forth herein since the date hereof or any obligation to update or provide amendments hereto. The information contained herein is derived from proprietary and non-proprietary sources deemed by Townsend to be reliable and are not necessarily all inclusive. Reliance upon information in this material is at the sole discretion of the reader.

Past performance is no guarantee of future results.

This document does not constitute an offer of securities or solicitation of any kind and may not be treated as such, i) in any jurisdiction where such an offer or solicitation is against the law; ii) to anyone to whom it is unlawful to make such an offer or solicitation; or iii) if the person making the offer or solicitation is not qualified to do so.

Townsend is a registered investment adviser with the Securities and Exchange Commission and is a wholly owned, indirect subsidiary of Aon plc

**ARKANSAS TEACHER RETIREMENT SYSTEM  
1400 West Third Street  
Little Rock, Arkansas 72201**

**RESOLUTION  
No. 2021-66**

**Approving Investment in Landmark Real Estate Partners IX, L.P.**

**WHEREAS**, the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) is authorized to invest and manage trust assets for the benefits of its plan participants; and

**WHEREAS**, the ATRS Board has reviewed the recommendation of its real assets investment consultant, Aon Hewitt Investment Consulting, Inc., along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **Landmark Real Estate Partners IX, L.P.**, a closed-ended opportunistic fund investing in secondary interests of value added and opportunistic real estate funds.

**NOW, THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$50 million dollars (\$50,000,000.00)** in **Landmark Real Estate Partners IX, L.P.**; The total investment amount is to be determined by the real assets consultant and ATRS staff based upon the allocation available to ATRS and the overall investment objectives set by the ATRS Board; and

**FURTHER, BE IT RESOLVED**, That the ATRS staff is hereby authorized to take all necessary and proper steps to implement this investment, if acceptable terms are reached.

**Adopted this 6th day of December, 2021.**

---

**Mr. Danny Knight, Chair**  
**Arkansas Teacher Retirement System**



**TOWNSEND**<sup>®</sup>  
GROUP

an Aon company

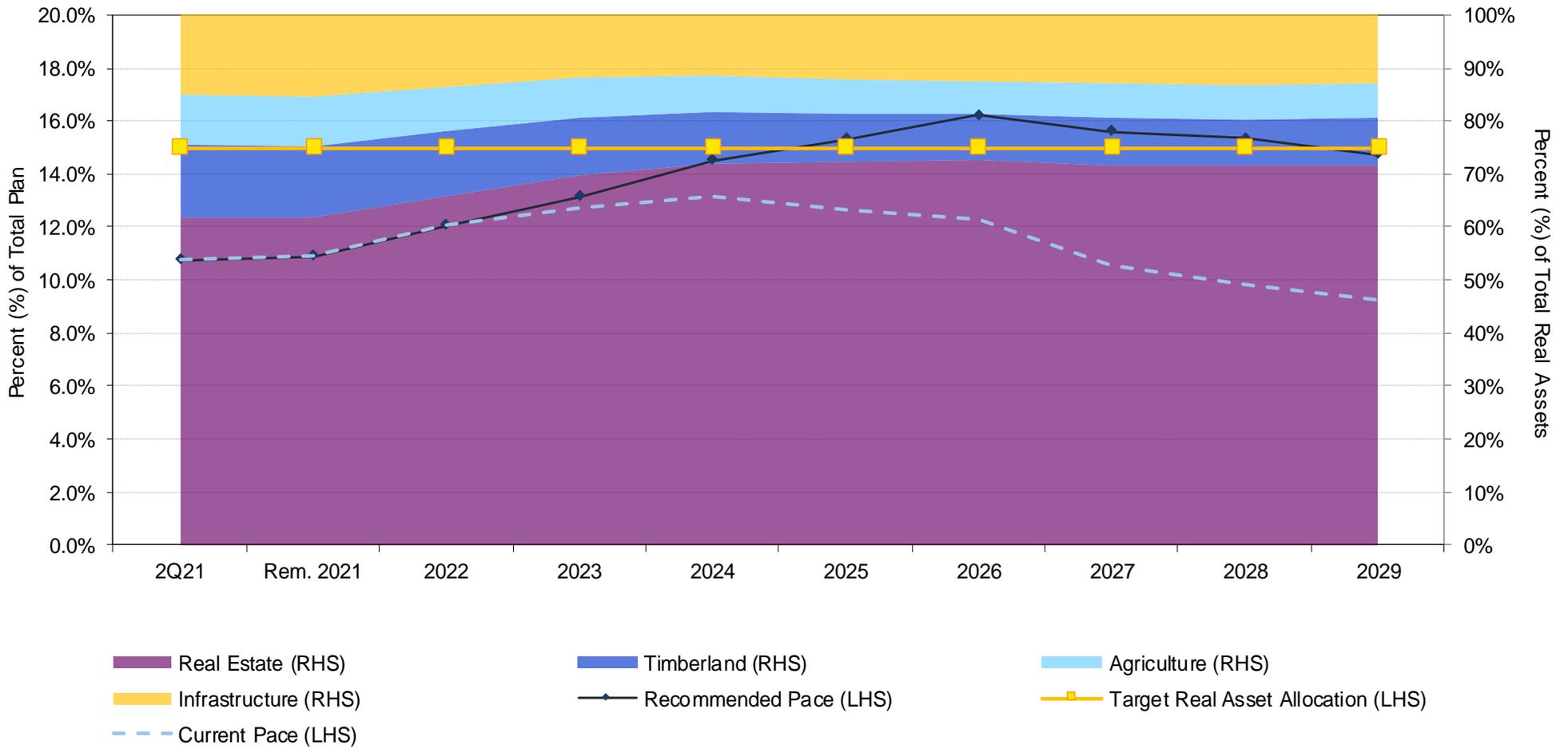
# Arkansas Teacher's Retirement System 2022 Annual Planning

PROPRIETARY & CONFIDENTIAL

December 2021

# Real Assets 2022 Pacing

## ATRS Real Assets Pacing



# Real Assets 2022 Pacing Commitment Overview

	Complete	2021	2022	2023	2024	2024 Forecasted Allocations	
Risk \ Reward of Profile	Non-Core (< 50%)	\$280	\$250	\$250	\$250	40%	30%-50% Target
	Core (50-70%)	\$0	\$250	\$200	\$150	60%	50%-70% Target
<b>Real Estate Total</b>			<b>\$500</b>	<b>\$450</b>	<b>\$400</b>	<b>100%</b>	
	Infrastructure (2%)	\$50	\$75	\$75	\$50	2%	
	Agriculture (1%)	\$0	\$0	\$0	\$0	1%	
	Timberland (2%)	\$0	\$0	\$0	\$0	1%	
<b>Real Assets Total</b>			<b>\$75</b>	<b>\$75</b>	<b>\$50</b>		

## 2022 Investment Themes

- **KEY INVESTMENT THEMES FOR 2022 INCLUDE:**

- Reposition the Core Real Estate portfolio for current market conditions
  - In 2021 approved repositioning the underperforming core portfolio with a \$140 million redemption from the JP Morgan Strategic Property Fund and proceeds to be equally distributed to the RREEF Core Plus Industrial Fund and the Morgan Stanley Prime Property Fund
- Strategically approach new commitments to Core Real Estate in accordance with Townsend's View of the World
  - UBS TPF redemption queue expected to be extinguished by year-end 2023
  - Reduce allocation to COVID-19 impacted property types such as Retail and Office
  - Increase allocation to property types with secular tailwinds such as Apartments and Industrial
- In alignment with Townsend's View of the World, increase exposure to blind pooled funds, such as Non-Core Real Estate, in order to capitalize on secular trends and dislocation from the COVID-19 pandemic
  - Commit capital to fund managers opportunistically investing with a higher risk and return profile
  - Search for real estate opportunities looking to capitalize on property types with secular tailwinds such as Apartments and Industrial
  - As a result of a growing plan and Real Estate portfolio, increase commitments sizes within the range of \$50 million to \$90 million, leading to three or four total commitments for ease of administration
- Continue to search for US focused infrastructure managers to bring the infrastructure portfolio within compliance

# Arkansas Teacher Retirement System Private Equity Portfolio Review

June 30, 2021

Section	Page	Section	Page
<b>I Executive Summary</b>		<b>VII Glossary</b>	
Executive Summary	4	Glossary	49
<b>II Portfolio Overview</b>		<b>VIII End Notes</b>	
Portfolio Summary	6	End Notes	54
Portfolio Summary	7		
Benchmark Summary	8		
Annual Cash Flow	10		
Capital Account Change Since Prior Quarter	11		
Recent Commitments	12		
<b>III Market Update</b>			
Fundraising Activity	14		
Investment Activity	15		
Public and Private Pricing	16		
Exit Activity	17		
Public and Private Performance	18		
<b>IV Performance Analysis</b>			
Investment Performance by Strategy	20		
Investment Performance by Vintage Year	26		
Performance by Vintage Year and Quartile Group	33		
<b>V Diversification Analysis</b>			
Exposure By Vintage Year	40		
Exposure By Strategy and Type	41		
Holdings by Region and Industry	42		
Holdings by Stage and Size	43		
Holdings by Region and Industry (ex Fund Holdings)	44		
Holdings by Stage and Size (ex Fund Holdings)	45		
<b>VI Recent Activity</b>			
Annual Commitments	47		

---

# Executive Summary

---

### Portfolio Summary

Since establishing the private equity program in 1996, Arkansas Teacher Retirement System (“ATRS”) has committed approximately \$5.5 billion to 88 primary funds, 26 fund-of-funds, 1 co-investment fund, and 12 direct investments through June 30, 2021. Of the \$5.5 billion committed, 88% has been contributed, 112% of contributed capital has been returned, and a total value of 1.7 times contributed capital has been generated. ATRS’ portfolio has outperformed the Dow Jones U.S. Total Stock Market Index equivalent (“PME”) by 390 basis points since inception.

### Investment Activity

For the six months ended June 30, 2021, ATRS made capital contributions of approximately \$180.4 million and received distributions of \$579.1 million, for net distributions of \$398.7 million.

### Commitment Activity

Since January 1, 2021, ATRS closed on \$30.0 million commitments to Greenbriar V, Alpine Investors VIII, and Revelstoke III.

Additionally, ATRS approved \$30.0 million commitments to FP CF Access II, FP Venture XIV, Clearlake VII, and Bison VI, which remain pending.

### Market Commentary

#### U.S. Private Equity

U.S. PE markets experienced a relatively typical first two quarters of investment activity, tracking closely the average deal value and deal count of the prior five-year period. Fundraising markets are also robust. After a dip last year, 2021 is on track to eclipse the record high of \$332 billion raised in 2019. While median leverage has crept up to nearly 6x EBITDA, all-in purchase prices have remained relatively steady at or near 11x EBITDA since 2019.

#### U.S. Venture Capital

Venture markets remain red-hot with half-year investment and fundraising activity approaching 2020 full-year totals, and exit

activity already exceeding 2020 totals by a wide margin. Investment activity is on pace to grow 17% year-over-year in deal count terms vs. 83% in dollar terms. \$72 billion raised in 2018 topped the prior record by nearly 50%, and 2021 fundraising has already eclipsed that level. 1H 2021 exit activity has generated 3x the proceeds generated in all of 2018.

*Franklin Park*

October 12, 2021

---

## Portfolio Overview

---

## Portfolio Summary



Group	Num.	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	Remaining Value (%)	Exposure (\$)	DPI	TVPI	Net IRR
<b>By Vehicle</b>											
1996-2000: Legacy Portfolio	13	1,106,390,461	1,070,676,238	0	1,639,782,207	1,394,163	0.0%	1,394,163	1.5 x	1.5 x	9.2%
2005-2006: CSFB Portfolio	2	654,300,000	688,202,653	64,976,207	1,002,087,301	122,714,970	4.3%	187,691,177	1.5 x	1.6 x	9.1%
Post 2006 Fund Portfolio	100	3,223,323,718	2,545,218,840	1,116,017,407	2,323,748,225	2,465,964,872	86.1%	3,581,982,278	0.9 x	1.9 x	18.1%
Big River Steel	8	257,880,449	257,940,356	0	409,830,332	21,775,211	0.8%	21,775,211	1.6 x	1.7 x	14.5%
Blue Oak Arkansas	1	18,000,000	19,740,000	0	5,385,136	0	0.0%	0	0.3 x	0.3 x	-34.8%
Highland LLC	2	218,244,727	234,114,727	0	31,674,525	211,174,169	7.4%	211,174,169	0.1 x	1.0 x	2.1%
GTLA Holdings	1	20,000,000	20,000,000	0	0	40,000,000	1.4%	40,000,000	0.0 x	2.0 x	27.7%
<b>Total</b>	<b>127</b>	<b>5,498,139,355</b>	<b>4,835,892,815</b>	<b>1,180,993,614</b>	<b>5,412,507,725</b>	<b>2,863,023,385</b>	<b>100.0%</b>	<b>4,044,016,998</b>	<b>1.1 x</b>	<b>1.7 x</b>	<b>11.7%</b>
<b>By Fund Type</b>											
Co-Investment Fund	1	263,823,718	282,545,213	180,031,258	221,350,049	287,696,474	10.0%	467,727,732	0.8 x	1.8 x	19.6%
Fund-of-Funds	26	1,394,300,000	1,117,389,121	371,905,394	1,331,519,637	986,452,183	34.5%	1,358,357,577	1.2 x	2.1 x	13.2%
Operating Company	12	514,125,176	531,795,084	0	446,889,992	272,949,380	9.5%	272,949,380	0.8 x	1.4 x	10.8%
Primary Fund	88	3,325,890,461	2,904,163,398	629,056,962	3,412,748,046	1,315,925,348	46.0%	1,944,982,309	1.2 x	1.6 x	11.0%
<b>Total</b>	<b>127</b>	<b>5,498,139,355</b>	<b>4,835,892,815</b>	<b>1,180,993,614</b>	<b>5,412,507,725</b>	<b>2,863,023,385</b>	<b>100.0%</b>	<b>4,044,016,998</b>	<b>1.1 x</b>	<b>1.7 x</b>	<b>11.7%</b>

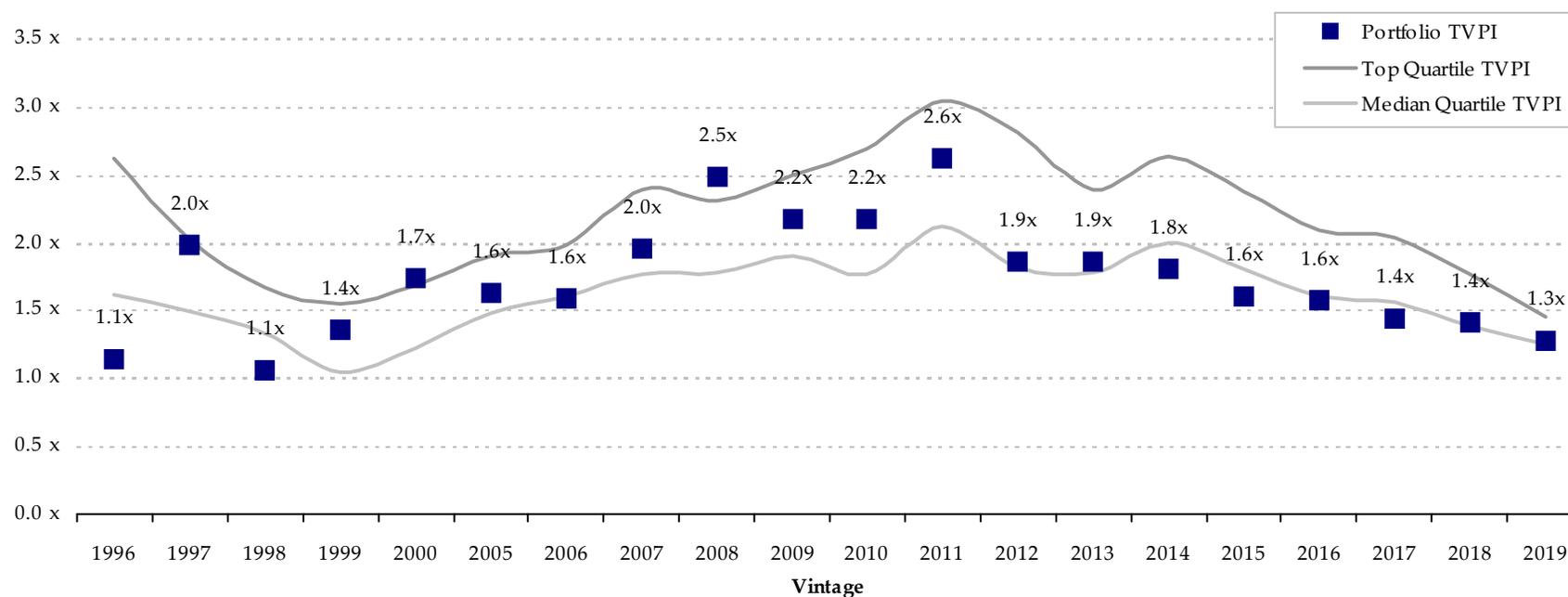
## Portfolio Summary



Group	Num.	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	Remaining Value (%)	Exposure (\$)	DPI	TVPI	Net IRR
<b>By Strategy</b>											
Buyout	63	2,512,390,461	2,100,191,603	568,799,238	2,548,443,050	1,083,938,789	37.9%	1,652,738,027	1.2 x	1.7 x	11.7%
Distressed Debt	3	100,000,000	93,881,464	27,977,137	86,605,131	52,189,274	1.8%	80,166,411	0.9 x	1.5 x	7.7%
Growth Equity	3	120,000,000	91,504,590	31,357,033	206,960,847	51,005,227	1.8%	82,362,260	2.3 x	2.8 x	21.0%
Hard Assets	12	545,744,727	544,679,053	38,886,008	217,689,292	382,579,828	13.4%	421,465,835	0.4 x	1.1 x	3.8%
Infrastructure	8	270,880,449	272,676,670	0	406,990,177	21,775,211	0.8%	21,775,211	1.5 x	1.6 x	12.3%
Mezzanine	7	285,000,000	189,299,385	40,631,947	218,624,321	32,558,317	1.1%	73,190,264	1.2 x	1.3 x	10.1%
Multi-Strategy	6	974,123,718	1,037,735,900	245,490,465	1,253,394,657	414,503,231	14.5%	659,993,696	1.2 x	1.6 x	8.8%
Special Assets	1	30,000,000	8,497,598	21,502,402	3,195	6,536,625	0.2%	28,039,027	0.0 x	0.8 x	-14.3%
Structured Capital	3	85,000,000	82,941,536	24,080,777	54,540,531	55,187,868	1.9%	79,268,645	0.7 x	1.3 x	11.3%
Turnaround	8	210,000,000	152,664,237	84,743,659	147,136,733	95,167,134	3.3%	179,910,793	1.0 x	1.6 x	15.3%
Venture Capital	13	365,000,000	261,820,777	97,524,948	272,119,792	667,581,881	23.3%	765,106,829	1.0 x	3.6 x	27.6%
<b>Total</b>	<b>127</b>	<b>5,498,139,355</b>	<b>4,835,892,815</b>	<b>1,180,993,614</b>	<b>5,412,507,725</b>	<b>2,863,023,385</b>	<b>100.0%</b>	<b>4,044,016,998</b>	<b>1.1 x</b>	<b>1.7 x</b>	<b>11.7%</b>
<b>By Sub-Asset Class</b>											
Corporate Finance	102	4,619,014,179	4,042,276,954	1,083,468,666	4,693,497,941	1,922,492,124	67.1%	3,005,960,789	1.2 x	1.6 x	10.9%
Direct Investments	12	514,125,176	531,795,084	0	446,889,992	272,949,380	9.5%	272,949,380	0.8 x	1.4 x	10.8%
Venture Capital	13	365,000,000	261,820,777	97,524,948	272,119,792	667,581,881	23.3%	765,106,829	1.0 x	3.6 x	27.6%
<b>Total</b>	<b>127</b>	<b>5,498,139,355</b>	<b>4,835,892,815</b>	<b>1,180,993,614</b>	<b>5,412,507,725</b>	<b>2,863,023,385</b>	<b>100.0%</b>	<b>4,044,016,998</b>	<b>1.1 x</b>	<b>1.7 x</b>	<b>11.7%</b>

- Remaining Value is defined as the investor's value as reported by the fund's manager.
- Exposure is defined as the sum of the investor's Remaining Value plus Unfunded Commitment.
- DPI is the ratio of Distributed Capital to Contributed Capital.
- TVPI is the ratio of Distributed Capital plus Remaining Value to Contributed Capital.
- Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
- Results include fully liquidated investments (if applicable).
- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date.

TVPI by Vintage



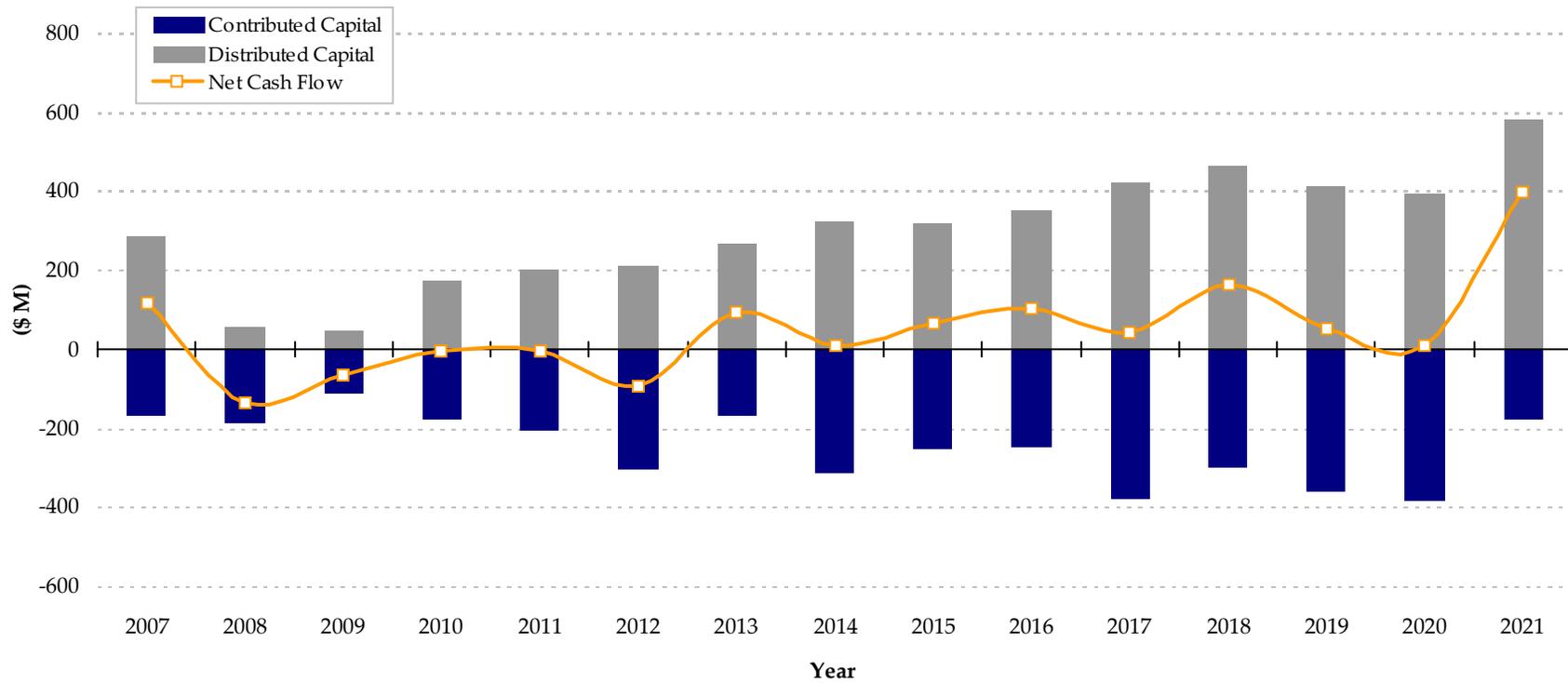
Net IRR vs. PME vs. Cambridge Associates: U.S. All Private Equity

Calculation Set	1-Year	3-Year	5-Year	10-Year	Inception
Aggregate Portfolio	33.8%	18.7%	19.5%	16.1%	11.7%
DJ US TSM TR Index* Public Market Equivalent	44.5%	18.2%	17.5%	14.2%	7.8%
Cambridge Associates: U.S. All Private Equity	56.2%	22.7%	19.3%	15.4%	N/A
Post 2006 Fund Portfolio	54.6%	25.2%	22.0%	18.6%	18.1%
DJ US TSM TR Index* Public Market Equivalent (Post 2006 Fund Portfolio)	44.0%	18.2%	17.5%	14.8%	14.5%

\* The Dow Jones U.S. Total Stock Market Total Return Index measures all U.S. equity securities that have readily available prices and is calculated with dividend reinvestment.

- 
- Benchmark TVPI represents vintage year first quartile per Cambridge Associates, as of March 31, 2021. The portfolio is compared to data compiled across multiple strategies including U.S. Buyout, Growth Equity, Venture Capital, Mezzanine, Distressed, Fund-of-funds, and Secondary funds.
  - Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
  - The public market equivalent (PME) represents the performance of a public market index expressed in terms of an IRR, using the same cash flows and timing as the investor's investment activity in private equity. The PME serves as a proxy for the return the investor could have achieved by investing in the public market. The PME return assumes cash flows are invested at the end of each day.
  - Cambridge Associates: U.S. All Private Equity reflects the pooled net IRR based on data compiled from Cambridge Associates as of March 31, 2021.
  - Benchmark data is not available (N/A).

# Annual Cash Flow

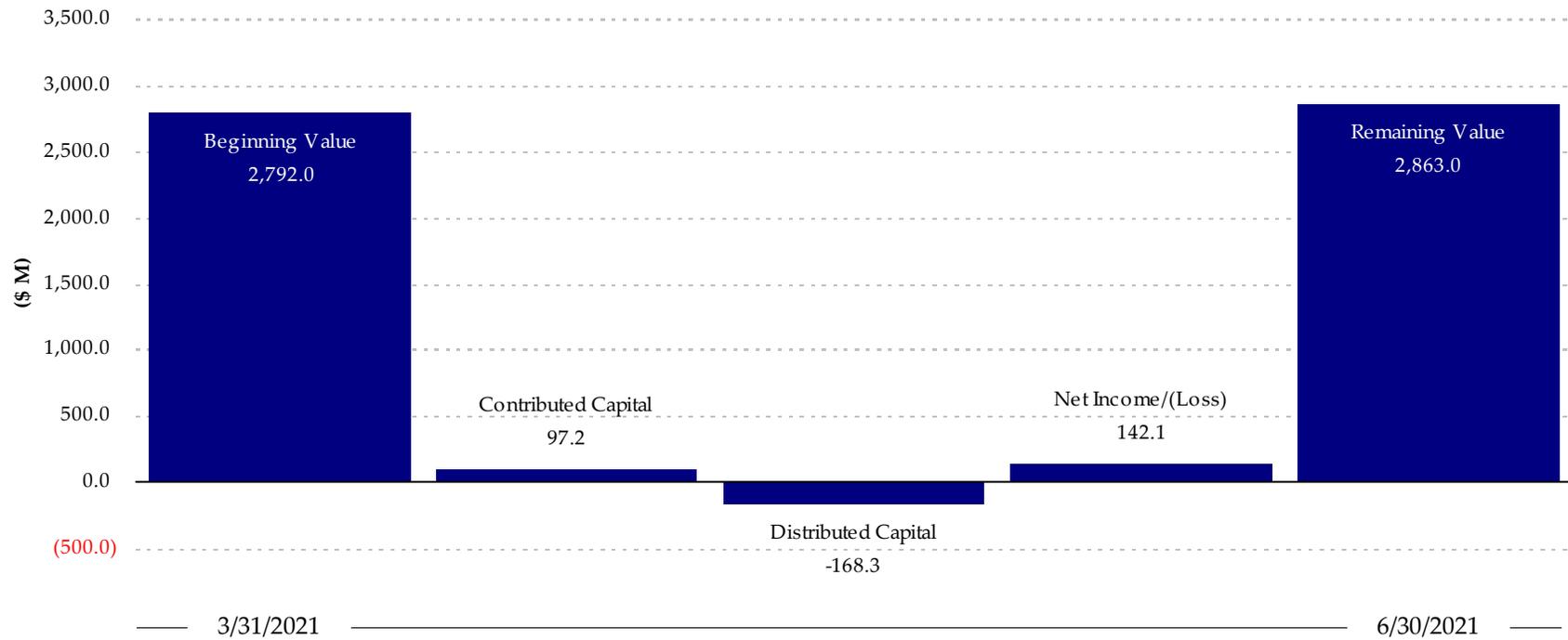


2021 (\$)		
Distributed	Contributed	Net Cash Flow
579,071,482	-180,379,069	398,692,413

▫ Cash flow data was compiled through the Report Date.

## Capital Account Change Since Prior Quarter

### Quarterly Portfolio Activity



Percent Change in Value	5.1%
-------------------------	------

- Beginning Value represents the aggregate Remaining Value of the portfolio as of the prior quarter-end.
- Percent Change in Value is calculated by dividing Net Income / (Loss) by Beginning Value.

## Recent Commitments



### Commitments for Year Ended December 31, 2020

Fund	Strategy	Date	Commitment (\$)
Thoma Bravo Explore I	Buyout	Jan 2020	20,000,000
FP Venture XIII	Venture Capital	Feb 2020	60,000,000
BV X	Buyout	Feb 2020	30,000,000
FP Intl X	Buyout	Mar 2020	30,000,000
Greyrock V	Mezzanine	Apr 2020	35,000,000
Thoma Bravo XIV	Buyout	May 2020	20,000,000
Thoma Bravo Discover III	Buyout	May 2020	20,000,000
LLR VI	Growth Equity	Sep 2020	30,000,000
<b>Total</b>			<b>245,000,000</b>

### Year to Date Commitments as of October 12, 2021

Fund	Strategy	Date	Commitment (\$)
Greenbriar V	Buyout	Feb 2021	30,000,000
Alpine Investors VIII	Buyout	Aug 2021	30,000,000
Revelstoke III	Buyout	Oct 2021	30,000,000
<b>Total</b>			<b>90,000,000</b>

### Approved and Pending Commitments as of October 12, 2021

Fund	Strategy	Date	Target Commitment (\$)
FP CF Access II	Buyout	N/A	30,000,000
FP Venture XIV	Venture Capital	N/A	30,000,000
Clearlake VII	Buyout	N/A	30,000,000
Bison VI	Structured Capital	N/A	30,000,000

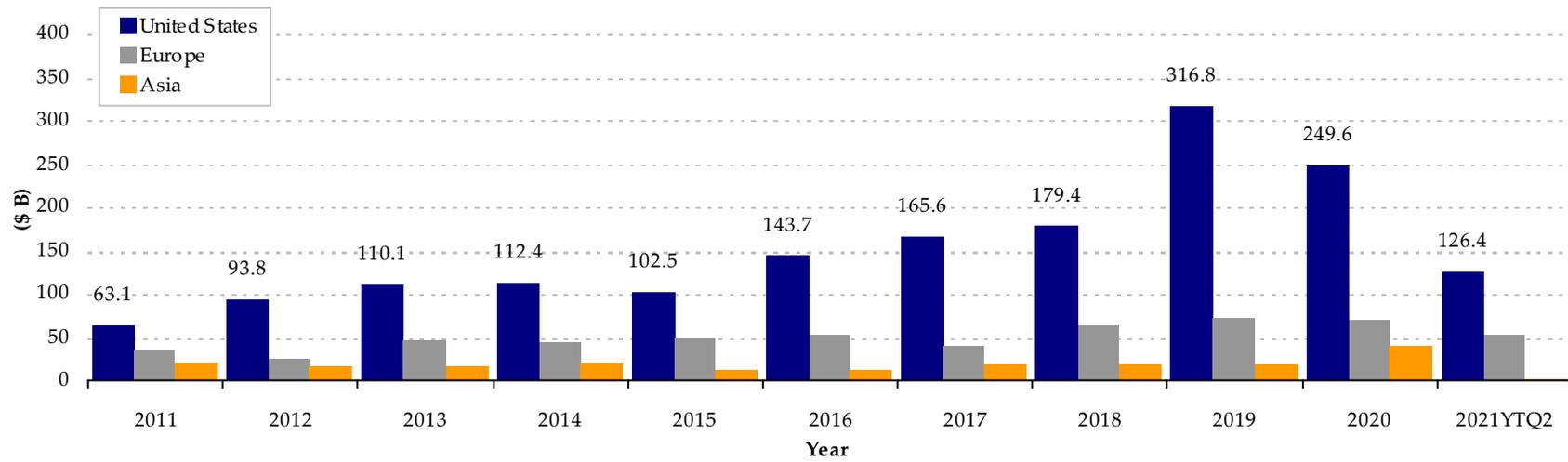
◦ Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.

---

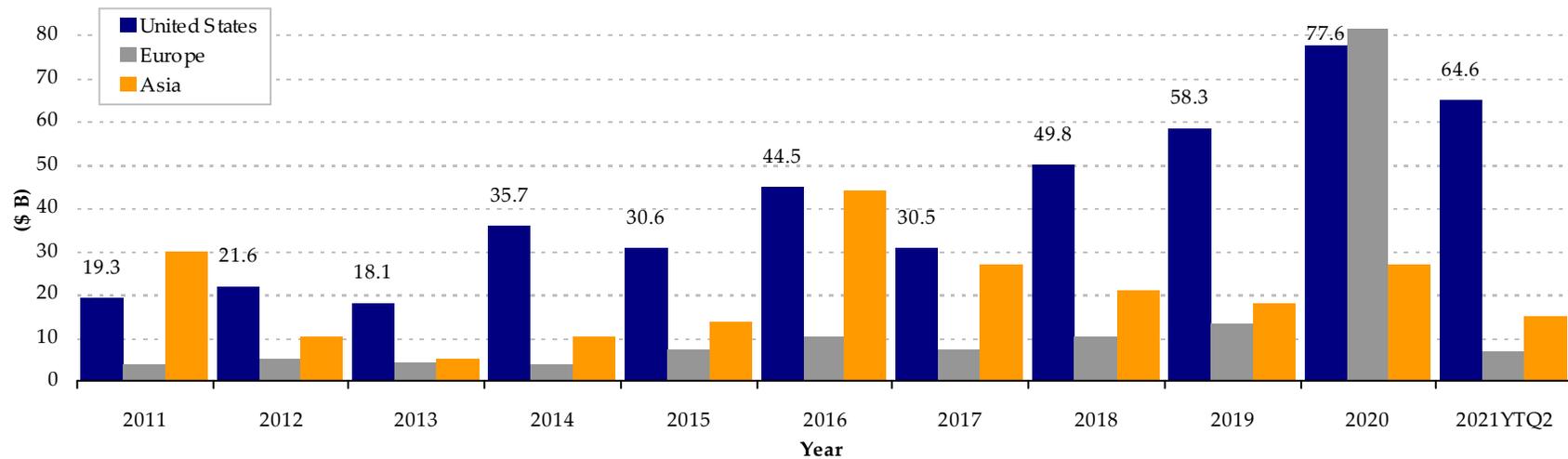
# Market Update

---

Buyout Funds

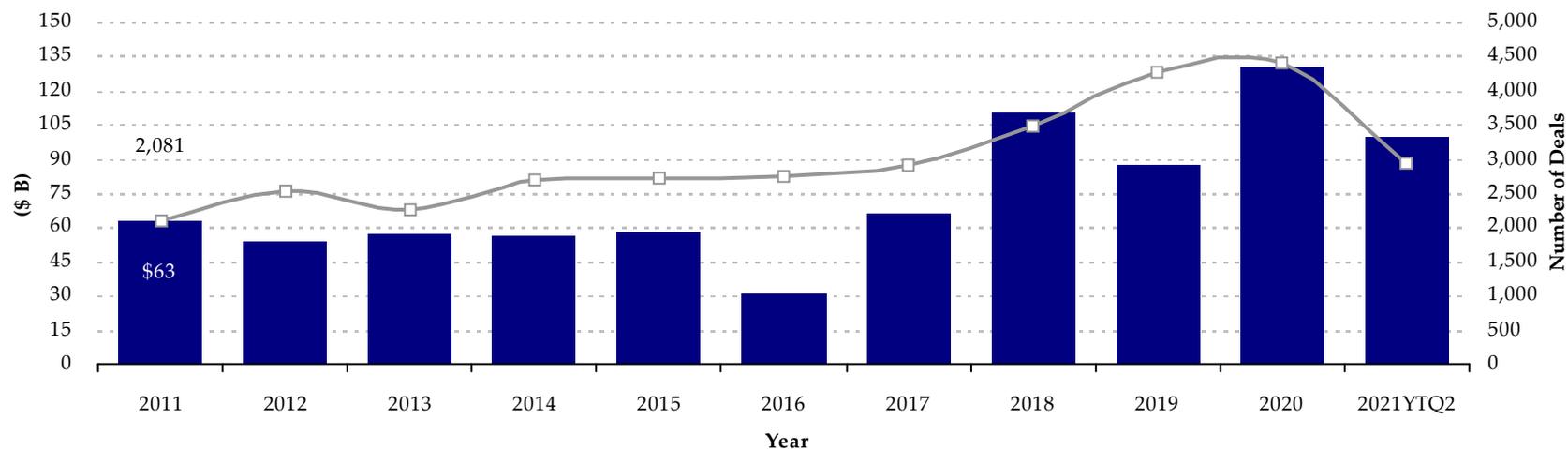


Venture Funds

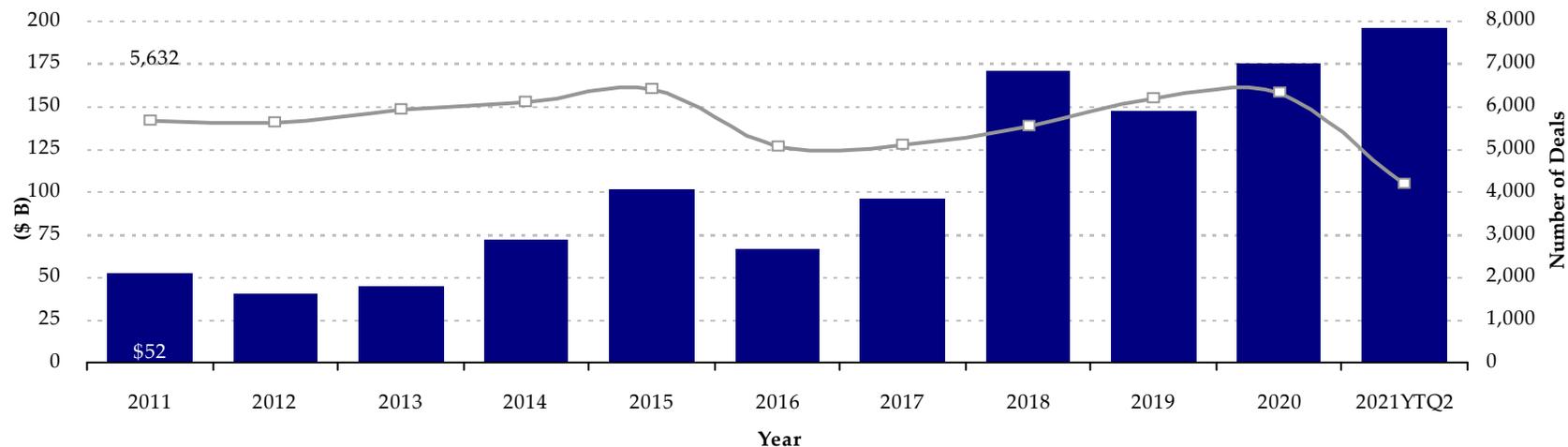


Source: Thomson One Private Equity.  
Data compiled through 2Q 2021.

U.S. Buyout

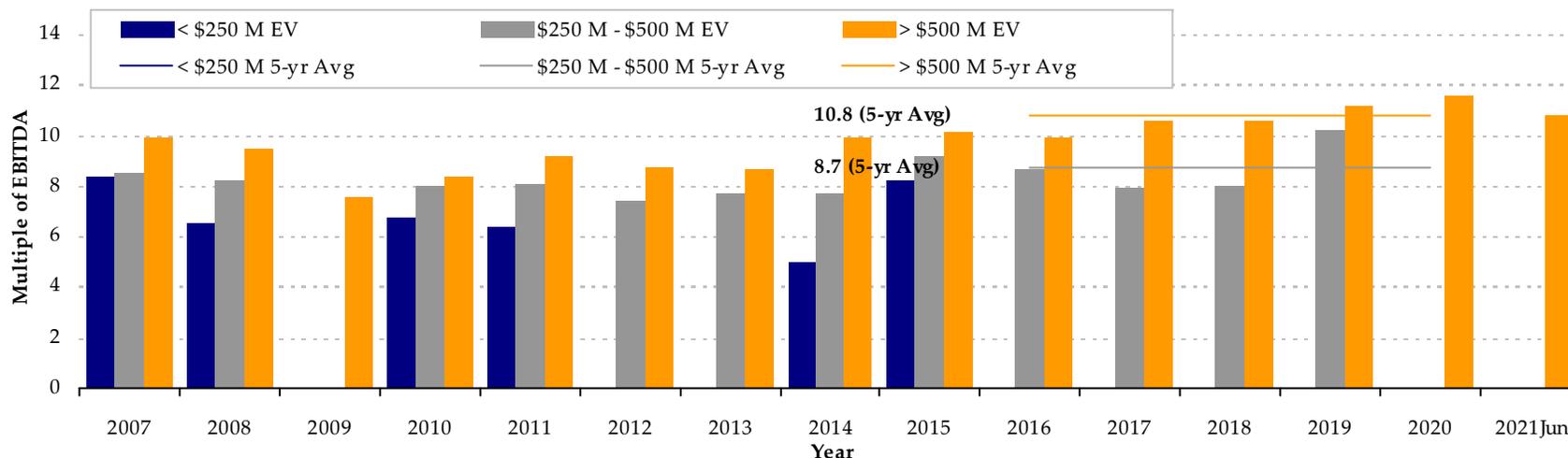


U.S. Venture

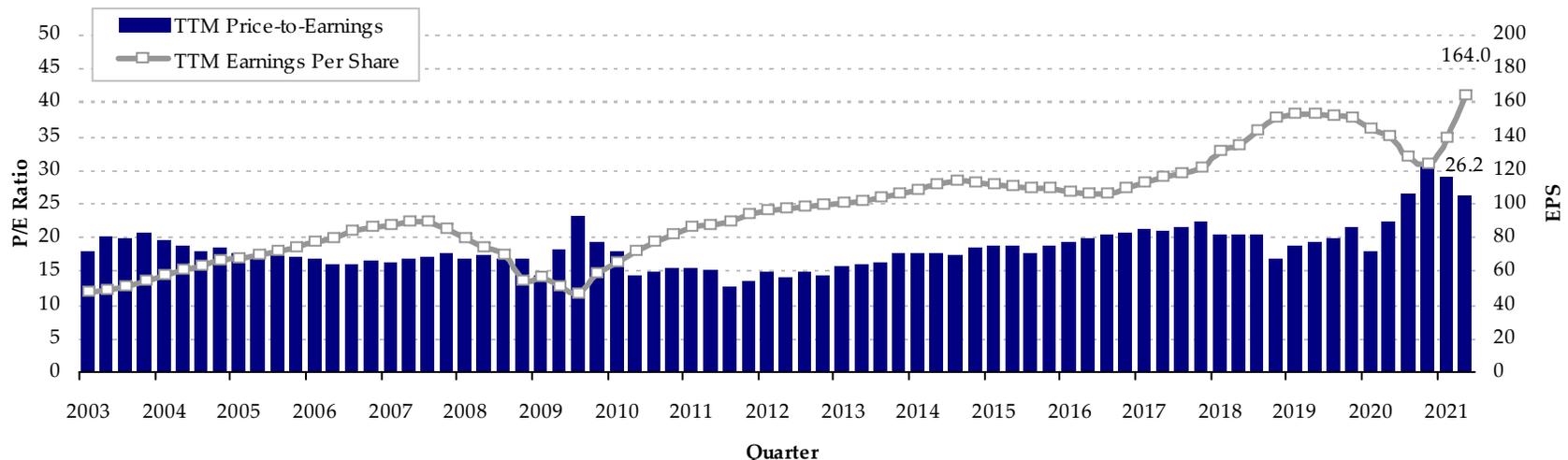


- Source: Thomson One Private Equity.
- Data compiled through 2Q 2021.

U.S. LBO Pricing Multiples

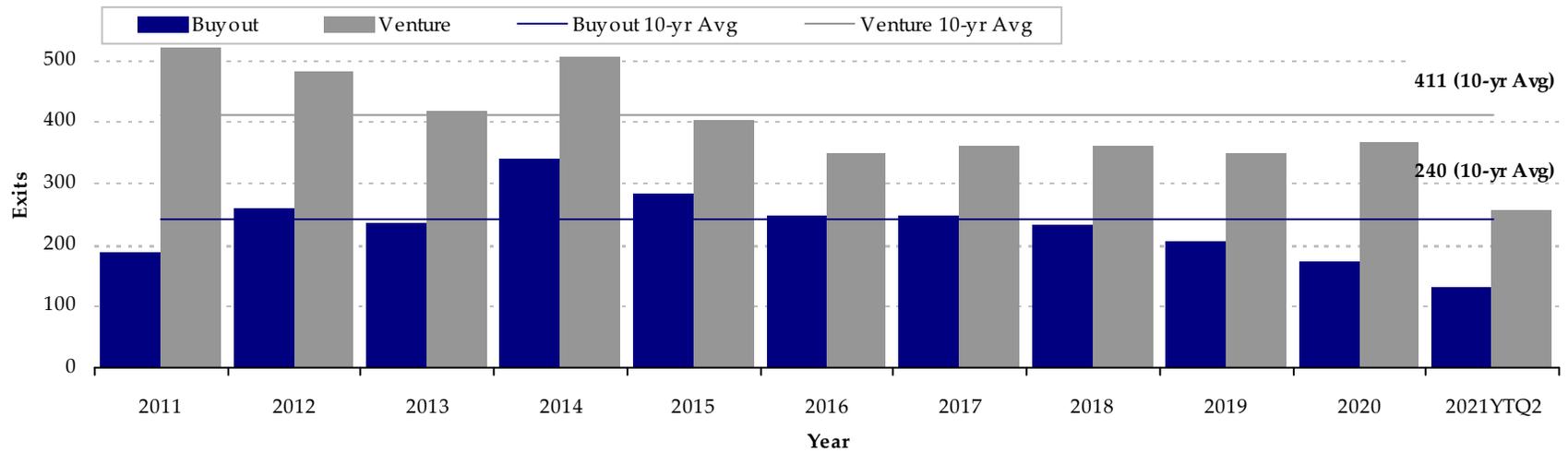


S&P 500 Valuation and Earnings

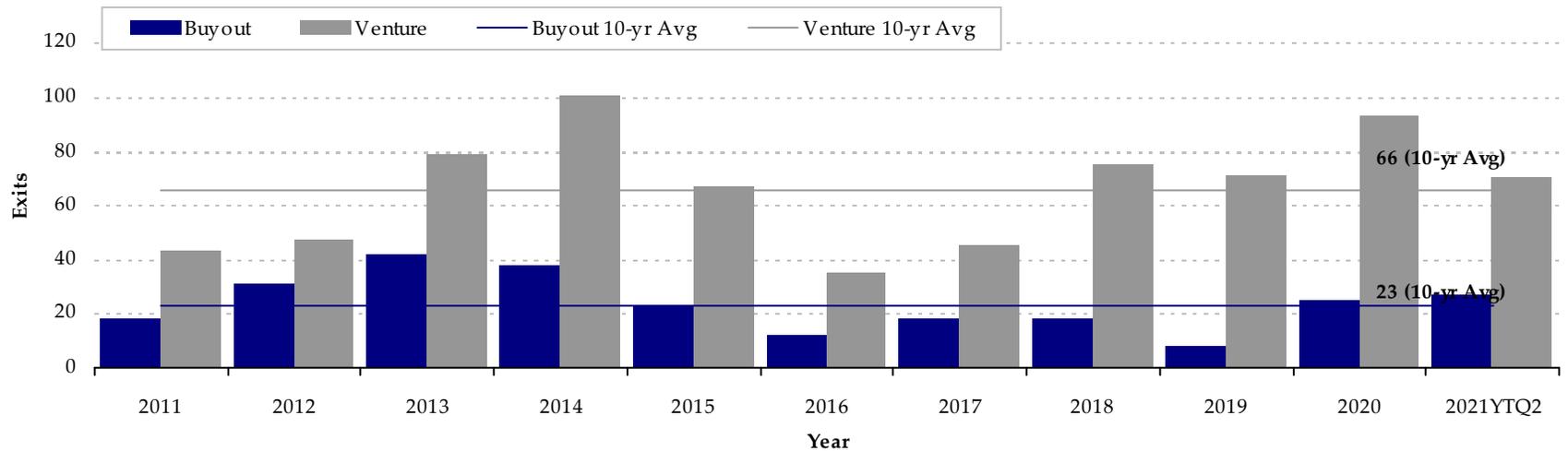


Source: Standard & Poor's Leveraged Commentary.

U.S. Mergers and Acquisitions



U.S. Initial Public Offerings



- Source: Thomson One Private Equity.
- Data compiled through 2Q 2021.

## Vintage Returns

Group	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
U.S. All PE Median	13.2%	17.0%	15.8%	14.6%	18.9%	19.8%	20.1%	25.0%	24.5%	28.1%
U.S. All PE Top Quartile	22.1%	24.0%	22.9%	21.9%	27.3%	27.9%	30.6%	39.9%	42.3%	53.7%
U.S. Buyout Median	18.6%	18.8%	16.3%	15.3%	20.6%	20.3%	20.1%	32.1%	19.5%	18.3%
U.S. Buyout Top Quartile	23.4%	24.2%	24.8%	22.9%	26.2%	28.3%	28.9%	40.9%	31.0%	47.1%
U.S. Energy Median	6.5%	-1.9%	-1.1%	4.3%	6.4%	5.8%	4.9%	3.4%	5.8%	-4.1%
U.S. Energy Top Quartile	19.4%	6.2%	4.8%	14.1%	11.1%	10.0%	9.5%	9.7%	15.1%	15.2%
U.S. Real Assets Median	11.7%	13.5%	10.1%	9.5%	9.1%	9.2%	9.5%	9.2%	10.3%	3.6%
U.S. Real Assets Top Quartile	17.5%	19.2%	14.4%	15.1%	12.8%	13.2%	12.4%	13.9%	15.0%	17.2%
U.S. Real Estate Median	13.4%	15.2%	11.3%	10.6%	10.2%	11.3%	10.6%	9.9%	10.7%	2.3%
U.S. Real Estate Top Quartile	18.8%	20.9%	15.1%	15.9%	13.3%	13.8%	14.1%	14.8%	15.1%	11.2%
U.S. Venture Median	15.8%	19.2%	17.6%	16.4%	24.1%	20.3%	26.5%	27.1%	32.3%	32.1%
U.S. Venture Top Quartile	27.9%	25.8%	27.4%	25.0%	35.7%	28.9%	36.5%	45.9%	52.8%	57.9%

▫ Source: Cambridge Associates.

▫ Data compiled through March 31, 2021.

---

# Performance Analysis

---

# Investment Performance by Strategy



Investment	Vintage	Fund Size	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>Buyout</b>									
21st Century Group I *	2000	\$80,365,451	25,000,000	27,141,173	0	22,841,928	0	0.8 x	-3.8%
Advent GPE VI-A	2008	\$9,000,000,000	40,000,000	40,167,228	0	80,492,730	4,150,264	2.1 x	16.7%
Altaris Constellation	2017	\$165,000,000	20,000,000	16,270,591	5,543,214	7,480,371	28,700,029	2.2 x	25.3%
Altaris IV	2018	\$1,085,000,000	24,000,000	18,360,095	5,639,905	0	30,652,137	1.7 x	29.9%
Altus Capital II	2010	\$200,000,000	20,000,000	18,997,669	3,938,519	21,918,807	8,318,397	1.6 x	12.1%
American Industrial VI	2016	\$1,845,000,000	20,000,000	22,579,389	4,537,292	10,763,077	23,300,474	1.5 x	14.5%
American Industrial VII	2019	\$3,075,000,000	30,000,000	14,745,648	17,343,467	2,089,115	12,826,525	1.0 x	3.0%
Arlington IV	2016	\$700,000,000	23,000,000	23,122,269	1,919,395	13,753,581	32,996,869	2.0 x	29.0%
Arlington V	2019	\$1,692,000,000	25,000,000	9,078,626	15,921,374	0	11,400,478	1.3 x	44.3%
Boston Ventures VII	2006	\$434,507,010	50,000,000	43,016,769	8,258,947	44,748,285	5,377,672	1.2 x	2.8%
BV IX	2017	\$750,000,000	30,000,000	26,412,576	8,651,389	9,212,748	31,779,242	1.6 x	29.6%
BV VIII	2012	\$486,800,000	30,000,000	27,215,697	3,065,489	41,556,375	19,127,005	2.2 x	50.2%
BV X	2020	\$1,122,000,000	30,000,000	5,709,052	24,290,947	0	5,212,657	0.9 x	NMF
Clearlake V	2018	\$3,623,125,000	30,000,000	31,583,005	8,202,569	25,412,659	46,455,241	2.3 x	55.7%
Clearlake VI	2020	\$7,068,000,000	30,000,000	14,556,094	15,531,378	250,159	21,190,727	1.5 x	NMF
Court Square III	2012	\$3,173,449,997	40,000,000	43,586,703	2,634,524	38,479,936	38,960,616	1.8 x	18.6%
Cypress MBP II *	1999	\$2,376,060,606	50,000,000	52,304,562	0	50,840,220	0	1.0 x	-0.5%
DLJ MBP III *	2000	\$5,304,941,647	200,000,000	215,345,711	0	458,746,671	0	2.1 x	19.4%
Doughty Hanson III *	1997	\$2,660,000,000	100,000,000	99,374,207	0	197,482,184	0	2.0 x	13.5%
DW Healthcare III	2012	\$268,147,500	40,000,000	37,138,408	2,861,592	56,029,790	15,639,285	1.9 x	18.5%
DW Healthcare IV	2016	\$294,274,000	30,000,000	29,106,500	2,422,466	20,631,745	29,577,621	1.7 x	26.0%
DW Healthcare V	2019	\$611,000,000	30,000,000	9,826,274	20,173,726	0	8,417,214	0.9 x	-11.8%
FP CF Access	2020	\$146,408,500	90,000,000	17,319,711	72,787,884	116,662	19,356,391	1.1 x	NMF
FP Intl 2011	2011	\$45,000,000	25,000,000	23,027,778	2,334,744	24,134,624	14,730,609	1.7 x	10.4%
FP Intl 2012	2012	\$70,000,000	25,000,000	17,071,429	8,150,384	11,753,922	13,085,376	1.5 x	9.5%
FP Intl 2013	2013	\$97,000,000	20,000,000	13,814,433	6,337,857	3,075,158	19,653,672	1.6 x	11.2%
FP Intl 2014	2014	\$97,000,000	25,000,000	16,005,155	9,137,203	8,055,913	16,930,276	1.6 x	13.9%
FP Intl 2015	2015	\$113,000,000	25,000,000	17,367,257	7,744,152	4,774,142	22,943,002	1.6 x	16.4%
FP Intl 2016	2016	\$97,000,000	25,000,000	17,190,722	7,942,461	2,638,230	20,865,301	1.4 x	12.0%
FP Intl 2017	2017	\$98,000,000	25,000,000	15,816,326	9,320,011	2,763,894	29,131,483	2.0 x	38.6%
FP Intl 2018	2018	\$65,500,000	25,000,000	19,083,969	6,103,476	0	25,776,014	1.4 x	29.1%
FP Intl 2019	2019	\$70,500,000	30,000,000	8,510,638	21,684,841	0	11,648,001	1.4 x	47.2%
FP Intl X	2021	\$139,000,000	60,000,000	2,158,273	57,861,226	0	2,035,207	0.9 x	NMF
Greenbriar V	2021	\$1,618,737,475	30,000,000	0	30,000,000	0	174,128	N/A	NMF
HMTF III *	1996	\$2,458,754,795	76,743,018	76,799,039	0	87,834,289	0	1.1 x	1.8%
HMTF IV *	1998	\$4,023,532,721	100,000,000	98,010,015	0	67,130,479	0	0.7 x	-6.1%

## Investment Performance by Strategy



Investment	Vintage	Fund Size	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
HMTF V *	2000	\$1,552,965,194	207,366,433	205,198,451	0	378,102,491	0	1.8 x	17.6%
JF Lehman III	2011	\$575,500,000	39,000,000	44,012,406	5,309,096	52,042,688	15,152,788	1.5 x	10.7%
JF Lehman IV	2016	\$833,000,000	30,000,000	28,747,093	1,252,907	29,033,089	42,940,161	2.5 x	37.0%
JF Lehman V	2020	\$1,350,000,000	30,000,000	14,108,657	15,891,343	0	13,136,227	0.9 x	NMF
Mason Wells III	2010	\$525,000,000	30,000,000	28,553,580	1,446,420	83,157,926	2,610,789	3.0 x	20.6%
Oak Hill I *	1999	\$1,600,000,000	50,000,000	50,786,497	0	91,264,962	0	1.8 x	10.6%
One Rock II	2017	\$964,000,000	30,000,000	26,377,212	5,741,192	3,906,746	36,950,352	1.5 x	20.1%
Riverside IV	2009	\$406,091,370	40,000,000	31,433,665	0	74,584,420	234,437	2.4 x	21.3%
Riverside V	2013	\$531,833,200	35,000,000	36,114,152	680,265	24,247,705	27,576,885	1.4 x	9.1%
Riverside VI	2019	\$327,916,667	30,000,000	13,996,370	16,003,630	0	13,888,006	1.0 x	-0.6%
Second Cinven *	1998	£904,547,000	65,281,010	65,281,010	0	104,700,661	0	1.6 x	9.3%
Siris III	2015	\$1,810,000,000	25,000,000	30,925,309	4,137,215	24,093,067	18,868,182	1.4 x	14.1%
Siris IV	2019	\$3,452,454,000	30,000,000	16,809,292	14,977,399	2,481,341	20,617,002	1.4 x	20.2%
SK Capital V	2018	\$2,013,000,000	30,000,000	18,796,524	11,296,802	1,119,767	23,466,172	1.3 x	22.9%
Thoma Bravo Discover	2016	\$1,074,000,000	10,000,000	11,350,409	1,767,370	11,063,084	22,603,623	3.0 x	39.6%
Thoma Bravo Discover II	2018	\$2,402,685,000	17,000,000	16,833,057	3,263,467	3,096,524	24,988,088	1.7 x	42.4%
Thoma Bravo Discover III	2021	\$3,929,323,000	20,000,000	6,784,137	13,215,863	0	6,837,846	1.0 x	NMF
Thoma Bravo Explore I	2020	\$1,127,120,000	20,000,000	3,821,541	16,178,459	0	5,486,527	1.4 x	NMF
Thoma Bravo XI	2014	\$3,662,000,000	20,000,000	20,785,558	2,135,646	40,382,363	36,568,590	3.7 x	31.7%
Thoma Bravo XII	2016	\$7,603,860,000	30,000,000	32,615,034	5,286,569	7,903,757	50,456,699	1.8 x	18.8%
Thoma Bravo XIII	2019	\$12,575,745,000	30,000,000	29,644,074	9,400,965	15,449,096	37,604,752	1.8 x	57.5%
Thoma Bravo XIV	2021	\$17,889,895,914	20,000,000	7,865,859	12,134,141	5	7,823,805	1.0 x	NMF
Vista Equity III	2007	\$1,287,129,725	50,000,000	54,336,098	3,894,584	127,483,122	5,263,443	2.4 x	28.6%
Vista Foundation II	2013	\$1,145,000,000	15,000,000	15,663,619	7,471,017	13,770,930	18,656,074	2.1 x	17.1%
Vista Foundation III	2016	\$2,950,561,226	30,000,000	33,112,646	8,327,987	27,018,507	34,044,783	1.8 x	29.0%
Wellspring V	2011	\$1,194,387,756	40,000,000	46,082,900	14,182,253	62,576,302	13,699,308	1.7 x	16.5%
Wicks IV	2011	\$414,000,000	40,000,000	42,343,460	4,464,216	55,956,803	34,052,337	2.1 x	21.0%
<b>Total Buyout</b>			<b>2,512,390,461</b>	<b>2,100,191,603</b>	<b>568,799,238</b>	<b>2,548,443,050</b>	<b>1,083,938,789</b>	<b>1.7 x</b>	<b>11.7%</b>
<b>Distressed Debt</b>									
Castlelake II	2011	\$996,762,000	35,000,000	32,656,036	2,625,461	28,449,704	18,441,572	1.4 x	6.7%
Castlelake III	2014	\$1,421,000,000	25,000,000	23,149,741	1,864,884	15,940,680	18,439,321	1.5 x	7.9%
Tennenbaum VI	2010	\$530,000,000	40,000,000	38,075,687	23,486,792	42,214,747	15,308,381	1.5 x	8.5%
<b>Total Distressed Debt</b>			<b>100,000,000</b>	<b>93,881,464</b>	<b>27,977,137</b>	<b>86,605,131</b>	<b>52,189,274</b>	<b>1.5 x</b>	<b>7.7%</b>

## Investment Performance by Strategy



Investment	Vintage	Fund Size	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>Growth Equity</b>									
LLR III	2008	\$803,000,000	50,000,000	48,504,590	4,357,033	102,823,367	6,733,704	2.3 x	16.6%
LLR VI	2021	\$1,800,000,000	30,000,000	3,600,000	26,400,000	57,473	3,070,363	0.9 x	NMF
TA XI	2010	\$4,000,100,000	40,000,000	39,400,000	600,000	104,080,007	41,201,160	3.7 x	27.1%
<b>Total Growth Equity</b>			<b>120,000,000</b>	<b>91,504,590</b>	<b>31,357,033</b>	<b>206,960,847</b>	<b>51,005,227</b>	<b>2.8 x</b>	<b>21.0%</b>
<b>Hard Assets</b>									
EnCap IX	2013	\$5,154,639,175	25,000,000	28,607,862	1,149,676	22,395,686	12,901,346	1.2 x	7.4%
EnCap VIII	2010	\$3,608,247,422	47,500,000	54,117,730	0	31,900,072	14,399,473	0.9 x	-4.3%
EnCap X	2015	\$6,701,030,928	30,000,000	29,691,518	2,316,716	10,356,829	26,175,943	1.2 x	6.9%
EnCap XI	2017	\$6,961,190,722	35,000,000	15,131,558	19,868,442	0	12,977,201	0.9 x	-8.6%
GTLA Holdings	2018	\$20,000,000	20,000,000	20,000,000	0	0	40,000,000	2.0 x	27.7%
Highland Contingent Note	2018	\$152,244,727	152,244,727	152,244,727	0	15,000,000	159,129,336	1.1 x	12.6%
Highland Equity	2016	\$66,000,000	66,000,000	81,870,000	0	16,674,525	52,044,833	0.8 x	-6.0%
Lime Rock Resources III	2014	\$762,000,000	25,000,000	25,545,926	350,694	4,687,078	16,566,389	0.8 x	-3.2%
NGP IX	2007	\$4,000,000,000	50,000,000	54,215,131	201,825	76,326,171	1,467,659	1.4 x	10.9%
NGP X	2012	\$3,586,000,000	35,000,000	36,173,293	520,437	29,503,108	4,951,064	1.0 x	-1.5%
NGP XI	2014	\$5,325,000,000	30,000,000	30,200,751	1,358,775	10,695,381	23,185,727	1.1 x	3.6%
NGP XII	2017	\$4,304,081,633	30,000,000	16,880,556	13,119,444	150,442	18,780,857	1.1 x	5.0%
<b>Total Hard Assets</b>			<b>545,744,727</b>	<b>544,679,053</b>	<b>38,886,008</b>	<b>217,689,292</b>	<b>382,579,828</b>	<b>1.1 x</b>	<b>3.8%</b>
<b>Infrastructure</b>									
Big River - Equity	2014	\$151,090,000	151,090,000	151,090,000	0	296,427,836	1,910,070	2.0 x	15.0%
Big River - Funding *	2017	\$3,750,000	3,750,000	3,750,000	0	3,812,795	0	1.0 x	4.3%
Big River - Holdings Note *	2017	\$12,000,000	12,000,000	12,000,000	0	13,343,726	0	1.1 x	11.0%
Big River - Holdings Note 2023	2018	\$12,000,000	12,000,000	12,000,000	0	380,905	13,965,866	1.2 x	5.6%
Big River - Holdings Note 2023-2	2018	\$5,150,000	5,150,000	5,150,000	0	237,847	5,899,275	1.2 x	6.6%
Big River - Preferred Equity *	2017	\$41,980,449	41,980,449	41,980,449	0	51,702,368	0	1.2 x	12.5%
Big River - Sr Secured Debt *	2015	\$26,910,000	26,910,000	26,966,221	0	35,699,565	0	1.3 x	14.7%
Blue Oak Arkansas *	2014	\$18,000,000	18,000,000	19,740,000	0	5,385,136	0	0.3 x	-34.8%
<b>Total Infrastructure</b>			<b>270,880,449</b>	<b>272,676,670</b>	<b>0</b>	<b>406,990,177</b>	<b>21,775,211</b>	<b>1.6 x</b>	<b>12.3%</b>

## Investment Performance by Strategy



Investment	Vintage	Fund Size	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>Mezzanine</b>									
Audax Mezzanine III	2011	\$1,002,250,000	25,000,000	25,012,492	6,363,653	30,112,470	2,858,757	1.3 x	9.6%
Big River - Mezzanine *	2014	\$5,000,000	5,000,000	5,003,686	0	8,225,290	0	1.6 x	17.3%
Blackstone Mezzanine I *	1999	\$1,141,000,000	100,000,000	73,353,517	0	96,729,026	0	1.3 x	10.2%
DLJ Investment II *	1999	\$1,600,000,000	80,000,000	43,611,022	0	60,468,989	0	1.4 x	10.4%
Greyrock IV	2017	\$275,000,000	30,000,000	27,781,132	3,354,854	11,228,368	24,026,882	1.3 x	10.8%
Greyrock V	2020	\$280,000,000	35,000,000	4,566,067	30,433,933	0	3,993,887	0.9 x	NMF
Insight Mezzanine I	2009	\$94,678,011	10,000,000	9,971,470	479,507	11,860,178	1,678,791	1.4 x	6.5%
<b>Total Mezzanine</b>			<b>285,000,000</b>	<b>189,299,385</b>	<b>40,631,947</b>	<b>218,624,321</b>	<b>32,558,317</b>	<b>1.3 x</b>	<b>10.1%</b>
<b>Multi-Strategy</b>									
ATRS-FP PE	2012	\$265,516,382	263,823,718	282,545,213	180,031,258	221,350,049	287,696,474	1.8 x	19.6%
CSFB-ATRS 2005-1 Series	2005	\$252,525,253	250,000,000	277,750,644	10,732,491	398,007,897	54,728,178	1.6 x	8.2%
CSFB-ATRS 2006-1 Series	2006	\$406,331,658	404,300,000	410,452,009	54,243,716	604,079,404	67,986,792	1.6 x	10.0%
DH Tech I	2000	\$236,700,000	50,000,000	61,471,034	0	20,543,107	1,394,163	0.4 x	-16.7%
Diamond State *	1999	\$46,000,000	2,000,000	2,000,000	0	3,097,200	0	1.5 x	5.5%
Diamond State II	2007	\$25,361,350	4,000,000	3,517,000	483,000	6,317,000	2,697,624	2.6 x	10.4%
<b>Total Multi-Strategy</b>			<b>974,123,718</b>	<b>1,037,735,900</b>	<b>245,490,465</b>	<b>1,253,394,657</b>	<b>414,503,231</b>	<b>1.6 x</b>	<b>8.8%</b>
<b>Special Assets</b>									
WNG II	2019	\$438,350,000	30,000,000	8,497,598	21,502,402	3,195	6,536,625	0.8 x	-14.3%
<b>Total Special Assets</b>			<b>30,000,000</b>	<b>8,497,598</b>	<b>21,502,402</b>	<b>3,195</b>	<b>6,536,625</b>	<b>0.8 x</b>	<b>-14.3%</b>
<b>Structured Capital</b>									
Bison V	2017	\$384,132,653	35,000,000	29,932,432	10,951,182	9,847,704	29,215,165	1.3 x	14.7%
Levine Leichtman V	2013	\$1,644,081,633	20,000,000	27,381,092	2,299,263	29,592,755	19,498,322	1.8 x	17.3%
PineBridge Structured III	2016	\$600,000,000	30,000,000	25,628,013	10,830,332	15,100,072	6,474,381	0.8 x	-7.3%
<b>Total Structured Capital</b>			<b>85,000,000</b>	<b>82,941,536</b>	<b>24,080,777</b>	<b>54,540,531</b>	<b>55,187,868</b>	<b>1.3 x</b>	<b>11.3%</b>

## Investment Performance by Strategy



Investment	Vintage	Fund Size	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>Turnaround</b>									
Atlas Capital II	2014	\$900,000,000	15,000,000	19,178,876	6,189,650	15,147,363	13,013,621	1.5 x	17.3%
Insight Equity II	2009	\$429,735,291	30,000,000	30,897,834	1,014,821	32,746,073	18,201,793	1.6 x	9.3%
KPS III Supplemental	2009	\$816,326,531	40,000,000	37,777,254	16,117,982	80,212,144	187,806	2.1 x	22.8%
KPS IV	2014	\$3,571,428,571	25,000,000	21,772,162	3,398,285	5,509,461	30,110,594	1.6 x	22.2%
KPS Mid-Market I	2019	\$1,020,408,163	20,000,000	5,666,989	14,333,011	0	5,999,897	1.1 x	5.8%
KPS V	2020	\$6,122,448,980	30,000,000	7,442,700	22,491,589	595,219	6,860,077	1.0 x	NMF
Sycamore Partners II	2014	\$2,700,000,000	25,000,000	22,118,786	4,007,956	12,926,472	13,030,979	1.2 x	5.3%
Sycamore Partners III	2018	\$4,870,000,000	25,000,000	7,809,635	17,190,365	0	7,762,367	1.0 x	-0.4%
<b>Total Turnaround</b>			<b>210,000,000</b>	<b>152,664,237</b>	<b>84,743,659</b>	<b>147,136,733</b>	<b>95,167,134</b>	<b>1.6 x</b>	<b>15.3%</b>
<b>Venture Capital</b>									
FP Venture 2008	2008	\$102,000,000	30,000,000	30,000,000	190,012	51,012,901	49,344,071	3.3 x	19.5%
FP Venture 2009	2009	\$58,000,000	25,000,000	24,471,983	759,965	49,228,810	22,832,856	2.9 x	19.2%
FP Venture 2010	2010	\$80,000,000	25,000,000	16,000,000	1,651,384	18,698,793	38,756,248	3.6 x	20.2%
FP Venture 2011	2011	\$70,000,000	25,000,000	24,125,000	1,091,716	81,452,829	187,709,063	11.2 x	45.2%
FP Venture 2012	2012	\$80,000,000	25,000,000	22,281,250	2,882,094	30,540,346	59,676,612	4.0 x	27.4%
FP Venture 2013	2013	\$87,000,000	20,000,000	18,218,391	1,888,566	19,596,157	48,540,008	3.7 x	31.3%
FP Venture 2014	2014	\$93,000,000	25,000,000	23,682,796	1,434,796	11,195,678	77,731,818	3.8 x	30.7%
FP Venture 2015	2015	\$113,000,000	25,000,000	23,683,629	1,427,454	4,343,201	58,403,663	2.6 x	30.0%
FP Venture 2016	2016	\$82,000,000	25,000,000	20,121,951	5,009,140	3,938,745	39,212,278	2.1 x	31.8%
FP Venture 2017	2017	\$113,000,000	25,000,000	14,933,628	10,149,712	2,016,791	27,981,624	2.0 x	47.5%
FP Venture 2018	2018	\$80,500,000	25,000,000	17,701,863	7,416,326	217	26,189,077	1.5 x	34.7%
FP Venture 2019	2019	\$80,500,000	30,000,000	14,161,491	15,938,527	23,600	18,523,930	1.3 x	32.8%
FP Venture XIII	2020	\$162,000,000	60,000,000	12,438,795	47,685,256	71,724	12,680,633	1.0 x	NMF
<b>Total Venture Capital</b>			<b>365,000,000</b>	<b>261,820,777</b>	<b>97,524,948</b>	<b>272,119,792</b>	<b>667,581,881</b>	<b>3.6 x</b>	<b>27.6%</b>
<b>Total Portfolio</b>			<b>5,498,139,355</b>	<b>4,835,892,815</b>	<b>1,180,993,614</b>	<b>5,412,507,725</b>	<b>2,863,023,385</b>	<b>1.7 x</b>	<b>11.7%</b>

- Remaining Value is defined as the investor's value as reported by the fund's manager.
- TVPI is the ratio of Distributed Capital plus Remaining Value to Contributed Capital.
- Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
- An asterisk indicates an investment that is fully liquidated, if applicable.
- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.
- Returns calculated for funds in the early years of their lives are particularly not meaningful given the J-curve effect. During these early years, due to illiquidity, stagnant valuations, fees and expenses, fund performance tends to be negative (the bottom of the "J").

## Investment Performance by Vintage Year



Investment	Strategy	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>1996</b>								
HMTF III *	Buyout	76,743,018	76,799,039	0	87,834,289	0	1.1 x	1.8%
<b>Total 1996</b>		<b>76,743,018</b>	<b>76,799,039</b>	<b>0</b>	<b>87,834,289</b>	<b>0</b>	<b>1.1 x</b>	<b>1.8%</b>
<b>1997</b>								
Doughty Hanson III *	Buyout	100,000,000	99,374,207	0	197,482,184	0	2.0 x	13.5%
<b>Total 1997</b>		<b>100,000,000</b>	<b>99,374,207</b>	<b>0</b>	<b>197,482,184</b>	<b>0</b>	<b>2.0 x</b>	<b>13.5%</b>
<b>1998</b>								
HMTF IV *	Buyout	100,000,000	98,010,015	0	67,130,479	0	0.7 x	-6.1%
Second Cinven *	Buyout	65,281,010	65,281,010	0	104,700,661	0	1.6 x	9.3%
<b>Total 1998</b>		<b>165,281,010</b>	<b>163,291,025</b>	<b>0</b>	<b>171,831,140</b>	<b>0</b>	<b>1.1 x</b>	<b>0.9%</b>
<b>1999</b>								
Blackstone Mezzanine I *	Mezzanine	100,000,000	73,353,517	0	96,729,026	0	1.3 x	10.2%
Cypress MBP II *	Buyout	50,000,000	52,304,562	0	50,840,220	0	1.0 x	-0.5%
Diamond State *	Multi-Strategy	2,000,000	2,000,000	0	3,097,200	0	1.5 x	5.5%
DLJ Investment II *	Mezzanine	80,000,000	43,611,022	0	60,468,989	0	1.4 x	10.4%
Oak Hill I *	Buyout	50,000,000	50,786,497	0	91,264,962	0	1.8 x	10.6%
<b>Total 1999</b>		<b>282,000,000</b>	<b>222,055,598</b>	<b>0</b>	<b>302,400,397</b>	<b>0</b>	<b>1.4 x</b>	<b>7.7%</b>
<b>2000</b>								
21st Century Group I *	Buyout	25,000,000	27,141,173	0	22,841,928	0	0.8 x	-3.8%
DH Tech I	Multi-Strategy	50,000,000	61,471,034	0	20,543,107	1,394,163	0.4 x	-16.7%
DLJ MBP III *	Buyout	200,000,000	215,345,711	0	458,746,671	0	2.1 x	19.4%
HMTF V *	Buyout	207,366,433	205,198,451	0	378,102,491	0	1.8 x	17.6%
<b>Total 2000</b>		<b>482,366,433</b>	<b>509,156,369</b>	<b>0</b>	<b>880,234,197</b>	<b>1,394,163</b>	<b>1.7 x</b>	<b>14.8%</b>
<b>2005</b>								
CSFB-ATRS 2005-1 Series	Multi-Strategy	250,000,000	277,750,644	10,732,491	398,007,897	54,728,178	1.6 x	8.2%
<b>Total 2005</b>		<b>250,000,000</b>	<b>277,750,644</b>	<b>10,732,491</b>	<b>398,007,897</b>	<b>54,728,178</b>	<b>1.6 x</b>	<b>8.2%</b>

## Investment Performance by Vintage Year



Investment	Strategy	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>2006</b>								
Boston Ventures VII	Buyout	50,000,000	43,016,769	8,258,947	44,748,285	5,377,672	1.2 x	2.8%
CSFB-ATRS 2006-1 Series	Multi-Strategy	404,300,000	410,452,009	54,243,716	604,079,404	67,986,792	1.6 x	10.0%
<b>Total 2006</b>		<b>454,300,000</b>	<b>453,468,778</b>	<b>62,502,663</b>	<b>648,827,689</b>	<b>73,364,464</b>	<b>1.6 x</b>	<b>9.3%</b>
<b>2007</b>								
Diamond State II	Multi-Strategy	4,000,000	3,517,000	483,000	6,317,000	2,697,624	2.6 x	10.4%
NGP IX	Hard Assets	50,000,000	54,215,131	201,825	76,326,171	1,467,659	1.4 x	10.9%
Vista Equity III	Buyout	50,000,000	54,336,098	3,894,584	127,483,122	5,263,443	2.4 x	28.6%
<b>Total 2007</b>		<b>104,000,000</b>	<b>112,068,229</b>	<b>4,579,409</b>	<b>210,126,293</b>	<b>9,428,726</b>	<b>2.0 x</b>	<b>20.4%</b>
<b>2008</b>								
Advent GPE VI-A	Buyout	40,000,000	40,167,228	0	80,492,730	4,150,264	2.1 x	16.7%
FP Venture 2008	Venture Capital	30,000,000	30,000,000	190,012	51,012,901	49,344,071	3.3 x	19.5%
LLR III	Growth Equity	50,000,000	48,504,590	4,357,033	102,823,367	6,733,704	2.3 x	16.6%
<b>Total 2008</b>		<b>120,000,000</b>	<b>118,671,818</b>	<b>4,547,045</b>	<b>234,328,998</b>	<b>60,228,039</b>	<b>2.5 x</b>	<b>17.5%</b>
<b>2009</b>								
FP Venture 2009	Venture Capital	25,000,000	24,471,983	759,965	49,228,810	22,832,856	2.9 x	19.2%
Insight Equity II	Turnaround	30,000,000	30,897,834	1,014,821	32,746,073	18,201,793	1.6 x	9.3%
Insight Mezzanine I	Mezzanine	10,000,000	9,971,470	479,507	11,860,178	1,678,791	1.4 x	6.5%
KPS III Supplemental	Turnaround	40,000,000	37,777,254	16,117,982	80,212,144	187,806	2.1 x	22.8%
Riverside IV	Buyout	40,000,000	31,433,665	0	74,584,420	234,437	2.4 x	21.3%
<b>Total 2009</b>		<b>145,000,000</b>	<b>134,552,206</b>	<b>18,372,275</b>	<b>248,631,625</b>	<b>43,135,683</b>	<b>2.2 x</b>	<b>17.6%</b>
<b>2010</b>								
Altus Capital II	Buyout	20,000,000	18,997,669	3,938,519	21,918,807	8,318,397	1.6 x	12.1%
EnCap VIII	Hard Assets	47,500,000	54,117,730	0	31,900,072	14,399,473	0.9 x	-4.3%
FP Venture 2010	Venture Capital	25,000,000	16,000,000	1,651,384	18,698,793	38,756,248	3.6 x	20.2%
Mason Wells III	Buyout	30,000,000	28,553,580	1,446,420	83,157,926	2,610,789	3.0 x	20.6%
TA XI	Growth Equity	40,000,000	39,400,000	600,000	104,080,007	41,201,160	3.7 x	27.1%
Tennenbaum VI	Distressed Debt	40,000,000	38,075,687	23,486,792	42,214,747	15,308,381	1.5 x	8.5%
<b>Total 2010</b>		<b>202,500,000</b>	<b>195,144,666</b>	<b>31,123,115</b>	<b>301,970,352</b>	<b>120,594,448</b>	<b>2.2 x</b>	<b>16.1%</b>

## Investment Performance by Vintage Year



Investment	Strategy	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>2011</b>								
Audax Mezzanine III	Mezzanine	25,000,000	25,012,492	6,363,653	30,112,470	2,858,757	1.3 x	9.6%
Castlelake II	Distressed Debt	35,000,000	32,656,036	2,625,461	28,449,704	18,441,572	1.4 x	6.7%
FP Intl 2011	Buyout	25,000,000	23,027,778	2,334,744	24,134,624	14,730,609	1.7 x	10.4%
FP Venture 2011	Venture Capital	25,000,000	24,125,000	1,091,716	81,452,829	187,709,063	11.2 x	45.2%
JF Lehman III	Buyout	39,000,000	44,012,406	5,309,096	52,042,688	15,152,788	1.5 x	10.7%
Wellspring V	Buyout	40,000,000	46,082,900	14,182,253	62,576,302	13,699,308	1.7 x	16.5%
Wicks IV	Buyout	40,000,000	42,343,460	4,464,216	55,956,803	34,052,337	2.1 x	21.0%
<b>Total 2011</b>		<b>229,000,000</b>	<b>237,260,072</b>	<b>36,371,139</b>	<b>334,725,420</b>	<b>286,644,434</b>	<b>2.6 x</b>	<b>21.0%</b>
<b>2012</b>								
ATRS-FP PE	Multi-Strategy	263,823,718	282,545,213	180,031,258	221,350,049	287,696,474	1.8 x	19.6%
BV VIII	Buyout	30,000,000	27,215,697	3,065,489	41,556,375	19,127,005	2.2 x	50.2%
Court Square III	Buyout	40,000,000	43,586,703	2,634,524	38,479,936	38,960,616	1.8 x	18.6%
DW Healthcare III	Buyout	40,000,000	37,138,408	2,861,592	56,029,790	15,639,285	1.9 x	18.5%
FP Intl 2012	Buyout	25,000,000	17,071,429	8,150,384	11,753,922	13,085,376	1.5 x	9.5%
FP Venture 2012	Venture Capital	25,000,000	22,281,250	2,882,094	30,540,346	59,676,612	4.0 x	27.4%
NGP X	Hard Assets	35,000,000	36,173,293	520,437	29,503,108	4,951,064	1.0 x	-1.5%
<b>Total 2012</b>		<b>458,823,718</b>	<b>466,011,993</b>	<b>200,145,778</b>	<b>429,213,526</b>	<b>439,136,432</b>	<b>1.9 x</b>	<b>19.1%</b>
<b>2013</b>								
EnCap IX	Hard Assets	25,000,000	28,607,862	1,149,676	22,395,686	12,901,346	1.2 x	7.4%
FP Intl 2013	Buyout	20,000,000	13,814,433	6,337,857	3,075,158	19,653,672	1.6 x	11.2%
FP Venture 2013	Venture Capital	20,000,000	18,218,391	1,888,566	19,596,157	48,540,008	3.7 x	31.3%
Levine Leichtman V	Structured Capital	20,000,000	27,381,092	2,299,263	29,592,755	19,498,322	1.8 x	17.3%
Riverside V	Buyout	35,000,000	36,114,152	680,265	24,247,705	27,576,885	1.4 x	9.1%
Vista Foundation II	Buyout	15,000,000	15,663,619	7,471,017	13,770,930	18,656,074	2.1 x	17.1%
<b>Total 2013</b>		<b>135,000,000</b>	<b>139,799,549</b>	<b>19,826,644</b>	<b>112,678,391</b>	<b>146,826,307</b>	<b>1.9 x</b>	<b>16.0%</b>

## Investment Performance by Vintage Year



Investment	Strategy	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>2014</b>								
Atlas Capital II	Turnaround	15,000,000	19,178,876	6,189,650	15,147,363	13,013,621	1.5 x	17.3%
Big River - Equity	Infrastructure	151,090,000	151,090,000	0	296,427,836	1,910,070	2.0 x	15.0%
Big River - Mezzanine *	Mezzanine	5,000,000	5,003,686	0	8,225,290	0	1.6 x	17.3%
Blue Oak Arkansas *	Infrastructure	18,000,000	19,740,000	0	5,385,136	0	0.3 x	-34.8%
Castlelake III	Distressed Debt	25,000,000	23,149,741	1,864,884	15,940,680	18,439,321	1.5 x	7.9%
FP Intl 2014	Buyout	25,000,000	16,005,155	9,137,203	8,055,913	16,930,276	1.6 x	13.9%
FP Venture 2014	Venture Capital	25,000,000	23,682,796	1,434,796	11,195,678	77,731,818	3.8 x	30.7%
KPS IV	Turnaround	25,000,000	21,772,162	3,398,285	5,509,461	30,110,594	1.6 x	22.2%
Lime Rock Resources III	Hard Assets	25,000,000	25,545,926	350,694	4,687,078	16,566,389	0.8 x	-3.2%
NGP XI	Hard Assets	30,000,000	30,200,751	1,358,775	10,695,381	23,185,727	1.1 x	3.6%
Sycamore Partners II	Turnaround	25,000,000	22,118,786	4,007,956	12,926,472	13,030,979	1.2 x	5.3%
Thoma Bravo XI	Buyout	20,000,000	20,785,558	2,135,646	40,382,363	36,568,590	3.7 x	31.7%
<b>Total 2014</b>		<b>389,090,000</b>	<b>378,273,437</b>	<b>29,877,889</b>	<b>434,578,652</b>	<b>247,487,385</b>	<b>1.8 x</b>	<b>14.2%</b>
<b>2015</b>								
Big River - Sr Secured Debt *	Infrastructure	26,910,000	26,966,221	0	35,699,565	0	1.3 x	14.7%
EnCap X	Hard Assets	30,000,000	29,691,518	2,316,716	10,356,829	26,175,943	1.2 x	6.9%
FP Intl 2015	Buyout	25,000,000	17,367,257	7,744,152	4,774,142	22,943,002	1.6 x	16.4%
FP Venture 2015	Venture Capital	25,000,000	23,683,629	1,427,454	4,343,201	58,403,663	2.6 x	30.0%
Siris III	Buyout	25,000,000	30,925,309	4,137,215	24,093,067	18,868,182	1.4 x	14.1%
<b>Total 2015</b>		<b>131,910,000</b>	<b>128,633,935</b>	<b>15,625,537</b>	<b>79,266,804</b>	<b>126,390,790</b>	<b>1.6 x</b>	<b>17.2%</b>
<b>2016</b>								
American Industrial VI	Buyout	20,000,000	22,579,389	4,537,292	10,763,077	23,300,474	1.5 x	14.5%
Arlington IV	Buyout	23,000,000	23,122,269	1,919,395	13,753,581	32,996,869	2.0 x	29.0%
DW Healthcare IV	Buyout	30,000,000	29,106,500	2,422,466	20,631,745	29,577,621	1.7 x	26.0%
FP Intl 2016	Buyout	25,000,000	17,190,722	7,942,461	2,638,230	20,865,301	1.4 x	12.0%
FP Venture 2016	Venture Capital	25,000,000	20,121,951	5,009,140	3,938,745	39,212,278	2.1 x	31.8%
Highland Equity	Hard Assets	66,000,000	81,870,000	0	16,674,525	52,044,833	0.8 x	-6.0%
JF Lehman IV	Buyout	30,000,000	28,747,093	1,252,907	29,033,089	42,940,161	2.5 x	37.0%
PineBridge Structured III	Structured Capital	30,000,000	25,628,013	10,830,332	15,100,072	6,474,381	0.8 x	-7.3%
Thoma Bravo Discover	Buyout	10,000,000	11,350,409	1,767,370	11,063,084	22,603,623	3.0 x	39.6%
Thoma Bravo XII	Buyout	30,000,000	32,615,034	5,286,569	7,903,757	50,456,699	1.8 x	18.8%
Vista Foundation III	Buyout	30,000,000	33,112,646	8,327,987	27,018,507	34,044,783	1.8 x	29.0%
<b>Total 2016</b>		<b>319,000,000</b>	<b>325,444,026</b>	<b>49,295,919</b>	<b>158,518,412</b>	<b>354,517,023</b>	<b>1.6 x</b>	<b>17.5%</b>

## Investment Performance by Vintage Year



Investment	Strategy	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>2017</b>								
Altaris Constellation	Buyout	20,000,000	16,270,591	5,543,214	7,480,371	28,700,029	2.2 x	25.3%
Big River - Funding *	Infrastructure	3,750,000	3,750,000	0	3,812,795	0	1.0 x	4.3%
Big River - Holdings Note *	Infrastructure	12,000,000	12,000,000	0	13,343,726	0	1.1 x	11.0%
Big River - Preferred Equity *	Infrastructure	41,980,449	41,980,449	0	51,702,368	0	1.2 x	12.5%
Bison V	Structured Capital	35,000,000	29,932,432	10,951,182	9,847,704	29,215,165	1.3 x	14.7%
BV IX	Buyout	30,000,000	26,412,576	8,651,389	9,212,748	31,779,242	1.6 x	29.6%
EnCap XI	Hard Assets	35,000,000	15,131,558	19,868,442	0	12,977,201	0.9 x	-8.6%
FP Intl 2017	Buyout	25,000,000	15,816,326	9,320,011	2,763,894	29,131,483	2.0 x	38.6%
FP Venture 2017	Venture Capital	25,000,000	14,933,628	10,149,712	2,016,791	27,981,624	2.0 x	47.5%
Greyrock IV	Mezzanine	30,000,000	27,781,132	3,354,854	11,228,368	24,026,882	1.3 x	10.8%
NGP XII	Hard Assets	30,000,000	16,880,556	13,119,444	150,442	18,780,857	1.1 x	5.0%
One Rock II	Buyout	30,000,000	26,377,212	5,741,192	3,906,746	36,950,352	1.5 x	20.1%
<b>Total 2017</b>		<b>317,730,449</b>	<b>247,266,460</b>	<b>86,699,440</b>	<b>115,465,954</b>	<b>239,542,835</b>	<b>1.4 x</b>	<b>18.7%</b>
<b>2018</b>								
Altaris IV	Buyout	24,000,000	18,360,095	5,639,905	0	30,652,137	1.7 x	29.9%
Big River - Holdings Note 2023	Infrastructure	12,000,000	12,000,000	0	380,905	13,965,866	1.2 x	5.6%
Big River - Holdings Note 2023-2	Infrastructure	5,150,000	5,150,000	0	237,847	5,899,275	1.2 x	6.6%
Clearlake V	Buyout	30,000,000	31,583,005	8,202,569	25,412,659	46,455,241	2.3 x	55.7%
FP Intl 2018	Buyout	25,000,000	19,083,969	6,103,476	0	25,776,014	1.4 x	29.1%
FP Venture 2018	Venture Capital	25,000,000	17,701,863	7,416,326	217	26,189,077	1.5 x	34.7%
GTLA Holdings	Hard Assets	20,000,000	20,000,000	0	0	40,000,000	2.0 x	27.7%
Highland Contingent Note	Hard Assets	152,244,727	152,244,727	0	15,000,000	159,129,336	1.1 x	12.6%
SK Capital V	Buyout	30,000,000	18,796,524	11,296,802	1,119,767	23,466,172	1.3 x	22.9%
Sycamore Partners III	Turnaround	25,000,000	7,809,635	17,190,365	0	7,762,367	1.0 x	-0.4%
Thoma Bravo Discover II	Buyout	17,000,000	16,833,057	3,263,467	3,096,524	24,988,088	1.7 x	42.4%
<b>Total 2018</b>		<b>365,394,727</b>	<b>319,562,875</b>	<b>59,112,910</b>	<b>45,247,918</b>	<b>404,283,573</b>	<b>1.4 x</b>	<b>25.0%</b>

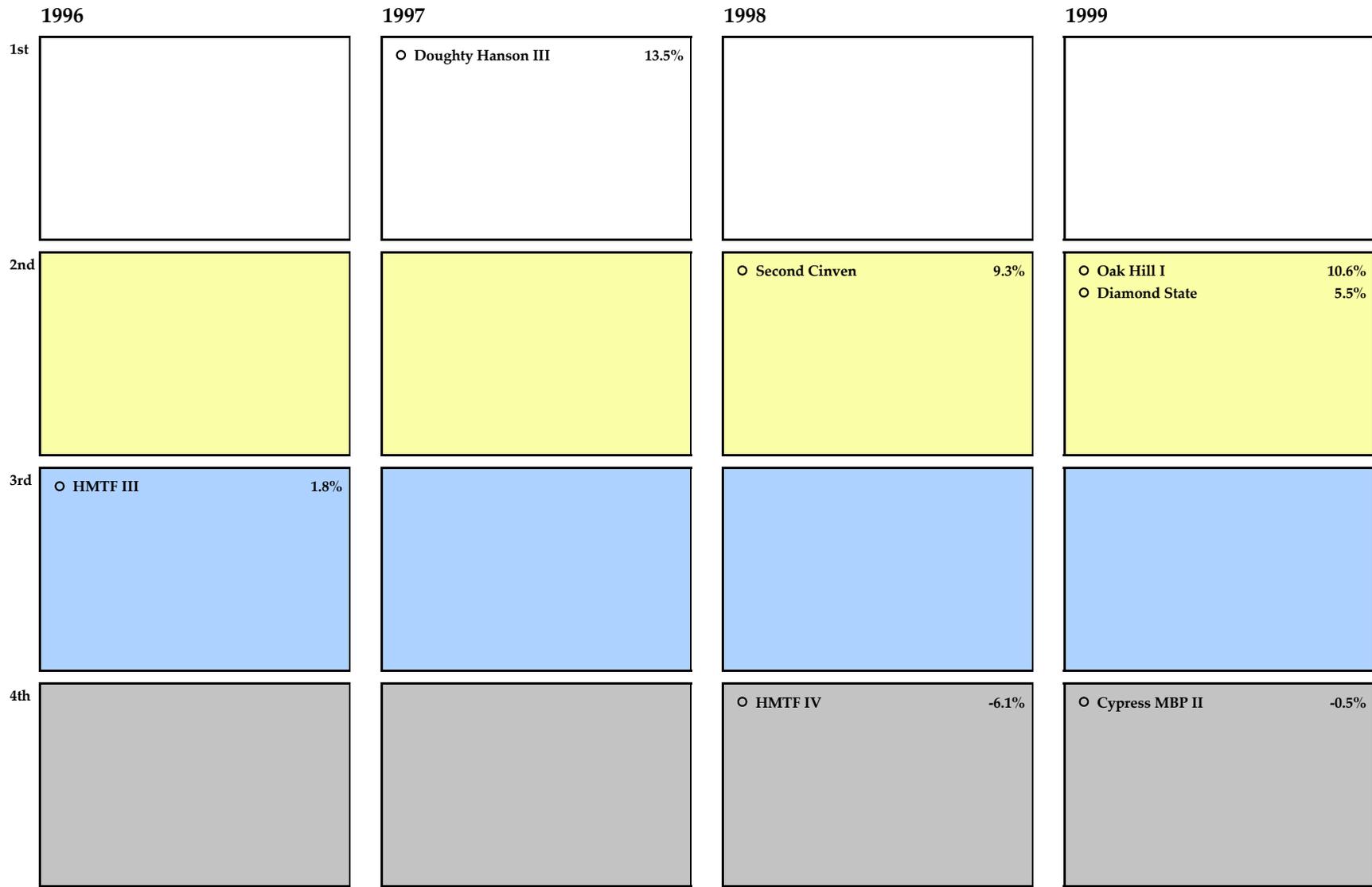
## Investment Performance by Vintage Year



Investment	Strategy	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>2019</b>								
American Industrial VII	Buyout	30,000,000	14,745,648	17,343,467	2,089,115	12,826,525	1.0 x	3.0%
Arlington V	Buyout	25,000,000	9,078,626	15,921,374	0	11,400,478	1.3 x	44.3%
DW Healthcare V	Buyout	30,000,000	9,826,274	20,173,726	0	8,417,214	0.9 x	-11.8%
FP Intl 2019	Buyout	30,000,000	8,510,638	21,684,841	0	11,648,001	1.4 x	47.2%
FP Venture 2019	Venture Capital	30,000,000	14,161,491	15,938,527	23,600	18,523,930	1.3 x	32.8%
KPS Mid-Market I	Turnaround	20,000,000	5,666,989	14,333,011	0	5,999,897	1.1 x	5.8%
Riverside VI	Buyout	30,000,000	13,996,370	16,003,630	0	13,888,006	1.0 x	-0.6%
Siris IV	Buyout	30,000,000	16,809,292	14,977,399	2,481,341	20,617,002	1.4 x	20.2%
Thoma Bravo XIII	Buyout	30,000,000	29,644,074	9,400,965	15,449,096	37,604,752	1.8 x	57.5%
WNG II	Special Assets	30,000,000	8,497,598	21,502,402	3,195	6,536,625	0.8 x	-14.3%
<b>Total 2019</b>		<b>285,000,000</b>	<b>130,937,001</b>	<b>167,279,342</b>	<b>20,046,347</b>	<b>147,462,430</b>	<b>1.3 x</b>	<b>24.4%</b>
<b>2020</b>								
BV X	Buyout	30,000,000	5,709,052	24,290,947	0	5,212,657	0.9 x	NMF
Clearlake VI	Buyout	30,000,000	14,556,094	15,531,378	250,159	21,190,727	1.5 x	NMF
FP CF Access	Buyout	90,000,000	17,319,711	72,787,884	116,662	19,356,391	1.1 x	NMF
FP Venture XIII	Venture Capital	60,000,000	12,438,795	47,685,256	71,724	12,680,633	1.0 x	NMF
Greyrock V	Mezzanine	35,000,000	4,566,067	30,433,933	0	3,993,887	0.9 x	NMF
JF Lehman V	Buyout	30,000,000	14,108,657	15,891,343	0	13,136,227	0.9 x	NMF
KPS V	Turnaround	30,000,000	7,442,700	22,491,589	595,219	6,860,077	1.0 x	NMF
Thoma Bravo Explore I	Buyout	20,000,000	3,821,541	16,178,459	0	5,486,527	1.4 x	NMF
<b>Total 2020</b>		<b>325,000,000</b>	<b>79,962,618</b>	<b>245,290,789</b>	<b>1,033,764</b>	<b>87,917,126</b>	<b>1.1 x</b>	<b>NMF</b>
<b>2021</b>								
FP Intl X	Buyout	60,000,000	2,158,273	57,861,226	0	2,035,207	0.9 x	NMF
Greenbriar V	Buyout	30,000,000	0	30,000,000	0	174,128	N/A	NMF
LLR VI	Growth Equity	30,000,000	3,600,000	26,400,000	57,473	3,070,363	0.9 x	NMF
Thoma Bravo Discover III	Buyout	20,000,000	6,784,137	13,215,863	0	6,837,846	1.0 x	NMF
Thoma Bravo XIV	Buyout	20,000,000	7,865,859	12,134,141	5	7,823,805	1.0 x	NMF
<b>Total 2021</b>		<b>160,000,000</b>	<b>20,408,269</b>	<b>139,611,230</b>	<b>57,478</b>	<b>19,941,350</b>	<b>1.0 x</b>	<b>NMF</b>
<b>Total Portfolio</b>		<b>5,498,139,355</b>	<b>4,835,892,815</b>	<b>1,180,993,614</b>	<b>5,412,507,725</b>	<b>2,863,023,385</b>	<b>1.7 x</b>	<b>11.7%</b>

- Remaining Value is defined as the investor's value as reported by the fund's manager.
- TVPI is the ratio of Distributed Capital plus Remaining Value to Contributed Capital.
- Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
- An asterisk indicates an investment that is fully liquidated, if applicable.
- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.
- Returns calculated for funds in the early years of their lives are particularly not meaningful given the J-curve effect. During these early years, due to illiquidity, stagnant valuations, fees and expenses, fund performance tends to be negative (the bottom of the "J").

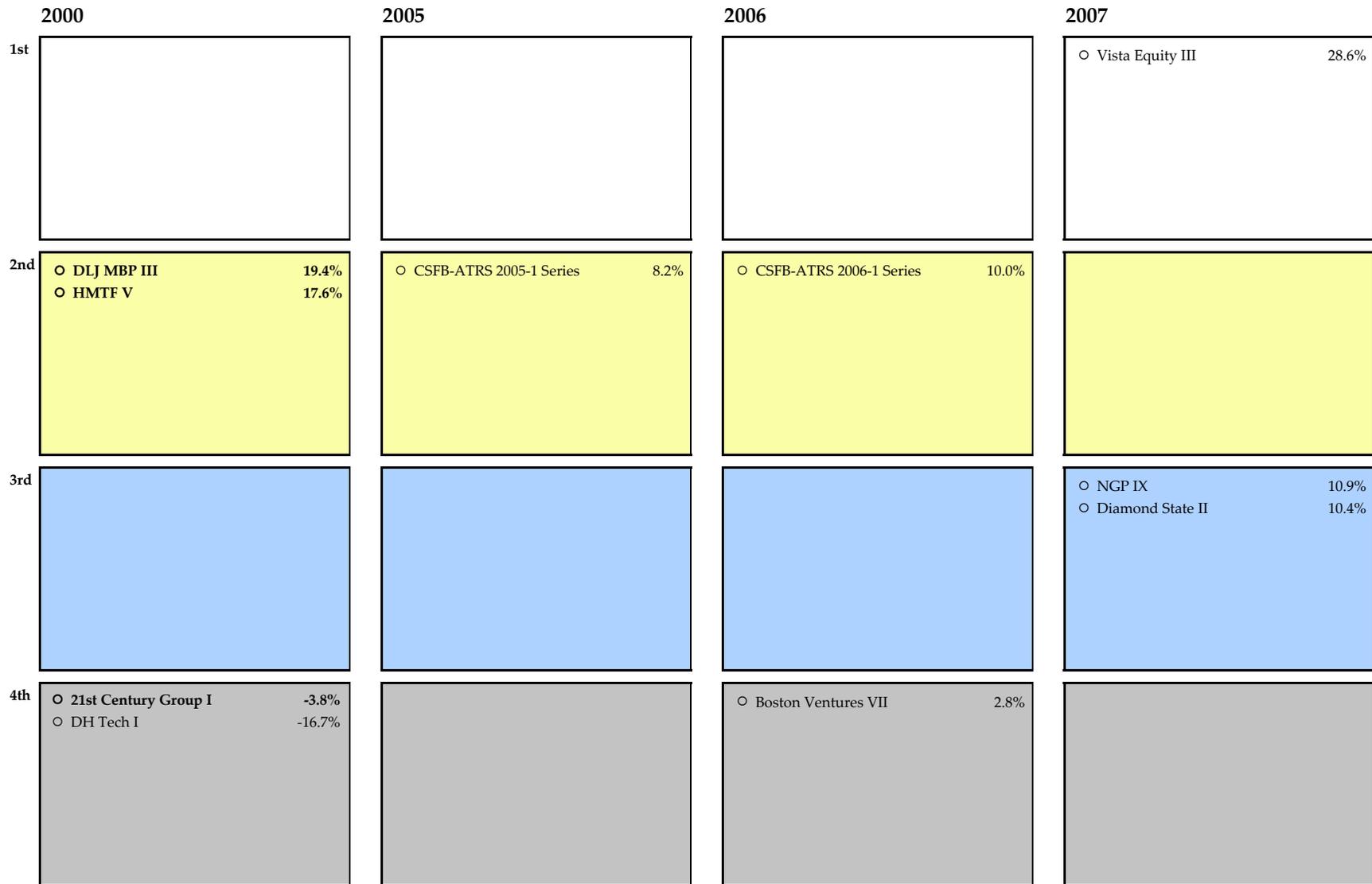
# Performance by Vintage Year and Quartile Group



● Venture ○ Non-venture

BOLD = Realized

# Performance by Vintage Year and Quartile Group



● Venture ○ Non-venture

**BOLD = Realized**

# Performance by Vintage Year and Quartile Group

	2008	2009	2010	2011
1st			○ TA XI 27.1%	● FP Venture 2011 45.2%
2nd	<ul style="list-style-type: none"> <li>● FP Venture 2008 19.5%</li> <li>○ Advent GPE VI-A 16.7%</li> <li>○ LLR III 16.6%</li> </ul>	<ul style="list-style-type: none"> <li>○ KPS III Supplemental 22.8%</li> <li>○ Riverside IV 21.3%</li> <li>● FP Venture 2009 19.2%</li> </ul>	<ul style="list-style-type: none"> <li>○ Mason Wells III 20.6%</li> <li>● FP Venture 2010 20.2%</li> </ul>	<ul style="list-style-type: none"> <li>○ Wicks IV 21.0%</li> </ul>
3rd			<ul style="list-style-type: none"> <li>○ Altus Capital II 12.1%</li> <li>○ EnCap VIII -4.3%</li> </ul>	<ul style="list-style-type: none"> <li>○ Wellspring V 16.5%</li> </ul>
4th		○ Insight Equity II 9.3%		<ul style="list-style-type: none"> <li>○ JF Lehman III 10.7%</li> <li>○ FP Intl 2011 10.4%</li> </ul>

● Venture ○ Non-venture

**BOLD = Realized**

# Performance by Vintage Year and Quartile Group

	2012	2013	2014	2015
1st	○ BV VIII 50.2%	● FP Venture 2013 31.3%	○ Thoma Bravo XI 31.7%	● FP Venture 2015 30.0%
2nd	<ul style="list-style-type: none"> <li>● FP Venture 2012 27.4%</li> <li>○ ATRS-FP PE 19.6%</li> <li>○ Court Square III 18.6%</li> <li>○ DW Healthcare III 18.5%</li> </ul>	<ul style="list-style-type: none"> <li>○ Vista Foundation II 17.1%</li> <li>○ EnCap IX 7.4%</li> </ul>	<ul style="list-style-type: none"> <li>● FP Venture 2014 30.7%</li> <li>○ KPS IV 22.2%</li> </ul>	○ EnCap X 6.9%
3rd	○ NGP X -1.5%	○ FP Intl 2013 11.2%	<ul style="list-style-type: none"> <li>○ Atlas Capital II 17.3%</li> <li>○ FP Intl 2014 13.9%</li> <li>○ NGP XI 3.6%</li> <li>○ Lime Rock Resources III -3.2%</li> </ul>	<ul style="list-style-type: none"> <li>○ FP Intl 2015 16.4%</li> <li>○ Siris III 14.1%</li> </ul>
4th	○ FP Intl 2012 9.5%	○ Riverside V 9.1%	○ Sycamore Partners II 5.3%	

● Venture ○ Non-venture

**BOLD = Realized**

# Performance by Vintage Year and Quartile Group

	2016	2017	2018	2019
1st	<ul style="list-style-type: none"> <li>○ Thoma Bravo Discover 39.6%</li> <li>○ JF Lehman IV 37.0%</li> <li>○ Vista Foundation III 29.0%</li> <li>○ Arlington IV 29.0%</li> </ul>	<ul style="list-style-type: none"> <li>● FP Venture 2017 47.5%</li> </ul>	<ul style="list-style-type: none"> <li>○ Clearlake V 55.7%</li> <li>○ Thoma Bravo Discover II 42.4%</li> </ul>	<ul style="list-style-type: none"> <li>○ Thoma Bravo XIII 57.5%</li> <li>○ FP Intl 2019 47.2%</li> </ul>
2nd	<ul style="list-style-type: none"> <li>● FP Venture 2016 31.8%</li> <li>○ DW Healthcare IV 26.0%</li> </ul>	<ul style="list-style-type: none"> <li>○ FP Intl 2017 38.6%</li> <li>○ NGP XII 5.0%</li> </ul>	<ul style="list-style-type: none"> <li>● FP Venture 2018 34.7%</li> <li>○ Altaris IV 29.9%</li> <li>○ FP Intl 2018 29.1%</li> <li>○ SK Capital V 22.9%</li> </ul>	<ul style="list-style-type: none"> <li>○ Arlington V 44.3%</li> <li>● FP Venture 2019 32.8%</li> <li>○ Siris IV 20.2%</li> </ul>
3rd	<ul style="list-style-type: none"> <li>○ Thoma Bravo XII 18.8%</li> </ul>	<ul style="list-style-type: none"> <li>○ BV IX 29.6%</li> <li>○ Altaris Constellation 25.3%</li> </ul>		
4th	<ul style="list-style-type: none"> <li>○ American Industrial VI 14.5%</li> <li>○ FP Intl 2016 12.0%</li> </ul>	<ul style="list-style-type: none"> <li>○ One Rock II 20.1%</li> <li>○ EnCap XI -8.6%</li> </ul>	<ul style="list-style-type: none"> <li>○ Sycamore Partners III -0.4%</li> </ul>	<ul style="list-style-type: none"> <li>○ KPS Mid-Market I 5.8%</li> <li>○ American Industrial VII 3.0%</li> <li>○ Riverside VI -0.6%</li> <li>○ DW Healthcare V -11.8%</li> </ul>

● Venture ○ Non-venture

**BOLD = Realized**

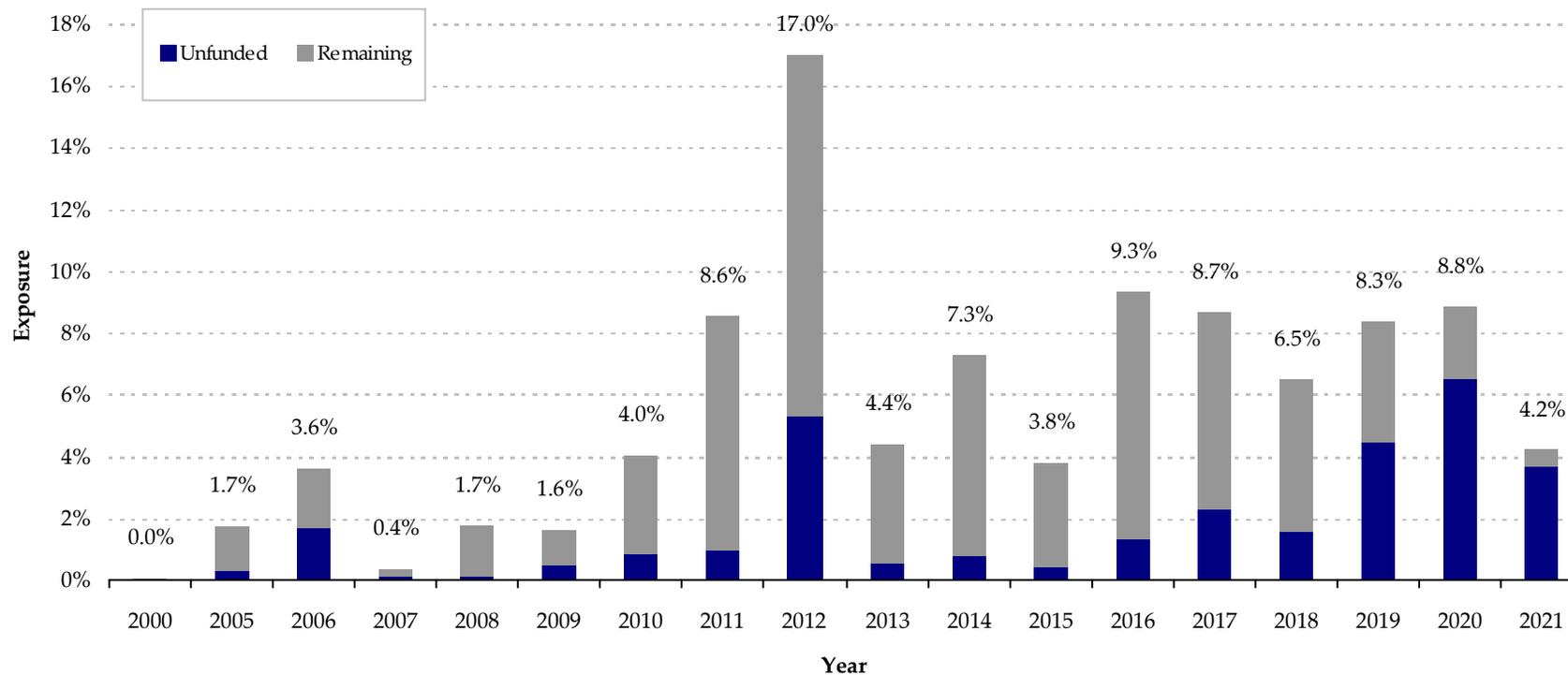
- 
- The analysis compares each fund's Net IRR versus its respective peer group by vintage year and strategy. Funds with a corporate finance strategy, excluding private debt, are compared to Cambridge Associates, U.S. Buyout. Funds with a venture capital strategy are compared to Cambridge Associates, U.S. Venture Capital. Multi-strategy funds are compared to data compiled by Cambridge Associates for funds across multiple strategies including U.S. Buyout, Growth Equity, Venture Capital, Mezzanine, Distressed, Fund-of-Funds, and Secondary Funds. Funds with a hard assets strategy are compared to Cambridge Associates, U.S. Private Equity Energy. Funds with a real estate strategy are compared to Cambridge Associates, U.S. Real Estate. Benchmark data is not available for funds with a private debt strategy.
  - The analysis excludes the two most recent vintage years, as fund performance is deemed not yet meaningful (NMF).
  - Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
  - Benchmark data was compiled from Cambridge Associates as of March 31, 2021. Hard Assets benchmark data for Vintage Years prior to 2005 is not available.

---

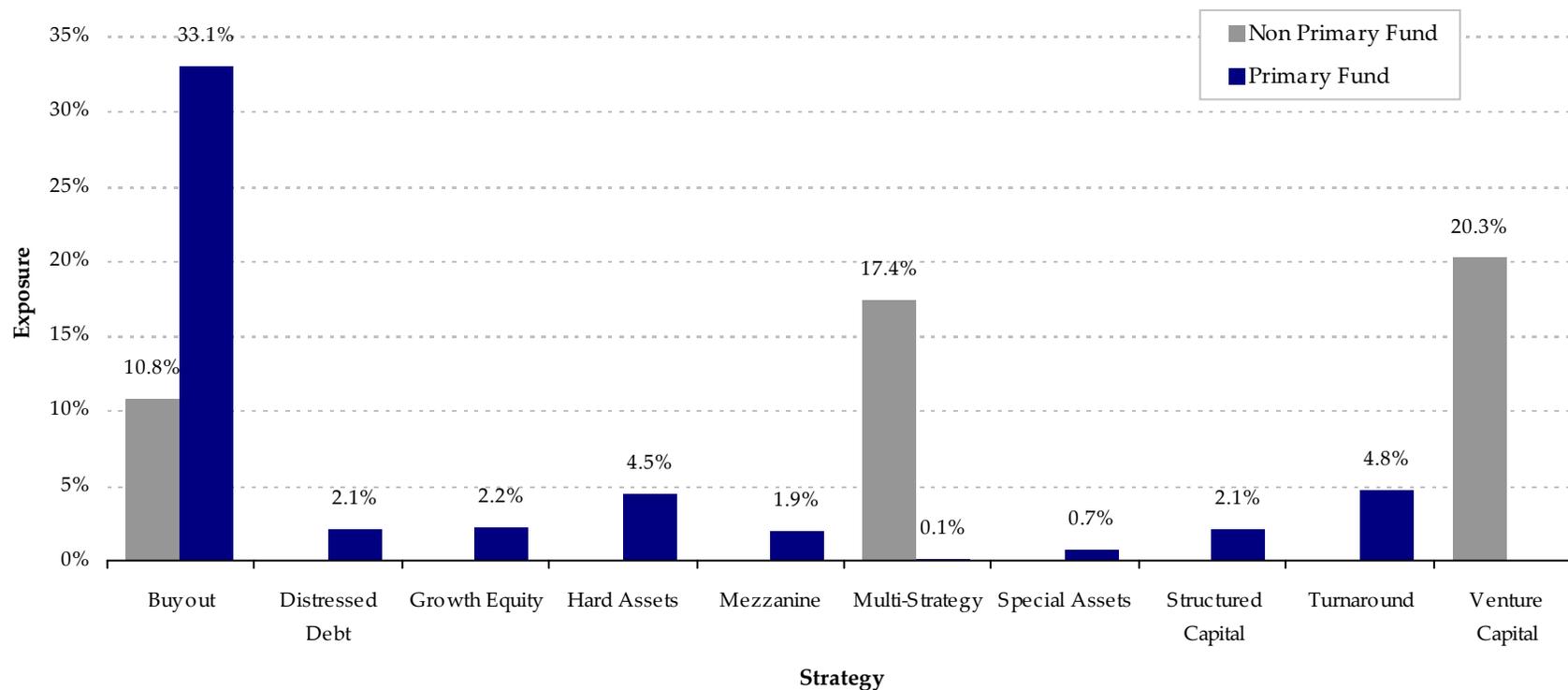
## Diversification Analysis

---

## Exposure By Vintage Year

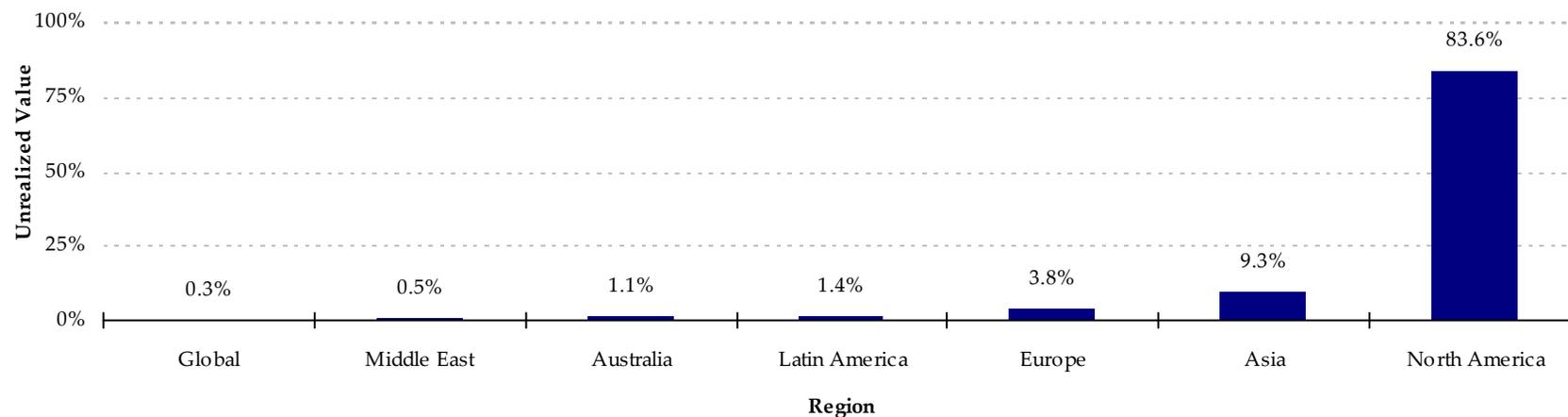


- Exposure is defined as the sum of the investor's Remaining Value plus Unfunded Commitment.
- Data includes commitments through the Report Date.

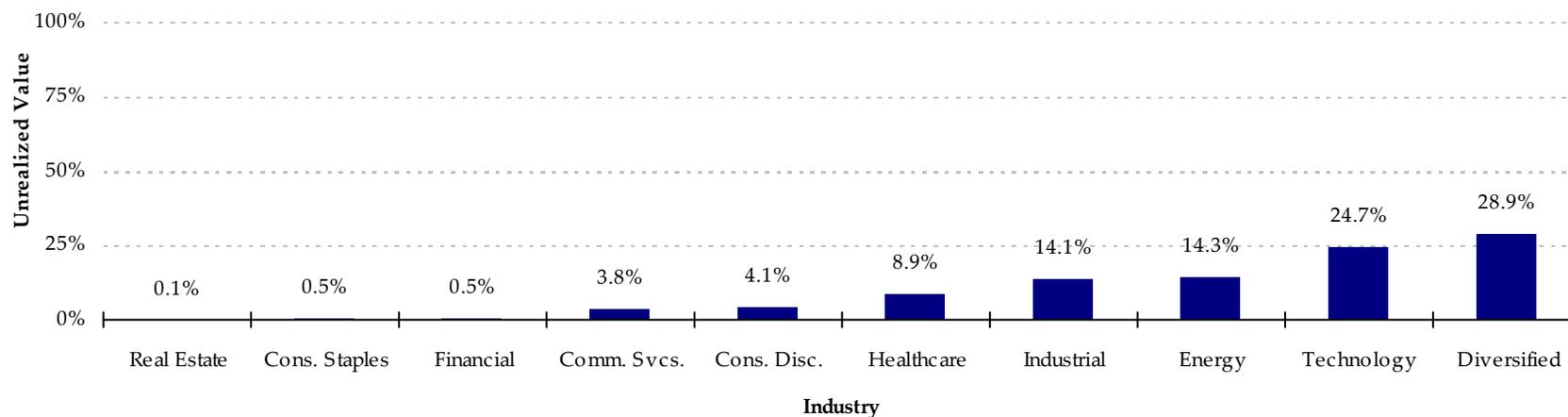


- Exposure is defined as the sum of the investor's Remaining Value plus Unfunded Commitment.
- Primary Fund represents interests in private equity funds acquired directly from the seller (i.e. fund manager). Non Primary Fund represents interests in private equity funds acquired through a commitment to a fund-of-funds or secondary fund-of-funds.

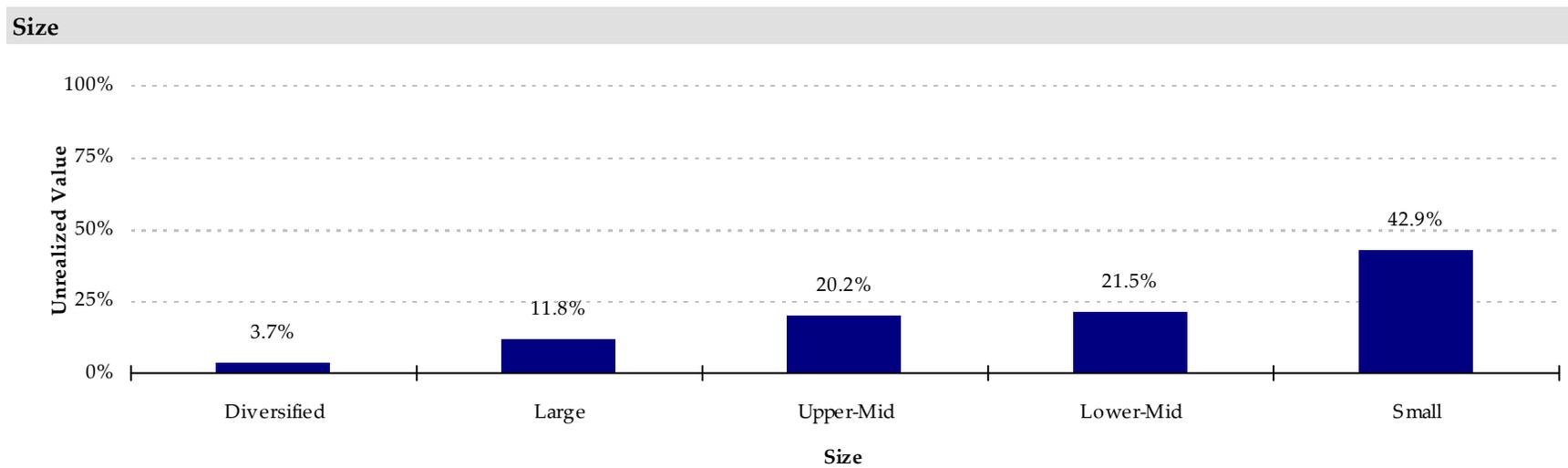
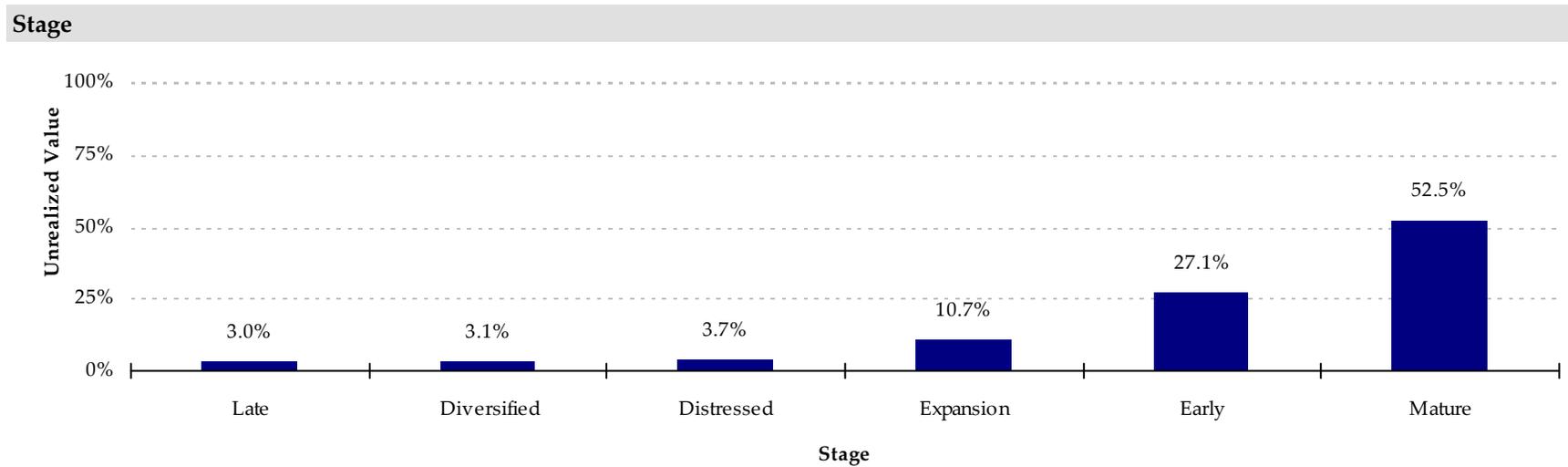
**Region**



**Industry**



- Unrealized Value represents the value of portfolio holdings as reported by fund managers.
- Values are estimated based on the investor's percent interest in each fund's portfolio holdings.
- Values are converted to the investor's currency, when applicable, as of the Report Date.

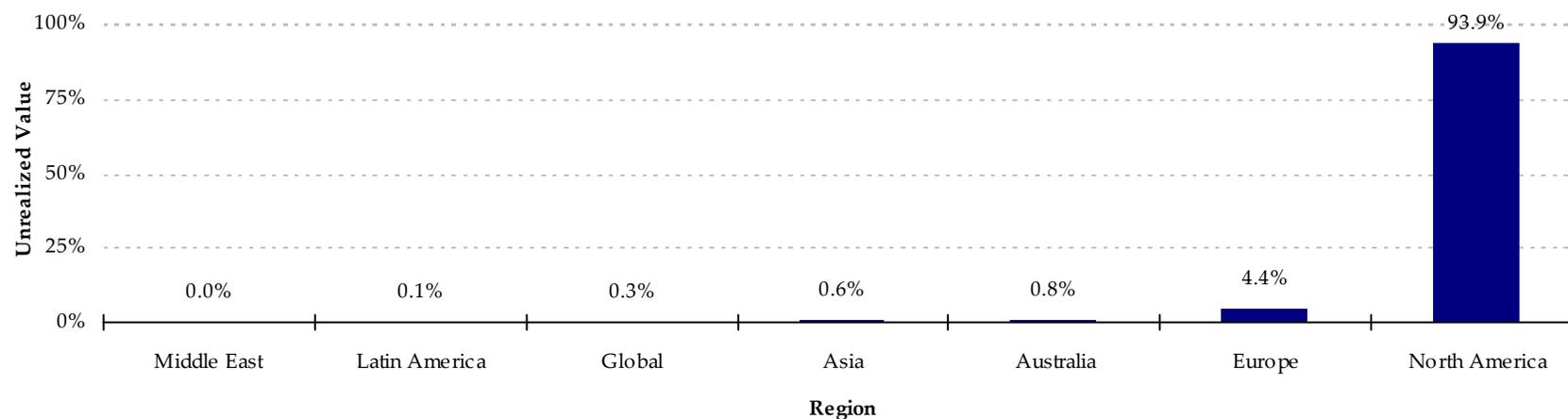


- Unrealized Value is the value of portfolio holdings as reported by the fund manager.
- Values are estimated based on the investor's percent interest in each fund's portfolio holdings.
- Values converted to the investor's currency, when applicable, as of the Report Date.

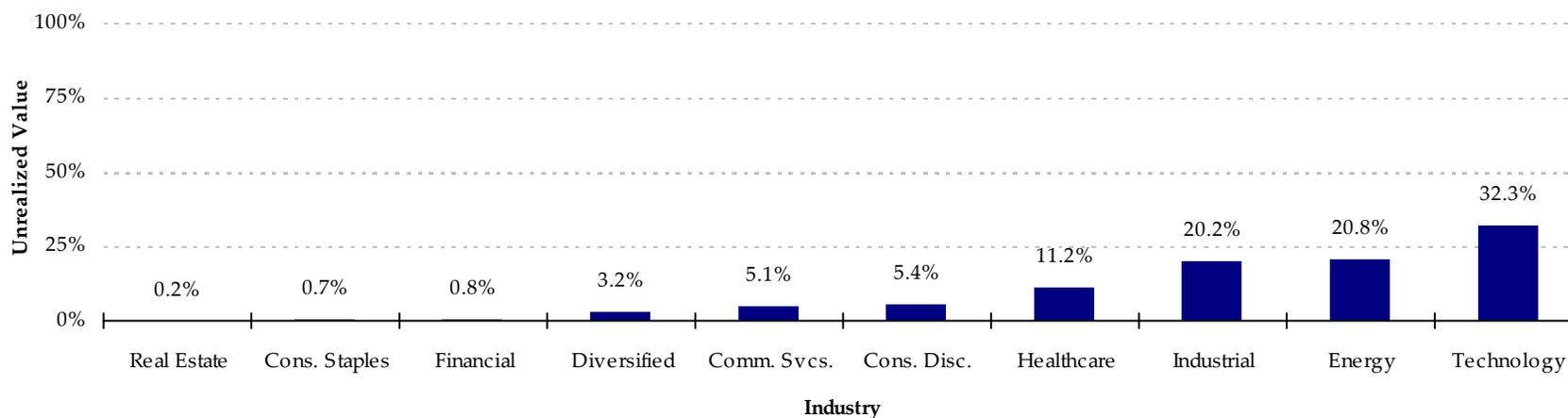
## Holdings by Region and Industry (ex Fund Holdings)



### Region



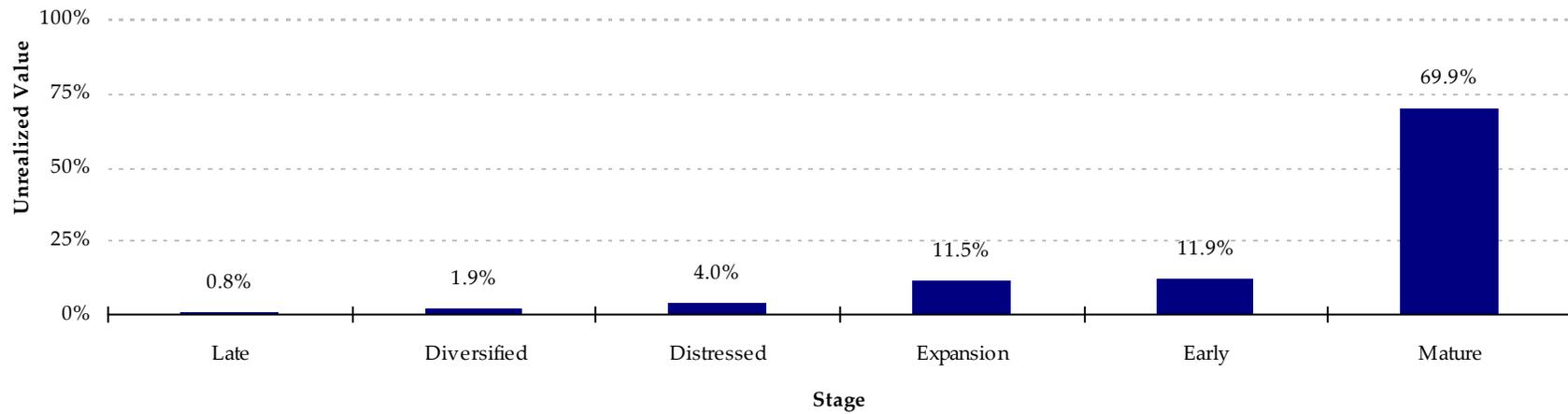
### Industry



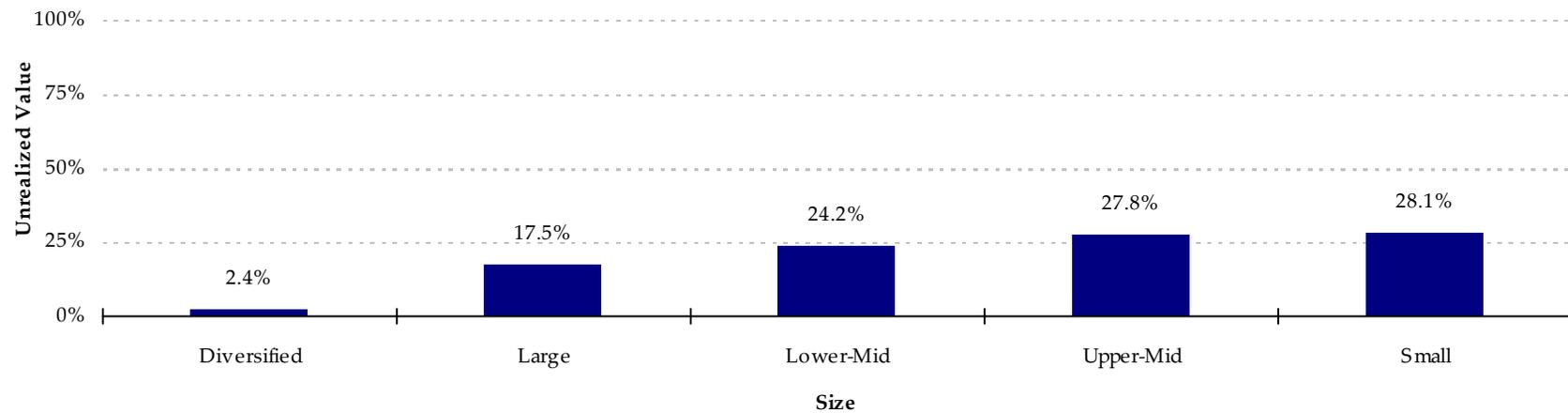
- Fund investments in other funds were excluded from this analysis.
- Unrealized Value represents the value of portfolio holdings as reported by fund managers.
- Values are estimated based on the investor's percent interest in each fund's portfolio holdings.
- Values are converted to the investor's currency, when applicable, as of the Report Date.

## Holdings by Stage and Size (ex Fund Holdings)

### Stage



### Size

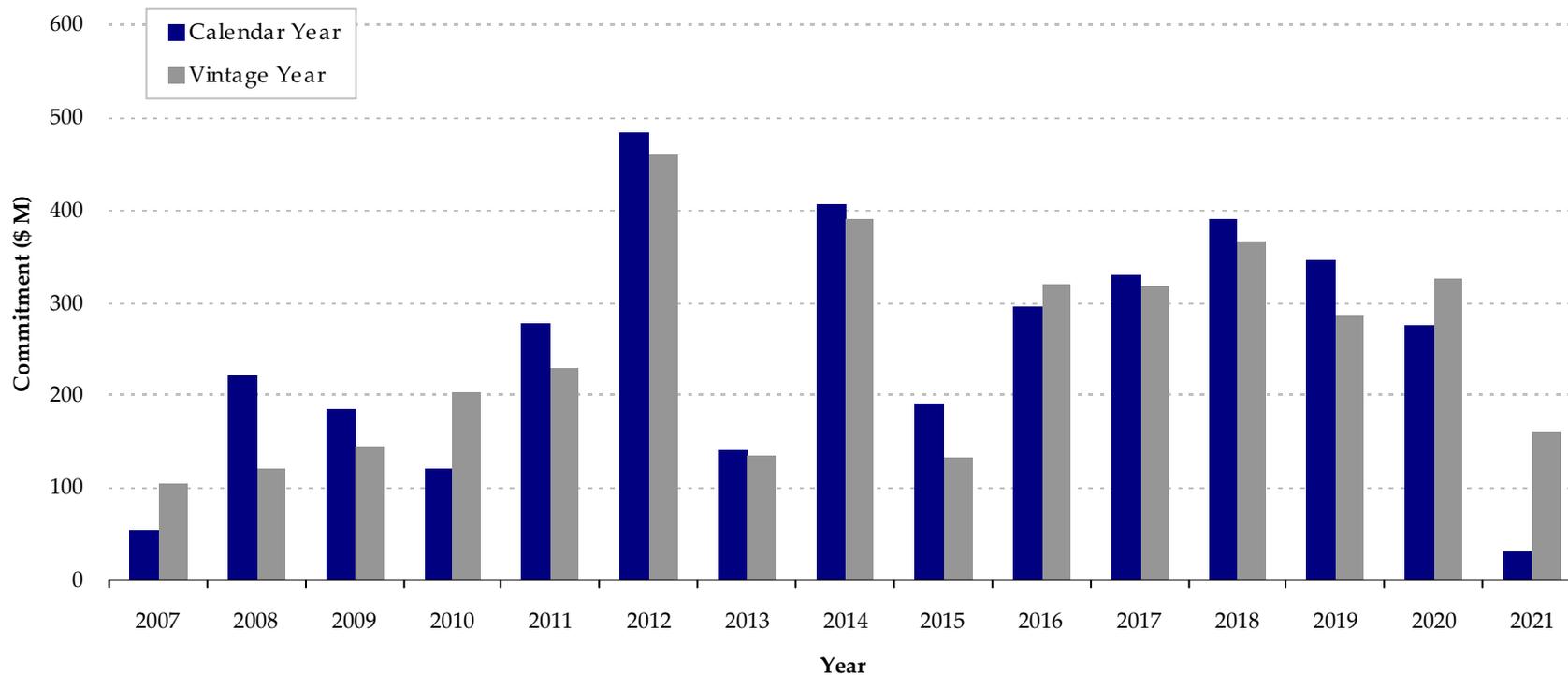


- Fund investments in other funds were excluded from this analysis.
- Unrealized Value represents the value of portfolio holdings as reported by fund managers.
- Values are estimated based on the investor's percent interest in each fund's portfolio holdings.
- Values are converted to the investor's currency, when applicable, as of the Report Date.

---

**Recent Activity**

---



- Vintage Year represents the year in which investors first contribute capital to a fund.
- Calendar Year represents the year in which a commitment to a fund formally closed.
- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.
- Commitments were compiled through the Report Date.

---

## Glossary

---

Term	Definition	Term	Definition
Barclays US Corporate High Yield Index	The Barclays US Corporate High Yield Bond Index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. Bonds from issuers with an emerging markets country of risk, based on Barclays EM country definition, are excluded.	Dow Jones US Total Stock Market Total Return Index	The Dow Jones US Total Stock Market Total Return Index measures all U.S. equity securities with readily available prices. It is a free float-adjusted market capitalization weighted index and is calculated with dividend reinvestment.
Bridge Financing	Temporary funding that will eventually be replaced by permanent capital from equity investors or debt lenders	DPI	Ratio of Distributed Capital to Contributed Capital
Buyout	Fund whose strategy is to acquire controlling interests in companies	Early Stage	A company's first Stage of development. Company is generally generating modest or no revenues
Co/Direct Investment	Investment made directly into a company, rather than indirectly through a fund	Equity	Security type that signifies ownership of a company (e.g. common stock, preferred stock, warrants, etc.)
Committed Capital	Total dollar amount of capital pledged to a fund	Expansion Stage	A company's third Stage of development. Company is generally experiencing high growth and nearing profitability
Contributed Capital	Total capital contributed to a fund for investments, fees and expenses, including late closing interest paid, less returns of excess capital called	Exposure	Sum of Remaining Value plus Unfunded Commitment
Cost Basis	Remaining amount of invested capital	Fund-of-Funds	Fund whose strategy is to make investments in other funds
Debt	Security type that signifies a repayment obligation by a company (e.g. senior debt, subordinated debt, bridge loan etc.)	Geographic Region	Market location of a company: North America, Western Europe, Africa/Middle East, Latin America, Asia/Pacific Rim
Distressed	A company's final Stage of development. Company is generally experiencing operational or financial distress	Growth Equity	Fund whose strategy is to invest in companies to expand or restructure operations, enter new markets or finance an acquisition without a change of control of the business
Distressed Debt	<ul style="list-style-type: none"> <li>• Distressed Trading – Fund whose strategy is to invest and trade debt of financially stressed companies</li> <li>• Distressed Restructuring – Fund whose strategy is to acquire and restructure debt of financially stressed companies</li> <li>• Opportunistic Credit – Fund whose strategy is to flexibly invest in debt securities and income-producing assets of any kind, where the issuer or holder is financially stressed</li> <li>• Structured Capital – Fund whose strategy is to issue hybrid debt and equity securities to mature companies</li> </ul>	Hard Assets	Fund whose strategy is to invest in natural resources or infrastructure
Distributed Capital	Capital distributed to the limited partners, including late closing interest earned	Infrastructure	Fund whose strategy is to acquire interests in physical structures and networks that provide the essential services for society's economic and social needs (e.g. roads, tunnels, communication networks, etc.)
		Internal Rate of Return (IRR)	The discount rate that results in a net present value of zero of a series of cash flows. The IRR considers both cash flow timing and amount and is the preferred performance measure for private market funds
		Invested Capital	Capital invested by a fund in portfolio holdings
		Investment Type	Classification of an investment vehicle: Primary Fund, Secondary Fund, Fund-of-Funds

Term	Definition	Term	Definition
J-Curve	Refers to the shape of the curve illustrating a fund's performance over time. During the initial years of a fund's life, as a result of illiquidity, stagnant valuations, fees and expenses, a fund's performance tends to be negative (the bottom of the "J"). Eventually, as portfolio companies are realized or increase in value and fees become a smaller percentage of overall contributions, performance improves and investors' returns move up the "J" shaped curve	Net IRR	Annualized effective compound rate of return using daily contributions, distributions and Remaining Value as of the Report Date, net of all fees and expenses, including late closing interest
Large	Company with a Size greater than \$1 billion	Percent Interest	Represents an investor's economic interest in a fund based upon the investor's commitment divided by total fund commitments
Late Stage	A company's second Stage of development. Company is generally generating high revenue growth and high losses	Primary Investment	An interest in a private equity fund acquired directly from the fund manager during the fundraising period
Lower-Mid	Company with a Size greater than \$100 million, but less than \$250 million	Public Market Equivalent (PME)	A private equity benchmark that represents the performance of a public market index expressed in terms of an IRR, using the same cash flows and timing as the investor's investment activity in private equity. The PME serves as a proxy for the return the investor could have achieved by investing in the public market. The PME benchmark return assumes cash flows are invested at the end of each day
Mature	A company's fourth Stage of development. Company is generally generating modest to no growth and operating profitably	Publication Date	Refers to the date this report was created as reflected in the Executive Summary
Mezzanine	<ul style="list-style-type: none"> <li>• Sponsored Mezzanine – Fund whose strategy is to issue subordinated loans to companies owned by private equity fund sponsors</li> <li>• Non-Sponsored Mezzanine – Fund whose strategy is to issue subordinated loans to companies not owned by private equity fund sponsors</li> </ul>	Real Assets	Fund whose strategy is to invest in assets that are tangible or physical in nature such as land, machinery, and livestock
MSCI ACWI Index - Total Return	The MSCI ACWI Total Return is a reflection of the performance of the MSCI ACWI Index, including dividend reinvestment, as calculated by Bloomberg. The MSCI ACWI Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 45 country indices comprising 24 developed and 21 emerging market country indices.	Real Estate	Fund whose strategy is to acquire interests in real estate property
Natural Resources	Fund whose strategy is to acquire interests in naturally-occurring, economically valuable raw materials and all physical facilities and capabilities required for the extraction, refinement, and delivery to end users (e.g. oil and gas properties, timberland, etc.)	Realized Capital	Capital distributed to a fund from portfolio holdings
NCREIF Property Index	The NCREIF Property Index is a quarterly, unleveraged composite total return for private commercial real estate properties held for investment purposes only.	Recallable / Recyclable Capital	Capital that has been previously distributed by a fund to investors but may be called again for investment purposes. It is generally associated with realizations that have occurred in the early years of a fund or refers to uninvested capital that has been temporarily returned (i.e. returns of excess capital)
		Recapitalization	The reorganization of a company's capital structure
		Remaining Value	Capital account balance as reported by the General Partner, generally on a fair value basis
		Report Date	Refers to the end date of the reporting period as reflected on the cover page
		Return on Investment (ROI)	Ratio of Realized Capital plus Unrealized Value to Invested Capital

Term	Definition	Term	Definition
Russell 1000® Total Return Index	The Russell 1000® Total Return Index measures the performance, including dividend reinvestment, of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000® Index and includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 represents approximately 92% of the U.S. market.	Size	Capitalization size of a company: Large, Upper-Mid, Lower-Mid, Small
Russell 3000® Total Return Index	The Russell 3000® Total Return Index measures the performance, including dividend reinvestment, of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market.	Small	Company with a Size of less than \$100 million
S&P 500 Price Index	The S&P 500 Price Index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.	Small Business Investment Company (SBIC)	Lending and investment firms that are licensed and regulated by the Small Business Administration (SBA). The licensing enables them to borrow from the federal government to supplement the private funds of their investors
S&P 500 Total Return Index	The S&P 500 Total Return Index is a reflection of the performance of the S&P 500 Index, including dividend reinvestment. All regular cash dividends are assumed to be reinvested in the S&P 500 Index on the ex-date. Special cash dividends trigger a price adjustment in the price return index.	Small Buyout	Fund whose strategy is to acquire or recapitalize Small businesses
Secondary Investment	Investments that involve the purchase of private equity fund interests or portfolios of direct investments in privately held companies from existing institutional investors	Special Assets	<ul style="list-style-type: none"> <li>• Healthcare Royalties – Fund whose strategy is to acquire royalty or revenue interests, or issue loans, backed by approved life science products</li> <li>• Music Royalties – Fund whose strategy is to acquire royalty or revenue interests, or issue loans, backed by music copyright assets</li> <li>• Aircraft Leasing – Fund whose strategy is to acquire and lease commercial aircraft</li> <li>• Life Settlement - Fund whose strategy is to acquire life insurance policies</li> <li>• Shipping – Fund whose strategy is to acquire and charter commercial shipping vessels</li> <li>• Asset Backed Securities – Fund whose strategy is to acquire or structure securities that are backed by income-producing assets</li> </ul>
Sector	Industry in which the company operates: technology, telecommunications, healthcare, financial services, diversified, industrial, consumer, energy, etc.	Stage	The course of development through which a company passes from its inception to its termination: Early, Late, Expansion, Mature, Distressed
Senior Debt	<ul style="list-style-type: none"> <li>• Direct Lending – Fund whose strategy is to issue senior loans to mature companies</li> <li>• Unitranche – Fund whose strategy is to issue hybrid senior and subordinated loans to mature companies</li> <li>• Venture Debt – Fund whose strategy is to issue loans to venture stage companies</li> <li>• Asset Based Lending – Fund whose strategy is to issue loans to companies where the amount of allowable borrowing outstanding is based on asset collateral value</li> <li>• Rescue Financing – Fund whose strategy is to issue loans to financially stressed companies</li> </ul>	Sub-Asset Class	Private equity investments are generally classified as Buyout, Venture Capital, Mezzanine, Distressed/Turnaround, and Fund-of-Funds
		TVPI	Ratio of Distributed Capital plus Remaining Value to Contributed Capital
		Unfunded Commitment	Amount of capital that remains to be contributed to a fund as defined in a fund's limited partnership agreement
		Unrealized Value	Holding value of a portfolio company assigned by the General Partner, which generally represents fair value
		Upper-Mid	Company with a Size greater than \$250 million but less than \$1 billion
		Venture Capital	Fund whose strategy is to make investments in Early Stage and/or Late Stage companies

---

<b>Term</b>	<b>Definition</b>
Vintage Year	The calendar year in which an investor first contributes capital to a fund

---

## End Notes

---

The information contained in this report is confidential and may contain proprietary information and trade secret information. The information contained herein is prepared by Franklin Park and is not reviewed or approved by the general partners or affiliates of underlying portfolio fund investments and is strictly for the use of Arkansas Teacher Retirement System and, subject to applicable law, may not be reproduced, transmitted or used in whole or in part for any other purpose without the expressed written consent of Franklin Park. Franklin Park requests that investors maintain this information in confidence and that this report is not disclosed to any person other than affiliates, advisers, and accountants, who agree to maintain this information in similar confidence, without the prior written consent of Franklin Park.

Information regarding the Arkansas Teacher Retirement System portfolio, trends and performance returns are based on or derived from information and data provided by third-party sources, including Arkansas Teacher Retirement System's historical records. Franklin Park assumes that such information is accurate and that the sources from which it has been obtained are reliable. For example, the performance figures contained within this report are calculated by Franklin Park based on information provided by the managers of Arkansas Teacher Retirement System's private equity fund investments (General Partners). The General Partners have not verified the performance figures presented by Franklin Park and such figures may differ from those calculated by General Partners or other investors.

Franklin Park presents Net IRR performance as recommended by the CFA Institute. The IRR calculation is a dollar-weighted return measurement, which considers both cash flow timing and amount, and is net of fees, expenses and carried interest. The total portfolio Net IRR presented herein is net of fees, expenses and carried interest paid by underlying private equity fund investments, but is gross of fees and expenses paid to Franklin Park. The IRR is most commonly used for measuring the performance of private equity funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. An IRR is particularly not meaningful in the first two years of a fund's life given the J-curve effect (see footnote). The actual IRR of any private equity fund investment is not known until final liquidation.

---

▫ The J-curve refers to the shape of the curve that illustrates a private equity fund's performance over time. During the initial years of a fund's life, due to fees and expenses, a fund's performance tends to be negative (the bottom of the "J"). Eventually, as portfolio company investments increase in value, fund performance improves and returns move up the "J" shaped curve.



# Arkansas Teacher Retirement System 2022 Investment Plan

December 6, 2021

## 2021 Actual Commitments vs. Plan

ATRS committed \$300 million in 2021, meeting the expected plan for the year

### ATRS Commitments

<b>Investment</b>	<b>Strategy</b>	<b>Region</b>	<b>ATRS Commitment</b>
Greenbriar V	Mid Market Buyouts (logistics)	U.S.	\$30m
Revelstoke III	Mid Market Buyouts (healthcare)	U.S.	\$30m
Alpine VIII	Mid Market Buyouts (technology)	U.S.	\$30m
Clearlake VII	Value Oriented Investments	U.S.	\$30m
Bison VI	Structured Equity	U.S.	\$30m
Riverside Value I	Turnaround	U.S.	\$30m
FP CF Access	Small/Mid Market Funds	U.S.	\$30m
FP International X	Buyout/Growth/Turnaround	Non-U.S.	\$30m
FP Venture XIV	Early/Late/Growth	U.S./Non-U.S.	\$30m
FP CF Access II	Small/Mid Market Funds	U.S.	\$30m
<b>Total</b>			<b>\$300m</b>

### Due Diligence Activities

<b>Activity</b>	<b># of Funds (3Q20 LTM)</b>	<b># of Funds (3Q21 LTM)</b>	<b>% of Funds Reviewed (3Q21 LTM)</b>
Preliminary Reviews	911	1,136	100%
Manager Meetings	384	471	41%
Due Diligence Analyses	136	173	15%
ATRS Funds Closed	6	6	<1%

*\*Excludes FP Vehicles*



# Policy

ATRS' Objective, Guidelines and Constraints are outlined below

## Objectives

- Achieve a target 12% allocation to private equity
- Generate a long-term return of 200 bps over the Dow Jones U.S. Total Stock Market index (+390 bps as of 6/30/21)

## Guidelines

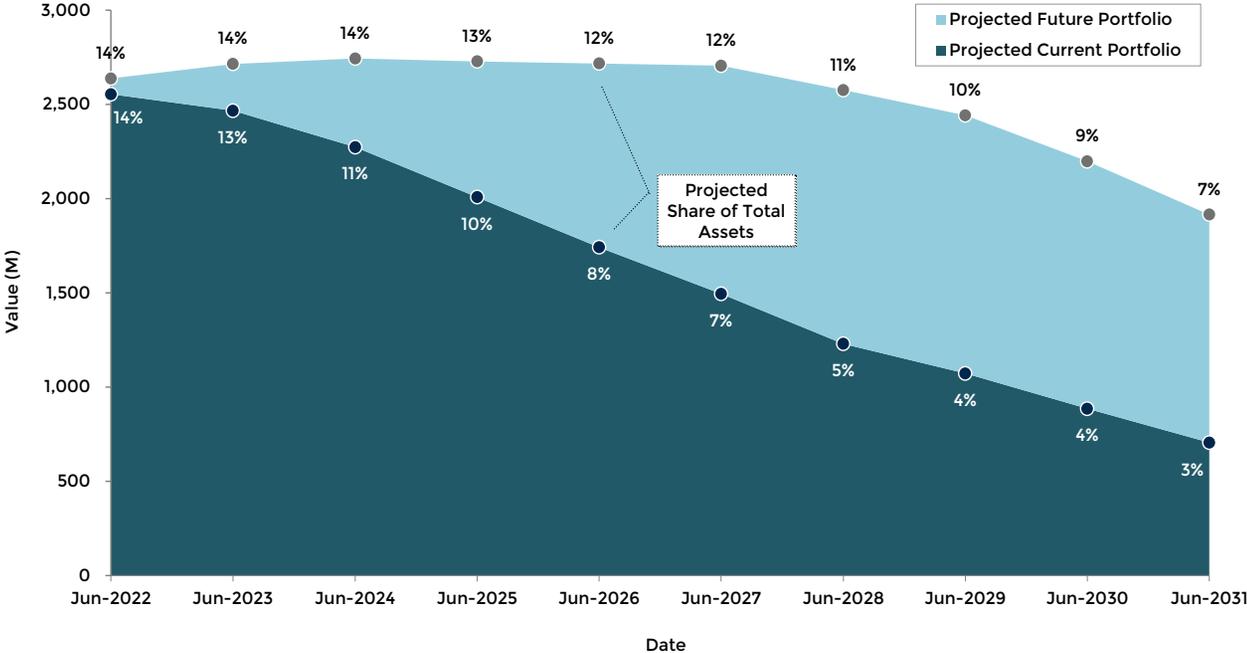
- Achieve a target 12% allocation to private equity (13.5% as of 6/30/21)
- Target 80-100% of PE commitments to Corporate Finance strategies, including buyout, turnaround, growth capital and private debt funds (79.7% as of 6/30/21)
- Target 0-20% of PE commitments to Venture Capital strategies (20.3% as of 6/30/21)

## Constraints

- Individual commitments should be at least \$10 million
- A commitment can be no more than 15% of the total amount raised by a primary fund
- No more than 35% of new private equity commitments can be invested with any one fund manager

# Investment Pacing

To reach and maintain a 12% allocation to PE, \$350 million should be committed annually



## Methodology

- Franklin Park’s pacing model approximates the amount of capital that an investor should commit each year to reach its target allocation over a specified horizon
- The model is based on historical industry cash flow rates generated from Thomson One Private Equity’s database

## Assumptions

- Average total assets over the last eight quarters as of 6/30/21 (\$18.2B) was used as the beginning portfolio value
- 3.6% annual net growth rate for total assets
- 12% target allocation to private equity
- Existing private equity portfolio data as of 6/30/21
- Future commitments allocated 80% to corporate finance equity funds, 10% to private debt funds, and 10% to venture capital funds

## Commitment Plan

It is recommended that ATRS allocate the planned 2021 commitments to approximately 10 funds/vehicles

### ATRS Commitments

<b>Investment</b>	<b>Strategy</b>	<b>Region</b>	<b>ATRS Commitment</b>
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$35m
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$35m
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$35m
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$35m
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$30m
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$30m
Direct Fund	Buyout/Growth/Turnaround/Debt	U.S.	\$30m
FP International XI	Buyout/Growth/Turnaround	Non-U.S.	\$30m
FP Venture XIV	Early Stage	U.S./Non-U.S.	\$30m
FP Venture Opps I	Late Stage	U.S./Non-U.S.	\$30m
FP CF Access II	Buyout/Growth/Turnaround	U.S.	\$30m
<b>Total</b>			<b>\$350m</b>

## Recommendation

---

**Maintain current policy targets and investment guidelines**

---

**Seek to commit \$350 million in 2022**

---

**Allocate the planned commitments to approximately 11 funds/vehicles**

---



# Arkansas Teacher Retirement System

Franklin Park International Fund XI, L.P.

November 2021

## Disclaimer

This Presentation (this “Presentation”) has been prepared by Franklin Park Associates, LLC (“Franklin Park”) solely for informational purposes for the exclusive use of the party to whom Franklin Park delivers this Presentation (the “Recipient”). This Presentation is not to be construed as a solicitation, invitation or an offer by Franklin Park or any of its members, officers, employees or agents to buy or sell any securities or related financial instruments. This Presentation is furnished on a confidential and limited basis for the sole and exclusive purpose of providing general and background information concerning Franklin Park International Fund XI, L.P. (the “Fund”) as well as Franklin Park and its activities. This Presentation is not an offer or sale of, or a solicitation to any person to buy, any security or investment product or investment advice. Any such offer, sale or solicitation of interests in the Fund will be made only pursuant to the Fund’s definitive documents, and will be subject to the terms and conditions contained in such documents. This Presentation is qualified in its entirety by reference to the Fund’s definitive documents.

The information in this Presentation has been obtained from Franklin Park’s proprietary research and other publicly available sources and has not been independently verified by Franklin Park or any of its members, officers, employees, agents, representatives or advisers or any other person. Any valuations, projections, estimates, forecasts, targets, prospects, returns and/or opinions contained herein involve elements of subjective judgment and analysis. Any opinions expressed in this material are subject to change without notice. This Presentation may contain forward-looking statements. Any estimates or projections as to events that may occur in the future are based upon the reasonable expectation of Franklin Park. No obligation is undertaken by Franklin Park or any other person to provide the Recipient with additional information or to update, revise or reaffirm the information contained in this Presentation or to correct any inaccuracies therein which may become apparent.

Past or projected performance information contained in this Presentation is not necessarily indicative of future results. There can be no assurance that the Fund will ultimately achieve comparable performance results.

This Presentation is not intended to be relied upon as legal, tax, accounting or investment advice or a recommendation and is not, and should not be assumed to be, complete. The Recipient agrees that Franklin Park and its affiliates, members, partners, stockholders, managers, directors, officers, employees and agents shall have no liability for any misstatement or omission of fact or any opinion expressed herein. The contents herein are not to be construed as legal, business or tax advice, and the Recipient should consult its own attorney, business advisor and tax advisor as to legal, business and tax advice. Recipient is expected to rely on its own due diligence if it wishes to proceed further.

The Recipient further agrees that it will (i) not copy, reproduce or distribute the Presentation, in whole or in part, to any person or party without the prior written consent of Franklin Park, (ii) keep permanently confidential all information contained herein not already public and (iii) use the Presentation solely for the purpose set forth in the first paragraph above.

By accepting this Presentation the Recipient agrees to be bound by the foregoing obligations and limitations.

# International Strategy

Franklin Park targets investable non-U.S. markets and less competitive strategies

---

## Market Criteria

- Acceptable country risk
- Sufficient liquidity – private equity deal volume, active exit market
- Pockets of inefficiency

---

## Strategy Criteria

- Seek to at least double earnings over a 5-year holding period
  - Attractive deal pricing relative to earnings growth
- 

### Underweight

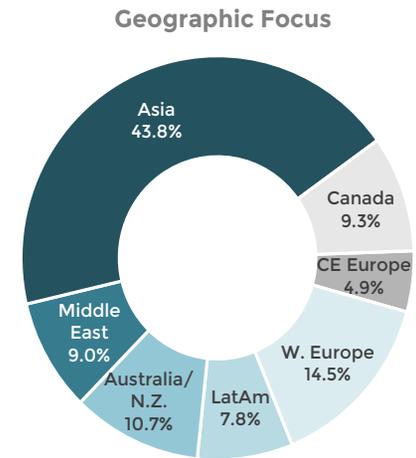
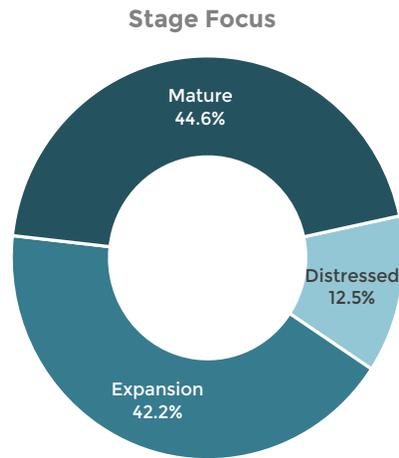
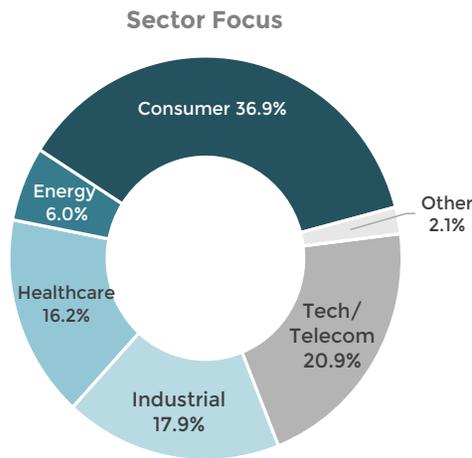
- Pan-European
- Pan-Asian
- India (growth equity)
- Indonesia (growth equity)
- ROW (Africa, Latin America)

### Overweight

- China (growth equity/ buyout)
- Europe (small/lower mid-market buyout)
- Australia (small/lower mid-market buyout)
- Canada (small/lower mid-market buyout)
- Japan/S. Korea (small/lower mid-market buyout)
- Europe (turnaround)
- Australia (turnaround)

# Portfolio Diversification

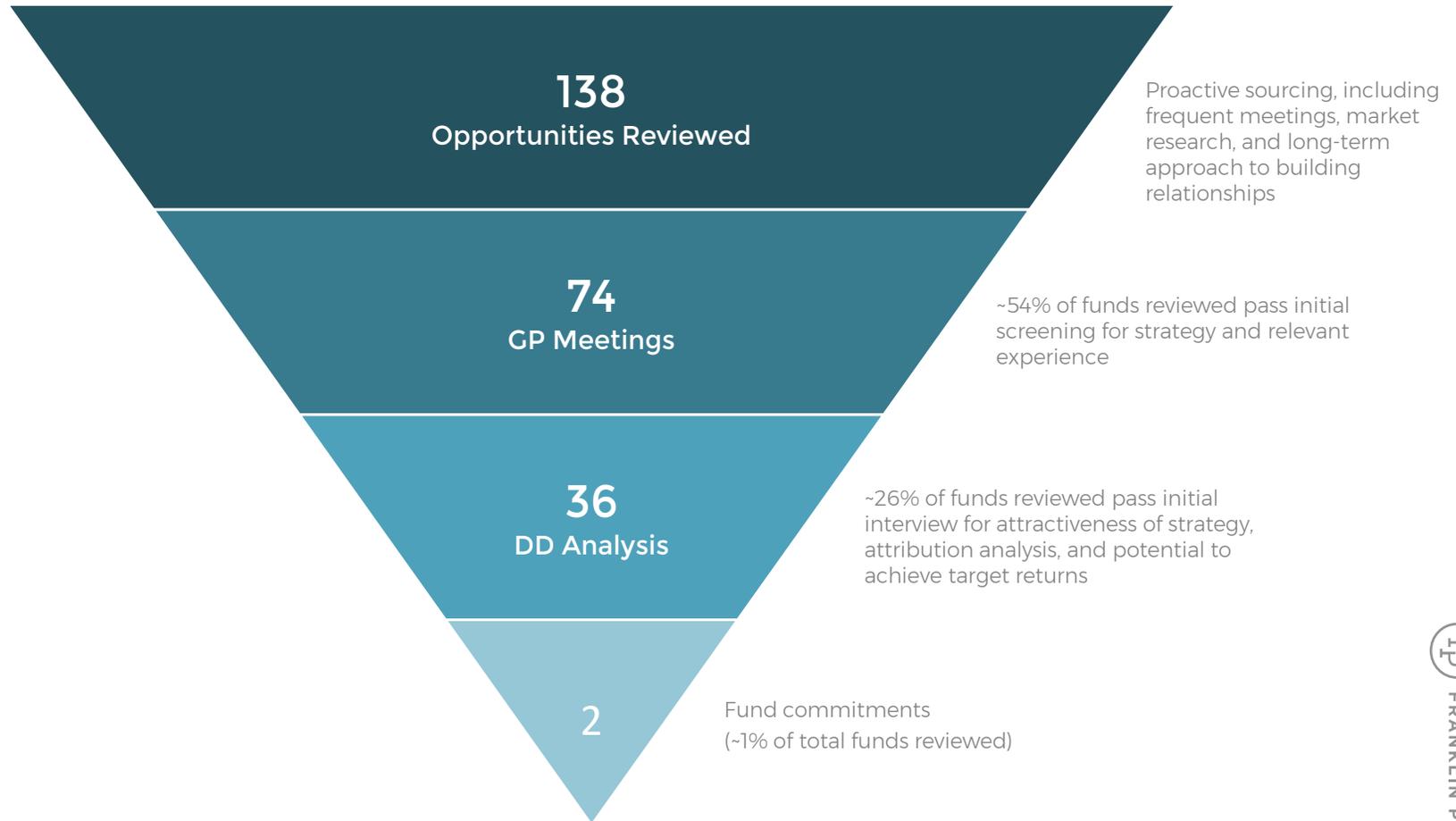
Activity weighted towards expansion and mature consumer companies across Asia and Europe



Note: Chart data is based on the unrealized value of the underlying portfolio funds' holdings as of June 30, 2021 for Franklin Park International Fund Series 2011-2019 and Franklin Park International Fund X, L.P. (collectively, "FPI"). Values are based on the respective FPI Fund's interest in the underlying portfolio funds. Values reported in currencies other than USD have been converted to USD as of June 30, 2021.

# Non-U.S. Corporate Finance Deal Flow (2020)

Broad market coverage with highly selective decision making



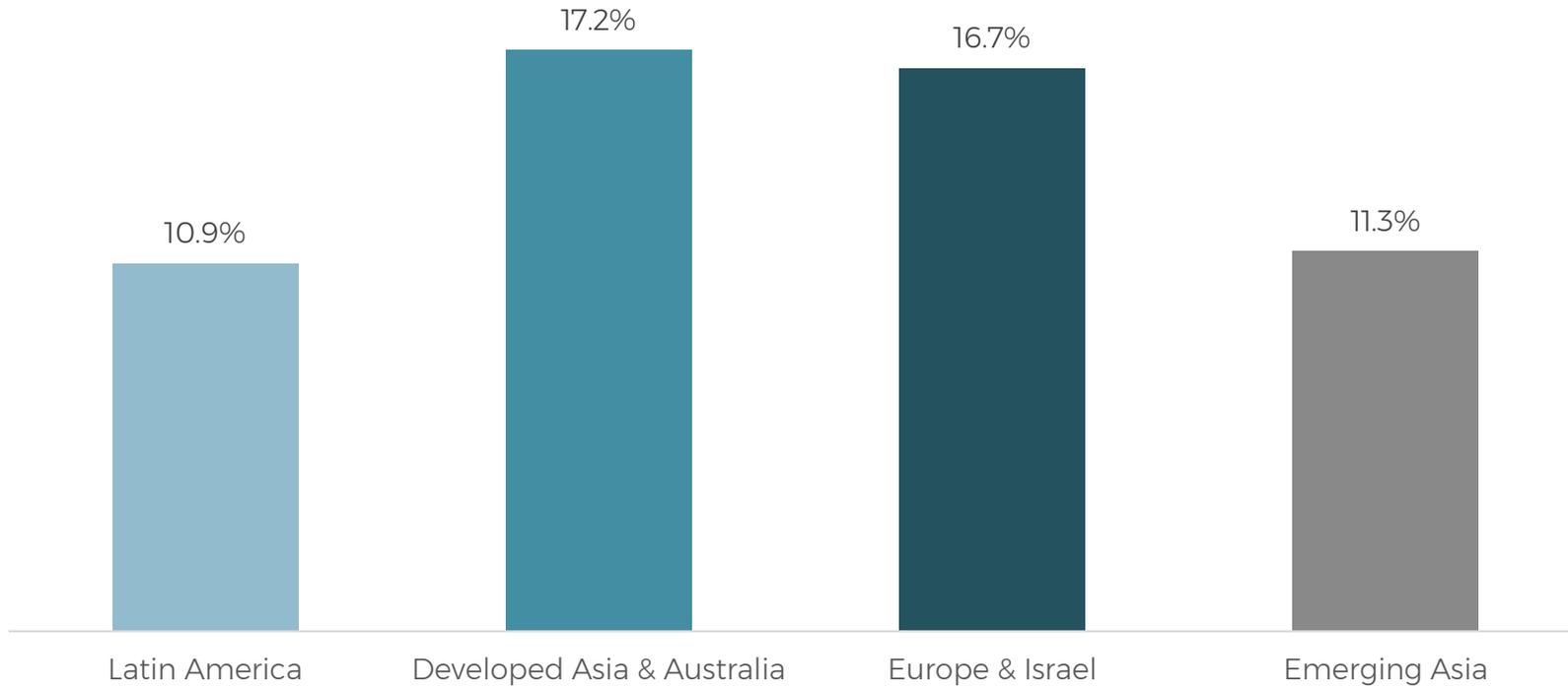
## Historical Performance

Franklin Park has raised 10 prior non-U.S. corporate finance focused fund of funds vehicles

VEHICLE	FUND SIZE	CONTRIBUTED	DISTRIBUTED	REMAINING	TVPI	NET IRR
FPI 2011	45.0	41.5	43.4	26.5	1.7x	10.4%
FPI 2012	70.0	47.8	32.9	36.6	1.5x	9.5%
FPI 2013	97.0	67.0	14.9	95.3	1.6x	11.2%
FPI 2014	97.0	62.1	31.3	65.7	1.6x	13.9%
FPI 2015	113.0	78.5	21.6	103.7	1.6x	16.4%
FPI 2016	97.0	66.7	10.2	81.0	1.4x	12.0%
FPI 2017	98.0	62.0	10.8	114.2	2.0x	38.6%
FPI 2018	65.5	50.0	0.0	67.5	1.4x	29.1%
FPI 2019	70.5	20.0	0.0	27.4	1.4x	NMF
FPI X	139.0	5.0	0.0	4.7	0.9x	NMF
<b>Total</b>		<b>\$500.6</b>	<b>\$165.2</b>	<b>\$622.6</b>	<b>1.6x</b>	<b>14.6%</b>

# Historical Performance: By Region

Performance for FPI 2011-2019 and FPI X by region



Notes: Data is as of June 30, 2021. Past results are not necessarily indicative of future performance. Wherever there is potential for profit, there is also potential for loss. See additional important information in the Track Record Footnotes.

\*Latin America includes Brazil Capital Growth II, Alothon III and Brazil Opportunity Growth III.

\*Developed Asia & Australia includes Archer Growth 2, Anchorage II, Hahn II, Growth Fund 3, Anchorage III, Aspirant III and Potentia I.

\*Europe & Israel includes Fortissimo III, German Equity IV, Mid-Europa IV, Kerogen Energy II, Quantum I, Fortissimo IV, OpCapita II, Procuritas VI, Kerogen Expansion, Quantum II, Keensight V, Main Capital VI, Blixt I, and Phi III.

\*Emerging Asia includes Prax III, North Haven PE Asia IV, Falcon House I, CDH Parallel III, Falcon House II, Legend VII, GenBridge I & II, C Bridge IV & V, CITIC PE III, Xiang He II, CDH VGC II and 5Y Growth I.

\*Funds based in Canada (Novacap TMT V and VI) are excluded.

# Proposal

---

**Consider a \$30 million commitment to Franklin Park International Fund XI, L.P. as part of the 2022 pacing.**

---

## Footnotes

Based in Bala Cynwyd, Pennsylvania, Franklin Park was formed in April 2003. Franklin Park is an independent, registered investment adviser with the U.S. Securities and Exchange Commission. Franklin Park assists its clients in building and managing customized investment portfolios of private market investments.

### Historical Performance (p.6):

The returns represent the performance of each Franklin Park International Fund 2011-2019 and Franklin Park International Fund X, L.P. (the "Franklin Park International vehicles") based upon client cash flows and capital account balances. The performance results are measured in U.S. dollars from the inception date of each vehicle's activities through June 30, 2021.

Performance for FP International Fund 2019 and Fund X vehicles is deemed not yet meaningful ("NMF") due to the young age of the underlying investment portfolio, and are therefore not presented.

The returns presented are net of underlying private equity fund manager fees, transaction expenses and carried interest charges, as well as expenses incurred by the Franklin Park International vehicles. No investment advisory fees or carried interest are charged by the Franklin Park International vehicles to any investor; provided that, the calculations exclude investment fees and expenses paid through other Franklin Park accounts and vehicles, including amounts paid to Franklin Park and its affiliates under separate investment management agreements. If the performance results had been adjusted to reflect the Partnership's expense structure, net returns would be lower.

Net IRR is the discount rate that results in a net present value of zero of a series of cash flows, and considers both cash flow timing and amount.

Vintage represents the year in which each Franklin Park International vehicle first called capital.

### Historical Performance by Region (p.7)

The returns represent the returns of the underlying Portfolio Funds aggregated by region. The returns are based on the Franklin Park International vehicles' cash flows and reported capital balances from the underlying Portfolio Funds. The returns presented are net of underlying private equity fund manager fees, transaction expenses and carried interest charges, but exclusive of expenses incurred by the Franklin Park International vehicles.

### Risk of Loss; Past Performance is Not a Guarantee:

Prospective investors must be aware that investments in private equity funds such as the Fund are speculative and involve a substantial risk of loss. No assurance can be given that the Fund will achieve its investment objectives or avoid substantial losses. Information about other investments made by Franklin Park, including the past performance of other Franklin Park vehicles and investments, is provided solely to illustrate Franklin Park's investment experience, and processes and strategies used by Franklin Park in the past with respect to other Franklin Park vehicles and investments. The performance information relating to Franklin Park's previous investments is not intended to be indicative of the Fund's future results. Past performance is not necessarily indicative, or a guarantee, of future results. There can be no assurance that the Fund will achieve comparable results as those presented or that investors in the Fund will not lose any of their invested capital.

### Potential Future Returns:

There can be no assurance that investments with an unrealized value will be realized at the valuations shown, as actual realized returns will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations contained herein are based. Accordingly, the actual realized return of these unrealized investments may differ materially from the returns indicated herein.

### No Investment Advice:

References to the portfolio funds in this Presentation should not be considered a recommendation or solicitation for the portfolio funds mentioned, nor should individual portfolio fund performance be considered representative of portfolio funds held, or to be held, by the Fund.

## Franklin Park Associates, LLC

251 St. Asaphs Road  
Three Bala Plaza, Suite 500 West  
Bala Cynwyd, PA 19004

For more information, please contact us at [info@franklinparkllc.com](mailto:info@franklinparkllc.com)

Franklin Park Associates, LLC is an SEC registered investment advisor pursuant to the Investment Advisors Act of 1940

**ARKANSAS TEACHER RETIREMENT SYSTEM**  
**1400 West Third Street**  
**Little Rock, Arkansas 72201**

**RESOLUTION**  
**No. 2021-63**

**Approving Investment in Franklin Park International  
Fund XI, L.P. with Imminent Need**

**WHEREAS**, the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) is authorized to invest and manage trust assets for the benefits of its plan participants; and

**WHEREAS**, the ATRS Board has reviewed the recommendation of its private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **Franklin Park International Fund XI, L.P.**, a fund of funds managed by Franklin Park investing in international private equity funds; and

**WHEREAS**, the ATRS Board approves an investment of up to **\$30 million dollars (\$30,000,000.00)** in **Franklin Park International Fund XI, L.P.**, and the Board, after its review of the timing in which the closing of the investment in **Franklin Park International Fund XI, L.P.** may need to occur, has determined that there is an imminent need to immediately enter into the partial equity ownership agreement prior to the next scheduled meeting of the Arkansas Legislative Council. The Board also deems it financially appropriate to enter into the partial equity ownership agreement and concludes that to forego the opportunity to promptly implement its investment directives under the prudent investor rule would be inconsistent with its fiduciary duty of care to the members and annuitants;

**NOW, THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$30 million dollars (\$30,000,000.00)** in **Franklin Park International Fund XI, L.P.** and agrees to immediately move to close and subscribe the approved ATRS limited partnership interest in **Franklin Park International Fund XI, L.P.** The total investment amount is to be determined by the private equity consultant and ATRS staff based upon the allocation available to ATRS and the overall investment objectives set by the Board; and

***FURTHER, BE IT RESOLVED***, that the ATRS staff is hereby authorized to take all necessary and proper steps to implement this investment using the Imminent Need process, if acceptable terms are reached.

**Adopted this 6th day of December 2021**

---

**Mr. Danny Knight, *Chair***  
**Arkansas Teacher Retirement System**



Arkansas Teacher Retirement System

Franklin Park  
Venture Capital Opportunity Fund, L.P.

December 2021

## Disclaimer

This Presentation (this “Presentation”) has been prepared by Franklin Park Associates, LLC (“Franklin Park”) solely for informational purposes for the exclusive use of the party to whom Franklin Park delivers this Presentation (the “Recipient”). This Presentation is not to be construed as a solicitation, invitation or an offer by Franklin Park or any of its members, officers, employees or agents to buy or sell any securities or related financial instruments. This Presentation is furnished on a confidential and limited basis for the sole and exclusive purpose of providing general and background information concerning Franklin Park Venture Capital Opportunity Fund, L.P. (the “Fund”) as well as Franklin Park and its activities. This Presentation is not an offer or sale of, or a solicitation to any person to buy, any security or investment product or investment advice. Any such offer, sale or solicitation of interests in the Fund will be made only pursuant to the Fund’s definitive documents, and will be subject to the terms and conditions contained in such documents. This Presentation is qualified in its entirety by reference to the Fund’s definitive documents.

The information in this Presentation has been obtained from Franklin Park’s proprietary research and other publicly available sources and has not been independently verified by Franklin Park or any of its members, officers, employees, agents, representatives or advisers or any other person. Any valuations, projections, estimates, forecasts, targets, prospects, returns and/or opinions contained herein involve elements of subjective judgment and analysis. Any opinions expressed in this material are subject to change without notice. This Presentation may contain forward-looking statements. Any estimates or projections as to events that may occur in the future are based upon the reasonable expectation of Franklin Park. No obligation is undertaken by Franklin Park or any other person to provide the Recipient with additional information or to update, revise or reaffirm the information contained in this Presentation or to correct any inaccuracies therein which may become apparent.

Past or projected performance information contained in this Presentation is not necessarily indicative of future results. There can be no assurance that the Fund will ultimately achieve comparable performance results.

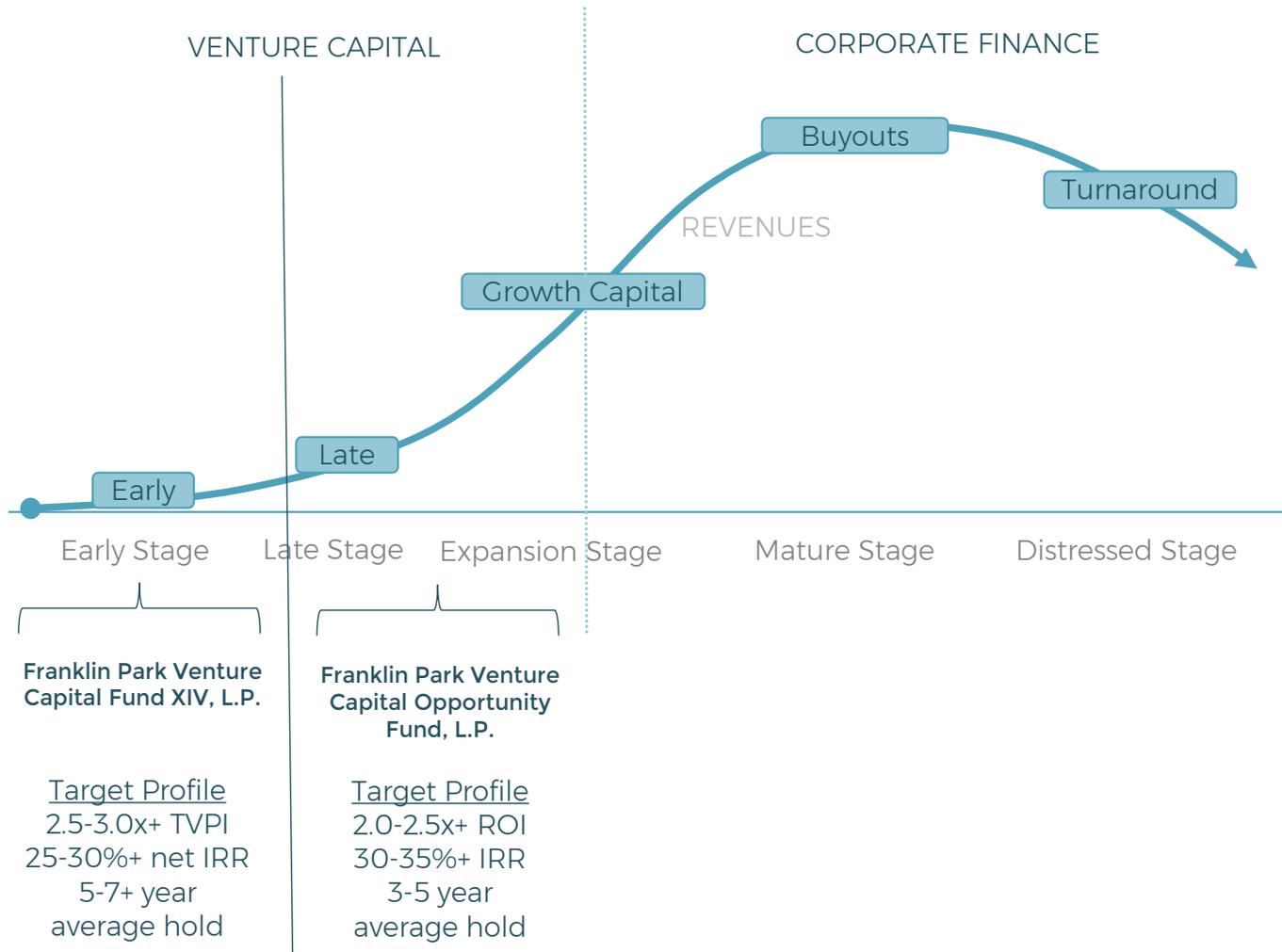
This Presentation is not intended to be relied upon as legal, tax, accounting or investment advice or a recommendation and is not, and should not be assumed to be, complete. The Recipient agrees that Franklin Park and its affiliates, members, partners, stockholders, managers, directors, officers, employees and agents shall have no liability for any misstatement or omission of fact or any opinion expressed herein. The contents herein are not to be construed as legal, business or tax advice, and the Recipient should consult its own attorney, business advisor and tax advisor as to legal, business and tax advice. Recipient is expected to rely on its own due diligence if it wishes to proceed further.

The Recipient further agrees that it will (i) not copy, reproduce or distribute the Presentation, in whole or in part, to any person or party without the prior written consent of Franklin Park, (ii) keep permanently confidential all information contained herein not already public and (iii) use the Presentation solely for the purpose set forth in the first paragraph above.

By accepting this Presentation the Recipient agrees to be bound by the foregoing obligations and limitations.

# Late Stage Venture Capital Overview

Late stage venture has a lower risk/return profile and shorter holding period relative to early stage venture



*For illustrative purposes only. There can be no assurance that the Fund or Franklin Park Venture Capital Fund XIV, L.P. can achieve the target profile returns. The actual years portfolio investments are held and portfolio returns cannot be known and may vary from the targeted parameters.*

# Strategy

The vehicle will provide investors with exposure to later stage venture capital opportunities

---

<b>Primary Strategy</b>	<ul style="list-style-type: none"><li>• Commitments to later stage funds raised by early stage venture firms we have identified as “top tier”</li><li>• Venture firms have insight into the most promising companies in their existing early stage portfolios and may have advantaged access to deals at the later stages</li></ul>
<b>Other Potential Opportunities</b>	<ul style="list-style-type: none"><li>• Other later stage funds: firms with a primary focus on making investments in later stage venture or growth companies</li><li>• Co-investments: select opportunities to invest directly (or through an SPV) in later stage venture businesses alongside of fully vetted venture managers</li></ul>

---

## Historical Venture Performance

ATRS has committed \$365 million to 13 prior Franklin Park venture capital vehicles raised since 2008

VEHICLE	ATRS COMMITMENT	CONTRIBUTED	DISTRIBUTED	REMAINING	TVPI	NET IRR
FPV 2008	\$30.0	\$30.0	\$51.0	\$49.3	3.3x	19.5%
FPV 2009	25.0	24.5	49.2	22.8	2.9x	19.2%
FPV 2010	25.0	16.0	18.7	38.8	3.6x	20.2%
FPV 2011	25.0	24.1	81.5	187.7	11.2x	45.2%
FPV 2012	25.0	22.3	30.5	59.7	4.0x	27.4%
FPV 2013	20.0	18.2	19.6	48.5	3.7x	31.3%
FPV 2014	25.0	23.7	11.2	77.7	3.8x	30.7%
FPV 2015	25.0	23.7	4.3	58.4	2.6x	30.0%
FPV 2016	25.0	20.1	3.9	39.2	2.1x	31.8%
FPV 2017	25.0	14.9	2.0	28.0	2.0x	47.5%
FPV 2018	25.0	17.7	0.0	26.2	1.3x	34.7%
FPV 2019	30.0	14.2	0.0	18.5	1.3x	32.8%
FPV XIII	60.0	12.4	0.1	12.7	1.0x	NMF
<b>Total</b>	<b>\$365.0</b>	<b>\$261.8</b>	<b>\$272.1</b>	<b>\$667.6</b>	<b>3.6x</b>	<b>27.6%</b>

Data in the table is as of June 30, 2021 and represents only ATRS's interests in each vehicle; \$ in millions. The returns presented are net of underlying private fund manager fees, transaction expenses and carried interest charges, as well as expenses incurred by the Franklin Park Venture Capital Fund vehicles. Past results are not necessarily indicative of future performance. There can be no assurance that investments recommended by Franklin Park will realize the rates of return indicated in this presentation. Wherever there is potential for profit, there is also potential for loss. See additional information in the Footnotes.

## Track Record- Late Stage

Franklin Park has committed \$70.8 million to 12 later stage venture funds, which have generated a net IRR of 35.2%

VEHICLE	VINTAGE	FUND SIZE	COMMITMENT	CONTRIBUTED	DISTRIBUTED	REMAINING	TVPI	NET IRR
ABC Select I	2014	431.5	2.5	2.5	2.3	5.2	3.1x	25.2%
XYZ Special Opportunities	2014	102.5	2.9	2.8	0.3	17.8	6.5x	37.5%
ABC Select II	2016	500.0	2.5	2.4	1.0	5.4	2.7x	31.5%
XYZ Special Opportunities II	2017	200.0	5.0	5.0	-	12.1	2.4x	34.8%
ABC Select III	2018	1,361.8	3.5	3.3	0.0	5.4	1.7x	28.5%
Capital VI Plus	2018	225.8	2.5	2.4	-	8.1	3.4x	67.8%
Special Opportunities I	2019	300.0	4.0	3.6	-	4.7	1.3x	52.5%
China Select I	2019	252.0	3.0	1.7	0.0	2.5	1.5x	41.7%
DEF Opportunity Fund	2019	55.8	5.0	2.5	-	3.3	1.3x	28.3%
Growth III	2020	909.1	10.0	6.6	-	7.8	1.2x	48.8%
Opportunity Fund	2021	375.5	9.9	1.5	-	1.7	1.2x	NMF
A Growth I	2021	904.2	20.0	-	-	0.0	n/a	n/a
<b>Total</b>			<b>\$70.8</b>	<b>\$34.0</b>	<b>\$3.6</b>	<b>\$74.0</b>	<b>2.3x</b>	<b>35.2%</b>

Data in the table is as of June 30, 2021; \$ in millions. The returns presented are net of underlying private fund manager fees, transaction expenses and carried interest charges. Past results are not necessarily indicative of future performance. There can be no assurance that investments recommended by Franklin Park will realize the rates of return indicated in this presentation. Wherever there is potential for profit, there is also potential for loss. See additional information in the Footnotes.

## Other Late Stage Opportunities/Pipeline

Franklin Park has consistently sourced later stage venture opportunities

---

<b>Prior Opportunities (passed given no dedicated vehicle)</b>	<ul style="list-style-type: none"><li>• ABC Venture Opps I (\$250m, 2019)</li><li>• ABC Venture Opps II (\$250m, 2021)</li><li>• DEF Opportunity 2020 (\$50m, 2020)</li><li>• Select I (\$60m, 2017)</li><li>• Select II (\$225m, 2020)</li><li>• Growth IV (\$1b, 2021)</li><li>• GHI Fund II (\$100m, 2020)</li><li>• Harvest I (\$100m, 2021)</li></ul>
<b>Near Term Pipeline</b>	<ul style="list-style-type: none"><li>• JKL Select II (\$600m, Jan 2022)</li><li>• MNO Growth IV (\$1b, Jan 2022)</li><li>• PQR Opportunity I (\$100m, 1Q22)</li><li>• STU Opportunity II (\$55m, 1H22)</li></ul>

---

*References to the portfolio funds in this Presentation should not be considered a recommendation or solicitation for the portfolio funds mentioned, nor should they be considered representative of portfolio funds held, or to be held, by the Fund. Years represent the year in which Franklin park passed on the investment opportunity (Prior Opportunities) or expects to close on a potential investment opportunity (Near Term Pipeline). However, no assurance is given that the Fund will make an investment in such private funds.*

*The information contained herein is prepared by Franklin Park and is not reviewed or approved by the general partner or affiliates of the private funds mentioned and is strictly for the use of the Recipient and, subject to applicable law, may not be reproduced, transmitted or used in whole or in part for any other purpose without the express written consent of Franklin Park.*

# Proposal

---

Consider making an initial \$30 million commitment to Franklin Park Venture Capital Opportunity Fund, L.P. - another \$30 million commitment is expected to be considered in 2022

---

Proposed Terms (same as Franklin Park Venture Capital Fund XIV, L.P.):

1. Management Fees:

- No management fee for existing Franklin Park clients (including ATRS)
- 0.9% of commitment during investment period (for all other investors)

2. Carried Interest:

- 5% carried interest once 8% preferred return is achieved
  - 4% carried interest for investors committing at least \$60 million (including ATRS)
-

## Footnotes

Historical Performance page 5:

The returns represent the performance of each Franklin Park Venture Fund Series 2008-2019 vehicle and Franklin Park Venture Capital Fund XIII, L.P. based upon ATRS' cash flows and capital account balances. The performance results are measured in U.S. dollars from the inception date of each vehicle's activities through June 30, 2021.

The returns presented are net of underlying private equity fund manager fees, transaction expenses and carried interest charges, as well as expenses incurred by the Franklin Park Venture vehicles. No investment advisory fees or carried interest are charged by the Franklin Park Venture Fund Series 2008-2019 vehicles and Franklin Park Venture Capital Fund XIII, L.P. (the "FPV vehicles") to any investor; provided that, the calculations exclude investment fees and expenses paid through other Franklin Park accounts and vehicles, including amounts paid to Franklin Park and its affiliates under a separate investment management agreement. If the performance results had been adjusted to reflect the Fund's expected expense structure, net returns would be lower.

Performance for FP Venture Capital Fund XIII, L.P. is deemed not yet meaningful ("NMF") due to the young age of the underlying investment portfolio, and are therefore not presented.

Track Record - Late Stage page 6:

Performance results are presented for a portfolio of late stage venture capital focused private fund investments made on behalf of Franklin Park's discretionary client accounts. The returns represent the performance for Franklin Park's discretionary client accounts based upon client cash flows and capital account balances as reported by the underlying private fund managers. The performance results are measured in U.S. dollars on a since-inception basis through June 30, 2021.

The returns presented are net of underlying private fund manager fees, transaction expenses and carried interest charges, but exclusive of Franklin Park's investment advisory fees and fund-of-one vehicle expenses. The returns will be reduced by Franklin Park's investment advisory fees. As described in Part II of Form ADV, Franklin Park's fees are negotiable and are based on either a fixed fee arrangement or as a percentage of assets under management. As a representative example, a fixed fee of \$800,000 annually, compounded over 10 years, may reduce a portfolio IRR of 17.3% by 20 basis points. Franklin Park may charge performance fees to specific funds it manages if specified performance conditions, as detailed in fund documents, are met. Fees, including performance fees, and expenses charged may result in a greater reduction to performance depending on the terms and conditions specific to the fee arrangement or fund terms. If the performance results had been adjusted to reflect the Fund's fee and expense structure, net returns would be lower.

Vintage represents the year in which the vehicle first called capital.

TVPI represents the ratio of distributed capital plus remaining value (the capital account balance) to contributed capital.

Net IRR is the discount rate that results in a net present value of zero of a series of cash flows, and considers both cash flow timing and amount.

Risk of Loss; Past Performance is Not a Guarantee: Prospective investors must be aware that investments in private equity funds such as the Fund are speculative and involve a substantial risk of loss. No assurance can be given that the Fund will achieve its investment objectives or avoid substantial losses. Information about other investments made by Franklin Park, including the past performance of other Franklin Park vehicles and investments, is provided solely to illustrate Franklin Park's investment experience, and processes and strategies used by Franklin Park in the past with respect to other Franklin Park vehicles and investments. The performance information relating to Franklin Park's previous investments is not intended to be indicative of the Fund's future results. Past performance is not necessarily indicative, or a guarantee, of future results. There can be no assurance that the Fund will achieve comparable results as those presented or that investors in the Fund will not lose any of their invested capital.

Potential Future Returns: There can be no assurance that investments with an unrealized value will be realized at the valuations shown, as actual realized returns will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations contained herein are based. Accordingly, the actual realized return of these unrealized investments may differ materially from the returns indicated herein.

No Investment Advice: References to the portfolio funds in this Presentation should not be considered a recommendation or solicitation for the portfolio funds mentioned, nor should individual portfolio fund performance be considered representative of portfolio funds held, or to be held, by the Fund.

## Franklin Park Associates, LLC

251 St. Asaphs Road  
Three Bala Plaza, Suite 500 West  
Bala Cynwyd, PA 19004

For more information, please contact us at [info@franklinparkllc.com](mailto:info@franklinparkllc.com)

Franklin Park Associates, LLC is an SEC registered investment advisor pursuant to the Investment Advisors Act of 1940

**ARKANSAS TEACHER RETIREMENT SYSTEM  
1400 West Third Street  
Little Rock, Arkansas 72201**

**RESOLUTION  
No. 2021-64**

**Approving Investment in Franklin Park Venture Capital  
Opportunity Fund, L.P. with Imminent Need**

**WHEREAS**, the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) is authorized to invest and manage trust assets for the benefits of its plan participants; and

**WHEREAS**, the ATRS Board has reviewed the recommendation of its private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **Franklin Park Venture Capital Opportunity Fund, L.P.**, a fund of funds managed by Franklin Park investing in later stage venture capital private equity funds; and

**WHEREAS**, the ATRS Board approves an investment of up to **\$30 million dollars (\$30,000,000.00)** in **Franklin Park Venture Capital Opportunity Fund, L.P.**, and the Board, after its review of the timing in which the closing of the investment in **Franklin Park Venture Capital Opportunity Fund, L.P.** may need to occur, has determined that there is an imminent need to immediately enter into the partial equity ownership agreement prior to the next scheduled meeting of the Arkansas Legislative Council. The Board also deems it financially appropriate to enter into the partial equity ownership agreement and concludes that to forego the opportunity to promptly implement its investment directives under the prudent investor rule would be inconsistent with its fiduciary duty of care to the members and annuitants;

**NOW, THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$30 million dollars (\$30,000,000.00)** in **Franklin Park Venture Capital Opportunity Fund, L.P.** and agrees to immediately move to close and subscribe the approved ATRS limited partnership interest in **Franklin Park Venture Capital Opportunity Fund, L.P.** The total investment amount is to be determined by the private equity consultant and ATRS staff based upon the allocation available to ATRS and the overall investment objectives set by the Board; and

***FURTHER, BE IT RESOLVED***, that the ATRS staff is hereby authorized to take all necessary and proper steps to implement this investment using the Imminent Need process, if acceptable terms are reached.

**Adopted this 6<sup>th</sup> day of December 2021**

---

**Mr. Danny Knight, *Chair***  
**Arkansas Teacher Retirement System**



**Executive Summary**  
**Riverside Value Fund I, L.P.**



### Executive Summary

**Fund** Riverside Value Fund I, L.P. (the “Fund”)

**General Partner** RVF I Associates, L.P. (the “General Partner” or “RVF”)

**Report Date** November 2021

**Fundraising** The General Partner is targeting \$350 million for the Fund. A first closing was held in August 2021 with \$140 million in commitments. The General Partner plans additional closings in early and mid-2022.

**Source** Franklin Park sourced the offering directly from the General Partner.

**Investment Strategy** The Fund is being formed to acquire underperforming U.S. companies. In particular, the General Partner will target control investments in businesses with revenue of \$60 million to \$300 million that are facing fixable operational or financial challenges.

The targeted companies may be:

- Underperforming operationally or financially;
- In need of investment in infrastructure, systems, and processes;
- In default on indebtedness, facing covenant pressure or liquidity constraints, or in bankruptcy or preparing for insolvency proceedings; or
- In need of upgraded management talent and improved governance.

**Management Team** The General Partner is a wholly-owned subsidiary of Riverside Partners, LLC d/b/a The Riverside Companies (“Riverside”). Founded in 1988, Riverside is a global private equity firm managing mid-market, micro-cap, Europe, and Australia buyout funds, as well as direct lending, revenue interest lending and structured capital funds. Today, Riverside employs over 300 professionals and has \$12 billion in assets under management. Riverside is led by Co-Chief Executive Officers Béla Szigethy and Stewart Kohl.

The General Partner’s team is led by three senior investment professionals (the “Principals”), whose backgrounds are summarized below.

Partner	Title	Yrs. GP	Yrs. PE	Background
Ron Sansom*	Managing Partner	2	15	Riverside Micro-Cap, GE
Sean Ozbolt	Managing Partner	2	21	Aurora Capital, HIG
Andy Fohrer	Partner	2	13	Aurora Capital, Oaktree

\*Joined Riverside in 2005.

**Track Record** The Fund represents the first vehicle being raised by the General Partner with the targeted strategy. However, the Principals have collectively been responsible for managing 21 investments at prior firms. These investments have generated a 2.3x aggregate return over a 12-year period.

**Investment  
Evaluation**

1. **The Fund's strategy is compelling.** The return potential for the Fund's strategy is high given the focus on small and lower-mid market, high quality and underperforming companies. The target market tends to attract relatively less competition from buyers, which should allow the General Partner to acquire companies at attractive valuations. Additionally, there is opportunity to generate excess returns through post-investment efforts to improve previously undermanaged business.

**Further, the team's sourcing relationships and Riverside's origination platform serve to advantage the General Partner in identifying and sourcing less competitive deal opportunities.** The Principals have developed an extensive network within the middle market banking, advisory, lending, restructuring, and workout community for sourcing deals in the target market. Moreover, Riverside's origination team is mandated to find relevant opportunities. Riverside has 12 deal originators dedicated to North America. This origination model generates a consistent pipeline of deal flow for both new platform investments as well as add-on acquisition opportunities.

2. **The senior investment professionals have significant private equity experience.** In particular, Messrs. Ozbolt and Fohrer serve as the two deal leads for the Fund. Prior to joining Riverside in 2019, they were both senior members at Aurora Resurgence where they worked together for over five years. Mr. Ozbolt was a Partner and investment committee member, and Mr. Fohrer was a Principal. Mr. Ozbolt joined Aurora Resurgence in 2014, and Mr. Fohrer joined in 2013. Mr. Ozbolt has more than 20 years of value investing experience in the middle market, including 15 years focusing on operationally and financially challenged businesses. Prior to Aurora, Mr. Ozbolt was a Managing Director at H.I.G. Capital.

**Further, the team also has complementary operational, CEO and senior management experience.** Ron Sansom, Managing Partner, joined Riverside in 2005. Prior to joining Riverside, he spent over two decades in senior operating roles at General Electric, Kinetek and Honeywell. Marc Jourlait, Operating Partner, is fully dedicated to the team and will serve as board chairman of portfolio companies. Prior to Riverside, he spent over three decades in operating roles at Kodak Alaris, Navico, Apple, Hewlett-Packard, Seagate Technology and Technicolor.

3. **The General Partner benefits from its affiliation to Riverside.** In particular, Riverside's brand and deep resources should aid the team in deal sourcing, value add to portfolio companies and fund management. Riverside has a long tenure and well-known brand in the private equity market, particularly within the small and lower-mid market. Riverside has more than a 300-person organization, including 18 deal originators, 112 investors and 62 Operators.
4. **While the General Partner does not have a prior fund track record, this concern is partly mitigated by the Principals' significant private equity investment experience from their prior firms.** The Principals have collectively been responsible for managing 21 investments at prior firms. While these investments are not fully relevant to the Fund's strategy and attributable to the team, they do illustrate the depth of the team's investment experience. Franklin Park was able to independently confirm the Principals' roles in many of these investments



through reference calls. They generated a 2.3x aggregate return over a 12-year period on 21 investments.

**Recommendation** Franklin Park recommends a commitment of up to \$30 million to the Fund, subject to satisfactory negotiation of final documentation, based on the following:

- The Fund's strategy is compelling and the team is well-positioned to source deals;
- The team has a combination of investment and operating experience; and
- The Fund should benefit from the resources of Riverside.

**ARKANSAS TEACHER RETIREMENT SYSTEM**  
**1400 West Third Street**  
**Little Rock, Arkansas 72201**

**RESOLUTION**  
**No. 2021-65**

**Approving Investment in Riverside Value  
Fund I, L.P. with Imminent Need**

**WHEREAS**, the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) is authorized to invest and manage trust assets for the benefits of its plan participants; and

**WHEREAS**, the ATRS Board has reviewed the recommendation of its private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **Riverside Value Fund I, L.P.**, a private equity turnaround fund that will invest in underperforming companies in the U.S.; and

**WHEREAS**, the ATRS Board approves an investment of up to **\$30 million dollars (\$30,000,000.00)** in **Riverside Value Fund I, L.P.**, and the Board, after its review of the timing in which the closing of the investment in **Riverside Value Fund I, L.P.** may need to occur, has determined that there is an imminent need to immediately enter into the partial equity ownership agreement prior to the next scheduled meeting of the Arkansas Legislative Council. The Board also deems it financially appropriate to enter into the partial equity ownership agreement and concludes that to forego the opportunity to promptly implement its investment directives under the prudent investor rule would be inconsistent with its fiduciary duty of care to the members and annuitants;

**NOW, THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$30 million dollars (\$30,000,000.00)** in **Riverside Value Fund I, L.P.** and agrees to immediately move to close and subscribe the approved ATRS limited partnership interest in **Riverside Value Fund I, L.P.** The total investment amount is to be determined by the private equity consultant and ATRS staff based upon the allocation available to ATRS and the overall investment objectives set by the Board; and

***FURTHER, BE IT RESOLVED***, that the ATRS staff is hereby authorized to take all necessary and proper steps to implement this investment using the Imminent Need process, if acceptable terms are reached.

**Adopted this 6th day of December 2021**

---

**Mr. Danny Knight, *Chair***  
**Arkansas Teacher Retirement System**

# **ATRS Board Policy 3 EXECUTIVE DIRECTOR**

A.C.A. § 24-7-303

---

## **I. Board - Executive Director Relationship**

### **A. Employment of Executive Director**

Employment of the Executive Director will be by the Board.

1. Employment will be based on the Board's judgment that a candidate's knowledge, skill, and character would indicate reasonable assurance of excellent performance.
2. Criteria will be based on:
  - a. General characteristics set forth by the Board to predict successful Executive Director performance, and
  - b. Specific characteristics set forth by the Board to predict successful Executive Director performance in view of the Retirement System's strategic challenges in the future.
3. Prior to selecting an Executive Director, the Board will make explicit provisions for:
  - a. Providing notice of the vacancy,
  - b. Screening nominations or applications, and
  - c. The selection process.

### **B. Executive Director's Job Description**

1. The Executive Director is the Board's official link to the operation of the Retirement System. The Executive Director is accountable for all organizational performance and entitled to exercise all authority delegated by official Board action.
2. The Executive Director's job description may be stated as performance in these areas:
  - a. Organizational accomplishment of the provisions of ATRS Board Policy 2 - Board Objectives.
  - b. Organizational operation within the boundaries of prudence and ethics established in Board policies on Executive Director Limitations.
  - c. Serving as secretary to the Retirement Board and an ex officio

nonvoting member of its committees and maintaining an accurate record of the proceedings.

- d. Serving as liaison between the (a) Actuary, (b) Investment ~~Consultants~~ ~~Consultant~~, and (c) ~~Investment Managers~~ ~~Real Estate Manager~~ and the Retirement Board, helping to interpret the intent of the Board to the consultants, and coordinating their reports and recommendations to the Board.

### **C. Delegation to the Executive Director**

Authority for implementing policy and the development of supporting procedures is delegated to the Executive Director.

1. All Board authority delegated to staff is delegated through the Executive Director, so that all authority and accountability of staff is considered to be within the authority and accountability of the Executive Director.
2. Board Objectives policies direct the Executive Director to achieve certain results; Executive Director Limitations policies constrain the Executive Director to act within Board adopted policies, legal requirements, and acceptable boundaries of prudence and ethics. With respect to Board Objectives and Executive Director Limitations, the Executive Director is authorized to establish further procedures, make decisions, and take actions provided they are consistent with Board policies.
3. The Board may change its policies, thereby shifting the boundary between the Board and the Executive Director domains. The Board and Executive Director will respect and support the parameters of delegation as they exist and as they may be changed in the future.

### **D. Monitoring Executive Performance**

Monitoring executive performance is synonymous with monitoring organizational performance against policies on Board Objectives and Executive Director Limitations. Any evaluation of Executive Director performance, formal or informal, may be derived only from these monitoring data.

1. The purpose of monitoring is simply to determine the degree to which Board policies are being fulfilled. Information that does not meet this purpose will not be considered to be monitoring. Monitoring will be as automatic as possible, using a minimum of Board time so that meetings can be used to create the future rather than to review the past.
2. A given policy may be monitored in one or more of three ways:

- a. Internal Report: Compliance information prepared by the Executive Director for the Board.
  - b. External Report: Compliance information prepared by a disinterested, external auditor, inspector, or consultant who is selected by and reports directly to the Board. Such reports must assess executive performance only against policies of the Board, not those of the external party unless the Board has previously indicated that party's opinion to be the standard.
  - c. Direct Board Inspection: Compliance information prepared by a Board member, a committee, or the Board as a whole. This is a Board inspection of documents, activities, or circumstances directed by the Board that allows a "prudent person" test of policy compliance.
3. Upon the choice of the Board, any policy may be monitored by any method at any time. For regular monitoring, however, each Board Objectives and Executive Director Limitations policy will be classified by the Board according to the following frequency and method:

**Ends Policies - Financial Perspective**

<i><b>Policy</b></i>	<i><b>Method</b></i>	<i><b>Responsibility</b></i>	<i><b>Frequency</b></i>	<i><b>Month Expected</b></i>
Sustain actuarial soundness	External Report	Actuary	Annual	Dec.
Manage contributions effectively	Internal Report	Executive Director	Annual	June
Maximize investment returns	External Report	Investment Consultant	Quarterly	Apr., July, Oct., Jan.
Ensure budget credibility	Internal Report	Executive Director	Annual	June

### Ends Policies - Customer Perspective

<b><i>Policy</i></b>	<b><i>Method</i></b>	<b><i>Responsibility</i></b>	<b><i>Frequency</i></b>	<b><i>Month Expected</i></b>
Promote comparable contribution rates, benefits and services	Internal Report	Executive Director	Annual	June
Increase awareness of trust fund stewardship	Internal Report/ External Audit Report	Executive Director/ Independent Auditor	Annual	June
Promote retirement education and communications	Internal Report	Executive Director	Annual	June
Improve overall service level	Internal Report	Executive Director	Annual	June

### Ends Policies - Internal-Business Process Perspective

<b><i>Policy</i></b>	<b><i>Method</i></b>	<b><i>Responsibility</i></b>	<b><i>Frequency</i></b>	<b><i>Month Expected</i></b>
Administer retirement laws timely, accurately and consistently	Internal Audit Report	Internal Auditor	Annual	June
Provide member benefits and services (1) at a level that promote member satisfaction and (2) in a cost effective manner	Internal Report	Executive Director	Annual	June
Process improvement	Internal Report	Executive Director	Annual	June
Effectively manage new projects and initiatives	Internal Report	Executive Director	Annual	June
Promote effective communication	Internal Report	Executive Director	Annual	June

## Ends Policies - Learning and Growth Perspective

<b><i>Policy</i></b>	<b><i>Method</i></b>	<b><i>Responsibility</i></b>	<b><i>Frequency</i></b>	<b><i>Month Expected</i></b>
Foster a positive, innovative work environment	Internal Report	Executive Director	Annual	June
Employ and retain highly capable employees	Internal Report	Executive Director	Annual	June
Recruit and retain a diverse work force	Internal Report	Executive Director	Annual	June
Enhance training and development opportunities	Internal Report	Executive Director	Annual	June

## Ends Policies - Executive Director Limitations

<b><i>Policy</i></b>	<b><i>Method</i></b>	<b><i>Responsibility</i></b>	<b><i>Frequency</i></b>	<b><i>Month Expected</i></b>
General Executive Constraints	Internal Report	Executive Director	Annual	June
Communication and Counsel to the Board	Direct Board Inspection	Board	Annual	June
Code of Ethics	Internal Report	Executive Director	Annual	June
Compensation and Benefits	Internal Audit Report	Internal Auditor	Annual	June
Staff Treatment	Internal Report	Executive Director	Annual	June
Operations	Internal Report	Executive Director	Annual	June
Risk Management	Internal Report	Executive Director	Annual	June

- \* Each Regular Session of the Arkansas General Assembly, all actuarial census data is sent to an independent actuary hired by the State Legislature for use in reviewing the system and preparing cost analysis reports for legislation affecting ATRS.

- \* Every five years another independent actuary will review the actuarial soundness of ATRS. (The last five-year actuarial audit was conducted for FY 2015.)

## **II. Executive Director Limitations**

### **A. General Executive Constraints**

The Executive Director shall not cause or allow any acts, decisions, activities, or circumstances that are imprudent, in violation of commonly accepted business and professional ethics, or a breach of fiduciary responsibility.

#### **1. Communication and Counsel to the Board**

With respect to providing information and counsel to the Board, the Executive Director may not permit the Board to be uninformed. Accordingly, the Executive Director may not:

- a. Let the Board be unaware of relevant trends, anticipated adverse media coverage, and material external or internal changes, particularly changes in the assumptions upon which any Board policy has previously been established.
- b. Fail to submit the required monitoring data in a timely, accurate, and understandable fashion, directly addressing provisions of the Board policies being monitored. See ATRS Board Policy 3 - Monitoring Executive Performance.
- c. Fail to marshal as many alternatives as needed for fully informed Board choices.
- d. Fail to provide requested information that would assist the Actuary, Investment Consultant, and Real Estate Manager in their efforts to make reports and recommendations directly to the Board without modification.
- e. Present information in unnecessarily complex or lengthy form.
- f. Fail to provide a mechanism for official Board, officer, or committee communications.
- g. Fail to deal with the Board as a whole, except for fulfilling individual requests for information.
- h. Fail to report actual or anticipated noncompliance with any policy of the Board.

### **B. Code of Ethics**

The Executive Director may not fail to require employees of the Retirement System to adhere to an appropriate code of ethics that will assure:

1. Confidentiality of member records.

2. No conflict of interest, or appearance thereof, with respect to their fiduciary responsibilities.
3. Adherence to applicable professional codes of ethics and standards of professional conduct.
4. No solicitation or acceptance of gifts, favors, or other items of value as defined by the Arkansas Ethics Commission.
5. No ATRS associate shall participate in any activities regarding the candidacy of any person for a position as a Board member or officer of the Board.

**C. Compensation and Benefits**

With respect to employment, compensation, and benefits to employees, consultants, contract workers, and volunteers, the Executive Director may not cause or allow jeopardy to fiscal integrity or public image.

Accordingly, the Executive Director may not:

1. Change their own compensation and benefits.
2. Promise or imply permanent or guaranteed employment within ATRS or through its investments or contractors.
3. Establish compensation or benefits for ATRS employees that are not within state-approved salary schedules or benefit provisions.
4. Promote, hire, terminate, or change the assignment of regular, full-time personnel for positions classified under the Arkansas Uniform Classification and Compensation Act (A.C.A. § 21-5-201 et seq.) as SE1, IT5, GS9, or higher, or persons designated as a part of the senior management team, without prior notification to the Board Chair.

**D. Operations**

Budgeting for any fiscal period shall not deviate materially from priorities in the Board Objectives policies, risk fiscal jeopardy, or fail to show a generally acceptable level of foresight. The proposed biennial budget shall be presented to the Board for review and approval prior to its submission to the General Assembly for adoption.

1. Accordingly, the Executive Director may not cause or allow budgeting that:
  - a. Contains too little detail to enable accurate projection of revenues and expenses, separation of capital and operational items, cash flow and subsequent audit trails, and disclosure of planning assumptions.

- b. Does not provide for Board prerogatives and Board development.
  - c. With respect to the actual, ongoing condition of the Retirement System's operating budget, the Executive Director may not cause or allow the development of financial jeopardy.
2. Accordingly, the Executive Director may not:
- a. Allow tax payments or other government-ordered payments or filings to be overdue or inaccurately filed.
  - b. Allow actual operating budget allocations to deviate materially from Board priorities in Ends policies.
  - c. Fail to promulgate procedures to assure an equitable and open system of awarding contracts to providers of contractual and consultant services.
  - d. Fail to establish and maintain a System of internal controls designed to assure that the policies and procedures of the Retirement System are being followed and that assets belonging to ATRS are properly received, are protected while in the custody of ATRS, are used only for appropriate purposes, and reduce the opportunity for errors and dishonesty.

**E. Staff Treatment**

The Executive Director may not cause or allow conditions that are inhumane, unfair, or undignified. Accordingly, the Executive Director may not:

- 1. Discriminate among employees on other than clearly job-related individual performance or qualifications.
- 2. Employ or promote a family member.
- 3. Adversely affect the stability of the staff or terminate senior executives without previous discussion with the Board.
- 4. Fail to take reasonable steps to protect employees from unsafe or unhealthy conditions.

**F. Risk Management**

**1. Emergency Executive Succession**

To protect the Board from sudden loss of Executive Director services, the Executive Director shall assure that at least one other senior executive is familiar with Board and Executive Director issues and processes.

**2. Business Continuity Planning**

The Executive Director may not fail to have a Business Continuity Plan, in place and tested, to assure that the critical business processes of the Retirement System (i.e., the payment of monthly benefits and the investment and protection of assets) can continue notwithstanding the loss of use of all or part of the home office or computer facilities.

### 3. **Asset Protection**

The Executive Director may not allow assets to be unprotected, inadequately maintained, or unnecessarily risked as would be determined by a prudent person.

Accordingly, the Executive Director may not:

- a. Allow uninsured personnel access to material amounts of funds.
- b. Subject physical plant and equipment to improper wear and tear or insufficient maintenance.
- c. Unnecessarily expose the Board, employees, or the Retirement System to claims of liability.
- d. Receive, process, or disburse funds under controls insufficient to meet the Board-appointed auditor's standards.
- e. Acquire, encumber, or dispose of real property without Board authorization.
- f. May not allow investment assets to be unprotected. Such protection shall include:
  - i. Timely deposit of cash as provided for by law and Board policy.
  - ii. Transfer of securities to the State Treasurer or the Treasurer's designated subcustodian for safekeeping.
- g. Allow investment assets to be unprotected through the failure to have a well-qualified and trained staff.

### 4. **Insurance**

The Executive Director may not allow the Retirement System to be uninsured against known perils. Accordingly, insurance policies will be maintained with coverages that would be considered prudent in the following areas:

- a. Facility Liabilities
- b. Crime
- c. Difference in Conditions
- d. Directors and Officers

- e. Fiduciary
- f. General Liability
- g. Kidnap, Ransom, and Extortion
- h. Pollution Legal Liability
- i. Property
- j. Surety Bonds
- k. Travel Accident

## **HISTORY**

Adopted: April 26, 2007 as Rule 3-1 through 3-11  
Amended: June 19, 2007  
Amended: December 18, 2009  
Amended: October 4, 2010  
Amended: April 12, 2012  
Amended: June 3, 2019 as Board Policy 3



**Administrative Rules Update**  
 (Ark. Code Ann. § 25-15-216)  
 Date: December 1, 2021

Agency Contact: Jennifer Liwo ([jenniferl@artts.gov](mailto:jenniferl@artts.gov))

Act No.	Summary of Act	Agency Rule	Action Proposed for Agency Rule (New Rule, Amend Rule, or Repeal Rule)	Promulgation Status
190	<ul style="list-style-type: none"> <li>Concerns the look-back period rule that invalidates certain actions and rights unless initiated within the five-year look-back period.</li> <li>Adds an obvious or documented error resulting in the understatement of a member's salary by an employer or the Arkansas Teacher Retirement System as an exception to the five-year look-back period rule.</li> </ul>	Rule 9 – Retirement Benefits	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Pending Governor's approval determination.</li> </ul>
220	<ul style="list-style-type: none"> <li>Requires the Arkansas Teacher Retirement System to impose an interest penalty equal to the actuarially assumed rate of return on investments if an employer fails to remit moneys that are required by law or rule to the Arkansas Teacher Retirement System.</li> </ul>	Rule 7 – Reporting and Eligibility	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Received Governor's approval on November 24, 2021.</li> </ul>



221	<ul style="list-style-type: none"> <li>Provides that the final average salary used in determining a member's benefit shall be either that of the Arkansas Teacher Retirement System or a reciprocal system in which the member has at least two (2) years of service credit, whichever provides the highest final average salary at the time of the member's retirement.</li> </ul>	Rule 7 – Reporting and Eligibility	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Received Governor's approval on November 24, 2021.</li> </ul>
221	<ul style="list-style-type: none"> <li>Provides that the final average salary used in determining a member's benefit shall be either that of the Arkansas Teacher Retirement System or a reciprocal system in which the member has at least two (2) years of service credit, whichever provides the highest final average salary at the time of the member's retirement.</li> </ul>	Rule 10 – T-DROP and Return to Service	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Pending Governor's approval determination.</li> </ul>
223	<ul style="list-style-type: none"> <li>Clarifies deadlines concerning the application process for disability retirement.</li> <li>Provides that a member who applies for disability retirement may request a second review if the medical committee finds that the member is not qualified to receive disability retirement benefits.</li> </ul>	Rule 9 – Retirement Benefits	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Pending Governor's approval determination.</li> </ul>
279	<ul style="list-style-type: none"> <li>Clarifies that one (1) of the two (2) active member trustees on the Board of Trustees of the Arkansas Teacher Retirement System</li> </ul>	Rule 4 – Election of Board of Trustees	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> </ul>



	<p>who are required to be employed in a position requiring an administrator’s license shall be a superintendent or an educational cooperative director.</p> <ul style="list-style-type: none"> <li>• Changes “participating employer” to “employer” or “covered employer”.</li> </ul>			<ul style="list-style-type: none"> <li>• Received Governor’s approval on November 24, 2021.</li> </ul>
279	<ul style="list-style-type: none"> <li>• Changes “participating employer” to “employer” or “covered employer”.</li> </ul>	Rule 6 – Membership	Amend Rule	<ul style="list-style-type: none"> <li>• Submitted request for Governor’s approval on November 1, 2021.</li> <li>• Received Governor’s approval on November 24, 2021.</li> </ul>
279	<ul style="list-style-type: none"> <li>• Amends the law to afford both active and inactive members the opportunity to purchase domestic federal service that may be credited as service under the Arkansas Teacher Retirement System.</li> <li>• Changes “interest” to “regular interest” where appropriate.</li> </ul>	Rule 8 – Purchases and Refunds	Amend Rule	<ul style="list-style-type: none"> <li>• Submitted request for Governor’s approval on November 1, 2021.</li> <li>• Pending Governor’s approval determination.</li> </ul>
279	<ul style="list-style-type: none"> <li>• Provides that an annuity may begin earlier than July 1 if the Board of Trustees of the Arkansas Teacher Retirement System adopts by rule or resolution an earlier beginning date for members whose retirement will not result in a reduction of</li> </ul>	Rule 9 – Retirement Benefits	Amend Rule	<ul style="list-style-type: none"> <li>• Submitted request for Governor’s approval on November 1, 2021.</li> <li>• Pending Governor’s approval determination.</li> </ul>



	<p>classroom teachers and who meet certain other requirements.</p> <ul style="list-style-type: none"> <li>• Changes “participating employer” to “employer” or “covered employer”.</li> </ul>			
279	<ul style="list-style-type: none"> <li>• Clarifies the law concerning plan interest rates applicable to Teacher Deferred Retirement Option Plan accounts of members.</li> <li>• Clarifies that the Board of Trustees of the Arkansas Teacher Retirement System determines the plan interest rate applicable to member accounts by adopting fixed interest rates and variable interest rates that shall apply in a fiscal year.</li> <li>• Clarifies that the Board of Trustees of the Arkansas Teacher Retirement System may modify the fixed interest rate and variable interest rate for subsequent fiscal years.</li> <li>• Repeals the law requiring the balance in a member’s Teacher Deferred Retirement Option plan account to be distributed in certain lump-sum and annuitized percentages.</li> </ul>	Rule 10 – T-DROP and Return to Service	Amend Rule	<ul style="list-style-type: none"> <li>• Submitted request for Governor’s approval on November 1, 2021.</li> <li>• Pending Governor’s approval determination.</li> </ul>



279	<ul style="list-style-type: none"> <li>Clarifies the pro rata formula that is used to calculate a Teacher Deferred Retirement Option Plan participant's residue.</li> </ul>	Rule 11 – Survivors and Domestic Relations Orders	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Pending Governor's approval determination.</li> </ul>
290	<ul style="list-style-type: none"> <li>Provides that "normal retirement age" means at least sixty (60) years of age if the member has a combined total of thirty-eight (38) years or more of credited service in the Arkansas Teacher Retirement System, Teacher Deferred Retirement Option Plan, or reciprocal service with another eligible state retirement system.</li> </ul>	Rule 6 – Membership	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Received Governor's approval on November 24, 2021.</li> </ul>
427	<ul style="list-style-type: none"> <li>Clarifies when reciprocal service earned from participation in an alternate retirement plan may be established under the Arkansas Teacher Retirement System.</li> </ul>	Rule 6 – Membership	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Received Governor's approval on November 24, 2021.</li> </ul>
443	<ul style="list-style-type: none"> <li>Provides that an active member whose status changes from nonteacher to administrator or from nonteacher to teacher status under a contract for at least one hundred eighty-five (185) days shall become a contributory member of the Arkansas Teacher Retirement System.</li> </ul>	Rule 6 – Membership	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor's approval on November 1, 2021.</li> <li>Received Governor's approval on November 24, 2021.</li> </ul>



691	<ul style="list-style-type: none"> <li>Amends the definition of “employee” to clarify when youth participants in summer work programs are not considered “employees” under the Arkansas Teacher Retirement System.</li> <li>Provides that covered employers who act as a pass-through fiscal agent are not required to report youth participants who do not meet the definition of “employee”.</li> </ul>	Rule 7 – Reporting and Eligibility	Amend Rule	<ul style="list-style-type: none"> <li>Submitted request for Governor’s approval on November 1, 2021.</li> <li>Received Governor’s approval on November 24, 2021.</li> </ul>
711	<ul style="list-style-type: none"> <li>Clarifies the law concerning reciprocal service credit.</li> </ul>	N/A	N/A	<ul style="list-style-type: none"> <li>Request for exclusion from reporting previously submitted on August 31, 2021.</li> </ul>

**ARKANSAS TEACHER RETIREMENT SYSTEM  
1400 WEST THIRD STREET  
LITTLE ROCK, ARKANSAS 72201**

**RESOLUTION  
No. 2021-67**

**Board of Trustees Congressional District Map**

**WHEREAS**, the Arkansas General Assembly meets after each national census to establish the boundaries of the Arkansas congressional districts; and

**WHEREAS**, candidates for the Board of Trustees of the Arkansas Teacher Retirement System positions one (1) through four (4) are required to be employed by an employer located in each of the four congressional districts respectively; and

**WHEREAS**, from time to time the Board of Trustees of the Arkansas Teacher Retirement System has the need to conduct elections or make appointments to fill trustee positions one (1) through four (4); and

**WHEREAS**, the process of conducting a regular election begins in December and proceeds through April of the following year; and

**WHEREAS**, the Congressional map in effect during the period that candidates become qualified to seek election during the next Board election cycle is the map based on the census of 2010, and the map scheduled to be in effect at the time of the Board elections will be the map based upon the census of 2020; and

**WHEREAS**, the Board of Trustees of the Arkansas Teacher Retirement System desires to use consistent congressional district boundaries for the complete election process.

**NOW, THEREFORE, BE IT RESOLVED**, that the Board of Trustees of the Arkansas Teacher Retirement System hereby declares the Arkansas congressional district boundaries as defined on the first day of the fiscal year shall be used to determine trustee candidate eligibility for the complete fiscal year.

**Adopted this 6th day of December, 2021.**

---

**Mr. Danny Knight, Chair**  
**Arkansas Teacher Retirement System Board**

**BEFORE THE  
ARKANSAS TEACHER RETIREMENT SYSTEM**

IN THE MATTER OF  
CONTINUATION OF DISABILITY RETIREMENT BENEFITS  
UNDISPUTED RECOMMENDATIONS

---

**PROPOSED DISABILITY REVIEW ORDER: DR-2021-12-A**

**INTRODUCTION**

This matter is a review of the medical committee's recommendations that certain members' disability retirement benefits be continued under subdivision A.C.A. §24-7-704(b)(3)(D) (iii).

**FINDINGS OF FACT**

1. The following members applied for disability review after having been initially approved for disability benefits: 301982; 310126; & 195598.
2. After reviewing each member's records, the medical committee recommended that each member be **approved** eligibility to continue receiving ATRS disability benefits.
3. After reviewing each member's records, the medical committee recommended that each member remain eligibility to receive ATRS disability benefits.

**ANALYSIS AND RECOMMENDATION TO THE BOARD**

Arkansas law provides that an ATRS member who has been approved for disability benefits must provide, within thirty-six months, a favorable determination by the Social Security Administration that the member is disabled. In the alternative A.C.A. §24-7-704(b)(3)(C) allows the member to ask for additional time to provide the SSA decision, or to apply for a review by the medical committee due to the lack of an SSA

determination letter.

The medical committee considers each request for review, and makes a recommendation to the Board on the question of whether the member continues to meet “the definition of disability under subdivision (a)(1)(D)” of A.C.A. §24-7-704. The primary element of the standard of review is whether the member is able to perform their previous covered employment work duties.

In the cases noted above, the medical committee is recommending to the Board that it find that these members continue to be “disabled” within the meaning of the ATRS law and are entitled to continue to receive ATRS disability benefits.

The Executive Director recommends that the Board of Trustees accept the medical committee recommendation to approve continued disability benefits in each case.

Reviewed and approved

---

Danny Knight, Chairman

December 6, 2021

SUMMARY OF DISABILITY APPLICATIONS SUBMITTED  
FOR CONSIDERATION BY THE MEDICAL COMMITTEE

The Medical Committee met in executive session in the first floor conference room at 9:30 a.m. on October 4, 2021. Those members present were Dr. Eddie Phillips, Dr. Hoyte Pyle, and Dr. Jim Morse. Anne Marie Lehman Berardi of the Teacher Retirement System was also in attendance.

A total of six disability applications were considered. Of the six applicants, two were approved. One applicant was denied. Three applicants had more information requested.

Respectfully Submitted,



Eddie Phillips, CMO  
Medical Committee Chairman

Respectfully Submitted,



Anne Marie Lehman Berardi  
Retirement Benefits Counselor

SUMMARY OF DISABILITY APPLICATIONS SUBMITTED  
FOR CONSIDERATION BY THE MEDICAL COMMITTEE

The Medical Committee met in executive session in the first floor conference room at 9:30 a.m. on November 1, 2021. Those members present were Dr. Eddie Phillips, Dr. Hoyte Pyle, and Dr. Jim Morse. Anne Marie Lehman Berardi of the Teacher Retirement System was also in attendance.

A total of five disability applications were considered. Of the five applicants, four were approved. One applicant was denied.

Respectfully Submitted,



Eddie Phillips, CMO  
Medical Committee Chairman

Respectfully Submitted,



Anne Marie Lehman Berardi  
Retirement Benefits Counselor

SUMMARY OF DISABILITY APPLICATIONS SUBMITTED  
FOR CONSIDERATION BY THE MEDICAL COMMITTEE

The Medical Committee met in executive session in the first floor conference room at 9:30 a.m. on December 1, 2021. Those members present were Dr. Hoyte Pyle and Dr. Jim Morse. Anne Marie Lehman Berardi of the Teacher Retirement System was also in attendance.

A total of thirteen disability applications were considered. Of the thirteen applicants, eleven were approved. One applicant was denied. One applicant had more information requested.

Respectfully Submitted,



DR. JIM MORSE  
Acting Medical Committee Chairman

Respectfully Submitted,



Anne Marie Lehman Berardi  
Retirement Benefits Counselor

ARKANSAS TEACHER RETIREMENT SYSTEM  
FINANCIAL COMPARISON

PLAN NET POSITION

	<u>June 30, 2021</u>	<u>June 30, 2020</u>	<u>Percentage Change</u>
<b>ASSETS</b>			
Cash and cash equivalents	333,682,820	348,737,178	
Accounts receivable	99,532,369	72,911,127	
Investments	21,092,661,353	16,535,192,016	
Invested securities lending	479,988,268	315,851,510	
Equipment (net of accumulated depreciation)	106,240	113,544	
Deferred Outflows Related to OPEB	1,034,149	1,310,404	
Other assets	94,100	73,276	
<b>TOTAL ASSETS</b>	<u>22,007,099,299</u>	<u>17,274,189,055</u>	27.40%
<b>LIABILITIES</b>			
Deferred Inflows Related to OPEB	139,784	719,096	
Securities lending collateral	479,988,268	315,851,510	
Investment principal payable	47,771,989	45,253,144	
Survivor benefits for minors	80,911	256,126	
Other payables	10,345,476	10,032,955	
<b>TOTAL LIABILITIES</b>	<u>538,326,428</u>	<u>372,112,831</u>	44.67%
<b>NET POSITION HELD IN TRUST FOR PENSION BENEFITS</b>	<u>21,468,772,871</u>	<u>16,902,076,224</u>	27.02%

CHANGES IN PLAN NET POSITION

	<u>For the Year Ended</u>		<u>Percentage Change</u>
	<u>June 30, 2021</u>	<u>June 30, 2020</u>	
<b>ADDITIONS</b>			
Contributions	640,697,119	599,333,262	6.90%
Investment income			
Interest and dividends	122,262,275	135,744,503	
Gain / (loss) on investments	5,166,017,302	(269,255,964)	
Real estate operating income	6,321,144	7,545,561	
Securities lending activity	2,678,677	3,072,879	
Other investment income	1,769,200	1,662,896	
Total investment income	5,299,048,598	(121,230,125)	
Less investment expense	48,095,147	44,536,364	
Net income from investing activities	<u>5,250,953,451</u>	<u>(165,766,489)</u>	

TOTAL ADDITIONS	<u>5,891,650,570</u>	<u>433,566,773</u>	1258.88%
DEDUCTIONS			
Benefits	1,308,163,750	1,255,065,795	
Refunds	9,463,375	9,592,091	
Administrative expenses	<u>7,326,798</u>	<u>8,454,436</u>	
TOTAL DEDUCTIONS	<u>1,324,953,923</u>	<u>1,273,112,322</u>	4.07%
CHANGE IN NET PLAN POSITION	4,566,696,647	(839,545,549)	
NET POSITION - BEGINNING OF YEAR	<u>16,902,076,224</u>	<u>17,741,621,773</u>	
NET POSITION - END OF YEAR	<u><u>21,468,772,871</u></u>	<u><u>16,902,076,224</u></u>	27.02%

**Fiscal Year 2021 Board and Staff Travel Report**

Due to significantly decreased travel expenditures in FY2021, ATRS staff is presenting travel expenditures in total for three different categories (Board, Senior Staff and Staff). The travel comparisons for FY2021 to FY2020 are as follows:

	<b>FY2021</b>	<b>FY2020</b>	<b>Difference</b>
Board	\$2,405	\$26,318	(\$23,913)
Senior Staff	\$2,333	\$8,016	(\$5,683)
Staff	\$212	\$42,936	(\$42,724)
<b>Total</b>	<b>\$4,950</b>	<b>\$77,270</b>	<b>(\$72,320)</b>