

# **ARKANSAS TEACHER RETIREMENT SYSTEM**

**December 2, 2024**

1400 West Third Street

**BOARD ROOM**

Little Rock, AR 72201

## **Board of Trustees Meeting**

**11:00 a.m.**

### **Trustees**

Danny Knight, Chair

Shawn Higginbotham, Vice Chair

Kelsey Bailey

Anita Bell

Susan Ford

Keri Hamilton

Dr. Mike Hernandez

Michael Johnson

Bobby G. Lester

Chip Martin

Jeff Stubblefield

### **Ex Officio Trustees**

Susannah Marshall, State Bank Commissioner

Jacob Oliva, Secretary, Dept. of Education

Honorable Dennis Milligan, State Auditor

Honorable Larry Walther, State Treasurer

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

**December 2, 2024**  
**11:00 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. **\*September 30, 2024, Minutes.** (Attachment No. 2) page 19.
  - B. **\*October 31, 2024, Minutes.** (Attachment No. 3) page 28.
- V. Executive Director Report. *Mark White, Executive Director* (Attachment No. 4)
- VI. **\*Actuarial Valuations for the Year Ending June 30, 2024.** *Judy Kermans, Heidi Berry, and Derek Henning of Gabriel, Roeder, Smith and Company* (Attachment No. 5) page 30.
  - A. **\*Active and Inactive Members.** (Attachment No. 6) page 76.
  - B. **\*Retirees & Beneficiaries.** (Attachment No. 7) page 154.
- VII. Statement of Financial Interest. (Attachment No. 8) page 198.
- VIII. **\*Proposed 2025 Board of Trustees Schedule.** *Mark White, Executive Director* (Attachment No. 9) page 216.
- IX. 2025 Board Election. *Mark White, Executive Director*
  - A. Election Timeline. (Attachment No. 10) page 217.
- X. Report of Member Interest Waiver Under A.C.A. Sec. 24-7-205. None were waived this reporting period.

\* Action Item

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- XI. Report of Employer Penalties and Interest Waived. (Attachment No. 11) page 219.
  
- XII. **\*Board Waiver of Penalties and Interest Greater than \$1,000 in a Fiscal Year.**
  - A. **\*Resolution 2024-41.** (Attachment No. 12) page 220.
  - B. **\*Resolution 2024-42.** (Attachment No. 13) page 222.
  
- XIII. Manifest Injustice Report. (Attachment No. 14) page 224.
  
- XIV. **\*Manifest Injustice Claim Referral.**
  - A. **\*In Re: MI# 2024-006.** (Attachment No. 15) page 227.
  
- XV. **\*Executive Director Review.**
  - A. In Re: EDR No. 2024-01. (Attachment No. 16) page 228.
  
- XVI. Audit Committee Report. *Maggie Garrett, Audit Committee Chair*
  - A. **\*Audit of Information Technology Division's Network Infrastructure Management Process.** (Attachment No. 17) page 230.
  - B. **\*Audit of the Benefit Section's Disability Retirement Application Process.** (Attachment No. 18) page 243.
  
- XVII. Investment Committee Report. *Chip Martin, Investment Committee Chair*
  - A. Arkansas Related and Investment Update.
    - 1. List of Fund Closings.
      - a. Green and Clean Power and associated entities, the Board authorized commitment of up to \$100 million dollars in a promissory note on September 30, 2024 was accepted and closed on October 31, 2024.
      - b. South Harbor GP I, LLC, the Board approved commitment of up to \$16.64 million dollars in a promissory note on October 31, 2024 was accepted and closed on November 11, 2024.
    - 2. Board Policies Report. (Attachment No. 19) page 252.
    - 3. Arkansas Related Update.
      - a. **\*Recommendation to approve for Board adoption Resolution 2024-35 authorizing the sale of ATRS owned property located on John Ashley Drive in North Little Rock.** (Attachment No. 20) page 255.

\* Action Item

1. **\*Resolution 2024-35.** (Attachment No. 21) page 256.
- B. General Investment Consultant.
1. Preliminary Performance Report for the Quarter Ended September 30, 2024. (Attachment No. 22) page 257.
  2. Preliminary Performance Report for the Month Ended October 31, 2024. (Attachment No. 23) page 412.
- C. Real Assets.
1. Performance Report for the Quarter Ended June 30, 2024. (Attachment No. 24) page 437.
  2. **\*Recommendation to approve for Board adoption Resolution 2024-36 authorizing an investment of up to \$50 million dollars in Long Wharf Real Estate Partners VII, LP.** (Attachment No. 25) page 484.
    - a. **\*Resolution 2024-36.** (Attachment No. 26) page 492.
  3. **\*Recommendation to approve for Board adoption a motion to revise Board Policy 6 (Real Assets Investment Policy) to adjust by 2% the target allocations of the Real Estate and Infrastructure subasset classes of the Real Assets portfolio.** (Attachment No. 27) page 493.
  4. **\*Recommendation to approve for Board adoption a motion to revise Board Policy 4 (Investment Policy) to adjust by 2% the target allocations of the Real Estate and Infrastructure subasset classes of the Real Assets portfolio.** (Attachment No. 28) page 509.
  5. **\*Recommendation to approve for Board adoption a motion to approve the 2025 Real Assets Commitment Pacing (Total Pacing \$750 Million Dollars).** (Attachment No. 29) page 535.
    - a. Core Real Estate \$300 Million Dollars.
    - b. Value Added and Opportunistic (Non-Core) Real Estate \$100 Million Dollars.
    - c. Infrastructure \$350 Million Dollars.
- D. Private Equity.
1. Preliminary Private Equity Portfolio Review for the Quarter Ended June 30, 2024. (Attachment No. 30) page 540.
  2. **\*Recommendation to approve for Board adoption Resolution 2024-37 authorizing an investment of up to \$35 million dollars in Riverside Value Fund II, LP.** (Attachment No. 31) page 587.
    - a. **\*Resolution 2024-37.** (Attachment No. 32) page 591.

\* Action Item

3. **\*Recommendation to approve for Board adoption Resolution 2024-38 authorizing an investment of up to \$35 million dollars in NovaCap International Technologies VII, L.P.** (Attachment No. 33) page 592.
  - a. **\*Resolution 2024-38.** (Attachment No. 34) page 596.
4. **\*Recommendation to approve for Board adoption Resolution 2024-39 authorizing an investment of up to \$35 million dollars in Revelstoke Capital Partners Fund IV, L.P.** (Attachment No. 35) page 597.
  - a. **\*Resolution 2024-39.** (Attachment No. 36) page 600.
5. **\*Recommendation to approve for Board adoption Resolution 2024-40 authorizing an investment of up to \$35 million dollars in Peak Rock Capital Fund IV, L.P.** (Attachment No. 37) page 601.
  - a. **\*Resolution 2024-40.** (Attachment No. 38) page 605.
6. **\*Recommendation to approve for Board adoption a motion to approve the 2025 Private Equity Pacing Schedule (Total Pacing \$400 Million Dollars).** (Attachment No. 39) page 606.
  - a. Five to Seven Buyout/Growth/Turnaround \$40 Million Dollars Each Primarily in the U.S. (Total up to \$280 Million Dollars).
  - b. Up to Two Debt/Distressed Assets (Total up to \$80 Million Dollars Depending on the Total Commitments to Buyout/Growth/Turnaround Funds Discussed Above).
  - c. Franklin Park Corporate Finance Access Fund III, LP \$40 Million Dollars.
  - d. Franklin Park Venture Fund XV \$40 Million Dollars.
  - e. Franklin Park Venture Capital Opportunity Fund II, LP \$40 Million Dollars.

XVIII. Operations Committee Report. *Bobby Lester, Operations Committee Chair*

- A. Open Forum for Potential Rule or Law Changes by Committee Member and Board Member in Attendance.
  1. Open Forum.
- B. ATRS 2025 Legislative Package Update.
- C. **\*Update to ATRS Board Policy 4 - Investment Policy.** (Attachment No. 40) page 612.
- D. **\*Update to ATRS Board Policy 6 - Real Asset Investment.** (Attachment No. 41) page 638.

\* Action Item

XIX. **\*Staff Reports.**

- A. **\*Medical Committee Report. A total of Eleven (11) Disability Retirement Applications were Approved.** *Willie Kincade, Director of Operations* (Attachment No. 42) page 654.
- B. Financial Reports.
  - 1. Financial Statement Report. *Curtis Carter, Chief Fiscal Officer* (Attachment No. 43) page 656.
  - 2. Travel Report. *Curtis Carter, Chief Fiscal Officer* (Attachment No. 44) page 658.
- C. Personnel Report. *Stephanie Lilly-Palmer, HR Manager* (Attachment No. 45) page 659.
- D. **\*Request for Qualifications for Securities Litigation and Class Action Monitoring.** *Mark White, Executive Director*
  - 1. **\*Recommendation for Securities Monitoring and Asset Recovery Litigation Policy.** (Attachment No. 46) page 660.
  - 2. **\*Recommendation for Selection of Securities Litigation and Class Action Monitoring Counsel.** (Attachment No. 47) page 661.

XX. Other Business.

XXI. **\*Adjourn.**

## EXECUTIVE SUMMARY

TO: Board of Trustees  
FROM: ATRS Staff  
RE: Executive Summary  
DATE: December 2, 2024

**A. \*September 30, 2024, Minutes.** page 19.

**B. \*October 31, 2024, Minutes.** page 28.

**V. Executive Director Report.** *Mark White, Executive Director*

**VI. \*Actuarial Valuations for the Year Ending June 30, 2024.** *Judy Kermans, Heidi Berry, and Derek Henning of Gabriel, Roeder, Smith and Company* page 30.

**A. \*Active and Inactive Members.** page 76.

**B. \*Retirees & Beneficiaries.** page 154.

**VII. Statement of Financial Interest.** page 198.

This is the reminder that ATRS Trustees must file a Statement of Financial Interest (SFI) by January 31, 2025, for their financial information for calendar year 2024.

Included with the portal information are the instructions for completing the SFI and a blank SFI for your use. SFIs may be completed online at the Secretary of State's website after creating a user name at the login screen: <http://www.ark.org/sos>.

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 SFI.

**VIII. \*Proposed 2025 Board of Trustees Schedule.** *Mark White, Executive Director* page 216.

ATRS Staff has attached a proposed meeting schedule for 2024. 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 of the same pattern as in prior years, with Monday meetings to accommodate Trustees who have to travel a long distance to Little Rock.

**IX. 2025 Board Election. *Mark White, Executive Director***

Election of the following two (2) positions on the ATRS Board of Trustees is scheduled in March, 2025: Position No.3 (Certified Member Trustee 3rd Congressional District, Requires State Licensure); and Position No. 10 (Retiree Trustee)

Nominating petitions and a candidate information form must be filed with the Executive Director of the Teacher Retirement System by Monday, January 10, 2025. Petitions may be requested by contacting Tammy Porter by email at [tammyp@atrs.gov](mailto:tammyp@atrs.gov) or by phone at 501-682-6149.

The Board of Trustees shall employ an independent contractor who will mail ballots to eligible voters' addresses of record and will also collect, count, and certify election results.

Deadline for nomination petitions to be submitted is Wednesday, January 10, 2025. Ballots will be mailed from selection vendor on March, 15, 2025. Deadline for ballots to be returned: April 15, 2025. Results will be certified: April 20, 2025.

**A. Election Timeline. page 217.**

**X. Report of Member Interest Waiver Under A.C.A.Sec. 24-7-205. None were waived this reporting period.**

No member interest was waived this reporting period. This is a standard report for information and is not an action item.

**XI. Report of Employer Penalties and Interest Waived. page 219.**

Arkansas Code 24-7-411 directs the Arkansas Teacher Retirement System (ATRS) to levy late fees and interest penalties for an employer's failure to timely remit moneys or reports as required. The Code allows the "Board or its designee" to waive fees and penalties if the delinquency was not the result of the employer's nondisclosure, fraud, or misrepresentation; and if under the circumstances, requiring payment by the employer would be unduly penal, burdensome, or result in a manifest injustice. This is a standard report for information and is not an action item.



**XII. \*Board Waiver of Penalties and Interest Greater than \$1,000 in a Fiscal Year.**

Board Waiver of Penalties and Interest Greater than \$1,000 in a Fiscal Year.

Executive staff only has authority to waive up to \$1,000 in a fiscal year for an employer. ATRS staff has placed these two (2) items on the agenda and recommends the Board approve the waiver of penalties and interest in the total amount of \$ 983.39

**A. \*Resolution 2024-41. page 220.**

**B. \*Resolution 2024-42. page 222.**

**XIII. Manifest Injustice Report. page 224.**

The rule on Manifest Injustice required reports to the Board at least 2 times per year. This is the second report of 2024. This report is for information purposes only and is not an action item.

**XIV. \*Manifest Injustice Claim Referral.**

Manifest Injustice Claim Referral

**A. \*In Re: MI# 2024-006. page 227.**

**XV. \*Executive Director Review.**

**A. In Re: EDR No. 2024-01. page 228.**

**XVI. Audit Committee Report. *Maggie Garrett, Audit Committee Chair***

**A. \*Audit of Information Technology Division's Network Infrastructure Management Process. page 230.**

**B. \*Audit of the Benefit Section's Disability Retirement Application Process. page 243.**

**XVII. Investment Committee Report. *Chip Martin, Investment Committee Chair***

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

**1. List of Fund Closings.**

**a. Green and Clean Power and associated entities, the Board authorized commitment of up to \$100 million dollars in a promissory note on September 30, 2024 was accepted and closed on October 31, 2024.**

The ATRS full commitment of up to \$100 million dollars was negotiated, accepted, and closed on October 31, 2024.

- b. **South Harbor GP I, LLC, the Board approved commitment of up to \$16.64 million dollars in a promissory note on October 31, 2024 was accepted and closed on November 11, 2024.**

The ATRS commitment of up to \$16,491,262.01 million dollars was negotiated, accepted, and closed on November 11, 2024.

2. **Board Policies Report. [page 252.](#)**
3. **Arkansas Related Update.**

- a. **\*Recommendation to approve for Board adoption Resolution 2024-35 authorizing the sale of ATRS owned property located on John Ashley Drive in North Little Rock. [page 255.](#)**

ATRS obtained ownership of a three acre parcel in North Little Rock as part of a recovery of a defaulted loan in 2001. Approximately one acre was sold in 2014 to facilitate access to the North Little Rock Veteran Administration's Veteran Housing. ATRS has received no offers for the remaining two acres until now. A buyer has proposed paying \$40,000 for the property which is appraised at \$65,000. The ATRS real estate broker at Colliers has recommended acceptance of the offer and ATRS staff concurs.

1. **\*Resolution 2024-35. [page 256.](#)**

**B. General Investment Consultant.**

1. **Preliminary Performance Report for the Quarter Ended September 30, 2024. [page 257.](#)**

P.J. Kelly and Katie Comstock of Aon Hewitt Investment Consulting will provide the Board with a portfolio update for the quarter ending September 30, 2024.

2. **Preliminary Performance Report for the Month Ended October 31, 2024. [page 412.](#)**

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, 2024.

**C. Real Assets.**

1. **Performance Report for the Quarter Ended June 30, 2024.**

page 437.

Jack Dowd of Aon Hewitt Investment Consulting will provide the Board with a portfolio update for the quarter ending June 30, 2024.

2. **\*Recommendation to approve for Board adoption Resolution 2024-36 authorizing an investment of up to \$50 million dollars in Long Wharf Real Estate Partners VII, LP. page 484.**

Long Wharf Real Estate Partners VII is a closed-end, value added fund focused on domestic real estate investing. The strategy will pursue a diversified portfolio of properties with a focus on acquiring assets at significant discounts to peak values with positive fundamental trends that offer the opportunity to increase returns through the execution of a value added strategy. The fund will target a 12 to 15% net IRR. Based in Boston, Long Wharf was originally an arm of the investment giant Fidelity before it spun out as an employee owned entity. Long Wharf's previous six funds have averaged a 7.9% net IRR. If approved, this will be the fourth ATRS investment in the Long Wharf series of funds. The three prior funds in which ATRS is invested have produced an average of 8.9% IRR. Aon Hewitt Investment Consulting recommends an investment of up to \$50 million dollars in Long Wharf Real Estate Partners Fund VII, L.P., and ATRS staff concurs.

a. **\*Resolution 2024-36. page 492.**

3. **\*Recommendation to approve for Board adoption a motion to revise Board Policy 6 (Real Assets Investment Policy) to adjust by 2% the target allocations of the Real Estate and Infrastructure subasset classes of the Real Assets portfolio. page 493.**

A redline of the proposed changes is included in the Investment Committee and Board materials for consideration. The proposed changes include adjusting the target allocations of the Real Assets portfolio.

4. **\*Recommendation to approve for Board adoption a motion to revise Board Policy 4 (Investment Policy) to adjust by 2% the target allocations of the Real Estate and Infrastructure subasset classes of the Real Assets portfolio. page 509.**

A redline of the proposed changes is included in the Investment Committee and Board materials for consideration. Pending approval of the proposed changes to the Board's Real Assets Investment Policy, these proposed changes are intended to update the Board's Investment Policy to mirror the new target allocations for the Real Assets Investment Policy.

5. **\*Recommendation to approve for Board adoption a motion to approve the 2025 Real Assets Commitment Pacing (Total**

**Pacing \$750 Million Dollars).** page 535.

Jack Dowd of Aon Hewitt Investment Consulting will present the 2025 Real Assets Commitment Pacing. For calendar year 2025, Aon Hewitt Investment Consulting and ATRS staff are recommending approximately \$750 million dollars for 2025 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 \$300 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.

**b. Value Added and Opportunistic (Non-Core) Real Estate \$100 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 \$350 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.**

**1. Preliminary Private Equity Portfolio Review for the Quarter Ended June 30, 2024.** page 540.

Michael Bacine of Franklin Park will provide the Board with a preliminary portfolio review for the quarter ending June 30, 2024.

**2. \*Recommendation to approve for Board adoption Resolution 2024-37 authorizing an investment of up to \$35 million dollars in Riverside Value Fund II, LP.** page 587.

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 350 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, Andy Fohrer and Craig Kahler (principals). The team managers have an average of over eighteen 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 dollars 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 second vehicle being raised by the general partner with this targeted strategy. ATRS invested in Fund I that has generated a net return of 1.7X cost and 73.8% IRR as of June 30, 2024. Franklin Park recommends an investment of up to \$35 million dollars in Riverside Value Fund II, L.P., and ATRS staff concurs.

a. **\*Resolution 2024-37.** [page 591.](#)

**3. \*Recommendation to approve for Board adoption Resolution 2024-38 authorizing an investment of up to \$35 million dollars in NovaCap International Technologies VII, L.P.** [page 592.](#)

NovaCap is a Canadian private equity firm that was founded in 1981 by Marc Beauchamp. The general partner of the fund presented today is the technology, media and telecommunications affiliate of NovaCap. NovaCap also sponsors buyout funds focused on the industrial, digital infrastructure and financial services sectors, with back office systems and staff shared across the funds. The technology group has offices in Montreal, Toronto and New York. It is led by eight principals including Pascal Tremblay who is also the president of Novacap and managing partner of the technology group. The performance of the two most recent technology funds are impressive with aggregate net returns of more than 1.5X cost and 20% IRR as of June 30, 2024.

The fund will make control buyout investments in middle market technology, media and telecommunications platform companies based in North America, primarily Canada. The general partner will pursue add-on acquisitions to the platforms on a global basis. The fund's sub-sector focus will include software, communications infrastructure, industrial technology and tech-enabled services. The

firm will seek companies with a broad and diversified customer base and revenues of \$50 to \$500 million dollars. The fund is targeting total commitments of \$2.75 billion dollars. Franklin Park recommends an investment of up to \$35 million dollars in NovaCap International Technologies VII, L.P., and ATRS staff concurs.

a. **\*Resolution 2024-38.** [page 596.](#)

4. **\*Recommendation to approve for Board adoption Resolution 2024-39 authorizing an investment of up to \$35 million dollars in Revelstoke Capital Partners Fund IV, L.P.** [page 597.](#)

Based in Denver with offices in New York and Seattle, Revelstoke was founded in 2013 by Mark King, Dale Meyer and Simon Bachleda who previously worked together at KRG Capital Partners. Today, the firm is led Mr. Bachleda and five senior investment professionals who each average more than ten years of private equity experience and have complimentary investing experience. The investment team has an attractive track record with Funds I and II each generating a net IRR of over 17%. ATRS is invested in Fund III, and it is on track to perform well.

The firm primarily makes control or significant minority investments in healthcare and related business services companies in the small and lower middle market. The fund will target companies that provide reduced cost, health and wellness outcomes, and/or improved patient/customer experience. In general, investments will be made in companies for which the investment represents the company's first institutional capital and also in which the founder's are rolling a significant amount of capital. The general partner uses a proactive, thematic approach to sourcing investment opportunities in value-based care, home care, behavioral health and health and wellness companies. The fund is expecting commitments of \$1.75 billion dollars and is well-positioned in its target market. Franklin Park recommends a commitment of up to \$35 million dollars in Revelstoke Capital Partners Fund IV, L.P., and ATRS staff concurs with the recommendation.

a. **\*Resolution 2024-39.** [page 600.](#)

5. **\*Recommendation to approve for Board adoption Resolution 2024-40 authorizing an investment of up to \$35 million dollars in Peak Rock Capital Fund IV, L.P.** [page 601.](#)

Peak Rock was formed in 2012 by Anthony DiSimone, Steve Martinez, Peter Liebman and Tiffany Kosch who formerly worked as part of Aurora Resurgence and H.I.G. Capital. Based in Austin, TX, with a satellite office in London, the firm currently manages funds focused on control equity, private credit and real estate strategies. The private equity team is overseen by Mssrs. DiSimone and Martinez and led by seven senior professionals.

The team has performed well with its previous two funds each generating over 1.5X cost and a net IRR in excess of 26% as of June 30, 2024.

The fund will make control oriented investments in undermanaged or underperforming mid-sized companies with revenues in the range of \$50 to \$500 million dollars. The team will target founder-owned businesses, carve-outs and special situations. Typical companies will be fundamentally sound and recession resilient within the consumer, technology, healthcare and industrial sectors. The general partner is targeting \$2 billion dollars in commitments with a hard cap of \$2.5 billion dollars. Franklin Park recommends a commitment of up to \$35 million dollars in Peak Rock Capital IV, L.P., and ATRS staff concurs.

a. **\*Resolution 2024-40.** page 605.

6. **\*Recommendation to approve for Board adoption a motion to approve the 2025 Private Equity Pacing Schedule (Total Pacing \$400 Million Dollars).** page 606.

Michael Bacine of Franklin Park will provide the 2025 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 \$400 million dollars for 2025 in order to maintain a 12% allocation to private equity over a long term time horizon, and ATRS staff agrees.

In years past, ATRS made an allocation of the total pacing each year to different types of private equity through various Franklin Park vehicles that were raised annually. These vehicles included venture capital, international funds, co-investments and smaller corporate finance funds. Today, ATRS invests in these types of assets through multi-year funds alongside other Franklin Park clients. As a result, there is not a new allocation to each of these types of funds every year. For 2025, an allocation of up to \$40 million dollars each is planned for both Franklin Park Venture Capital Fund XV (early stage venture) and Franklin Park Venture Opportunity Fund II (later stage venture). A commitment of up to \$40 million dollars is also planned in Franklin Park Corporate Finance Access Fund III for next year. No new commitment is expected in Franklin Park international funds or co-investment funds in the coming year.

Franklin Park also expects to commit up to \$280 million dollars in five to seven funds with buyout, growth, or turnaround strategies within the U.S. during 2025. Additionally, a commitment of up to \$40 million dollars each is planned for one or two funds that will

focus 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. Five to Seven Buyout/Growth/Turnaround \$40 Million Dollars Each Primarily in the U.S. (Total up to \$280 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 five to seven of these types of funds at a \$40 million level each for a total of up to \$280 million dollars.

**b. Up to Two Debt/Distressed Assets (Total up to \$80 Million Dollars Depending on the Total Commitments to Buyout/Growth/Turnaround Funds Discussed Above).**

Up to Two Debt/Distressed Assets (Total up to \$80 Million Dollars Depending on the Total Commitment to Buyout/Growth/Turnaround Funds Discussed Above). 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 under certain circumstances. This is an allocation for one or two of these funds at a \$40 million level each.

**c. Franklin Park Corporate Finance Access Fund III, LP \$40 Million Dollars.**

This is a fund of smaller corporate finance funds that are often started by "next generation" managers who have spun out of larger successful firms. An investment in this fund is anticipated for 2025. A presentation and recommendation will be made at a later date.

**d. Franklin Park Venture Fund XV \$40 Million Dollars.**

This is a fund made up of early stage venture capital funds. An investment in this fund is anticipated for 2025. A presentation and recommendation will be made at a later date.



e. **Franklin Park Venture Capital Opportunity Fund II, LP \$40 Million Dollars.**

This is a fund of later stage venture capital funds. An investment in this fund is anticipated for 2025. A presentation and recommendation will be made at a later date.

**XVIII. Operations Committee Report.** *Bobby Lester, Operations Committee Chair*

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

Open Forum for Potential Rule or Law Changes by Committee Member and Board Member in Attendance.

**1. Open Forum.**

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. ATRS 2025 Legislative Package Update.**

**C. \*Update to ATRS Board Policy 4 - Investment Policy.** page 612.

The proposed changes to Board Policy 4 include non-substantive, stylistic changes and substantive changes recommended by ATRS staff. This is an action item.

**D. \*Update to ATRS Board Policy 6 - Real Asset Investment.** page 638.

The proposed changes to Board Policy 6 include changes and substantive changes recommended by ATRS staff. This is an action item.

**XIX. \*Staff Reports.**

**A. \*Medical Committee Report. A total of Eleven (11) Disability Retirement Applications were Approved.** *Willie Kincade, Director of Operations* page 654.

The Medical Committee Report is a standard report made by staff on behalf of the Medical Committee approving disability cases. A total of 16 disability applications were received, 11 were approved, 3 was denied, and 2 needed more information. This is an action item

**B. Financial Reports.**

**1. Financial Statement Report.** *Curtis Carter, Chief Fiscal Officer* page 656.

The ATRS Chief Financial Officer will give the Board summary

information for the financial reports for the year ending June 30,2024. No action is needed for this information item.

**2. Travel Report.** *Curtis Carter, Chief Fiscal Officer* page 658.

The ATRS Chief Financial Officer will present a standard travel report showing the expenses for staff and Trustees for fiscal year ending June 30, 2024. No action is needed for this information item.

**C. Personnel Report.** *Stephanie Lilly-Palmer, HR Manager* page 659.

The personnel report is provided annually for information. Ms. Stephanie Lilly-Palmer, the ATRS Human Resources Manager, will be available to answer any questions about this report.

**D. \*Request for Qualifications for Securities Litigation and Class Action Monitoring.** *Mark White, Executive Director*

**1. \*Recommendation for Securities Monitoring and Asset Recovery Litigation Policy.** page 660.

**2. \*Recommendation for Selection of Securities Litigation and Class Action Monitoring Counsel.** page 661.

**XX. Other Business.**

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

**Monday, September 30, 2024  
10:45 a.m.  
1400 West Third Street  
Little Rock, AR 72201**

**ATTENDEES**

**Board Members Present**

Danny Knight, Chair  
Shawn Higginbotham, Vice Chair  
Kelsey Bailey  
Anita Bell  
Susan Ford\*  
Dr. Mike Hernandez  
Michael Johnson  
Chip Martin  
Jeff Stubblefield  
Susannah Marshall, Bank Commissioner  
Jason Brady, designee for Hon. Dennis Milligan  
Kelly Griffin, designee for Sec. Jacob Oliva  
Hon. Larry Walther, State Treasurer  
Eric Munson, designee for Hon. Larry Walter,  
State Treasurer

**Board Members Absent**

Bobby Lester

**Reporters Present**

Mike Wickline, AR Dem Gaz

**ATRS Staff Present**

Mark White, Executive Director  
Sarah Linam, Deputy Director  
Rod Graves, Deputy Director  
Tammy Porter, Board Secretary  
Curtis Carter, Chief Financial Officer  
Kevin Chadwick, Internal Audit/Risk Mgmt.  
Braeden Duke, Software Support Analyst  
Willie Kincade, Director of Operations  
Jennifer Liwo, General Counsel  
Manju, Director, Information Systems  
Jerry Meyer, Manager, Real Assets  
Logan Penter, Staff Attorney\*  
Joe Sithong, Information Systems Coordinator\*  
Whitney Sommers, Administrative Analyst  
Leslie Ward, Manager, Private Equity  
Misty Yant, Manager, Accounting/Reporting\*

**Guest Present**

Donna Morey, ARTA  
PJ Kelly, Aon Hewitt Consulting  
Katie Comstock, Aon Hewitt Consulting  
Chae Hong, Aon Hewitt Consulting\*  
Cyril Espanol\*  
Darbie Harris\*  
Douglas Appell\*  
Gar Chung – FIN News\*  
Hannah Ross\*  
Jon Gilmore\*  
Cyril Espanol, Journalist\*  
Logan Timmis\*  
Mathews de Carvalho\*  
Michael Knapp\*  
Alfred Crooks\*

\*ZOOM

I. **Call to Order/Roll Call.** Mr. Danny Knight, Chair, called the Board of Trustees meeting to order at 11:01 a.m. Roll call was taken. Mr. Lester was absent.

II. **Motion to Excuse Absences.**

**Mr. Stubblefield moved to excuse Mr. Lester from the September 30, 2024, Meeting. Ms. Bell seconded the motion, and the Board unanimously approved the Motion.**

III. **Adoption of Agenda.**

**Dr. Hernandez moved for adoption of the Agenda. Mr. Martin seconded the motion, and the Board unanimously approved the motion.**

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

V. **Approval of Prior Meeting Minutes.**

A. **June 3, 2024, Minutes.**

**Ms. Marshall moved for approval of the Minutes of the Board of Trustees meeting of June 3, 2024. Ms. Bell seconded the motion, and the Board unanimously approved the motion.**

B. **June 12, 2024, Minutes.**

**Mr. Johnson moved for approval of the Minutes of the Board of Trustees meeting of June 12, 2024. Mr. Bailey seconded the motion, and the Board unanimously approved the motion.**

VI. **Executive Director Report.** Director White provided with the Board with his Executive Director Report.

VII. **Report of Member Interest Waived under A.C.A. Section 24-7-205.** None

VIII. **Report of Employer Penalties and Interest Waived Under A.C.A. Section 24-7-411.** Director White 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. This was for information only. No action was taken.

**IX. Board Waiver of Penalties and Interest Greater than \$1,000 in a Fiscal Year.**

**A. In Re: Employer 00172**

**Mr. Stubblefield *moved to approve* the Board Waiver of Penalties and Interest Greater than \$1,000 in a Fiscal Year for Employer 00172. Mr. Walther *seconded the motion*, and the Board *unanimously approved the motion*.**

**B. In Re: Employer 00238**

**Mr. Higginbotham *moved to approve* the Board Waiver of Penalties and Interest Greater than \$1,000 in a Fiscal Year for Employer 00238. Mr. Bailey *seconded the motion*, and the Board *unanimously approved the motion*.**

**X. Manifest Injustice.**

**A. In Re: MI# 2024-004**

**Ms. Hamilton *moved to approve* the Manifest Injustice Committee Recommendation for MI# 2024-005. Mr. Bailey *seconded the motion*, and the Board *unanimously approved the motion*.**

**B. In Re: MI# 2024-005**

**Ms. Bell *moved to approve* the Manifest Injustice Committee Recommendation for MI# 2024-006. Mr. Martin *seconded the motion*, and the Board *unanimously approved the motion*.**

**XI. Authorization to Pay Regular T-DROP Interest for Fiscal Year 2025.**

**A. Resolution 2024-30**

**Mr. Stubblefield *moved to adopt* Resolution 2024-30, Authorization to Pay Regular T-DROP Interest for Fiscal Year 2025. Ms. Bell *seconded the motion*, and the Board *unanimously approved the motion*.**

**XII. Authorization to Pay Post 10 year T-DROP Interest for Fiscal Year 2025.**

**A. Resolution 2024-31**

**Mr. Higginbotham *moved to adopt* Resolution 2024-31, Authorization to Pay Post 10 year T-DROP Interest for Fiscal Year 2025. Dr. Hernandez *seconded the motion*, and the Board *unanimously approved the motion*.**

**XIII. CBA Incentive Interest Rate on T-DROP Cash Balance Account.**

**A. Resolution 2024-32**

**Mr. Martin *moved to adopt* Resolution 2024-32, CBA Incentive Interest Rate on T-DROP Cash Balance Account. Mr. Brady *seconded the motion*, and the Board *unanimously approved the motion*.**

**XIV. Extension of ATRS Cash Program for Fiscal Year 2025.**

**A. Resolution 2024-33**

**Mr. Stubblefield *moved to adopt* Resolution 2024-33, Extension of ATRS Cash Program for Fiscal Year 2025. Ms. Marshall *seconded the motion*, and the Board *unanimously approved the motion*.**

**XV. Investment Committee Report.** Chip Martin, Chair, gave a report on the Investment Committee Meeting.

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

- 1. List of Fund Closings.** The report was provided for reference with no questions or explanations on the written summary.
- 2. Board Policies Report.** The report was provided for reference with no questions or explanations on the written summary.
- 3. Emerging Manager Report.** The report was provided for reference with no questions or explanations on the written summary.

4. **Proxy Voting Report for Fiscal year Ended June 30, 2024.** The report was provided for reference with no questions or explanations on the written summary.
5. **Update on Board Policy 4 – Investment Policy.** The report was provided for reference with no questions or explanations on the written summary.
6. **Recommendation to approve for Board adoption Resolution 2024-27, authorizing an investment of up to \$100 million dollars in a promissory note to Green and Clean Power and associated entities.**
  - a. **Resolution 2024-27.**

**Mr. Martin *moved to approve* the recommendation for Board adoption of Resolution 2024-27, authorizing an investment of up to \$100 million dollars in a promissory note to Green and Clean Power and associated entities, and the Board *unanimously approved* the motion.**

**B. General Investment Consultant Report *Aon Hewitt Consulting***

1. **Performance Report for the Quarter Ending June 30, 2024.** Katie Comstock and P.J. Kelly of Aon Hewitt Investment Consulting provided the Committee with a Performance Report for the quarter ending June 30, 2024. The report was for information purposes and no action was taken.
2. **Preliminary Performance Report for the Month Ended August 31, 2024.** Katie Comstock and P.J. Kelly of Aon Hewitt Investment Consulting provided the Committee with a Preliminary Performance Report for the month ending August 31, 2024. The report was for information purposes and no action was taken.
3. **Recommendation to approve for Board adoption Resolution 2024-28 authorizing the full redemption of the ATRS Investment in Prophet Mortgage Servicing Opportunities LP.** PJ Kelly of Aon Hewitt Investment Consulting presented the Committee with the recommendation to authorize the full redemption of the ATRS Investment in Prophet Mortgage Servicing Opportunities LP.

Director White stated that staff concurs with the recommendation.

a. **Resolution 2024-28**

**Mr. Martin *moved to approve* the recommendation for Board adoption of Resolution 2024-28, authorizing the full redemption of the ATRS Investment in Prophet Mortgage Servicing Opportunities LP, and the Board *unanimously approved* the motion.**

C. **Real Assets Consultant Report. *Aon Hewitt Investment Consulting.***

1. **Performance Report for the Quarter Ended March 31, 2024.** Chae Hong of Aon Hewitt Investment Consulting gave the Committee a report on the quarter ended March 31, 2024.

D. **Private Equity Consultant Report. *Franklin Park***

1. **Private Equity Portfolio Review for the Quarter Ended March 31, 2024.** Michael Bacine gave the Committee a report on the quarter ended March 31, 2024.
3. **Recommendation to approve for Board adoption Resolution 2024-29 authorizing an investment of up to \$35 million dollars in The Veritas Capital Fund IX, L.P.**

Director White stated that staff concurs with the recommendation.

a. **Resolution 2024-29**

**Mr. Martin *moved to approve* the recommendation for Board adoption of Resolution 2024-22, authorizing an investment of up to \$35 million dollars in The Veritas Capital Fund IX, L.P., and the Board *unanimously approved* the motion.**

3. **Motion to approve for Board reaffirmation investment of up to \$40 million dollars in Franklin Park Venture Capital Opportunity Fund II, L.P.**



Director White stated that staff concurs with the recommendation.

**Mr. Martin *moved to approve motion* authorizing up to \$40 million dollars in Franklin Park Venture Capital Opportunity Fund II, L.P., and the Board *unanimously approved* the motion.**

**XVI. Operations Committee Report.** Dr. Hernandez, 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. Rule Promulgation Status Update.** Jennifer Liwo, General Counsel gave the Committee a status update on the Rules Promulgation.

**C. ATRS 2025 Legislative Package.**

**Dr. Hernandez *moved to approve* ATRS 2025 Legislative Package as presented to the Board, *and the the Board unanimously approved* the motion.**

**D. Update to ATRS Policy 2 - Board Objectives.**

**Dr. Hernandez *moved to approve* the update to ATRS Board Policy 2 – Board Objectives as presented to the Board, *and the Board unanimously approved the motion.***

**E. Update to ATRS Board Policy 4 – Investment Policy.** This was a discussion item and no action was taken.

**XVII. Board of Trustees Disability Review.**

**A. In the Matter of Disability Review Applicant, ATRS ID#233403.**

**Mr. Walther *moved to approve* the Disability Order of the Medical Committee. Mr. Stubblefield *seconded the motion* and the Board *unanimously approved the motion.***

**XVIII. Staff Reports.**

- A. Medical Committee Report.** Mr. Kincade reported that a total of Twenty-Five (25) Disability Retirement Applications were approved.

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

- B. Contract Renewals.** Curtis Carter, Chief Financial Officer gave the Board an update on Contract Renewals.

- C. ATRS Biennial Budget Request.** Director White gave the Board an update on ATRS Biennial Budget Request.

- D. Authorization to Issue Request for Qualifications for Securities Litigation and Class Action monitoring.**

**Mr. Johnson moved to approve the authorization to Issue Request for Qualifications for Securities Litigation and Class Action monitoring. Mr. Bailey seconded the motion and the Board unanimously approved the motion.**

- E. Recommendation – Securities Litigation Lead Plaintiff**

**Mr. Knight moved to approve the Recommendation as Lead Plaintiff in a Securities Litigation. Dr. Hernandez seconded the motion, and the Board unanimously approved the motion.**

- XIX. Other Business: None**

- XX. Adjourn.**

**Mr. Martin moved to adjourn the Board meeting. Mr. Bailey seconded the motion and the Board unanimously approved the motion.**

**Meeting adjourned at 11:50 a.m.**

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Mr. Mark White  
Executive Director

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Mr. Danny Knight, Chair  
Board of Trustees

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Tammy Porter,  
Recorder

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Date Approved

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

**Thursday, October 31, 2024**

**4:15 p.m.**

**1400 West Third Street**

**Little Rock, AR 72201**

**ATENDEES**

**Board Members Present**

Danny Knight, Chair  
Shawn Higginbotham, Vice Chair\*  
Kelsey Bailey\*  
Dr. Mike Hernandez\*  
Michael Johnson\*  
Bobby G. Lester\*  
Chip Martin\*  
Jeff Stubblefield\*  
Susannah Marshall, Bank Commissioner\*  
Jason Brady, designee for Dennis Milligan\*  
Hon. Larry Walther, State Treasurer\*

**Board Members Absent**

Jacob Oliva, Secretary, Dept. of Education  
Anita Bell  
Susan Ford  
Keri Hamilton

**ATRS Staff Present**

Mark White Executive Director  
Rod Graves, Deputy Director  
Whitney Sommers, Administrative Analyst  
Manju, Director, Information Technology

**Guest Present**

Eric Munson, State Treasurer's Office\*

**Reporters Present**

Mike Wickline, AR Dem Gaz

\* *via ZOOM*

- I. **Call to Order/Roll Call.** Mr. Danny Knight, called the Board of Trustees Meeting to order at 5:00 p.m. Roll call was taken. Anita Bell, Susan Ford, Keri Hamilton and Mr. Jacob Oliva were absent.
  
- II. **Adoption of Agenda.**  
  
**Mr. Brady *moved for adoption of the Agenda.* Mr. Martin *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, Chair***  
**Recommendation to approve for Board adoption Resolution 2024-34, authorizing a promissory note of up to \$16.64 million dollars to South Harbor GP I, LLC.** Mr. Mark White, Executive Director presented the Committee with the recommendation to approve Resolution 2024-34.

Staff concurs with the recommendation.

**Mr. Martin *moved* for *adoption* of Resolution 2024-34, authorizing a promissory note of up to \$16.64 million dollars to South Harbor GP I, LLC. A roll call vote was taken and the Board *unanimously approved the motion.***

- IV. Other Business.** None.

- V. Adjourn.**

Mr. Martin *moved to adjourn* the Board meeting. Mr. Stubblefield *seconded the motion* and the Board *unanimously approved the motion.*

**Meeting adjourned at 5:03 p.m.**

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Mr. Mark White  
Executive Director

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Mr. Danny Knight Chair  
Board of Trustees

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Tammy Porter,  
Board Secretary

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Date Approved



# Arkansas Teacher Retirement System

## Valuation Results as of June 30, 2024

December 2, 2024

Judith A. Kermans, EA, FCA, MAAA, Heidi G. Barry, ASA, FCA, MAAA

Derek Henning, ASA, EA, FCA, MAAA





**June 30, 2024 Valuation Results**

**1**



**Going Forward**

**29**



**Actuarial Funding vs. Fixed Rate Funding  
and Actuarial Assumptions**

**37**

# Funding Objectives

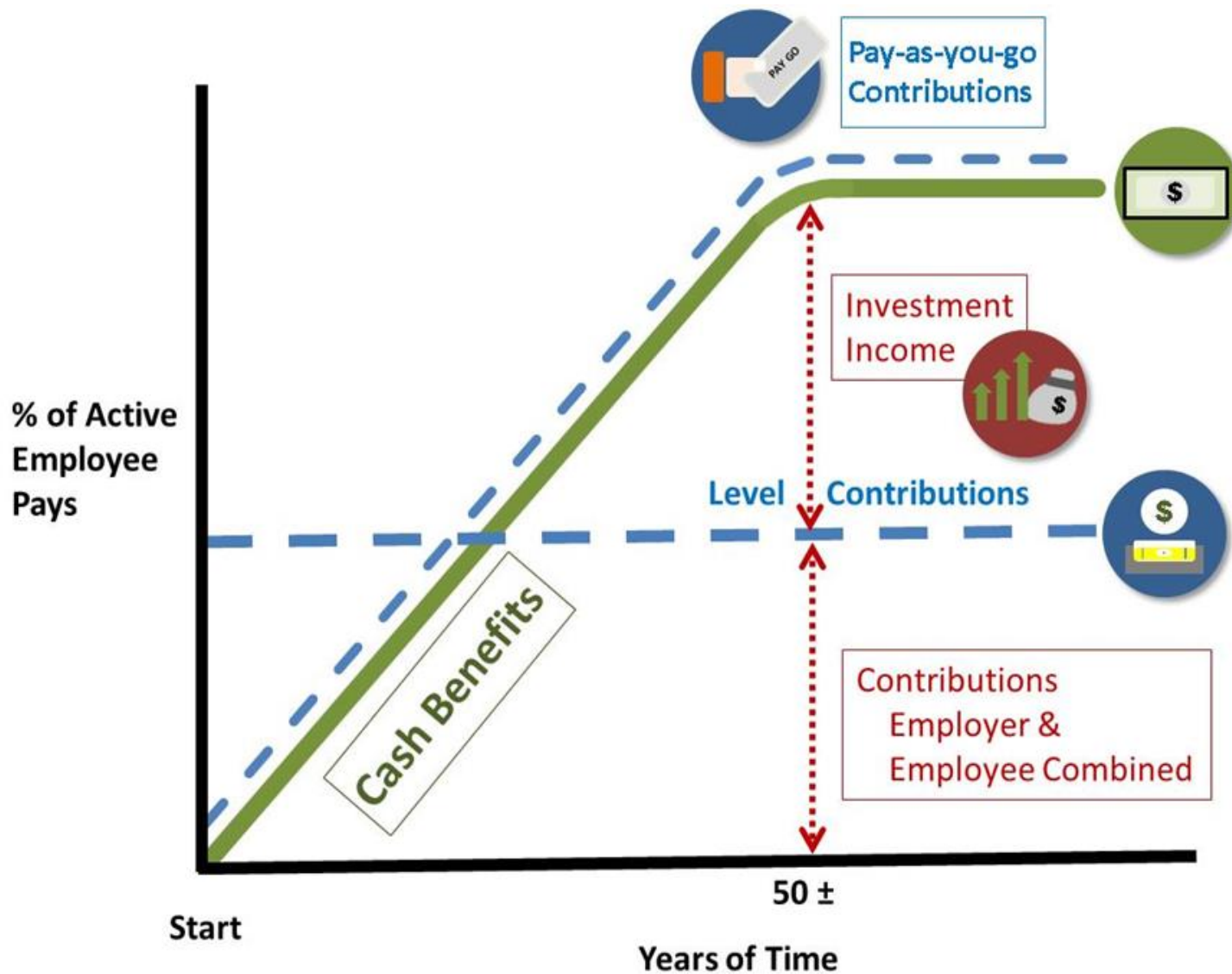
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24-7-401 (a). Fund contributions -- Fund rates.

- (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?

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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 as of June 30		% Change
	2024	2023	
Active	68,265	68,249	0.0%
T-DROP	2,981	3,138	-5.0%
Inactive Vested	14,775	14,355	2.9%
Retired	56,177	54,646	2.8%
<b>Total</b>	<b>142,198</b>	<b>140,388</b>	<b>1.3%</b>

ATRS receives full employer contributions for Active and T-DROP members and for 4,400 retirees who have returned to work.

# Active, T-DROP and RTW Members

June 30	Number				Total Payroll	% Change
	Active	T-DROP	RTW	Total	\$ Millions	
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%
2022	68,127	3,251	3,643	75,021	3,320	3.6%
2023	68,249	3,138	4,108	75,495	3,492	5.2%
2024	68,265	2,981	4,400	75,646	3,612	3.4%

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.

# Active Members not in T-DROP

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		Group Averages			
June 30	Number	Age	Years of Service	Average Earnings	% Change
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%
2022	68,127	44.1	10.2	43,758	2.00%
2023	68,249	44.0	10.2	45,897	4.89%
2024	68,265	44.1	10.1	47,551	3.60%

# Active Members in T-DROP

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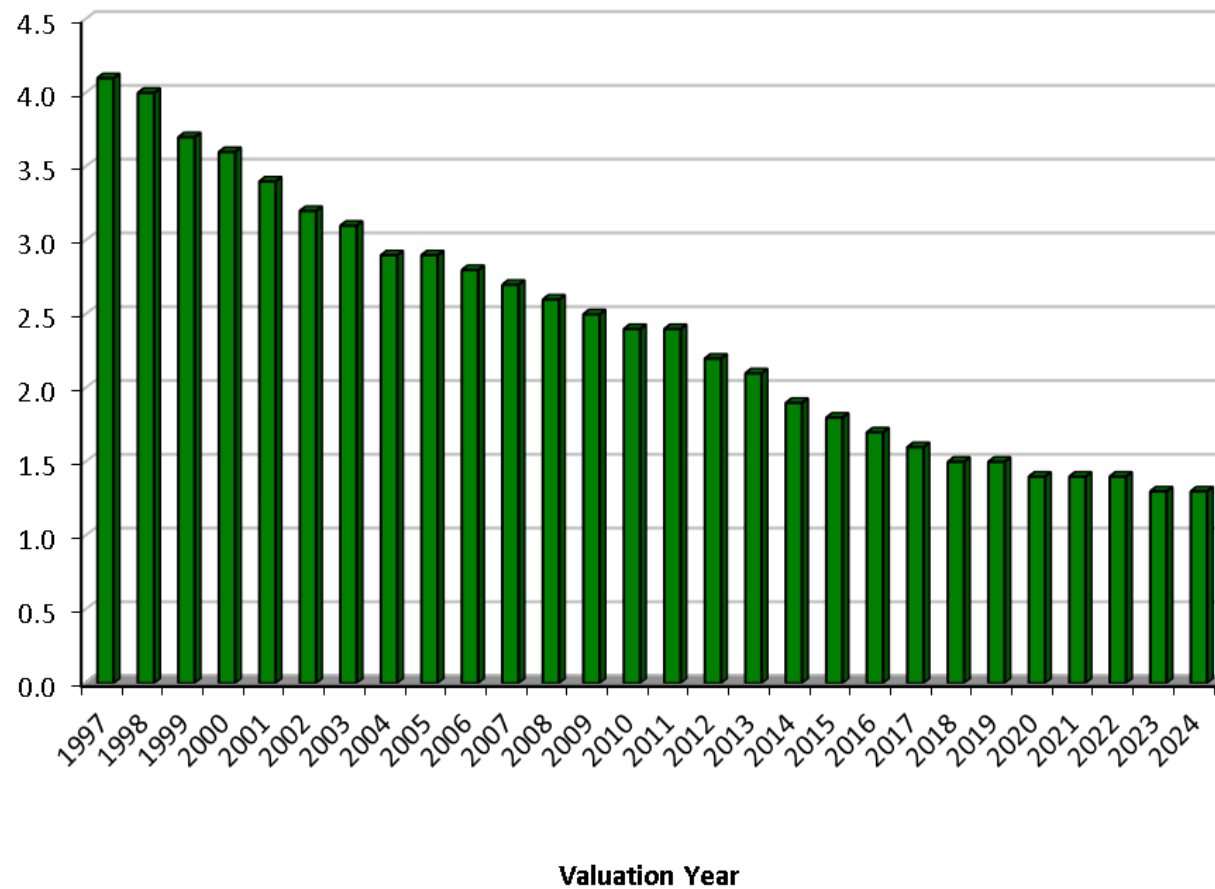
June 30	Number	Payroll		
		Average	\$ Millions	% Change
2018	3,696	\$62,456	\$230.8	-2.5%
2019	3,707	62,812	232.8	0.9%
2020	3,639	63,477	231.0	-0.8%
2021	3,465	65,732	227.8	-1.4%
2022	3,251	66,877	217.5	-4.5%
2023	3,138	70,134	220.1	1.2%
2024	2,981	71,536	213.2	-3.1%

# Deferred Vested and Retired Members

	Deferred Members			Retired Members		
		Benefit			Benefit	
June 30	Number	\$ Millions	Average	Number	\$ Millions	Average
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
2022	13,986	80.5	5,758	52,748	1,293.8	24,527
2023	14,355	87.0	6,063	54,646	1,346.6	24,643
2024	14,775	94.0	6,359	56,177	1,403.8	24,988

# Ratio of Actives to Retirees

Active Members Per Retired Life \*

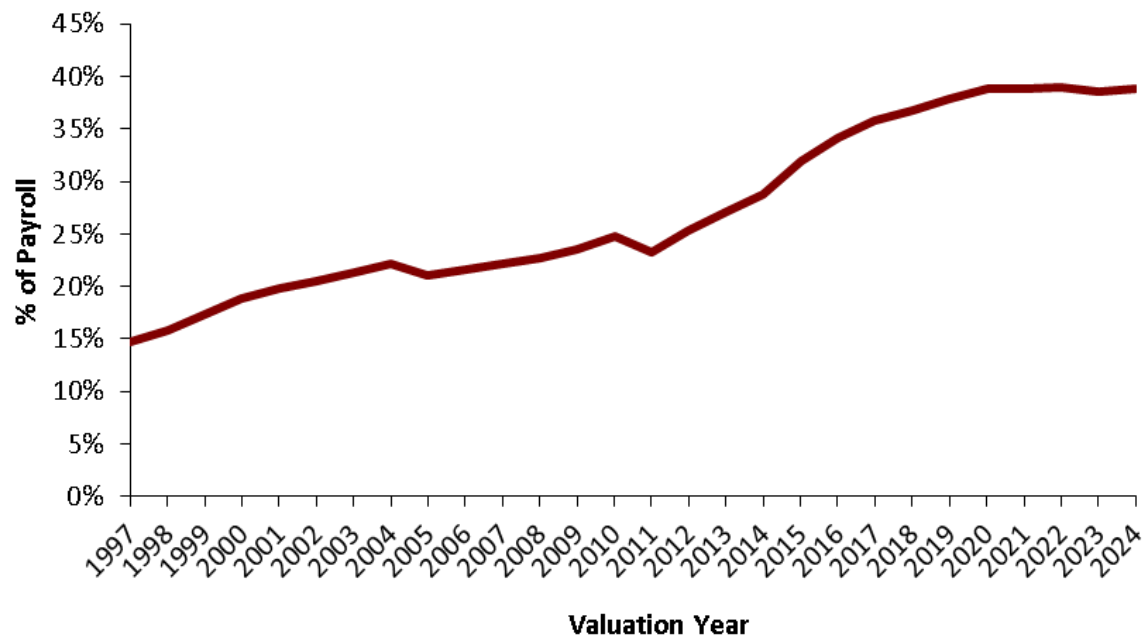


\* Members in T-DROP are included with Active members.



# 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 2024

The amortization period is 20 years, a decrease from the 26-year period last year.

The rate of investment return on a market basis was 11.84% for FY 2024, however after smoothing prior gains and losses, the recognized return on the Funding Value of Assets was 9.75%.

Details of other experience will be presented in the Gain/Loss analysis later this month.

# Investment Experience

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

This year there was a \$907 million investment gain relative to the 7.25% investment return assumption

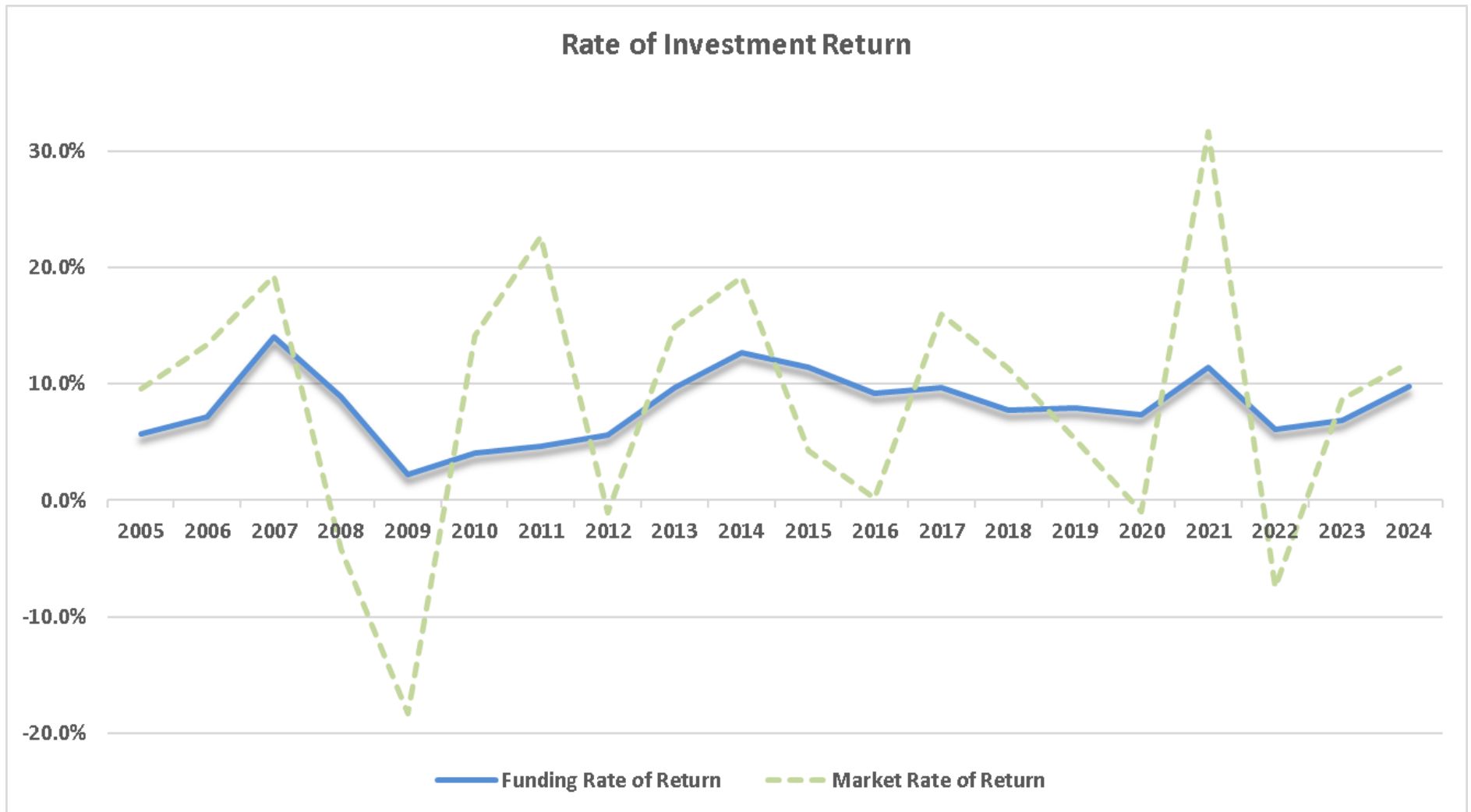
25% of the gain was recognized this year and the remaining 75% will be recognized over 3 future years

This year's 25% recognized gain was added to portions of gains and losses from prior years producing a net \$517 million gain (Funding Value)

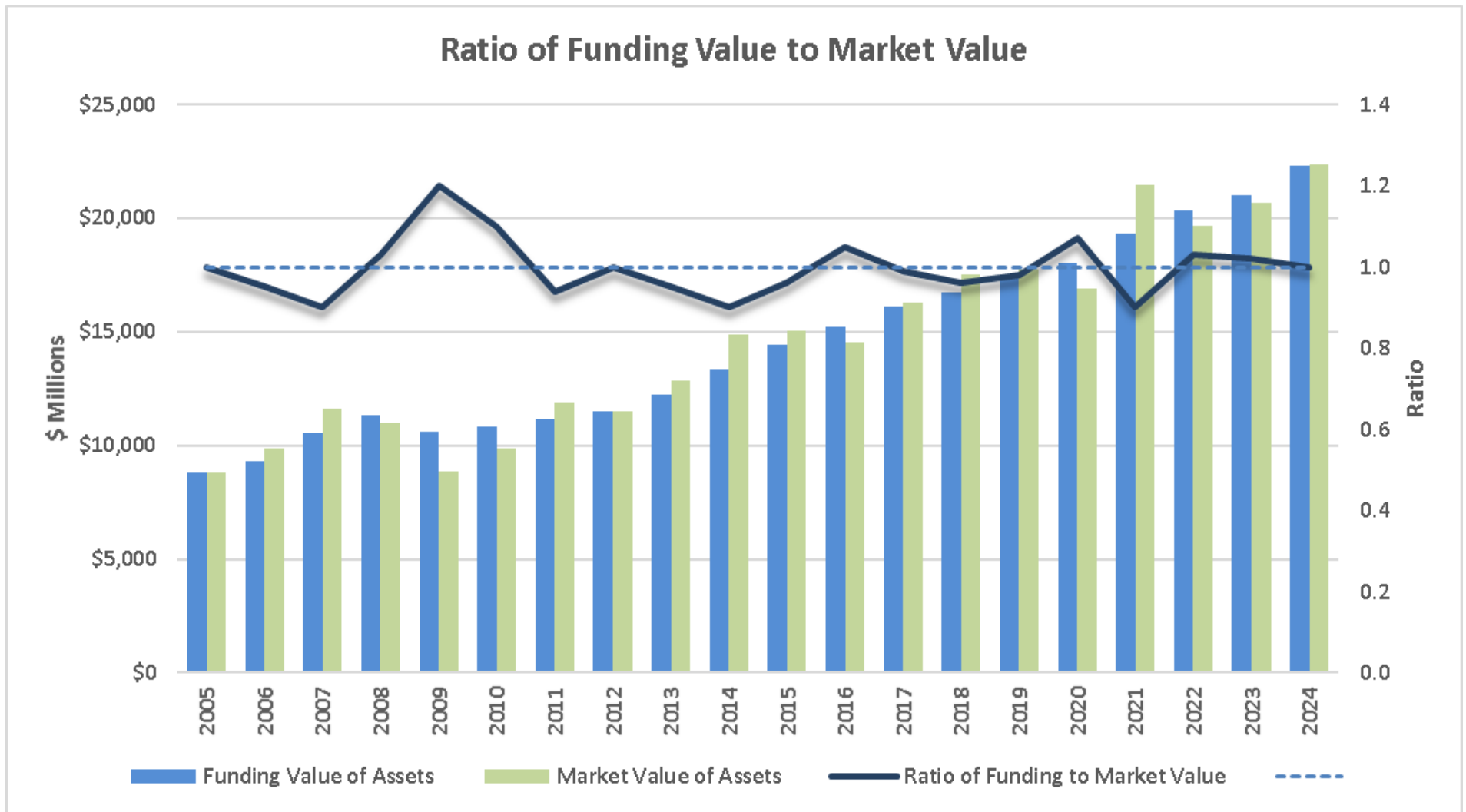
# Development of Funding Value of Assets

Year Ended June 30:	2023	2024	2025	2026	2027
A. Funding Value Beginning of Year	\$ 20,328,281,484	\$ 21,014,908,823			
B. Market Value End of Year	20,675,051,918	22,359,231,384			
C. Market Value Beginning of Year	19,679,467,252	20,675,051,918			
D. Non-Investment Net Cash Flow	(688,831,775)	(720,213,715)			
E. Investment Return	-	-			
E1. Market Total: B - C - D	1,684,416,441	2,404,393,181			
E2. Assumed Rate	7.25%	7.25%	7.25%		
E3. Amount for Immediate Recognition	1,448,830,256	1,497,473,142			
E4. Amount for Phased-In Recognition: E1-E3	235,586,185	906,920,039			
F. Phased-In Recognition of Investment Return					
F1. Current Year: 0.25 x E4	58,896,546	226,730,010	Unknown	Unknown	Unknown
F2. First Prior Year	(748,081,697)	58,896,546	\$ 226,730,010	Unknown	Unknown
F3. Second Prior Year	979,616,848	(748,081,697)	58,896,546	\$ 226,730,010	Unknown
F4. Third Prior Year	(363,802,839)	979,616,849	(748,081,696)	58,896,547	\$ 226,730,009
<b>F5. Total Recognized Investment Gain</b>	<b>(73,371,142)</b>	<b>517,161,708</b>	<b>(462,455,140)</b>	<b>285,626,557</b>	<b>226,730,009</b>
<b>G. Funding Value End of Year:</b>					
G1. Preliminary Funding Value End of Year: A+D+E3+F5	<b>21,014,908,823</b>	<b>22,309,329,958</b>			
G2. Upper Corridor Limit: 120% x B	<b>24,810,062,302</b>	<b>26,831,077,661</b>			
G3. Lower Corridor Limit: 80% x B	<b>16,540,041,535</b>	<b>17,887,385,107</b>			
<b>G4. Funding Value End of Year</b>	<b>21,014,908,823</b>	<b>22,309,329,958</b>			
H. Actual/Projected Difference between Market and Funding Value	(339,856,905)	49,901,426	512,356,566	226,730,009	-
I. Market Rate of Return	8.71 %	11.84 %			
J. Funding Rate of Return	6.88 %	9.75 %			
K. Ratio of Funding Value to Market Value	101.64 %	99.78 %			

# Development of Funding Value of Assets



# Development of Funding Value of Assets



# Results of the June 30, 2024 Valuation

Actuarial Accrued Liabilities for:	\$ Millions	
	2024	2023
Age and service retirement allowances based on total service likely to be rendered by <i>present Active and T-DROP members</i>	\$ 10,186	\$ 9,967
Benefits payable to present Retirees and Beneficiaries	14,992	14,511
Benefits payable for all other reasons	1,178	1,114
Total	26,356	25,592
Funding Value of Assets	22,309	21,015
Unfunded Actuarial Accrued Liability	\$ 4,047	\$ 4,577
% Funded Based on		
Funding Value of Assets	85%	82%
Market Value of Assets	85%	81%

If the UAAL were measured based on the market value of assets, it would be \$3,997 million.

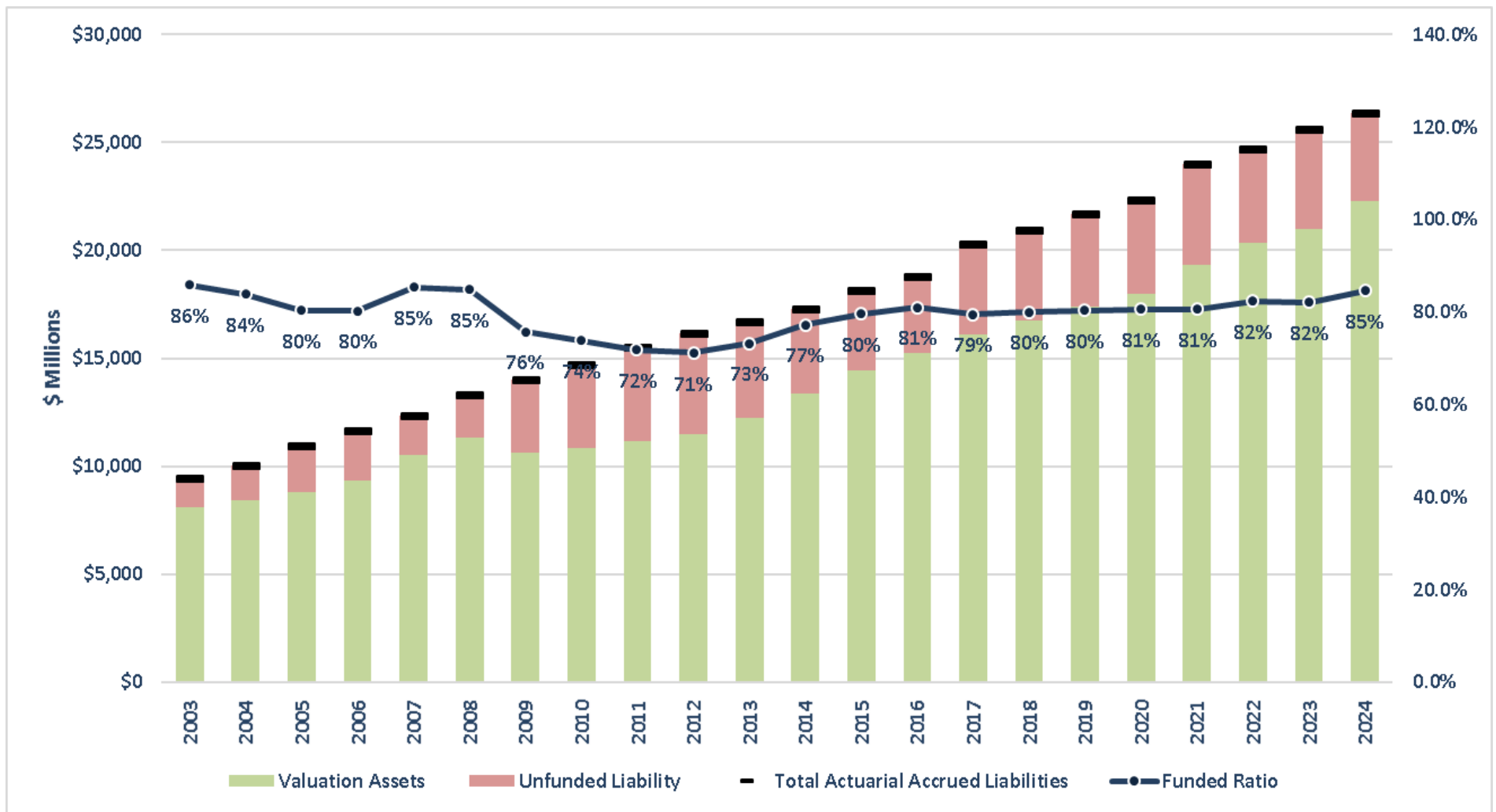
# Results of the June 30, 2024 Valuation

Computed Contributions for	% of Payroll	
	2024	2023
1) Employer Normal Cost	7.06%	7.05%
2) Unfunded Actuarial Accrued Liabilities	7.94%	7.95%
<b>3) Employer Contribution Rate</b>	<b>15.00%</b>	15.00%
<b>Amortization Years</b>	<b>20</b>	26

The employer and employee contribution rates are 15% and 7%, respectively. If the Market Value of Assets were used in the calculations instead of the Funding Value of Assets, the resulting amortization period would also be 20 years .



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



# Disclosures of Risk

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## 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



	2024	2023	2022	2021	2020
Number of Active and T-DROP Participants	71,246	71,387	71,378	70,098	70,539
Number of Terminated Vested Participants	14,775	14,355	13,986	13,574	13,338
Number of Retirees	56,177	54,646	52,748	51,405	50,133
Retiree % of Total Liabilities	56.9%	56.7%	56.9%	56.7%	57.7%
Commentary	Retired participants account for approximately 57% of plan liabilities, a proportion which has been relatively level 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)



	2024	2023	2022	2021	2020
Actuarial Accrued Liability	\$26,356	\$25,592	\$24,697	\$23,987	\$22,352
Payroll	3,612	3,492	3,320	3,205	3,078
Ratio of Actuarial Accrued Liability to Payroll	729.8%	732.9%	743.8%	748.4%	756.7%
Duration of the Present Value of Future Benefits	14.17	14.16	14.03	14.02	13.83

## 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 7.298% of payroll and would affect the amortization period by 2 years based on the 2024 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 14.2 indicates that the present value of future benefits would increase approximately 14.2% 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)



	2024	2023	2022	2021	2020
Market Value of Assets	\$22,359	\$20,675	\$19,679	\$21,469	\$16,902
Payroll	3,612	3,492	3,320	3,205	3,078
Ratio of Market Value of Assets to Payroll	619.1%	592.1%	592.7%	669.9%	572.2%

## Commentary

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. The market value of assets is currently 6.2 times the payroll indicating that a return on assets 2% different from assumed would equal approximately 12.4% of payroll. Such a change could affect the amortization period by approximately 4 years based on 2024 results. While asset smoothing would spread out the effect over 4 years, 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 <sup>^</sup>	(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%
2022	24,697	19,679	5,018	3,320	3.6%	79.7%	14,044	56.9%
2023	25,592	20,675	4,917	3,492	5.2%	80.8%	14,511	56.7%
2024	26,356	22,359	3,997	3,612	3.4%	84.8%	14,992	56.9%

# 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. Porfolio Std. Dev.	(12) Std. Dev. % of Pay (10)x(11)	(13) Unfunded/ Payroll (3)/(4)	(14) Net External Cash Flow (NECF)	(15) NECF/ Assets (14)/(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%
2022	743.8%	592.7%	13.7%	81.1%	151.1%	(192)	-1.0%	-7.5%	8.9%
2023	732.9%	592.1%	13.9%	82.3%	140.8%	(689)	-3.3%	8.7%	8.3%
2024	729.8%	619.1%	13.9%	86.1%	110.7%	(720)	-3.2%	11.8%	7.6%

# Benefit change

\* Assumption change

Valuation Payroll includes T-DROP payroll.



# Footnotes

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(\* ) 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

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(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 past is not a predictor of the future.

# GOING FORWARD - 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 2025.

All scenarios assume a 7.25% return for years after 2025.

All scenarios assume a 15% of pay contribution rate.

Of course, actual experience will determine what really happens.

# Projected Amortization Years

Valuation Year	Actual	Projected			
	2024	2025	2026	2027	2028
<b>Projection A</b>					
Investment Return	11.84%	7.25%	7.25%	7.25%	7.25%
Amortization Years	20	24	19	16	15
<b>Projection B</b>					
Investment Return	11.84%	10.00%	7.25%	7.25%	7.25%
Amortization Years	20	22	17	13	11
<b>Projection C</b>					
Investment Return	11.84%	0.00%	7.25%	7.25%	7.25%
Amortization Years	20	27	26	26	28



# Going Forward

Projection A: The projection suggests an increase in the amortization period in FY 2025 followed by a decrease in FY 2026 (if assumptions are met). The amortization period decreases again in FY 2027 as the last of the FY 2024 investment gain is recognized.

Projection B: If this trend actually materializes, the amortization period may begin to decrease in FY 2026.

Projection C: If the 2025 market return is very unfavorable, any remaining gains from 2023 and 2024 could be fully offset causing the amortization period to increase to 27 years.



# Going Forward

Projections shown indicate that the amortization period will likely be 24 years in the next valuation, if experience is as assumed.

With a 24 or more 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 out of favor, particularly in situations where the active contributing population is declining.



# Going Forward

“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.

ATRS has targeted an 18-year funding period in its Board Financial Objectives.



# GOING FORWARD - Risk Management

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May involve:

- Reviewing asset allocation with a goal of reducing the standard deviation of the portfolio return
- Reducing asset-liability mismatch
- Either of which might lead to a reduction in the assumed rate of investment return
- Other



# Actuarial Funding vs. Fixed Rate Funding

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- **Actuarial Funding**

- Contributions to the defined benefit retirement system are based on the results of an actuarial valuation and an Actuarial Determined Contribution (ADC).
- Amortization period is established by funding policy.

- **Fixed Rate Funding**

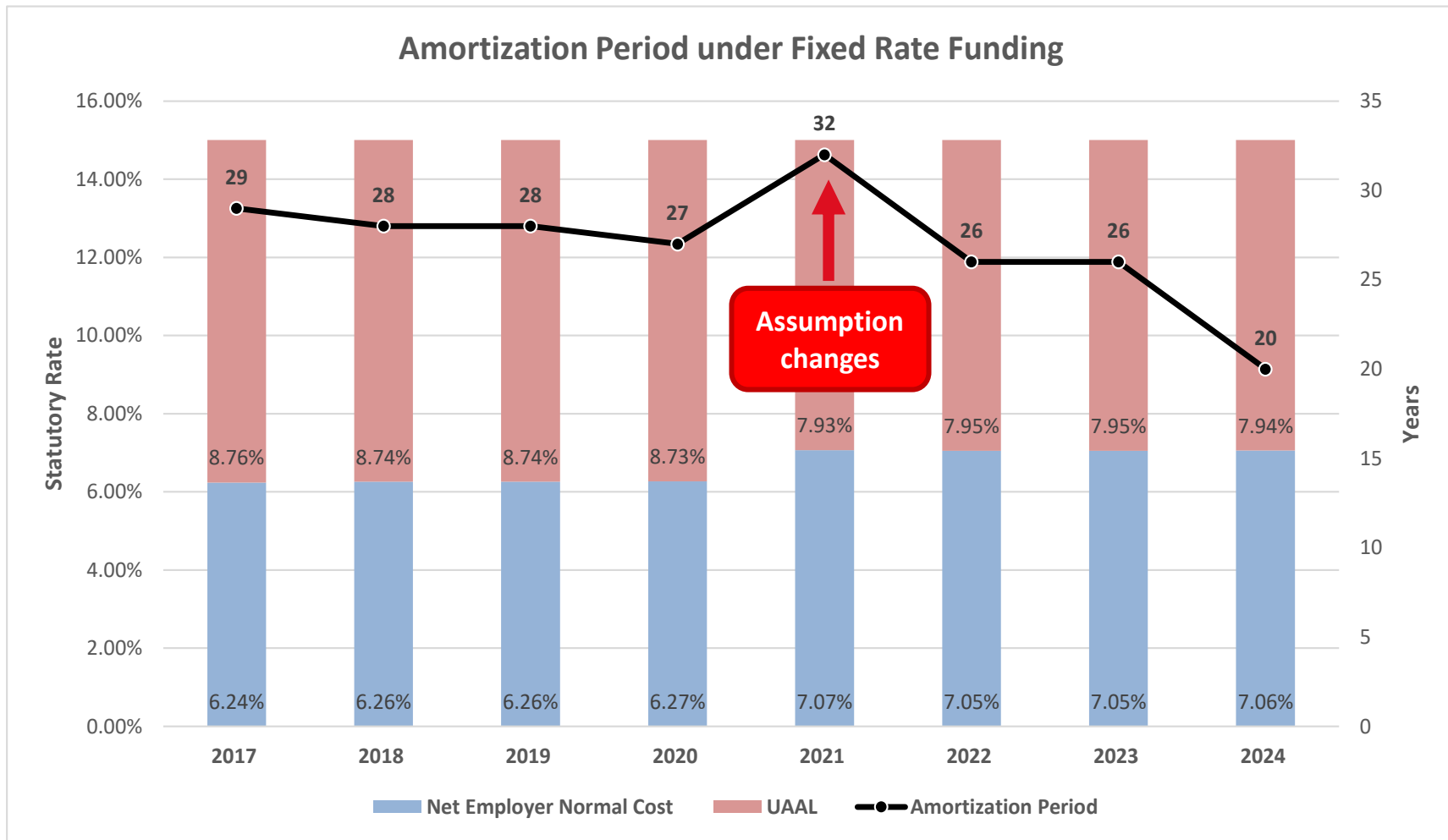
- The employer contribution rate is set by statute.
- A retirement system's administrative body can not directly change the rate.
- A change to the rate usually requires action by a separate governing body such as a state legislature.
- It is customary for the actuarial valuation to calculate the amortization period implicit in the fixed contribution rate.

# ACA 24-7-401 (c)(5)(B)(ii)

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- Statutes have a maximum 30-year amortization but an 18-year threshold (amortization period) in some places
- If a report from the actuary shows that the amortization period would be 18 years or less based on a 14% employer contribution rate, then the employer rate cannot exceed 14%
- An employer contribution rate of 15.62% would be needed to achieve an 18-year amortization period
- If 14% were the rate, the amortization period would be 25 years
- Statute does not address the contributory member rate of 7%

# ATRS – Fixed Rate Funding



The calculated amortization period was based on anticipated increases in the employer and member contribution rates for the 2017 through 2022 valuations. The employer and member rates increased by 0.25% increments from FY 2020 through FY 2023. The ultimate employer and member contribution rates is 15% and 7%, respectively, and is reflected in the 2023 valuation. The chart above includes the 15% rate.



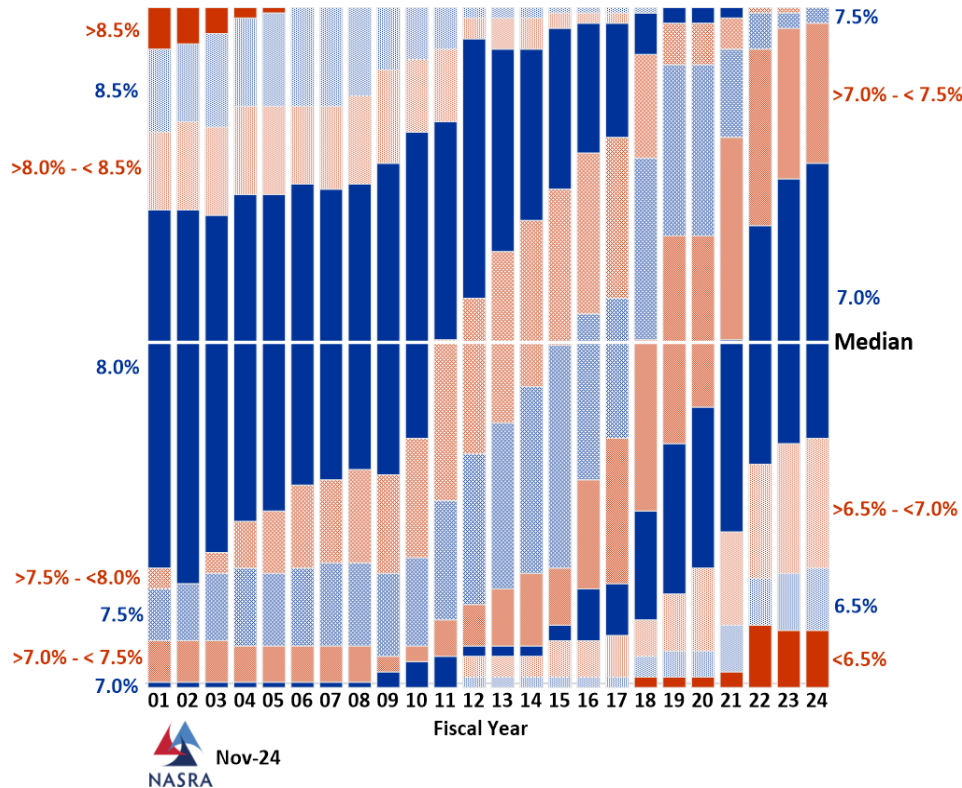
# ACA 24-7-401 (c)(5)(B)(ii)

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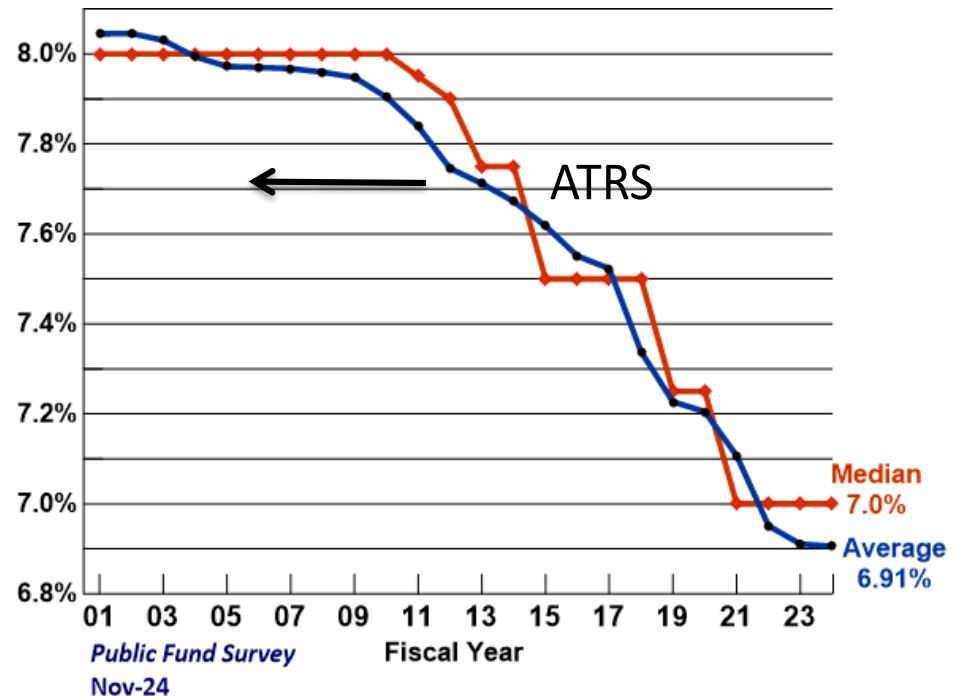
- A reduction in contributions would be unfortunate if ATRS is not 100% funded and/or if the assumed rate of return should really be lowered further
- A careful review of assumptions would be warranted if this situation were to occur in between experience studies
- A detailed study of plan experience is done every five years
- The assumed rate of return is based on forward looking expectations

# NASRA Survey of Investment Return Assumptions

Distribution of Investment Return Assumptions  
FY 01 to present



Change to Average and Median  
Investment Return Assumption, FY 01 to present



ATRS is above the median reported in the NASRA survey of 7.0%. The 7.25% assumption was at the upper end of the reasonable range based on forward looking models last fall. However, recent models are more optimistic.

# ATRS Rate of Return History

Accumulation of \$1,000 invested July 1, 2002		
Fiscal	Actual Return	\$1,000
2003	1.1%	\$1,011
2004	17.0%	\$1,183
2005	9.6%	\$1,296
2006	13.3%	\$1,469
2007	19.2%	\$1,751
2008	-4.2%	\$1,677
2009	-18.3%	\$1,370
2010	14.2%	\$1,565
2011	22.6%	\$1,919
2012	-1.1%	\$1,898
2013	14.9%	\$2,180
2014	19.2%	\$2,599
2015	4.3%	\$2,711
2016	0.2%	\$2,716
2017	16.0%	\$3,150
2018	11.4%	\$3,508
2019	5.2%	\$3,690
2020	-1.0%	\$3,653
2021	31.7%	\$4,809
2022	-5.0%	\$4,569
2023	8.7%	\$4,967
2024	11.8%	\$5,553
<b>Geo Avg</b>	<b>8.10%</b>	

- Since the turn of the millennium, ATRS' geometric compounded average return was 8.10%.
- Of course, historical averages depend heavily on the time period chosen.

# Current Target Asset Allocation

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- Presented below is the target asset allocation for ATRS:

Asset Class	ATRS Target Allocation
Total Equity	48%
Fixed Income	20%
Opportunistic/Alternatives	5%
Real Assets	15%
Private Equity	12%
<b>Total</b>	<b>100%</b>

- Based upon ATRS' target asset allocation, future expectations of various investment firms were analyzed
- The next slide shows the results of this analysis



# Other Investment Firms – Projected Investment Returns

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<b>Summary of GRS 2024 CMAM Analysis</b>	
<b>10-Year Capital Market Expectations</b> Average of 12 Investment Firms	
1-Year Expected Return	7.80%
Standard Deviation of 1-Year Expected Return	13.05%
10-Year Expected Median Return (i.e., 50 <sup>th</sup> Percentile)	7.02%
<b>20-to 30-Year Capital Market Expectations</b> Average of 8 Investment Firms	
Long-Term Expected Median Return (i.e., 50 <sup>th</sup> Percentile)	7.26%

**A 10-year time horizon for capital market expectations is appropriate for ATRS given that the duration for accrued liabilities is 11 years. This means that a good portion of obligations will be paid out in the next decade.**

# Discussion

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- Actuarial standards require that actuarial assumptions be reasonable each year, not just when the experience study is performed
- This review was done as part of the actuarial valuation process this fall
- We are not recommending an assumption change at this time
- However, in the future, actuarial standards might require a further reduction in the discount rate assumption
- The next detailed study of experience will occur after the June 30, 2025 valuation is completed

# Disclaimers

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- 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.
- This presentation expresses the views of the authors and does not necessarily express the views of Gabriel, Roeder, Smith & Company.

# Arkansas Teacher Retirement System

Annual Actuarial Valuation of  
Active and Inactive Members  
June 30, 2024



# Report of the June 30, 2024 Actuarial Valuation

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-	Cover Letter
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November 5, 2024

Board of Trustees  
Arkansas Teacher Retirement System  
Little Rock, Arkansas

Dear Board Members:

Presented in this report are the results of the ***Annual Actuarial Valuation of active and inactive members as of June 30, 2024***. The June 30<sup>th</sup> annual valuation of retired lives receiving monthly benefits indicates the liabilities for future benefit payments to existing retirees. These liabilities are covered in detail in a separate report. They are also covered briefly in this report on page B-4. A gain (loss) analysis of financial experience of the Arkansas Teacher Retirement System covering the period from July 1, 2023 to June 30, 2024 will also be issued in a separate report.

The purposes of the valuation are to measure the System's funding progress and to determine the amortization period that results from the statutory employer and employee rates and the actuarial assumptions that the Board has adopted. This report should not be relied on for any purpose other than the purposes described herein. Financial results associated with the benefits described in this report that are developed for purposes other than those identified above may be significantly different than those in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the Retirement System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

This valuation was based upon census data and financial information provided by the System's administrative staff. Preparation of this data requires considerable staff time. The helpful cooperation of the Arkansas Teacher Retirement System (ATRS) staff in furnishing the data is acknowledged with appreciation. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of any data provided by ATRS.

This report was prepared using certain assumptions approved by the Board. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. The combined effect of the assumptions is expected to have no significant bias (i.e., not significantly optimistic or pessimistic). All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice. The actuarial assumptions used for valuation purposes are summarized in Section G. These assumptions reflect expectations of future experience under the plan. They were developed in connection with an experience study covering the period July 1, 2015 to June 30, 2020.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. The scope of an actuarial valuation does not contain an analysis of the potential range of such future measurements.

To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Arkansas Teacher Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. The actuarial assumptions used for the valuation produce results which, individually and in the aggregate, are reasonable.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. Judith A. Kermans, Heidi G. Barry and Derek Henning are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The actuaries submitting this report are independent of the plan sponsor.

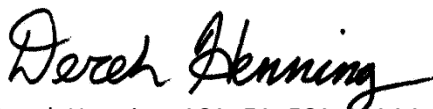
Respectfully submitted,  
Gabriel, Roeder, Smith & Company



Judith A. Kermans, EA, FCA, MAAA



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## **SECTION A**

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### **EXECUTIVE SUMMARY**



## Executive Summary

**General Financial Objective.** Section 24-7-401 (a) of the Arkansas Code provides as follows (emphasis added):

- (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.

**Arkansas Teacher Retirement System Status:** Based upon the results of the June 30, 2024 actuarial valuations, **ATRS is satisfying the financial objective of level-contribution-percent financing.**

This report contains the results of the June 30, 2024 valuation. The table below shows a summary of the data used in the valuation. This data was the basis for determining valuation results.

	Number	Average	Type of Average
Active not in T-DROP	68,265	\$47,551	Pay
Active in T-DROP	2,981	71,536	Pay
Deferred Vested	14,775	6,359	Annual Projected Benefit
Retired	56,177	24,988	Annual Current Benefit
<b>Total Members</b>	<b>142,198</b>		

Included in the 2024 valuation were 4,400 reemployed retirees (included in the Retired data file) with total earnings of \$152.2 million. ATRS receives full employer contributions on these individuals per Arkansas Code Section 24-7-708. The actuarial valuation assumes the number of working members will remain constant at the current level. In some recent years, the total number of working members has decreased. A decreasing population means less contribution income for the retirement system than expected and can lead to funding difficulty in extreme cases. ATRS receives employer contributions on behalf of all working members.

**Actuarial Assumptions and Methods:** There were no assumption or method changes in the June 30, 2024 valuation. In our judgement the actuarial assumptions in use, and in particular the 7.25% investment return assumption, are reasonable for the purposes described in this report.

## Executive Summary (Continued)

**Benefit Changes:** There were no benefit provision changes reflected in the June 30, 2024 valuation.

### **Results of the Valuation**

**The amortization period this year is 20 years**, a decrease from last year's period of 26 years. On a market value basis, the amortization period is also 20 years. The amortization period is calculated assuming 7.94% of payroll contributions to finance the unfunded actuarially accrued liability. (Please refer to page B-1 for details).

**The statutory employer contribution rate is 15%.** Statute dictates that the employer contribution rate shall not exceed 14% if the actuarial valuation shows that the amortization period is 18 years or less with a 14% employer contribution rate (A.C.A. § 24-7-401(c)(5)(B)(ii)). The statute does not address the contributory member rate of 7%. As of the June 30, 2024 valuation, the contribution rate based upon an amortization period of 18 years would be approximately 15.6% of payroll. Therefore, no changes in the rate are required at this time. A reduction in contributions would be unfortunate if ATRS is not 100% funded. A careful review of assumptions would be warranted if this situation were to occur in between experience studies. **The statutory employer contribution rate of 15% of payroll is a reasonable actuarially determined contribution rate based on the results of the June 30, 2024 valuation.**

**The Arkansas Teacher Retirement System remains stable with an 84.6% funded position** as of June 30, 2024. If experience is reasonably in line with expectations in Fiscal Year 2025, the amortization period is likely to increase in the next valuation due to the scheduled phase-in of net investment losses in FY 2025. (Please refer to page D-3 for details.)

**The rate of investment return on a market value basis was 11.84%<sup>#</sup>** this year. As of June 30, 2024, the market value of assets exceeded the actuarial value of assets by approximately \$50 million. (Please refer to page D-3 for details.) Investment gains and losses that occur each year are smoothed in over a 4-year period. After considering smoothing, the recognized return this year was 9.75%, compared to an assumed 7.25% return for Fiscal Year 2024. A phase-in of net investment gains is scheduled for the Fiscal Years 2026 and 2027, while a phase-in of net investment losses is scheduled for the Fiscal Year 2025.

<sup>#</sup> *The actuary calculated this return figure which may not exactly match the investment consultant's figure.*

# Executive Summary (Continued)

## Other Observations

### General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.25% on the funding value of assets), it is expected that:

- 1) The employer normal cost as a percentage of pay will remain approximately level;
- 2) The unfunded actuarial accrued liabilities will be fully amortized after 20 years; and
- 3) The funded status of the plan will increase gradually towards a 100% funded ratio.

### Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the funding value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

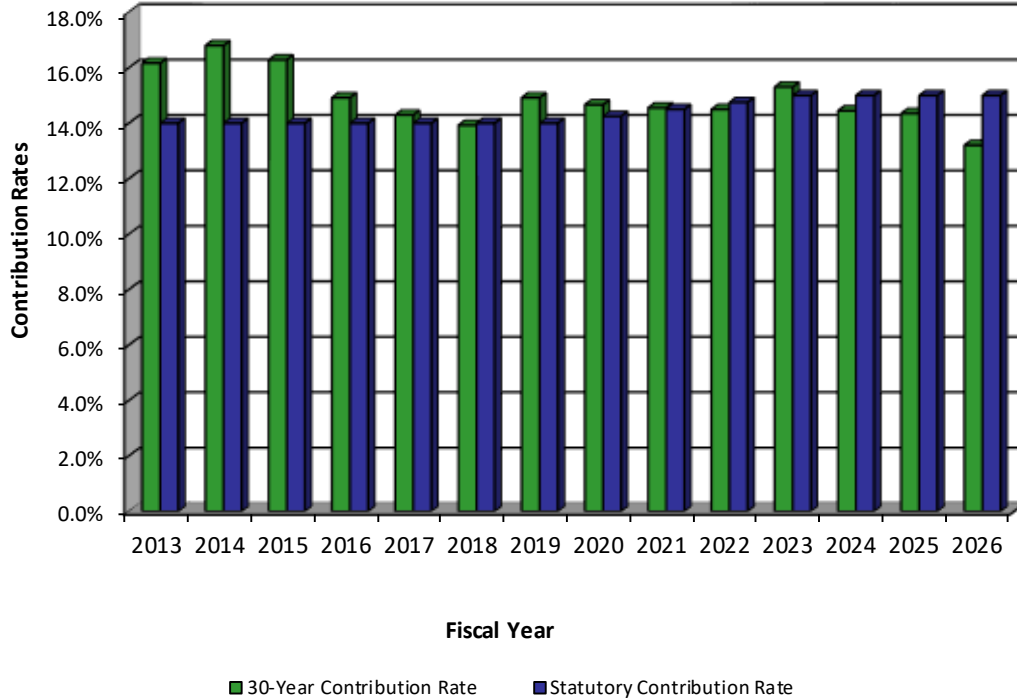
- 1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction;
- 2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit); and
- 3) The measurement would produce a different result if the market value of assets were used instead of the funding value of assets, unless the market value of assets is used in the measurement.

### Limitations of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

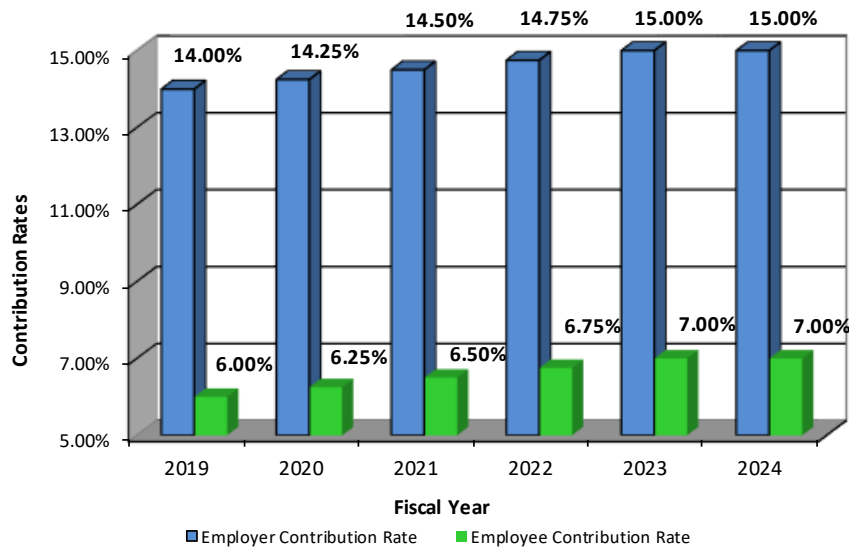
## Executive Summary (Concluded)

The following graph shows a history of the amounts contributed vs. the employer contributions based on a maximum amortization period of 30 years. The results would look different if the Employer Contribution were calculated according to the Board’s target of 18 years.



The amount contributed is less than the 30-year contribution in FY 2013-2017, FY 2019-2021 and FY 2023. In FY 2018, FY 2022 and FY 2024 the amount contributed exceeded the 30-year contribution.

The following graph also shows a recent history of the employer and employee amounts contributed.



## **SECTION B**

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### **VALUATION RESULTS**

## Determination of Amortization Period Computed as of June 30, 2024 and June 30, 2023

Computed Contributions for	Percents of Active Member Payroll			
	June 30, 2024			June 30, 2023
	Teachers	Support	Combined	Combined
Normal Cost				
Age & Service Annuities	11.33%	7.61%	<b>10.34%</b>	10.24%
Deferred Annuities	1.49%	2.32%	<b>1.71%</b>	1.71%
Survivor Benefits	0.27%	0.19%	<b>0.25%</b>	0.25%
Disability Benefits	0.41%	0.39%	<b>0.40%</b>	0.40%
Refunds of Member Contributions	0.49%	1.25%	<b>0.69%</b>	0.68%
<b>Total</b>	<b>13.99%</b>	<b>11.76%</b>	<b>13.39%</b>	<b>13.28%</b>
Average Member Contributions	6.71%	5.28%	<b>6.33%</b>	6.23%
Net Employer Normal Cost	7.28%	6.48%	<b>7.06%</b>	7.05%
Unfunded Actuarial Accrued Liabilities			<b>7.94%</b>	7.95%
<b>Employer Contribution Rate</b>			<b>15.00%</b>	15.00%
<b>Amortization Years</b>			<b>20</b>	26

The calculated amortization period of 20 years is based on employer and member contribution rates of 15.00% and 7.00%, respectively. See page A-4 for a recent history of employer and employee contribution rates.

The amortization period is the number of years it will take to pay off the unfunded liability of \$4.0 billion, assuming contributions remain at the Fiscal 2025 level. Since 2000, the period has varied from a low of 19 years to a high of over 100 years. If experience in FY 2025 is reasonably in line with expectations, the amortization period is likely to increase in the next valuation due to the phase-in of net investment losses. Please see additional comments regarding the amortization period on page A-2.

## Employer Contribution Rates 10-Year Comparative Statement

Valuation Date June 30	Active Members in Valuation **		Average Annual Pay		Consumer Price (Inflation) Index	Employer Contributions	
	Number	Annual Payroll (\$ Millions)				Computed Financing Period (Years)	Total Employer Rate
			Amount	% Change	% Change		
2015	72,919	\$ 2,777	\$ 38,088	2.7 %	0.1 %	33	14.00 %
2016	72,232	2,785	38,557	1.2 %	1.0 %	29	14.00 %
2017#*	72,148	2,814	38,997	1.1 %	1.6 %	29	14.00 %
2018#	72,341	2,872	39,702	1.8 %	2.9 %	28	14.00 %
2019#	72,164	2,907	40,285	1.5 %	1.6 %	28	14.00 %
2020#	70,539	2,954	41,884	4.0 %	0.6 %	27	14.25 %
2021#*	70,098	3,086	44,030	5.1 %	5.4 %	32	14.50 %
2022#	71,378	3,199	44,811	1.8 %	9.1 %	26	14.75 %
2023#	71,387	3,353	46,963	4.8 %	3.0 %	26	15.00 %
2024	71,246	3,459	48,555	3.4 %	3.0 %	20	15.00 %

\* Revised assumptions.

# Legislated benefit or contribution rate changes.

\*\* Includes T-DROP members and payroll. ATRS also receives contributions on return to work retirees, but they are not included on this schedule.

## Computed Actuarial Liabilities as of June 30, 2024

Actuarial Present Value of	(1) Total Present Value	Entry Age Actuarial Cost Method	
		(2) Portion Covered by Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1)-(2)
Age and service retirement allowances based on total service likely to be rendered by present active members.	\$ 11,391,881,106	\$ 3,002,705,363	\$ 8,389,175,743
Age and service retirement allowances based on total service likely to be rendered by present T-DROP members.	1,835,540,468	38,416,417	1,797,124,051
Vested deferred benefits likely to be paid present active and inactive members.	1,609,061,513	502,563,006	1,106,498,507
Survivor benefits expected to be paid on behalf of present active members.	191,190,410	73,520,558	117,669,852
Disability benefits expected to be paid on behalf of present active members.	228,152,502	115,281,856	112,870,646
Refunds of member contributions expected to be paid on behalf of present active members.	31,261,606	190,740,077	(159,478,471)
Benefits payable to present retirees and beneficiaries.	14,992,397,409	-	14,992,397,409
<b>Total</b>	<b>\$ 30,279,485,014</b>	<b>\$ 3,923,227,277</b>	<b>\$ 26,356,257,737</b>
Funding Value of Assets.	22,309,329,958	-	22,309,329,958
Liabilities to be covered by future contributions.	\$ 7,970,155,056	\$ 3,923,227,277	\$ 4,046,927,779

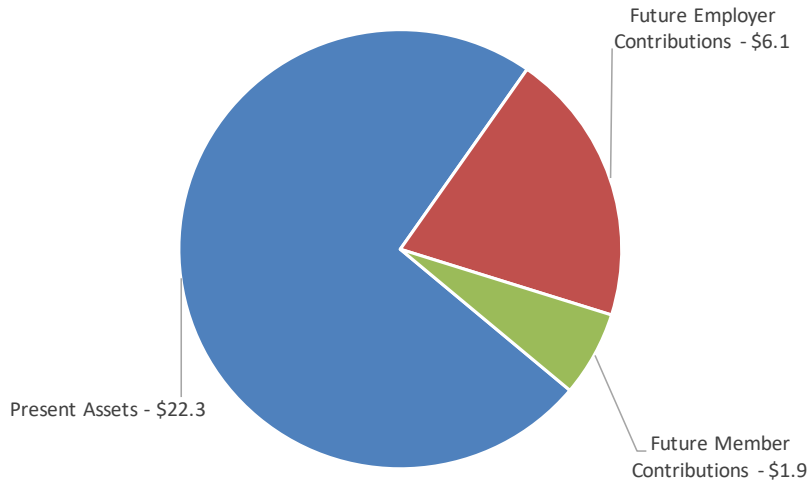


## Liabilities for Retirees July 1, 2024 Tabulated by Type of Benefit Being Paid

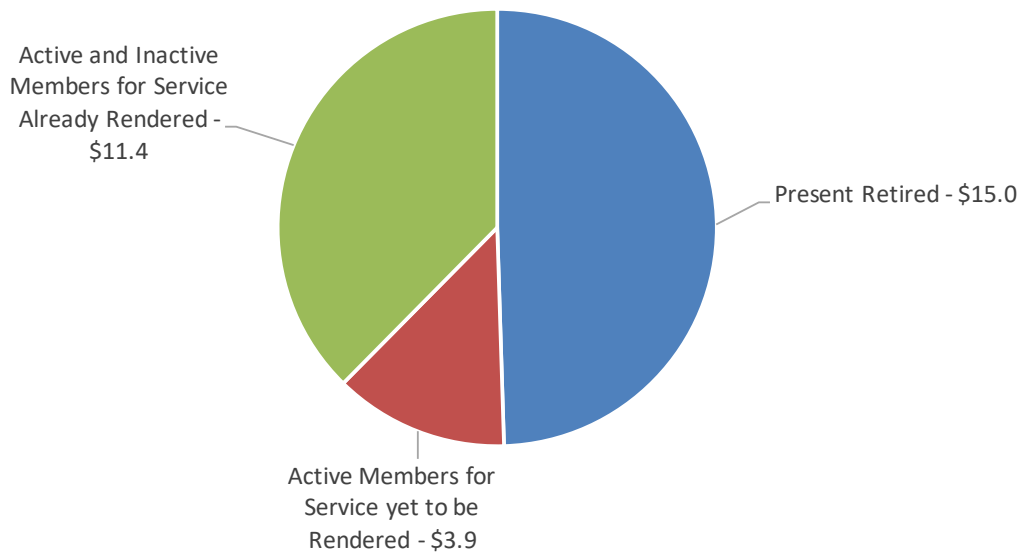
Type of Annuity	Liabilities July 1, 2024		
	Men	Women	Totals
<b>RETIREMENT RESERVE ACCOUNT</b>			
Age and Service Annuities			
Option 1 (Straight Life)	\$ 1,745,026,970	\$ 8,606,168,394	\$ 10,351,195,364
Option A (100% Joint & Survivor)	885,523,315	1,032,012,123	1,917,535,438
Option B (50% Joint & Survivor)	425,602,089	711,408,530	1,137,010,619
Option C (10 Years Certain & Life)	53,211,808	204,917,187	258,128,995
Beneficiaries	80,648,376	232,260,831	312,909,207
Total Age and Service	3,190,012,558	10,786,767,065	13,976,779,623
Disability Annuities			
Option 1	51,681,690	292,428,393	344,110,083
Option A	27,167,139	48,776,449	75,943,588
Option B	7,026,897	12,539,721	19,566,618
Option C	-	-	-
Beneficiaries	21,926,211	25,472,360	47,398,571
Total Disability	107,801,937	379,216,923	487,018,860
Act 793	6,500,750	4,431,239	10,931,989
Retirement Reserve Account	3,304,315,245	11,170,415,227	14,474,730,472
Act 808 Retirement Reserve Account	4,141,313	1,054,833	5,196,146
Total Retirement Reserve Account	3,308,456,558	11,171,470,060	14,479,926,618
<b>SURVIVORS' BENEFIT ACCOUNT</b>			
Beneficiaries of Deceased Members	\$ 58,710,971	\$ 63,503,585	\$ 122,214,556
<b>RETIREMENT SYSTEM TOTALS</b>			
Total Annuity Liabilities	\$ 3,367,167,529	\$ 11,234,973,645	\$ 14,602,141,174
Cash Benefit Account Liabilities			240,202,392
Liabilities for Lump Sum Death Benefits			150,053,843
Total			\$ 14,992,397,409

# Financing \$30.3 Billion of Benefit Promises for Present Active and Retired Members June 30, 2024

### Sources of Funds (\$ Billions)



### Uses of Funds



## Short Condition Test

ATRS' funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will **pay all promised benefits when due -- the ultimate test of financial soundness**. Testing for level contribution rates is the long-term test.

**A short condition test** is one means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with: 1) Member contributions on deposit; 2) The liabilities for future benefits to present retired lives; and 3) The liabilities for service already rendered by members. In a system that has been following the discipline of level percent-of-payroll financing, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system. Liability 3 being fully funded is unusual, but highly desired.

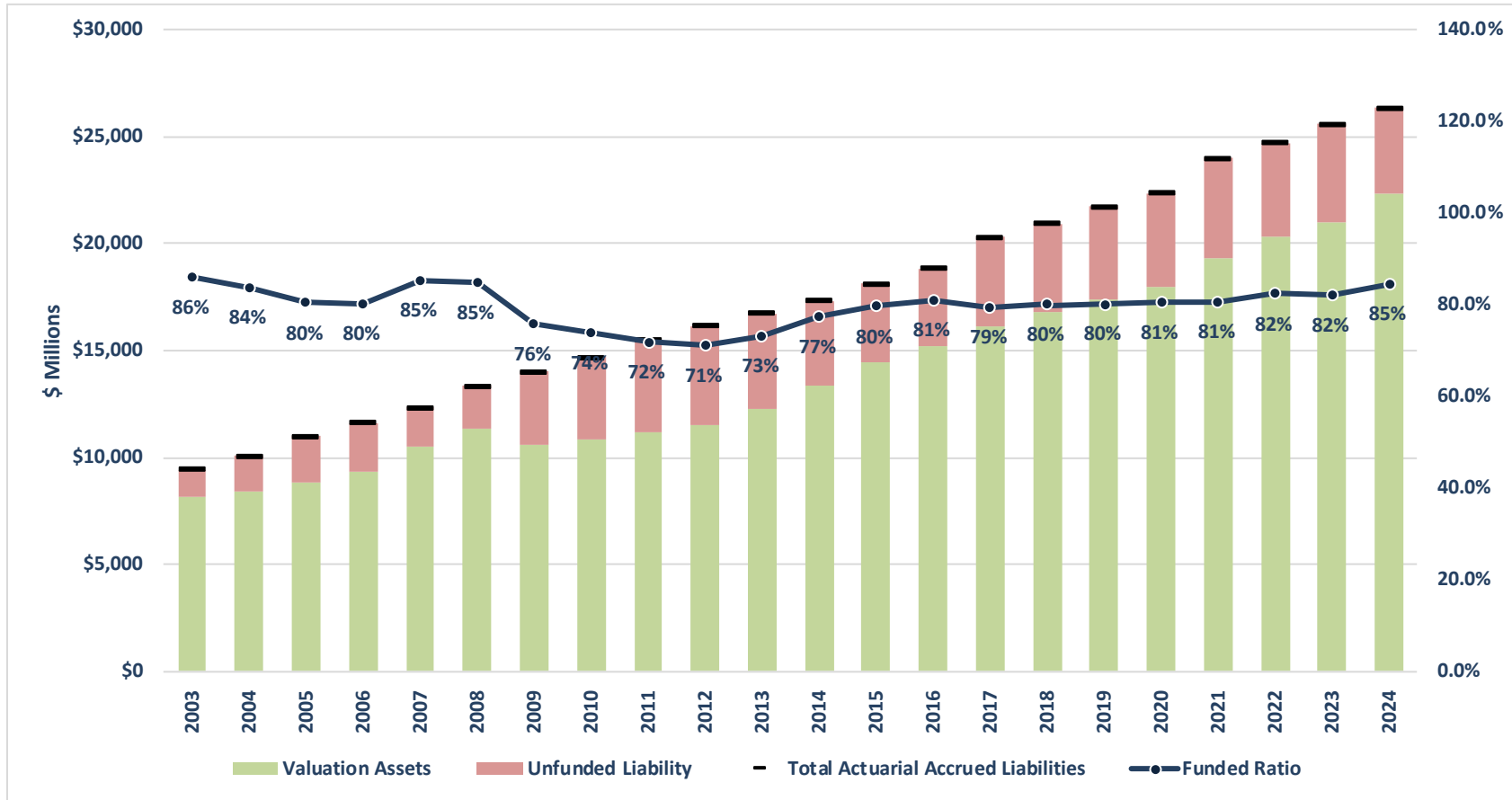
The schedule below illustrates the history of Liability 3 of the System and is indicative of the ATRS' objective of following the discipline of level percent-of-payroll financing.

Val. Date June 30	(1) Member Contrb.	(2) Retirees and Benef.	(3) Active and Inactive Members (Employer Financed Portion)	Present Valuation Assets	Portion of Present Values Covered by Present Assets			
					(1)	(2)	(3)	Total
-----\$ Millions-----								
2015	\$ 1,128	\$ 9,778	\$ 7,230	\$ 14,434	100%	100%	49%	80%
2016	1,184	10,430	7,198	15,239	100%	100%	50%	81%
2017#*	1,254	11,337	7,707	16,131	100%	100%	46%	79%
2018#	1,312	11,851	7,772	16,756	100%	100%	46%	80%
2019#	1,377	12,460	7,872	17,413	100%	100%	45%	80%
2020#	1,455	12,890	8,007	18,007	100%	100%	46%	81%
2021#*	1,544	13,596	8,847	19,343	100%	100%	48%	81%
2022#	1,648	14,044	9,005	20,328	100%	100%	51%	82%
2023#	1,751	14,511	9,330	21,015	100%	100%	51%	82%
2024	1,863	14,992	9,501	22,309	100%	100%	57%	85%

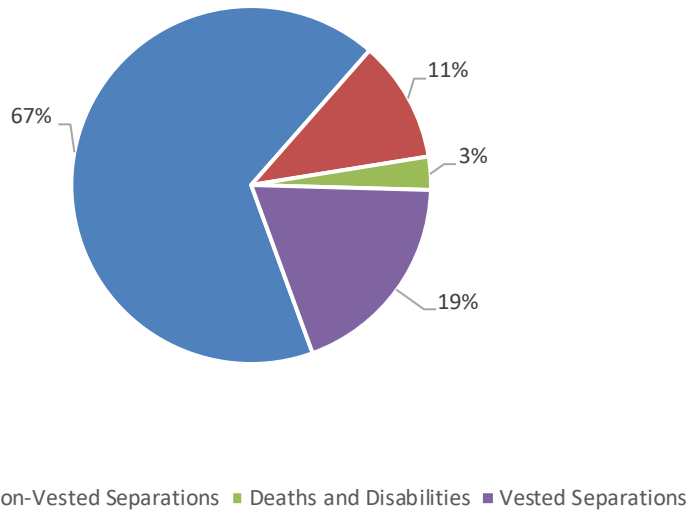
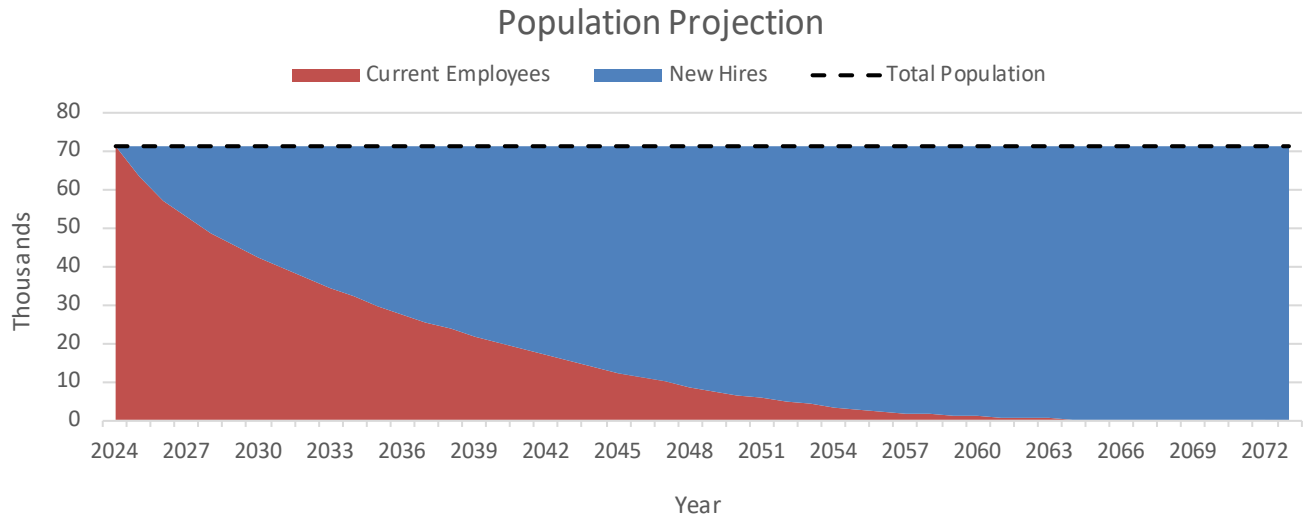
\* Revised actuarial assumptions or methods.

# Legislated benefit or contribution rate changes.

## Actuarial Accrued Liabilities and Valuation Assets



# Expected Development of Present Active Population June 30, 2024 (Excludes Rehired Retirees)



The charts show the expected future development of the present population in simplified terms. The Retirement System presently covers 71,246 active members (includes T-DROP). Eventually, 11% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Approximately 86% of the present population is expected to receive monthly retirement benefits. Approximately 3% of the present population is expected to become eligible for death-in-service or disability benefits. Within nine years, over half of the covered active membership is expected to consist of new hires.

## SECTION C

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### SUMMARY OF BENEFITS

## Summary of Benefit Provisions

### June 30, 2024

1. **Voluntary Retirement – A.C.A. § 24-7-701.** A member may retire at age 60 with 5 or more years of credited service, or after 28 years of credited service regardless of age.
2. **Early Retirement – A.C.A. § 24-7-702.** A member who has more than 25 but less than 28 years of credited service and has not attained age 60 years may retire and receive an immediate early retirement annuity. The early annuity is an age & service annuity reduced by the lesser of (i) and (ii) below:
  - (i) 10/12 of 1% multiplied by the number of months by which early retirement precedes completion of 28 years of service, or
  - (ii) 10/12 of 1% multiplied by the number of months by which early retirement precedes the attainment of age 60 years.

The ATRS Board is allowed to set by resolution the early annuity reduction at a rate between 5% and 15% per year, to be prorated monthly if the System's actuary certifies that the amortization period to pay the unfunded liabilities exceeds 18 years. The Board adjusted the reduction to 10% per year beginning August 1, 2017 by Resolution 2017-14 on April 17, 2017.

3. **Deferred Retirement – A.C.A. § 24-7-707.** An inactive member who has 5 or more years of credited ATRS service will be entitled to an age & service annuity beginning at age 60, provided accumulated contributions are on deposit with the retirement system.
4. **Disability Retirement – A.C.A. § 24-7-704.** An active member with 5 or more years of actual and reciprocal service, who becomes totally and permanently disabled may be retired and receive a disability annuity computed in the same manner as an age & service annuity. In order to qualify for disability retirement, the member must exhibit symptoms of physical or mental incapacitation while the member is an active member. A member who is eligible for age and service retirement (age 60 and 5 years of service or 28 years of service at any age) is no longer eligible to apply for disability retirement.

An ATRS disability retiree is required to obtain a Social Security Administration determination letter finding that the retiree is disabled within 36 months of the effective date of disability retirement. If a member cannot provide the SSA determination letter within the 36-month period, benefits will be terminated, the member will be returned to active service, and all member history will be restored. The requirement to qualify for SSA disability shall not apply to a disability retiree who was age 57 or older before July 1, 2015, because that member would qualify for age & service benefits prior to requiring the SSA determination of disability. The retiree may apply for an extension of the 36-month deadline if the retiree can demonstrate the SSA determination is in progress. There is a rebuttable presumption that if a Teacher Retirement member is qualified for Social Security Administration disability benefits then they would also qualify for ATRS disability retirement benefits.

A disability retiree may be employed with a covered employer for less than (80) days of actual service during a fiscal year. The covered employer who employs a disability retiree under this subsection shall remit contributions on all salary paid to the disability retiree in an amount equal



# Summary of Benefit Provisions

## June 30, 2024

**Disability Retirement – A.C.A. § 24-7-704 (Cont.)** to the employer contributions rate. The retiree will continue receiving their annuity from the system and shall not accrue additional service credit. If a retiree tries to return to full time employment, and fails, the suspended disability benefit will be restored to what it would have been had they not tried to return to work, or a recomputed benefit using the additional service, whichever is higher.

5. **Final Average Salary (FAS) – A.C.A. § 24-7-736 and A.C.A. § 24-7-601.** The ATRS Board made changes to the final average salary (FAS) by Resolution 2017-33 on November 13, 2017. Effective July 1, 2018, a member's final average salary is the average of the five (5) highest service year salaries (5-year FAS).

Members active in ATRS or a reciprocal system as of June 30, 2018 and with at least 3 full years of service in ATRS can use a benchmark 3-year FAS, which is the average of the three (3) highest service year salaries as of June 30, 2018. The three (3) highest service year salaries are adjusted for anti-spiking before being used in the calculation of the benchmark 3-year FAS.

In calculating the 5-year FAS, if a member has less five (5) years of credited service, the final average salary of the member shall be the total salary paid to the member for his or her years of credited service divided by the member's total credited years of service.

The Board may adjust the final average salary anti-spiking parameters by board resolution provided that the anti-spiking percentage range is no lower than 105% nor higher than 120% per year; and the anti-spiking amount is no lower than \$1,250 nor higher than \$5,000. The ATRS Board set the anti-spiking percentage to 110% and the anti-spiking amount to \$5,000 by Resolution 2017-13 on April 17, 2017.

If a member has at least five (5) years of credited service the five (5) highest service year salaries shall be adjusted for anti-spiking and the final average salary will be calculated as follows:

- a. The service year salaries are ranked from lowest to highest.
- b. The lowest service year salary in the ranking shall be the base salary.
- c. The next-highest-ranked service year salary shall be compared to the base salary.
- d. The next-highest service year salary in the calculation of final average salary that is less than eight (8) years from the base salary year, shall not exceed the base salary value plus \$5,000 unless the next-highest year's value is less than or equal to 110% of the base salary.
- e. After comparison of the base salary to the next-highest service year salary, a reduction to the next-highest service year salary is made if required to satisfy the conditions of the prior step.
- f. The next-highest service year salary, with any required reduction, becomes the new base salary to compare to the next succeeding highest service year salary in the ranking until all service year salaries in the ranking have been compared.
- g. The total value of the base salaries shall then be divided by the applicable number of years to be used in computing final average salary.



## Summary of Benefit Provisions

### June 30, 2024

**Final Average Salary (FAS) – A.C.A. § 24-7-736 and A.C.A. § 24-7-601 (Cont.)** ATRS members with reciprocal service credit will also have a reciprocal FAS calculated. The reciprocal FAS is generally a value calculated by the non-ATRS reciprocal system. Effective March 2, 2021, ATRS will use the value calculated by the non-ATRS reciprocal system only if the member has at least two (2) years of service credit in that system.

The highest of the 5-year FAS, benchmark 3-year FAS, or reciprocal FAS will be used to calculate retirement benefits for the member.

6. **Age & Service Annuity and Disability Annuity – A.C.A. §§ 24-7-705, 24-7-727 (stipend).** The annuity payable will not be less than the total of: years of contributory service times 2.15% of FAS; plus years of noncontributory service times 1.39% of FAS (1.25% for service earned after 2019); plus a stipend for all members with 10 or more years of ATRS actual service. The ATRS Board is allowed to set the contributory multiplier for service credit earned after June 30, 2013, within a range of 1.75% to 2.15%. Also, the noncontributory multiplier for service credit earned after June 30, 2013, may be set within a range of 0.5% and 1.39%. In addition, the Board is allowed to set special multiplier rates for the first 10 years of ATRS service earned after June 30, 2013, for both contributory and noncontributory service. By Board Resolution 2017-31 on November 13, 2017, the noncontributory multiplier was set to 1.25% beginning in FY 2020. By Board Resolution 2017-32 on November 13, 2017, the contributory multiplier and noncontributory multiplier for the first 10 years of service was set to 1.75% and 1.0% respectively beginning July 1, 2018. Once a member accrues 10 years of service, all service including the first 10 years is then credited at the standard multiplier rate in place at the time the service was earned.
7. **T-DROP – A.C.A. §§ 24-7-1301–1316.** A member with 28 or more years of service may participate in the Teacher Deferred Retirement Option Plan (T-DROP). T-DROP participants do not make member contributions. A T-DROP deposit is made monthly to the participant's T-DROP account. The T-DROP deposit is the amount that would have been paid had the member retired, reduced by 1% for each year of contributory, noncontributory, and reciprocal service. Members who enter T-DROP with less than 30 years of service are subject to an additional 6% reduction for each year less than 30 years. T-DROP deposits are increased each year by 3% of the member's initial T-DROP deposit. T-DROP Deposits cease at the earlier of 10 years of T-DROP participation or separation from service. T-DROP participants may continue in covered employment after 10 years of T-DROP participation, but do not accumulate additional T-DROP deposits.

T-DROP participants receive interest annually on the balance of the T-DROP account. Regular T-DROP interest is credited for 10 or less years of participation. Post 10-year T-DROP interest is credited for more than 10 years of participation.

Regular T-DROP interest is a combination of a fixed interest rate and an incentive interest rate. An incentive rate may be approved by the Board to encourage continued participation in T-DROP, if the estimated ATRS rate of return is 2% greater than the ATRS actuarial assumed rate of return in the preceding calendar year. Beginning in fiscal year 2019, the Board has set the Regular T-DROP fixed interest rate at 3% and the maximum incentive rate at 3% by Resolution 2017-35 on November 13, 2017.

# Summary of Benefit Provisions

## June 30, 2024

**T-DROP – A.C.A. §§ 24-7-1301–1316 (Cont.)** The fixed and incentive interest rates may be adopted by board resolution before the first quarter of the fiscal year and would apply to subsequent fiscal years unless modified by the Board. For fiscal year 2024, the Board set the Regular T-DROP fixed interest rate at 3% and the incentive interest rate at 0%, resulting in a total interest rate of 3%, by Resolution 2023-35 on September 25, 2023.

Post 10-year T-DROP interest has been in effect since July 1, 2010. The Post 10-year T-DROP interest rate can be determined as appropriate by the Board and adopted by the resolution prior to the first quarter of the fiscal year in which the interest rate shall apply. Post 10-year T-DROP interest is a combination of a variable interest rate and an incentive interest rate, to encourage continued participation in T-DROP. The Post 10-year T-DROP variable interest rate formula is based on investment returns and other factors. On November 13, 2017, the ATRS Board by Resolution 2017-36 set the formula for the variable interest rate and the maximum combined variable and incentive interest rate for fiscal year 2019 and beyond. The Post 10-year T-DROP variable interest rate is calculated as 2% less than the system's rate of return, but not less than 4%, nor greater than 6%. The maximum Post 10-year T-DROP combined interest rate including the incentive interest rate is 7.5%. The Post 10-year T-DROP incentive interest rate can be awarded if the estimated ATRS rate of T-DROP – A.C.A. § 24-7-1301-1316 return is 2% greater than the ATRS actuarial assumed rate of return in the preceding calendar year. For fiscal year 2024, the Board set the Post 10-year T-DROP variable interest rate at 4% and the incentive interest rate at 0%, resulting in a combined interest rate of 4%, by Resolution 2023-36 on September 25, 2023.

Upon actual retirement, the member may receive the T-DROP account balance in the form of a lump sum, a Cash Balance Account (CBA), or as an additional annuity. The T-DROP distribution may be a combination of lump sum, CBA, and additional annuity.

8. **Post-Retirement Increases – A.C.A. §§ 24-7-713, 24-7-727 (compound COLA).** Each July 1, annuities are adjusted to be equal to the base annuity times 100% plus 3% for each full year in the period from the effective date of the base annuity to the current July 1. The base annuity is the amount of the member's annuity on the later of July 1, 2001 or the effective date of retirement. The July 1, 2009 cost of living adjustment for retirees was compounded. The annuity was set to 103% of the June 30, 2009 retirement benefit amount. After it was calculated on July 1, 2009, the base amount was reset to be the July 1, 2009 benefit amount. Future cost of living raises will be established by the new updated base amount. Future cost of living adjustments will be evaluated on an annual basis to determine if a simple or compound cost of living increase will be given, depending on the financial condition of the System.
9. **Survivor Benefits – A.C.A. § 24-7-710.** Upon the death of an active member, who has 5 or more years of actual and reciprocal service, the following annuities are payable:
  - (a) The surviving spouse receives an annuity computed in the same manner as if the member had (i) retired the date of his death with entitlement to an annuity, (ii) elected Option A - 100% Survivor Annuity, and (iii) nominated the spouse as joint beneficiary. If the member has attained age 60 and has acquired 5 years of credited service or has acquired 25 years of

# Summary of Benefit Provisions

## June 30, 2024

### Survivor Benefits – A.C.A. § 24-7-710. (Cont.)

- (a) credited service regardless of age, the annuity begins immediately; otherwise the annuity begins the month following the date the member would have attained age 60. Under certain circumstances, a lump sum distribution may be made to the beneficiary(ies) of the deceased member.
  
- (b) A surviving child's benefit is prorated to an amount equal to 1% of the member's highest salary year for each quarter of a year credited as actual service in the system, up to 20% or up to a maximum of \$20,000 per year. If there is more than 1 surviving dependent, the benefits are capped to the lesser of 60% of the member highest salary or \$60,000 per year to be divided equally among the dependents. A child is dependent until the child's death, marriage, or attainment of age 18 (age 23 if the child is a full-time student).

A child of a deceased member is considered a dependent child and is eligible for the dependent child annuity to eighteen years of age or older, but no older than twenty-three years of age if the dependent child stays continuously enrolled as a full-time student at an accredited school, college, university or vocational-technical school.

- 10. **Lump Sum Death Benefit – A.C.A. § 24-7-720.** Beneficiaries of deceased active members or retirees with 10 or more years of ATRS credited service are eligible to receive a lump sum death benefit of up to \$10,000. Resolution 2020-27 on September 28, 2021 set the minimum amount of the lump sum death benefit for all eligible members to six thousand six hundred sixty-seven dollars (\$6,667); retired members who retired on or before July 1, 2007 will receive an additional six hundred sixty-six dollars and sixty cents (\$666.60) for each contributory year of service credit up to the maximum amount of ten thousand dollars (\$10,000); and all other members will receive an additional three hundred thirty-three dollars and thirty cents (\$333.30) for each contributory year of service credit up to the maximum amount of ten thousand dollars (\$10,000).
  
- 11. **Member Contributions – A.C.A. § 24-7-406.** Contributory members pay 7% of their salaries. Through FY 2019, contributory members contributed 6% of their salaries. Members that are participating in the T-DROP program or are working retirees do not make member contributions. If a member leaves service prior to becoming eligible to retire, the accumulated member contributions are returned upon request. No interest is credited to a member's contributions for the first year of membership; after 1 year, interest is credited. The ATRS Board set the interest rate on refunded contributions to 0.08% for fiscal year 2017 and beyond by Resolution 2017-17 on April 17, 2017. By Resolution 2017-30 on November 13, 2017, the Board set the member contribution rate to 6.25%, 6.50%, 6.75%, and 7.00% for FY 2020, FY 2021, FY 2022, and FY 2023 respectively and 7.00% thereafter. Effective July 1, 1986, a noncontributory plan was created. Effective July 1, 1999 the default choice for new members is contributory. Effective July 1, 1997, all future member contributions are tax deferred in accordance with §414(h) of the Internal Revenue Code of the United States. Each July 1, members who previously elected to be noncontributory may elect to change to contributory status. The election is irrevocable.

A member, who was reported as non-contributory and should have been contributory, may remain in a non-contributory status for the current fiscal year and will be pending for the next fiscal year as

# Summary of Benefit Provisions

## June 30, 2024

**Member Contributions – A.C.A. § 24-7-406 (Cont.)** contributory. If the member owes contributions, he or she may have the system convert the contributory service to noncontributory service rather than pay the balance due.

Members who are contracted for 181 days or more in a fiscal year must be contributory. Effective July 1, 2021 the number of contracted days increased to 185.

12. **Act 808 Retirement – A.C.A. § 24-4-732.** Any employee of a state agency who was an active member of the Arkansas Teacher Retirement System on April 8, 1987, and who qualified for retirement before January 1, 1988, could become a member of the Arkansas Public Employees Retirement System and retire from that system. All credited service was transferred to that system but the member's contributions were retained by the Arkansas Teacher Retirement System and the benefit amount is transferred monthly to the Arkansas Public Employees Retirement System. Each July 1, annuities are adjusted by 3% (compound escalator).
13. **Act 793 Retirement – A.C.A. § 24-4-522.** Any employee who was a member of the rehabilitation services in 1977 was permitted to become a member of the Arkansas Public Employees Retirement System. Liabilities associated with prior service earned through June 30, 1978 remain in the Arkansas Teacher Retirement System. Future service is allocated to the Arkansas Public Employees Retirement System. Each July 1, annuities are adjusted by 3% (compound escalator).
14. **Retiree Benefit Stipend – A.C.A. § 24-7-713.** The current stipend amount is \$50 per month. Each retired member as of June 30, 2008, with 5 or more years of ATRS credited service receives a \$75 per month stipend. Members in T-DROP do not receive the \$75 per month stipend until actual retirement. For all members retiring on or after July 1, 2008, a minimum of 10 years of ATRS credited service is required to receive the \$75 per month stipend. The ATRS Board is allowed to set the stipend to a minimum of \$1 per month and a maximum of \$75 per month. By Board Resolution 2017-34 on November 13, 2017 the benefit stipend is removed from the base amount for all retirees and beneficiaries beginning in fiscal year 2019 and the benefit stipend will be reduced to \$50.00 for fiscal year 2020 and beyond. The Resolution contains a "hold harmless" provision that prevents the lowering of the stipend if it would actually reduce the total monthly benefit. This would only affect retirees when the COLA is less than \$25 per month.
15. **Optional Forms of Benefits – A.C.A. § 24-7-706:**
  - Option 1 (Straight Life Annuity)**

A member will receive the maximum monthly benefit for which he/she qualifies, throughout his/her lifetime. No monthly benefits will be paid to his/her beneficiary after the member's death. Should a member die before he/she has drawn in benefits an amount equal to his/her contributions plus earned interest, the balance will be paid to a designated beneficiary. The designated beneficiary may be anyone chosen by the member.

# Summary of Benefit Provisions

## June 30, 2024

### **Option A (100% Survivor Annuity)**

Under this option a member will receive a reduced annuity throughout his/her lifetime. Upon the member's death, the designated beneficiary(ies) will receive (equal shares of) the same annuity for the balance of his/her lifetime.

### **Option B (50% Survivor Annuity)**

Under this option a member will receive a reduced annuity throughout his/her lifetime. Upon the member's death, the designated beneficiary(ies) will receive (equal shares of) one-half (1/2) of this annuity for the balance of his/her lifetime.

### **Option C (Annuity for Ten Years Certain and Life Thereafter)**

A reduced monthly benefit payable for 120 months. After that time, a member's monthly allowance will revert to the amount he/she would have received under the regular plan and continue for life. If the member dies before receiving 120 payments, the designated beneficiary will receive a monthly benefit in the same amount until monthly benefits to both the member and the beneficiary equal 120 monthly payments. No further benefits are then payable to the beneficiary.

### **Pop-Up Election**

Following the death of or a divorce from the member's designated beneficiary, his or her benefit reverts (pops-up) to the straight life annuity amount from the elected optional annuity amount. The member may then elect new beneficiaries in accordance with Arkansas Code and rules adopted by the ATRS board.

Option Factors are based upon a 5.0% interest rate and the PUB-2010 General Healthy Retiree/MP-2020 tables (generational projections using retirement year 2025) adjusted with a 50% unisex mix.

16. **Refund of Member Contributions – A.C.A. § 24-7-711.** Any termination refund made to a member or a lump sum payout made to a surviving spouse after July 1, 2011, cancels all service credit, including noncontributory service credit; any repurchase of refunded service will be as contributory years at actuarial cost. All membership rights (including noncontributory service credit) and beneficiary designations to the ATRS are cancelled when a member gets a refund of his or her contributions.
17. **Contract Buyout – A.C.A. § 24-7-735.** During periods of contract buyout/litigation/termination, members will not receive service credit if no on-call service or on-site work is performed. ATRS will not allow the purchase of the time between actual work and the settlement unless the settlement was made to resolve a claim of wrongful termination.
18. **Actuarial Cost of Service – A.C.A. §§ 24-1-107, 24-2-502, 24-7-202, 24-7-406, 24-7-501, 24-7-502, 24-7-612, 24-7-602, 24-7-603, 24-7-604, 24-7-606, 24-7-607, 24-7-610, 24-7-611.** Effective July 1, 2011, all service purchases will be at actuarial cost. Act 279 of 2021 allows inactive members to purchase service at actuarial cost before monthly retirement benefits or T-DROP deposits begin.
19. **Deceased Member Refund of Contributions – § 24-7-711.** Effective July 1, 2011, if a beneficiary is not eligible for survivor benefits, or if a surviving spouse is eligible and chooses a contribution refund, the interest on the refund stops the July 1 following the member's death.

## Summary of Benefit Provisions

### June 30, 2024

20. **Look-back Period – A.C.A. §§ 24-7-202, 24-7-205.** Effective July 1, 2011, absent intentional nondisclosure, fraud, misrepresentation, criminal act, or obvious/documentated error by an employer of ATRS members can no longer establish old service previously unreported unless such service is acquired by purchase at actuarial cost. ATRS is allowed to correct an understated service credit error upon which all required contributions have been paid or when understated service credit is well documented and undisputed, even if beyond the 5-year look-back period.
21. **Service Credit Requirements – A.C.A. §§ 24-7-501, 24-7-502, 24-7-601, 24-7-603, 24-7-604, 24-7-606, 24-7-607, 24-7-611.** Effective July 1, 2011, members must receive 160 days of service to be credited with a year of service credit.
22. **T-DROP Cash Balance Account.** Effective July 1, 2012, a T-DROP cash balance account was established that allows members exiting (retiring) from T-DROP to place all or a portion of their T-DROP proceeds into a Cash Balance Account (CBA) at ATRS. On November 13, 2017, by Resolution 2017-38 the Board set the CBA interest rate schedule based on years of participation as follows: 2.50% for year one, 2.75% for year two, 3.00% for year three, 3.25% for year four, 3.50% for year five, and 4.00% for year six and beyond. Each fiscal year, the Board can grant an incentive interest rate to encourage continued participation in the CBA program. For fiscal year 2024, the Board granted CBA participants an incentive rate of 0%, by Resolution 2023-38 on September 25, 2023.
23. **Purchase of “Air Time” as a Result of Wrongful Termination – A.C.A. §§ 24-7-702, 24-7-735, 6-17-413.** A member is allowed to purchase service credit under a settlement agreement or court order to resolve a claim of wrong termination if the service credit is purchased from the date of termination by an ATRS employer to the date of the resolution of the dispute. This service credit would be purchased at actuarial cost.
24. **Buyout of Inactive Members – A.C.A. § 24-7-505.** The ATRS Board created a voluntary "buyout plan" for inactive vested members. The System will make a one-time lump sum payment to a member, a surviving spouse, or an alternate payee in exchange for a member, surviving spouse, or alternate payee's cancellation of membership and retirement benefit rights. The buyout plan will be established by Board rules. Rule 16 Cash and Savings Help Program for Members (CASH) defines the terms of the "buyout plan". Depending upon the success of the plan, it may be extended by the Board. The ATRS Board expanded the CASH program to include all inactive vested members, regardless of service type by Resolution 2017-18 on May 10, 2017. The ATRS Board offered the FY 2022 CASH program for all inactive vested members to end on June 30, 2022 by Resolution 2021-37 on September 27, 2021. The ATRS Board offered the FY 2025 CASH program for all inactive vested members to end on June 30, 2025 by Resolution 2024-33 on September 30, 2024.
25. **Private School Service – A.C.A. § 24-7-607.** Prior to 2015, private school service had to be recognized by the Arkansas Department of Education as positions that required the issuance of teaching licenses. The certification of this service credit was performed by one employee of the Arkansas Department of Education, and that one employee retired. Upon that employee's retirement, the Arkansas Department of Education no longer certified private school service credit. No certifications occurred for approximately a year until legislation could be passed to allow ATRS to make this determination. In addition, a distinction was made between certified and noncertified private school service credit. Certified private school service (basically administrative and teaching) could be purchased at actuarial

## Summary of Benefit Provisions

### June 30, 2024

**Private School Service – A.C.A. § 24-7-607 (Cont.)** cost, up to 15 years. Noncertified private school service could be purchased at actuarial cost, up to 5 years.

26. **Military Service Credit – A.C.A. § 24-7-602.** Act 301 of 2015 made technical corrections to the ATRS laws. In the military service credit section, ATRS was not in compliance with a state law that was passed in 2009, Act 295, which repealed the requirement for free military service credit to be granted only if the service was not credited under any other plan except Social Security and the requirement that receipt of a pension from the federal military retirement system paid solely for disability shall not be considered as having service with another retirement plan. The military technical corrections bill raised questions by some of the legislators, and Act 558 of 2015 was passed to further clarify military service credit. Compulsory military service was changed throughout the law to read: "federal military draft". The word "honorable" was inserted before discharge in order for the member to obtain free military service credit throughout the law.
27. **Pension Advance Prohibition – A.C.A. § 24-7-715.** Prohibits a pension advance company from obtaining a retiree's benefit to repay a loan.
28. **Accrued Sick Leave – A.C.A. § 24-7-601.** Unused accrued sick leave, whether paid or unpaid, is allowed to count as service credit to determine retirement eligibility for survivor benefits and lump sum death benefits. One day of service shall be added to the service credit for the fiscal year of the member's death for each day of unused sick leave. This does not include catastrophic leave and other unused donated leave.
29. **Spousal Survivor Benefit – A.C.A. § 24-7-710.** Members may direct an alternative residual beneficiary to receive a lump sum payment of the member's residue amount or T-DROP balance. No spousal survivor benefits will be payable if an alternative beneficiary who is not the surviving spouse is designated by the member.
30. **Settlement Agreements – A.C.A. § 24-7-202, § 24-7-735.** Salary or service credit may be purchased as part of a settlement agreement between a member and their employer. Salary will be added to the salary at the time of purchase and will be determined using the same factors used to calculate an additional monthly benefit in the annuitization of a T-DROP distribution. It is assumed the member would have retired immediately at the time of the purchase.
31. **Outsourcing – A.C.A. § 24-7-506.** Outsourcing is defined to mean employment for an ATRS covered employer through a third party, private employer, independent contractor, or other contractual relationship. A person who performs services that are necessary for the normal daily operation for an ATRS covered employer is considered an Embedded Employee. The ATRS covered employer has a one-time decision to choose between two options for handling their Embedded Employees. The first option for the ATRS covered employer is to become a participating employer and make embedded employees participating members of ATRS. The second option for the ATRS covered employer is to become a Surcharge Employer and opt to pay a surcharge on the Embedded Employee's salary to ATRS to help cover the actuarial cost. The surcharge starts at ½% the first year and slowly rises to 3% over 4 years with a hard cap of 4%. The Embedded Employees of a Surcharge Employer will not be

## Summary of Benefit Provisions

### June 30, 2024

**Outsourcing – A.C.A. § 24-7-506 (Cont.)** members of ATRS. The services necessary for normal daily operations include: substitute teaching, teacher's aides, food service, transportation service, custodial service, security services, and school nursing. Only those working on the premises are subject to the surcharge. The surcharge is ONLY on SALARY of embedded employees. All salary is reported in the aggregate with the contractor's salary amount being the final word unless it is clearly in error. The Division of Youth Services shall be a participating Employer and may designate any or all Embedded Employees as members of ATRS. The law does not apply to post-secondary higher education institutions.

32. **Concurrent Reciprocal Service Credit – A.C.A. § 24-7-601.** ATRS members have the option of waiving their ATRS service in the event the member had concurrent service in two (2) state supported retirement systems. The member has the option to surrender either ATRS service or the reciprocal plan service. If a member worked full-time under a reciprocal retirement system and only part-time under ATRS, the member can to waive the ATRS service to obtain a higher benefit based upon the full-time service in the other system. Concurrent reciprocal members have the option to voluntarily elect to waive service in ATRS.
33. **Employer Contribution Rate – A.C.A. § 24-7-401.** Employer contributions are collected on active members, T-DROP participants (even those who work beyond the 10-year participation period), and working retirees. Through fiscal year 2019, the employer contribution rate is 14%. For the fiscal year beginning July 1, 2018, the Board may modify the employer contribution rate for future fiscal years above 14% in increments of 0.25% per fiscal year provided the system has a greater than 18-year amortization period to pay unfunded liabilities without an employer contribution rate of more than 14% limited to a maximum employer contribution rate of 15%. By Resolution 2017-40 on November 13, 2017, the Board set the employer contribution rate to 14.25%, 14.50%, 14.75%, and 15.00% for FY 2020, FY 2021, FY 2022, and FY 2023 respectively and 15.00% thereafter.
34. **Forfeiture of Benefits by Certain Persons – A.C.A. §§ 24-1-301, 302, 303, 304, 305.** A beneficiary's benefits under a public retirement system can be forfeited when the beneficiary unlawfully kills a member or retiree.
35. **Socially responsible investments – A.C.A. § 24-7-105.** A decision on whether to invest, not invest, or withdraw from investment the funds of the Arkansas Teacher Retirement System or an alternate retirement plan of the system shall not be based on a consideration that the location of the investment, fund, company, or any other type of investment vehicle is in the State of Israel.
36. **Normal Retirement Age & Separation Period – A.C.A. §§ 24-7-202, 24-7-502.** In order for a member to start drawing retirement benefits the IRS requires them to have a bona fide termination of employment or have attained the "normal retirement age". ATRS ensures the bona fide termination of employment by requiring a member stay separated from covered employment for six (6) months before returning to work for an ATRS covered employer. The ATRS "normal retirement age" is defined as age 65 with 5 years of actual service OR at least age 60 years of age or older if the member's age and the member's combined years of actual service, T-DROP service and reciprocal service total 98. A member who has attained the normal retirement age may draw full retirement benefits and remain employed without separating from employment.





## Sample Benefit Calculations for a Member Retiring June 30, 2024

The data for the Example member is shown below:

A.	\$35,000	Final Average Compensation
B.	32	Total Service Credit
C.	27	Contributory Service Credit
D.	60	Age of Retiree
E.	55	Age of Spouse
F.	100%	Percentage of Retirement Allowance to Continue to Spouse after Retiree's Death (Retiree Chooses this Percentage)

The computations that would be made for this case are:

	<u>Annual</u>
G. Non-Contributory Base: $1.39\% \times A \times B$	\$15,568
H. Extra for Contributory: $0.76\% \times A \times C$	<u>7,182</u>
I. Subtotal Benefit: G + H	22,750
J. Health Stipend	<u>600</u>
K. Total Benefit: I + J	23,350
L. Adjustment for Line F election: $(1 - 0.78571) \times I$	<u>4,875</u>
M. Annual Amount Payable	\$18,475

Projected Benefits, taking into account increases after retirement would be:

<u>Year Ended June 30</u>	<u>Annual Amount</u>
2025	\$18,475
2026	19,011
2027	19,547
2028	20,083
2029	20,619

Thereafter, the amount would increase by \$536 annually for life.

## Sample T-DROP Benefit Calculations for a Member Entering T-DROP June 30, 2024

The data for the Example member is shown below:

A.	\$35,000	Final Average Compensation
B.	28	Total Service Credit
C.	28	Contributory Service Credit
D.	55	Age of Retiree

The computations that would be made for this case are:

		<b>Annual Amount</b>
E.	Non-Contributory Base: $1.39\% \times A \times B$	\$13,622
F.	Extra for Contributory: $0.76\% \times A \times C$	7,448
G.	Reduction for T-DROP Plan: (1% for each year of service) $0.28 \times (E+F)$	5,900
H.	Reduction for Entering T-DROP with less than 30 years of service (6% for each year less than 30): $0.12 \times (E + F - G)$	1,820
I.	Annual Deposit $E + F - G - H$	\$13,350

Projected Deposits, taking into account increases after DROP, and 5 years duration would be:

Year Ended June 30	Amount Deposited
2025	\$13,350
2026	13,751
2027	14,151
2028	14,552
2029	14,952
Total	\$70,756

The amount deposited, plus credited interest, can be paid as a lump sum or as an annuity. A portion of the deposits can also be placed into a Cash Balance account.

## SECTION D

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### **FINANCIAL INFORMATION**

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items the auditor changes so that we may maintain consistency with the System's financial statements.

## Asset Valuation Method

An essential step in the valuation process is comparing valuation assets with computed liabilities. Valuation assets are those assets that are recognized for funding purposes.

Asset valuation methods are distinguished by the timing of the recognition of investment income. Total investment income is the sum of ordinary income and capital value changes. Under a pure market value approach, ordinary investment income and all capital value changes would be recognized immediately. Because of market volatility, use of pure market values in retirement funding can result in volatile contribution rates and unstable financial ratios, contrary to ATRS' objectives.

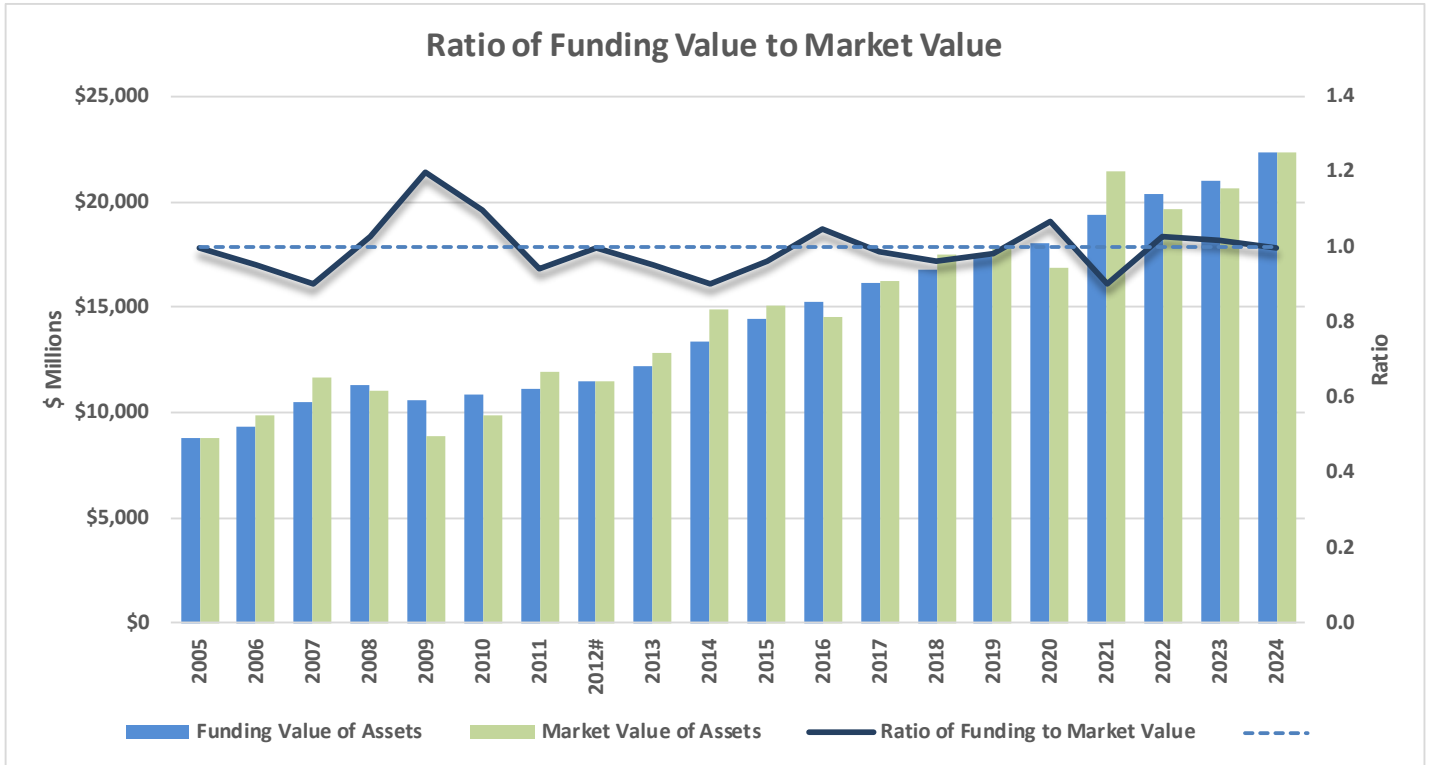
Under the ATRS asset valuation method (see page D-3), assumed investment return is recognized fully each year. Differences between actual and assumed investment return are phased-in over a closed four-year period. During periods when investment performance exceeds the assumed rate, the funding value will tend to be less than the market value. Conversely, during periods when investment performance is less than the assumed rate, funding value will tend to be greater than market value. If assumed rates are exactly realized for three consecutive years, funding value will become equal to market value.

A multi-year comparison of market value to funding (actuarial) value is below and on the following pages.

Valuation Date June 30	Market Value of Assets (1)	Funding Value of Assets (2)	Ratio of FV to MV (2) / (1)
2005	\$ 8,811	\$ 8,817	100%
2006	9,868	9,332	95%
2007	11,637	10,519	90%
2008	11,018	11,319	103%
2009	8,847	10,617	120%
2010	9,884	10,845	110%
2011	11,895	11,146	94%
2012#	11,484	11,484	100%
2013	12,830	12,247	95%
2014	14,856	13,375	90%
2015	15,036	14,434	96%
2016	14,559	15,239	105%
2017	16,285	16,131	99%
2018	17,493	16,756	96%
2019	17,742	17,413	98%
2020	16,902	18,007	107%
2021	21,469	19,343	90%
2022	19,679	20,328	103%
2023	20,675	21,015	102%
2024	22,359	22,309	100%

# Funding Value set equal to Market Value.

# Asset Valuation Method



# Funding Value set equal to Market Value.

This year the market value of assets exceeded the funding value (see page A-2 for a more detailed explanation). To prevent unreasonably large differences between market value and funding value, there is a requirement that the recognized assets must always be between 80% and 120% of the market value (see page D-3).

## Development of Funding Value of Assets

Year Ended June 30:	2021	2022	2023	2024	2025	2026	2027
A. Funding Value Beginning of Year	\$ 18,007,255,143	\$ 19,342,870,512	\$ 20,328,281,484	\$ 21,014,908,823			
B. Market Value End of Year	21,468,772,872	19,679,467,252	20,675,051,918	22,359,231,384			
C. Market Value Beginning of Year	16,902,076,224	21,468,772,872	19,679,467,252	20,675,051,918			
D. Non-Investment Net Cash Flow	(676,930,006)	(192,363,759) *	(688,831,775)	(720,213,715)			
E. Investment Return							
E1. Market Total: B - C - D	5,243,626,654	(1,596,941,861)	1,684,416,441	2,404,393,181			
E2. Assumed Rate	7.50%	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%
E3. Amount for Immediate Recognition	\$ 1,325,159,261	\$ 1,395,384,926	\$ 1,448,830,256	\$ 1,497,473,142			
E4. Amount for Phased-In Recognition: E1-E3	3,918,467,393	(2,992,326,787)	235,586,185	906,920,039			
F. Phased-In Recognition of Investment Return							
F1. Current Year: 0.25 x E4	979,616,848	(748,081,697)	58,896,546	226,730,010	Unknown	Unknown	Unknown
F2. First Prior Year	(363,802,838)	979,616,848	(748,081,697)	58,896,546	\$ 226,730,010	Unknown	Unknown
F3. Second Prior Year	(85,342,509)	(363,802,838)	979,616,848	(748,081,697)	58,896,546	\$ 226,730,010	Unknown
F4. Third Prior Year	156,914,613	(85,342,508)	(363,802,839)	979,616,849	(748,081,696)	58,896,547	\$ 226,730,009
<b>F5. Total Recognized Investment Gain</b>	<b>687,386,114</b>	<b>(217,610,195)</b>	<b>(73,371,142)</b>	<b>517,161,708</b>	<b>(462,455,140)</b>	<b>285,626,557</b>	<b>226,730,009</b>
G. Funding Value End of Year:							
G1. Preliminary Funding Value End of Year: A+D+E3+F5	<b>19,342,870,512</b>	<b>20,328,281,484</b>	<b>21,014,908,823</b>	<b>22,309,329,958</b>			
G2. Upper Corridor Limit: 120% x B	<b>25,762,527,446</b>	<b>23,615,360,702</b>	<b>24,810,062,302</b>	<b>26,831,077,661</b>			
G3. Lower Corridor Limit: 80% x B	<b>17,175,018,297</b>	<b>15,743,573,802</b>	<b>16,540,041,535</b>	<b>17,887,385,107</b>			
<b>G4. Funding Value End of Year</b>	<b>19,342,870,512</b>	<b>20,328,281,484</b>	<b>21,014,908,823</b>	<b>22,309,329,958</b>			
H. Actual/Projected Difference between Market and Funding Value	2,125,902,360	(648,814,232)	(339,856,905)	49,901,426	512,356,566	226,730,009	-
I. Market Rate of Return	31.66 %	(7.47)%	8.71 %	11.84 %			
J. Funding Rate of Return	11.39 %	6.12 %	6.88 %	9.75 %			
K. Ratio of Funding Value to Market Value	90.10 %	103.30 %	101.64 %	99.78 %			

\* Includes \$507.4 million from the settlement of a lawsuit.

The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased-in over a closed four-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. **The Funding Value of Assets is unbiased with respect to Market Value.** At any time, it may be either greater or less than Market Value. If assumed rates (applied to the funding value of assets) are exactly realized for three consecutive years, it will become equal to Market Value.

**The assets** of the Retirement System, as of June 30, 2024, were reported to your actuary to be \$22,359,231,384. This amount, reduced by a funding value adjustment of \$49,901,426 this year, is used to finance the Retirement System liability.

Accounts	Assets as of June 30	
	2024	2023
Regular Accounts		
Members' Deposit Accounts		
Contributions	\$ 1,830,533,728	\$ 1,718,903,627
Interest	13,013,551,141	11,599,922,370
Total	14,844,084,869	13,318,825,997
T-DROP Member Deposit Accounts		
Contributions	32,961,427	32,472,783
Interest	17,836,421	18,548,379
Total	50,797,848	51,021,162
Cash Balance Account	240,202,392	226,279,957
Employer's Accumulation Account	(7,498,915,914)	(7,256,480,855)
Retirement Reserve Account	14,288,978,608	13,886,819,183
Act 808 Retirement Reserve Account	5,192,191	6,235,877
T-Lump Sum Payable	299,014,864	320,171,587
Survivors Benefit Account	119,259,431	112,186,981
Total Regular Accounts	22,348,614,289	20,665,059,889
Other Accounts		
Income Expense Account	10,617,095	9,992,029
Other Special Reserves	-	-
Miscellaneous	-	-
Total Other Accounts	10,617,095	9,992,029
Total Accounting Value of Assets	22,359,231,384	20,675,051,918
Funding Value Adjustment	(49,901,426)	339,856,905
Funding Value of Assets	\$ 22,309,329,958	\$ 21,014,908,823

## Market Value of Assets

The net market value of assets at year-end was \$22,359,231,384 and was invested as shown below:

	Market Value at June 30	
	2024	2023
Cash	\$ 382,291,377	\$ 349,165,471
Receivables		
Unsettled Trades and Accrued Return	57,267,479	58,090,474
Member Contributions	10,702,302	11,023,509
Employer Contributions	32,164,260	33,734,466
Other	698,897	669,443
Total Receivables	100,832,938	103,517,892
Investments		
Public Equity	4,294,178,732	3,715,263,524
Fixed Income	1,842,669,015	1,686,126,493
Real Estate	167,593,445	175,694,289
Pooled	5,654,476,103	5,555,585,690
State Recycling Tax Credits	203,200,000	129,552,000
Derivative	14,174	(17,623)
Alternative	9,851,978,883	9,005,490,511
Other	(288,933)	(133,457)
Total Investments	22,013,821,419	20,267,561,427
Invested Securities Lending	427,105,534	457,448,502
Net Equipment	194,149	210,730
Deferred Outflows Related to OPEB	262,602	493,831
Total Assets	22,924,508,019	21,178,397,853
Liabilities		
Survivor Benefits for Minors	9,048	14,148
Other Payables	6,412,743	6,576,235
Securities Related Payables	130,273,772	37,647,135
Securities Lending Collateral	427,105,534	457,448,502
Deferred Inflows Related to OPEB	1,475,538	1,659,915
Total Liabilities	565,276,635	503,345,935
Net Market Value	\$ 22,359,231,384	\$ 20,675,051,918
Change from Prior Year	1,684,179,466	995,584,666



## Market Value Reconciliation

Assets developed during the year as follows:

	Year Ended June 30	
	2024	2023
Net Market Value July 1	\$ 20,675,051,918	\$ 19,679,467,252
<b>Additions</b>		
Employer Contributions	554,738,036	536,619,031
Employee Contributions	211,036,048	200,610,721
Other (Including Settlement)	-	-
Appreciation	2,273,170,605	1,550,226,801
Interest	90,172,675	66,655,648
Dividends	115,400,128	128,765,267
Real Estate	6,369,111	6,437,924
Other	3,368,925	1,244,319
Securities Lending Activity	2,501,792	3,789,883
<b>Total Additions</b>	<b>3,256,757,320</b>	<b>2,494,349,594</b>
<b>Deductions</b>		
Age and Service Benefits	1,228,650,953	1,183,189,280
Disability Benefits	41,027,658	40,457,469
Option Benefits	42,609,573	39,659,615
Survivor Benefits	13,191,438	12,949,173
Reciprocal Service	70,173,668	67,375,786
Act 808	1,421,578	1,605,876
Refunds	12,116,533	12,583,767
Active Member Death	379,839	396,423
T-DROP Benefits	46,757,375	47,464,578
CBA Benefits	25,927,024	17,726,519
CASH Benefit Program	3,732,160	2,653,041
Investment Expense	78,162,659	64,810,579
Administrative Expense	8,427,396	7,892,822
<b>Total Deductions</b>	<b>1,572,577,854</b>	<b>1,498,764,928</b>
Miscellaneous	-	-
<b>Net Market Value June 30</b>	<b>\$ 22,359,231,384</b>	<b>\$ 20,675,051,918</b>

## Schedule of Funding Progress (Dollar Amounts in Millions)

Valuation Date June 30	(1) Funding Value of Assets	(2) Entry Age AAL	(3) UAAL (2)-(1)	(4) Funding Ratio (1)/(2)	(5) Annual Payroll	Liabilities as a % of Payroll		
						Unfunded (3)/(5)	Funded (1)/(5)	Total (2)/(5)
2004	\$ 8,424	\$ 10,050	\$ 1,626	83.8%	\$ 1,748	93.0%	481.9%	574.9%
2005	8,817	10,973	2,156	80.4%	1,962	109.9%	449.4%	559.3%
2006	9,332	11,623	2,291	80.3%	2,080	110.1%	448.7%	558.8%
2007+	10,519	12,329	1,810	85.3%	2,191	82.6%	480.1%	562.7%
2008+	11,319	13,334	2,015	84.9%	2,268	88.8%	499.1%	587.9%
2009	10,617	14,019	3,402	75.7%	2,318	146.8%	458.0%	604.8%
2010+	10,845	14,697	3,852	73.8%	2,381	161.8%	455.5%	617.3%
2011+*	11,146	15,521	4,375	71.8%	2,728	160.4%	408.6%	569.0%
2012	11,484	16,139	4,655	71.2%	2,714	171.5%	423.2%	594.7%
2013+*	12,247	16,718	4,471	73.3%	2,727	164.0%	449.1%	613.1%
2014	13,375	17,310	3,935	77.3%	2,758	142.7%	484.9%	627.6%
2015	14,434	18,136	3,702	79.6%	2,777	133.3%	519.8%	653.1%
2016	15,239	18,812	3,573	81.0%	2,785	128.3%	547.2%	675.5%
2017+*	16,131	20,298	4,167	79.5%	2,814	148.1%	573.2%	721.3%
2018+*	16,756	20,935	4,179	80.0%	2,872	145.5%	583.4%	728.9%
2019+	17,413	21,709	4,296	80.2%	2,907	147.8%	599.0%	746.8%
2020+	18,007	22,352	4,345	80.6%	2,954	147.1%	609.6%	756.7%
2021+*	19,343	23,987	4,644	80.6%	3,086	150.5%	626.8%	777.3%
2022+	20,328	24,697	4,369	82.3%	3,199	136.6%	635.4%	772.0%
2023+	21,015	25,592	4,577	82.1%	3,353	136.5%	626.8%	763.3%
2024	22,309	26,356	4,047	84.6%	3,459	117.0%	645.0%	762.0%

+ Legislated benefit or contribution rate changes.

\* Revised actuarial assumptions.

A system with a high ratio of assets or liabilities to payroll will tend to experience more volatility than a system with a lesser ratio, assuming a similar asset allocation.

## Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base. In a fixed rate plan with unfunded liabilities, a reduction in covered payroll can have a negative effect on the system as actual employer contributions are based on a lower than expected payroll;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected. Teacher shortages and reductions in school age populations may have an effect on the System other than expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

## Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures are discussed below and on the following pages. An additional historical summary of plan maturity measures can be found on page D-11.

	2024	2023	2022	2021	2020
Ratio of the Market Value of Assets to Total Payroll	6.2	5.9	5.9	6.7	5.7
Ratio of Actuarial Accrued Liability to Payroll	7.3	7.3	7.4	7.5	7.6
Ratio of Actives to Retirees and Beneficiaries	1.3	1.3	1.4	1.4	1.4
Ratio of Net Cash Flow to Market Value of Assets	-3.2%	-3.3%	-1.0%*	-3.2%	-3.9%
Duration of the Present Value of Future Benefits	14.17	14.16	14.03	14.02	13.83

\* The net cash flow for 2022 includes \$507.4 million from the settlement of a lawsuit.

### Ratio of the Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. The market value of assets is currently 6.2 times the payroll indicating that a return on assets 2% different from assumed would equal approximately 12% of payroll. Such a change could affect the amortization period by approximately four years based on 2024 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.

### Ratio of Actuarial Accrued Liability to Payroll

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 7.3% of payroll and would affect the amortization period by two years based on the 2024 results.

### Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

### Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means benefits and expenses exceed contributions, and existing funds may be used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

# Plan Maturity Measures

## Duration of Present Value of Future Benefits

The modified 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 14.2 (which is based on a 7.25% discount rate) indicates that the present value of future benefits would increase approximately 14.2% if the assumed rate of return were lowered 1%. Such a change could affect the amortization period by 20 years or more.

## Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

## Plan Maturity Measures (Based on Market Value of Assets)

Valuation Date June 30	(1) Accrued Liabilities (AAL)	(2) Market Value of Assets	(3) Unfunded AAL (1)-(2)	(4) Valuation Payroll <sup>^</sup>	(5) % Change in Payroll	(6) Funded Ratio (2)/(1)	(7) Annuitant Liabilities (AnnLiab)	(8) AnnLiab/AAL (7)/(1)	(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 (14)/(2)	(16) Portfolio Rate of Return	(17) 10-year Trailing Average
2012	\$ 16,139	\$ 11,484	\$ 4,655	\$ 2,803		71.2%	\$ 7,649	47.4%	575.8%	409.7%			166.1%	\$ (285)	-2.5%	-1.1%	6.6%
2013#	16,718	12,830	3,888	2,819	0.6%	76.7%	8,181	48.9%	593.0%	455.1%			137.9%	(337)	-2.6%	14.9%	8.0%
2014	17,310	14,856	2,454	2,851	1.1%	85.8%	8,777	50.7%	607.2%	521.1%			86.1%	(395)	-2.7%	19.2%	8.2%
2015	18,136	15,036	3,100	2,874	0.8%	82.9%	9,778	53.9%	631.0%	523.1%			107.9%	(445)	-3.0%	4.3%	7.7%
2016	18,812	14,559	4,253	2,888	0.5%	77.4%	10,430	55.4%	651.3%	504.0%			147.3%	(505)	-3.5%	0.2%	6.3%
2017#*	20,298	16,285	4,013	2,922	1.2%	80.2%	11,337	55.9%	694.7%	557.4%			137.3%	(556)	-3.4%	16.0%	6.0%
2018	20,935	17,493	3,442	2,986	2.2%	83.6%	11,851	56.6%	701.1%	585.8%	12.7%	77.3%	115.3%	(607)	-3.5%	11.4%	7.6%
2019	21,709	17,742	3,967	3,027	1.4%	81.7%	12,460	57.4%	717.2%	586.1%	12.5%	76.3%	131.1%	(642)	-3.6%	5.2%	10.4%
2020	22,352	16,902	5,450	3,078	1.7%	75.6%	12,890	57.7%	726.2%	549.1%	12.5%	71.5%	177.1%	(665)	-3.9%	-1.0%	8.8%
2021*	23,987	21,469	2,518	3,205	4.1%	89.5%	13,596	56.7%	748.4%	669.8%	13.8%	92.1%	78.6%	(677)	-3.2%	31.7%	9.6%
2022	24,697	19,679	5,018	3,320	3.6%	79.7%	14,044	56.9%	743.8%	592.7%	13.7%	81.1%	151.1%	(192)	-1.0%	-7.5%	8.9%
2023	25,592	20,675	4,917	3,492	5.2%	80.8%	14,511	56.7%	732.9%	592.1%	13.9%	82.3%	140.8%	(689)	-3.3%	8.7%	8.3%
2024	26,356	22,359	3,997	3,612	3.4%	84.8%	14,992	56.9%	729.8%	619.1%	13.9%	86.1%	110.7%	(720)	-3.2%	11.8%	7.6%

(\*) 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.

(^) Includes payroll for return to work retirees.

(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 or an increased level of volatility in results.

(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 the past performance of the investment program. Of course, past performance is not a guarantee of future results. Some of the trailing averaged are distorted by the extraordinary events of 2008 and 2021.

# Low-Default-Risk Obligation Measure

## Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDRM). The rationale that the ASB cited for the calculation and disclosure of the LDRM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below:

“The ASB believes that the calculation and disclosure of this measure provides appropriate, useful information for the intended user regarding the funded status of a pension plan. The calculation and disclosure of this additional measure is not intended to suggest that this is the “right” liability measure for a pension plan. However, the ASB does believe that this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.”

## Comparing the Accrued Liabilities and the LDRM

One of the fundamental financial objectives of ATRS is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of ATRS is set equal to the expected return on the System’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For ATRS, the investment return assumption is 7.25%.

The LDRM is meant to approximately represent the lump sum cost to secure benefits by purchasing low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDRM is very dependent upon market interest rates at the time of the LDRM measurement. The lower the market interest rates, the higher the LDRM, and vice versa. The LDRM results presented in this report are based on the projected unit credit actuarial cost method and discount rates based upon the June 2024 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10- and 30-year rates follow: 5.12%, 4.34%, 4.22% and 4.45%.

Presented below are the actuarial accrued liability and the LDRM as of June 30, 2024 for ATRS.

Type of Member	Valuation Accrued Liabilities	LDRM
Retirees	\$14,992,397,409	\$19,042,974,700
Deferreds	755,402,602	1,248,120,685
Actives	10,608,457,726	15,063,938,913
<b>Totals</b>	<b>\$26,356,257,737</b>	<b>\$35,355,034,298</b>

# Low-Default-Risk Obligation Measure

## Commentary Regarding the LDROM

Some ways in which the LDROM can assist the ATRS Board of Trustees in a decision-making process include:

- (1) It provides information to potentially allow for better risk management for ATRS.
- (2) It places the appropriateness of potential employer contribution rate reductions or benefit enhancements in a better context.
- (3) It provides more complete information regarding the benefit security of the membership's benefits earned as of the measurement date.

**Potentially Allows for Better Risk Management:** A very useful risk metric to exhibit potential contribution rate volatility (or amortization period volatility for fixed rate plans) is the ratio of assets to payroll or AAL to payroll. How could we reduce that potential contribution rate volatility (or amortization period volatility for fixed rate plans)? The LDROM and Liability Driven Investing (LDI) are closely related concepts.

Other than reducing benefits, all other things being equal, the only way to reduce that volatility is to immunize (i.e., LDI) a portion of the System's liability. This does not mean that the System needs to immunize all of the liability. For example, if it could immunize half of it, it could reduce the contribution rate volatility in half. This would require the actuary to use a cash flow matching method to value that portion of the liabilities. This means that the actuary would not use the System's investment return assumption for this portion of the liability, but the yield curve resulting from the fixed income portfolio that is being used to immunize the liability. The value of the assets (i.e., fixed income portfolio) and the value of the immunized liability would move in tandem with any changes (up or down) in future interest rates. The result being that the immunized portion of the System's liability would reduce the potential of producing new unfunded actuarial accrued liabilities. However, the fixed income portfolio would still have the potential for credit default risk.

**Places the Appropriateness of Potential Employer Contribution Rate Reductions or Benefit Enhancements in a Better Context:** Many Public Employees Retirement Systems have adopted a funding policy. Many funding policies already take into account the System's funded ratio (based upon the AAL) when considering whether to allow for benefit enhancements or contribution rate reductions. For example, a System may not allow for a benefit enhancement if the funded ratio does not exceed a certain threshold. Similarly, a System may not allow for an employer contribution rate reduction in some circumstances. For example, a reduction to the employer normal cost contribution may not be allowed until the System reaches a funded ratio of 120%. Given the fact that most criteria are based upon the expectation of earning the investment return assumption, a System may want to also consider information based upon the LDROM criteria.

**Provides more Complete Information Regarding the Benefit Security of the Membership's Benefits Earned as of the Measurement Date:** Too often a high funded ratio (e.g., 100% funded) on an AAL basis is interpreted as benefit security for the participants. The fact that this funded ratio is based upon an expected measure is many times overlooked. If the AAL and LDROM measures are relatively close, then the System could consider securing benefits by investing in a low-default-risk laddered bond portfolio.



## SECTION E

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### COVERED MEMBER DATA

**Active Members in Valuation June 30, 2024  
by Attained Age and Years of Service  
(Excludes T-DROP and Rehired Retirees)**

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	728							728	\$ 2,501,264
20-24	2,353	12						2,365	70,076,388
25-29	4,851	1,300	7					6,158	277,448,620
30-34	3,209	3,353	920	4				7,486	345,920,113
35-39	2,891	2,320	2,601	667	8			8,487	406,553,526
40-44	2,513	2,098	1,719	2,477	727	3		9,537	488,176,775
45-49	1,916	1,708	1,485	1,718	2,084	521	2	9,434	508,981,825
50-54	1,618	1,341	1,299	1,574	1,600	1,944	74	9,450	517,606,577
55-59	1,279	1,031	967	1,188	1,283	1,082	135	6,965	337,229,400
60	254	194	156	260	226	225	23	1,338	59,143,315
61	262	186	147	206	180	170	20	1,171	50,433,841
62	238	199	130	165	188	142	24	1,086	47,025,822
63	191	160	113	129	133	108	20	854	35,649,846
64	194	136	82	94	90	95	13	704	27,559,024
65	145	110	84	67	67	83	12	568	22,018,756
66	146	72	44	28	27	14	7	338	11,084,496
67	120	90	20	15	13	13	8	279	8,449,708
68	122	59	21	9	8	7	5	231	6,277,888
69	116	44	17	10	4	7	2	200	4,907,662
70 & Up	520	236	81	19	11	6	13	886	19,052,429
<b>Totals</b>	<b>23,666</b>	<b>14,649</b>	<b>9,893</b>	<b>8,630</b>	<b>6,649</b>	<b>4,420</b>	<b>358</b>	<b>68,265</b>	<b>\$3,246,097,275</b>

Group Averages:

Age: 44.1 years

Service: 10.1 years



**FEMALE Active Members in Valuation June 30, 2024**  
**by Attained Age and Years of Service**  
**(Excludes T-DROP and Rehired Retirees)**

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	321							321	\$ 1,351,122
20-24	1,772	8						1,780	54,847,129
25-29	3,641	998	4					4,643	201,949,407
30-34	2,547	2,561	702	2				5,812	257,182,610
35-39	2,348	1,815	1,931	524	4			6,622	301,170,046
40-44	2,066	1,748	1,359	1,934	560	2		7,669	375,244,062
45-49	1,481	1,423	1,199	1,350	1,652	397	1	7,503	386,255,513
50-54	1,192	1,033	1,055	1,301	1,309	1,504	54	7,448	392,072,193
55-59	899	751	735	976	1,096	876	96	5,429	253,623,184
60	177	132	112	200	194	191	13	1,019	42,892,825
61	176	135	104	158	152	147	15	887	37,699,879
62	168	136	91	124	161	122	16	818	34,896,781
63	116	118	79	93	113	87	15	621	25,022,297
64	134	80	60	69	71	80	9	503	18,964,050
65	81	74	56	54	55	75	12	407	15,582,615
66	74	46	28	20	20	13	5	206	6,695,852
67	74	56	14	11	10	12	6	183	5,283,152
68	68	33	14	8	8	5	4	140	3,821,194
69	76	20	11	7	2	7	1	124	2,778,788
70 & Up	296	104	47	14	8	3	7	479	10,158,468
<b>Totals</b>	<b>17,707</b>	<b>11,271</b>	<b>7,601</b>	<b>6,845</b>	<b>5,415</b>	<b>3,521</b>	<b>254</b>	<b>52,614</b>	<b>\$ 2,427,491,167</b>

Group Averages:

Age: 44.0 years

Service: 10.4 years



**MALE Active Members in Valuation June 30, 2024**  
**by Attained Age and Years of Service**  
**(Excludes T-DROP and Rehired Retirees)**

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	407							407	\$ 1,150,142
20-24	581	4						585	15,229,259
25-29	1,210	302	3					1,515	75,499,213
30-34	662	792	218	2				1,674	88,737,503
35-39	543	505	670	143	4			1,865	105,383,480
40-44	447	350	360	543	167	1		1,868	112,932,713
45-49	435	285	286	368	432	124	1	1,931	122,726,312
50-54	426	308	244	273	291	440	20	2,002	125,534,384
55-59	380	280	232	212	187	206	39	1,536	83,606,216
60	77	62	44	60	32	34	10	319	16,250,490
61	86	51	43	48	28	23	5	284	12,733,962
62	70	63	39	41	27	20	8	268	12,129,041
63	75	42	34	36	20	21	5	233	10,627,549
64	60	56	22	25	19	15	4	201	8,594,974
65	64	36	28	13	12	8		161	6,436,141
66	72	26	16	8	7	1	2	132	4,388,644
67	46	34	6	4	3	1	2	96	3,166,556
68	54	26	7	1		2	1	91	2,456,694
69	40	24	6	3	2		1	76	2,128,874
70 & Up	224	132	34	5	3	3	6	407	8,893,961
<b>Totals</b>	<b>5,959</b>	<b>3,378</b>	<b>2,292</b>	<b>1,785</b>	<b>1,234</b>	<b>899</b>	<b>104</b>	<b>15,651</b>	<b>\$ 818,606,108</b>

Group Averages:

Age: 44.2 years

Service: 9.4 years



## Summary of Active Members (Excludes T-DROP and Rehired Retirees)

	Educational		Support		Total Active Members	
	No.	Valuation Payroll	No.	Valuation Payroll	No.	Valuation Payroll
Female	29,171	\$ 1,741,329,426	23,443	\$ 686,161,741	52,614	\$ 2,427,491,167
Male	8,452	570,167,316	7,199	248,438,792	15,651	818,606,108
All	37,623	\$ 2,311,496,742	30,642	\$ 934,600,533	68,265	\$ 3,246,097,275

	Educational	Support	Total
Members Contributing Now	36,354	18,989	55,343
Members Not Contributing	1,269	11,653	12,922
All	37,623	30,642	68,265

June 30	Number	Group Averages			Active Member Payroll (\$ Millions)
		Age	Years of Service	Annual Earnings	
2005	65,793	44.2	9.4	\$29,826	\$1,962
2006	67,710	44.3	9.3	30,714	2,080
2007	69,226	44.4	9.3	31,645	2,191
2008	70,172	44.5	9.4	32,319	2,268
2009	70,655	44.7	9.5	32,804	2,318
2010	72,208	44.7	9.7	32,980	2,381
2011	72,293	44.8	9.9	33,995	2,458
2012	71,195	45.0	10.1	34,362	2,446
2013	70,660	45.0	10.2	34,920	2,467
2014	70,225	44.7	10.2	35,673	2,505
2015	68,945	44.6	10.3	36,717	2,531
2016	68,368	44.4	10.2	37,235	2,546
2017	68,337	44.3	10.2	37,707	2,577
2018	68,645	44.2	10.2	38,477	2,641
2019	68,457	44.1	10.1	39,065	2,674
2020	66,900	44.3	10.3	40,709	2,723
2021	66,633	44.2	10.5	42,901	2,859
2022	68,127	44.1	10.2	43,758	2,981
2023	68,249	44.0	10.2	45,897	3,132
2024	68,265	44.1	10.1	47,551	3,246

## Deferred Vested Members at June 30, 2024 by Attained Age

Age	Number	Estimated Annual Benefits	Contribution Balance
Below 40	2,122	\$ 11,897,035	\$ 31,470,016
40	368	2,571,560	6,315,030
41	348	2,612,067	6,339,630
42	361	2,790,235	6,850,231
43	398	3,205,911	7,705,543
44	402	3,361,445	7,974,808
45	437	3,448,390	8,150,699
46	355	2,801,907	6,581,771
47	413	3,414,973	8,178,866
48	417	3,207,469	7,369,697
49	427	3,579,109	8,097,035
50	502	3,829,245	8,757,151
51	459	3,549,121	7,649,035
52	511	3,847,055	8,350,029
53	570	4,107,838	8,249,275
54	559	3,953,867	7,718,123
55	519	3,806,127	7,863,202
56	571	4,276,615	8,689,607
57	577	3,784,496	7,098,984
58	578	3,958,007	7,597,694
59	627	4,301,054	8,407,319
60 & Up	3,200	11,303,875	17,891,297
Future Beneficiaries #	54	351,626	0
<b>Totals</b>	<b>14,775</b>	<b>\$ 93,959,027</b>	<b>\$ 203,305,042</b>

# These are beneficiaries of deceased active members who are eligible for a pension at age 62.

An inactive member is no longer actively working in a position covered by ATRS but has sufficient service credit to qualify for a monthly benefit at retirement age.

## All Members Participating in T-DROP at June 30, 2024 by Attained Age

Age	Number	Current T-DROP Contribution	Original T-DROP Contribution	T-DROP Account Balance	Pay
47	1	\$ 12,186	\$ 11,831	\$ 12,023	\$ 35,141
49	3	59,135	56,510	90,779	206,239
50	6	111,249	106,366	169,663	397,809
51	24	565,802	548,736	579,344	1,789,021
52	76	1,829,371	1,763,231	2,558,292	5,465,969
53	164	4,153,472	3,948,629	7,190,932	12,598,985
54	193	4,869,857	4,588,956	10,233,057	14,470,362
55	221	5,255,596	4,862,947	15,272,187	16,316,516
56	253	6,356,342	5,788,122	21,437,755	19,027,157
57	262	6,192,580	5,544,999	25,200,684	19,077,582
58	276	6,504,616	5,778,597	29,344,005	19,967,433
59	265	6,274,237	5,566,755	33,675,931	19,399,676
60	273	6,088,880	5,662,372	37,171,345	19,677,433
61	276	5,999,624	5,476,770	37,088,296	19,578,773
62	216	4,322,759	4,128,864	28,838,777	14,895,882
63	157	2,883,349	2,804,352	17,350,635	9,920,426
64	112	1,959,094	1,931,941	12,746,223	7,267,112
65	104	1,825,268	1,828,467	13,611,139	7,019,662
66	45	662,838	739,726	6,223,871	2,726,666
67	21	232,256	309,093	2,488,214	1,278,443
68	16	254,988	268,406	2,417,393	1,068,064
69	6	44,077	55,229	531,706	290,370
70	2	16,841	33,438	463,733	122,958
71	2	49,980	39,849	419,221	156,837
72	2	33,023	26,006	267,164	118,511
73	1	21,693	17,081	204,092	63,000
74	1	-	9,665	184,715	40,440
75	1	18,460	14,536	173,681	36,268
77	2	-	50,179	758,472	236,564
<b>Totals</b>	<b>2,981</b>	<b>\$ 66,597,573</b>	<b>\$ 61,961,653</b>	<b>\$ 306,703,329</b>	<b>\$ 213,249,299</b>

A T-DROP member continues to work, but does not accrue additional retirement benefits and does not make member contributions. A reduced benefit is paid into the T-DROP account (see pages C-3 and C-4) during T-DROP participation. Deposits to T-DROP cease at 10 years of T-DROP participation. ATRS receives full employer contributions on behalf of T-DROP participants.



## All Members Participating in T-DROP at June 30, 2024 by Years in T-DROP

Years in T-DROP	Number	Current T-DROP Contribution	Original T-DROP Contribution	T-DROP Account Balance	Pay
1	500	\$ 11,674,274	\$ 11,376,057	\$ 11,560,918	\$ 35,804,087
2	502	11,345,221	10,733,340	22,466,096	35,227,474
3	392	8,841,413	8,128,954	26,417,442	27,493,369
4	331	7,456,782	6,667,145	29,889,874	23,671,545
5	322	7,030,695	6,124,075	35,485,795	22,524,666
6	301	7,533,288	6,390,558	45,945,755	22,587,078
7	208	5,143,346	4,261,419	37,032,825	14,947,769
8	178	4,479,376	3,620,124	37,186,934	13,257,185
9	132	3,093,178	2,463,907	29,441,418	9,399,140
10	88	-	1,634,589	22,469,597	6,447,284
11	9	-	200,484	2,906,031	714,399
12	6	-	139,771	2,137,595	444,319
13	6	-	126,219	2,046,193	385,930
14	3	-	51,901	888,223	167,030
15	1	-	14,652	265,039	78,785
16	1	-	9,665	184,715	40,440
17	1	-	18,793	378,879	58,799
<b>Totals</b>	<b>2,981</b>	<b>\$ 66,597,573</b>	<b>\$ 61,961,653</b>	<b>\$ 306,703,329</b>	<b>\$ 213,249,299</b>

A T-DROP member continues to work, but does not accrue additional retirement benefits and does not make member contributions. A reduced benefit is paid into the T-DROP account (see pages C-3 and C-4) during T-DROP participation. Deposits to T-DROP cease at 10 years of T-DROP participation. ATRS receives full employer contributions on behalf of T-DROP participants.



## Active, T-DROP and Return to Work Members as of June 30, 2024

June 30	Number				Total Payroll
	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
2017	68,337	3,811	3,881	76,029	2,922
2018	68,645	3,696	4,029	76,370	2,986
2019	68,457	3,707	4,077	76,241	3,027
2020	66,900	3,639	4,019	74,558	3,078
2021	66,633	3,465	3,575	73,673	3,205
2022	68,127	3,251	3,643	75,021	3,320
2023	68,249	3,138	4,108	75,495	3,492
2024	68,265	2,981	4,400	75,646	3,612

The actuarial valuation assumes the number of working members will remain constant at the current level. In some recent years the total number of working members has decreased. A decreasing population means less contribution income for the Retirement System than expected and can lead to funding difficulties in extreme cases.

## Annuities Being Paid Retirees and Beneficiaries July 1, 2024 by Type of Annuity Being Paid

Type of Annuity	No.	Annual Amounts		
		Original Annuities	Base Annuities	Current Annuities
<b>RETIREMENT RESERVE ACCOUNT</b>				
Age and Service				
Option 1 (Basic single life)	41,319	\$ 674,115,602	\$ 751,382,658	\$ 1,027,112,303
Option A (Joint & 100% Survivor)	5,745	98,843,205	110,095,621	152,039,803
Option B (Joint & 50% Survivor)	2,797	64,254,084	73,757,700	102,144,498
Option C (10-year certain)	842	15,869,897	15,799,405	19,552,347
Beneficiaries	1,577	31,052,264	26,885,088	38,921,702
Totals	52,280	884,135,052	977,920,472	1,339,770,653
Disability				
Option 1	2,182	24,214,056	25,546,544	35,273,376
Option A	357	4,093,205	4,080,239	5,492,655
Option B	78	1,216,130	1,273,816	1,729,809
Option C	-	-	-	-
Beneficiaries	286	3,595,842	3,441,060	5,060,653
Totals	2,903	33,119,233	34,341,659	47,556,493
Act 793	123	705,677	1,555,572	1,555,572
Retirement Reserve Account	55,306	917,959,962	1,013,817,703	1,388,882,718
Act 808 Retirement Reserve Account	23	416,115	1,379,738	1,379,738
Total Retirement Reserve Account	55,329	918,376,077	1,015,197,441	1,390,262,456
<b>SURVIVOR'S BENEFIT ACCOUNT</b>				
Beneficiaries of Deceased Members				
Age 0 - 17	134	\$ 1,260,642	\$ 1,259,851	\$ 1,394,610
Age 18 - 23	74	692,381	691,367	789,881
Other	640	7,535,988	8,242,672	11,305,739
Totals	848	9,489,011	10,193,890	13,490,230
<b>RETIREMENT SYSTEM TOTALS</b>				
Total Annuities Being Paid	56,177	\$ 927,865,088	\$ 1,025,391,331	\$ 1,403,752,686

**The Original Annuity** is the annuity at the date of retirement.

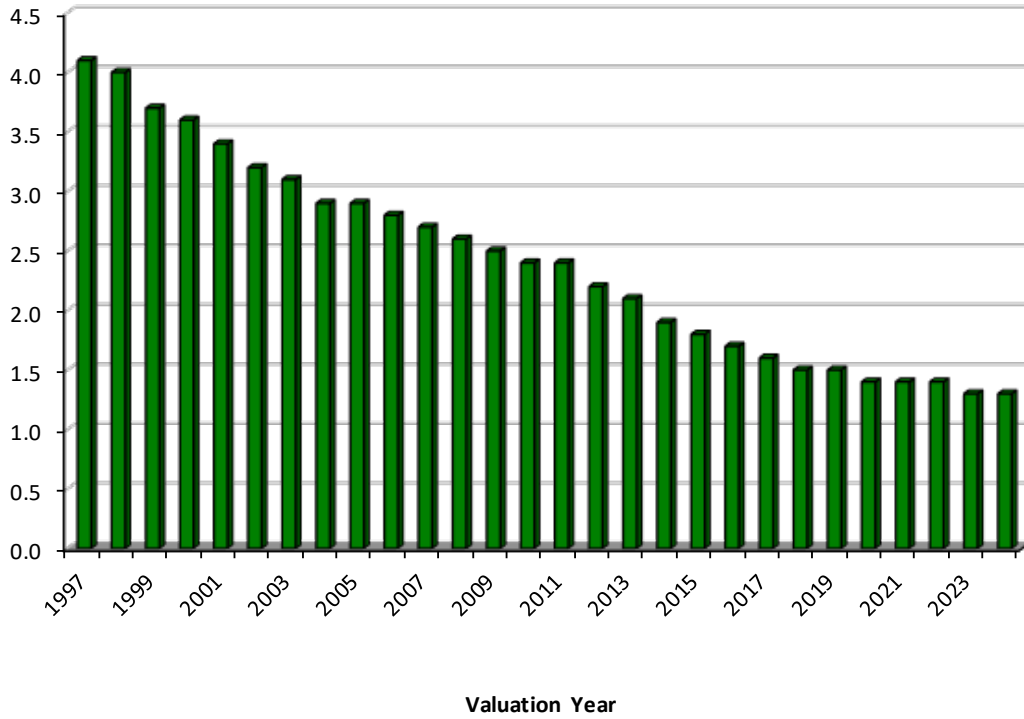
**The Base Annuity** is the amount from which the 3.0% COLA is calculated.

**The Current Annuity** is the annuity payable at July 1, 2024 (includes July 1 COLA).

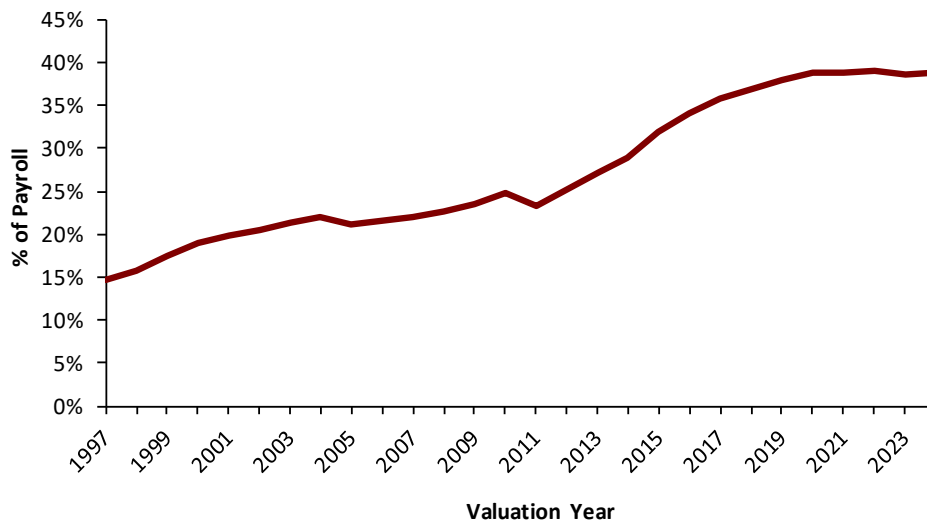


# Historical Graphs

## Active Members Per Retired Life \*



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



\* Beginning with the June 30, 2011 valuation, active members include T-DROP participants in payroll.

## Benefit Changes During Recent Years of Retirement and Related Changes in Purchasing Power (1990 \$)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				1990 \$	% of 1990
1990	\$ - - - -	\$ 11,000	- - - -	\$ 11,000	100%
1991	330	11,330	(4.7)%	10,822	98%
1992	1,005	12,335	(3.1)%	11,429	104%
1993	1,045	13,380	(3.0)%	12,036	109%
1994	1,082	14,462	(2.5)%	12,693	115%
1995	400	14,862	(3.0)%	12,660	115%
1996	400	15,262	(2.8)%	12,652	115%
1997	772	16,034	(2.3)%	12,993	118%
1998	481	16,515	(1.7)%	13,161	120%
1999	1,383	17,898	(2.0)%	13,989	127%
2000	1,129	19,027	(3.7)%	14,336	130%
2001	1,406	20,433	(3.2)%	14,911	136%
2002	807	21,240	(1.1)%	15,337	139%
2003	562	21,802	(2.1)%	15,417	140%
2004	562	22,364	(3.3)%	15,314	139%
2005	562	22,926	(2.5)%	15,312	139%
2006	562	23,488	(4.3)%	15,037	137%
2007	562	24,050	(2.7)%	14,994	136%
2008	562	24,612	(5.0)%	14,611	133%
2009	562	25,174	1.4 %	15,161	138%
2010	755	25,929	(1.1)%	15,453	140%
2011	778	26,707	(3.6)%	15,370	140%
2012	778	27,485	(1.7)%	15,558	141%
2013	778	28,263	(1.8)%	15,723	143%
2014	778	29,041	(2.1)%	15,828	144%
2015	778	29,819	(0.1)%	16,232	148%
2016	778	30,597	(1.0)%	16,491	150%
2017	778	31,375	(1.6)%	16,638	151%
2018	778	32,153	(2.9)%	16,575	151%
2019	751	32,904	(1.6)%	16,687	152%
2020+	451	33,355	(0.6)%	16,807	153%
2021	751	34,106	(5.4)%	16,306	148%
2022	751	34,857	(9.1)%	15,281	139%
2023	751	35,608	(3.0)%	15,160	138%
2024	751	36,359	(3.0)%	15,033	137%
2025	751	37,110			

\* The \$11,000 benefit used to begin this schedule is an arbitrary amount. A smaller beginning amount could show a smaller purchasing power loss in percent loss.

# Based on Consumer Price Index, All Urban Consumers, United States City Average (June values).

+ The Retiree Benefit Stipend was reduced by \$300 in FY 2020.

## Benefit Changes During Recent Years of Retirement and Related Changes in Purchasing Power (2000 \$)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				2000 \$	% of 2000
2000	\$ ----	\$ 11,600	----	\$ 11,600	100%
2001	1,003	12,603	(3.2)%	12,207	105%
2002	523	13,126	(1.1)%	12,579	108%
2003	372	13,498	(2.1)%	12,668	109%
2004	372	13,870	(3.3)%	12,605	109%
2005	372	14,242	(2.5)%	12,624	109%
2006	372	14,614	(4.3)%	12,417	107%
2007	372	14,986	(2.7)%	12,400	107%
2008	372	15,358	(5.0)%	12,100	104%
2009	372	15,730	1.4 %	12,573	108%
2010	472	16,202	(1.1)%	12,815	110%
2011	486	16,688	(3.6)%	12,746	110%
2012	486	17,174	(1.7)%	12,902	111%
2013	486	17,660	(1.8)%	13,039	112%
2014	486	18,146	(2.1)%	13,125	113%
2015	486	18,632	(0.1)%	13,460	116%
2016	486	19,118	(1.0)%	13,675	118%
2017	486	19,604	(1.6)%	13,797	119%
2018	486	20,090	(2.9)%	13,745	118%
2019	459	20,549	(1.6)%	13,831	119%
2020+	159	20,708	(0.6)%	13,848	119%
2021	459	21,167	(5.4)%	13,431	116%
2022	459	21,626	(9.1)%	12,582	108%
2023	459	22,085	(3.0)%	12,479	108%
2024	459	22,544	(3.0)%	12,371	107%
2025	459	23,003			

\* The \$11,600 benefit used to begin this schedule is an arbitrary amount. A smaller beginning amount could show a smaller purchasing power loss in percent loss.

# Based on Consumer Price Index, All Urban Consumers, United States City Average (June values).

+ The Retiree Benefit Stipend was reduced by \$300 in FY 2020.

## Benefit Changes During Recent Years of Retirement and Related Changes in Purchasing Power (2010 \$)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				2010 \$	% of 2010
2010	\$ ----	\$ 11,900	----	\$ 11,900	100%
2011	357	12,257	(3.6)%	11,836	99%
2012	357	12,614	(1.7)%	11,981	101%
2013	357	12,971	(1.8)%	12,108	102%
2014	357	13,328	(2.1)%	12,188	102%
2015	357	13,685	(0.1)%	12,499	105%
2016	357	14,042	(1.0)%	12,699	107%
2017	357	14,399	(1.6)%	12,812	108%
2018	357	14,756	(2.9)%	12,764	107%
2019	330	15,086	(1.6)%	12,837	108%
2020+	30	15,116	(0.6)%	12,780	107%
2021	330	15,446	(5.4)%	12,391	104%
2022	330	15,776	(9.1)%	11,605	98%
2023	330	16,106	(3.0)%	11,506	97%
2024	330	16,436	(3.0)%	11,403	96%
2025	330	16,766			

\* The \$11,900 benefit used to begin this schedule is an arbitrary amount. A smaller beginning amount could show a smaller purchasing power loss in percent loss.

# Based on Consumer Price Index, All Urban Consumers, United States City Average (June values).

+ The Retiree Benefit Stipend was reduced by \$300 in FY 2020.

## **SECTION F**

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### **FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES**

## Financial Principles and Operational Techniques

**Promises Made and to Be Paid For.** As each year is completed, the System, in effect, hands an “IOU” to each member then acquiring a year of service credit. The “IOU” says: “The Arkansas Teacher Retirement System owes you one year’s worth of retirement benefits, payments in cash commencing when you qualify for retirement.”

The related **key financial questions** are:

**Which generation of taxpayers contributes the money to cover the IOU?**

**The present taxpayers**, who receive the benefit of the member’s present year of service?

**Or the future taxpayers**, who happen to be in Arkansas at the time the IOU becomes a cash demand?

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The financial objective of the ATRS is that this year’s taxpayers contribute the money to cover the IOUs being handed out this year so that **the employer contribution rate will remain approximately level from generation to generation** -- our children and our grandchildren will not have to contribute greater percents of pay than we contribute now. This objective was set forth in Act 793 of 1977.

(There are systems which have **a design for deferring contributions to future taxpayers**, lured by a lower contribution rate now and putting aside the fact that the contribution rate must then relentlessly grow much greater over decades of time -- consume now, and let your children face higher contribution rates after you retire.)

An inevitable byproduct of the level-cost design is the accumulation of reserve assets for decades and the income produced when the assets are invested. **Investment income** becomes the **third and largest contributor** for benefits to employees, and is interlocked with the contribution amounts required from employees and employers.

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

Normal Cost (the cost of members’ service being rendered this year)

... plus ...

Interest on Unfunded Actuarial Accrued Liabilities (unfunded accrued liabilities are the difference between (i) liabilities for service already rendered and (ii) the accrued assets of the plan).

**Computing Contributions to Support System Benefits.** From a given schedule of benefits and from the employee data and asset data furnished, the actuary determines the contribution rates to support the benefits, by means of **an actuarial valuation**. An actuarial valuation has a number of ingredients such as: the rate of investment income which plan assets will earn; the rates of withdrawal of active members who leave covered employment before qualifying for any monthly benefit; the rates of mortality; the rates of disability; the rates of pay increases; and the assumed age or ages at actual retirement. In an actuarial valuation, assumptions must be made as to what the above rates will be, for the next year and for decades in the future. Only the subsequent actual experience of the System can indicate the degree of accuracy of the assumptions.

**Reconciling Differences Between Assumed Experience and Actual Experience.** Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the accuracy of the various financial assumptions or the skill of the actuary and the precision of the calculations made. The System copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continual adjustments in financial position.



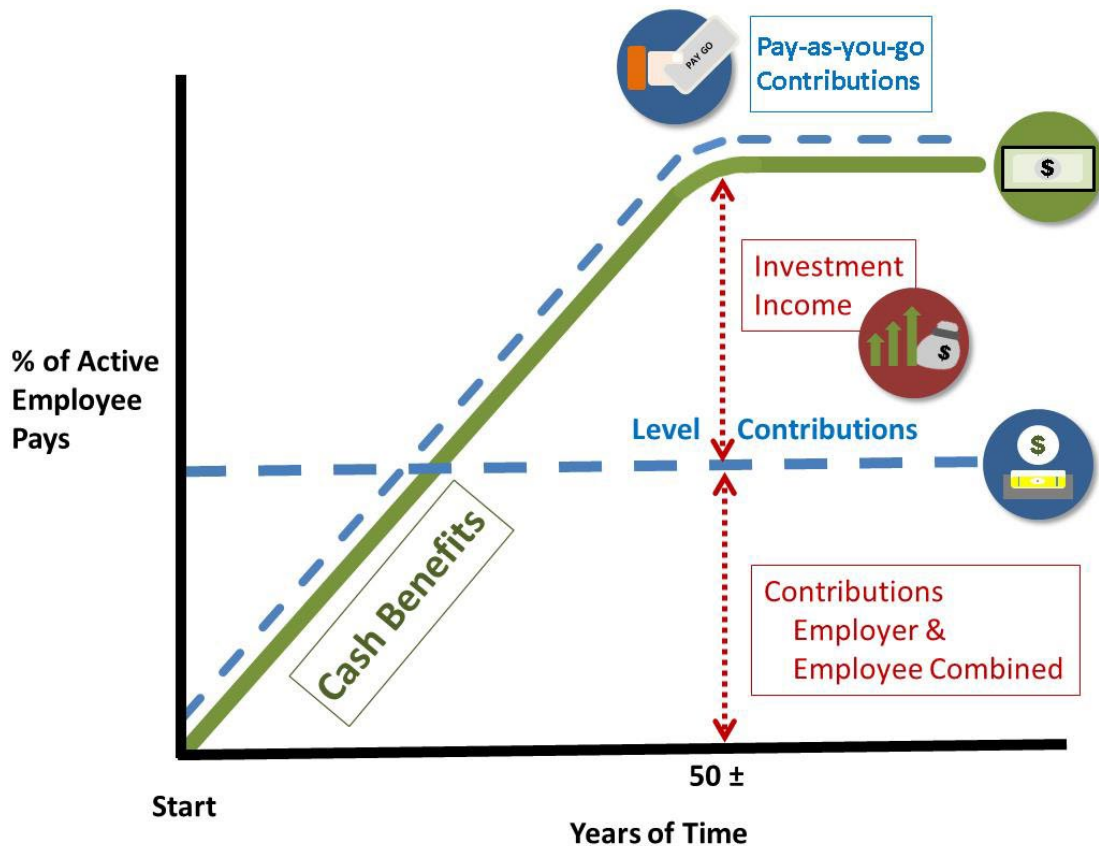
## Actuarial Valuation Process

*The financing diagram* on the next page shows the relationship between the two fundamentally different philosophies of paying for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program), and is thus an *increasing contribution method*; and the *level contribution method* which equalizes contributions between the generations.

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*The actuarial valuation* is the mathematical process by which the level contribution rate is determined, and the flow of activity constituting the valuation may be summarized as follows:

- A. **Census Data**, furnished by plan administrator
  - Retired lives now receiving benefits
  - Former employees with vested benefits not yet payable
  - Active employees
  
- B. + **Asset data** (cash & investments), furnished by plan administrator
  
- C. + **Benefit provisions** that establish eligibility and amounts of payments to members
  
- D. + **Assumptions concerning future financial experiences in various risk areas**, which assumptions are established by the Board of Trustees after consulting with the actuary
  
- E. + **The funding method** for employer contributions (the long-term planned pattern for employer contributions)
  
- F. + **Mathematically combining the assumptions, the funding method, and the data**
  
- G. = Determination of:
  - Plan financial position**, and/or
  - New Employer Contribution Rate**



**CASH BENEFITS LINE.** This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

**LEVEL CONTRIBUTION LINE.** Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

- **Economic Risk Areas**
  - Rates of investment return
  - Rates of pay increase
  - Changes in active member group size
- **Non-Economic Risk Areas**
  - Ages at actual retirement
  - Rates of mortality
  - Rates of withdrawal of active members (turnover)
  - Rates of disability

## **SECTION G**

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### **ACTUARIAL ASSUMPTIONS**

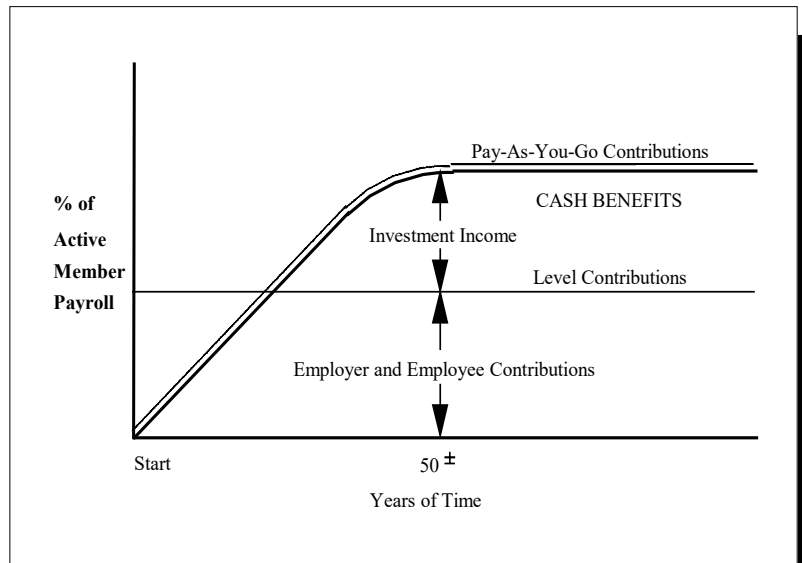
# Selection of Assumptions Used in Actuarial Valuations

## Economic Assumptions

Investment return  
Pay increases to individual employees  
Active member group size and total payroll growth

## Demographic Assumptions

Actual ages at service retirement  
Disability while actively employed  
Separations before retirement  
Mortality after retirement  
Mortality before retirement



## Relationship Between Plan Governing Body and the Actuary

The actuary should have the primary responsibility for choosing the **demographic** assumptions used in the actuarial valuation, making use of specialized training and experience.

Guidance regarding the selection of economic assumptions for measuring pension obligations is provided by Actuarial Standards of Practice (ASOP) No. 27. The standard requires that the selected economic assumptions be consistent with each other. That is, the selection of the investment return assumption should be consistent with the selection of the payroll growth and inflation assumptions.

ASOP No. 27 defines a reasonable economic assumption as an assumption that has the following characteristics: (a) It is appropriate for the purpose of the measurement; (b) It reflects the actuary's professional judgment; (c) It takes into account historical and current economic data that is relevant as of the valuation date; (d) It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and (e) It has no significant bias (i.e., it is not significantly optimistic or pessimistic), except when provisions for adverse deviation or plan provisions that are difficult to measure are included and disclosed under Section 3.5.1, or when alternative assumptions are used for the assessment of risk.

# Summary of Assumptions Used in Actuarial Valuations for the Arkansas Teacher Retirement System Assumptions Adopted by the Board of Trustees After Consulting with Actuary

The actuarial assumptions used in the valuation are shown in this section. The rationale for the assumptions is provided in the Experience Study covering the period July 1, 2010 through June 30, 2015. The Board of Trustees adopts the actuarial assumptions used for actuarial valuation purposes after consulting with the actuary. The actuarial assumptions represent estimates of future experience.

## Economic Assumptions

The **price inflation** assumption is 2.50%. It is assumed that the 3% COLA will always be paid.

**The investment return rate** used in the valuation was 7.25% per year, compounded annually (net after administrative expenses). This rate was first used for the **June 30, 2021** valuation. The assumed real rate of return over price inflation is 4.75%.

The **wage inflation** assumption is 2.75%. This consists of 2.50% related to pure price inflation and 0.25% related to general economic improvements. This assumption was first used for the **June 30, 2017** valuation.

**Pay increase assumptions** for individual active members are shown on page G-9. Part of the assumption for each service year is for a merit and/or seniority increase, and the other 2.75% recognizes wage inflation. These rates were first used for the **June 30, 2021** valuation.

The Active Member Group (Active, T-DROP, RTW) size is assumed to remain constant at its present level.

**Total active member payroll** is assumed to increase 2.75% per year, which is the portion of the individual pay increase assumptions attributable to wage inflation. This rate was first used for the **June 30, 2017** valuation.

## Non-Economic Assumptions

**The mortality tables** used were the Pub-2010 General Healthy Retired, General Disabled Retiree and General Employee Mortality amount weighted tables for males and females. Mortality rates were adjusted for future mortality improvements using projection scale MP-2020 from 2010.

A limited fluctuation credibility procedure was used to determine the appropriate scaling factor of each gender and each member classification (see the 2015-2020 Experience Study), and are shown below:

	<b>Scaling Factor</b>
Healthy Male Retirees	<b>105%</b>
Healthy Female Retirees	<b>105%</b>
Disabled Male Retirees	<b>104%</b>
Disabled Female Retirees	<b>104%</b>
Male Active Members	<b>100%</b>
Female Active Members	<b>100%</b>

Related values are shown on page G-4. These tables were first used for the **June 30, 2021** valuation.

**The probabilities of retirement** for members eligible to retire are shown on pages G-5 and G-6. The rates for full retirement and reduced retirement were first used in the **June 30, 2021** valuation.

**The probabilities of withdrawal from service, death-in-service and disability** are shown for sample ages on pages G-7 and G-8. These rates were first used in the **June 30, 2021** valuation.

**The entry age actuarial cost method of valuation** was used in determining accrued liabilities and normal cost. T-DROP members are treated as active members. Normal cost runs from the date of entry to the date of retirement.

Differences in the past between assumed experience and actual experience (“actuarial gains and losses”) become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce contribution amounts (the total of principal & interest) which are level percents of payroll contributions.

These cost methods were first used in the June 30, 1986 valuation.

The Fiscal Year 2024 employer and member contribution rates were 15% and 7%, respectively.

**Asset Valuation Method.** A market value related asset method is used as described on page D-1. This method was first used in the June 30, 1995 valuation. It was modified following the 1997-2002 Experience Study to include an 80% - 120% market value corridor.

**The data about persons now covered and about present assets** was furnished by the System’s administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary. Members whose dates of birth were not supplied were assumed to be 40 years old on the valuation date. Members whose salaries were not supplied and that entered T-DROP were assumed to have the group average pay of those with salary data as of the valuation date that entered T-DROP.

## Single Life Retirement Values\*

Sample Attained Ages in 2024	Present Value of \$1.00 Monthly for Life		Present Value of \$1 Monthly for Life Increasing 3.0% Simple Annually		Future Life Expectancy (Years)*		Percent Dying within Next Year*	
	Male	Female	Male	Female	Male	Female	Male	Female
40	\$160.03	\$162.55	\$213.61	\$218.42	45.45	48.45	0.09 %	0.05 %
45	155.66	158.89	205.22	211.11	40.21	43.16	0.13 %	0.07 %
50	149.99	154.08	194.84	202.00	35.10	37.99	0.29 %	0.22 %
55	143.10	148.30	182.69	191.30	30.23	33.04	0.43 %	0.30 %
60	134.34	140.66	168.05	177.99	25.52	28.19	0.66 %	0.42 %
65	123.42	130.67	150.82	161.67	21.04	23.47	0.96 %	0.61 %
70	109.91	117.95	130.82	142.23	16.79	18.95	1.48 %	0.98 %
75	93.95	102.44	108.69	120.08	12.89	14.74	2.49 %	1.74 %
80	76.31	84.72	85.74	96.39	9.46	10.96	4.47 %	3.21 %
85	58.84	66.25	64.31	73.21	6.67	7.77	8.24 %	6.13 %
Base	2705 x 1.05	2706 x 1.05	2705 x 1.05	2706 x 1.05				
Projection	964	965	964	965				

\* Rates and life expectancies in future years are determined by the MP-2020 projection scale.

Age	Benefit Increasing 3.0% Simple Annually	Portion of Age 60 Lives Still Alive	
		Male	Female
60	\$100.00	100%	100%
65	115.00	96%	98%
70	130.00	91%	94%
75	145.00	84%	89%
80	160.00	73%	81%
Ref		2705 x 1.05	2706 x 1.05

## Probabilities of Retirement for Members

Retirement Ages	% of Active Participants Retiring with Unreduced Benefits			
	Education		Support	
	Male	Female	Male	Female
48	8%	7%	8%	8%
49	8%	7%	8%	8%
50	8%	7%	8%	8%
51	8%	7%	8%	8%
52	8%	7%	8%	8%
53	8%	7%	8%	8%
54	8%	7%	8%	8%
55	8%	8%	8%	8%
56	10%	8%	8%	8%
57	10%	10%	8%	11%
58	10%	12%	8%	11%
59	14%	15%	8%	15%
60	17%	18%	13%	15%
61	24%	20%	13%	16%
62	27%	29%	28%	26%
63	27%	26%	25%	20%
64	27%	28%	25%	24%
65	60%	57%	57%	59%
66	60%	57%	47%	49%
67	50%	42%	44%	40%
68	45%	42%	44%	40%
69	45%	42%	44%	40%
70	45%	42%	44%	40%
71	45%	42%	44%	40%
72	45%	42%	44%	40%
73	45%	42%	44%	40%
74	45%	42%	44%	40%
75	100%	100%	100%	100%
Ref	3245	3246	3247	3248

These rates are based upon data presented in the 2015-2020 experience study and were first used in the 2021 valuation.



## Probabilities of Reduced Retirement for Members

Retirement Ages	% of Active Participants Retiring with Reduced Benefits			
	Education		Support	
	Male	Female	Male	Female
45	1.0%	1.0%	2.0%	3.0%
46	1.0%	1.0%	2.0%	3.0%
47	1.0%	1.0%	2.0%	3.0%
48	1.0%	1.0%	2.0%	3.0%
49	1.0%	1.0%	2.0%	3.0%
50	2.0%	2.0%	3.0%	4.0%
51	3.0%	2.0%	3.0%	4.0%
52	3.0%	3.0%	4.0%	4.0%
53	4.0%	4.0%	4.0%	4.0%
54	5.0%	4.0%	5.0%	4.0%
55	6.0%	5.0%	6.0%	4.0%
56	6.0%	5.0%	7.0%	6.0%
57	8.0%	5.0%	7.0%	6.0%
58	9.0%	6.0%	7.0%	6.0%
59	6.0%	6.0%	7.0%	6.0%
Ref	3249	3250	3251	3252

These rates are based upon data presented in the 2015-2020 experience study and were first used in the 2021 valuation.

## Duration of T-DROP for Members

Present T-DROP members are assumed to remain in T-DROP according to the following table:

Entry Age	Assumed Duration Years
50-56	7
57	6
58	5
59+	4

## T-DROP Participation

It was assumed that active members will participate in the T-DROP at the time in which entering the T-DROP would provide the highest value of benefits.

## Teachers Separations from Active Employment Before Age and Service Retirement

Sample Ages in 2024	Percent of Active Members Separating within the Next Year						
	Years of Service	Death *		Disability		Other	
		Male	Female	Male	Female	Male	Female
	0					17.00%	13.00%
	1					13.80%	11.30%
	2					11.30%	10.50%
	3					8.90%	8.30%
	4					6.30%	6.50%
25	5 & Up	0.03%	0.01%	0.02%	0.02%	5.80%	6.50%
30		0.05%	0.02%	0.02%	0.02%	4.20%	4.80%
35		0.07%	0.03%	0.02%	0.03%	2.90%	3.20%
40		0.09%	0.04%	0.04%	0.07%	2.00%	2.10%
45		0.11%	0.06%	0.13%	0.17%	1.70%	1.70%
50		0.14%	0.08%	0.31%	0.37%	1.60%	1.70%
55		0.21%	0.12%	0.61%	0.63%	1.60%	1.70%
60	0.32%	0.19%	0.82%	0.89%	1.50%	1.60%	
65	0.47%	0.28%	0.82%	0.89%	1.20%	1.30%	
Ref:						1364	1365
		2723 x 1.00	2724 x 1.00	1217 x 1	1218 x 1	1574	1575

\* Rates and life expectancies in future years are determined by the MP-2020 projection scale.

## Support Employees Separations from Active Employment Before Age and Service Retirement

Sample Ages in 2024	Percent of Active Members Separating within the Next Year						
	Years of Service	Death *		Disability		Other	
		Male	Female	Male	Female	Male	Female
	0					54.50%	48.50%
	1					29.90%	27.20%
	2					19.80%	19.00%
	3					15.50%	15.30%
	4					12.00%	12.80%
25	5 & Up	0.03%	0.01%	0.02%	0.01%	10.60%	9.90%
30		0.05%	0.02%	0.05%	0.03%	7.80%	7.00%
35		0.07%	0.03%	0.10%	0.04%	5.70%	5.10%
40		0.09%	0.04%	0.13%	0.08%	4.40%	4.30%
45		0.11%	0.06%	0.21%	0.16%	3.70%	4.00%
50		0.14%	0.08%	0.45%	0.33%	3.50%	3.90%
55		0.21%	0.12%	0.88%	0.61%	3.50%	3.70%
60		0.32%	0.19%	1.36%	0.79%	3.40%	3.20%
65	0.47%	0.28%	1.36%	0.79%	2.70%	2.50%	
Ref:						1366	1367
		2723 x 1.00	2724 x 1.00	1219 x 1	1220 x 1	1576	1577

\* Rates and life expectancies in future years are determined by the MP-2020 projection scale.

## Individual Pay Increases

Education			
Years of Service	Pay Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
1	2.50%	2.75%	5.25%
2	2.20%	2.75%	4.95%
3	1.90%	2.75%	4.65%
4	1.80%	2.75%	4.55%
5	1.70%	2.75%	4.45%
6	1.60%	2.75%	4.35%
7	1.50%	2.75%	4.25%
8	1.40%	2.75%	4.15%
9	1.30%	2.75%	4.05%
10	1.25%	2.75%	4.00%
11	1.20%	2.75%	3.95%
12	1.15%	2.75%	3.90%
13	1.10%	2.75%	3.85%
14	1.05%	2.75%	3.80%
15	1.00%	2.75%	3.75%
16	0.95%	2.75%	3.70%
17	0.85%	2.75%	3.60%
18	0.75%	2.75%	3.50%
19	0.65%	2.75%	3.40%
20	0.55%	2.75%	3.30%
21	0.50%	2.75%	3.25%
22	0.45%	2.75%	3.20%
23	0.40%	2.75%	3.15%
24	0.30%	2.75%	3.05%
25	0.20%	2.75%	2.95%
26	0.15%	2.75%	2.90%
27	0.10%	2.75%	2.85%
28	0.25%	2.75%	3.00%
29+	0.00%	2.75%	2.75%
Ref:	931		

Support			
Years of Service	Pay Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
1	3.00%	2.75%	5.75%
2	2.60%	2.75%	5.35%
3	1.60%	2.75%	4.35%
4	1.45%	2.75%	4.20%
5	1.35%	2.75%	4.10%
6	1.25%	2.75%	4.00%
7	1.20%	2.75%	3.95%
8	1.15%	2.75%	3.90%
9	1.10%	2.75%	3.85%
10	1.05%	2.75%	3.80%
11	1.00%	2.75%	3.75%
12	0.95%	2.75%	3.70%
13	0.90%	2.75%	3.65%
14	0.80%	2.75%	3.55%
15	0.75%	2.75%	3.50%
16	0.70%	2.75%	3.45%
17	0.65%	2.75%	3.40%
18	0.60%	2.75%	3.35%
19	0.50%	2.75%	3.25%
20	0.45%	2.75%	3.20%
21	0.40%	2.75%	3.15%
22	0.35%	2.75%	3.10%
23	0.30%	2.75%	3.05%
24	0.25%	2.75%	3.00%
25	0.25%	2.75%	3.00%
26	0.25%	2.75%	3.00%
27	0.25%	2.75%	3.00%
28	0.40%	2.75%	3.15%
29+	0.00%	2.75%	2.75%
Ref:	932		

# Miscellaneous and Technical Assumptions

## June 30, 2024

<b>Marriage Assumption:</b>	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male members are assumed to have a beneficiary three years younger and female members are assumed to have a beneficiary two years older.
<b>Pay Increase Timing:</b>	Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
<b>Decrement Timing:</b>	Decrements are assumed to occur mid-year, with the exception of normal and early retirement, which are assumed to occur at the beginning of the year. This implies that people who worked the entire school year are reported as active members even if they retired at the end of the year.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and the service nearest whole year on the date of the valuation.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability does not operate during the first 5 years of service. Disability and turnover do not operate during retirement eligibility.
<b>Normal Form of Benefit:</b>	The assumed normal form of benefit is the straight life form.
<b>Incidence of Contributions:</b>	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. The payroll used for this purpose is payroll for all active members plus payroll for members in the T-DROP and retirees who returned to work.
<b>Minimum Salary:</b>	The actuarial valuation reflects a minimum base salary for teachers of \$50,000 due to ACT 237, also known as the LEARNS Act
<b>Liability Adjustments:</b>	The liability calculations assume that the non-contributory and contributory multipliers for the first ten years of service are at the standard rate at the time the service is earned.
<b>Data Adjustments:</b>	Members whose dates of birth were not supplied were assumed to be 40 years old on the valuation date.  Members whose salaries were not supplied and that entered the T-DROP were assumed to have the group average pay of those with salary data as of the valuation that entered the T-DROP.

## **SECTION H**

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### **GLOSSARY**

## Glossary

**Accrued Service.** The service credited under the plan which was rendered before the date of the actuarial valuation.

**Accumulated Benefit Obligation.** The actuarial present value of vested and non-vested benefits based on service to date and past and current salary levels.

**Actuarial Accrued Liability.** The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability.”

**Actuarial Assumptions.** Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

**Actuarial Cost Method.** A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

**Actuarial Equivalent.** A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

**Actuarial Present Value.** The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Actuarial Present Value of Credited Projected Benefits or Pension Benefit Obligation.** The present value of future benefits based on service to date and the effect projected salary increases.

**Actuary.** A person who is trained in the applications of probability and compound interest to solve problems in business and finance that involve payment of money in the future, contingent upon the occurrence of future events. Most actuaries in the United States are Members of the American Academy of Actuaries. The Society of Actuaries is an international research, education and membership organization for actuaries in the life and health insurance, employee benefits, and pension fields. It administers a series of examinations leading initially to Associateship and the designation A.S.A. and ultimately to Fellowship with the designation F.S.A. The federal government certifies actuaries to practice under ERISA with the designation of E.A.

**Amortization.** Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

## Glossary

**Experience Gain (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

**Immunize.** Immunization is a risk-mitigation strategy that matches asset and liability duration so portfolio values are protected against interest rate changes.

**LDRM.** The Low-Default-Risk Obligation Measure (LDRM) is meant to approximately represent the lump sum cost to secure benefits by purchasing low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDRM is very dependent upon market interest rates at the time of the LDRM measurement. The lower the market interest rates, the higher the LDRM, and vice versa.

**Normal Cost.** The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

**Plan Termination Liability.** The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a “going concern” basis and is not normally determined in a routine actuarial valuation.

**Reserve Account.** An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

**Unfunded Actuarial Accrued Liability.** The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”

**Valuation Assets.** The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.





November 5, 2024

Mr. Mark White  
Executive Director  
Arkansas Teacher Retirement System  
1400 West Third  
Little Rock, Arkansas 72201

**Re: Report of June 30, 2024 Actuarial Valuation of Active and Inactive Members**

Dear Mr. White:

Enclosed are 15 copies of the report. If you need anything else, please call.

Sincerely,  
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "Judith A. Kermans". The signature is written in a cursive, flowing style.

Judith A. Kermans, EA, FCA, MAAA

JAK:rmn  
Enclosures

# Arkansas Teacher Retirement System

Annual Actuarial Valuation of Annuities Being Paid to  
Retirees and Beneficiaries

June 30, 2024



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November 12, 2024

Board of Trustees  
Arkansas Teacher Retirement System  
Little Rock, Arkansas

Dear Board Members:

Presented in this report are the results of the ***Annual Actuarial Valuation of annuities being paid to retirees and beneficiaries*** of the Arkansas Teacher Retirement System (ATRS).

The purpose of this document is to provide a summary of the liabilities of the System's retirees and beneficiaries. This is one of multiple documents comprising the actuarial results. Funding of the System's liabilities as well as calculations of the liabilities of active and inactive members is provided in a separate report. The other documents include the active and inactive valuation dated November 5, 2024 and the presentation (available in December).

***The date of the valuation*** was June 30, 2024 (using amounts payable as of July 1, 2024).

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the Retirement System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The valuation was based upon census data and financial information provided by the System's administrative staff. Preparation of this data requires considerable staff time. The helpful cooperation of the Arkansas Teacher Retirement System staff in furnishing the data is acknowledged with appreciation. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the data provided by ATRS.

This report was prepared using certain assumptions approved by the Board. The actuarial assumptions used for valuation purposes are summarized in the Appendix. These assumptions reflect experience during the period July 1, 2015 to June 30, 2020 and expectations for the future.

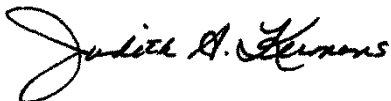
This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. The scope of an actuarial valuation does not contain an analysis of the potential range of such future measurements.

To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Arkansas Teacher Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. The actuarial assumptions used for the valuation produce results which, individually and in the aggregate, are reasonable. The combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e., not significantly optimistic or pessimistic).

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. Judith A. Kermans, Heidi G. Barry and Derek Henning are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The actuaries submitting this report are independent of the plan sponsor.

Respectfully submitted,  
Gabriel, Roeder, Smith & Company



Judith A. Kermans, EA, FCA, MAAA



Heidi G. Barry, ASA, FCA, MAAA



Derek Henning, ASA, EA, FCA, MAAA

JAK/HGB/DH:rl

## Comments

As expected, during the year ended June 30, 2024 the number of retired lives increased, as did the total amount being paid monthly to retired lives.

**The financing diagram** on page 6 shows the general pattern in which cash benefits increase (the green line). The schedule below shows how ATRS history illustrates the general pattern.

June 30	Retired Lives Receiving Benefits		
	No.	Annual Amounts (Millions)	% of Active Payroll
1967	3,846	\$ 6.27	
1972	5,453	11.08	
1977	7,524	23.96	
1982	8,828	36.64	
1987	10,526	66.45	10.0%
1992	12,033	115.50	10.7%
1997	14,233	194.90	15.0%
2002	19,199	334.15	20.5%
2003	20,271	359.98	21.4%
2004	21,428	386.23	22.1%
2005	22,680	415.04	21.1%
2006	24,153	449.77	21.6%
2007	25,611	484.55	22.1%
2008	26,801	515.56	22.7%
2009	28,818	564.59	23.5%
2010	30,587	612.77	24.8%
2011	32,099	657.08	23.3%
2012	34,160	709.17	25.3%
2013	36,254	763.76	27.1%
2014	38,478	822.19	28.8%
2015	40,748	916.62	31.9%
2016	43,095	983.87	34.1%
2017	45,092	1,044.74	35.8%
2018	46,824	1,099.35	36.8%
2019	48,677	1,146.74	37.9%
2020	50,133	1,194.82	38.8%
2021	51,405	1,242.70	38.8%
2022	52,748	1,293.75	39.0%
2023	54,646	1,346.62	38.6%
2024	56,177	1,403.75	38.9%

**A significant financial goal** for the Arkansas Teacher Retirement System was to reach a point in time where System assets fully covered the liabilities for future benefit payments to retirees and beneficiaries then on rolls. This goal was achieved in 1980 and retired life liabilities continue to be 100% funded.

# Subset of the Annual Actuarial Valuation of Active and Inactive Members

## Other Observations

### General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.25% on the actuarial value of assets), it is expected that:

- 1) The employer normal cost as a percentage of pay will remain approximately level;
- 2) The unfunded actuarial accrued liabilities will be fully amortized after 20 years; and
- 3) The funded status of the plan will increase gradually towards a 100% funded ratio.

### Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- 1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction.
- 2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
- 3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

### Limitations of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

## **FINANCIAL PRINCIPLES (SUBSET OF THE ANNUAL ACTUARIAL VALUATION OF ACTIVE AND INACTIVE MEMBERS)**

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## Financial Principles and Operational Techniques

**Promises Made and To Be Paid For.** As each year is completed, the System in effect hands an “IOU” to each member then acquiring a year of service credit. The “IOU” says: “The Arkansas Teacher Retirement System owes you one year’s worth of retirement benefits, payments in cash commencing when you qualify for retirement.”

The related *key financial questions* are:

**Which generation of taxpayers contributes the money to cover the IOU?**

**The present taxpayers**, who receive the benefit of the member’s present year of service?

**Or the future taxpayers**, who happen to be in Arkansas at the time the IOU becomes a cash demand?

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The financial objective of the ATRS is that this year’s taxpayers contribute the money to cover the IOUs being handed out this year so that **the employer contribution rate will remain approximately level from generation to generation** -- our children and our grandchildren will not have to contribute greater percents of pay than we contribute now. This objective was set forth in Act 793 of 1977.

(There are systems which have **a design for deferring contributions to future taxpayers**, lured by a lower contribution rate now and putting aside the fact that the contribution rate must then relentlessly grow much greater over decades of time -- consume now, and let your children face higher contribution rates after you retire.)

An inevitable byproduct of the level-cost design is the accumulation of reserve assets for decades and the income produced when the assets are invested. **Investment income** becomes the **third and largest contributor** for benefits to employees, and is interlocked with the contribution amounts required from employees and employers.

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

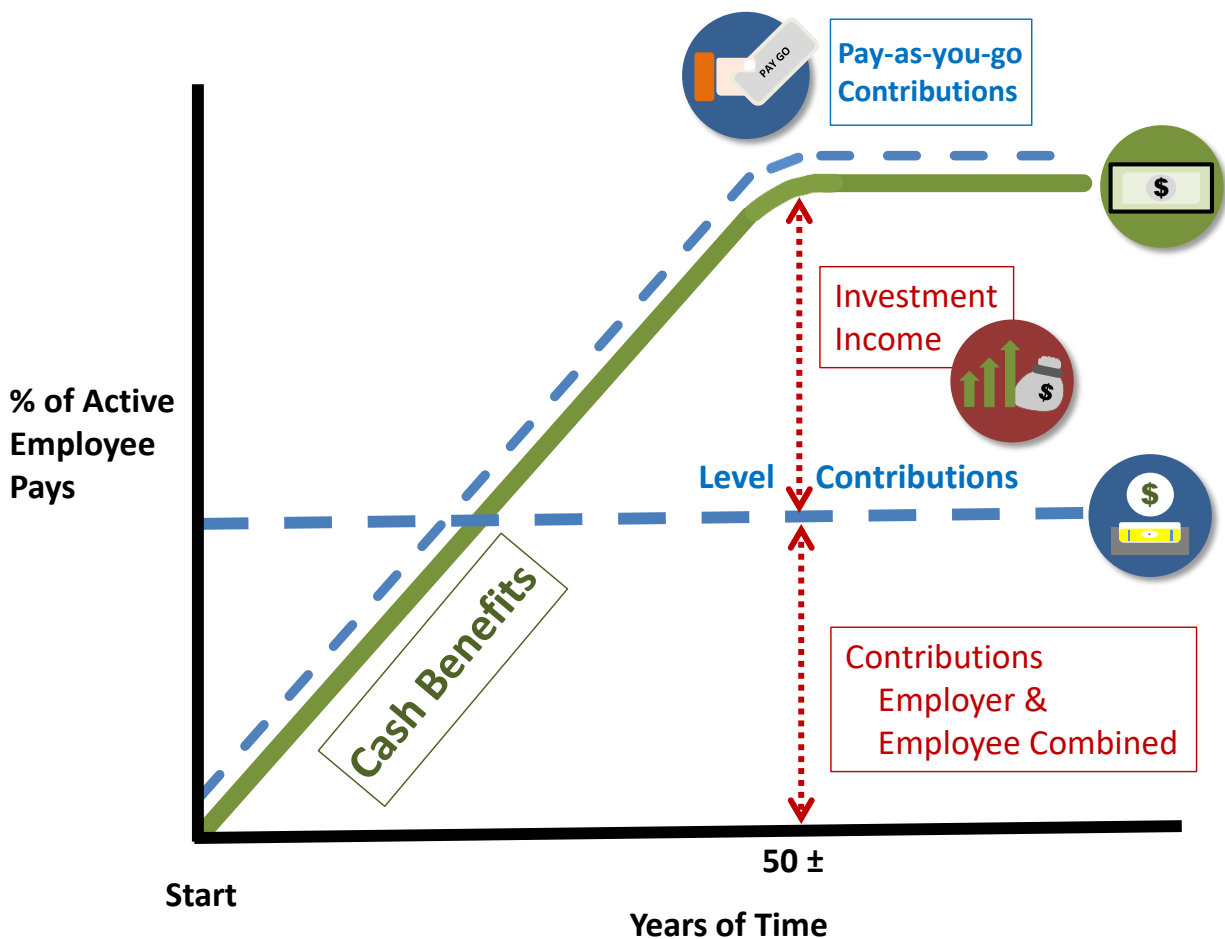
Normal Cost (the cost of members’ service being rendered this year)

... plus ...

Interest on Unfunded Actuarial Accrued Liabilities (unfunded accrued liabilities are the difference between (i) liabilities for service already rendered and (ii) the accrued assets of the plan).

**Computing Contributions to Support System Benefits.** From a given schedule of benefits and from the employee data and asset data furnished, the actuary determines the contribution rates to support the benefits, by means of **an actuarial valuation**. An actuarial valuation has a number of ingredients such as: the rate of investment income which plan assets will earn; the rates of withdrawal of active members who leave covered employment before qualifying for any monthly benefit; the rates of mortality; the rates of disability; the rates of pay increases; and the assumed age or ages at actual retirement. In an actuarial valuation, assumptions must be made as to what the above rates will be, for the next year and for decades in the future. Only the subsequent actual experience of the System can indicate the degree of accuracy of the assumptions.

**Reconciling Differences Between Assumed Experience and Actual Experience.** Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the accuracy of the assumptions or the skill of the actuary and the precision of the calculations made. The System copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continual adjustments in financial position.



**CASH BENEFITS LINE.** This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

**LEVEL CONTRIBUTION LINE.** Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

- **Economic Risk Areas**
  - Rates of investment return
  - Rates of pay increase
  - Changes in active member group size
- **Non-Economic Risk Areas**
  - Ages at actual retirement
  - Rates of mortality
  - Rates of withdrawal of active members (turnover)
  - Rates of disability

## Actuarial Valuation Process

*The financing diagram* on the preceding page shows the relationship between the two fundamentally different philosophies of paying for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program), and is thus an *increasing contribution method*; and the *level contribution method* which equalizes contributions between the generations.

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*The actuarial valuation* is the mathematical process by which the level contribution rate is determined, and the flow of activity constituting the valuation may be summarized as follows:

A. **Census data**, furnished by plan administrator

Retired lives now receiving benefits  
Former employees with vested benefits not yet payable  
Active employees

B. + **Asset data** (cash & investments), furnished by plan administrator

C. + **Benefit provisions** that establish eligibility and amounts of payments to members

D. + **Assumptions concerning future financial experience in various risk areas**, which assumptions are established by the Board of Trustees after consulting with the actuary

E. + **The funding method** for employer contributions (the long-term planned pattern for employer contributions)

F. + **Mathematically combining the assumptions, the funding method, and the data**

G. = Determination of:

**Plan financial position**, and/or  
**New Employer Contribution Rate**

## Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base. In a fixed rate plan with unfunded liabilities, a reduction in covered payroll can have a negative effect on the system as actual employer contributions are based on a lower than expected payroll;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected. Teacher shortages and reductions in school age populations may have an effect on the System other than expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

## Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures are discussed below and on the following pages. An additional historical summary of plan maturity measures can be found on page 11.

	2024	2023	2022	2021	2020
Ratio of the Market Value of Assets to Total Payroll	6.2	5.9	5.9	6.7	5.7
Ratio of Actuarial Accrued Liability to Payroll	7.3	7.3	7.4	7.5	7.6
Ratio of Actives to Retirees and Beneficiaries	1.3	1.3	1.4	1.4	1.4
Ratio of Net Cash Flow to Market Value of Assets	-3.2%	-3.3%	-1.0%*	-3.2%	-3.9%
Duration of the Present Value of Future Benefits	14.17	14.16	14.03	14.02	13.83

\* The net cash flow for 2022 includes \$507.4 million from the settlement of a lawsuit.

### Ratio of the Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. The market value of assets is currently 6.2 times the payroll indicating that a return on assets 2% different from assumed would equal approximately 12% of payroll. Such a change could affect the amortization period by approximately four years based on 2024 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.

### Ratio of Actuarial Accrued Liability to Payroll

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 7.3% of payroll and would affect the amortization period by two years based on the 2024 results.

### Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

### Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means benefits and expenses exceed contributions, and existing funds may be used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

## Plan Maturity Measures (Concluded)

### Duration of Present Value of Future Benefits

The modified 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 14.2 (which is based on a 7.25% discount rate) indicates that the present value of future benefits would increase approximately 14.2% if the assumed rate of return were lowered 1%. Such a change could affect the amortization period by 20 years or more.

### Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

## Plan Maturity Measures (Based on Market Value of Assets)

Valuation Date June 30	(1) Accrued Liabilities (AAL)	(2) Market Value of Assets	(3) Unfunded AAL (1)-(2)	(4) Valuation Payroll <sup>^</sup>	(5) % Change in Payroll	(6) Funded Ratio (2)/(1)	(7) Annuitant Liabilities (AnnLiab)	(8) AnnLiab/AAL (7)/(1)	(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 (14)/(2)	(16) Portfolio Rate of Return	(17) 10-year Trailing Average
2012	\$ 16,139	\$ 11,484	\$ 4,655	\$ 2,803		71.2%	\$ 7,649	47.4%	575.8%	409.7%			166.1%	\$ (285)	-2.5%	-1.1%	6.6%
2013#	16,718	12,830	3,888	2,819	0.6%	76.7%	8,181	48.9%	593.0%	455.1%			137.9%	(337)	-2.6%	14.9%	8.0%
2014	17,310	14,856	2,454	2,851	1.1%	85.8%	8,777	50.7%	607.2%	521.1%			86.1%	(395)	-2.7%	19.2%	8.2%
2015	18,136	15,036	3,100	2,874	0.8%	82.9%	9,778	53.9%	631.0%	523.1%			107.9%	(445)	-3.0%	4.3%	7.7%
2016	18,812	14,559	4,253	2,888	0.5%	77.4%	10,430	55.4%	651.3%	504.0%			147.3%	(505)	-3.5%	0.2%	6.3%
2017#*	20,298	16,285	4,013	2,922	1.2%	80.2%	11,337	55.9%	694.7%	557.4%			137.3%	(556)	-3.4%	16.0%	6.0%
2018	20,935	17,493	3,442	2,986	2.2%	83.6%	11,851	56.6%	701.1%	585.8%	12.7%	77.3%	115.3%	(607)	-3.5%	11.4%	7.6%
2019	21,709	17,742	3,967	3,027	1.4%	81.7%	12,460	57.4%	717.2%	586.1%	12.5%	76.3%	131.1%	(642)	-3.6%	5.2%	10.4%
2020	22,352	16,902	5,450	3,078	1.7%	75.6%	12,890	57.7%	726.2%	549.1%	12.5%	71.5%	177.1%	(665)	-3.9%	-1.0%	8.8%
2021*	23,987	21,469	2,518	3,205	4.1%	89.5%	13,596	56.7%	748.4%	669.8%	13.8%	92.1%	78.6%	(677)	-3.2%	31.7%	9.6%
2022	24,697	19,679	5,018	3,320	3.6%	79.7%	14,044	56.9%	743.8%	592.7%	13.7%	81.1%	151.1%	(192)	-1.0%	-7.5%	8.9%
2023	25,592	20,675	4,917	3,492	5.2%	80.8%	14,511	56.7%	732.9%	592.1%	13.9%	82.3%	140.8%	(689)	-3.3%	8.7%	8.3%
2024	26,356	22,359	3,997	3,612	3.4%	84.8%	14,992	56.9%	729.8%	619.1%	13.9%	86.1%	110.7%	(720)	-3.2%	11.8%	7.6%

(\*) 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.

(^) Includes payroll for return to work retirees.

(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 or an increased level of volatility in results.

(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 the past performance of the investment program. Of course, past performance is not a guarantee of future results. Some of the trailing averaged are distorted by the extraordinary events of 2008 and 2021.

# **BENEFIT PROVISIONS**

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# Summary of Benefit Provisions

## June 30, 2024

- 1. Post-Retirement Increases – A.C.A. §§ 24-7-713, 24-7-727 (compound COLA).** Each July 1, annuities are adjusted to be equal to the base annuity times 100% plus 3% for each full year in the period from the effective date of the base annuity to the current July 1. The base annuity is the amount of the member's annuity on the later of July 1, 2001 or the effective date of retirement. The July 1, 2009 cost of living adjustment for retirees was compounded. The annuity was set to 103% of the June 30, 2009 retirement benefit amount. After it was calculated on July 1, 2009, the base amount was reset to be the July 1, 2009 benefit amount. Future cost of living raises will be established by the new updated base amount. Future cost of living adjustments will be evaluated on an annual basis to determine if a simple or compound cost of living increase will be given, depending on the financial condition of the System.
- 2. Lump Sum Death Benefit – A.C.A. § 24-7-720.** Beneficiaries of deceased active members or retirees with 10 or more years of ATRS credited service are eligible to receive a lump sum death benefit of up to \$10,000. Resolution 2020-27 on September 28, 2021 set the minimum amount of the lump sum death benefit for all eligible members to six thousand six hundred sixty-seven dollars (\$6,667); retired members who retired on or before July 1, 2007 will receive an additional six hundred sixty-six dollars and sixty cents (\$666.60) for each contributory year of service credit up to the maximum amount of ten thousand dollars (\$10,000); and all other members will receive an additional three hundred thirty-three dollars and thirty cents (\$333.30) for each contributory year of service credit up to the maximum amount of ten thousand dollars (\$10,000).
- 3. Act 808 Retirement – A.C.A. § 24-4-732.** Any employee of a state agency who was an active member of the Arkansas Teacher Retirement System on April 8, 1987, and who qualified for retirement before January 1, 1988, could become a member of the Arkansas Public Employees Retirement System and retire from that system. All credited service was transferred to that system but the member's contributions were retained by the Arkansas Teacher Retirement System and the benefit amount is transferred monthly to the Arkansas Public Employees Retirement System. Each July 1, annuities are adjusted by 3% (compound escalator).
- 4. Act 793 Retirement – A.C.A. § 24-4-522.** Any employee who was a member of the rehabilitation services in 1977 was permitted to become a member of the Arkansas Public Employees Retirement System. Liabilities associated with prior service earned through June 30, 1978 remain in the Arkansas Teacher Retirement System. Future service is allocated to the Arkansas Public Employees Retirement System. Each July 1, annuities are adjusted by 3% (compound escalator).

## Summary of Benefit Provisions

### June 30, 2024

5. **Retiree Benefit Stipend – A.C.A. § 24-7-713.** Each retired member as of June 30, 2008, with 5 or more years of ATRS credited service receives a \$75 per month stipend. Members in T-DROP do not receive the \$75 per month stipend until actual retirement. For all members retiring on or after July 1, 2008, a minimum of 10 years of ATRS credited service is required to receive the \$75 per month stipend. The ATRS Board is allowed to set the stipend to a minimum of \$1 per month and a maximum of \$75 per month. By Board Resolution 2017-34 on November 13, 2017 the benefit stipend is removed from the base amount for all retirees and beneficiaries beginning in fiscal year 2019 and the benefit stipend will be reduced to \$50.00 for fiscal year 2020 and beyond. The Resolution contains a "hold harmless" provision that prevents the lowering of the stipend if it would actually reduce the total monthly benefit. This would only affect retirees when the COLA is less than \$25 per month.
6. **T-DROP Cash Balance Account.** Effective July 1, 2012, a T-DROP cash balance account was established that allows members exiting (retiring) from T-DROP to place all or a portion of their T-DROP proceeds into a Cash Balance Account (CBA) at ATRS. On November 13, 2017, by Resolution 2017-38 the Board set the CBA interest rate schedule based on years of participation as follows: 2.50% for year one, 2.75% for year two, 3.00% for year three, 3.25% for year four, 3.50% for year five, and 4.00% for year six and beyond. Each fiscal year, the Board can grant an incentive interest rate to encourage continued participation in the CBA program. For fiscal year 2024, the Board granted CBA participants an incentive rate of 0%, by Resolution 2023-38 on September 25, 2023.

7. **Optional Forms of Benefits – A.C.A. § 24-7-706:**

**Option 1 (Straight Life Annuity)**

A member will receive the maximum monthly benefit for which he/she qualifies, throughout his/her lifetime. No monthly benefits will be paid to his/her beneficiary after the member's death. Should a member die before he/she has drawn benefits in an amount equal to his/her contributions plus earned interest, the balance will be paid to a designated beneficiary. The designated beneficiary may be anyone chosen by the member.

**Option A (100% Survivor Annuity)**

Under this option a member will receive a reduced annuity throughout his/her lifetime. Upon the member's death, the designated beneficiary(ies) will receive (equal shares of) the same annuity for the balance of his/her lifetime.

**Option B (50% Survivor Annuity)**

Under this option a member will receive a reduced annuity throughout his/her lifetime. Upon the member's death, the designated beneficiary(ies) will receive (equal shares of) one-half (1/2) of this annuity for the balance of his/her lifetime.

## Summary of Benefit Provisions

### June 30, 2024

#### **Option C (Annuity for Ten Years Certain and Life Thereafter)**

A reduced monthly benefit payable for 120 months. After that time, or if the beneficiary dies prior to 120 months, a member's monthly allowance will revert to the amount he/she would have received under the regular plan and continue for life. If the member dies before receiving 120 payments, the designated beneficiary will receive a monthly benefit in the same amount until monthly benefits to both the member and the beneficiary equal 120 monthly payments. No further benefits are then payable to the beneficiary.

#### **Pop-Up Election**

Following the death of or a divorce from the member's designated beneficiary, his or her benefit reverts (pops-up) to the straight life annuity amount from the elected optional annuity amount. The member may then elect new beneficiaries in accordance with Arkansas Code and rules adopted by the ATRS board.

Option Factors are based upon a 5.0% interest rate and the PUB-2010 General Healthy Retiree/MP-2020 tables (generational projections using retirement year 2025) adjusted with a 50% unisex mix.

## Sample Benefit Computations for a Member Retiring July 1, 2024 with a Simple 3% COLA

Data for an example member is shown below.

Annual retirement benefit as of July 1, 2024 (excluding stipend): \$30,000

Projected benefits, taking into account increases after retirement would be:

Year Ended June 30	Annual Amount		
	Base	Current	\$ Increase
2025	\$30,000	\$30,000	\$ 0
2026	30,000	30,900	900
2027	30,000	31,800	900
2028	30,000	32,700	900
2029	30,000	33,600	900

Thereafter, the amount would increase by \$900 annually for life. Act 793 members and Act 808 members receive compound COLAs.

## **CHANGES IN PURCHASING POWER**

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## Benefit Changes During Recent Years of Retirement and Related Changes in Purchasing Power (1990 \$)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				1990 \$	% of 1990
1990	\$ ----	\$ 11,000	----	\$ 11,000	100%
1991	330	11,330	(4.7)%	10,822	98%
1992	1,005	12,335	(3.1)%	11,429	104%
1993	1,045	13,380	(3.0)%	12,036	109%
1994	1,082	14,462	(2.5)%	12,693	115%
1995	400	14,862	(3.0)%	12,660	115%
1996	400	15,262	(2.8)%	12,652	115%
1997	772	16,034	(2.3)%	12,993	118%
1998	481	16,515	(1.7)%	13,161	120%
1999	1,383	17,898	(2.0)%	13,989	127%
2000	1,129	19,027	(3.7)%	14,336	130%
2001	1,406	20,433	(3.2)%	14,911	136%
2002	807	21,240	(1.1)%	15,337	139%
2003	562	21,802	(2.1)%	15,417	140%
2004	562	22,364	(3.3)%	15,314	139%
2005	562	22,926	(2.5)%	15,312	139%
2006	562	23,488	(4.3)%	15,037	137%
2007	562	24,050	(2.7)%	14,994	136%
2008	562	24,612	(5.0)%	14,611	133%
2009	562	25,174	1.4 %	15,161	138%
2010	755	25,929	(1.1)%	15,453	140%
2011	778	26,707	(3.6)%	15,370	140%
2012	778	27,485	(1.7)%	15,558	141%
2013	778	28,263	(1.8)%	15,723	143%
2014	778	29,041	(2.1)%	15,828	144%
2015	778	29,819	(0.1)%	16,232	148%
2016	778	30,597	(1.0)%	16,491	150%
2017	778	31,375	(1.6)%	16,638	151%
2018	778	32,153	(2.9)%	16,575	151%
2019	751	32,904	(1.6)%	16,687	152%
2020+	451	33,355	(0.6)%	16,807	153%
2021	751	34,106	(5.4)%	16,306	148%
2022	751	34,857	(9.1)%	15,281	139%
2023	751	35,608	(3.0)%	15,160	138%
2024	751	36,359	(3.0)%	15,033	137%
2025	751	37,110			

\* The \$11,000 benefit used to begin this schedule is an arbitrary amount. A different beginning amount could show a different purchasing power amount, but the same in percent loss.

# Based on Consumer Price Index, All Urban Consumers, United States City Average (June values).

+ The Retiree Benefit Stipend was reduced by \$300 in FY 2020.

## Benefit Changes During Recent Years of Retirement and Related Changes in Purchasing Power (2000 \$)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				2000 \$	% of 2000
2000	\$ ----	\$ 11,600	----	\$ 11,600	100%
2001	1,003	12,603	(3.2)%	12,207	105%
2002	523	13,126	(1.1)%	12,579	108%
2003	372	13,498	(2.1)%	12,668	109%
2004	372	13,870	(3.3)%	12,605	109%
2005	372	14,242	(2.5)%	12,624	109%
2006	372	14,614	(4.3)%	12,417	107%
2007	372	14,986	(2.7)%	12,400	107%
2008	372	15,358	(5.0)%	12,100	104%
2009	372	15,730	1.4 %	12,573	108%
2010	472	16,202	(1.1)%	12,815	110%
2011	486	16,688	(3.6)%	12,746	110%
2012	486	17,174	(1.7)%	12,902	111%
2013	486	17,660	(1.8)%	13,039	112%
2014	486	18,146	(2.1)%	13,125	113%
2015	486	18,632	(0.1)%	13,460	116%
2016	486	19,118	(1.0)%	13,675	118%
2017	486	19,604	(1.6)%	13,797	119%
2018	486	20,090	(2.9)%	13,745	118%
2019	459	20,549	(1.6)%	13,831	119%
2020+	159	20,708	(0.6)%	13,848	119%
2021	459	21,167	(5.4)%	13,431	116%
2022	459	21,626	(9.1)%	12,582	108%
2023	459	22,085	(3.0)%	12,479	108%
2024	459	22,544	(3.0)%	12,371	107%
2025	459	23,003			

\* The \$11,600 benefit used to begin this schedule is an arbitrary amount. A different beginning amount could show a different purchasing power amount, but the same in percent loss.

# Based on Consumer Price Index, All Urban Consumers, United States City Average (June values).

+ The Retiree Benefit Stipend was reduced by \$300 in FY 2020.

## Benefit Changes During Recent Years of Retirement and Related Changes in Purchasing Power (2010 \$)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				2010 \$	% of 2010
2010	\$ ----	\$ 11,900	----	\$ 11,900	100%
2011	357	12,257	(3.6)%	11,836	99%
2012	357	12,614	(1.7)%	11,981	101%
2013	357	12,971	(1.8)%	12,108	102%
2014	357	13,328	(2.1)%	12,188	102%
2015	357	13,685	(0.1)%	12,499	105%
2016	357	14,042	(1.0)%	12,699	107%
2017	357	14,399	(1.6)%	12,812	108%
2018	357	14,756	(2.9)%	12,764	107%
2019	330	15,086	(1.6)%	12,837	108%
2020+	30	15,116	(0.6)%	12,780	107%
2021	330	15,446	(5.4)%	12,391	104%
2022	330	15,776	(9.1)%	11,605	98%
2023	330	16,106	(3.0)%	11,506	97%
2024	330	16,436	(3.0)%	11,403	96%
2025	330	16,766			

\* The \$11,900 benefit used to begin this schedule is an arbitrary amount. A different beginning amount could show a different purchasing power amount, but the same in percent loss.

# Based on Consumer Price Index, All Urban Consumers, United States City Average (June values).

+ The Retiree Benefit Stipend was reduced by \$300 in FY 2020.



## VALUATION DATA

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## Summary of Annuities Being Paid Retirees and Beneficiaries July 1, 2024 by Disbursing Account and Gender

Disbursing Account	Men		Women		Totals	
	No.	Annual Annuities	No.	Annual Annuities	No.	Annual Annuities
<b>RETIREMENT RESERVE ACCOUNT</b>						
Age & Service Annuities						
Retirees	10,955	\$303,715,679	39,748	\$ 997,133,272	50,703	\$1,300,848,951
Beneficiaries	466	10,574,304	1,111	28,347,398	1,577	38,921,702
Totals	11,421	314,289,983	40,859	1,025,480,670	52,280	1,339,770,653
Disability						
Retirees	508	8,258,414	2,109	34,237,426	2,617	42,495,840
Beneficiaries	145	2,377,307	141	2,683,346	286	5,060,653
Totals	653	10,635,721	2,250	36,920,772	2,903	47,556,493
Act 793	63	1,018,980	60	536,592	123	1,555,572
Retirement Reserve Account	12,137	325,944,684	43,169	1,062,938,034	55,306	1,388,882,718
Act 808 Retirement Reserve Account	15	1,067,493	8	312,245	23	1,379,738
<b>Total Retirement Reserve Account</b>	12,152	327,012,177	43,177	1,063,250,279	55,329	1,390,262,456
<b>SURVIVOR'S BENEFIT ACCOUNT</b>						
Beneficiaries of Deceased Members	441	6,693,653	407	6,796,577	848	13,490,230
<b>RETIREMENT SYSTEM TOTALS</b>						
<b>Total Annuities Being Paid</b>	<b>12,593</b>	<b>\$333,705,830</b>	<b>43,584</b>	<b>\$1,070,046,856</b>	<b>56,177</b>	<b>\$1,403,752,686</b>
Prior Year Totals	12,330	\$323,142,251	42,316	\$1,023,473,463	54,646	\$1,346,615,714
<b>Average Age</b>	<b>72.4</b>		<b>72.3</b>		<b>72.3</b>	

## Summary of Annuities Being Paid Retirees and Beneficiaries July 1, 2024 by Disbursing Account and Source of Financing

Disbursing Account	Annual Annuities		Total	
	Employee Financed	Employer Financed	No.	Annual Annuities
<b>RETIREMENT RESERVE ACCOUNT</b>				
Age & Service Annuities				
Retirees	\$ 67,871,697	\$ 1,232,977,254	50,703	\$ 1,300,848,951
Beneficiaries	297,785	38,623,917	1,577	38,921,702
Totals	68,169,482	1,271,601,171	52,280	1,339,770,653
Disability				
Retirees	1,241,502	41,254,338	2,617	42,495,840
Beneficiaries	127,305	4,933,348	286	5,060,653
Totals	1,368,807	46,187,686	2,903	47,556,493
Act 793	92,594	1,462,978	123	1,555,572
Retirement Reserve Account	69,630,883	1,319,251,835	55,306	1,388,882,718
Act 808 Retirement Reserve Account	51,592	1,328,146	23	1,379,738
Total Retirement Reserve Account	69,682,475	1,320,579,981	55,329	1,390,262,456
<b>SURVIVOR'S BENEFIT ACCOUNT</b>				
Beneficiaries of Deceased Members	379,801	13,110,429	848	13,490,230
<b>RETIREMENT SYSTEM TOTALS</b>				
<b>Total Annuities Being Paid</b>	<b>\$ 70,062,276</b>	<b>\$ 1,333,690,410</b>	<b>56,177</b>	<b>\$ 1,403,752,686</b>
Prior Year Totals	\$ 69,437,273	\$ 1,277,178,441	54,646	\$ 1,346,615,714

## Annuities Being Paid Retirees and Beneficiaries July 1, 2024 by Type of Annuity Being Paid

Type of Annuity	No.	Annual Amounts		
		Original Annuities	Base Annuities	Current Annuities
<b>RETIREMENT RESERVE ACCOUNT</b>				
Age & Service				
Option 1 (Basic single life)	41,319	\$ 674,115,602	\$ 751,382,658	\$1,027,112,303
Option A (Joint & 100% Survivor)	5,745	98,843,205	110,095,621	152,039,803
Option B (Joint & 50% Survivor)	2,797	64,254,084	73,757,700	102,144,498
Option C (10-year certain)	842	15,869,897	15,799,405	19,552,347
Beneficiaries	1,577	31,052,264	26,885,088	38,921,702
Totals	52,280	884,135,052	977,920,472	1,339,770,653
Disability				
Option 1	2,182	24,214,056	25,546,544	35,273,376
Option A	357	4,093,205	4,080,239	5,492,655
Option B	78	1,216,130	1,273,816	1,729,809
Option C	0	-	-	-
Beneficiaries	286	3,595,842	3,441,060	5,060,653
Totals	2,903	33,119,233	34,341,659	47,556,493
Act 793	123	705,677	1,555,572	1,555,572
Retirement Reserve Account	55,306	917,959,962	1,013,817,703	1,388,882,718
Act 808 Retirement Reserve Account	23	416,115	1,379,738	1,379,738
Total Retirement Reserve Account	55,329	918,376,077	1,015,197,441	1,390,262,456
<b>SURVIVOR'S BENEFIT ACCOUNT</b>				
Beneficiaries of Deceased Members				
Age 0-17	134	1,260,642	1,259,851	1,394,610
Age 18-23	74	692,381	691,367	789,881
Other	640	7,535,988	8,242,672	11,305,739
Totals	848	9,489,011	10,193,890	13,490,230
<b>RETIREMENT SYSTEM TOTALS</b>				
Total Annuities Being Paid	56,177	\$ 927,865,088	\$1,025,391,331	\$1,403,752,686

**The Original Annuity** is the annuity at the date of retirement (includes stipend).

**The Base Annuity** is the amount from which the 3.0% COLA is calculated.

**The Current Annuity** is the annuity payable at July 1, 2024 including the COLA granted on July 1.

**Annuities Being Paid July 1, 2024**  
**from the Retirement Reserve Account to**  
**AGE AND SERVICE Retirees and Beneficiaries**  
**by Attained Ages**

Attained Age	Annual Amounts			
	No.	Original Annuities	Base Annuities	Current Annuities
Under 40	11	\$ 194,268	\$ 164,609	\$ 222,941
40-44	4	110,351	92,043	121,656
45-49	18	311,612	300,938	326,817
50-54	419	12,922,360	12,650,193	13,764,299
55-59	1,322	37,629,138	37,133,753	43,511,196
60-64	6,663	126,159,186	126,563,447	155,258,965
65-69	11,705	208,317,355	214,339,695	278,468,400
70-74	12,614	212,571,578	230,930,577	322,816,663
75-79	10,219	161,996,901	188,201,559	275,344,718
80-84	5,544	78,269,868	99,418,742	148,192,667
85-89	2,522	32,325,433	45,062,329	67,302,853
90-94	966	10,721,097	17,670,703	26,399,511
95 & Up	273	2,605,905	5,391,884	8,039,967
<b>Totals</b>	<b>52,280</b>	<b>\$884,135,052</b>	<b>\$977,920,472</b>	<b>\$1,339,770,653</b>
<b>Avg. Age</b>	<b>72.3</b>			

Amounts in the Original Annuities column include the original \$900 Retiree Benefit Stipend. Amounts in the Base Annuities column exclude this amount for purposes of determining the COLA. Amounts in the Current Annuities column include the current \$600 Retiree Benefit Stipend.

**Annuities Being Paid July 1, 2024  
from the Retirement Reserve Account to  
DISABILITY Retirees and Beneficiaries by Attained Ages**

Attained Age	Annual Amounts			
	No.	Original Annuities	Base Annuities	Current Annuities
Under 40	8	\$ 83,419	\$ 79,006	\$ 92,739
40-44	30	366,972	351,072	390,336
45-49	99	1,292,947	1,239,421	1,448,398
50-54	182	2,592,585	2,477,637	2,915,487
55-59	334	4,668,770	4,457,508	5,472,043
60-64	518	5,761,346	5,461,351	7,258,756
65-69	580	6,378,868	6,130,037	8,696,992
70-74	496	5,115,433	5,273,187	7,906,117
75-79	388	4,175,840	4,972,866	7,507,900
80-84	186	2,015,871	2,659,790	4,003,975
85-89	53	491,092	795,538	1,195,925
90-94	23	142,570	349,360	525,343
95 & Up	6	33,520	94,886	142,482
<b>Totals</b>	<b>2,903</b>	<b>\$33,119,233</b>	<b>\$34,341,659</b>	<b>\$47,556,493</b>
<b>Avg. Age</b>	<b>66.8</b>			

Amounts in the Original Annuities column include the original \$900 Retiree Benefit Stipend. Amounts in the Base Annuities column exclude this amount for purposes of determining the COLA. Amounts in the Current Annuities column include the current \$600 Retiree Benefit Stipend.

**Annuities Being Paid July 1, 2024  
from the Retirement Reserve Account to  
ACT 793 Retirees and Beneficiaries by Attained Ages**

Attained Age	Annual Amounts		
	No.	Original Annuities	Current Annuities
Under 40	-	\$ -	\$ -
40-44	-	-	-
45-49	-	-	-
50-54	-	-	-
55-59	-	-	-
60-64	-	-	-
65-69	3	5,222	9,881
70-74	23	74,363	136,344
75-79	35	172,194	349,279
80-84	36	258,298	567,602
85-89	19	130,837	311,801
90-94	7	64,763	180,665
95 & Up	-	-	-
<b>Totals</b>	<b>123</b>	<b>\$705,677</b>	<b>\$1,555,572</b>
<b>Avg. Age</b>	<b>79.7</b>		

Base annuities are equal to current annuities since the COLA is compounded.

**Annuities Being Paid July 1, 2024  
from the Retirement Reserve Account to  
SURVIVOR BENEFICIARIES by Attained Ages**

Attained Age	Annual Amounts			
	No.	Original Annuities	Base Annuities	Current Annuities
Under 40	217	\$2,004,448	\$ 2,000,990	\$ 2,251,608
40-44	4	20,910	20,760	28,619
45-49	5	45,869	46,248	60,080
50-54	16	292,972	280,997	317,371
55-59	32	457,832	452,798	556,728
60-64	100	1,221,228	1,150,790	1,419,231
65-69	148	1,890,493	1,880,087	2,509,602
70-74	129	1,355,051	1,428,920	2,029,619
75-79	99	1,285,495	1,490,099	2,165,676
80-84	55	524,938	737,815	1,101,177
85-89	29	273,084	439,487	655,855
90-94	13	112,717	245,370	365,531
95 & Up	1	3,974	19,529	29,133
<b>Totals</b>	<b>848</b>	<b>\$9,489,011</b>	<b>\$10,193,890</b>	<b>\$13,490,230</b>
<b>Avg. Age</b>	<b>56.3</b>			

Amounts in the Original Annuities column include the original \$900 Retiree Benefit Stipend. Amounts in the Base Annuities column exclude this amount for purposes of determining the COLA. Amounts in the Current Annuities column include the current \$600 Retiree Benefit Stipend.



**Annuities Being Paid July 1, 2024  
from the ACT 808 Retirement Reserve Account to  
ACT 808 Retirees and Beneficiaries by Attained Ages**

Attained Age	Annual Amounts		
	No.	Original Annuities	Current Annuities
Under 40	-	\$ -	\$ -
40-44	-	-	-
45-49	-	-	-
50-54	-	-	-
55-59	-	-	-
60-64	-	-	-
65-69	-	-	-
70-74	-	-	-
75-79	-	-	-
80-84	-	-	-
85-89	7	153,070	540,640
90-94	12	199,498	688,309
95 & Up	4	63,547	150,789
<b>Totals</b>	<b>23</b>	<b>\$416,115</b>	<b>\$1,379,738</b>
<b>Avg. Age</b>	<b>91.7</b>		

Base annuities are the same as current annuities since the COLA is compounded.

## Retiree and Beneficiary Data as of June 30

Year	Estimated Number		Total Retirees*	Annual Allowances (Millions)	% Increase in Annual Allowances@	Average Annual Allowances
	Added	Removed				
1992	455	312	12,033	\$ 115.50	10.4%	\$ 9,599
1993	589	316	12,306	129.71	12.3%	10,540
1994	846	512	12,640	141.87	9.4%	11,224
1995	908	342	13,206	156.59	10.4%	11,857
1996	1,107	654	13,659	170.59	8.9%	12,489
1997	1,049	475	14,233	194.90	14.3%	13,694
1998	809	240	14,802	220.38	13.1%	14,888
1999	1,582	497	15,887	248.75	12.9%	15,658
2000	1,249	479	16,657	280.14	12.6%	16,818
2001	1,571	450	17,778	309.03	10.3%	17,383
2002	1,989	568	19,199	334.15	8.1%	17,404
2003	1,621	549	20,271	359.98	7.7%	17,758
2004	1,685	528	21,428	386.23	7.3%	18,025
2005	1,822	570	22,680	415.04	7.5%	18,300
2006	1,958	485	24,153	449.77	8.4%	18,622
2007	2,017	559	25,611	484.55	7.7%	18,920
2008	1,703	513	26,801	515.56	6.4%	19,237
2009	2,721	704	28,818	564.59	9.5%	19,591
2010	2,588	819	30,587	612.77	8.5%	20,034
2011	2,394	882	32,099	657.08	7.2%	20,470
2012	2,932	871	34,160	709.17	7.9%	20,760
2013	3,039	945	36,254	763.76	7.7%	21,067
2014	3,156	932	38,478	822.19	7.7%	21,368
2015	3,326	1,056	40,748	916.62	11.5%	22,495
2016	3,272	925	43,095	983.87	7.3%	22,830
2017	2,996	999	45,092	1,044.74	6.2%	23,169
2018	2,927	1,195	46,824	1,099.35	5.2%	23,478
2019	2,849	996	48,677	1,146.74	4.3%	23,558
2020	2,811	1,355	50,133	1,194.82	4.2%	23,833
2021	2,852	1,580	51,405	1,242.70	4.0%	24,175
2022	2,788	1,445	52,748	1,293.75	4.1%	24,527
2023	3,389	1,491	54,646	1,346.62	4.1%	24,643
2024	2,879	1,348	56,177	1,403.75	4.2%	24,988

\* T-DROP participants are classified as active members for purposes of the valuation and are not included in this schedule.

@ Upon actual retirement, T-DROP account balances may be paid in the form of an additional annuity – a “T-DROP Annuity.” Annual annuities shown include T-DROP annuities beginning in 2015.

**REPORTED ASSETS**

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## Reported Assets

**The assets** of the Retirement System, as of June 30, 2024, were reported to your actuary to be \$22,359,231,384. This amount, reduced by a funding value adjustment of \$49,901,426 this year, is used to finance the Retirement System liability.

Accounts	Assets as of June 30	
	2024	2023
Regular Accounts		
Members' Deposit Accounts		
Contributions	\$ 1,830,533,728	\$ 1,718,903,627
Interest	13,013,551,141	11,599,922,370
Total	14,844,084,869	13,318,825,997
T-DROP Member Deposit Accounts		
Contributions	32,961,427	32,472,783
Interest	17,836,421	18,548,379
Total	50,797,848	51,021,162
Cash Balance Account	240,202,392	226,279,957
Employer's Accumulation Account	(7,498,915,914)	(7,256,480,855)
Retirement Reserve Account	14,288,978,608	13,886,819,183
Act 808 Retirement Reserve Account	5,192,191	6,235,877
T-Lump Sum Payable	299,014,864	320,171,587
Survivors Benefit Account	119,259,431	112,186,981
Total Regular Accounts	22,348,614,289	20,665,059,889
Other Accounts		
Income Expense Account	10,617,095	9,992,029
Other Special Reserves	-	-
Miscellaneous	-	-
Total Other Accounts	10,617,095	9,992,029
Total Accounting Value of Assets	22,359,231,384	20,675,051,918
Funding Value Adjustment	(49,901,426)	339,856,905
Funding Value of Assets	\$ 22,309,329,958	\$ 21,014,908,823

## **VALUATION RESULTS**

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## Liabilities for Annuities Being Paid July 1, 2024 Tabulated by Type of Annuity Being Paid

Type of Annuity	Liabilities July 1, 2024		
	Men	Women	Totals
<b>RETIREMENT RESERVE ACCOUNT</b>			
Age & Service Annuities			
Option 1 (Straight Life)	\$ 1,745,026,970	\$ 8,606,168,394	\$10,351,195,364
Option A (100% Joint & Survivor)	885,523,315	1,032,012,123	1,917,535,438
Option B ( 50% Joint & Survivor)	425,602,089	711,408,530	1,137,010,619
Option C (10 Years Certain & Life)	53,211,808	204,917,187	258,128,995
Beneficiaries	80,648,376	232,260,831	312,909,207
<b>Total Age &amp; Service</b>	<b>3,190,012,558</b>	<b>10,786,767,065</b>	<b>13,976,779,623</b>
Disability Annuities			
Option 1	51,681,690	292,428,393	344,110,083
Option A	27,167,139	48,776,449	75,943,588
Option B	7,026,897	12,539,721	19,566,618
Option C	-	-	-
Beneficiaries	21,926,211	25,472,360	47,398,571
<b>Total Disability</b>	<b>107,801,937</b>	<b>379,216,923</b>	<b>487,018,860</b>
Act 793	6,500,750	4,431,239	10,931,989
Retirement Reserve Account	3,304,315,245	11,170,415,227	14,474,730,472
Act 808 Retirement Reserve Account	4,141,313	1,054,833	5,196,146
<b>Total Retirement Reserve Account</b>	<b>3,308,456,558</b>	<b>11,171,470,060</b>	<b>14,479,926,618</b>
<b>SURVIVORS' BENEFIT ACCOUNT</b>			
Beneficiaries of Deceased Members	58,710,971	63,503,585	122,214,556
<b>RETIREMENT SYSTEM TOTALS</b>			
Total Annuity Liabilities	3,367,167,529	11,234,973,645	14,602,141,174
Cash Benefit Account Liabilities			240,202,392
Liabilities for Lump Sum Death Benefits			150,053,843
<b>Total</b>	<b>\$ 3,367,167,529</b>	<b>\$11,234,973,645</b>	<b>\$14,992,397,409</b>

## Annual Reserve Transfers

The annual accounting transfers listed below are recommended so that retired life accounts will be fully funded as of the valuation date.

Reserve Account	June 30, 2024 Balance Reported	Transfer Amount	June 30, 2024 Balance After Transfer
Retiree Accounts			
RRA	\$ 14,288,978,608	\$ 185,751,864	\$ 14,474,730,472
808 RRA	5,192,191	3,955	5,196,146
SBA	119,259,431	2,955,125	122,214,556
Total Retiree Accounts	14,413,430,230	188,710,944	14,602,141,174
EAA	(7,498,915,914)	(188,710,944)	(7,687,626,858)
<b>Total</b>	<b>\$ 6,914,514,316</b>	<b>\$ -</b>	<b>\$ 6,914,514,316</b>

Lump sum death benefits for retirees are paid from the Employer Accumulation Account and are not included in the figures shown in this report. The actuarial accrued liabilities for lump sum death benefits for retirees are currently \$150.1 million. The Cash Balance Account includes an additional \$240.2 million of retiree liabilities and is not included in the schedule above. No reserve transfers are required for this account.

## Retirement Reserve Account

### Comparative Statement of Annuities, Accrued Liabilities and Assets (\$ Millions)

Valuation Date June 30	Annual Annuities Being Paid			Average	Computed Liabilities	Applicable Assets	Unfunded Retired Life Liabilities	Ratio of Assets to Liabilities
	No.	Amount	% Incr.					
1980*#	8,001	\$ 30.10	3.5%	\$ 3,761	\$ 280.70	\$ 280.7	none	100.0%
1985*+	9,331	51.49	13.6%	5,518	479.9	479.9	none	100.0%
1990	11,054	87.84	7.2%	7,946	847.7	847.7	none	100.0%
1995	12,622	150.45	10.8%	11,920	1,428.6	1,428.6	none	100.0%
2000* ##	16,172	275.65	14.6%	17,045	2,828.8	2,828.8	none	100.0%
2005	22,147	409.42	7.5%	18,486	4,148.1	4,148.1	none	100.0%
2006	23,606	443.98	8.4%	18,808	4,483.4	4,483.4	none	100.0%
2007	25,038	478.30	7.7%	19,103	4,816.4	4,816.4	none	100.0%
2008	26,258	509.29	6.5%	19,396	5,391.3	5,391.3	none	100.0%
2009	28,228	557.83	9.5%	19,762	5,891.9	5,891.9	none	100.0%
2010	29,969	605.55	8.6%	20,206	6,358.0	6,358.0	none	100.0%
2011^	31,498	649.47	7.3%	20,619	6,972.6	6,972.6	none	100.0%
2012	33,533	701.09	7.9%	20,907	7,481.0	7,481.0	none	100.0%
2013	35,622	755.26	7.7%	21,202	8,004.8	8,004.8	none	100.0%
2014	37,824	813.33	7.7%	21,503	8,561.9	8,561.9	none	100.0%
2015@	40,070	907.09	11.5%	22,638	9,515.7	9,515.7	none	100.0%
2016	42,395	973.78	7.4%	22,969	10,157.2	10,157.2	none	100.0%
2017* ^	44,394	1,034.17	6.2%	23,295	11,026.4	11,026.4	none	100.0%
2018	46,108	1,088.30	5.2%	23,603	11,515.7	11,515.7	none	100.0%
2019	47,979	1,137.79	4.5%	23,714	12,094.6	12,094.6	none	100.0%
2020	49,365	1,182.98	4.0%	23,964	12,494.4	12,494.4	none	100.0%
2021^	50,633	1,230.58	4.0%	24,304	13,163.2	13,163.2	none	100.0%
2022	51,944	1,281.16	4.1%	24,664	13,580.5	13,580.5	none	100.0%
2023	53,809	1,333.49	4.1%	24,782	14,019.7	14,019.7	none	100.0%
2024	55,329	1,390.26	4.3%	25,127	14,479.9	14,479.9	none	100.0%

\* After plan amendments.

# After change in interest assumption from 6.0% to 7.0%, change in post-retirement adjustments from 1.5% to 3.0% and recommended reserve transfer.

+ After redetermination of base, retroactive application of new minimum benefit formula and reserve transfers.

## Includes Act 808 and Act 793 retirees beginning in 2000.

^ After changes in assumptions.

@ Upon actual retirement, T-DROP account balances maybe paid in the form of an additional annuity – a “T-DROP Annuity.” Annual annuities shown include T-DROP annuities beginning in 2015.



## Survivors' Benefit Account Accrued Liabilities and Assets Comparative Statement

Valuation Date June 30	Annual Annuities Being Paid		Computed Liabilities	Applicable Assets	Unfunded Accrued Liabilities	Ratio of Assets to Liabilities
	No.	Amount				
1980*#	393	\$ 772,631	\$ 7,042,644	\$ 7,042,644	none	100.0%
1985*+	421	1,240,399	12,411,800	12,411,800	none	100.0%
1990	424	1,830,743	18,117,244	18,117,244	none	100.0%
1995	416	2,723,940	26,220,218	26,220,218	none	100.0%
2000*	485	4,487,519	43,701,138	43,701,138	none	100.0%
2005	533	5,619,675	56,257,745	56,257,745	none	100.0%
2006	547	5,791,974	57,605,939	57,605,939	none	100.0%
2007	573	6,250,603	63,481,565	63,481,565	none	100.0%
2008	543	6,269,551	66,496,539	66,496,539	none	100.0%
2009	590	6,761,034	70,857,161	70,857,161	none	100.0%
2010	618	7,224,585	75,108,334	75,108,334	none	100.0%
2011^	601	7,605,212	81,150,385	81,150,385	none	100.0%
2012	627	8,081,913	84,930,745	84,930,745	none	100.0%
2013	632	8,491,667	88,139,802	88,139,802	none	100.0%
2014	654	8,861,734	89,793,996	89,793,996	none	100.0%
2015	678	9,530,889	95,272,795	95,272,795	none	100.0%
2016	700	10,084,359	98,960,258	98,960,258	none	100.0%
2017* ^	698	10,574,602	104,668,995	104,668,995	none	100.0%
2018	716	11,042,074	107,043,067	107,043,067	none	100.0%
2019	741	11,313,962	106,306,434	106,306,434	none	100.0%
2020	768	11,843,667	108,528,929	108,528,929	none	100.0%
2021^	772	12,116,736	113,740,676	113,740,676	none	100.0%
2022	804	12,596,386	115,961,127	115,961,127	none	100.0%
2023	837	13,120,866	119,954,069	119,954,069	none	100.0%
2024	848	13,490,230	122,214,556	122,214,556	none	100.0%

\* Includes plan amendments.

# After change in interest assumption from 6.0% to 7.0%, change in post-retirement adjustments from 1.5% to 3.0% and recommended reserve transfer.

+ After redetermination of base annuity, retroactive application of new minimum benefit formula and recommended reserve transfer.

^ After changes in assumptions.

## Annual Allowances of Retired Lives by Year of Retirement as of June 30, 2024

Calendar Year of Retirement	No.	Annual Amount Being Paid			Average
		Original	Total Increase	Current	
2024*	660	\$ 8,240,864	\$ 449,516	\$ 8,690,380	\$13,167
2023	2,836	51,340,213	5,779,181	57,119,394	20,141
2022	3,208	50,905,340	7,393,020	58,298,360	18,173
2021	2,667	47,382,648	9,505,342	56,887,990	21,330
2020	2,680	45,425,834	10,248,893	55,674,727	20,774
2019	2,682	43,623,965	11,567,251	55,191,216	20,578
2018	2,663	44,564,105	12,917,684	57,481,789	21,585
2017	2,681	44,575,501	15,467,547	60,043,048	22,396
2016	2,721	44,769,569	17,082,927	61,852,496	22,732
2015	2,899	48,109,208	19,975,591	68,084,799	23,486
2014	2,827	48,371,690	21,864,417	70,236,107	24,845
2013	2,596	44,648,399	22,034,671	66,683,070	25,687
2012	2,521	41,805,187	22,246,451	64,051,638	25,407
2011	2,263	37,731,530	20,943,341	58,674,871	25,928
2010	1,901	31,855,299	20,088,923	51,944,222	27,325
2009	1,947	33,165,754	22,009,849	55,175,603	28,339
2008	1,871	30,354,804	19,782,920	50,137,724	26,797
2007	1,732	27,938,484	18,656,042	46,594,526	26,902
2006	1,491	24,475,828	17,842,218	42,318,046	28,382
2005	1,468	24,545,590	20,017,893	44,563,483	30,357
2004	1,284	20,543,740	16,287,295	36,831,035	28,685
2003	1,142	18,170,277	15,225,005	33,395,282	29,243
2002	1,067	17,386,174	14,548,194	31,934,368	29,929
2001	1,014	15,736,313	13,540,448	29,276,761	28,873
2000	912	15,389,013	13,971,645	29,360,658	32,194
1999	761	11,879,390	12,267,367	24,146,757	31,730
1998	710	10,447,122	11,255,213	21,702,335	30,567
1997	521	8,585,606	9,879,933	18,465,539	35,442
1996	386	6,682,583	8,046,494	14,729,077	38,158
1995	429	7,014,323	8,725,050	15,739,373	36,689
1994	408	6,713,162	9,136,228	15,849,390	38,847
1993	281	4,911,796	6,954,987	11,866,783	42,231
1992	162	2,170,495	3,381,390	5,551,885	34,271
1991	120	1,552,902	2,362,773	3,915,675	32,631
1990	131	1,421,474	2,731,578	4,153,052	31,703
Before 1989	535	5,430,906	11,700,321	17,131,227	32,021
<b>TOTAL</b>	<b>56,177</b>	<b>\$927,865,088</b>	<b>\$475,887,598</b>	<b>\$1,403,752,686</b>	<b>\$24,988</b>

\* Reporting for calendar year 2024 is not yet complete. The July 1<sup>st</sup> retirees are not included in the schedule.



## **APPENDIX**

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## APPENDIX

### Single Life Retirement Values Based on PubG-2010 Mortality Amount-Weighted Tables Adjusted Using MP-2020 Projection Scale and 7.25% Interest

Sample Attained Ages in 2024*	Present Value of \$1.00 Monthly for Life		Present Value of \$1 Monthly for Life Increasing 3.0% Annually		Future Life Expectancy (Years)		Percent Dying within Next Year	
	Men	Women	Men	Women	Men	Women	Men	Women
40	\$160.03	\$162.55	\$213.61	\$218.42	45.45	48.45	0.09 %	0.05 %
45	155.66	158.89	205.22	211.11	40.21	43.16	0.13 %	0.07 %
50	149.99	154.08	194.84	202.00	35.10	37.99	0.29 %	0.22 %
55	143.10	148.30	182.69	191.30	30.23	33.04	0.43 %	0.30 %
60	134.34	140.66	168.05	177.99	25.52	28.19	0.66 %	0.42 %
65	123.42	130.67	150.82	161.67	21.04	23.47	0.96 %	0.61 %
70	109.91	117.95	130.82	142.23	16.79	18.95	1.48 %	0.98 %
75	93.95	102.44	108.69	120.08	12.89	14.74	2.49 %	1.74 %
80	76.31	84.72	85.74	96.39	9.46	10.96	4.47 %	3.21 %
85	58.84	66.25	64.31	73.21	6.67	7.77	8.24 %	6.13 %
Base	2705 x 1.05	2706 x 1.05	2705 x 1.05	2706 x 1.05				
Projection	964	965	964	965				

\* Rates and life expectancies in future years are determined by the MP-2020 projection scale.

Age	Benefit Increasing 3.0% Yearly	Portion of Age 60 Lives Still Alive	
		Men	Women
60	\$100.00	100%	100%
65	115.00	96%	98%
70	130.00	91%	94%
75	145.00	84%	89%
80	160.00	73%	81%
Ref		2705 x 1.05	2706 x 1.05

The above chart is an illustration for a member who retires at age 60 in 2024.



November 12, 2024

Mr. Mark White  
Executive Director  
Arkansas Teacher Retirement System  
1400 West Third Street  
Little Rock, Arkansas 72201

**Re: Report of the June 30, 2024 Actuarial Valuation of Retirees and Beneficiaries**

Dear Mr. White:

Attached is a copy of this report. Please let us know if anything else is needed.

Sincerely,  
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "Judith A. Kermans". The signature is written in a cursive, flowing style.

Judith A. Kermans, EA, FCA, MAAA

JAK:rl  
Enclosures

# STATEMENT OF FINANCIAL INTEREST

**State/District officials file with:**

John Thurston, Secretary of State  
500 Woodlane Street  
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 8- GUARANTOR OR CO-MAKER**

List each guarantor or co-maker who has guaranteed a debt of yours that is still outstanding. (This includes debt guarantors arising or extended and refinanced after Jan. 1, 1989. Members of your family who are your guarantors are not required to be disclosed.)

a) \_\_\_\_\_  
(name)  
\_\_\_\_\_  
(address)

b) \_\_\_\_\_  
(name)  
\_\_\_\_\_  
(address)

**SECTION 9- GIFTS**

List the source, date, description, and a reasonable estimate of the fair market value of each gift of more than \$100 received by you or your spouse and of each gift of more than \$250 received by your dependent children. The term “gift” is defined as “any payment, entertainment, advance, services, or anything of value unless consideration of equal or greater value has been given therefor.” There are a number of exceptions to the definition of “gift.” Those exceptions are set forth in the Instructions for Statement of Financial Interest prepared for use with this form. (Note: The value of an item shall be considered to be less than \$100 if the public servant reimburses the person from whom the item was received any amount over \$100 and the reimbursement occurs within ten (10) days from the date the item was received.)

a) \_\_\_\_\_  
(description of gift)  
\_\_\_\_\_  
(date) (fair market value)  
\_\_\_\_\_  
(source of gift)

b) \_\_\_\_\_  
(description of gift)  
\_\_\_\_\_  
(date) (fair market value)  
\_\_\_\_\_  
(source of gift)

c) \_\_\_\_\_  
(description of gift)  
\_\_\_\_\_  
(date) (fair market value)  
\_\_\_\_\_  
(source of gift)

d) \_\_\_\_\_  
(description of gift)  
\_\_\_\_\_  
(date) (fair market value)  
\_\_\_\_\_  
(source of gift)

e) \_\_\_\_\_  
(description of gift)  
\_\_\_\_\_  
(date) (fair market value)  
\_\_\_\_\_  
(source of gift)

**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, tel. (501) 324-9600 or the **Secretary of State, Elections Division**, State Capitol, Room 026, Little Rock, Arkansas 72201, tel. (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.

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<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 10 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.

**REVISED 12/2017**

# 2025 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
<b>February 3, 2025</b>	<b>8:30 a.m.*</b>	<b>9:00 a.m.*</b>	<b>10:30 a.m.*</b>	<b>11:00 a.m.*</b>
<b>April 7, 2025</b>	<b>8:30 a.m.*</b>	<b>9:00 a.m.*</b>	<b>10:30 a.m.*</b>	<b>11:00 a.m.*</b>
<b>June 2, 2025</b>	<b>8:30 a.m.*</b>	<b>9:00 a.m.*</b>	<b>10:30 a.m.*</b>	<b>11:00 a.m.*</b>
<b>July 21, 2025 Educational Training</b>	<b>9:00 a.m.</b>			
<b>September 29, 2025</b>	<b>8:30 a.m.*</b>	<b>9:00 a.m.*</b>	<b>10:30 a.m.*</b>	<b>11:00 a.m.*</b>
<b>December 1, 2025</b>	<b>8:30 a.m.*</b>	<b>9:00 a.m.*</b>	<b>10:30 a.m.*</b>	<b>11:00 a.m.*</b>

**NCTR Annual Trustee Workshop: July 13-16, 2025, Williamsburg, Virginia**

**NCTR 102<sup>nd</sup> Annual Conference: October 4-7, 2025, Salt Lake City, Utah.**

**\*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.**



## 2025 Board of Trustees Elections Timeline

Vendor Contract No. 4600053938

- |  |                            |
|--|----------------------------|
| <p><b>a. Receive confirmation that the vendor agrees to perform the election under the contract terms.</b><br/>Once estimate for the quantity of voters is received , request a formal quote/estimate from SourceOne under contract #4600053938. The quote should list the positions, their respective eligible voter quantity, the unit cost, and total estimated cost for services. Under this contract, the unit cost is set at \$0.37 per eligible voter if using 8.5" x 11" paper (\$0.38 if using 8.5" x 14").</p>                 | <p>October 2024</p>        |
| <p><b>b. Receive ATRS Director approval of the estimated cost of the election.</b> After a quote has been received, please fill out an IPR that tabulates the expected cost, attach to the quote, and forward to the Director for approval. Under this contract, postage is billed separately at actual postage costs; therefore, <u>postage may or may not be included in the estimate and IPR approval.</u> All postage invoices received from the election services vendor will be forwarded to the Director for approval to pay.</p> | <p>October, 2024</p>       |
| <p><b>c. Receive approval from Fiscal to begin services.</b><br/>When you forward the approved IPR and quote to Fiscal, Please ask Fiscal for written approval to begin working with the vendor on the election. Typically, Fiscal would issue a purchase order that authorizes the start of services; however, due to AASIS restrictions, Fiscal may opt to give written approval to continue. In this case, the purchase order would be created after the election services invoice has been received.</p>                             | <p>October, 2024</p>       |
| <p>Submit Public Notice to Arkansas Democrat Gazette for publication:</p>  | <p>December 5, 2024</p>    |
| <p>Public Notice published in Dem/Gaz. for five (5) consecutive days:</p>  | <p>December 7-11, 2024</p> |
| <p>Post Public Notice on ATRS website:</p>   | <p>December 5, 2024</p>    |
| <p>Email courtesy copy of Public Notice to:<br/>AEA<br/>ARTA<br/>AAEA<br/>ASEA</p>   | <p>December 5, 2024</p>    |

Deadline for Nomination Petitions to be submitted to ATRS:	January 10, 2025
ALC Review – Election Vendor	TBD
ALC Meeting – Election Vendor	TBD
Effective date of Election Vendor Contract	TBD
Submit all published ballots to Vendor	March 1, 2025
Ballots mailed:	March 15, 2025
Deadline for Ballots to be returned:	April 15, 2025
Results Certified/ Winners declared and put on ATRS website:	April 20, 2025
Winner assumes office:	July 1, 2025
<b><i>If needed:</i></b>	
Run-off ballots mailed:	May 1, 2025
Deadline for Run-off Ballots to be returned:	June 1, 2025
Results Certified/ Winner declared and put on ATRS website:	June 6, 2025
Winner assumes office:	July 1, 2025

**Waiver of Employer Report Penalties 2024**  
**December 2, 2024 Board Meeting**  
A.C.A. Sec. 24-7-411

<b>Employer Penalties Waived</b>	
Employer #01355	\$600.00
Employer #01343	\$600.00
Employer #00132	\$150.00
Employer #02049	\$300.00
<b>TOTAL PENALTIES WAIVED</b>	<b>\$1,650.00</b>
Employer #02049	\$6.93
<b>TOTAL INTEREST WAIVED</b>	<b>\$6.93</b>
<b>TOTAL PENALTIES AND INTEREST WAIVED</b>	<b>\$1,656.93</b>

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

**RESOLUTION**  
**No. 2024-41**

**Waiver of Employer Late Fees and Interest Penalties**

---

**WHEREAS**, Arkansas Code § 24-7-411(a)(1) authorizes the Arkansas Teacher Retirement System (“ATRS” or “System”) to impose an interest penalty when a covered employer fails to timely remit money to ATRS as required by law or rule; and

**WHEREAS**, Arkansas Code § 24-7-411(b)(1) authorizes ATRS to impose late fees as a penalty when a covered employer fails to timely file with the System a report required by the Board of Trustees of the Arkansas Teacher Retirement System (“Board”); and

**WHEREAS**, ATRS Rule 7-106(c)(2)(B) prohibits one (1) or more interest penalties assessed against a covered employer from being waived if the amount of interest penalties assessed against the covered employer will exceed one thousand dollars (\$1,000) for the fiscal year; and

**WHEREAS**, Arkansas Code § 24-7-411(c) provides that the Board or its designee may waive penalties and interest if the Board or its designee determines that the covered employer’s failure to remit money or submit a report to the System was not the result of the covered employer’s nondisclosure, fraud, or misrepresentation and requiring payment by the covered employer under the circumstances would be unduly penal, burdensome, or result in a manifest injustice; and

**WHEREAS**, covered employer 02007 (“Covered Employer”) failed to file reports with the System in September 2024 and was assessed penalties in the amount of six hundred dollars (\$600), which combined with other assessed penalties exceeds one thousand dollars (\$1,000) for fiscal year 2024-2025; and

**WHEREAS**, Covered Employer has requested a waiver of the assessed penalty of six hundred dollars (\$600) explaining that the failure to timely remit the reports to the System was due to receiving incorrect information concerning the reporting deadline from a former employee of the Covered Employer.

**NOW, THEREFORE, BE IT RESOLVED**, that the Board finds that the Covered Employer’s failure to timely file reports with the System was not the result of the Covered Employer’s nondisclosure, fraud, or misrepresentation and that

requiring payment by the Covered Employer under the circumstances would be unduly penal, burdensome, or result in a manifest injustice; and

***FURTHER, BE IT RESOLVED***, that the Board grants the Covered Employer's waiver request and waives the assessed penalty of six hundred dollars (\$600).

**Adopted this 2nd day of December 2024**

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

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

**R E S O L U T I O N  
No. 2024-42**

**Waiver of Employer Late Fees and Interest Penalties**

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**WHEREAS**, Arkansas Code § 24-7-411(a)(1) authorizes the Arkansas Teacher Retirement System (“ATRS” or “System”) to impose an interest penalty when a covered employer fails to timely remit money to ATRS as required by law or rule; and

**WHEREAS**, Arkansas Code § 24-7-411(b)(1) authorizes ATRS to impose late fees as a penalty when a covered employer fails to timely file with the System a report required by the Board of Trustees of the Arkansas Teacher Retirement System (“Board”); and

**WHEREAS**, ATRS Rule 7-106(c)(2)(B) prohibits one (1) or more interest penalties assessed against a covered employer from being waived if the amount of interest penalties assessed against the covered employer will exceed one thousand dollars (\$1,000) for the fiscal year; and

**WHEREAS**, Arkansas Code § 24-7-411(c) provides that the Board or its designee may waive penalties and interest if the Board or its designee determines that the covered employer’s failure to remit money or submit a report to the System was not the result of the covered employer’s nondisclosure, fraud, or misrepresentation and requiring payment by the covered employer under the circumstances would be unduly penal, burdensome, or result in a manifest injustice; and

**WHEREAS**, covered employer 00211 (“Covered Employer”) failed to timely remit contributions owed to the System in July 2023 and was assessed interest penalties in the amount of three hundred eighty-three dollars and thirty-nine cents (\$383.39), which combined with other assessed penalties exceeded one thousand dollars (\$1,000) for the fiscal year 2023-2024; and

**WHEREAS**, Covered Employer has requested a waiver of the assessed interest penalty of three hundred eighty-three dollars and thirty-nine cents (\$383.39) explaining that the failure to timely remit contributions owed to the System was due to an unintentional oversight regarding the deadline to remit the payment.

**NOW, THEREFORE, BE IT RESOLVED**, that the Board finds that the Covered Employer’s failure to remit contributions owed to the System was not the result of the Covered Employer’s nondisclosure, fraud, or misrepresentation and that requiring payment by the Covered Employer under the circumstances would be unduly penal, burdensome, or result in a manifest injustice; and

***FURTHER, BE IT RESOLVED***, that the Board grants the Covered Employer's waiver request and waives the assessed interest penalty of three hundred eighty-three dollars and thirty-nine cents (\$383.39).

**Adopted this 2nd day of December 2024**

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

**MANIFEST INJUSTICE COMMITTEE  
SEMI-ANNUAL REPORT TO ATRS BOARD OF TRUSTEES  
DECEMBER 2, 2024**

MIC Claim #	Claim Type	Facts and Circumstances	Findings and Recommendations of Committee	Executive Director Remedy	Board Action
2024-004	Option Election – Effective Date of Election	<p>Member retired from ATRS effective July 1, 2004. At the time of his retirement, the Member selected an Option A annuity and designated his spouse as his Option A beneficiary.</p> <p>On or about November 10, 2020, the Member called and spoke with an ATRS Counselor 1. The Member informed Counselor 1 of his wife’s passing and mentioned that he had previously sent ATRS a marriage certificate.</p> <p>Member asked Counselor 1 whether he should send in a death certificate for his wife and Counselor 1 confirmed that the death certificate would be needed. The Member stated that he would send in a copy of his wife’s death certificate once he got a copy of it.</p> <p>Counselor 1 also explained that if the Member had selected and Option A annuity, he would be receiving a reduced annuity. After explaining that she did not handle beneficiary matters, Counselor 1 advised the Member that she would transfer him to ATRS Counselor 2 for assistance. The call was transferred, but went unanswered. The Member left a voicemail explaining that his wife passed away and that he needed to know what to do for ATRS purposes.</p> <p>There is no information indicating that the Member’s phone call was returned by Counselor 2. Outside of the Member’s marriage license, which was submitted</p>	<p>Manifest injustice exists. Recommended that the Executive Director:</p> <ol style="list-style-type: none"> <li>1. Designate December 1, 2020, as the date on which the Member’s election to change his Option A annuity to a straight life annuity became effective; and</li> <li>2. Issue payment to the Member in the amount of \$14, 238.47.</li> </ol>	Concurs with Committee findings and recommendation.	Previously Taken.



**MANIFEST INJUSTICE COMMITTEE  
SEMI-ANNUAL REPORT TO ATRS BOARD OF TRUSTEES  
DECEMBER 2, 2024**

		<p>to the System around January 30, 2019, there is no other information in the record showing written or oral contact between the Member and ATRS until April 16, 2024.</p> <p>On April 16, 2024, Counselor 3 called the Member to confirm that his wife had passed away. The Member's record reflects that he was mailed a <i>Change of Annuity Option – Death or Divorce After Retirement form</i> on April 16, 2024. ATRS received the Member's completed form on April 25, 2024, which is approximately nine (9) days after the form was mailed to the Member.</p>			
2024-005	Option Election - Deadline	<p>Member retired effective August 1, 2023. The Member has a spouse to whom he has been married since June 27, 1995. On July 30, 2024, the Member had an in-person visit with a counselor at ATRS to complete and provide all documents necessary for changing his annuity election from a straight life annuity to an Option A annuity.</p> <p>During this visit, the Member remitted payment for the difference between the straight life annuity he received when he retired and the new Option A annuity he elected. The Member also submitted all other documents necessary to effect the change except for Form 335. However, the counselor assisting the Member neglected to obtain a completed Form 335 from the Member.</p> <p>On August 1, 2024, the Payroll Department noticed that Form 335 was missing from the Member's</p>	<p>Manifest injustice exists. Recommended that the within-a-year of retirement deadline for canceling and changing an annuity election should be waived for the Member.</p>	<p>Concurs with Committee finding and recommendation.</p>	<p>Previously Taken</p>

**MANIFEST INJUSTICE COMMITTEE  
SEMI-ANNUAL REPORT TO ATRS BOARD OF TRUSTEES  
DECEMBER 2, 2024**

		records. On the same day, the counselor contacted the Member who came in and completed Form 335. With an August 1, 2024, date, the Member's Form 335 was submitted more than one (1) year from the effective date of his retirement.			
2024-006	Forfeited Contributions	<p>Member died on August 15, 1985. The Member never retired from the Arkansas Teacher Retirement System ("ATRS" or "System") and did not designate a residue beneficiary for her contributions. ATRS was not notified of the Member's death in 1985. The Member's records indicate that ATRS staff learned of the Member's death on or about August 11, 2011.</p> <p>After finding possible location information for the Member and her surviving relatives, on August 11, 2011, ATRS staff mailed letters concerning the Member's contributions to the Member and to the Member's son and daughter. On September 12, 2016, ATRS staff mailed another letter to the Member's estate concerning the contributions. No response to these letters was received.</p> <p>The Member's contributions were forfeited to the assets of the System on February 3, 2020. However, between 2016 and 2020, no additional attempts to locate surviving relatives of the Member or a representative of the Member's estate were made. On or about October 15, 2024, the Member's son contacted ATRS to ask if the Member's account could be reinstated, so that he could claim the forfeited contributions.</p>	<p>Manifest injustice exists. Recommended, subject to ATRS Board approval, reinstatement of the Member's account, so that the Member's forfeited contributions of \$8,574.13 may be reclaimed by a surviving relative of the Member in accordance with the regularly used procedures of the System.</p>	<p>Concurs with Committee finding and recommendation.</p>	<p><b>*Required</b></p>

**Manifest Injustice Claim Referrals**  
**December 2, 2024**

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**\*Board Action Required**

**Claim #: 2024-006**

**Claim Type: Forfeited Contributions**

**Issue:** Manifest Injustice Claim No. 2024-006 involves the question of whether or not Member #448715's ("Member") forfeited contributions in the amount of \$8,574.13 may be claimed by her surviving relatives.

**Facts and Circumstances:** The Member died on August 15, 1985. The Member never retired from the Arkansas Teacher Retirement System ("ATRS" or "System") and did not designate a residue beneficiary for her contributions. ATRS was not notified of the Member's death in 1985. The Member's records indicate that ATRS staff learned of the Member's death on or about August 11, 2011.

After finding possible location information for the Member and her surviving relatives, on August 11, 2011, ATRS staff mailed letters concerning the Member's contributions to the Member and to the Member's son and daughter. On September 12, 2016, ATRS staff mailed another letter to the Member's estate concerning the contributions. No response to these letters was received.

The Member's contributions were forfeited to the assets of the System on February 3, 2020. However, between 2016 and 2020, no additional attempts to locate surviving relatives of the Member or a representative of the Member's estate were made. On or about October 15, 2024, the Member's son contacted ATRS to ask if the Member's account could be reinstated, so that he could claim the forfeited contributions.

**Findings and Recommendations of Committee:** As there was a four-year gap between the last contact attempt made by ATRS staff and the forfeiture of the Member's contributions, additional measures to locate the Member's surviving relatives or a representative of her estate should have been taken before the contributions were presented to the ATRS Board for forfeiture. Had these additional steps been taken, it is possible that a surviving relative would have contacted ATRS to claim the Member's contributions before they were forfeited by the Board. Furthermore, allowing the forfeited contributions to be claimed by a surviving relative of the Member is unlikely to significantly impact the System's financial status, but will more than likely financially benefit the surviving relative.

The Manifest Injustice Committee recommends finding that a manifest injustice exists. The Committee further recommends, subject to ATRS Board approval, reinstating the Member's account, so that the Member's forfeited contributions of \$8,574.13 may be reclaimed by a surviving relative of the Member in accordance with the regularly used procedures of the System.

**Executive Director Remedy:** Concurs with the Manifest Injustice Committee's recommendation.

**Executive Director Review**  
**Proposed Resolution**  
**December 2, 2024**

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**\*Board Action Required**

**Claim #: 2024-01**

**Claim Type: Termination Separation Period**

**Issue:** Executive Director Review No. 2024-01 involves the question of whether Member #256281 (“Member”) violated her separation period when, for the purposes of payroll, she remained an employee of her covered employer following her July 1, 2024, effective retirement date.

**Facts and Circumstances:** Member submitted a retirement application to the Arkansas Teacher Retirement System (“ATRS” or “System”) on May 31, 2024. On her retirement application, Member reported August 9, 2024, as her last day of work for her covered employer.

During the System’s first quarter audit, the Member was reported by her covered employer as an active member. An AASIS wage report also showed that the Member received a total of three (3) regular working time salary payments in July through August.

On October 15, 2024, ATRS staff mailed the Member a staff determination letter advising her that an audit of her account showed that she may have worked in the month of August. This letter also advised the Member that, if she worked in August, she would have received an overpayment of retirement benefits in the amount of \$8,528.82, which she would need to repay the System.

When ATRS staff spoke with the Member concerning the possible violation of her separation period, the Member told ATRS staff that she did not work for her covered employer after June 30, 2024. The Member’s covered employer reported to ATRS that the Member did not work after June 30, 2024, but was paid as a teacher through the summer and received her last paycheck on August 9, 2024.

The Member requested an Executive Director Review of the October 15, 2024, staff determination letter.

**Findings:**

While the Member did not perform any work duties for her covered employer after retiring from ATRS, by maintaining an employed status for payroll purposes, the Member did not completely sever her employee-employer relationship with her covered employer as is required by law. Therefore, the Member violated her termination separation period.

Ark. Code Ann. § 24-7-205 permits the ATRS Board or the Executive Director to waive repayment of the Member’s payment obligation to the System if there was no intentional nondisclosure, fraud, misrepresentation, or other fault on the part of the Member and recovering the amount owed to the System will result in a manifest injustice. Although the Member violated her separation period,

the facts do not indicate intentional nondisclosure, fraud, misrepresentation, or other fault on the part of the Member.

The System permitted the Member to retire effective July 1, 2024, despite the Member reporting her last day of work as August 9, 2024, on her retirement application. Additionally, before retiring, the Member spoke with her covered employer's payroll specialist. Unfortunately, during this conversation, the Member was given either incorrect or incomplete information concerning how remaining employed for payroll purposes would impact her retirement with ATRS. The

It is unlikely that the Member would have retired from the System before August 9, 2024, but for the errors on the part of the System and the incorrect or incomplete information provided by the Member's covered employer.

For these reasons, requiring the Member to repay ATRS \$8,528.82, and any additional benefits she received pending the resolution of this matter would be an obvious unfairness that will have a direct and observable unconscionable effect by causing the Member significant financial harm.

**Proposed Resolution:**

- As the Member violated her termination separation period, she should be required to file a new retirement application with the System; and
- As the Member is without fault, she should not be required to repay ATRS \$8,528.82, and any additional retirement benefits she received pending the resolution of this matter.



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# ARKANSAS TEACHER RETIREMENT SYSTEM INTERNAL AUDIT DIVISION

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## Final Audit Report

### AUDIT OF INFORMATION TECHNOLOGY DIVISION'S NETWORK INFRASTRUCTURE MANAGEMENT PROCESS

Report Number 25-001

December 2, 2024

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## EXECUTIVE SUMMARY

### Audit of the Information Technology's Network Infrastructure Management Process

Report No. 25-001

December 2, 2024

#### Why Did We Conduct the Audit?

The objectives of our audit were to (1) determine if the Information Technology Division is following laws, regulations, polices, and procedures; (2) evaluate whether all assets with potential to store and process data have been identified; (3) determine if the IT Division is actively managing all software on the network; and (4) assess whether an inventory of all user accounts has been established and maintained.

#### What Did We Audit?

This assurance engagement assessed the effectiveness of CIS Control Safeguards implemented between July 1, 2023, and June 30, 2024, by the IT Division. Fieldwork was conducted from July 22, 2024, through August 30, 2024.

#### What Did We Find?

It was determined that the IT Division has strong controls over users accessing ATRS assets and programs. However, one area was identified where improvement is required to strengthen controls. Specifically:

- The IT Division lacks sufficient identification of enterprise technology assets, as well as third-party assets, regularly connected to the network

Additionally, two areas were identified where written policy could be improved. Specifically:

- No formalized risk assessment methodologies were found for the creation of internal policies and procedures.
- While an enterprise software inventory was provided, a formalized procedure for the establishment and maintenance of the inventory has not been developed.



## STATUS OF OBSERVATIONS AND FINDINGS

Status	Type	Follow-Up Date	Sec. & Rec.	Page #
Opportunity for Improvement	Policy	03/01/2025	A	4
Improvement Required	Asset Control	03/01/2025	B	5
Opportunity for Improvement	Software Inventory	03/01/2025	C	9
Adequate	Access Controls		D	10

Status Definitions	
Adequate	An observation is made that policy is well written, control activities are well designed and operating as intended.
Opportunity for Improvement	An observation is made that written policy could be improved, control activities could be better designed or operating more efficiently. This rating can be assigned if no findings were observed or a finding was observed but was not material (less than 10% error rate for tests conducted with judgmental or statistical sampling methods) and a recommendation is made where the root cause of the condition indicates one or more of the following: the potential for creating loss, misappropriation, inefficiencies, or inaccurate reporting in the future; lack of clear or comprehensive policy directives; may cause failure to reach minor objectives.
Improvement Required	A material finding was observed (10% or more error rate for tests conducted with statistical sampling methods, auditor discretion will be used for results of tests conducted with judgmental samples) which affects the Activity or Department and a recommendation is made where the root cause of the condition indicates one or more of the following: the area is risking a negative financial impact, legal jeopardy, or damaged reputation at a higher level than management's tolerance; a violation of ATRS policy or other regulations has occurred, including but not limited to, failing to create, complete, or retain required documentation; lack of management oversight; fraud, waste, or abuse of System assets has occurred but is not material in nature; significant opportunity exists for material gains in operational efficiency.
Significant Issue	A material finding was observed (25% or more error rate for tests conducted with statistical sampling methods, auditor discretion will be used for results of tests conducted with judgmental samples) which affects the Activity or Department and a recommendation is made where the root cause of the condition indicates one or more of the following: middle and/or upper management will need to be involved to develop and implement policy or other control activities; multiple Activities or Departments are affected by the issue; material fraud, waste, or abuse of System assets has occurred; post audit review reveals little or no effort has been made to implement corrective action to a previous audit finding where improvement was required.
Critical Issue	A material finding was observed (50% or more error rate for tests conducted with statistical sampling methods, auditor discretion will be used for results of tests conducted with judgmental samples) which affects an area and a recommendation is made where the root cause of the condition indicates one or more of the following: upper management, the Executive Director and/or Board of Trustees (BOT) will need to be involved to develop and implement policy or other control activities; substantial losses, including those attributed to fraud, waste, or abuse have occurred; post audit review reveals little or no effort has been made to implement corrective action to a previous significant issue.

## **BACKGROUND**

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The Information Technology (IT) Division of the ATRS is responsible for managing the organization's technology infrastructure, including critical application systems, electronic communications systems, and end-user computing environments. The IT Division ensures the confidentiality, integrity, and availability of these system by establishing policies and procedures in alignment with industry best practices to meet the mission and strategic goals of ATRS.

During the fiscal period between July 1, 2023, and June 30, 2024, the IT Division implemented the Center for Information Security Critical Security Controls (CIS Controls) as part of its cybersecurity framework. This framework is recognized by the Arkansas Department of Transformation Shared Services Cyber Security Office as an approved framework for the state of Arkansas. The CIS Controls consist of 18 overarching measures that provide a prescriptive, prioritized, and simplified set of best practices that can be used to strengthen a company's cybersecurity posture.

## **OBJECTIVE, SCOPE, AND METHODOLOGY**

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### **Objective**

To assess the effectiveness of procedures in place to establish, implement, and actively manage network devices to prevent attackers from exploiting vulnerable network services and access points. The primary objectives of this audit were to:

- A. Assess policies, procedures, and other documents to ensure ATRS operations can be protected from cyber-attacks
- B. Evaluate whether the IT Division has identified all devices regularly connected to the network with the potential to store and process data.
- C. Determine if the IT Division is actively managing all software on the network to ensure only authorized software is installed and can execute.
- D. Assess whether the IT Division has established and maintains an inventory of all user accounts.

### **Scope**

This review assessed the effectiveness of CIS Control Safeguards implemented between July 1, 2023, and June 30, 2024, by the IT Division related to the identification of devices, applications, users, and service providers with the ability to connect to the ATRS network infrastructure.

### **Methodology**

The Internal Audit (IA) Division reviewed various policies, procedures, and documents related to the management and security of the network infrastructure to ensure the establishment, implementation, and active management of devices, applications, users, and service providers with access to ATRS systems. IA staff also examined the control self-assessment and evaluated the risk assessment plan to ensure it appropriately identified and addresses risks. Finally, IA staff conducted interviews with appropriate employees and tested transactions were applicable.

## ***OBSERVATIONS, FINDINGS, AND RECOMMENDATIONS***

The sections below detail the results of our audit of the Information Technology Divisions' network infrastructure management process.

### **A. Assessment of policies, procedures, and other documents**

Opportunity for Improvement

The following documents were reviewed to determine if adequate controls have been established to ensure ATRS is protected against cyber-attacks.

- The **Acceptable Use Policy** covers the acceptable and prohibited use of technology resources and is developed to ensure the integrity, reliability, and performance of ATRS information systems and network by ensuring IT resources are used for their intended purposes.
- The **ATRS Incident Response Policy (DRAFT)** details the processes, scope, and responsibilities for ensuring incidents are properly handled with as little impact to ATRS as possible.
- The **ATRS Security Awareness Training Policy** was developed to educate employees on cyber threats, how to avoid them, how to report them, and what actions to take in case of a suspected incident.
- **File Transfer and Encryption Policy** which states that any confidential or otherwise sensitive data leaving the ATRS office shall be placed upon media that supports encryption.
- **Data Backup and Retention Policy** provided guidelines for system, application, and other media backup processes.

**Finding #1:** Formalized Risk Assessment methodologies have not been developed

Internal Audit noted that ATRS lacks formal processes or procedures for conducting risk assessments.

Risk assessments are crucial for identifying potential threats within an organization, such as unexpected loss, unauthorized access to, or potential disruption of information resources. By conducting risk assessments, organizations can determine the necessary controls to mitigate the risks associated with these threats. A comprehensive risk assessment process should entail assigning responsibility for conducting assessments; mandating regular assessments' establishing an inventory of IT assets, including hardware, software, and data; employing a structure methodology for conducting a risk assessment; documenting results and their potential impact; utilizing results to enact changes to the organization's security program; and reporting outcomes to management.

***Recommendation:***

*IA staff recommend ATRS create and follow written policies, standards, and procedures for risk assessment to ensure that vulnerabilities and threats are mitigated properly. The document outlining these risk assessment procedures should be finalized and approved by management, as well as reviewed and updated periodically.*

## Management Response

The IT department has completed the following risk assessments and risk related activities:

- Controls Self-Assessment; required activity in even numbered years – a component of which is identifying and assessing risks to the department.
- Disaster recovery activities; the disaster recovery plan is updated and practiced every year to ensure validity.
  - Policy is missing to provide governance for this activity, it is in development and will be in place by October 1, 2024
- External vulnerability management activities are performed annually by a third-party pen-testing service to assess the risk in our internet facing attack surface. This includes a manual penetration test and automation scanning with human verification between the annual manual penetration test. Annual attestation of these actions was previously provided.

### B. Evaluation of controls over enterprise assets:

Improvement Required

CIS Controls require entities to actively manage all enterprise assets connected to the infrastructure physically, virtually, remotely, and those within cloud environments, to accurately know the totality of assets that need to be monitored and protected within the enterprise. This will also support the identification of unauthorized and unmanaged assets to remove or remediate.

To ensure the IT Division is actively managing all enterprise assets connected to the infrastructure, Internal Audit conducted a review of the ATRS Enterprise Asset Inventory and Control Summary provided by the IT Division on June 28, 2024. The summary was compared with a list of devices with the potential to store and process data downloaded from the Arkansas Administrative Statewide Information System (AASIS) on August 20, 2024. A walk-through of each ATRS' three floors was also performed to determine if the ATRS Enterprise Asset Inventory and Control Summary also identifies those assets not under the control of ATRS which are regularly connected to the network. Finally, a review of inventory records was conducted to determine when the assets were last inventoried by ATRS staff.

It is noted that historically, asset verification has been performed by the Fiscal Affairs (FA) Division of ATRS on an annual basis. If the IT Division is aware of any asset movement between verifications, an email will be sent to the Budget Specialist for tracking. When the asset verification process is complete, a member of the FA Division will update AASIS with the date of the last verification.

As of August 30, 2024, the IT Division has begun coordinating with the FA Division to begin updating the ATRS Enterprise Asset Inventory and Control Summary to ensure a complete listing is created.

**Finding #2 – Incomplete enterprise asset inventory:**

IA staff found that 176 assets listed in AASIS were not documented on the ATRS Enterprise Asset Inventory and Control Summary created by the IT Division. These items included:

- 100 computers
- 32 laptops
- 21 tablets
- 10 printers
- 5 switches
- 4 phones
- 4 servers

However, the IT Division was able to locate 21 computers and one (1) laptop that should have been listed on the ATRS Enterprise Asset Inventory and Control Summary but due to their abnormal configurations these assets were missed during the initial development of the Inventory and Control Summary. The remaining assets were removed from the enterprise inventory because they were transferred to M and R. However, the FA Division has not yet removed the assets from the AASIS Fixed Assets for the System.

The ATRS Enterprise Asset Inventory and Control Summary was initially developed by polling the FA Division for an inventory of all IT assets. The listing provided by the FA Division came from the AASIS Fixed Asset Listing. The IT Division filtered the list to remove decommissioned hardware and/or tertiary redundancies and assigned their configuration management methodologies based on department practices. However, at the time the report was provided, IT was informed that the FA Division was in the middle of performing updates to the inventory and the list may be incomplete.

**Recommendation:**

*IA staff recommends the IT Division continue its coordination efforts with the Fiscal Affairs Division to acquire a complete listing of all IT assets assigned to ATRS within AASIS and update the ATRS Enterprise Asset Inventory and Control Summary to ensure all owned assets are identified.*

**Management Response**

IT was not provided with a full list of assets identified as not listed on the Enterprise Asset Inventory, but we suspect that these items are items that have been prepared and moved back to Fiscal for Marketing and Redistribution (M and R), and thus excluded from our Enterprise Asset Inventory.

When the Enterprise Asset Inventory was requested by Internal Audit, IT staff polled Fiscal for an inventory of all IT assets from the Fixed Asset List, upon notification that there may be some inaccuracies in the records that were produced due to pending updates and a full inventory not being completed recently - we filtered the results based on classification as an Enterprise Asset and performed a functional inventory of those assets, then further filtered it to remove decommissioned hardware and/or tertiary redundancies. Once complete, assets were assigned their configuration management methodologies based on deployment practices for assets of that type. The resultant list was provided to Internal Audit. The inventory performed by IT located all functional enterprise assets to a satisfactory measure.

Procedures are being updated to reflect the accurate status of items that have been decommissioned and moved to M and R.

Auditor Follow-up

Internal Audit provided an Excel file which combines the ATRS Enterprise Asset and Control Summary with the AASIS Fixed Asset list to allow IT Division to verify the missing items were indeed those that were transferred to Fiscal Affairs awaiting pick up from M and R.

The IT Division has also developed an Enterprise Asset Inventory Policy to provide governance objectives toward establishing and maintaining the ATRS Enterprise Asset Inventory; as well as Enterprise Asset Inventory Procedures outlining the necessary operations to update and verify ATRS enterprise asset inventory. The Enterprise Asset Inventory Procedures outline how the IT Division will maintain and report technology assets to the Fiscal Affairs Division. Copies of these two documents were provided to Internal Audit.

***Finding#3 – Enterprise asset inventory lacks detail:***

The ATRS Enterprise Asset Inventory and Control Summary does not document the network addresses of static assets, hardware addresses, machine names, owners/users of the asset, the Division to which the assets have been assigned, or whether the assets have been approved to connect to the network.

The inventory listing provided to the IT Division by Fiscal Affairs contains asset numbers, inventory numbers, and asset descriptions. The IT Division is able to acquire the network and hardware addresses of IT related assets however, this information can only be acquired by accessing each individual asset. A report from Bitdefender can be generated but the report does not provide all the information needed to properly identify assets.

***Recommendation:***

*IA staff recommends the IT Division update the ATRS Enterprise Asset Inventory and Control Summary document to include network addresses for static (or stationary) assets, hardware addresses assigned to each asset, the employee that has been assigned the asset and which Division he/she works, and whether the asset is approved to connect to the network.*

**Management Response**

The enterprise asset inventory is a composite inventory consisting of multiple data points across multiple data sources. As this is a new document request, processes to produce a unified enterprise asset inventory document do not exist. The inventory produced for audit did not include all details required to meet the standards of CIS Control 1.1. The IT department is satisfied that the data points exist to meet the purpose of an enterprise asset inventory from the vantage points needed for various functions. However, processes are being developed and tested to enable generation of an inventory that is auditable by non-technical staff that meet the standards of CIS Control 1.1 in a unified manner.

***Finding#4 – Third-party assets are not identified:***

Based on a walk-through of the ATRS building, IA staff found 10 leased printers and one computer connected to the network which were not identified on the ATRS Enterprise Asset Inventory and Control Summary.

No policies or procedures have been established to monitor third-party assets connecting to the ATRS network.

Without visibility and control over third-party assets routinely connected to the network, ATRS may not have a full understanding of what third-party vendors do with their systems and data.

***Recommendation:***

*IA staff recommends IT Division establish an inventory of all assets not owned by ATRS that are routinely connected to the network to ensure only approved assets are connected.*

**Management Response**

In response to this identified gap in our inventory, a quaternary inventory list has been added to our composite inventory, and associated policy, to track these third-party assets.

*Auditor Follow-up*

As mentioned in Finding #2 above, the IT Division provided copies of the Enterprise Inventory Asset Policy and Procedures documents which includes that quaternary enterprise asset inventory, which are those assets not tracked in other systems, will be performed with updates to the inventory listing conducted as necessary.

The IT Division did provide a list of all third-party assets connected to the network that provides the device name, location, addresses, owner, and that the asset is authorized to connect to the network. Therefore, this finding has been resolved.

***Finding #5 – Unverified Assets:***

An analysis of Last Inventory Date on the AASIS Fixed Asset List for those assets with the potential of storing and processing data (excluding phones) revealed a total of 252 assets were not verified between July 1, 2023, and June 30, 2024. The breakdown is as follows:

- 38 items were last inventoried in fiscal year 2023
- 102 items were last inventoried in fiscal year 2022
- 113 items were last inventoried in fiscal year 2021
- 1 item was last inventoried in fiscal year 2020

Historically, the IT Division has relied on the FA Division to perform a physical verification of assets. However, an asset control policy has not been implemented that details the roles and responsibilities for conducting physical verification of ATRS assets.

Without a proper asset verification process, assets can be stolen or misappropriated.

**Recommendation:**

*IA staff recommend ATRS conduct a physical verification of all assigned assets and update the Last Inventory Date to reflect the date that the verification was complete. IA staff also recommend that ATRS create an asset control policy that outlines the roles, responsibilities, and frequencies of physical asset verification and submit the policy to executive leadership for approval. Management may want to consider the frequency to which IT asset inventory should be reviewed and updated in the development of the policy.*

**Management Response**

IT concurs that ATRS should conduct a physical verification of all assigned assets and update the inventory date in AASIS. There is a risk of an IT staff member misappropriating an asset of this classification if it was in our standby inventory, this risk is addressed by the inventory process in Fiscal who perform regular inventory of all assets. The integrity of the fixed asset list in AASIS further mitigates this risk as the IT department does not, and should not, have access to modify the fixed asset list. Further, the IT assets that are capable of storing and processing data are not considered pilferable by the IT department as they are all functional inventory. If an asset of this classification were to be stolen or misappropriated by general staff they would be unable to perform their job functions. Part of the IT off-boarding process of staff includes identifying and recovering assets assigned to exiting staff at which time any assigned IT assets that could be pilfered would be revealed.

**C. Evaluate controls over software inventory:**

Opportunity for Improvement

A request was submitted to the Associate Director of IT to provide a software inventory listing to determine if the IT Division has established and maintains a detailed inventory of all software installed on devices connected to the network. The ATRS Licensed Software Inventory was provided on June 28, 2024, that lists four applications in which ATRS has purchased user licenses. CIS Control Safeguard 2.1 states entities should establish and maintain a detailed inventory of all licensed software installed on enterprise assets. The inventory must document the title, publisher, initial install/use date, and business purpose.

**Finding #6 – Incomplete Software Inventory**

The ATRS Licensed Software Inventory listing provides the title of the software, the license period (perpetual or triannual), and the number of licenses purchased. However, the listing does not provide the required details such as initial install/use date, publisher, and/or business purpose. It was also noted that the inventory was incomplete as it did not include applications such as Active Data (add-in for Excel) or Zoom Workplace licenses.

A formal policy has not been developed that identifies the individual responsible for the creation and maintenance of the system inventory listing or the frequency to which system inventory should be reviewed. Furthermore, there is no set procedure on acquiring additional software licenses.

An incomplete inventory can make it difficult to identify potential security risks, such as vulnerable assets that could lead to data breaches. Additionally, without an accurate inventory, it is hard for entities to track license usage.



**Recommendation:**

A) It is recommended that the IT Division develop a policy that includes the identification and assignment of roles and responsibilities for the creation and maintenance of the ATRS Software Inventory listing and includes the frequency to which the inventory should be reviewed for accuracy.

B) Additionally, Internal Audit recommends that uniform procedures be established that provides instruction to ATRS Staff on the proper acquisition of additional software. These procedures should include how to submit request and how risks will be assessed and mitigated.

**Management Response**

- A) IT is working to develop policy aligned with CISv8.1 Safeguard 2.1; which addresses this finding. Acquisition of new licensed software on a limited user scope is a relatively new facet of IT operations in the past year. Policy and procedures to address this are being actively developed and are expected to be online by October 1, 2024.
- B) Acquisition of additional software in the current environment is evaluated on a case-by-case basis at the request of a user. It is generally common knowledge that if a need exists, for this issue or any other issue, it should be reported to the IT helpdesk by emailing [dphelp@artts.gov](mailto:dphelp@artts.gov). However, with the influx of new staff over the past year this may not have been communicated clearly to all new staff. In response to this need the IT director shall bi-annually send a general reminder/encouragement e-mail to all staff to re-enforce this reporting/request vector.

**D. Evaluate Control Over User Accounts**

Adequate

Given the sensitivity of ATRS membership, investment, and financial data it is important that an inventory of user accounts be established and maintained. It is also important that this inventory only includes those individuals that are currently employed by ATRS. Therefore, to determine whether the IT Division has identified all system users, an employee listing as of June 30, 2024, was requested and received from the Human Resources Manager. The employee list was compared to the ATRS Chart of User Accounts created by the IT Division.

For an employee to gain access to the ATRS network, Division managers are responsible for completing the Employee Processing Form and submitting the completed form to the IT Division for processing. The Employee Processing Form must also be completed when an employee transfers between divisions or when access needs to be terminated. The controls in place to ensure only authorized users gain access to ATRS systems and applications is adequate.

## ***DISTRIBUTION***

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All intended recipients of this report are listed below.

Mark White, ATRS Executive Director

Sarah Linam, Deputy Director – Member Services

Mullahalli Manjunath, Associate Director of Information Technology

This report is intended solely for the information and use of the Arkansas Teacher Retirement System Board of Trustees Audit Committee and Arkansas Teacher Retirement System management and is not intended to be and should not be used by anyone other than these specified parties. However, the final audit report is a public record to the extent that it does not include information which has been made confidential and exempt from the provisions of A.C.A. §25-19-105, pursuant to law and upon request shall be made available for public inspection.

## ***CONCLUSION***

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The procedures in place to establish, implement, and actively manage network devices are not designed to optimize effectiveness. Improvements can be achieved by addressing control deficiencies identified. We believe that the evidence obtained provides a reasonable basis for the findings and conclusions stated in this report.

Kevin L. Chadwick, CIA  
ATRS Internal Auditor



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# ARKANSAS TEACHER RETIREMENT SYSTEM INTERNAL AUDIT DIVISION

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## Final Audit Report

A background image of the Arkansas Teacher Retirement System building, featuring a large glass entrance and a stone wall with the organization's name. The image is faded and serves as a backdrop for the text.

### AUDIT OF THE BENEFIT SECTION'S DISABILITY RETIREMENT APPLICATION PROCESS

Report Number 25-002

December 2, 2024

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## EXECUTIVE SUMMARY

### Audit of the Benefit Section's Application for Disability Retirement Process

Report No. 25-002

December 2, 2024

#### Why Did We Conduct the Audit?

The objectives of our audit were to (1) determine if the Benefits Section is following laws, regulation, and internal policies and procedures; (2) determine the effectiveness of controls in suspending disability retirement payments; and (3) ensure management is providing oversight reviews.

#### What Did We Audit?

The Internal Audit Division completed an assurance engagement of ATRS' Application for Disability Retirement process. Fieldwork was conducted from October 1, 2024 through October 14, 2024.

#### What Did We Find?

It is determined that ATRS Benefits Section correctly processed Applications for Disability Retirement in accordance with *Arkansas Code § 24-7-704*, *ATRS Rule § 9-107*, and *ATRS Standard Operating Procedures Disability Retirement Manual*.

## STATUS OF OBSERVATIONS AND FINDINGS

Status	Type	Follow-Up Date	Sec. & Rec.	Page #
Adequate	Policy	N/A	A	5
Adequate	Control Design	N/A	B	5
Adequate	Management Oversight	N/A	C	6

Status Definitions	
Adequate	An observation is made that policy is well written, control activities are well designed and operating as intended.
Opportunity for Improvement	An observation is made that written policy could be improved, control activities could be better designed or operating more efficiently. This rating can be assigned if no findings were observed or a finding was observed but was not material (less than 10% error rate for tests conducted with judgmental or statistical sampling methods) and a recommendation is made where the root cause of the condition indicates one or more of the following: the potential for creating loss, misappropriation, inefficiencies, or inaccurate reporting in the future; lack of clear or comprehensive policy directives; may cause failure to reach minor objectives.
Improvement Required	A material finding was observed (10% or more error rate for tests conducted with statistical sampling methods, auditor discretion will be used for results of tests conducted with judgmental samples) which affects the Activity or Department and a recommendation is made where the root cause of the condition indicates one or more of the following: the area is risking a negative financial impact, legal jeopardy, or damaged reputation at a higher level than management's tolerance; a violation of ATRS policy or other regulations has occurred, including but not limited to, failing to create, complete, or retain required documentation; lack of management oversight; fraud, waste, or abuse of System assets has occurred but is not material in nature; significant opportunity exists for material gains in operational efficiency.
Significant Issue	A material finding was observed (25% or more error rate for tests conducted with statistical sampling methods, auditor discretion will be used for results of tests conducted with judgmental samples) which affects the Activity or Department and a recommendation is made where the root cause of the condition indicates one or more of the following: middle and/or upper management will need to be involved to develop and implement policy or other control activities; multiple Activities or Departments are affected by the issue; material fraud, waste, or abuse of System assets has occurred; post audit review reveals little or no effort has been made to implement corrective action to a previous audit finding where improvement was required.
Critical Issue	A material finding was observed (50% or more error rate for tests conducted with statistical sampling methods, auditor discretion will be used for results of tests conducted with judgmental samples) which affects an area and a recommendation is made where the root cause of the condition indicates one or more of the following: upper management, the Executive Director and/or Board of Trustees (BOT) will need to be involved to develop and implement policy or other control activities; substantial losses, including those attributed to fraud, waste, or abuse have occurred; post audit review reveals little or no effort has been made to implement corrective action to a previous significant issue.

## **BACKGROUND**

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The disability retirement process begins when a member contacts the Arkansas Teacher Retirement System (ATRS or System) to inquire about disability retirement. The Call Center will verify the member's identity and transfer the member to a Retirement Counselor in the Benefits Section who will determine if the member is eligible to apply for disability retirement. An Application for Disability Retirement packet will then be sent to the member.

Once the Application for Disability Retirement and accompanying documents are received, the application is filed in the member's file in Docmage and an acknowledgment letter is sent to the member. The Retirement Counselor working the case will compile the application and all related documents for presentation to the Medical Committee. The Medical Committee will render a decision on an application for disability retirement after it is presented.

If a member's application for disability retirement is approved by the Medical Committee, the member will be sent an approval letter. The letter will also inform the member that he or she must terminate employment with a covered employer no later than two (2) months after the Medical Committee meeting. The letter will also notify the member of any additional documentation that is necessary to complete the application and begin receiving benefits.

The disability retiree's effective retirement date is determined based on the date on which ATRS received the disability retiree's Application for Disability Retirement and when the disability retiree terminated his or her employment with his or her last covered employer. The date of termination is determined with the Certification of Salary (Form 258) completed by the last covered employer.

Certain Disability Retirees must provide ATRS with a Social Security Administration (SSA) Determination Letter finding that he or she is disabled in order to continue receiving disability retirement benefits. A disability retiree is not required to provide an SSA Determination letter if the Disability Retiree turns fifty-seven (57) years of age in the month of the disability retiree's effective retirement date, regardless of when the disability retiree receives the first disability retirement benefit payment. Information concerning the Social Security Administration (SSA) Determination Letter requirements will be included in the approval letter.

Once ATRS receives an SSA Determination Letter finding or not finding a member or Disability Retiree disabled, this information will be noted on the member of Disability Retiree's status on the Disability Check Sheet Screen in the Arkansas Teacher Retirement Member Information System (ATRMIS).

The Payroll Section will be notified that a Disability Retiree's benefit payments are to be suspended if:

- An SSA Determination Letter finding the Disability Retiree disabled is not provided to ATRS within a thirty-six (36) month period;
- The Disability Retiree does not receive an extension to submit the SSA Determination Letter; or
- The Disability Retiree does not apply for review within three (3) months of ATRS suspending disability retirement benefits to the Disability Retiree due to the failure to submit an SSA Determination Letter finding him or her disabled within the thirty-six (36) month deadline.

If the Disability Retiree submits the SSA Determination Letter after benefits have been suspended and after the 36-month timeframe to submit an *Application for Disability Retirement*, the Executive Director may reinstate disability retirement benefit payments and/or permit back-pay of benefit payments.

The final step to processing an application for disability retirement is to update the member’s file in Docmage. A Disability Retirement Processing Check Sheet is prepared after the completed Disability Retirement Annuity Options Form (Form 259) or the Certification of Salary (Form 258) has been returned.

The appropriate Retirement Counselor in the Benefits Section will then run a Benefit Projection, a Retirement Benefit Statement, a History Card Report, and draft the Disability Retirement Letter to send to the member. These documents are compiled and sent to the Benefits Manager for review. After the second review is completed, the disability retirement letter and the Retirement Benefit Statement will be mailed to the member.

## ***OBJECTIVE, SCOPE, AND METHODOLOGY***

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### **Objective**

The objectives of the audit were to:

- Determine if the Application for Disability receiving process is following laws, regulations, and internal policies and procedures.
- Determine the effectiveness of controls to ensure Disability Retirees comply with the requirements of receiving disability retirement benefits.
- Ensure management is providing adequate oversight of the disability retirement process.

### **Scope**

The scope of our audit covered:

<b>Audit Area</b>	<b>Office(s)</b>	<b>Scope</b>
Disability Application Receipts	Benefits	7/1/2023 through 6/30/2024
Social Security Disability Monitoring	Benefits	7/1/2020 through 6/30/2024
Oversight over Disability Retirement Processing	Benefits	7/1/2023 through 6/30/2024

The fieldwork was performed between October 1, 2024 and October 14, 2024.

### **Methodology**

The Internal Audit (IA) Division reviewed various policies, procedures, and documents related to the processing of application for disability retirement. IA staff also examined the control self-assessment and evaluated the risk assessment plan to ensure it appropriately identified and addresses risks. Finally, IA staff conducted interviews with appropriate employees and tested transactions were applicable.



## ***OBSERVATIONS, FINDINGS, AND RECOMMENDATIONS***

The sections below detail the results of our audit of the Benefits Section’s Disability Retirement Process.

### **A. Receipt of Applications for Disability**

Adequate

A stratified sample of 27 Disability Retiree files were reviewed to determine if the Benefits Section is following laws, regulations, and internal policies and procedures related to the receipt of Applications for Disability Retirement. The sample was taken from a total population of 77 Disability Retirees with an effective retirement date between July 1, 2023, and June 30, 2024.

Each Disability Retiree from our sample was verified to have five (5) or more, but fewer than twenty-eight (28), years of actual or reciprocal services with a covered employer, the member was under sixty (60) years of age, the member was active at the time of application, and did not participate in the Teacher Deferred Retirement Option Plan (TDROP). Additionally, the files were reviewed to verify that each Disability Retiree’s effective retirement date was the first day of the month in which the Application for Disability Retirement was received, if received *after* he or she terminated employment, or the first day of the month following termination, if the application was received *before* he or she terminated employment.

It is determined that the Benefits Section correctly processed Applications for Disability Retirement in accordance with *Arkansas Code § 24-7-704* and the *ATRS Standard Operating Procedure: Disability Retirement Manual*.

### **B. Social Security Disability Monitoring**

Adequate

Certain Disability Retirees must provide ATRS with a Social Security Administration (SSA) Determination Letter finding that he or she is disabled in order to continue receiving disability retirement benefits. A disability retiree is not required to provide an SSA Determination Letter if the Disability Retiree turns fifty-seven (57) years of age in the month of the disability retiree’s effective retirement date, regardless of when the disability retiree receives the first disability retirement benefit payment.

Testing was conducted on members receiving disability retirement benefits between July 1, 2020, and June 30, 2024, to determine the effectiveness of controls in place to ensure disability retirees comply with the requirements of receiving disability retirement benefit payments.

An aging analysis was conducted on disability retirees with a Social Security disability status of “No Info Available” from the Disability Status Report which identified two (2) out of sixty-six (66) Disability Retirees who have not submitted an SSA Determination Letter within the 36-month deadline from their effective retirement date. The Disability Retiree’s retirement benefit payments were suspended effective the month following the deadline. As of October 9, 2024, ATRS has not yet received an SSA Determination Letter from the two Disability Retirees, and their disability retirement benefit payments have remained suspended.

Additionally, a statistical sample of thirty-three (33) out of 164 Disability Retiree files, with a Social Security disability status of “Approved”, were reviewed to determine whether the SSA Determination Letter was received within 36-months of their effective retirement date. One Disability Retiree with an effective

retirement date of June 1, 2021, had their benefit payments suspended effective May 1, 2024, due to ATRS not receiving the SSA Determination Letter. The SSA Determination Letter was received on July 16, 2024 and disability retirement payments were reinstated. The retiree was also awarded back pay for the month of June 2024.

It is determined the Benefits Section is actively monitoring those individuals receiving disability retirement payments to ensure the disability retiree is submitting the SSA Determination Letters in accordance with *Arkansas Code § 24-7-704* and *ATRS Rule § 9-108*.

### **C. Oversight over Disability Retirement Processing**

Adequate

The Folder Summary in Docmage of twenty-five (25) disability retirees “Approved” for Social Security Disability during fiscal year 2024 was reviewed to ensure each file contained:

- a. A Disability Retirement Process Check Sheet;
- b. A History Card;
- c. A Retirement Benefit Statement; and
- d. A copy of the Member’s Disability Retirement Letter and Benefit Projection

Additionally, these documents were reviewed for evidence of management review.

Only one (1) of the 25 Disability Retiree’s documents were reviewed by someone other than the Benefits Manager. The file for Retiree 176167 did contain all the above documents which were generated by the Disability Retirement Counselor and approved by a separate Retirement Counselor. According to the Disability Retirement Processing Check Sheet, the disability approval date was 10/4/2024. Once approval was given, the Disability Retirement Counselor began generating the documents necessary for review.

The last of the documents were prepared on October 24, 2023, however, the Benefit Manager was not available to review the documents. Since this was the last day to place a member on payroll, and to ensure the member would receive their first retirement benefit payment on time, it was necessary for a separate Retirement Counselor to review the documents for accuracy.

All other Disability Retiree files were reviewed and approved by the Benefits Manager.

It is determined that management is providing adequate oversight of the disability retirement process in accordance with the *ATRS Standard Operating Procedures: Disability Retirement Manual § 3.4*.

## ***DISTRIBUTION***

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All intended recipients of this report are listed below.

Mark White, ATRS Executive Director  
Sarah Linam, Deputy Director – Member Services  
Willie Kincade, Associate Director of Operations

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## ***CONCLUSION***

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It is determined that the controls in place to process disability retirement claims are adequate and functioning as intended. We believe that the evidence obtained provides a reasonable basis for the findings and conclusions stated in this report.

Kevin L. Chadwick, CIA  
ATRS Internal Auditor

**ATRS Private Equity Investment Guidelines - 2Q24**

**2024 Commitments**

<b>Investment</b>	<b>Strategy</b>	<b>Region</b>	<b>ATRS Board Approval</b>	<b>ATRS Commitment</b>
FP Co-Invest VI	Small/Mid Market Corporate Finance	U.S.	Dec-23	\$60,000,000
FP Venture XV	Early Stage Venture	U.S./non-U.S.	Dec-23	40,000,000
Enlightenment III	Private Debt	U.S.	Apr-24	35,000,000
FP CF Access III	Buyout/Growth/Turnaround	U.S.	Jun-24	40,000,000
FP VC Opps II	Mid/Late State VC	U.S./non-U.S.	Jun-24	40,000,000
Veritas IX	Mid/Large Market Corporate Finance	U.S.	Sep-24	35,000,000
<b>2024 commitments previously approved by ATRS' board</b>				<b>\$250,000,000</b>
Riverside Value II	Small Market Corporate Finance	U.S.	Dec-24	35,000,000
NovaCap VII	Mid Market Corporate Finance	Canada/U.S.	Dec-24	35,000,000
Revelstoke III	Small/Mid Market Corporate Finance	U.S.	Dec-24	35,000,000
Peak Rock IV	Mid Market Corporate Finance	U.S.	Dec-24	35,000,000
<b>2024 commitments being considered during current board meeting</b>				<b>\$140,000,000</b>
<b>Total targeted 2024 commitments (\$385M approved by the board in December 2023)</b>				<b>\$390,000,000</b>

<b>Private Equity Allocation</b>	<b>Target</b>	<b>6/30/2024</b>
Private Equity Value		\$2,951,410,457
Total Assets		\$22,387,955,711
<b>Private Equity Value as a % of Total Assets</b>	<b>12.0%</b>	<b>13.2%</b>

**Other Guidelines**

The following sub-allocations shall be used as an overall target for commitment levels within the portfolio.

**ATRS Strategy/Region Guidelines (% of Commitments)**

<b>Strategy</b>	<b>Target %</b>	<b>Post-2006 Portfolio Commitments (as of 6/30/24)</b>	<b>% of Total</b>
Corporate Finance (buyout, growth and debt strategies)	80-100%	3,698,323,718	88%
Venture Capital	0-20%	525,000,000	12%
<b>Total (Post-2006 Portfolio)</b>		<b>4,223,323,718</b>	<b>100%</b>

<b>Region</b>	<b>Target %</b>	<b>Post-2006 Portfolio Commitments (as of 6/30/24)</b>	<b>% of Total</b>
U.S. and Western Europe	80-100%	3,936,477,035	93%
Other <sup>1</sup>	0-20%	286,846,683	7%
<b>Total (Post-2006 Portfolio)</b>		<b>4,223,323,718</b>	<b>100%</b>

<sup>1</sup> Other represents ATRS' % of commitments made outside of the U.S. and Western Europe in FP VC and FP International vehicles

**ATRS shall, in general, make commitments of at least \$10 million.**

100% of the commitments made to primary funds since 2006

**In general, ATRS shall not make commitments to primary funds which exceed an amount equal to 15% of the total amount raised for a proposed fund, but in no event shall investments exceed 35% of the amount raised for a primary fund.**

100% of the commitments made to primary funds since 2006

**ATRS shall limit aggregate new commitments to a single investment sponsor to 35% of total Program allocation.**

<b>Manager</b>	<b>Aggregate Commitment</b>	<b>% of 2024 Commitments</b>	<b>Single Investment Sponsor</b>	<b>Notes</b>
Enlightenment III	35,000,000	9%		
FP Co-Invest VI	60,000,000	15%		
FP Venture XV	40,000,000	< 3.0%		Expected to include 7-10 investment sponsors
FP CF Access III	40,000,000	< 3.0%		Expected to include 4-6 investment sponsors
FP VC Opps II	40,000,000	< 3.0%		Expected to include 5-8 investment sponsors
Veritas IX	35,000,000	9%		
Riverside Value II	35,000,000	9%		
NovaCap VII	35,000,000	9%		
Revelstoke III	35,000,000	9%		
Peak Rock IV	35,000,000	9%		
<b>Total</b>	<b>\$390,000,000</b>			

for FP Venture XV, FP CF Access III and FP VC Opps II

As of June 30, 2024	ATRS' Portfolio \$ in Millions
Number of Investments	93
Total Commitments	4,752.8
Unfunded Commitments	796.7
Total Paid-In Capital	4,253.8
Total Distributions	3,723.1
Net Asset Value	2,607.9
Gross Asset Value	3,967.7
DPI	0.9x
TVPI	1.5x
Since Inception IRR	6.8%

*\*Active and Liquidated*

PORTFOLIO COMPOSITION TARGETS (As of June 30, 2024)		
	Target	Actual Funded
<b>Target Real Asset Allocation</b>	15%	11.6%
<b>Portfolio Style Composition</b>		
<b>Real Estate</b>	10%	6.6%
<b>Core*</b>	50%-70%	54.9%
<b>Non-Core</b>	30%-50%	45.1%
<b>Value-Added**</b>	N/A	26.9%
<b>Opportunistic**</b>	N/A	18.2%
<b>Agriculture</b>	1%	1.1%
<b>Timber</b>	2%	1.6%
<b>Infrastructure</b>	2%	2.3%
<b>Leverage</b>	50%	34.3%

RISK MANAGEMENT						
<b>Property Type - Real Estate</b>	<b>NFI-ODCE</b>	<b>Target/Constraint</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Actual</b>	<b>Compliant?</b>
Office	17.30	NFI-ODCE +/- 50%	8.65	25.95	16.71	Yes
Retail	10.80	NFI-ODCE +/- 50%	5.40	16.20	6.89	Yes
Industrial	33.80	NFI-ODCE +/- 50%	16.90	50.70	31.68	Yes
Apartment	29.30	NFI-ODCE +/- 50%	14.65	43.95	30.61	Yes
Other	8.80	n/a	0.00	20.00	14.12	Yes
<b>Geography - Real Estate</b>	<b>NFI-ODCE</b>	<b>Target/Constraint</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Actual</b>	<b>Compliant?</b>
West	43.80	NFI-ODCE +/- 50%	21.90	65.70	42.40	Yes
East	28.70	NFI-ODCE +/- 50%	14.35	43.05	26.23	Yes
Midwest	5.80	NFI-ODCE +/- 50%	2.90	8.70	6.24	Yes
South	21.60	NFI-ODCE +/- 50%	10.80	32.40	13.13	Yes
Other2,3	0.00	n/a	n/a	n/a	2.90	Yes
Non-U.S.	0.00	n/a	0.00	40.00	9.09	Yes
<b>Geography - Timber</b>	<b>NCREIF Timberland</b>	<b>Target/Constraint</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Actual</b>	<b>Compliant?</b>
Lake States	3.87	0%-20%	0.00	20.00	0.00	Yes
Northeast	4.69	0%-20%	0.00	20.00	1.00	Yes
Northwest	26.80	0%-50%	0.00	50.00	15.39	Yes
South	63.99	40%-80%	40.00	80.00	72.79	Yes
Other	0.00	0%-20%	0.00	20.00	10.82	Yes
<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	0.70		0.00	50.00	0.00	Yes
Corn Belt	11.33		0.00	50.00	9.94	Yes
Delta States	20.60		0.00	50.00	37.43	Yes
Lake States	2.77		0.00	50.00	16.50	Yes
Mountain	8.06		0.00	50.00	12.90	Yes
Northeast	0.00		0.00	50.00	0.00	Yes
Northern Plains	2.08		0.00	50.00	1.52	Yes
Pacific Northwest	7.46		0.00	50.00	4.53	Yes
Pacific West	39.13		0.00	50.00	8.09	Yes
Southeast	5.82		0.00	50.00	7.09	Yes
Southern Plains	1.99		0.00	50.00	1.99	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.		40.00	100.00	46.90	Yes	
Non-U.S.		0.00	60.00	53.10	Yes	
<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	46.99	Yes	
Transportation		0.00	70.00	30.13	Yes	
Social		0.00	70.00	3.86	Yes	
Communications		0.00	70.00	12.30	Yes	
Other		0.00	70.00	6.72	Yes	
<b>Manager</b>	<b>Target/Constraint</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Max</b>	<b>Compliant?</b>	
		0.00	30.00	13.96	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	54.91	Yes	
Non-Core		30.00	50.00	45.09	Yes	

As of 9/30/2024 (6/30/24 for Illiquid Asset Classes)

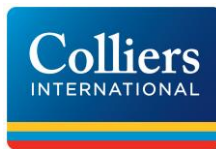
	Actual	Interim Target**	Difference (Actual vs. Interim)	Long-Term Target	Difference* (Actual vs. Long-Term)	Range***
<b>Total Equity</b>	50.1%	51.2%	-1.1%	48.0%	2.1%	43 - 53%
<b>Fixed Income</b>	20.1%	20.0%	0.1%	20.0%	0.1%	18 - 22%
<b>Opportunistic/Alternatives</b>	5.0%	5.1%	0.0%	5.0%	0.0%	NA
<b>Real Assets</b>	11.7%	11.8%	0.0%	15.0%	-3.3%	NA
<i>Real Estate</i>	6.7%	7.8%	-1.1%	10.0%	-3.3%	NA
<i>Core RE</i>	3.7%	4.7%	-1.0%	6.0%	-2.3%	5 - 7%
<i>Non-Core</i>	3.0%	3.1%	-0.1%	4.0%	-1.0%	3 - 5%
<i>Agriculture</i>	1.1%	1.6%	-0.5%	1.0%	0.1%	NA
<i>Timber</i>	1.6%	0.8%	0.8%	2.0%	-0.4%	NA
<i>Infrastructure</i>	2.4%	1.6%	0.8%	2.0%	0.4%	NA
<b>Private Equity</b>	12.9%	12.0%	0.9%	12.0%	0.9%	NA
<b>Cash</b>	0.2%	0.0%	0.2%	0.0%	0.2%	0 - 5%
	100.0%	100.0%	--	100.0%	--	--

\* Uninvested assets/commitments for the Opportunistic, Real Assets and Private Equity asset classes are invested in public equities.

\*\* The interim target reflects the beginning period actual allocation to this asset class

\*\*\* The actual allocation to equity may exceed the range to account for uninvested assets/commitments for the Opportunistic, Real Assets and Private Equity Asset Classes

Real Assets Breakdown	Absolute	%	2024 Pacing Commitment	Commitment Progress (\$M)
			(\$M)	As of 6/30/2024
Real Estate	10%	66.7%	\$400	\$100
<i>Core</i>	5-7%	50-70%	\$250	\$0
<i>Non-Core</i>	3-5%	30-50%	\$150	\$100
Ag	1%	6.7%	\$0	\$0
Timber	2%	13.3%	\$0	\$0
Infrastructure	2%	13.3%	\$50	\$100
<b>Total Real Assets</b>	<b>15%</b>	<b>100.0%</b>	<b>\$ 450</b>	<b>\$ 200</b>



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## JOHN ASHLEY & FENDLEY DRIVE, NORTH LITTLE ROCK PURCHASE SUMMARY

---

**TO:** JERRY MEYER, REAL & ALTERNATIVE ASSETS INVESTMENTS MANAGER  
**FROM:** GREG M. JOSLIN, CCIM, SIOR  
**DATE:** 11-18-24  
**RE:** John Ashley & Fendley Drive, North Little Rock

---

### **Background –**

ATRS has had this 2+/- acre tract of unimproved property located near Fort Roots Veteran Administration campus and adjacent to the Arkansas State Veterans Home facility actively listed since 2016. This property is currently zoned multifamily, is topography challenged and lies due west of some Class C multifamily properties.

Despite its exposure to market over that timeframe we've found little interest from the marketplace outside the periodic calls about size, price, etc. No written offers have been offered throughout multiple extended listing periods and despite a price reduction from \$90,000 to \$70,000. Current ATRS appraised value is \$65,000.

### **Current Offer –**

We now have secured a cash offer/quick close offer in hand for \$40,000 from a Buyer (Home Health Care Agency of Arkansas). The requested due diligence period is thirty (30) days with closing to occur fifteen (15) days thereafter. Closing is prefaced on an affirmative vote authorizing the sale by the ATRS Board of Trustees at their December 2, 2024 meeting.

### **Recommendation-**

It is Colliers Arkansas' recommendation to ATRS to move forward with execution of this Offer & Acceptance Agreement with Home Healthcare Agency of Arkansas.

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

**RESOLUTION  
No. 2024-35**

**Approving the Sale of ATRS Owned Property Located on John Ashley Drive in North Little Rock.**

**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**, through Resolution 2013-38, the ATRS Board authorized ATRS staff to list and sell unoccupied properties and raw land including this property located on John Ashley Drive in North Little Rock for appraised value or higher; and

**WHEREAS**, ATRS staff has received an offer to buy the property located on John Ashley Drive in North Little Rock for \$40,000.00 which is less than the appraised value of \$65,000.00; and

**WHEREAS**, the ATRS Board has reviewed the recommendation of its real estate listing agent, Colliers, along with the recommendation of the Investment Committee and ATRS staff regarding the sale of ATRS owned property located on John Ashley Drive in North Little Rock

**THEREFORE, BE IT RESOLVED**, that the ATRS Board approves the sale of ATRS property located on John Ashley Drive in North Little Rock for no less than \$40,000.00; and

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

**Adopted this 2nd day of December 2024.**

---

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



**AON**

# Quarterly Investment Review

Arkansas Teacher Retirement  
System

Third Quarter 2024

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

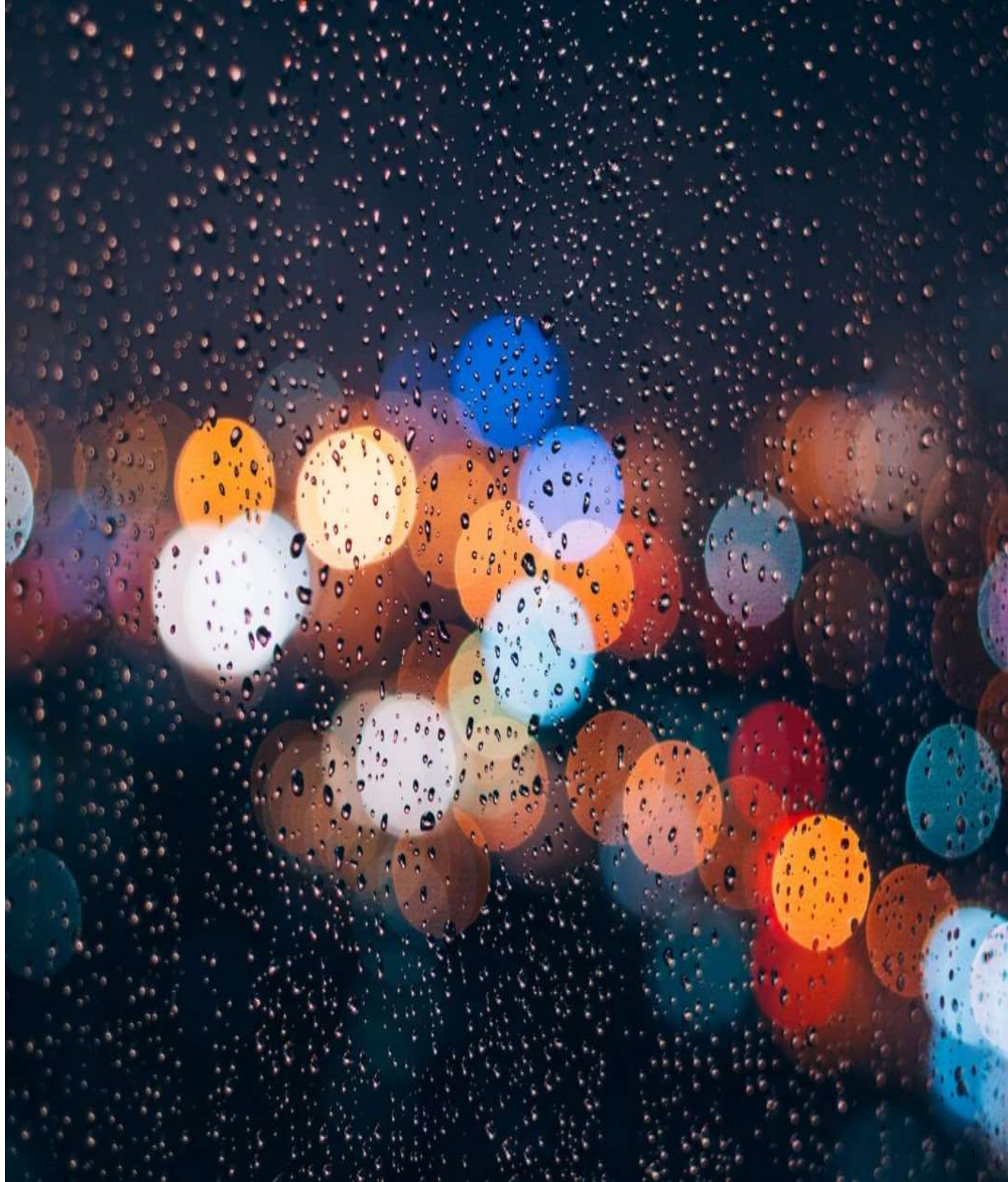
Nothing in this document should be construed as legal or investment advice. Please consult with your independent professional for any such advice. To protect the confidential and proprietary information included in this material, it may not be disclosed or provided to any third parties without the approval of Aon.



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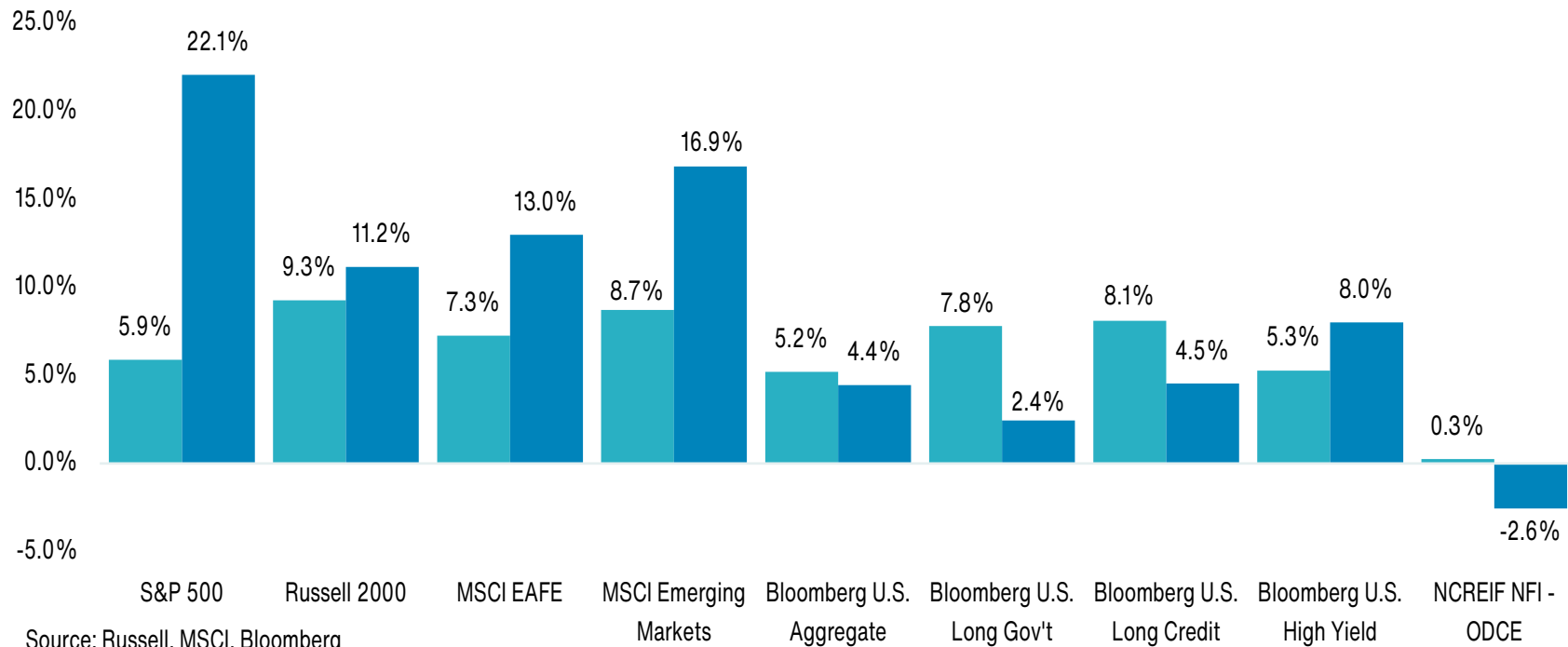
# Executive Summary



# Market Highlights

## SHORT TERM RETURNS AS OF 09/30/2024

■ Third Quarter 2024 ■ YTD



Source: Russell, MSCI, Bloomberg

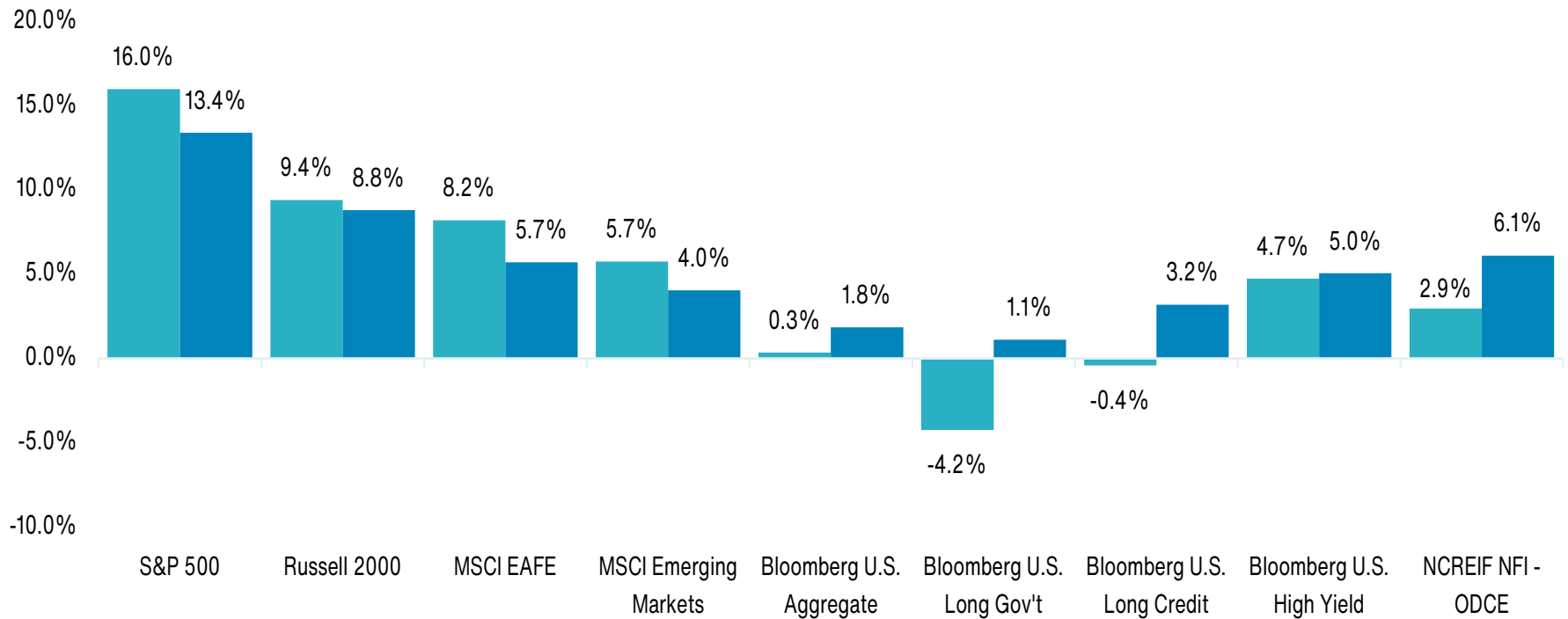
MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

**Past performance is no guarantee of future results.** Indices cannot be invested in directly. Unmanaged index returns assume reinvestment of any and all distributions and do not reflect fees and expenses. Please see appendix for index definitions and other general disclosures.

# Market Highlights

## LONG TERM ANNUALIZED RETURNS AS OF 09/30/2024

■ Five-Year ■ Ten-Year



Source: Russell, MSCI, Bloomberg

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# Market Highlights

Returns of the Major Capital Markets						
	Period Ending 09/30/2024					
	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	6.84%	17.83%	30.96%	7.44%	11.87%	9.20%
MSCI All Country World	6.61%	18.66%	31.76%	8.09%	12.19%	9.39%
Dow Jones U.S. Total Stock Market	6.16%	20.61%	35.24%	10.12%	15.15%	12.75%
Russell 3000	6.23%	20.63%	35.19%	10.29%	15.26%	12.83%
S&P 500	5.89%	22.08%	36.35%	11.91%	15.98%	13.38%
Russell 2000	9.27%	11.17%	26.76%	1.84%	9.39%	8.78%
MSCI All Country World ex-U.S. IMI	8.18%	13.90%	25.06%	3.74%	7.66%	5.33%
MSCI All Country World ex-U.S.	8.06%	14.21%	25.35%	4.14%	7.59%	5.22%
MSCI EAFE	7.26%	12.99%	24.77%	5.48%	8.20%	5.71%
MSCI EAFE (Local Currency)	0.82%	11.97%	17.53%	7.92%	8.78%	7.39%
MSCI Emerging Markets	8.72%	16.86%	26.05%	0.40%	5.75%	4.02%
<b>Equity Factors</b>						
MSCI World Minimum Volatility (USD)	10.30%	15.87%	23.80%	6.74%	6.82%	8.85%
MSCI World High Dividend Yield	10.43%	15.41%	23.70%	9.38%	9.09%	7.76%
MSCI World Quality	3.86%	22.72%	38.12%	12.03%	17.07%	13.84%
MSCI World Momentum	3.06%	30.18%	46.02%	8.53%	13.74%	12.85%
MSCI World Enhanced Value	6.31%	10.87%	20.07%	8.05%	9.11%	6.60%
MSCI World Index Growth	3.51%	21.48%	37.76%	8.59%	16.18%	13.02%
MSCI USA Minimum Volatility (USD)	9.34%	18.68%	27.92%	9.32%	9.31%	11.47%
MSCI USA High Dividend Yield	9.66%	16.53%	26.22%	9.64%	9.35%	10.02%
MSCI USA Quality	4.88%	24.80%	39.81%	13.48%	18.13%	15.63%
MSCI USA Momentum	3.83%	30.53%	47.18%	7.00%	12.84%	13.74%
MSCI USA Enhanced Value	6.32%	10.09%	23.63%	5.88%	9.01%	8.32%
MSCI USA Equal Weighted	8.93%	14.74%	29.31%	6.36%	11.83%	10.54%
MSCI USA Growth	2.61%	25.38%	42.53%	11.25%	20.16%	16.55%

Returns of the Major Capital Markets						
	Period Ending 09/30/2024					
	Third Quarter	YTD	1-Year	3-Year <sup>1</sup>	5-Year <sup>1</sup>	10-Year <sup>1</sup>
<b>Fixed Income</b>						
Bloomberg Global Aggregate	6.98%	3.60%	11.99%	-3.06%	-0.83%	0.57%
Bloomberg U.S. Aggregate	5.20%	4.45%	11.57%	-1.39%	0.33%	1.84%
Bloomberg U.S. Long Gov't	7.81%	2.44%	15.43%	-8.32%	-4.25%	1.09%
Bloomberg U.S. Long Credit	8.10%	4.54%	18.86%	-4.25%	-0.41%	3.18%
Bloomberg U.S. Long Gov't/Credit	7.96%	3.54%	17.24%	-6.17%	-1.97%	2.32%
Bloomberg U.S. TIPS	4.12%	4.85%	9.79%	-0.57%	2.62%	2.54%
Bloomberg U.S. High Yield	5.28%	8.00%	15.74%	3.10%	4.72%	5.04%
Bloomberg Global Treasury ex U.S.	9.40%	2.01%	11.48%	-5.53%	-2.96%	-0.83%
JP Morgan EMBI Global (Emerging Market)	6.07%	8.02%	18.02%	-0.10%	1.19%	3.13%
<b>Commodities</b>						
Bloomberg Commodity Index	0.68%	5.86%	0.96%	3.66%	7.79%	0.03%
Goldman Sachs Commodity Index	-5.26%	5.23%	-6.06%	8.81%	8.03%	-2.35%
<b>Hedge Funds</b>						
HFRI Fund-Weighted Composite <sup>2</sup>	2.78%	8.06%	12.57%	4.00%	7.40%	5.11%
HFRI Fund of Funds <sup>2</sup>	1.08%	5.98%	9.32%	2.25%	5.26%	3.58%
<b>Real Estate</b>						
NAREIT U.S. Equity REITS	16.09%	15.93%	34.74%	5.07%	5.46%	7.83%
NCREIF NFI - ODCE	0.25%	-2.57%	-7.26%	-0.18%	2.94%	6.10%
FTSE Global Core Infrastructure Index	14.29%	16.20%	29.47%	6.96%	6.20%	7.25%
<b>Private Equity</b>						
Burgiss Private iQ Global Private Equity <sup>3</sup>			6.43%	11.01%	15.07%	13.40%

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 December 31, 2023

Source: Russell, MSCI, Bloomberg

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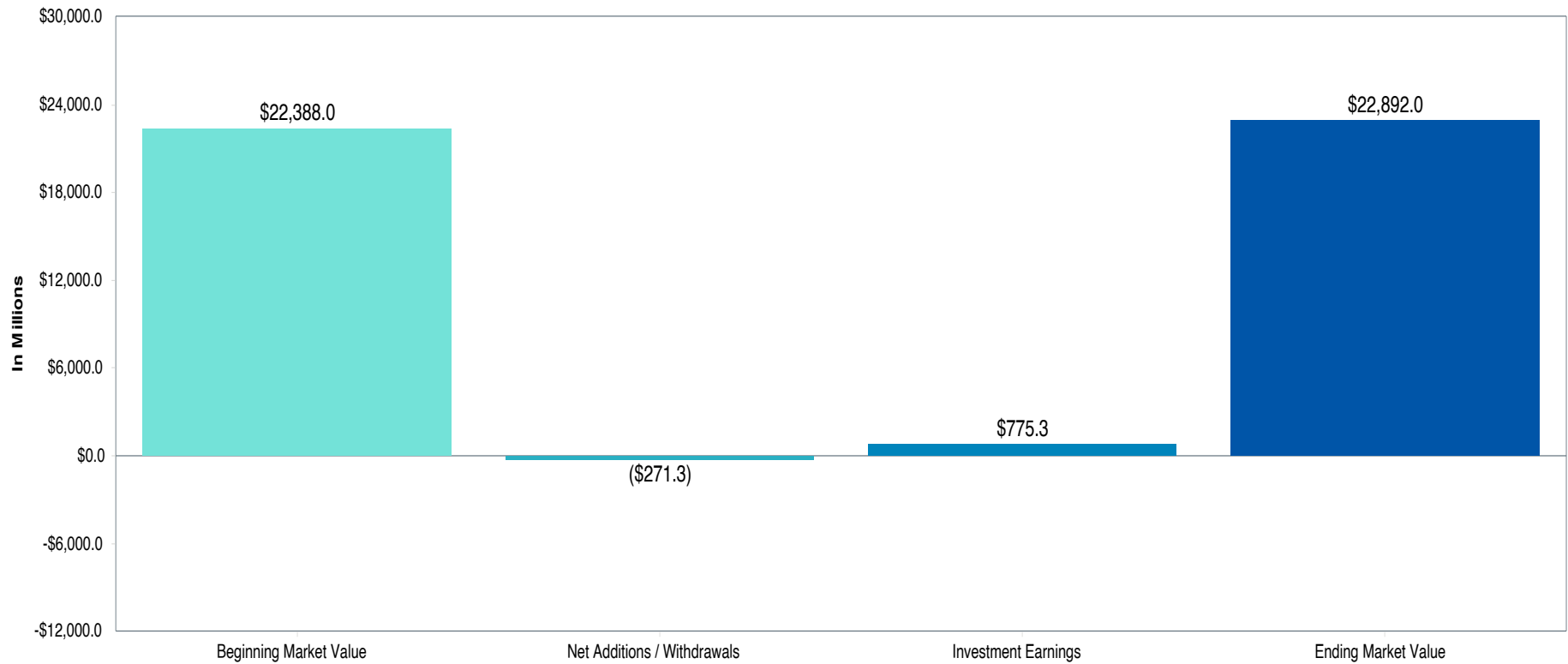
Total Fund





# Total Plan Asset Summary

As of September 30, 2024



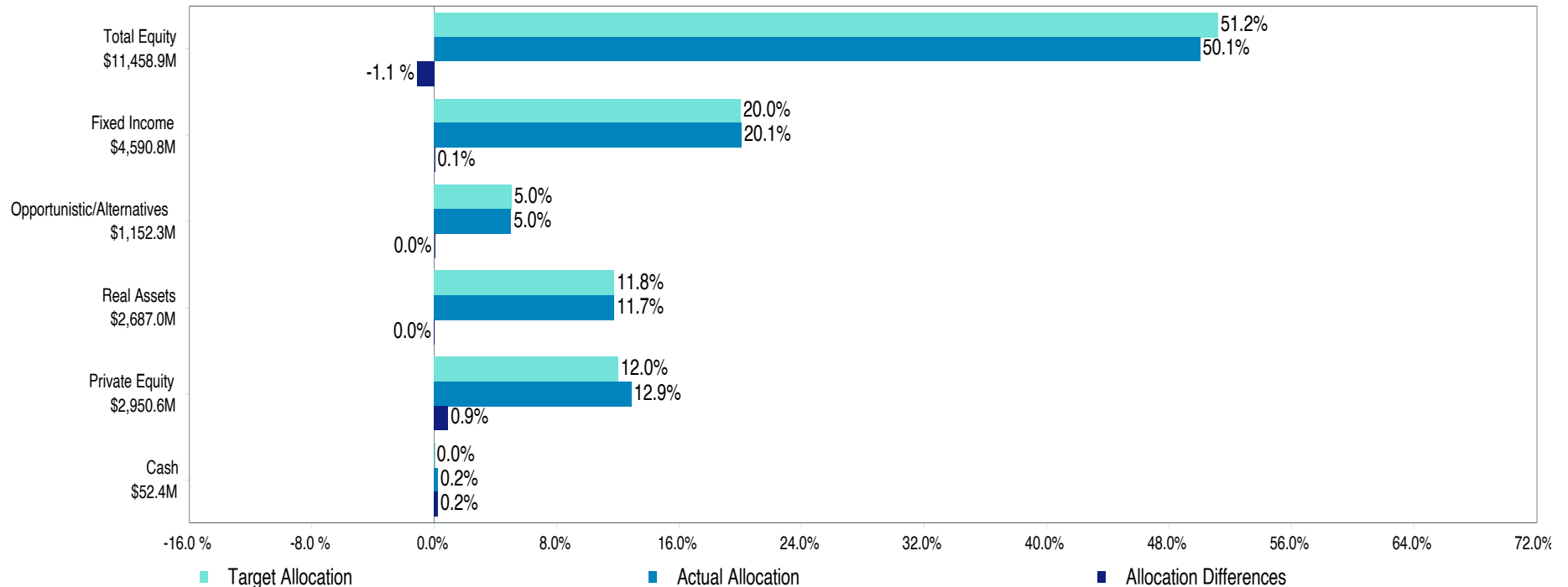
## Summary of Cash Flows

	1 Quarter	Year to Date	1 Year
<b>Total Fund</b>			
Beginning Market Value	22,387,955,711	21,289,300,596	19,999,048,353
+ Additions / Withdrawals	-271,261,145	-526,311,164	-651,879,708
+ Investment Earnings	775,306,125	2,129,011,258	3,544,832,046
<b>= Ending Market Value</b>	<b>22,892,000,691</b>	<b>22,892,000,691</b>	<b>22,892,000,691</b>

# Asset Allocation Compliance

As of September 30, 2024

	Market Value \$M	ATRS Current Allocation %	ATRS Benchmark Policy %	ATRS Long-Term Target Allocation %	Minimum Allocation %	Maximum Allocation %
<b>Total Fund</b>	<b>22,892.0</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>-</b>	<b>-</b>
Total Equity	11,458.9	50.06	51.19	48.00	43.00	53.00
Fixed Income	4,590.8	20.05	20.00	20.00	18.00	22.00
Opportunistic/Alternatives	1,152.3	5.03	5.05	5.00	0.00	100.00
Real Assets	2,687.0	11.74	11.76	15.00	0.00	100.00
Private Equity	2,950.6	12.89	12.00	12.00	0.00	100.00
Cash	52.4	0.23	0.00	-	0.00	5.00

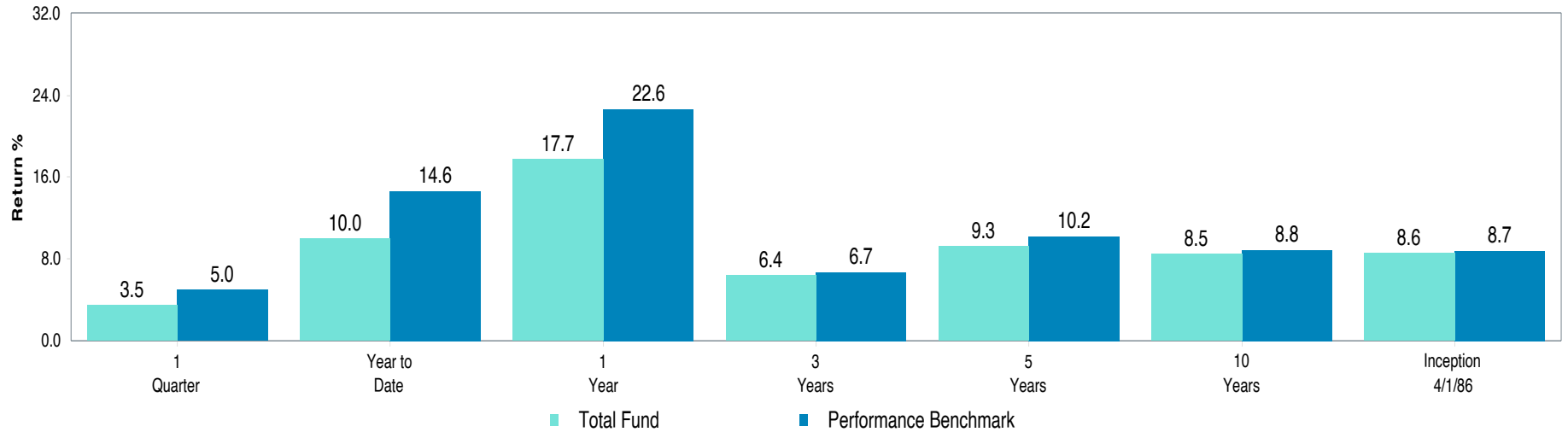


\*Market values and allocation percentages may not add to the sum total due to rounding.

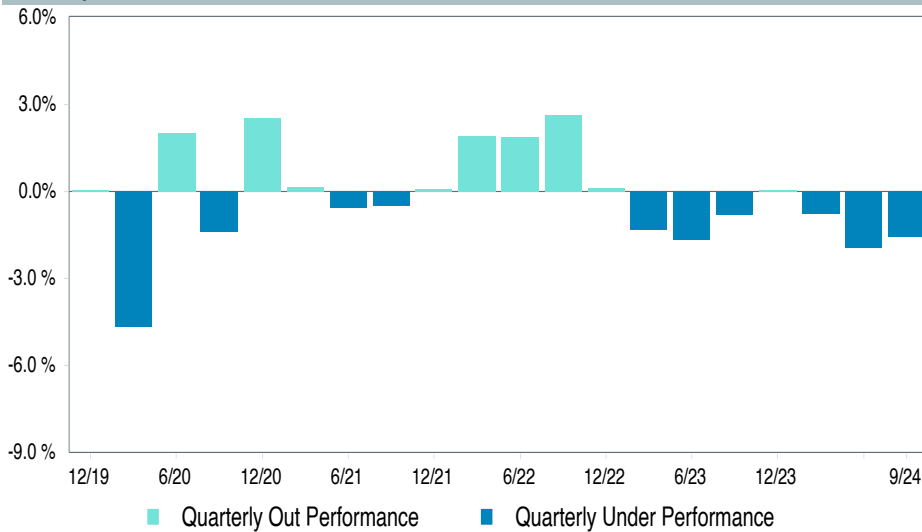
# Total Plan Performance Summary

As of September 30, 2024

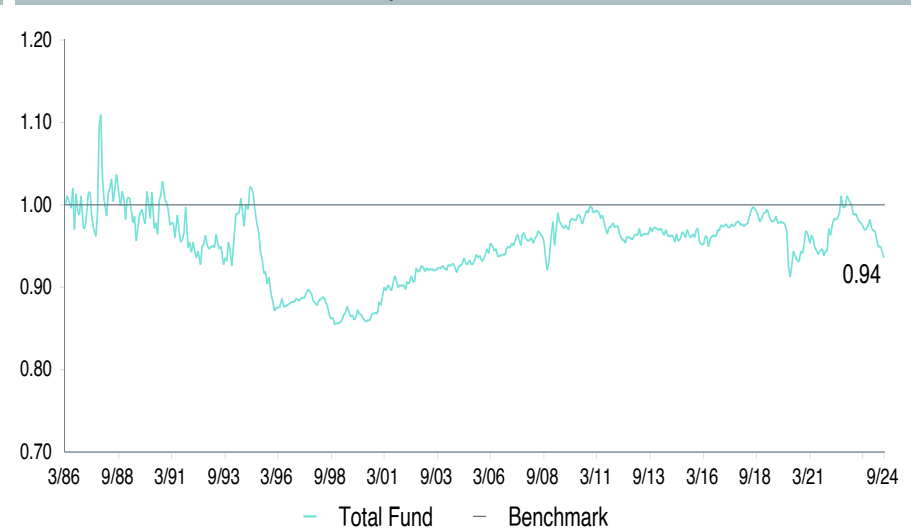
## Return Summary



## Quarterly Excess Performance

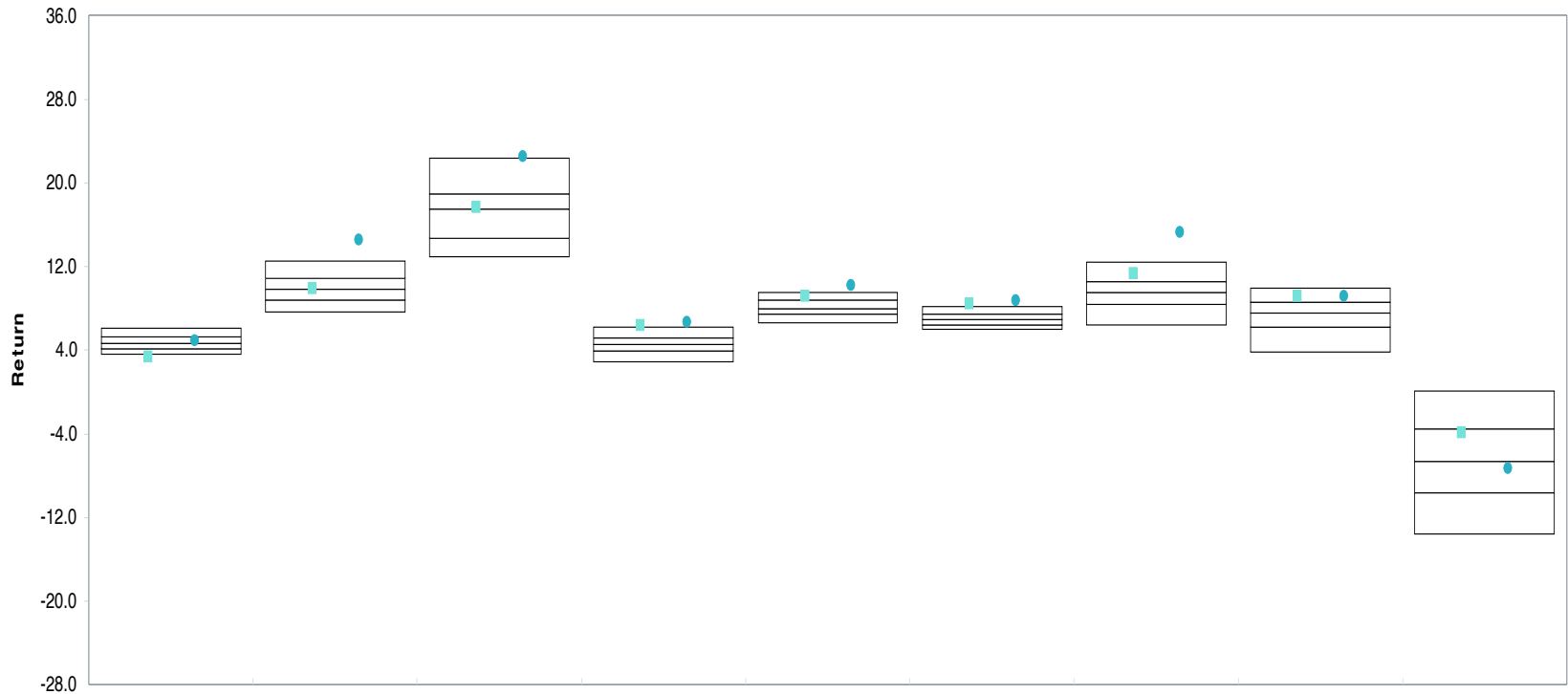


## Ratio of Cumulative Wealth - Since Inception



# Total Fund

As of September 30, 2024



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	Fiscal Year 2024	Fiscal Year 2023	Fiscal Year 2022
<b>Total Fund</b>	<b>3.5 (98)</b>	<b>10.0 (46)</b>	<b>17.7 (42)</b>	<b>6.4 (4)</b>	<b>9.3 (9)</b>	<b>8.5 (3)</b>	<b>11.4 (16)</b>	<b>9.2 (16)</b>	<b>-3.9 (29)</b>
● Performance Benchmark	5.0 (38)	14.6 (1)	22.6 (5)	6.7 (1)	10.2 (1)	8.8 (1)	15.3 (1)	9.2 (16)	-7.2 (56)
5th Percentile	6.1	12.6	22.4	6.2	9.5	8.2	12.4	10.0	0.1
1st Quartile	5.3	10.9	19.0	5.2	8.8	7.4	10.6	8.6	-3.6
Median	4.7	9.9	17.5	4.6	8.0	7.0	9.6	7.6	-6.6
3rd Quartile	4.1	8.8	14.7	3.9	7.5	6.5	8.4	6.2	-9.6
95th Percentile	3.7	7.7	13.0	2.9	6.6	6.0	6.4	3.8	-13.6
Population	105	105	105	102	101	97	168	183	182

Parentheses contain percentile rankings.



# Asset Allocation & Performance

As of September 30, 2024

	Allocation			Performance %							
	Market Value \$ (\$)	%	Policy %	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Total Fund</b>	22,892,000,691	100.0	100.0	3.5	10.0	17.7	6.4	9.3	8.5	8.6	04/01/1986
<i>Performance Benchmark</i>				5.0	14.6	22.6	6.7	10.2	8.8	8.7	
<b>Total Equity</b>	11,458,909,767	50.1	51.4	5.3	16.2	29.7	8.4	11.7		9.9	07/01/2015
<i>Total Equity Performance Benchmark</i>				6.6	18.8	32.5	8.4	12.9		10.7	
<b>Fixed Income</b>	4,590,823,124	20.1	20.0	4.7	5.3	10.7	0.7	2.0	2.9	4.9	07/01/1992
<i>Performance Benchmark</i>				5.2	4.9	12.1	-1.1	0.7	2.2	4.9	
<b>Opportunistic/Alternatives</b>	1,152,282,676	5.0	5.0	2.4	9.4	12.8	9.2	5.2	3.6	4.3	05/01/2011
<i>Custom Alternatives Benchmark</i>				1.5	7.3	8.9	4.9	4.4	2.9	2.8	
<b>Real Assets</b>	2,686,957,407	11.7	11.6	-0.1	-0.9	-1.9	3.5	4.2	6.2	6.7	07/01/2013
<i>Total Real Assets Benchmark</i>				0.2	-2.1	-2.8	4.7	4.6	6.2	6.7	
<b>Real Estate</b>	1,523,736,335	6.7		-0.6	-5.3	-7.0	1.4	1.9	5.5	7.6	12/01/1998
<i>NFI-ODCE (Net)</i>				-0.7	-8.1	-10.0	1.0	1.8	5.2	7.6	
<b>Timber</b>	364,101,356	1.6		1.6	8.1	8.4	7.4	7.1	5.7	7.1	06/01/1998
<i>Timberland Property Benchmark</i>				1.7	8.4	9.8	11.0	7.6	5.7		
<b>Agriculture</b>	249,115,260	1.1		-0.3	3.0	3.1	8.3	6.7	5.5	6.1	09/01/2011
<i>Agriculture Benchmark</i>				-0.2	2.8	2.5	6.8	5.8	5.3		
<b>Infrastructure</b>	550,004,456	2.4		0.2	4.5	4.9	10.2	12.1		12.5	07/01/2018
<i>Infrastructure Benchmark</i>				1.8	5.9	8.1	10.0	8.8		8.6	
<b>Private Equity</b>	2,950,608,572	12.9	12.0	-1.4	1.0	1.8	4.1	9.8	11.9	12.0	03/01/1997
<i>Private Equity Policy</i>				3.8	29.3	25.7	10.1	16.3	14.3	11.6	
<b>Cash</b>	52,419,145	0.2	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 145 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.

Total Equity and Total Fund Performance includes investment earnings from Allianz Security Litigation Income received on February 28, 2022

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

# Asset Allocation & Performance

As of September 30, 2024

	Allocation		Performance %							Inception Date
	Market Value \$	%	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	Since Inception	
<b>Total Fund</b>	<b>22,892,000,691</b>	<b>100.0</b>	<b>3.5 (98)</b>	<b>10.0 (46)</b>	<b>17.7 (42)</b>	<b>6.4 (4)</b>	<b>9.3 (9)</b>	<b>8.5 (3)</b>	<b>8.6</b>	<b>04/01/1986</b>
<i>Performance Benchmark</i>			5.0 (38)	14.6 (1)	22.6 (5)	6.7 (1)	10.2 (1)	8.8 (1)	8.7	
<b>Total Equity</b>	<b>11,458,909,767</b>	<b>50.1</b>	<b>5.3 (66)</b>	<b>16.2 (44)</b>	<b>29.7 (41)</b>	<b>8.4 (32)</b>	<b>11.7 (43)</b>		<b>9.9 (40)</b>	<b>07/01/2015</b>
<i>Total Equity Performance Benchmark</i>			6.6 (50)	18.8 (26)	32.5 (25)	8.4 (32)	12.9 (27)		10.7 (22)	
<b>Jacobs Levy 130/30</b>	<b>1,251,856,435</b>	<b>5.5</b>	<b>4.9 (76)</b>	<b>18.6 (33)</b>	<b>34.7 (26)</b>	<b>20.9 (2)</b>	<b>21.4 (2)</b>	<b>17.9 (1)</b>	<b>13.3 (2)</b>	<b>01/01/2008</b>
<i>Russell 3000 Index</i>			6.2 (59)	20.6 (25)	35.2 (24)	10.3 (26)	15.3 (22)	12.8 (23)	10.4 (29)	
<b>Kennedy Capital Management</b>	<b>449,293,095</b>	<b>2.0</b>	<b>7.8 (61)</b>	<b>10.2 (51)</b>	<b>24.8 (41)</b>	<b>4.3 (79)</b>	<b>10.3 (57)</b>	<b>8.1 (75)</b>	<b>11.7 (25)</b>	<b>01/01/1994</b>
<i>Russell 2000 Value Index</i>			10.2 (19)	9.2 (60)	25.9 (28)	3.8 (84)	9.3 (75)	8.2 (71)	9.4 (100)	
<b>Stephens</b>	<b>428,123,822</b>	<b>1.9</b>	<b>5.8 (76)</b>	<b>13.3 (48)</b>	<b>27.5 (46)</b>	<b>0.3 (44)</b>	<b>10.3 (53)</b>	<b>10.1 (69)</b>	<b>9.8 (59)</b>	<b>08/01/2006</b>
<i>Russell 2000 Growth Index</i>			8.4 (35)	13.2 (49)	27.7 (42)	-0.4 (49)	8.8 (75)	8.9 (91)	8.8 (84)	
<b>Voya Absolute Return</b>	<b>1,014,867,929</b>	<b>4.4</b>	<b>5.8 (58)</b>	<b>19.4 (23)</b>	<b>33.3 (21)</b>	<b>9.3 (23)</b>	<b>12.8 (29)</b>	<b>10.5 (22)</b>	<b>10.9 (14)</b>	<b>10/01/2008</b>
<i>Performance Benchmark</i>			6.6 (50)	18.7 (27)	31.8 (31)	8.1 (35)	12.2 (37)	10.3 (26)	10.8 (16)	
<b>Voya U.S. Convertibles</b>	<b>844,641,241</b>	<b>3.7</b>	<b>5.6 (69)</b>	<b>9.4 (84)</b>	<b>16.4 (95)</b>	<b>-0.4 (90)</b>	<b>11.7 (56)</b>	<b>10.1 (55)</b>	<b>10.2 (34)</b>	<b>12/01/1998</b>
<i>Performance Benchmark</i>			5.3 (73)	7.5 (91)	14.7 (97)	-0.5 (91)	10.5 (70)	8.8 (76)	8.1 (87)	
<b>Pershing Square Holdings</b>	<b>339,202,224</b>	<b>1.5</b>	<b>-9.9 (100)</b>	<b>3.3 (98)</b>	<b>32.0 (33)</b>	<b>10.7 (22)</b>	<b>21.4 (2)</b>	<b>7.5 (92)</b>	<b>9.9 (85)</b>	<b>01/01/2013</b>
<i>Dow Jones U.S. Total Stock Market Index</i>			6.2 (59)	20.6 (25)	35.2 (24)	10.1 (28)	15.2 (23)	12.7 (24)	14.2 (23)	
<b>Triam Partners</b>	<b>106,980,560</b>	<b>0.5</b>	<b>13.9</b>	<b>23.0</b>	<b>34.2</b>	<b>7.8</b>	<b>9.2</b>		<b>8.9</b>	<b>11/01/2015</b>
<i>S&amp;P 500 Index</i>			5.9	22.1	36.4	11.9	16.0		14.2	
<b>Triam Co-Investments</b>	<b>87,654,364</b>	<b>0.4</b>	<b>12.3</b>	<b>32.1</b>	<b>45.1</b>	<b>15.0</b>	<b>13.1</b>		<b>10.4</b>	<b>01/01/2017</b>
<i>S&amp;P 500 Index</i>			5.9	22.1	36.4	11.9	16.0		15.0	
<b>SSgA Global Index</b>	<b>1,056,145,455</b>	<b>4.6</b>	<b>6.8 (49)</b>	<b>17.8 (31)</b>	<b>31.0 (35)</b>	<b>7.7 (40)</b>	<b>12.1 (38)</b>	<b>9.5 (41)</b>	<b>7.8 (45)</b>	<b>04/01/2008</b>
<i>MSCI AC World IMI (Net)</i>			6.8 (48)	17.8 (32)	31.0 (35)	7.4 (42)	11.9 (42)	9.2 (47)	7.4 (49)	
<b>BlackRock MSCI ACWI IMI Fund</b>	<b>1,028,825,763</b>	<b>4.5</b>	<b>6.8 (48)</b>	<b>18.0 (31)</b>	<b>31.3 (34)</b>	<b>7.8 (37)</b>	<b>12.2 (37)</b>	<b>9.5 (42)</b>	<b>9.4 (46)</b>	<b>07/01/2011</b>
<i>MSCI AC World IMI (Net)</i>			6.8 (48)	17.8 (32)	31.0 (35)	7.4 (42)	11.9 (42)	9.2 (47)	9.0 (54)	
<b>Wellington Global Perspectives</b>	<b>765,896,445</b>	<b>3.3</b>	<b>8.0 (33)</b>	<b>11.8 (78)</b>	<b>25.7 (62)</b>	<b>4.3 (73)</b>	<b>10.2 (63)</b>	<b>8.5 (59)</b>	<b>12.3 (20)</b>	<b>07/01/2009</b>
<i>Performance Benchmark</i>			8.8 (26)	11.3 (81)	24.6 (70)	2.6 (83)	9.4 (74)	7.8 (69)	10.3 (62)	

# Asset Allocation & Performance

As of September 30, 2024

	Allocation		Performance %							
	Market Value \$	%	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>T. Rowe Price Global Equity</b>	1,273,562,271	5.6	2.5 (91)	18.6 (28)	33.3 (21)	2.9 (82)	15.4 (8)	13.9 (3)	13.4 (7)	09/01/2009
MSCI AC World Index (Net)			6.6 (50)	18.7 (27)	31.8 (31)	8.1 (35)	12.2 (37)	9.4 (43)	9.9 (57)	
MSCI AC World Index Growth (net)			4.1 (80)	21.0 (14)	36.5 (11)	7.2 (43)	14.7 (12)	11.8 (12)	11.8 (17)	
<b>Lazard</b>	902,483,749	3.9	5.8 (58)	17.7 (33)	32.8 (23)	2.7 (83)	9.7 (70)	8.2 (64)	9.0 (74)	09/01/2009
MSCI AC World Index (Net)			6.6 (50)	18.7 (27)	31.8 (31)	8.1 (35)	12.2 (37)	9.4 (43)	9.9 (57)	
<b>Harris Global Equity</b>	742,220,928	3.2	7.9 (34)	9.2 (89)	17.4 (94)	4.6 (71)	10.5 (58)	8.0 (66)	7.3 (71)	06/01/2014
MSCI World Index (Net)			6.4 (54)	18.9 (26)	32.4 (25)	9.1 (25)	13.0 (26)	10.1 (31)	9.7 (29)	
MSCI World Value (Net)			9.6 (19)	16.4 (42)	27.2 (54)	9.1 (24)	9.4 (74)	7.1 (79)	6.7 (78)	
<b>Arrowstreet Global Equity - Alpha Extension Fund</b>	1,150,905,486	5.0	5.4 (64)	25.9 (5)	38.9 (9)				30.0 (7)	04/01/2023
MSCI AC World IMI Index (Net)			6.8 (45)	17.8 (29)	31.0 (33)				21.5 (27)	
<b>Westrock Equity Fund</b>	16,250,000	0.1	-36.5	-36.3	-26.6				-33.1	09/01/2023
Total Equity Performance Benchmark			6.6	18.8	32.5				24.4	
<b>Fixed Income</b>	4,590,823,124	20.1	4.7	5.3	10.7	0.7	2.0	2.9	4.9	07/01/1992
Performance Benchmark			5.2	4.9	12.1	-1.1	0.7	2.2	4.9	
<b>BlackRock</b>	273,201,040	1.2	5.2 (25)	5.0 (47)	12.4 (36)	-1.2 (79)	0.8 (76)	2.2 (57)	3.7 (41)	10/01/2003
Performance Benchmark			5.2 (28)	4.9 (51)	12.1 (42)	-1.1 (73)	0.7 (78)	2.2 (58)	3.5 (47)	
<b>Loomis Sayles</b>	728,054,751	3.2	5.8 (11)	7.6 (9)	15.1 (13)	0.7 (46)	3.6 (20)	4.0 (19)	6.7 (7)	09/01/2008
Performance Benchmark			5.2 (30)	5.6 (30)	12.9 (32)	0.1 (56)	2.0 (41)	3.1 (31)	4.6 (30)	
<b>SSgA Aggregate Bond Index</b>	1,367,905,135	6.0	5.2 (29)	4.6 (69)	11.6 (48)	-1.4 (85)	0.3 (88)	1.8 (77)	2.4 (68)	06/01/2010
Barclays Aggregate Index			5.2 (28)	4.4 (73)	11.6 (49)	-1.4 (84)	0.3 (88)	1.8 (77)	2.4 (68)	
<b>Wellington Global Total Return</b>	417,532,054	1.8	1.0 (73)	4.8 (79)	4.1 (89)	5.2 (34)	3.7 (70)	3.0 (57)	2.9 (55)	05/01/2014
BofA Merrill Lynch 3 Month US T-Bill			1.4 (72)	4.0 (80)	5.5 (87)	3.5 (52)	2.3 (88)	1.6 (70)	1.6 (68)	
<b>Reams Core Plus Bond Fund</b>	610,899,038	2.7	5.6 (16)	5.1 (46)	12.8 (32)	-0.2 (60)	2.7 (26)	3.2 (30)	3.0 (33)	05/01/2014
Barclays Aggregate Index			5.2 (28)	4.4 (73)	11.6 (49)	-1.4 (84)	0.3 (88)	1.8 (77)	1.9 (75)	
<b>Baird Core Plus Bond</b>	833,411,340	3.6							1.4	09/01/2024
Blmbg. U.S. Universal Index									1.4	
<b>BRS Recycling Tax Credit</b>	186,500,000	0.8								
<b>BRS Recycling Tax Credit Phase 2</b>	91,200,000	0.4								
<b>BRS Recycling Tax Credit Phase 3</b>	82,119,766	0.4								

# Asset Allocation & Performance

As of September 30, 2024

	Allocation		Performance %							
	Market Value \$	%	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Opportunistic/Alternatives</b>	1,152,282,676	5.0	2.4	9.4	12.8	9.2	5.2	3.6	4.3	05/01/2011
<i>Custom Alternatives Benchmark</i>			1.5	7.3	8.9	4.9	4.4	2.9	2.8	
<b>Anchorage</b>	22,925,494	0.1	1.6	3.9	6.4	4.5	7.1	4.4	5.7	05/01/2011
<i>Credit Suisse Event Driven</i>			3.7	9.7	13.4	3.8	6.7	3.5	3.7	
<b>York</b>	1,384,631	0.0	48.5	139.4	126.3	42.5	6.2	2.4	4.2	05/01/2011
<i>Credit Suisse Event Driven</i>			3.7	9.7	13.4	3.8	6.7	3.5	3.7	
<b>Capula</b>	106,009,906	0.5	2.4	4.9	7.5	9.5	8.1	7.2	6.7	05/01/2011
<i>HFRI Macro (Total) Index</i>			-0.6	4.8	3.9	4.3	5.2	3.2	2.2	
<b>Graham</b>	104,314,929	0.5	-2.7	8.1	3.3	13.2	11.1	7.1	5.5	05/01/2011
<i>HFRI Macro (Total) Index</i>			-0.6	4.8	3.9	4.3	5.2	3.2	2.2	
<b>Circumference Group Core Value</b>	43,150,070	0.2	1.8	2.9	8.7	4.2	8.0	8.4	8.4	08/01/2015
<i>Russell 2000 Index</i>			9.3	11.2	26.8	1.8	9.4	8.1	8.1	
<b>Aeolus Keystone Fund</b>	22,062,190	0.1	3.1	8.2	10.1	9.8	2.2	0.3	12/01/2015	
<i>FTSE 3 Month T-Bill</i>			1.4	4.2	5.6	3.6	2.4	1.9	1.9	
<i>Eurekahedge ILS Advisers Index</i>			5.0	9.6	12.6	7.2	5.0	2.4	2.4	
<b>Parametric Global Defensive Equity Fund</b>	240,298,735	1.0	3.0	11.4	17.4	7.2	7.6	6.6	05/01/2017	
<i>Performance Benchmark</i>			4.0	11.3	18.2	6.2	7.6	6.6	6.6	
<i>MSCI AC World Index</i>			6.7	19.1	32.3	8.6	12.7	11.3	11.3	
<b>Man Alternative Risk Premia</b>	130,091,637	0.6	-1.0	10.3	12.7	11.1	4.9	4.3	06/01/2018	
<i>SG Multi Alternative Risk Premia Index</i>			0.3	8.3	6.8	7.0	1.9	1.8	1.8	
<b>CFM Systematic Global Macro Fund</b>	109,446,288	0.5	4.1	4.1	9.5			7.8	12/01/2021	
<i>HFRI Macro: Systematic Diversified Index</i>			-3.6	4.0	-0.3			4.3	4.3	
<b>Pillar Opportunity</b>	119,699,115	0.5	7.5	13.2	18.2			8.5	12/01/2021	
<i>FTSE 3 Month T-Bill</i>			1.4	4.2	5.6			3.8	3.8	
<i>Eurekahedge ILS Advisers Index</i>			5.0	9.6	12.6			7.4	7.4	
<b>Chatham PDSC III</b>	76,134,044	0.3	1.4	10.1	15.5			15.6	11/01/2021	
<i>HFRI Event-Driven (Total) Index</i>			4.6	7.6	13.4			4.2	4.2	
<b>Silver Point Capital Fund</b>	58,217,118	0.3	2.7	10.4	13.1			6.7	04/01/2022	
<i>HFRI ED: Distressed/Restructuring Index</i>			3.6	8.4	13.1			4.1	4.1	
<b>Prophet Mtg. Servicing Opportunities</b>	49,832,363	0.2	3.7	12.6	14.9			17.8	05/01/2023	
<i>Credit Suisse Hedge Fund Index</i>			1.2	8.2	10.4			9.7	9.7	
<b>Chatham PDSC IV</b>	68,716,156	0.3	4.6	9.8	16.4			26.9	06/01/2023	
<i>HFRI Event-Driven (Total) Index</i>			4.6	7.6	13.4			13.6	13.6	



# Asset Allocation & Performance

As of September 30, 2024

	Allocation		Performance %							
	Market Value \$	%	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Real Assets</b>	2,686,957,407	11.7	-0.1	-0.9	-1.9	3.5	4.2	6.2	6.7	07/01/2013
<i>Total Real Assets Benchmark</i>			0.2	-2.1	-2.8	4.7	4.6	6.2	6.7	
<b>Real Estate</b>	1,523,736,335	6.7	-0.6	-5.3	-7.0	1.4	1.9	5.5	7.6	12/01/1998
<i>NFI-ODCE (Net)</i>			-0.7	-8.1	-10.0	1.0	1.8	5.2	7.6	
<b>Timber</b>	364,101,356	1.6	1.6	8.1	8.4	7.4	7.1	5.7	7.1	06/01/1998
<i>Timberland Property Benchmark</i>			1.7	8.4	9.8	11.0	7.6	5.7		
<b>BTG Timber Separate Account</b>	112,768,417	0.5								
<b>BTG U.S. Timberland Fund, L.P.</b>	251,332,939	1.1								
<b>Agriculture</b>	249,115,260	1.1	-0.3	3.0	3.1	8.3	6.7	5.5	6.1	09/01/2011
<i>Agriculture Benchmark</i>			-0.2	2.8	2.5	6.8	5.8	5.3		
<b>HFMS Farmland</b>	184,446,389	0.8	-0.7	2.2	2.1	8.6	7.0	5.7	6.2	09/01/2011
<i>HFMS custom NCREIF Farmland Index</i>			-0.2	2.8	2.5	6.8	5.9	5.2		
<b>UBS Agrivest Core Farmland Fund</b>	64,668,871	0.3	0.9	5.2	5.9	7.4	5.9		5.4	07/01/2015
<i>UBS Agrivest custom NCREIF Farmland Index</i>			-0.2	2.8	2.5	6.8	5.8		6.0	
<b>Infrastructure</b>	550,004,456	2.4	0.2	4.5	4.9	10.2	12.1		12.5	07/01/2018
<i>Infrastructure Benchmark</i>			1.8	5.9	8.1	10.0	8.8		8.6	
<b>Private Equity</b>	2,950,608,572	12.9	-1.4	1.0	1.8	4.1	9.8	11.9	12.0	04/01/1997
<i>Private Equity Policy</i>			3.8	29.3	25.7	10.1	16.3	14.3	11.7	
<b>Cash</b>	52,419,145	0.2								

\*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 145 of this report.

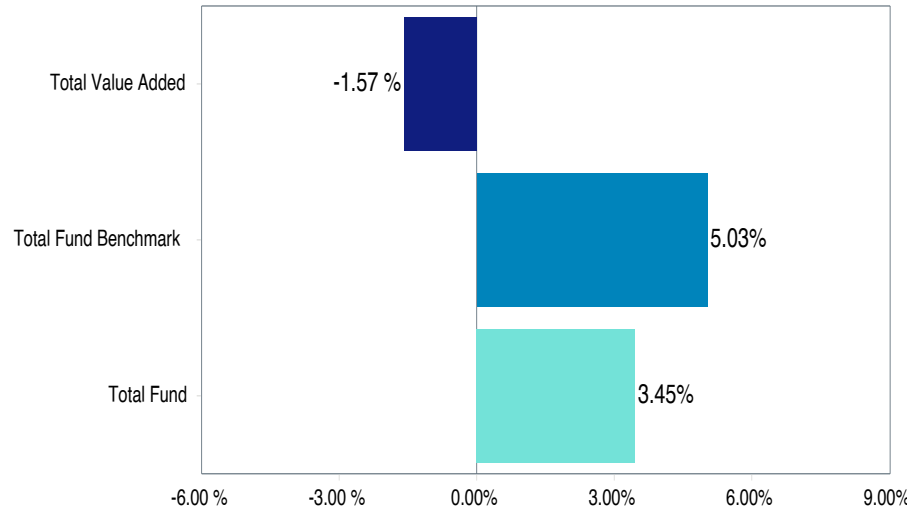
\*The inception date above for infrastructure reflects the inception date for the calculation and reporting of time-weighted returns. The Infrastructure program began in July 2014 and the full history of Infrastructure returns are included in Total Real Assets and Total Fund performance.

\*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.

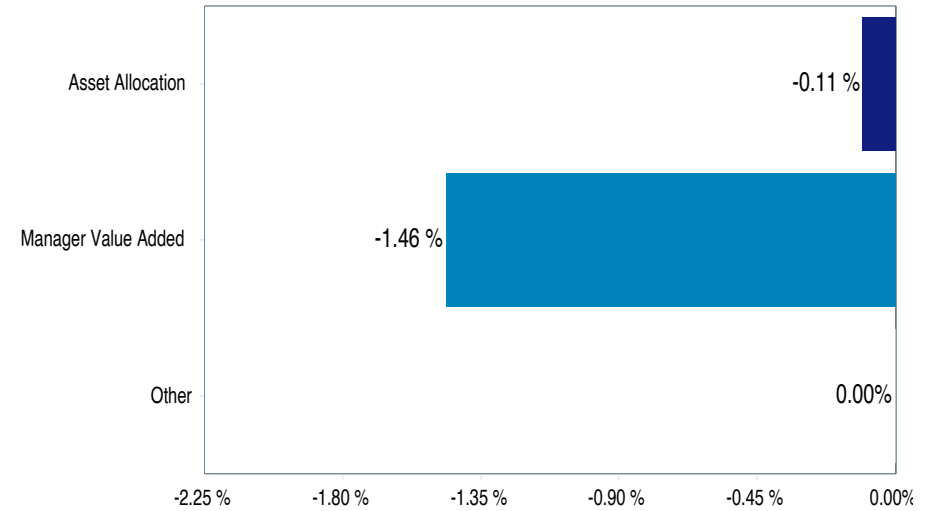
# Total Fund Attribution

1 Quarter Ending September 30, 2024

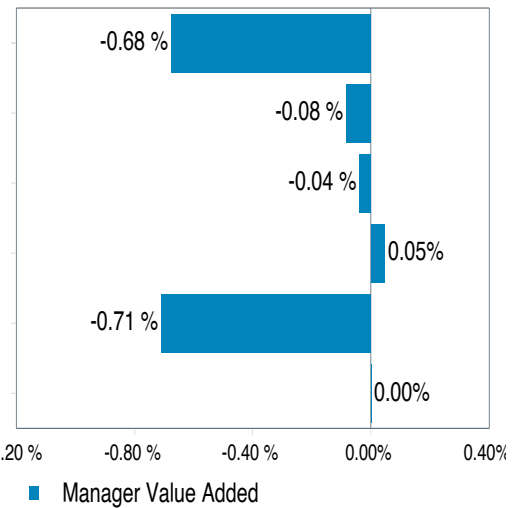
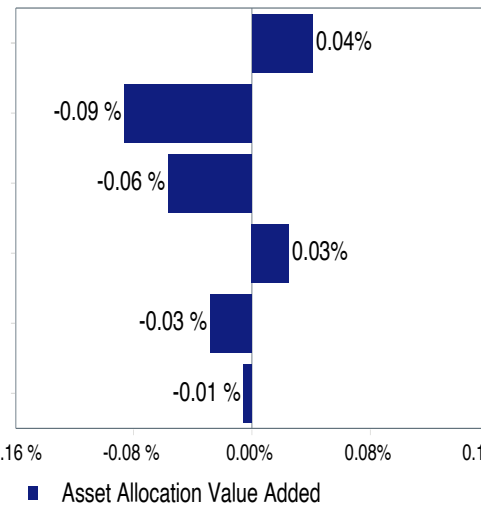
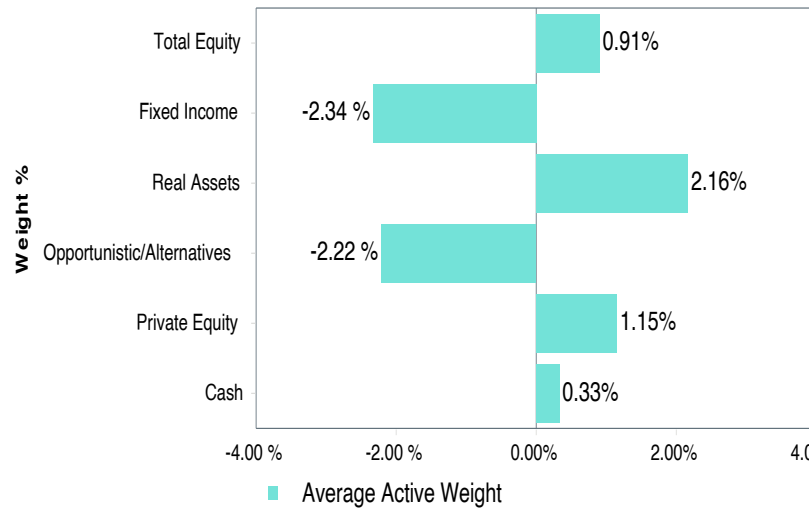
## Total Fund Performance



## Total Value Added: -1.57 %



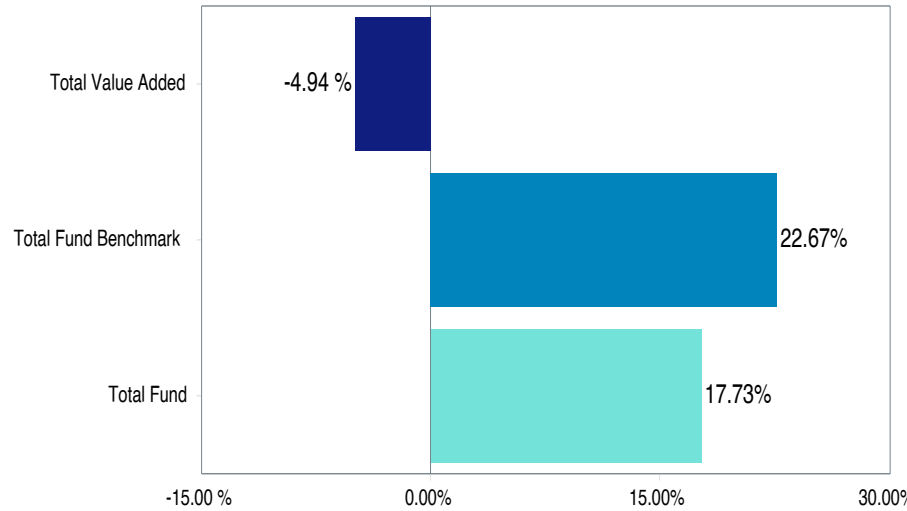
## Total Asset Allocation: -0.11 % Total Manager Value Added: -1.46 %



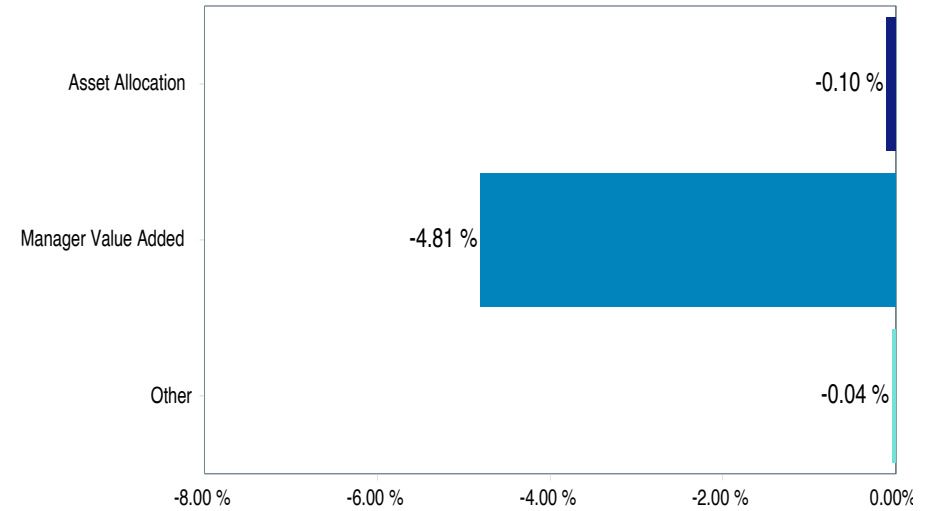
# Total Fund Attribution

1 Year Ending September 30, 2024

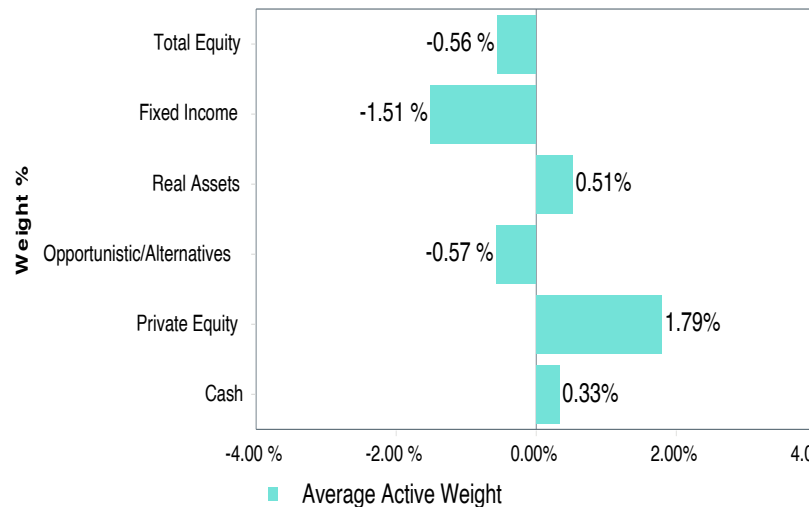
## Total Fund Performance



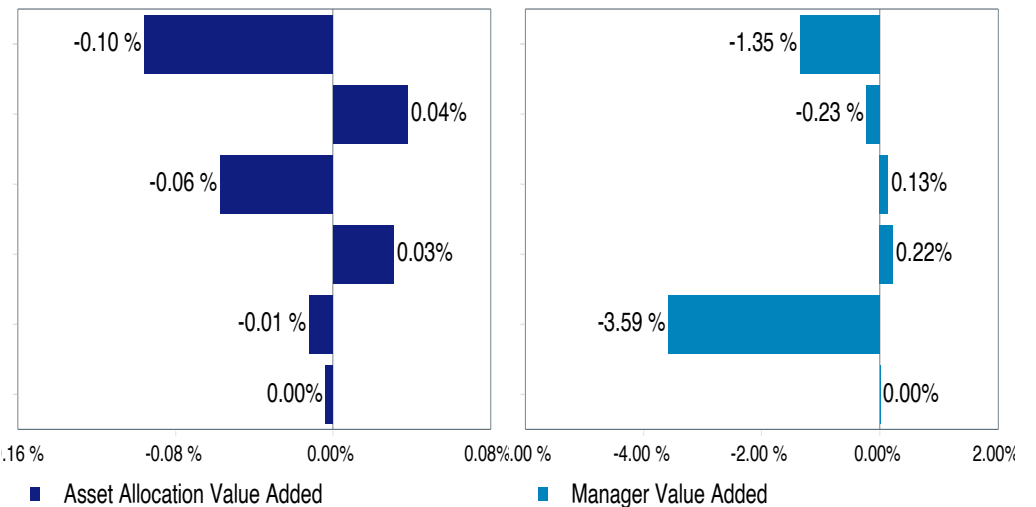
## Total Value Added: -4.94 %



## Total Asset Allocation: -0.10 %



## Total Manager Value Added: -4.81 %



# Asset Allocation & Performance

## Calendar Year Performance

	Performance %									
	Fiscal Year 2025	Fiscal Year 2024	Fiscal Year 2023	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016
<b>Total Fund</b>	<b>3.5 (98)</b>	<b>11.4 (16)</b>	<b>9.2 (16)</b>	<b>-3.9 (29)</b>	<b>31.9 (9)</b>	<b>-1.4 (93)</b>	<b>5.3 (68)</b>	<b>11.7 (2)</b>	<b>16.1 (2)</b>	<b>-0.5 (70)</b>
<i>Performance Benchmark</i>	<i>5.0 (38)</i>	<i>15.3 (1)</i>	<i>9.2 (16)</i>	<i>-7.2 (56)</i>	<i>31.2 (13)</i>	<i>2.3 (38)</i>	<i>7.1 (14)</i>	<i>9.2 (21)</i>	<i>13.2 (30)</i>	<i>1.8 (12)</i>
<b>Total Equity</b>	<b>5.3 (66)</b>	<b>19.5 (31)</b>	<b>15.7 (54)</b>	<b>-13.4 (37)</b>	<b>47.4 (24)</b>	<b>-6.4 (78)</b>	<b>4.1 (59)</b>	<b>13.4 (30)</b>	<b>22.1 (27)</b>	<b>-4.8 (57)</b>
<i>Total Equity Performance Benchmark</i>	<i>6.6 (50)</i>	<i>20.1 (29)</i>	<i>17.0 (44)</i>	<i>-15.8 (48)</i>	<i>42.0 (42)</i>	<i>2.7 (44)</i>	<i>5.9 (49)</i>	<i>12.2 (35)</i>	<i>19.0 (46)</i>	<i>-1.5 (38)</i>
<b>Jacobs Levy 130/30</b>	<b>4.9 (76)</b>	<b>28.7 (13)</b>	<b>18.0 (38)</b>	<b>12.1 (1)</b>	<b>50.3 (42)</b>	<b>0.2 (47)</b>	<b>5.5 (51)</b>	<b>19.9 (23)</b>	<b>24.6 (18)</b>	<b>8.3 (4)</b>
<i>Russell 3000 Index</i>	<i>6.2 (59)</i>	<i>23.1 (26)</i>	<i>19.0 (31)</i>	<i>-13.9 (52)</i>	<i>44.2 (57)</i>	<i>6.5 (32)</i>	<i>9.0 (32)</i>	<i>14.8 (45)</i>	<i>18.5 (56)</i>	<i>2.1 (23)</i>
<b>Kennedy Capital Management</b>	<b>7.8 (61)</b>	<b>10.8 (59)</b>	<b>6.6 (87)</b>	<b>-11.9 (55)</b>	<b>72.4 (30)</b>	<b>-16.2 (51)</b>	<b>-7.8 (68)</b>	<b>12.2 (49)</b>	<b>24.2 (36)</b>	<b>-4.9 (66)</b>
<i>Russell 2000 Value Index</i>	<i>10.2 (19)</i>	<i>10.9 (57)</i>	<i>6.0 (88)</i>	<i>-16.3 (83)</i>	<i>73.3 (28)</i>	<i>-17.5 (60)</i>	<i>-6.2 (59)</i>	<i>13.1 (41)</i>	<i>24.9 (30)</i>	<i>-2.6 (43)</i>
<b>Stephens</b>	<b>5.8 (76)</b>	<b>14.5 (22)</b>	<b>13.6 (73)</b>	<b>-25.8 (32)</b>	<b>40.2 (87)</b>	<b>7.8 (53)</b>	<b>8.4 (38)</b>	<b>29.5 (27)</b>	<b>18.3 (84)</b>	<b>-7.8 (42)</b>
<i>Russell 2000 Growth Index</i>	<i>8.4 (35)</i>	<i>9.1 (49)</i>	<i>18.5 (36)</i>	<i>-33.4 (64)</i>	<i>51.4 (59)</i>	<i>3.5 (63)</i>	<i>-0.5 (79)</i>	<i>21.9 (65)</i>	<i>24.4 (43)</i>	<i>-10.8 (60)</i>
<b>Voya Absolute Return</b>	<b>5.8 (58)</b>	<b>22.2 (20)</b>	<b>15.6 (54)</b>	<b>-14.1 (42)</b>	<b>41.9 (42)</b>	<b>0.1 (55)</b>	<b>4.0 (59)</b>	<b>9.9 (53)</b>	<b>20.3 (37)</b>	<b>1.9 (21)</b>
<i>Performance Benchmark</i>	<i>6.6 (50)</i>	<i>19.4 (31)</i>	<i>16.5 (47)</i>	<i>-15.8 (48)</i>	<i>39.3 (54)</i>	<i>2.1 (46)</i>	<i>5.7 (50)</i>	<i>10.7 (48)</i>	<i>18.8 (48)</i>	<i>1.1 (23)</i>
<b>Voya U.S. Convertibles</b>	<b>5.6 (69)</b>	<b>5.9 (91)</b>	<b>9.5 (84)</b>	<b>-19.8 (70)</b>	<b>47.3 (49)</b>	<b>20.1 (10)</b>	<b>12.5 (15)</b>	<b>16.4 (36)</b>	<b>15.9 (75)</b>	<b>-7.1 (79)</b>
<i>Performance Benchmark</i>	<i>5.3 (73)</i>	<i>6.2 (90)</i>	<i>10.6 (79)</i>	<i>-20.6 (71)</i>	<i>45.7 (52)</i>	<i>15.3 (16)</i>	<i>7.8 (39)</i>	<i>12.0 (64)</i>	<i>16.8 (69)</i>	<i>-4.7 (66)</i>
<b>Pershing Square Holdings</b>	<b>-9.9 (100)</b>	<b>47.9 (1)</b>	<b>23.5 (14)</b>	<b>-17.9 (66)</b>	<b>57.0 (26)</b>	<b>36.5 (2)</b>	<b>21.7 (1)</b>	<b>-2.7 (100)</b>	<b>8.3 (96)</b>	<b>-49.1 (100)</b>
<i>Dow Jones U.S. Total Stock Market Index</i>	<i>6.2 (59)</i>	<i>23.2 (25)</i>	<i>18.9 (32)</i>	<i>-14.2 (54)</i>	<i>44.3 (56)</i>	<i>6.4 (32)</i>	<i>8.9 (33)</i>	<i>14.8 (45)</i>	<i>18.5 (56)</i>	<i>2.0 (23)</i>
<b>Triar Partners</b>	<b>13.9</b>	<b>12.2</b>	<b>18.5</b>	<b>-19.0</b>	<b>33.4</b>	<b>-2.3</b>	<b>13.1</b>	<b>2.8</b>	<b>9.5</b>	
<i>S&amp;P 500 Index</i>	<i>5.9</i>	<i>24.6</i>	<i>19.6</i>	<i>-10.6</i>	<i>40.8</i>	<i>7.5</i>	<i>10.4</i>	<i>14.4</i>	<i>17.9</i>	
<b>Triar Co-Investments</b>	<b>12.3</b>	<b>25.2</b>	<b>22.6</b>	<b>-10.9</b>	<b>34.5</b>	<b>-3.4</b>	<b>14.4</b>	<b>-5.6</b>		
<i>S&amp;P 500 Index</i>	<i>5.9</i>	<i>24.6</i>	<i>19.6</i>	<i>-10.6</i>	<i>40.8</i>	<i>7.5</i>	<i>10.4</i>	<i>14.4</i>	<i>17.9</i>	
<b>SSgA Global Index</b>	<b>6.8 (49)</b>	<b>18.5 (34)</b>	<b>16.5 (47)</b>	<b>-16.2 (51)</b>	<b>41.3 (45)</b>	<b>1.6 (48)</b>	<b>4.8 (54)</b>	<b>11.4 (42)</b>	<b>19.4 (42)</b>	<b>-3.4 (48)</b>
<i>MSCI AC World IMI (Net)</i>	<i>6.8 (48)</i>	<i>18.4 (35)</i>	<i>16.1 (49)</i>	<i>-16.5 (52)</i>	<i>40.9 (46)</i>	<i>1.2 (51)</i>	<i>4.6 (56)</i>	<i>11.1 (44)</i>	<i>19.0 (45)</i>	<i>-3.9 (51)</i>
<b>BlackRock MSCI ACWI IMI Fund</b>	<b>6.8 (48)</b>	<b>18.8 (33)</b>	<b>16.6 (46)</b>	<b>-16.2 (51)</b>	<b>41.4 (45)</b>	<b>1.5 (49)</b>	<b>4.5 (56)</b>	<b>11.4 (42)</b>	<b>19.1 (45)</b>	<b>-3.4 (48)</b>
<i>MSCI AC World IMI (Net)</i>	<i>6.8 (48)</i>	<i>18.4 (35)</i>	<i>16.1 (49)</i>	<i>-16.5 (52)</i>	<i>40.9 (46)</i>	<i>1.2 (51)</i>	<i>4.6 (56)</i>	<i>11.1 (44)</i>	<i>19.0 (45)</i>	<i>-3.9 (51)</i>
<b>Wellington Global Perspectives</b>	<b>8.0 (33)</b>	<b>11.8 (63)</b>	<b>13.4 (69)</b>	<b>-17.1 (56)</b>	<b>60.0 (9)</b>	<b>-11.7 (91)</b>	<b>-3.8 (90)</b>	<b>15.7 (20)</b>	<b>24.8 (14)</b>	<b>-4.2 (52)</b>
<i>Performance Benchmark</i>	<i>8.8 (26)</i>	<i>10.6 (70)</i>	<i>13.0 (70)</i>	<i>-21.8 (77)</i>	<i>54.1 (13)</i>	<i>-5.5 (76)</i>	<i>-3.0 (88)</i>	<i>13.8 (27)</i>	<i>20.5 (36)</i>	<i>-4.7 (56)</i>

# Asset Allocation & Performance

## Calendar Year Performance

	Performance %									
	Fiscal Year 2025	Fiscal Year 2024	Fiscal Year 2023	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016
<b>T. Rowe Price Global Equity</b>	2.5 (91)	24.0 (15)	20.0 (22)	-28.7 (91)	52.0 (15)	22.8 (6)	8.0 (35)	21.3 (8)	28.8 (8)	-0.6 (33)
MSCI AC World Index (Net)	6.6 (50)	19.4 (31)	16.5 (47)	-15.8 (48)	39.3 (54)	2.1 (46)	5.7 (50)	10.7 (48)	18.8 (48)	-3.7 (49)
MSCI AC World Index Growth (net)	4.1 (80)	24.7 (13)	23.1 (12)	-23.5 (81)	39.7 (52)	16.6 (10)	7.2 (41)	16.1 (19)	18.6 (49)	-2.7 (44)
<b>Lazard</b>	5.8 (58)	20.0 (29)	10.4 (79)	-25.6 (86)	47.5 (24)	1.6 (48)	2.7 (69)	9.8 (53)	26.2 (12)	-10.7 (88)
MSCI AC World Index (Net)	6.6 (50)	19.4 (31)	16.5 (47)	-15.8 (48)	39.3 (54)	2.1 (46)	5.7 (50)	10.7 (48)	18.8 (48)	-3.7 (49)
<b>Harris Global Equity</b>	7.9	5.9	18.4	-17.0	56.6	-6.6	-2.0	5.0	38.9	-12.8
MSCI World Index (Net)	6.4	20.2	18.5	-14.3	39.0	2.8	6.3	11.1	18.2	-2.8
MSCI World Value (Net)	9.6	13.9	10.7	-6.6	37.9	-11.3	4.2	5.6	18.7	-3.7
<b>Arrowstreet Global Equity - Alpha Extension Fund</b>	5.4 (64)	31.4 (7)								
MSCI AC World IMI Index (Net)	6.8 (45)	18.4 (31)								
<b>Westrock Equity Fund</b>										
Total Equity Performance Benchmark	6.6									
<b>Fixed Income</b>	4.7	3.9	1.4	-7.5	3.1	6.4	6.4	1.3	5.2	3.5
Performance Benchmark	5.2	3.5	0.0	-10.9	1.1	7.9	8.1	-0.3	0.9	5.8
<b>BlackRock</b>	5.2 (25)	3.4 (66)	-0.4 (75)	-10.9 (69)	0.9 (73)	9.0 (18)	8.0 (26)	-0.3 (76)	0.3 (69)	6.0 (22)
Performance Benchmark	5.2 (28)	3.5 (65)	0.0 (70)	-10.9 (69)	1.1 (69)	7.9 (29)	8.1 (24)	-0.3 (74)	0.9 (55)	5.8 (25)
<b>Loomis Sayles</b>	5.8 (11)	7.1 (23)	3.3 (25)	-12.5 (82)	9.3 (21)	7.6 (31)	7.4 (37)	1.8 (26)	8.1 (15)	1.9 (69)
Performance Benchmark	5.2 (30)	5.4 (36)	2.7 (30)	-11.5 (75)	4.9 (33)	6.6 (39)	8.2 (21)	0.5 (48)	4.0 (26)	5.0 (35)
<b>SSgA Aggregate Bond Index</b>	5.2 (29)	2.7 (79)	-1.0 (85)	-10.4 (62)	-0.3 (92)	8.7 (21)	7.9 (28)	-0.4 (77)	-0.3 (83)	6.0 (22)
Barclays Aggregate Index	5.2 (28)	2.6 (80)	-0.9 (85)	-10.3 (61)	-0.3 (93)	8.7 (21)	7.9 (28)	-0.4 (77)	-0.3 (84)	6.0 (22)
<b>Wellington Global Total Return</b>	1.0 (73)	6.2 (81)	4.8 (50)	3.8 (6)	1.7 (88)	2.1 (43)	5.3 (28)	5.1 (46)	-0.7 (88)	1.3 (41)
BofA Merrill Lynch 3 Month US T-Bill	1.4 (72)	5.4 (83)	3.6 (62)	0.2 (15)	0.1 (90)	1.6 (47)	2.3 (58)	1.4 (78)	0.5 (86)	0.2 (46)
<b>Reams Core Plus Bond Fund</b>	5.6	2.6	2.6	-10.7	2.1	15.3	8.6	0.0	0.0	6.1
Barclays Aggregate Index	5.2	2.6	-0.9	-10.3	-0.3	8.7	7.9	-0.4	-0.3	6.0
<b>Baird Core Plus Bond</b>										
Bmbg. U.S. Universal Index										
<b>BRS Recycling Tax Credit</b>										
<b>BRS Recycling Tax Credit Phase 2</b>										
<b>BRS Recycling Tax Credit Phase 3</b>										

# Asset Allocation & Performance

## Calendar Year Performance

	Performance %									
	Fiscal Year 2025	Fiscal Year 2024	Fiscal Year 2023	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016
<b>Opportunistic/Alternatives</b>	2.4	12.7	7.9	0.2	10.4	-5.3	-0.2	0.6	6.8	-1.7
<i>Custom Alternatives Benchmark</i>	1.5	8.7	4.9	-0.2	11.5	-2.8	2.4	3.4	2.8	-3.7
<b>Anchorage</b>	1.6	6.1	6.9	0.1	23.9	-5.4	1.4	6.2	5.9	-3.9
<i>Credit Suisse Event Driven</i>	3.7	11.0	5.2	-5.4	27.5	-6.9	1.9	3.8	9.3	-10.4
<b>York</b>	48.5	19.6	35.5	-9.1	5.3	-45.2	-5.9	12.2	14.3	-12.9
<i>Credit Suisse Event Driven</i>	3.7	11.0	5.2	-5.4	27.5	-6.9	1.9	3.8	9.3	-10.4
<b>Capula</b>	2.4	8.2	11.8	6.6	2.5	9.8	6.3	3.8	7.8	6.1
<i>HFRI Macro (Total) Index</i>	-0.6	5.9	-0.4	7.9	15.0	0.8	2.4	1.1	-2.4	1.8
<b>Graham</b>	-2.7	14.9	3.7	23.6	27.4	-5.6	2.1	6.5	-3.2	-1.0
<i>HFRI Macro (Total) Index</i>	-0.6	5.9	-0.4	7.9	15.0	0.8	2.4	1.1	-2.4	1.8
<b>Circumference Group Core Value</b>	1.8	4.7	16.4	-10.1	27.9	5.0	2.7	15.9	14.0	
<i>Russell 2000 Index</i>	9.3	10.1	12.3	-25.2	62.0	-6.6	-3.3	17.6	24.6	
<b>Aeolus Keystone Fund</b>	3.1	4.4	11.3	-8.2	-0.2	5.1	-5.8	-17.9	11.2	
<i>FTSE 3 Month T-Bill</i>	1.4	5.6	3.7	0.2	0.1	1.6	2.3	1.3	0.5	
<i>Eurekahedge ILS Advisers Index</i>	5.0	11.2	4.2	0.4	3.6	2.9	-5.5	-6.6	5.0	
<b>Parametric Global Defensive Equity Fund</b>	3.0	12.7	12.6	-5.5	22.6	-4.2	3.9	5.8		
<i>Performance Benchmark</i>	4.0	12.6	10.4	-7.8	18.5	2.4	4.4	6.0		
<i>MSCI AC World Index</i>	6.7	19.9	17.1	-15.4	39.9	2.6	6.3	11.3		
<b>Man Alternative Risk Premia</b>	-1.0	15.3	8.5	12.1	2.8	-7.9	1.8			
<i>SG Multi Alternative Risk Premia Index</i>	0.3	10.9	6.1	4.0	3.1	-11.6	0.4			
<b>CFM Systematic Global Macro Fund</b>	4.1	7.4	-4.8							
<i>HFRI Macro: Systematic Diversified Index</i>	-3.6	4.4	-3.4							
<b>Pillar Opportunity</b>	7.5	17.9	-3.0							
<i>FTSE 3 Month T-Bill</i>	1.4	5.6	3.7							
<i>Eurekahedge ILS Advisers Index</i>	5.0	11.2	4.2							
<b>Chatham PDSC III</b>	1.4	17.7	18.8							
<i>HFRI Event-Driven (Total) Index</i>	4.6	10.8	5.3							
<b>Silver Point Capital Fund</b>	2.7	10.3	8.0							
<i>HFRI ED: Distressed/Restructuring Index</i>	3.6	10.3	1.6							
<b>Prophet Mtg. Servicing Opportunities</b>	3.7	19.3								
<i>Credit Suisse Hedge Fund Index</i>	1.2	11.0								
<b>Chatham PDSC IV</b>	4.6	19.3								
<i>HFRI Event-Driven (Total) Index</i>	4.6	10.8								

# Asset Allocation & Performance

## Calendar Year Performance

	Performance %									
	Fiscal Year 2025	Fiscal Year 2024	Fiscal Year 2023	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016
<b>Real Assets</b>	-0.1	-2.4	1.5	16.0	4.7	3.9	5.6	9.4	7.5	9.5
<i>Total Real Assets Benchmark</i>	0.2	-3.9	1.7	21.0	2.6	4.1	5.7	6.2	6.6	10.1
<b>Real Estate</b>	-0.6	-7.8	-3.5	21.7	0.8	2.0	5.7	11.1	6.9	12.0
<i>NFI-ODCE (Net)</i>	-0.7	-12.0	-3.9	27.3	-0.7	3.9	6.5	7.1	7.4	12.6
<b>Timber</b>	1.6	4.5	7.1	13.2	4.9	12.2	-0.3	1.2	8.0	0.4
<i>Timberland Property Benchmark</i>	1.7	9.8	11.3	11.8	1.6	3.1	0.1	2.6	3.7	2.5
<b>BTG Timber Separate Account</b>										
<b>BTG U.S. Timberland Fund, L.P.</b>										
<b>Agriculture</b>	-0.3	4.3	10.1	12.8	6.0	1.8	3.5	3.3	4.3	9.8
<i>Agriculture Benchmark</i>	-0.2	3.6	9.1	9.7	4.1	3.3	5.4	3.5	4.5	5.6
<b>HFMS Farmland</b>	-0.7	3.5	11.4	14.1	7.0	1.4	3.4	2.9	3.9	10.7
<i>HFMS custom NCREIF Farmland Index</i>	-0.2	3.6	9.1	9.7	4.4	4.6	4.9	2.0	4.0	4.8
<b>UBS Agrivest Core Farmland Fund</b>	0.9	6.4	6.9	9.4	3.5	3.1	4.0	4.5	5.0	6.2
<i>UBS Agrivest custom NCREIF Farmland Index</i>	-0.2	3.6	9.1	9.7	4.2	4.7	6.2	5.0	5.5	8.4
<b>Infrastructure</b>	0.2	6.7	12.6	16.3	21.2	7.2	14.6			
<i>Infrastructure Benchmark</i>	1.8	8.6	10.2	12.3	6.4	7.4	7.0			
<b>Private Equity</b>	-1.4	1.5	2.1	16.6	33.3	4.9	12.8	22.3	16.7	7.7
<i>Private Equity Policy</i>	3.8	31.9	-6.9	13.9	65.9	-7.5	10.8	16.1	20.4	1.6
<b>Cash</b>	3.0	19.5	7.8	2.1	0.8	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 145 of this report.

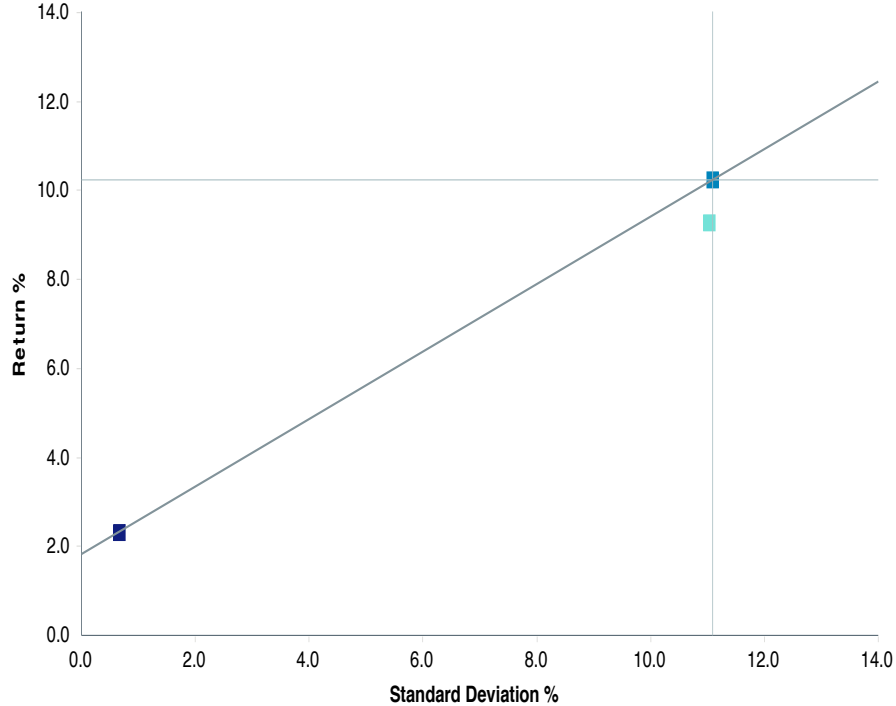
\*The inception date above for infrastructure reflects the inception date for the calculation and reporting of time-weighted returns. The Infrastructure program began in July 2014 and the full history of Infrastructure returns are included in Total Real Assets and Total Fund performance.

\*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.

# Risk Profile Total Fund

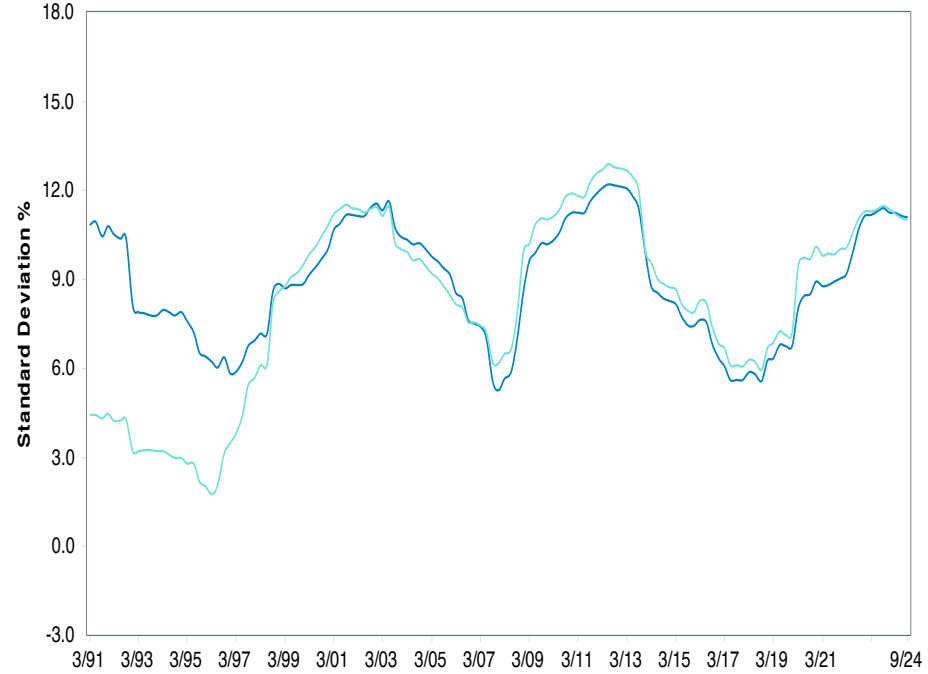
As of September 30, 2024

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



■ Total Fund      ■ Performance Benchmark      ■ 90 Day U.S. Treasury Bill

**Standard Deviation Rolling 5 Years**



— Total Fund      — Performance Benchmark

**5 Years Historical Statistics**

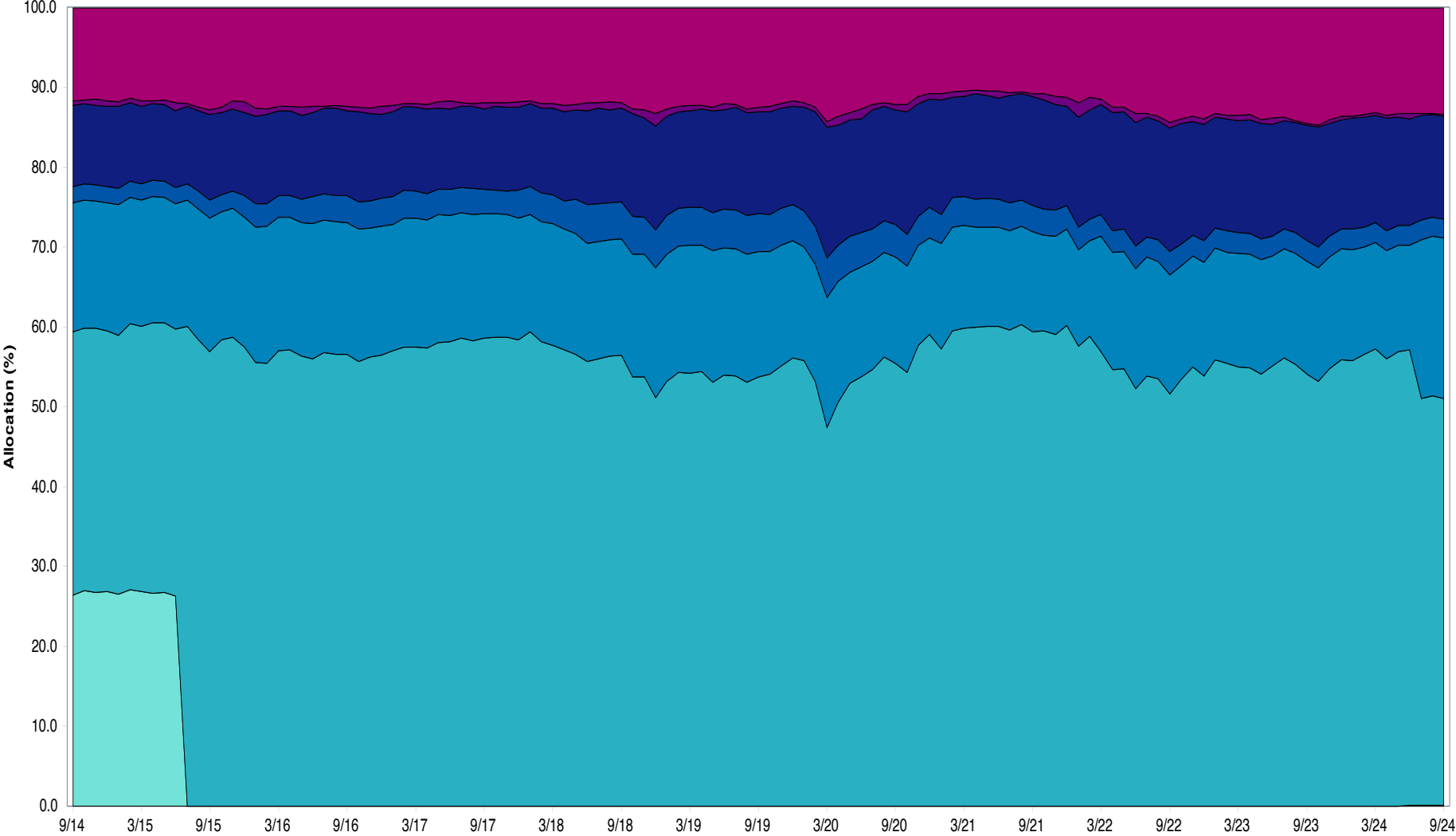
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
<b>Total Fund</b>	-0.88	3.67	-0.24	0.89	0.65	-0.25	0.94	9.28	11.03	0.94
Performance Benchmark	0.00	0.00	-	1.00	0.73	0.00	1.00	10.24	11.09	1.00
90 Day U.S. Treasury Bill	-8.09	11.12	-0.73	0.00	-	2.34	0.00	2.32	0.66	-0.02





# Historical Asset Allocation by Segment

10 Years Ending September 30, 2024



- Domestic Equity
- Global Equity
- Fixed Income
- Opportunistic/Alternatives
- Private Equity
- Cash
- Real Assets



# Total Fund Asset Allocation

Asset Allocation as of 9/30/2024							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	\$1,251,856.4	--	--	--	--	\$1,251,856.4	5.47%			
Kennedy Capital Management	\$449,293.1	--	--	--	--	\$449,293.1	1.96%			
Stephens	\$428,123.8	--	--	--	--	\$428,123.8	1.87%			
Voya Absolute Return	\$1,014,867.9	--	--	--	--	\$1,014,867.9	4.43%			
Voya U.S. Convertibles	\$844,641.2	--	--	--	--	\$844,641.2	3.69%			
Pershing Square Holdings	\$339,202.2	--	--	--	--	\$339,202.2	1.48%			
SSgA Global Index	\$1,056,145.5	--	--	--	--	\$1,056,145.5	4.61%			
BlackRock MSCI ACWI IMI Fund	\$1,028,825.8	--	--	--	--	\$1,028,825.8	4.49%			
Wellington Global Perspectives	\$765,896.4	--	--	--	--	\$765,896.4	3.35%			
T. Rowe Price Global Equity	\$1,273,562.3	--	--	--	--	\$1,273,562.3	5.56%			
Lazard	\$902,483.7	--	--	--	--	\$902,483.7	3.94%			
Harris Global Equity	\$742,220.9	--	--	--	--	\$742,220.9	3.24%			
Triam Partners	\$106,980.6	--	--	--	--	\$106,980.6	0.47%			
Triam Partners Co-Investments	\$87,654.4	--	--	--	--	\$87,654.4	0.38%			
Global Equity Transition Account	\$0.0	--	--	--	--	\$0.0	0.00%			
Arrowstreet	\$1,150,905.5	--	--	--	--	\$1,150,905.5	5.03%			
Westrock Equity Fund	\$16,250.0	--	--	--	--	\$16,250.0	0.07%			
<b>Total Equity</b>						<b>\$11,458,909.8</b>	<b>50.06%</b>	<b>54.84%</b>	<b>53.00%</b>	
BlackRock	--	\$273,201.0	--	--	--	\$273,201.0	1.19%			
Loomis Sayles	--	\$728,054.8	--	--	--	\$728,054.8	3.18%			
SSgA Aggregate Bond Index	--	\$1,367,905.1	--	--	--	\$1,367,905.1	5.98%			
Wellington Global Total Return	--	\$417,532.1	--	--	--	\$417,532.1	1.82%			
Reams Core Plus Bond Fund	--	\$610,899.0	--	--	--	\$610,899.0	2.67%			
Baird Core Plus Bond Fund	--	\$833,411.3	--	--	--	\$833,411.3	3.64%			
BRS Recycling Tax Credit	--	\$186,500.0	--	--	--	\$186,500.0	0.81%			
BRS Recycling Tax Credit Phase 2	--	\$91,200.0	--	--	--	\$91,200.0	0.40%			
BRS Recycling Tax Credit Phase 3	--	\$82,119.8	--	--	--	\$82,119.8	0.36%			
<b>Total Fixed Income</b>						<b>\$4,590,823.1</b>	<b>20.05%</b>	<b>15.00%</b>	<b>15.00%</b>	
Anchorage	--	--	--	\$22,925.5	--	\$22,925.5	0.10%			
Capula	--	--	--	\$106,009.9	--	\$106,009.9	0.46%			
Graham	--	--	--	\$104,314.9	--	\$104,314.9	0.46%			
York	--	--	--	\$1,384.6	--	\$1,384.6	0.01%			
Circumference Group Core Value	--	--	--	\$43,150.1	--	\$43,150.1	0.19%			
Aeolus Keystone Fund	--	--	--	\$22,062.2	--	\$22,062.2	0.10%			
Nephila Rubik Holdings	--	--	--	\$0.0	--	\$0.0	0.00%			
Parametric Global Defensive Equity	--	--	--	\$240,298.7	--	\$240,298.7	1.05%			
Man Alternative Risk Premia	--	--	--	\$130,091.6	--	\$130,091.6	0.57%			
CFM Systematic Global Macro	--	--	--	\$109,446.3	--	\$109,446.3	0.48%			
Juniperus	--	--	--	\$119,699.1	--	\$119,699.1	0.52%			
Chatham PDSC III	--	--	--	\$76,134.0	--	\$76,134.0	0.33%			
Silver Point Capital	--	--	--	\$58,217.1	--	\$58,217.1	0.25%			
Chatham PDSC IV	--	--	--	\$68,716.2	--	\$68,716.2	0.30%			
Prophet	--	--	--	\$49,832.4	--	\$49,832.4	0.22%			
<b>Total Opportunistic/Alternatives</b>						<b>\$1,152,282.7</b>	<b>5.03%</b>	<b>5.23%</b>	<b>5.00%</b>	
<b>Real Estate</b>			\$1,523,736.3			\$1,523,736.3	6.66%			
<b>Timber</b>			\$364,101.4			\$364,101.4	1.59%			
<b>Agriculture</b>			\$249,115.3			\$249,115.3	1.09%			
<b>Infrastructure</b>			\$550,004.5			\$550,004.5	2.40%			
<b>Total Real Assets</b>						<b>\$2,686,957.4</b>	<b>11.74%</b>	<b>12.92%</b>	<b>15.00%</b>	
<b>Total Private Equity</b>				\$2,950,608.6		\$2,950,608.6	12.89%	12.00%	12.00%	
<b>Total Cash</b>					\$52,419.1	\$52,419.1	0.23%	0.00%	0.00%	
<b>Total Fund</b>	<b>\$11,458,909.8</b>	<b>\$4,590,823.1</b>	<b>\$2,686,957.4</b>	<b>\$4,102,891.2</b>	<b>\$52,419.1</b>	<b>\$22,892,000.7</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 total due to rounding.

# Real Estate Asset Allocation

Asset Allocation as of 9/30/2024				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	\$50.9	0.00%	0.00%	LaSalle Asia Opportunity Fund VI	\$11,383.0	0.75%	0.05%
Almanac Realty Securities Fund VI	\$2,926.6	0.19%	0.01%	LaSalle Income & Growth Fund VI	\$2,235.9	0.15%	0.01%
Almanac Realty Securities Fund VII	\$16,331.7	1.07%	0.07%	LaSalle Income & Growth Fund VII	\$5,602.4	0.37%	0.02%
Almanac Realty Securities Fund VIII	\$24,675.5	1.62%	0.11%	LaSalle Income & Growth Fund VIII	\$34,658.4	2.27%	0.15%
Almanac Realty Securities Fund IX	\$8,496.7	0.56%	0.04%	LaSalle US Value Partners IX	-\$3,808.8	-0.25%	-0.02%
American Center	\$28,951.4	1.90%	0.13%	LBA Logistics Value Fund	\$37,879.3	2.49%	0.17%
AR Insurance	\$2,387.4	0.16%	0.01%	Lone Star Real Estate Fund IV	\$6,876.6	0.45%	0.03%
AR Teachers Retirement Building	\$4,822.4	0.32%	0.02%	Lone Star Real Estate Fund VII	-\$1,321.2	-0.09%	-0.01%
Blackstone Real Estate Partners VII	\$7,382.9	0.48%	0.03%	Long Wharf Real Estate Partners V	\$15,027.9	0.99%	0.07%
Blackstone RE Europe VI	\$38,087.8	2.50%	0.17%	Long Wharf Real Estate Partners VI	\$33,431.8	2.19%	0.15%
Blackstone RE Europe VII	\$4,905.9	0.32%	0.02%	Mesa West Income Fund V	\$14,978.0	0.98%	0.07%
Blackston RE X	\$18,800.5	1.23%	0.08%	Metropolitan RE Co-Investments	\$6,418.5	0.42%	0.03%
Carlyle Realty Partners VII	\$6,491.0	0.43%	0.03%	Met Life Commercial Mtg Inc Fund	\$42,740.1	2.80%	0.19%
Carlyle Realty VIII	\$10,888.8	0.71%	0.05%	Morgan Stanley Prime Property Fund	\$57,157.2	3.75%	0.25%
Carlyle Realty IX	\$15,363.2	1.01%	0.07%	New Boston Fund VII	\$16,273.4	1.07%	0.07%
CBREI SP U.S. Opportunity V	\$120.1	0.01%	0.00%	O'Connor NAPP II	\$2,927.6	0.19%	0.01%
CBREI SP VIII	\$13,495.1	0.89%	0.06%	PRISA	\$260,729.6	17.11%	1.14%
CBREI SP IX	\$41,642.1	2.73%	0.18%	Recoveries Land	\$70.0	0.00%	0.00%
Cerberus Institutional RE Partners III	\$8,115.2	0.53%	0.04%	Rockwood Capital RE Partners IX	\$2,478.3	0.16%	0.01%
Calmwater	\$11,397.8	0.75%	0.05%	Rockwood Capital RE XI	\$30,578.2	2.01%	0.13%
Fletcher Properties	\$1,087.0	0.07%	0.00%	Rose Law Firm	\$4,538.7	0.30%	0.02%
FPA Core Plus IV	\$34,643.3	2.27%	0.15%	RREEF Core Plus Industrial Fund	\$63,833.8	4.19%	0.28%
GCP GLP IV	\$40,360.4	2.65%	0.18%	Torchlight Debt Opportunity Fund IV	\$1,625.9	0.11%	0.01%
Harbert European Real Estate	\$1,174.7	0.08%	0.01%	Torchlight Debt Opportunity Fund V	\$2,540.3	0.17%	0.01%
Heitman European Property IV	\$277.8	0.02%	0.00%	Torchlight Debt Opportunity Fund VI	\$19,192.2	1.26%	0.08%
JP Morgan Strategic Property Fund	\$146,259.8	9.60%	0.64%	Torchlight Debt Opportunity Fund VII	\$49,992.3	3.28%	0.22%
Kayne Anderson V	\$17,364.1	1.14%	0.08%	UBS Trumbull Property Fund	\$112,357.5	7.37%	0.49%
Kayne Anderson VI	\$40,970.6	2.69%	0.18%	UBS Trumbull Property Income Fund	\$49,741.2	3.26%	0.22%
Landmark Fund VI	\$114.8	0.01%	0.00%	Victory	\$33,162.4	2.18%	0.14%
Landmark Real Estate IX	\$2,970.3	0.19%	0.01%	Walton Street Real Estate Debt II	\$18,941.4	1.24%	0.08%
Landmark Real Estate VIII	\$14,015.2	0.92%	0.06%	West Mphs. DHS	\$0.0	0.00%	0.00%
LaSalle Asia Opportunity Fund IV	\$1,773.7	0.12%	0.01%	Westbrook IX	\$4,181.6	0.27%	0.02%
LaSalle Asia Opportunity Fund V	\$14,479.2	0.95%	0.06%	Westbrook Real Estate Fund X	\$6,488.9	0.43%	0.03%
				<b>Total Real Estate</b>	<b>\$1,523,736.3</b>	<b>100.00%</b>	<b>6.66%</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 total due to rounding.

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# Private Equity Asset Allocation

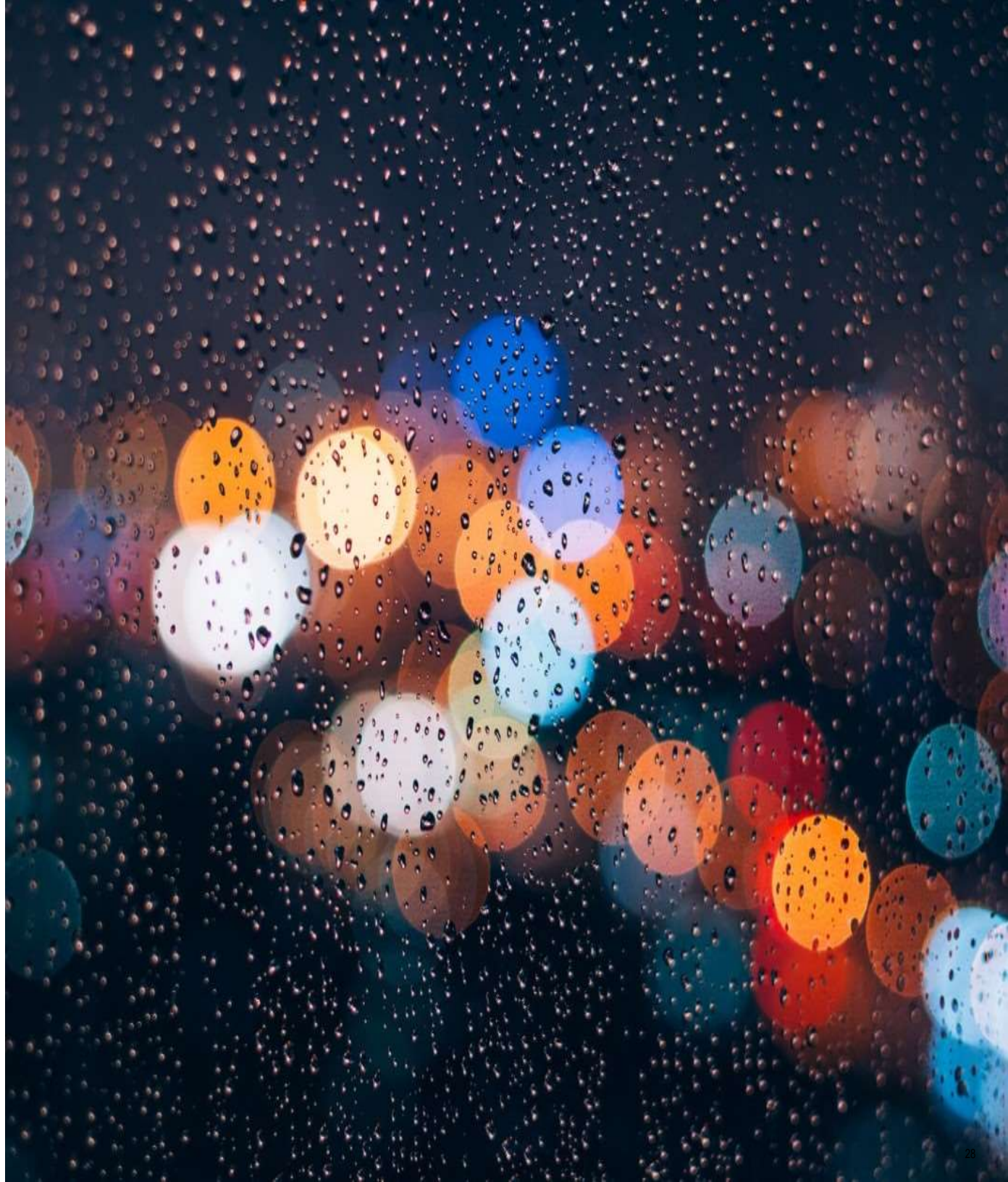
Asset Allocation as of 9/30/2024				Values in \$1,000			
	Private Equity	Percent of Private Equity	Percent of Total Fund		Private Equity	Percent of Private Equity	Percent of Total Fund
Alpine IX	\$4,973.9	0.17%	0.02%	Insight Mezzanine I	\$2,055.3	0.07%	0.01%
Alpine VIII	\$25,417.3	0.86%	0.11%	JF Lehman III	\$26,174.9	0.89%	0.11%
Arlington Capital IV	\$35,395.7	1.20%	0.15%	JF Lehman IV	\$5,005.0	0.17%	0.02%
Arlington Capital V	\$37,930.3	1.29%	0.17%	JF Lehman V	\$44,288.9	1.50%	0.19%
Arlington Capital VI	\$17,752.0	0.60%	0.08%	JF Lehman VI	\$10,820.8	0.37%	0.05%
Advent GPE VI	\$3,121.4	0.11%	0.01%	KPS III	\$0.0	0.00%	0.00%
Altus Capital II	\$4,754.7	0.16%	0.02%	KPS IV	\$11,943.6	0.40%	0.05%
American Industrial Partners VI	\$31,562.0	1.07%	0.14%	KPS V	\$30,105.3	1.02%	0.13%
American Industrial Partners VII	\$41,130.0	1.39%	0.18%	KPS Mid-Cap	\$15,411.3	0.52%	0.07%
Altaris Constellation Partners	\$23,270.7	0.79%	0.10%	Levine Leichtman V	\$823.5	0.03%	0.00%
Altaris Health Partners IV	\$22,920.6	0.78%	0.10%	Lime Rock III	\$18,582.7	0.63%	0.08%
Atlas Capital II	\$7,731.2	0.26%	0.03%	LLR III	\$795.5	0.03%	0.00%
Audax Mezzanine III	\$1,604.0	0.05%	0.01%	LLR VI	\$28,197.6	0.96%	0.12%
Big River - Equity	\$1,863.0	0.06%	0.01%	LLR VII	-\$600.3	-0.02%	0.00%
Big River - Holdings Note 2023	\$0.0	0.00%	0.00%	Mason Wells III	\$0.0	0.00%	0.00%
Big River - Holdings Note 3/16/23	\$0.0	0.00%	0.00%	NGP IX	\$28.4	0.00%	0.00%
Bison V	\$23,326.7	0.79%	0.10%	NGP X	\$2,982.8	0.10%	0.01%
Bison VI	\$16,824.0	0.57%	0.07%	NGP XI	\$11,969.9	0.41%	0.05%
Boston Ventures VII	\$879.4	0.03%	0.00%	NGP XII	\$16,535.6	0.56%	0.07%
Boston Ventures IX	\$33,888.3	1.15%	0.15%	One Rock Capital Partners II	\$30,177.3	1.02%	0.13%
Boston Ventures X	\$37,380.3	1.27%	0.16%	PineBridge	\$9,528.5	0.32%	0.04%
Boston Ventures XI	\$13,501.4	0.46%	0.06%	Revelstoke	\$24,976.1	0.85%	0.11%
BV VIII	\$8,680.4	0.29%	0.04%	Post Road	\$17,274.0	0.59%	0.08%
Castlelake II	\$6,881.8	0.23%	0.03%	Riverside Value Fund I	\$26,804.6	0.91%	0.12%
Castlelake III	\$8,762.5	0.30%	0.04%	Riverside V	\$23,989.3	0.81%	0.10%
Clearlake V	\$34,438.9	1.17%	0.15%	Riverside VI	\$33,910.7	1.15%	0.15%
Clearlake VI	\$47,189.7	1.60%	0.21%	Siris III	\$18,427.4	0.62%	0.08%
Clearlake VII	\$19,313.0	0.65%	0.08%	Siris IV	\$35,544.7	1.20%	0.16%
Court Square III	\$29,749.4	1.01%	0.13%	SK Capital V	\$31,651.2	1.07%	0.14%
CSFB-ATRS 2005-1 Series	\$15,103.7	0.51%	0.07%	Sk Capital VI	\$18,245.6	0.62%	0.08%
CSFB-ATRS 2006-1 Series	\$18,969.0	0.64%	0.08%	Sycamore Partners II	\$15,444.5	0.52%	0.07%
Diamond State Ventures II	\$596.6	0.02%	0.00%	Sycamore Partners III	\$28,628.2	0.97%	0.13%
DW Healthcare III	\$1,444.9	0.05%	0.01%	TA XI	\$4,446.3	0.15%	0.02%
DW Healthcare IV	\$20,602.5	0.70%	0.09%	Tennenbaum VI	\$162.6	0.01%	0.00%
DW Healthcare V	\$38,922.0	1.32%	0.17%	Thoma Bravo Discover	\$5,984.3	0.20%	0.03%
EnCap IX	\$5,725.9	0.19%	0.03%	Thoma Bravo Discover II	\$25,893.6	0.88%	0.11%
EnCap VIII	\$17,211.4	0.58%	0.08%	Thoma Bravo Discover III	\$25,147.7	0.85%	0.11%
EnCap X	\$20,990.6	0.71%	0.09%	Thomas Bravo Discover IV	\$10,252.4	0.35%	0.04%
EnCap XI	\$41,503.9	1.41%	0.18%	Thoma Bravo Explore I	\$25,950.5	0.88%	0.11%
Enlightenment Capital Solutions V	\$7,540.9	0.26%	0.03%	Thoma Bravo XI	\$16,579.0	0.56%	0.07%
Franklin Park Series	\$1,164,786.6	39.48%	5.09%	Thoma Bravo XII	\$38,248.0	1.30%	0.17%
Greenbriar V	\$34,011.4	1.15%	0.15%	Thoma Bravo XIII	\$43,500.3	1.47%	0.19%
Greenbriar VI	\$9,941.2	0.34%	0.04%	Thoma Bravo XIV	\$21,370.0	0.72%	0.09%
GCG IV	\$14,665.4	0.50%	0.06%	Thoma Bravo XV	\$13,414.3	0.45%	0.06%
GCG V	\$30,344.7	1.03%	0.13%	Vista Equity III	\$2,398.3	0.08%	0.01%
GCG VI	\$12,145.5	0.41%	0.05%	Vista Foundation II	\$6,204.2	0.21%	0.03%
GTLA Holdings	\$70,000.0	2.37%	0.31%	Vista Foundation III	\$32,670.2	1.11%	0.14%
Highland	\$16,938.4	0.57%	0.07%	Wellspring V	\$12,507.6	0.42%	0.05%
Hybar LLC	\$200.5	0.01%	0.00%	Wicks IV	\$7,706.3	0.26%	0.03%
Insight Equity II	\$6,505.0	0.22%	0.03%	WNG II	\$30,057.4	1.02%	0.13%
<b>Total Private Equity</b>					<b>\$2,950,608.6</b>	<b>100.00%</b>	<b>12.89%</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 total due to rounding.

Private and Confidential | Investment advice and consulting services provided by Aon Investment USA Inc.

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# Total Equity

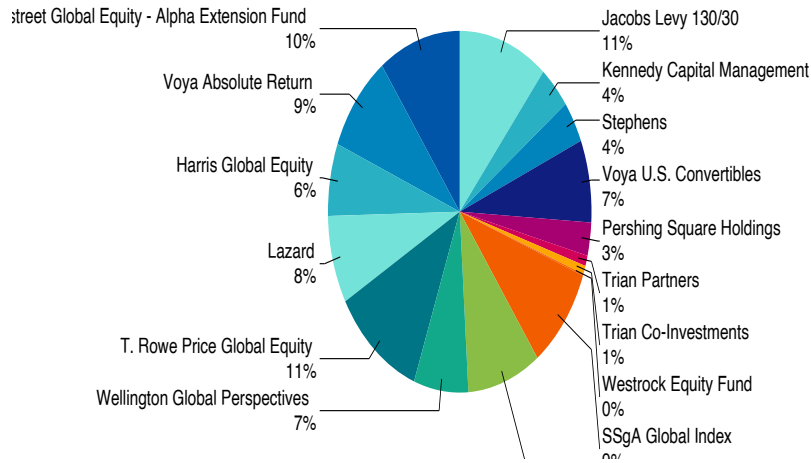


# Composite Portfolio Overview Total Equity

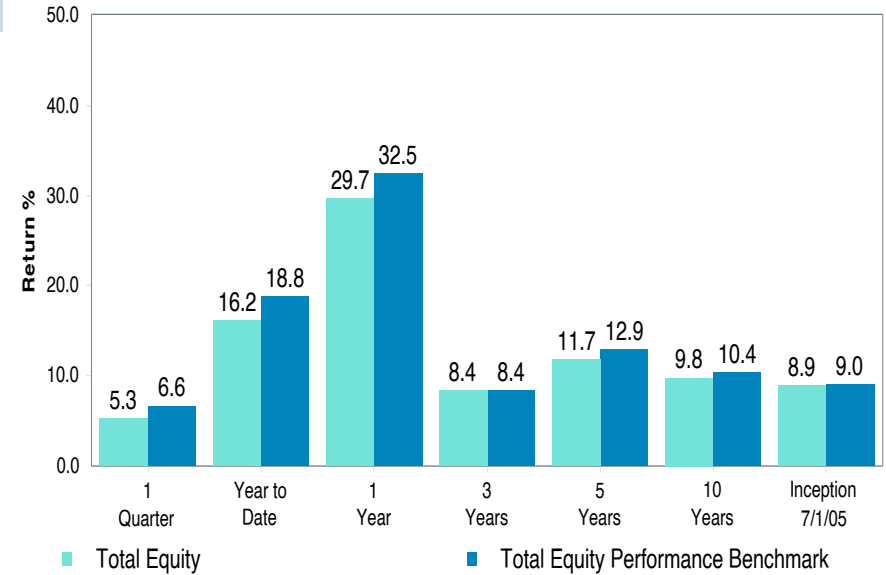
As of September 30, 2024

## Current Allocation

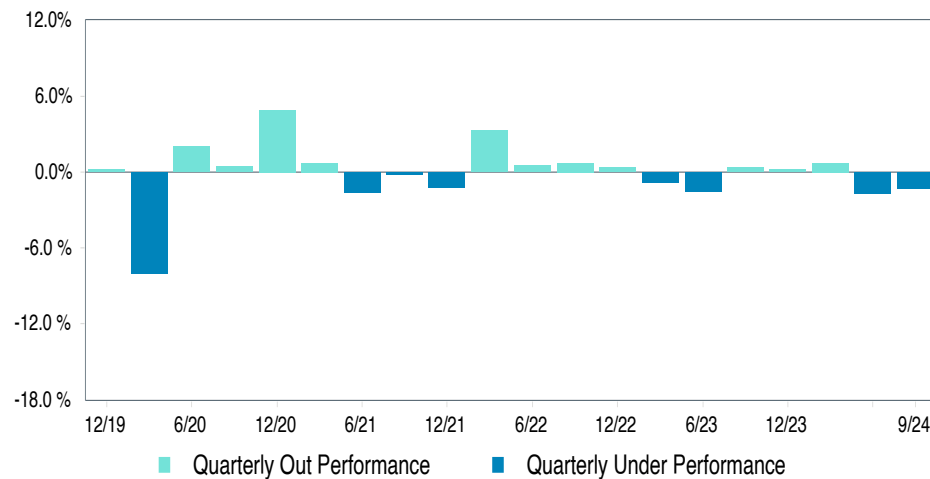
September 30, 2024 : \$11,458,909,767



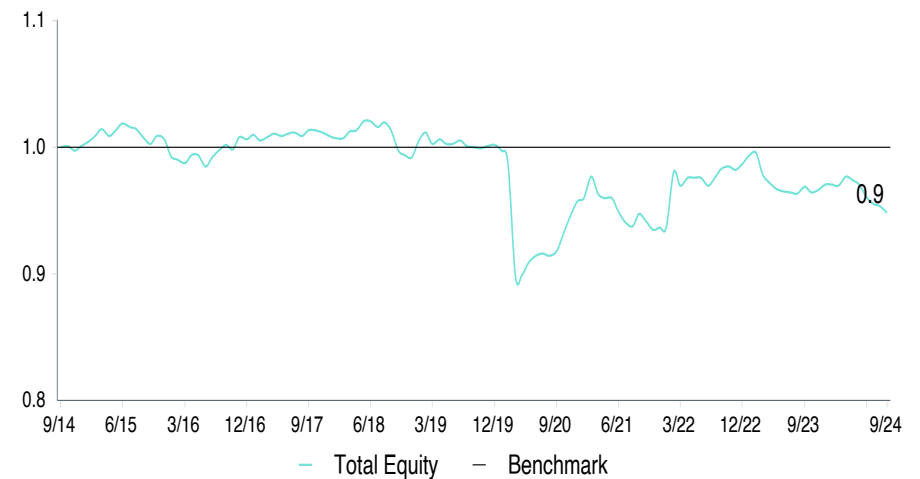
## Return Summary



## Quarterly Excess Performance



## Ratio of Cumulative Wealth - 10 Years

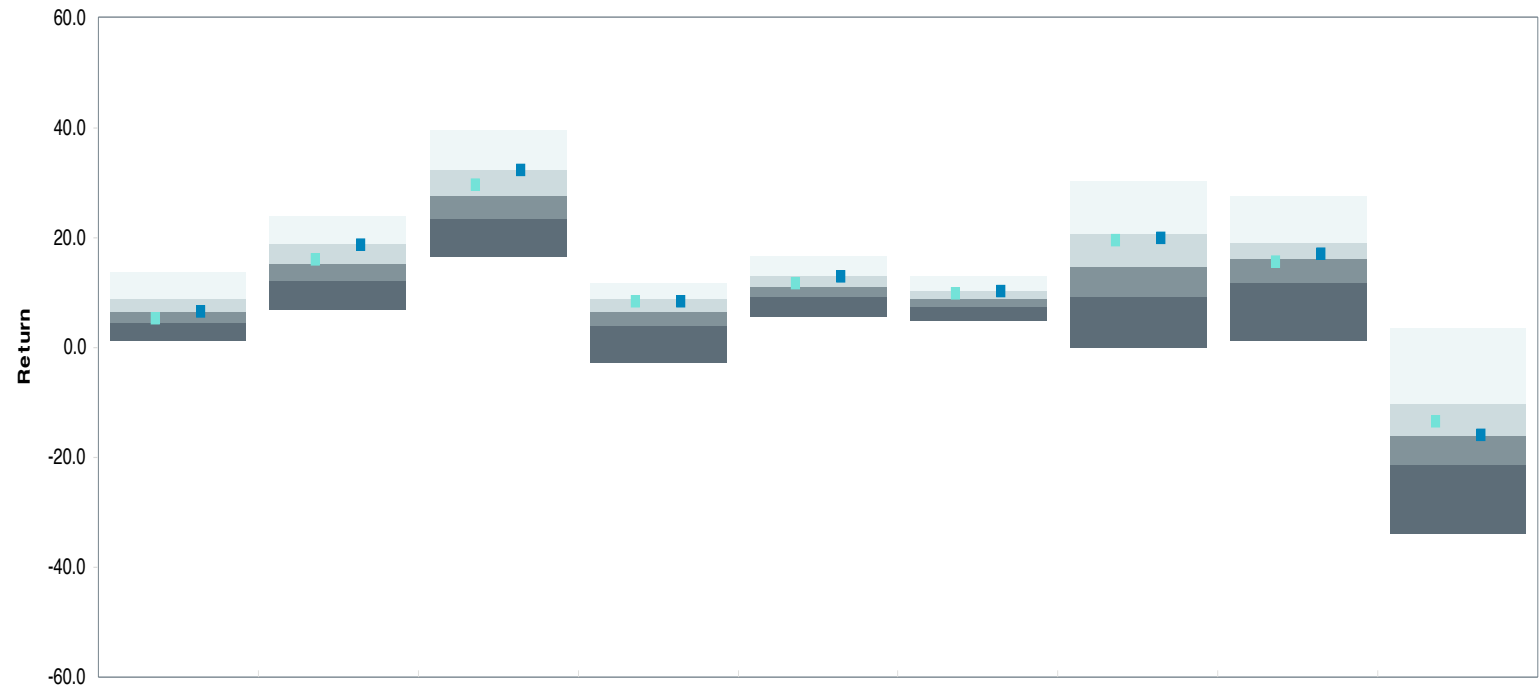


Note: April 1, 2004 represents the inception of the Global Equity Custom Benchmark as the primary performance objective for the Global Equity portfolio.

# Peer Group Analysis

As of September 30, 2024

IM Global Equity (SA+CF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	Fiscal Year 2024	Fiscal Year 2023	Fiscal Year 2022
<span style="color: red;">■</span> Total Equity	5.3 (66)	16.2 (44)	29.7 (41)	8.4 (32)	11.7 (43)	9.8 (35)	19.5 (31)	15.7 (54)	-13.4 (37)
<span style="color: blue;">■</span> Total Equity Performance Benchmark	6.6 (50)	18.8 (26)	32.5 (25)	8.4 (32)	12.9 (27)	10.4 (23)	20.1 (29)	17.0 (44)	-15.8 (48)
5th Percentile	13.6	24.0	39.5	11.8	16.7	13.1	30.2	27.6	3.4
1st Quartile	8.8	19.0	32.4	8.9	13.1	10.3	20.7	19.2	-10.2
Median	6.6	15.2	27.7	6.5	11.1	8.9	14.6	16.0	-16.2
3rd Quartile	4.6	12.3	23.5	3.9	9.3	7.4	9.2	11.8	-21.3
95th Percentile	1.2	6.9	16.4	-2.6	5.6	5.0	0.0	1.1	-33.9
Population	485	484	478	449	413	305	513	538	536

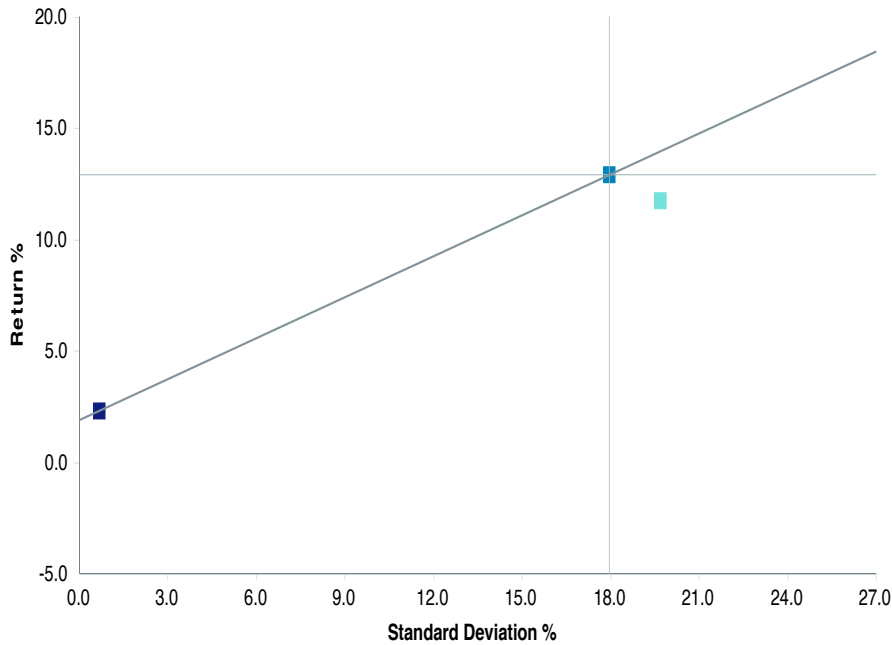
Parentheses contain percentile rankings.



# Risk Profile Total Equity

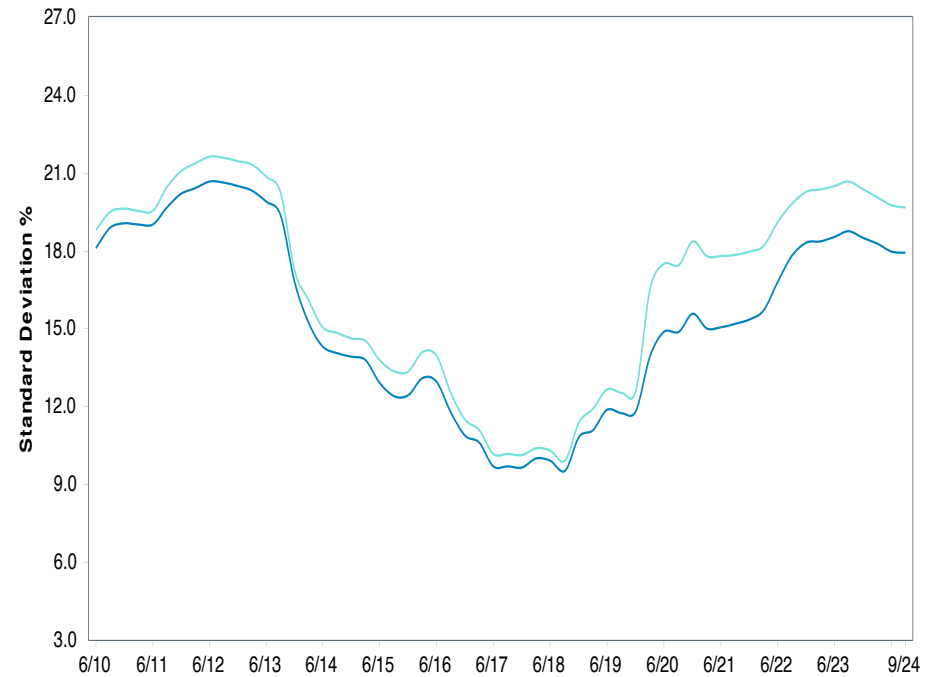
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



- Total Equity
- Total Equity Performance Benchmark
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 5 Years



- Total Equity
- Total Equity Performance Benchmark

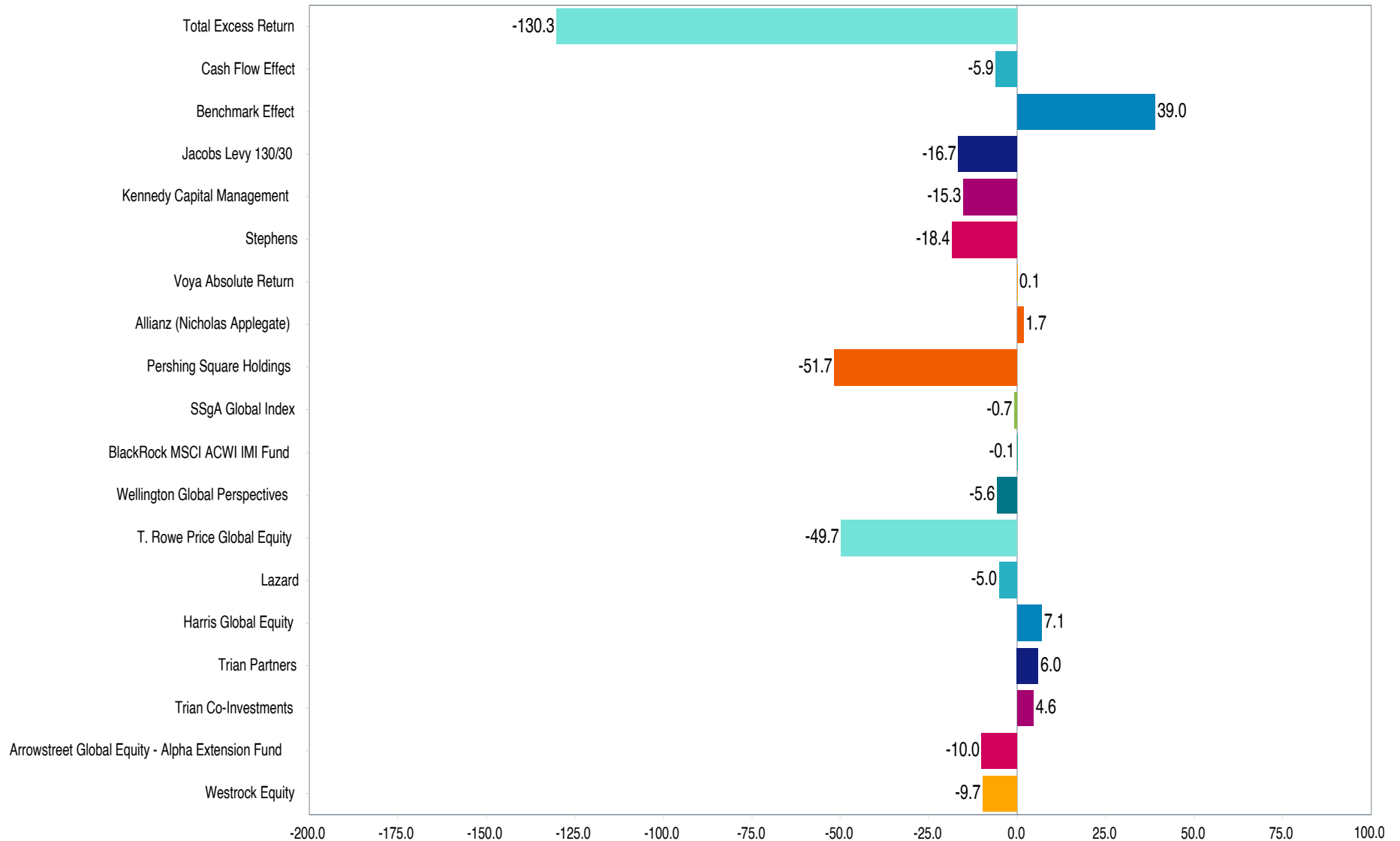
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
<b>Total Equity</b>	<b>-0.69</b>	<b>4.72</b>	<b>-0.15</b>	<b>0.95</b>	<b>0.55</b>	<b>-1.60</b>	<b>1.07</b>	<b>11.74</b>	<b>19.68</b>	<b>0.97</b>
Total Equity Performance Benchmark	0.00	0.00	-	1.00	0.64	0.00	1.00	12.93	17.95	1.00
90 Day U.S. Treasury Bill	-11.52	17.97	-0.64	0.00	-	2.33	0.00	2.32	0.66	-0.02

# Asset Class Attribution

1 Quarter Ending September 30, 2024

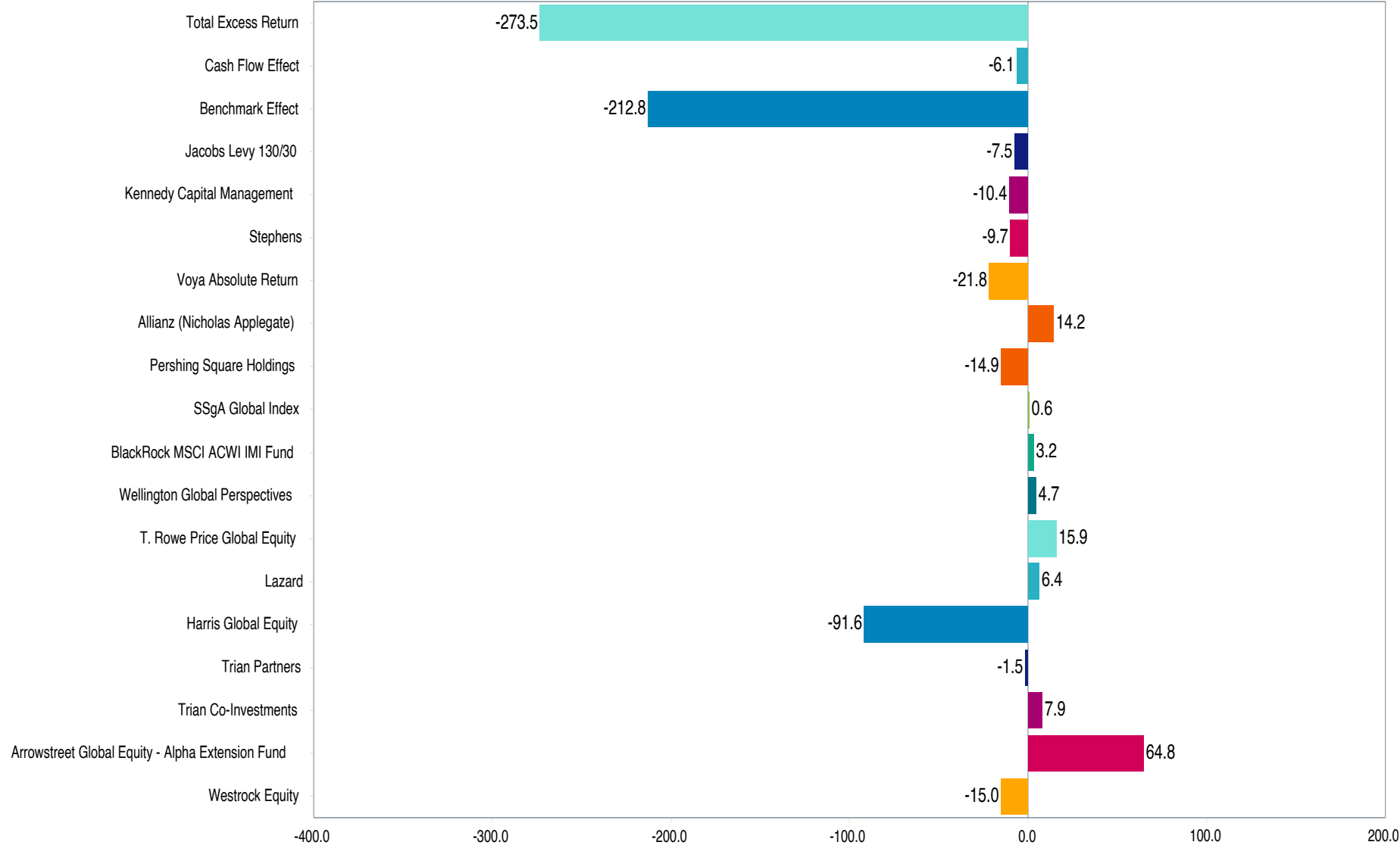
1 Quarter



# Asset Class Attribution

1 Year Ending September 30, 2024

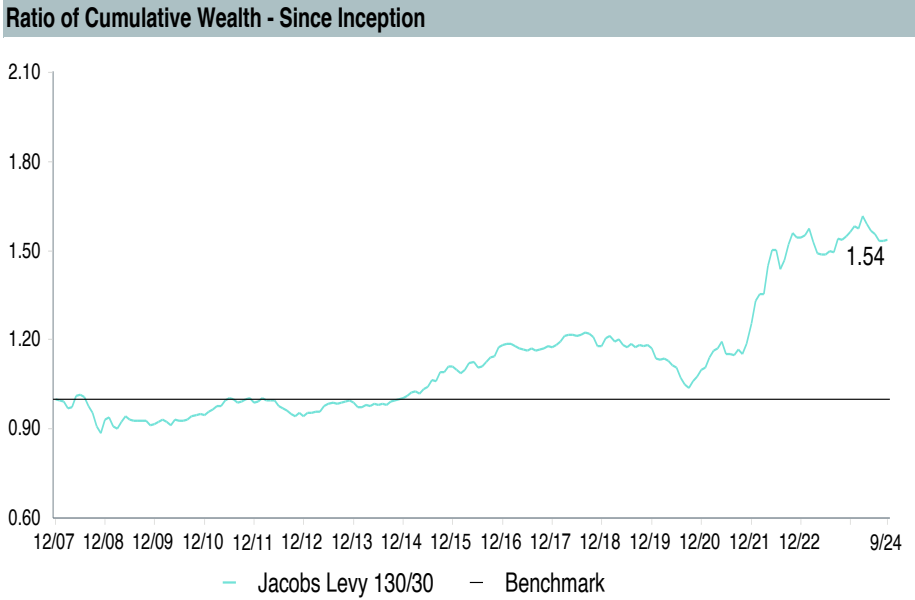
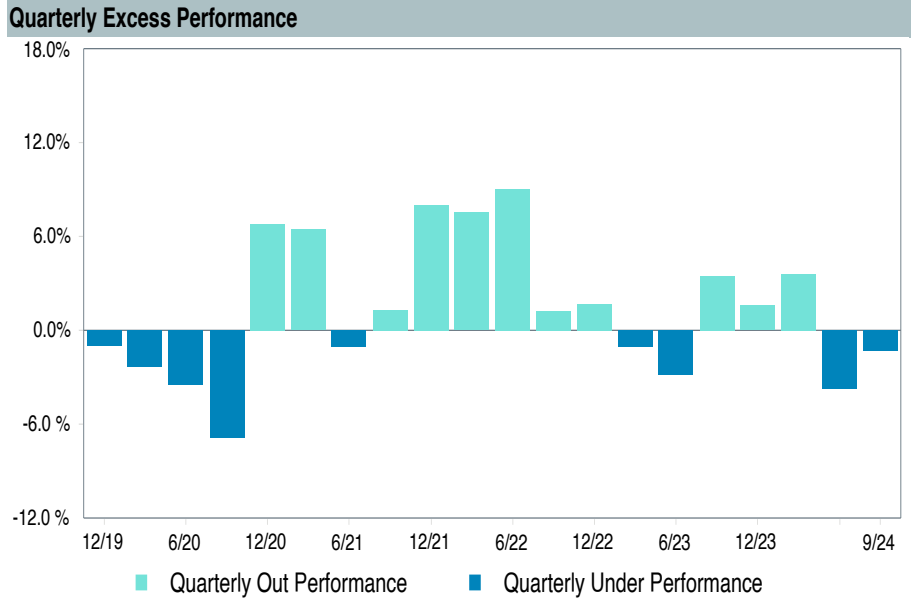
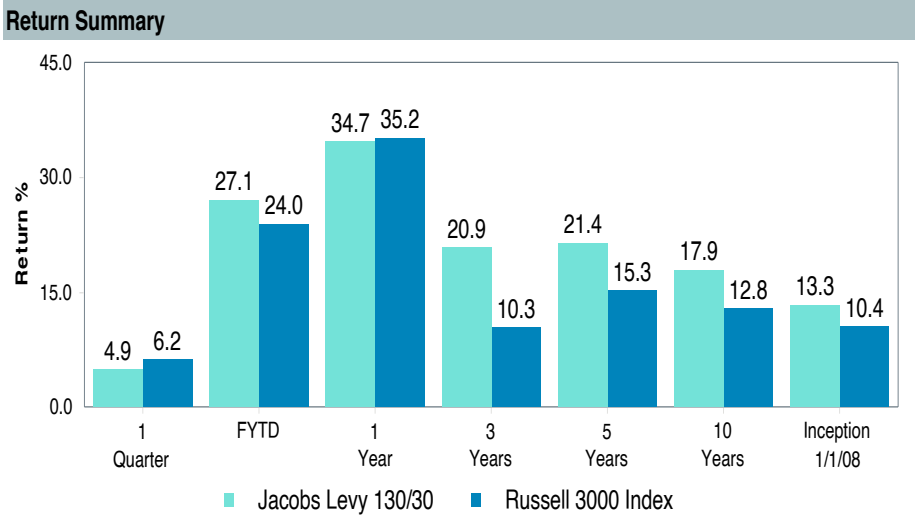
1 Year



# Manager Performance Summary Jacobs Levy 130/30

As of September 30, 2024

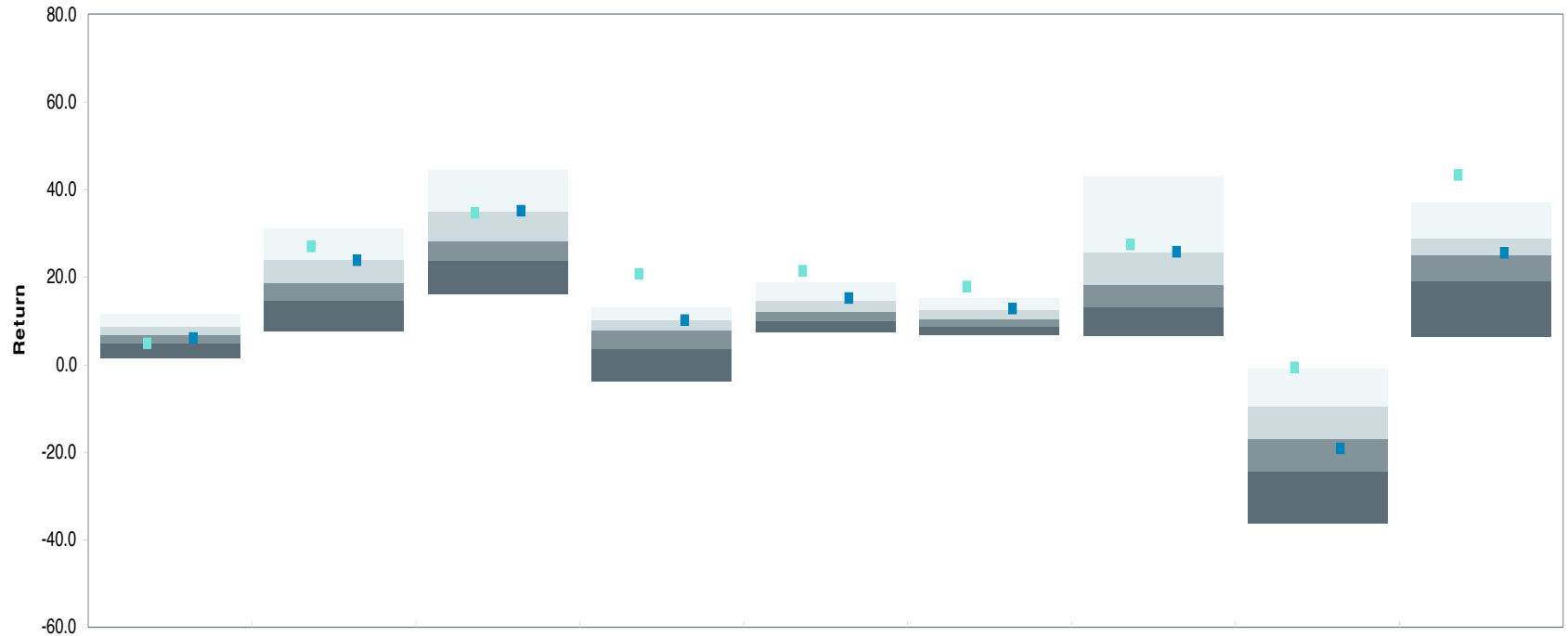
Account Information	
Account Name	Jacobs Levy 130/30
Inception Date	12/31/2007
Account Structure	Commingled Fund
Asset Class	US Equity
Benchmark	Russell 3000 Index
Peer Group	IM U.S. Equity (SA+CF)



# Jacobs Levy 130/30

As of September 30, 2024

IM U.S. Equity (SA+CF)



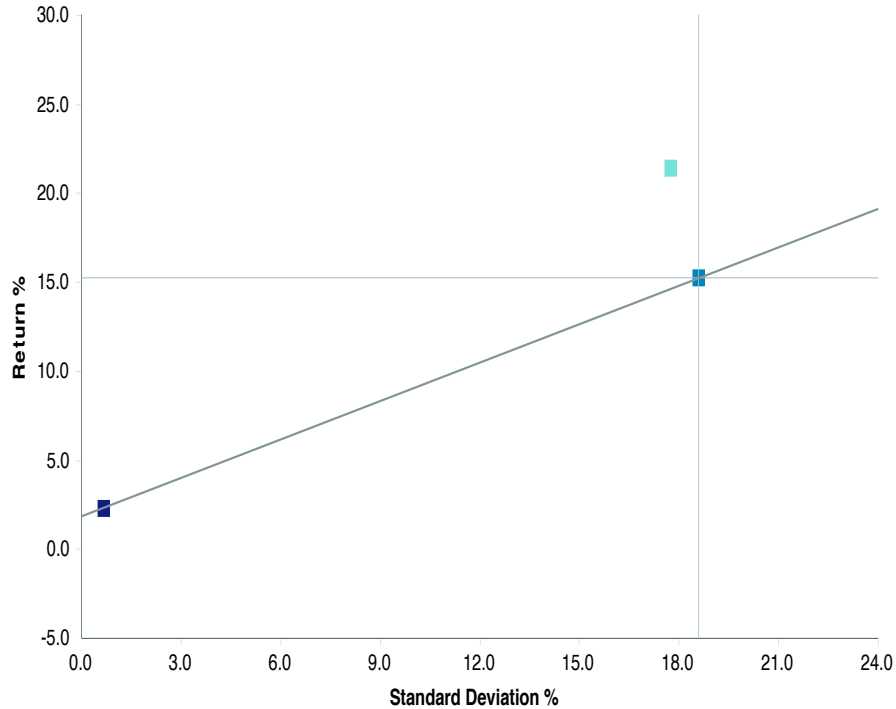
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Jacobs Levy 130/30	4.9 (76)	27.1 (13)	34.7 (26)	20.9 (2)	21.4 (2)	17.9 (1)	27.6 (19)	-0.5 (5)	43.5 (2)
Russell 3000 Index	6.2 (59)	24.0 (25)	35.2 (24)	10.3 (26)	15.3 (22)	12.8 (23)	26.0 (24)	-19.2 (62)	25.7 (46)
5th Percentile	11.7	31.2	44.3	13.2	18.9	15.4	43.0	-0.7	37.2
1st Quartile	8.8	23.9	35.0	10.3	14.9	12.7	25.6	-9.6	29.0
Median	6.9	18.6	28.2	7.8	12.2	10.4	18.5	-17.0	25.0
3rd Quartile	4.9	14.9	24.0	3.8	10.0	8.9	13.1	-24.3	19.2
95th Percentile	1.7	7.6	16.3	-3.8	7.5	6.9	6.6	-36.2	6.5
Population	1,823	1,802	1,807	1,741	1,667	1,407	2,006	2,083	2,117

Parentheses contain percentile rankings.

# Risk Profile Jacobs Levy 130/30

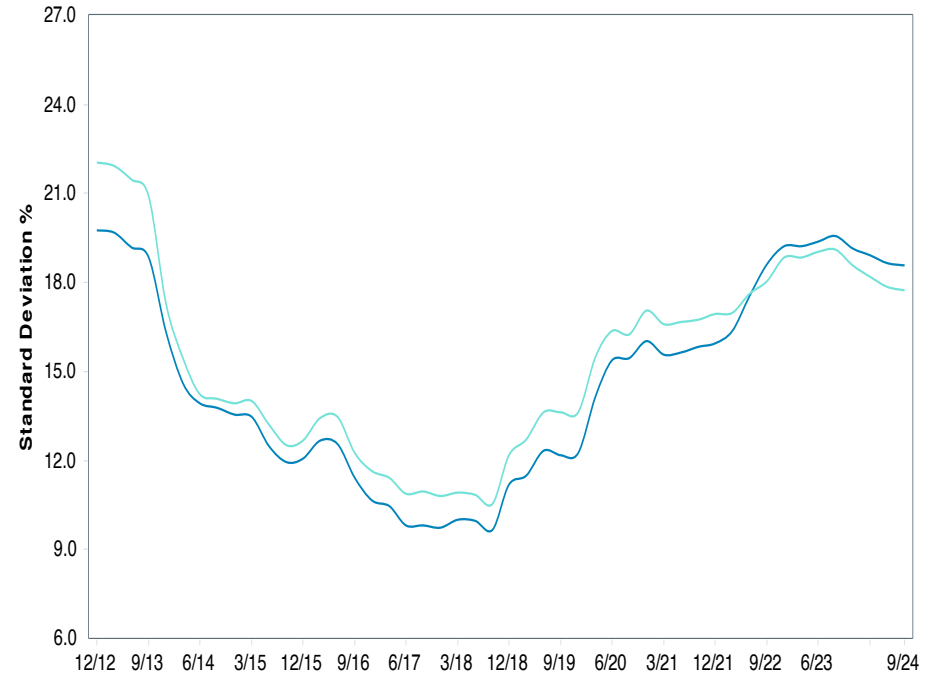
As of September 30, 2024

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



■ Jacobs Levy 130/30    ■ Russell 3000 Index    ■ 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



— Jacobs Levy 130/30    — Russell 3000 Index

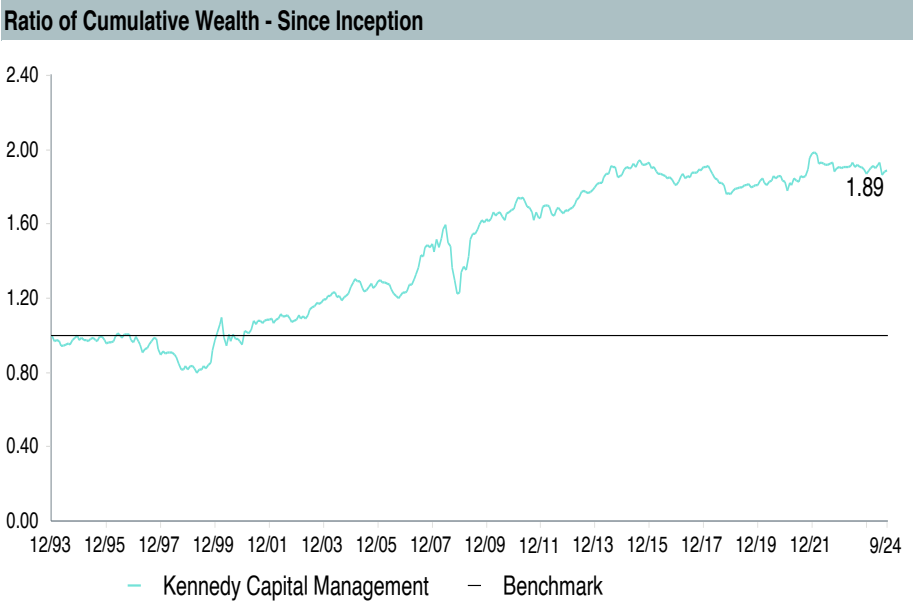
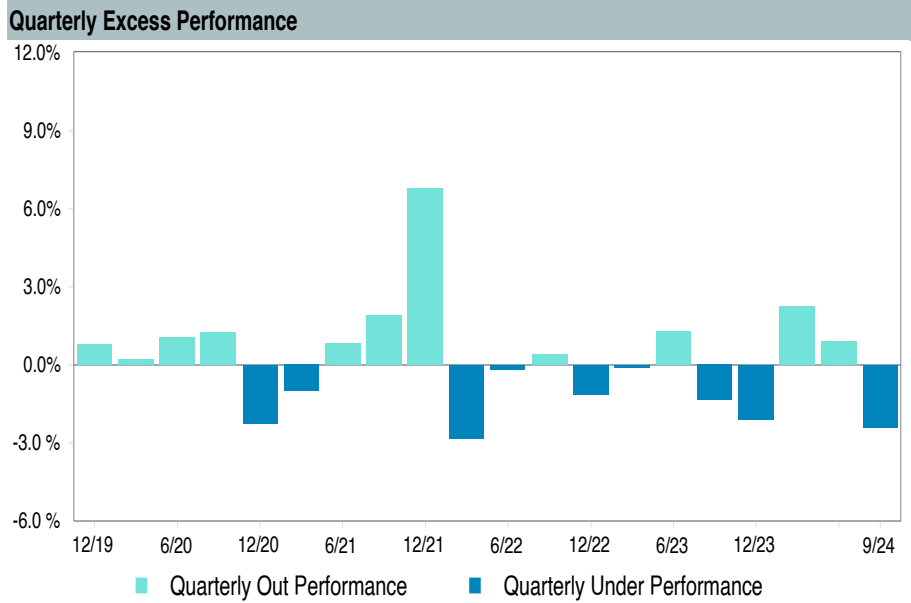
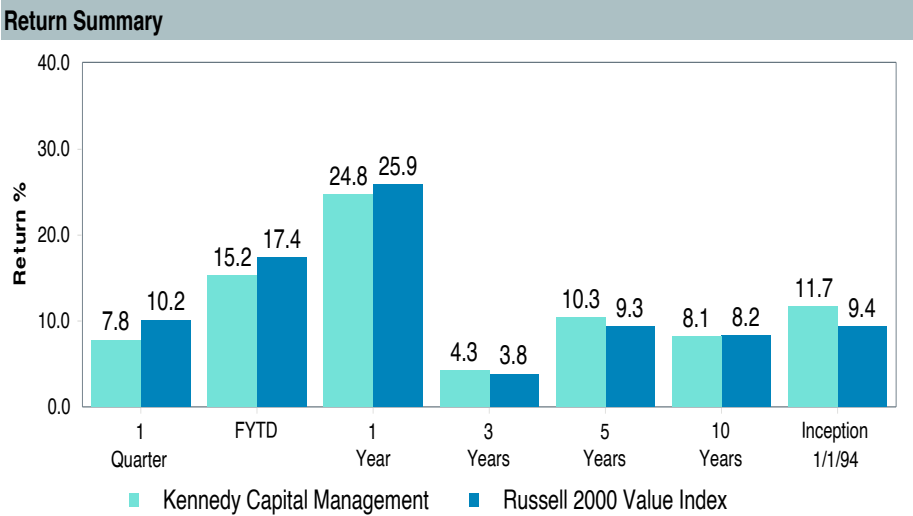
**5 Years Historical Statistics**

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Jacobs Levy 130/30	5.12	7.74	0.66	0.83	1.06	7.47	0.87	21.43	17.73	0.91
Russell 3000 Index	0.00	0.00	-	1.00	0.74	0.00	1.00	15.26	18.60	1.00
90 Day U.S. Treasury Bill	-13.70	18.63	-0.74	0.00	-	2.34	0.00	2.32	0.66	-0.03

# Manager Performance Summary Kennedy Capital Management

As of September 30, 2024

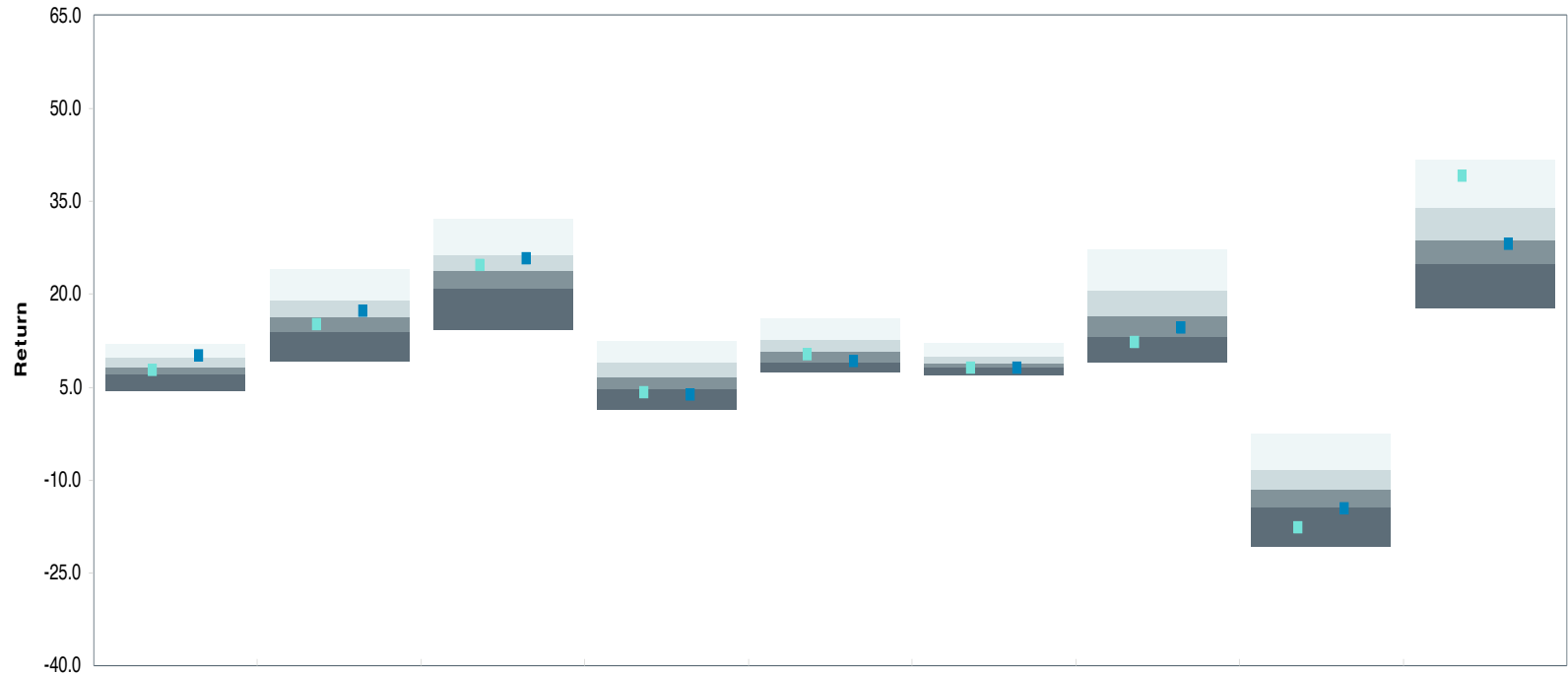
Account Information	
Account Name	Kennedy Capital Management
Inception Date	12/31/1993
Account Structure	Separate Account
Asset Class	US Equity
Benchmark	Russell 2000 Value Index
Peer Group	IM U.S. Small Cap Value Equity (SA+CF)



# Kennedy Capital Management

As of September 30, 2024

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



	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Kennedy Capital Management	7.8 (61)	15.2 (60)	24.8 (41)	4.3 (79)	10.3 (57)	8.1 (75)	12.3 (82)	-17.6 (89)	39.2 (11)
Russell 2000 Value Index	10.2 (19)	17.4 (39)	25.9 (28)	3.8 (84)	9.3 (75)	8.2 (71)	14.6 (65)	-14.5 (76)	28.3 (53)
5th Percentile	11.9	24.0	32.1	12.4	16.1	12.1	27.3	-2.5	41.8
1st Quartile	9.7	19.1	26.4	9.1	12.7	9.9	20.6	-8.3	34.0
Median	8.2	16.2	23.9	6.5	10.8	8.8	16.4	-11.6	28.8
3rd Quartile	7.0	14.0	21.1	4.7	9.2	8.1	13.2	-14.5	25.0
95th Percentile	4.3	9.3	14.3	1.3	7.5	6.9	9.0	-20.6	17.7
Population	152	152	152	146	142	127	172	177	178

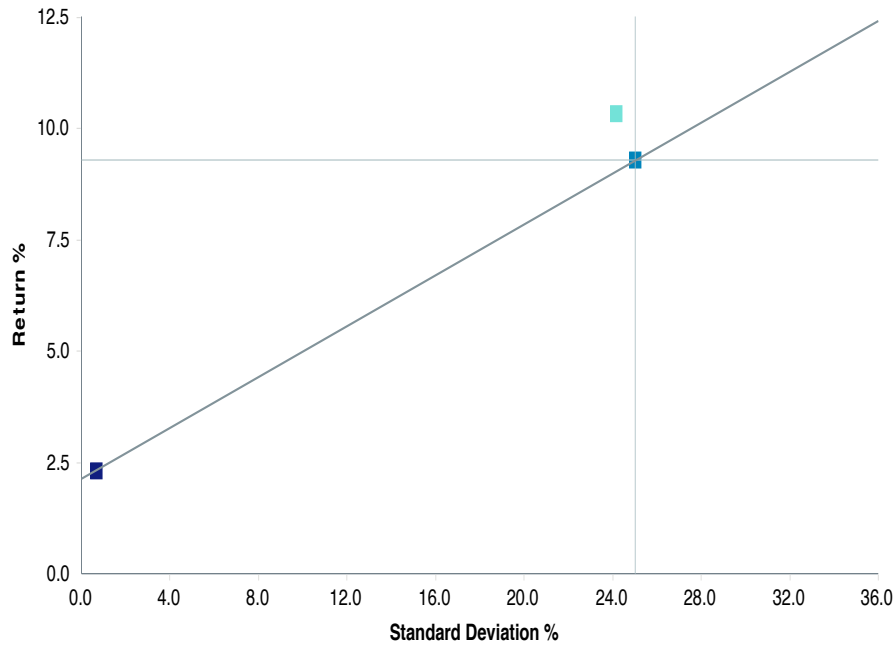
Parentheses contain percentile rankings.



# Risk Profile Kennedy Capital Management

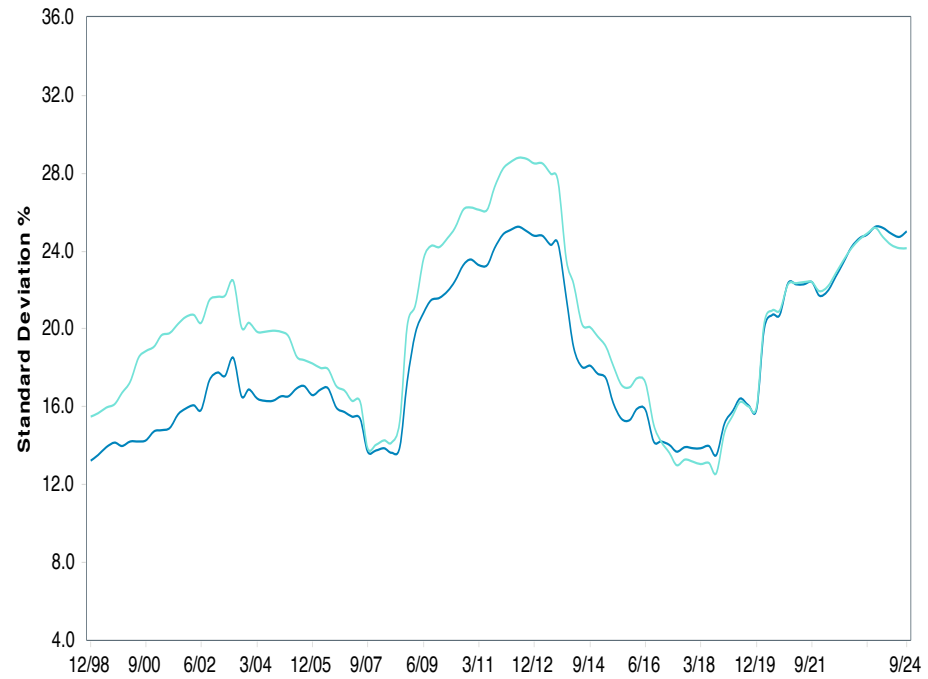
As of September 30, 2024

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



- Kennedy Capital Management
- Russell 2000 Value Index
- 90 Day U.S. Treasury Bill

**Standard Deviation Rolling 5 Years**



- Kennedy Capital Management
- Russell 2000 Value Index

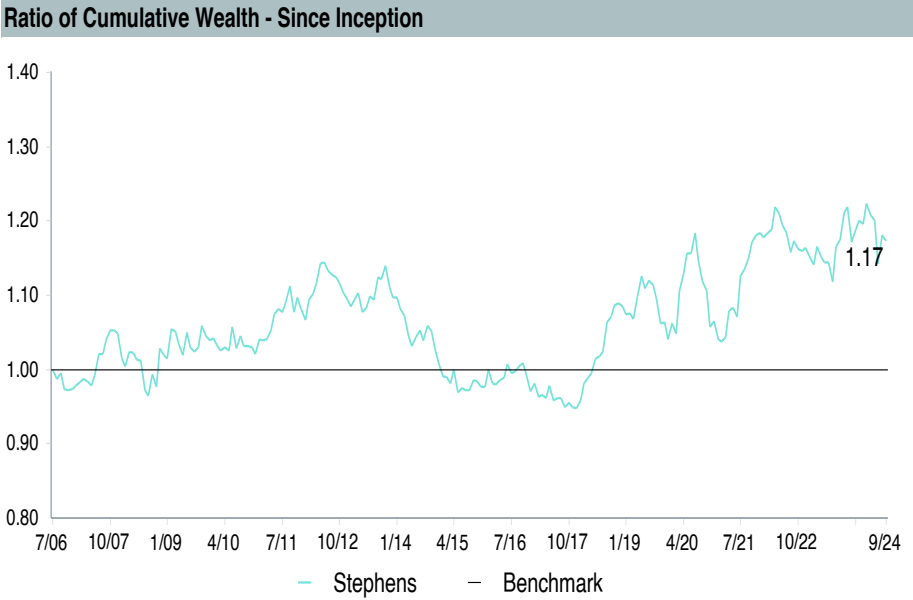
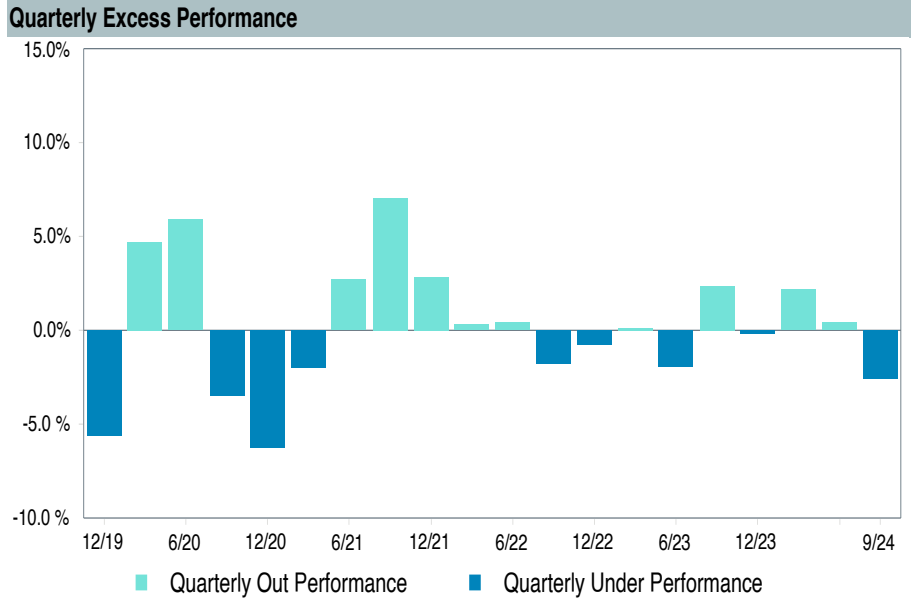
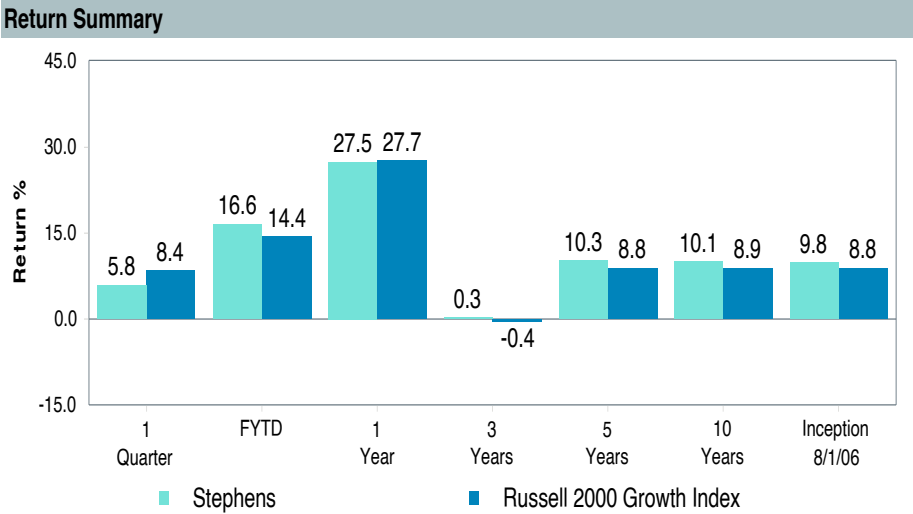
**5 Years Historical Statistics**

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Kennedy Capital Management	0.80	4.22	0.19	0.97	0.44	1.39	0.95	10.35	24.17	0.99
Russell 2000 Value Index	0.00	0.00	-	1.00	0.39	0.00	1.00	9.29	25.03	1.00
90 Day U.S. Treasury Bill	-9.76	25.11	-0.39	0.01	-	2.36	0.00	2.32	0.66	-0.12

# Manager Performance Summary Stephens

As of September 30, 2024

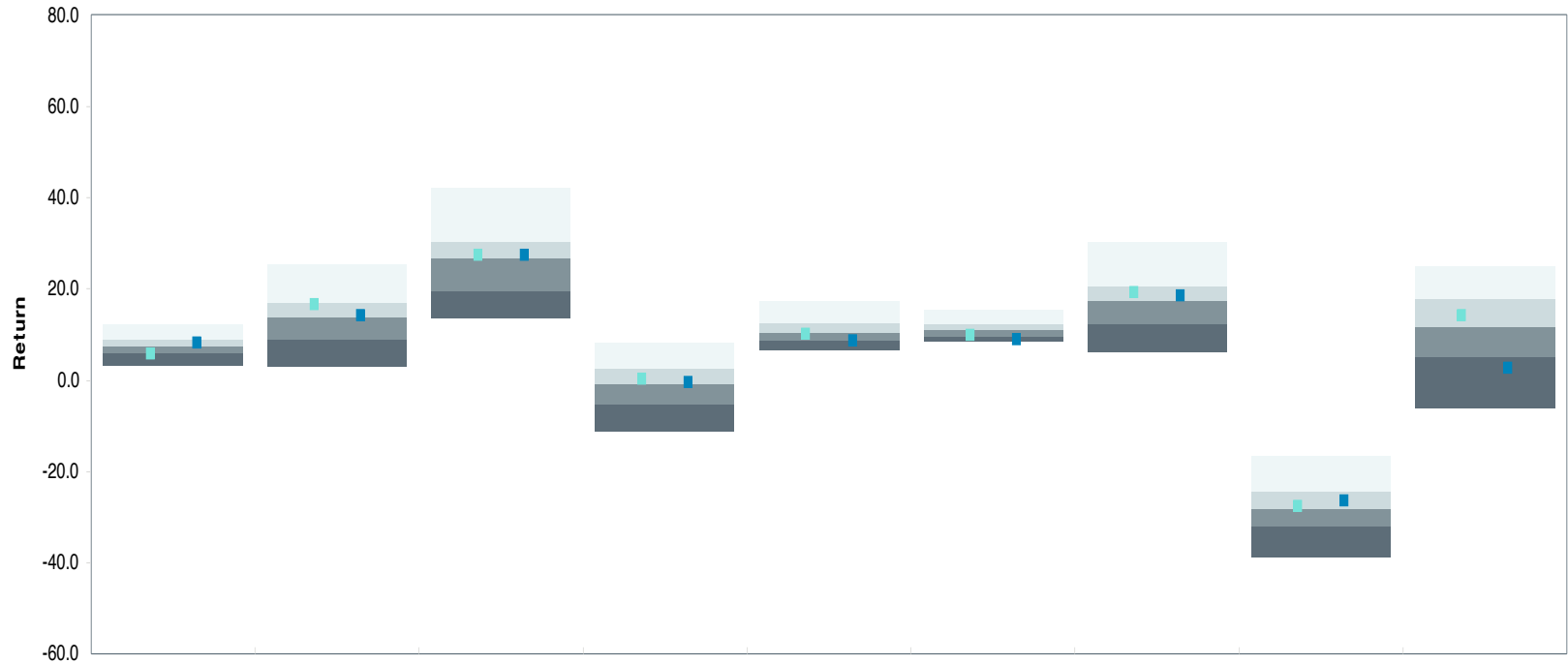
Account Information	
Account Name	Stephens
Inception Date	07/31/2006
Account Structure	Separate Account
Asset Class	US Equity
Benchmark	Russell 2000 Growth Index
Peer Group	IM U.S. Small Cap Growth Equity (SA+CF)



# Stephens

As of September 30, 2024

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



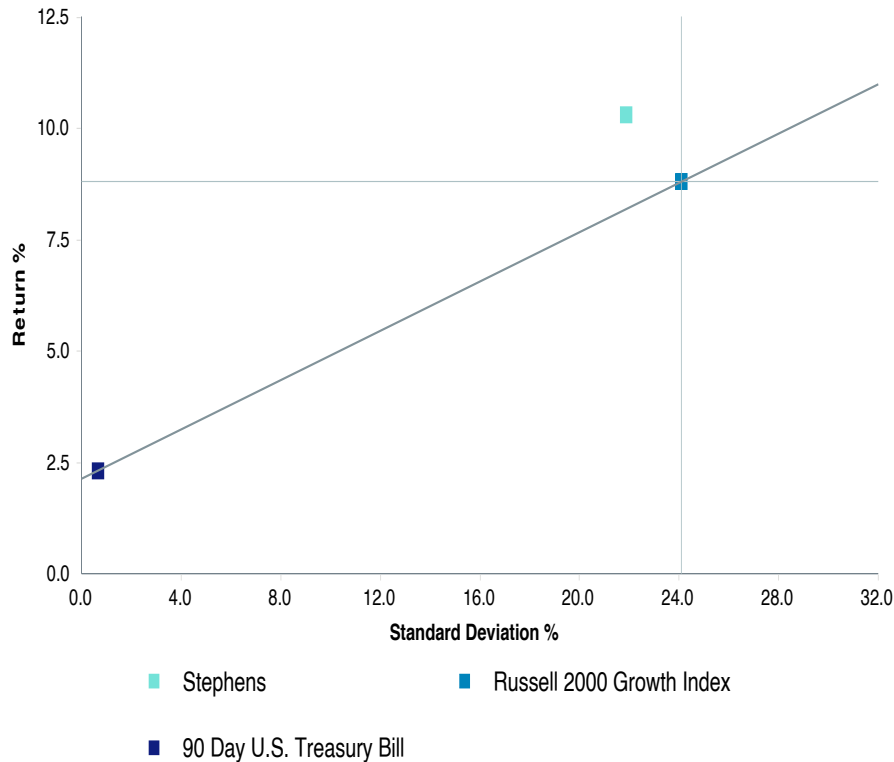
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Stephens	5.8 (76)	16.6 (29)	27.5 (46)	0.3 (44)	10.3 (53)	10.1 (69)	19.4 (35)	-27.6 (43)	14.3 (45)
Russell 2000 Growth Index	8.4 (35)	14.4 (49)	27.7 (42)	-0.4 (49)	8.8 (75)	8.9 (91)	18.7 (41)	-26.4 (36)	2.8 (84)
5th Percentile	12.5	25.4	42.4	8.2	17.5	15.5	30.3	-16.7	25.2
1st Quartile	9.1	17.0	30.4	2.5	12.7	12.4	20.6	-24.4	17.9
Median	7.4	14.0	26.7	-0.8	10.4	10.9	17.6	-28.3	11.6
3rd Quartile	5.9	9.1	19.6	-5.3	8.8	9.6	12.5	-31.9	5.2
95th Percentile	3.3	3.1	13.6	-11.3	6.7	8.5	6.1	-38.9	-6.1
Population	123	123	123	121	116	107	134	139	140

Parentheses contain percentile rankings.

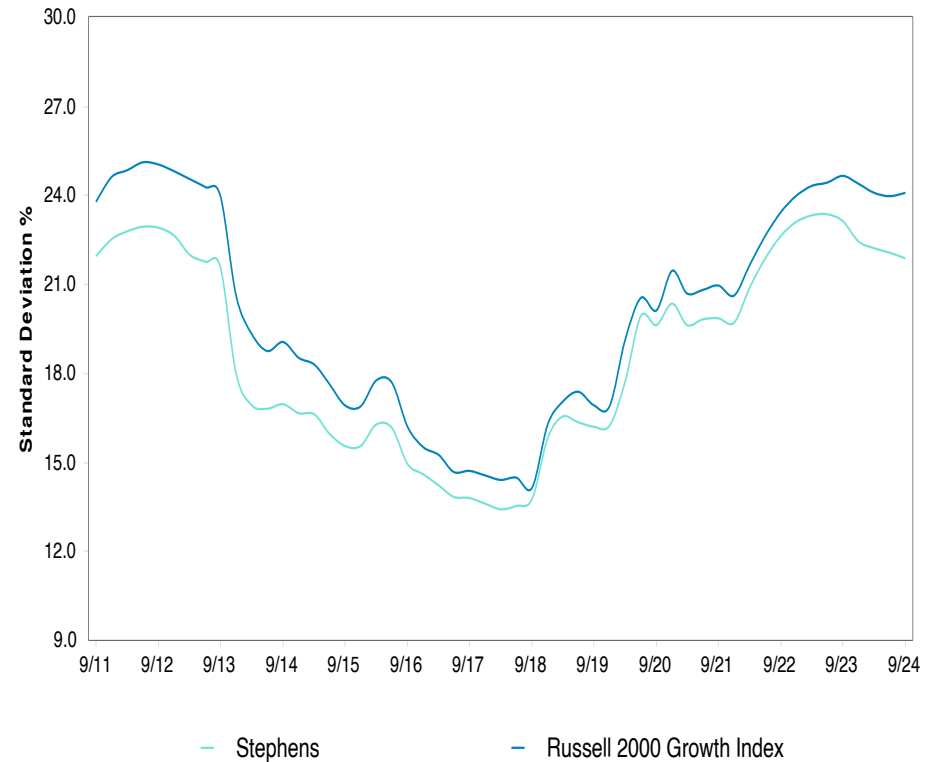
# Risk Profile Stephens

As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



Standard Deviation  
Rolling 5 Years



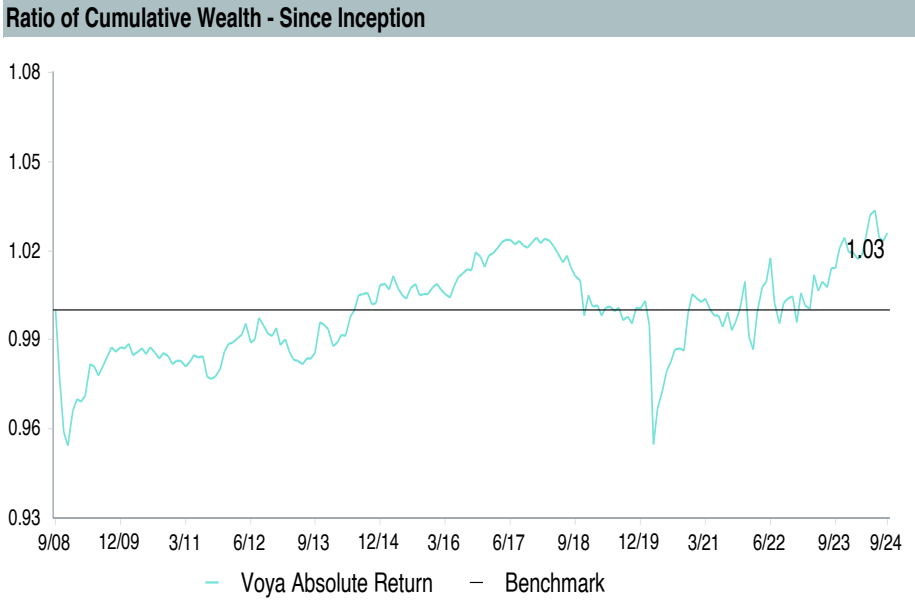
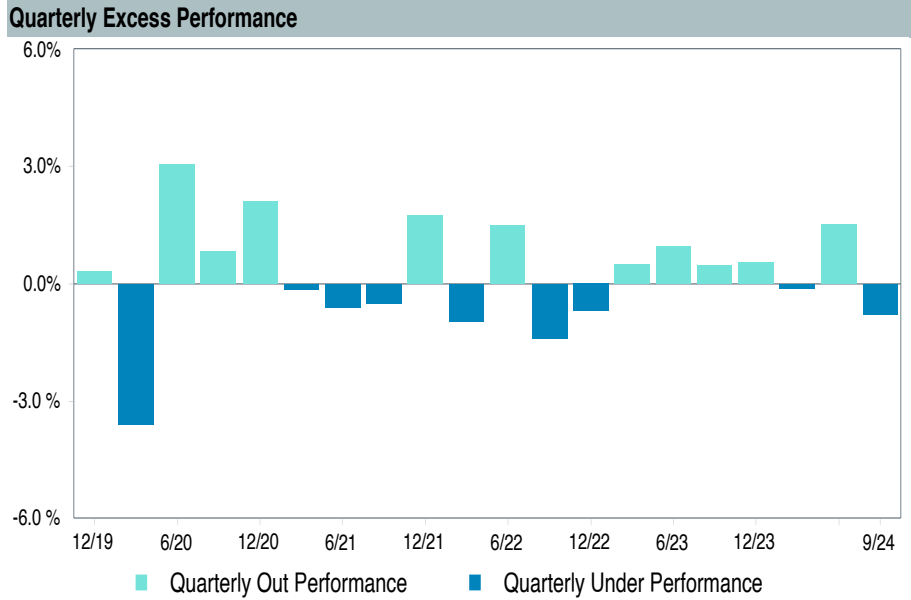
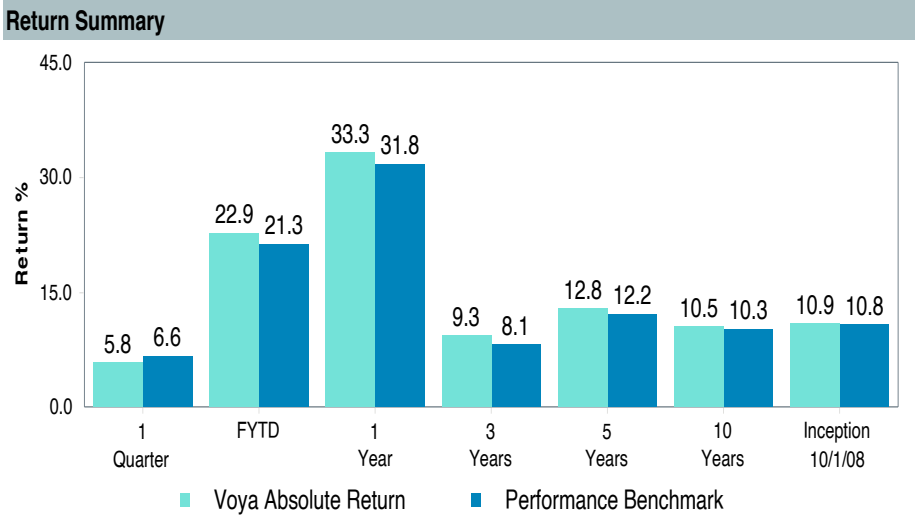
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Stephens	0.85	7.50	0.11	0.90	0.45	2.42	0.86	10.32	21.89	0.95
Russell 2000 Growth Index	0.00	0.00	-	1.00	0.38	0.00	1.00	8.82	24.09	1.00
90 Day U.S. Treasury Bill	-9.05	24.14	-0.38	0.00	-	2.34	0.00	2.32	0.66	-0.05

# Manager Performance Summary Voya Absolute Return

As of September 30, 2024

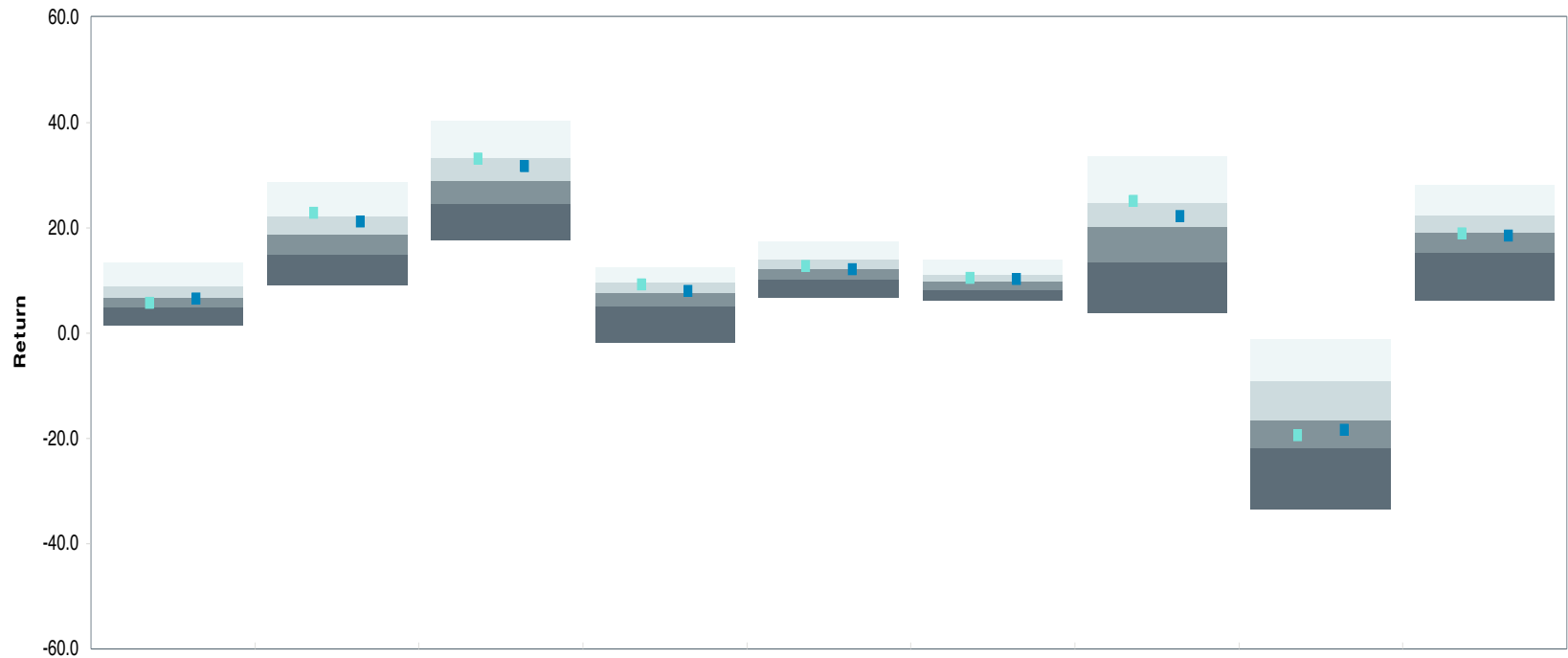
Account Information	
Account Name	Voya Absolute Return
Inception Date	09/30/2008
Account Structure	Commingled Fund
Asset Class	Global Equity
Benchmark	Performance Benchmark
Peer Group	IM Global Equity (MF)



# Voya Absolute Return

As of September 30, 2024

IM Global Equity (SA+CF)



	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Voya Absolute Return	5.8 (62)	22.9 (23)	33.3 (26)	9.3 (30)	12.8 (41)	10.5 (38)	25.1 (24)	-19.5 (66)	19.0 (51)
Performance Benchmark	6.6 (53)	21.3 (33)	31.8 (36)	8.1 (46)	12.2 (50)	10.3 (44)	22.2 (41)	-18.4 (61)	18.5 (55)
5th Percentile	13.3	28.6	40.5	12.5	17.4	13.9	33.5	-1.2	28.2
1st Quartile	8.8	22.3	33.3	9.7	14.0	11.0	24.7	-9.1	22.4
Median	6.8	18.8	28.8	7.6	12.2	9.8	20.2	-16.6	19.1
3rd Quartile	4.9	15.0	24.6	5.2	10.2	8.3	13.5	-21.8	15.2
95th Percentile	1.5	9.2	17.8	-1.9	6.8	6.1	3.9	-33.4	6.3
Population	500	495	496	477	443	338	555	574	570

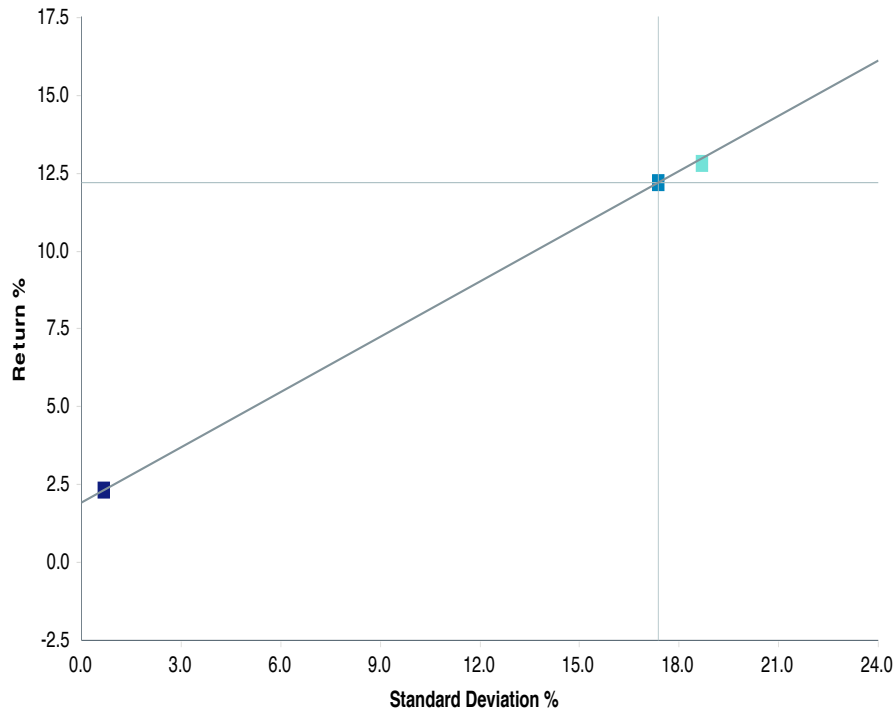
Parentheses contain percentile rankings.



# Risk Profile Voya Absolute Return

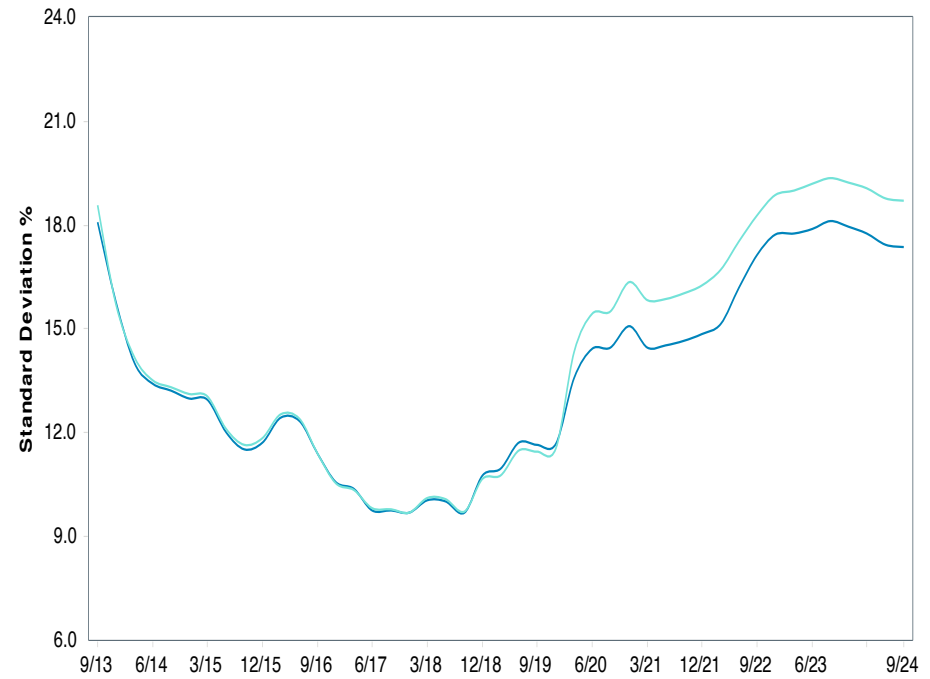
As of September 30, 2024

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



■ Voya Absolute Return   ■ Performance Benchmark   ■ 90 Day U.S. Treasury Bill

**Standard Deviation Rolling 5 Years**



— Voya Absolute Return   — Performance Benchmark

**5 Years Historical Statistics**

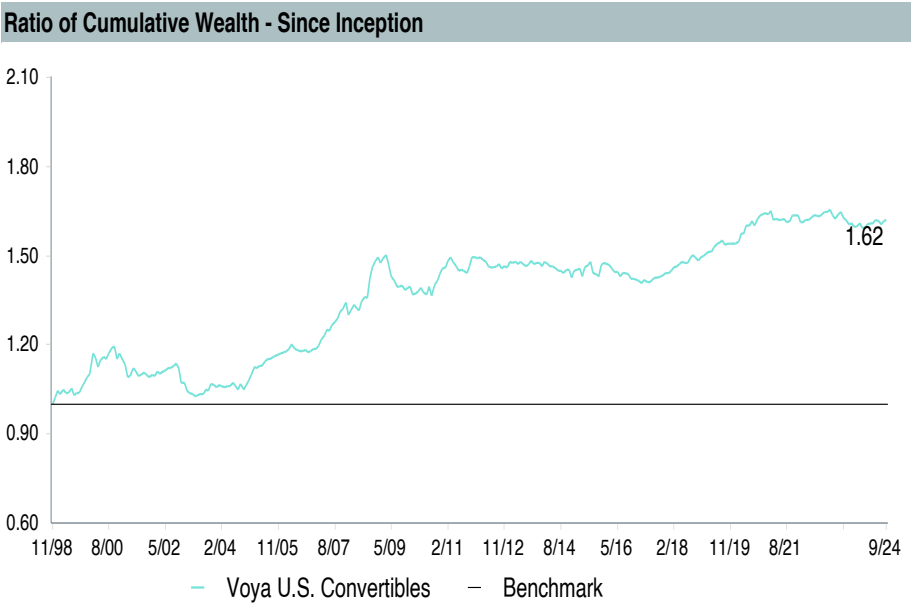
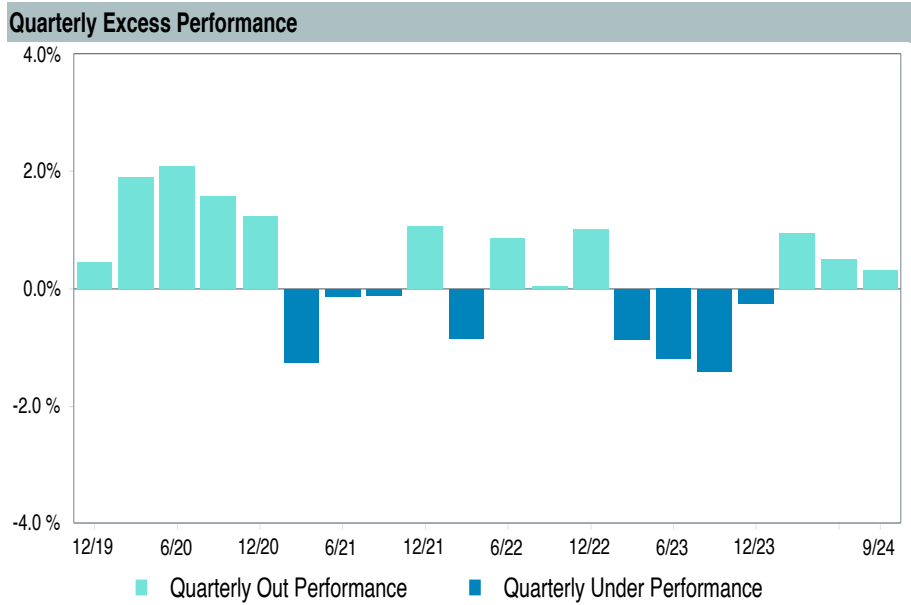
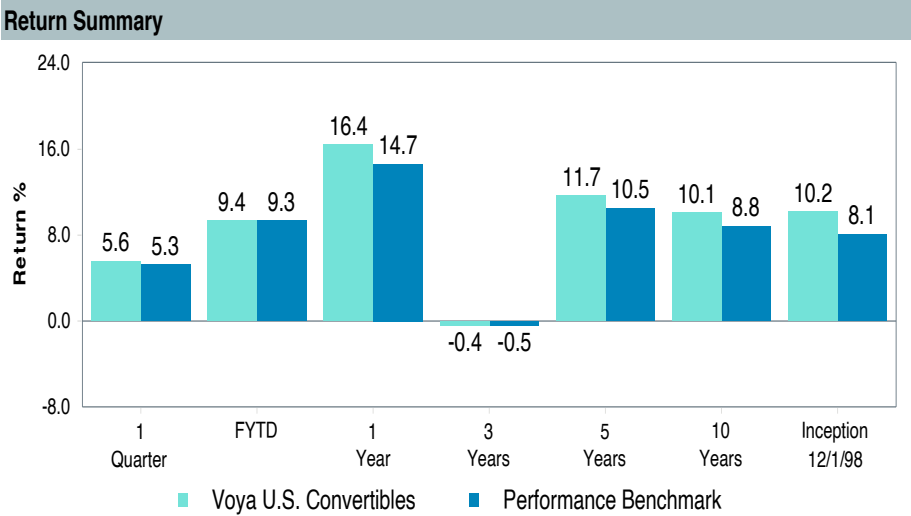
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Voya Absolute Return	0.81	2.73	0.30	0.98	0.62	-0.06	1.07	12.82	18.70	0.99
Performance Benchmark	0.00	0.00	-	1.00	0.62	0.00	1.00	12.19	17.37	1.00
90 Day U.S. Treasury Bill	-10.76	17.39	-0.62	0.00	-	2.33	0.00	2.32	0.66	-0.01



# Manager Performance Summary Voya U.S. Convertibles

As of September 30, 2024

Account Information	
Account Name	Voya U.S. Convertibles
Inception Date	11/30/1998
Account Structure	Separate Account
Asset Class	US Equity
Benchmark	Performance Benchmark
Peer Group	IM U.S. Equity (SA+CF)

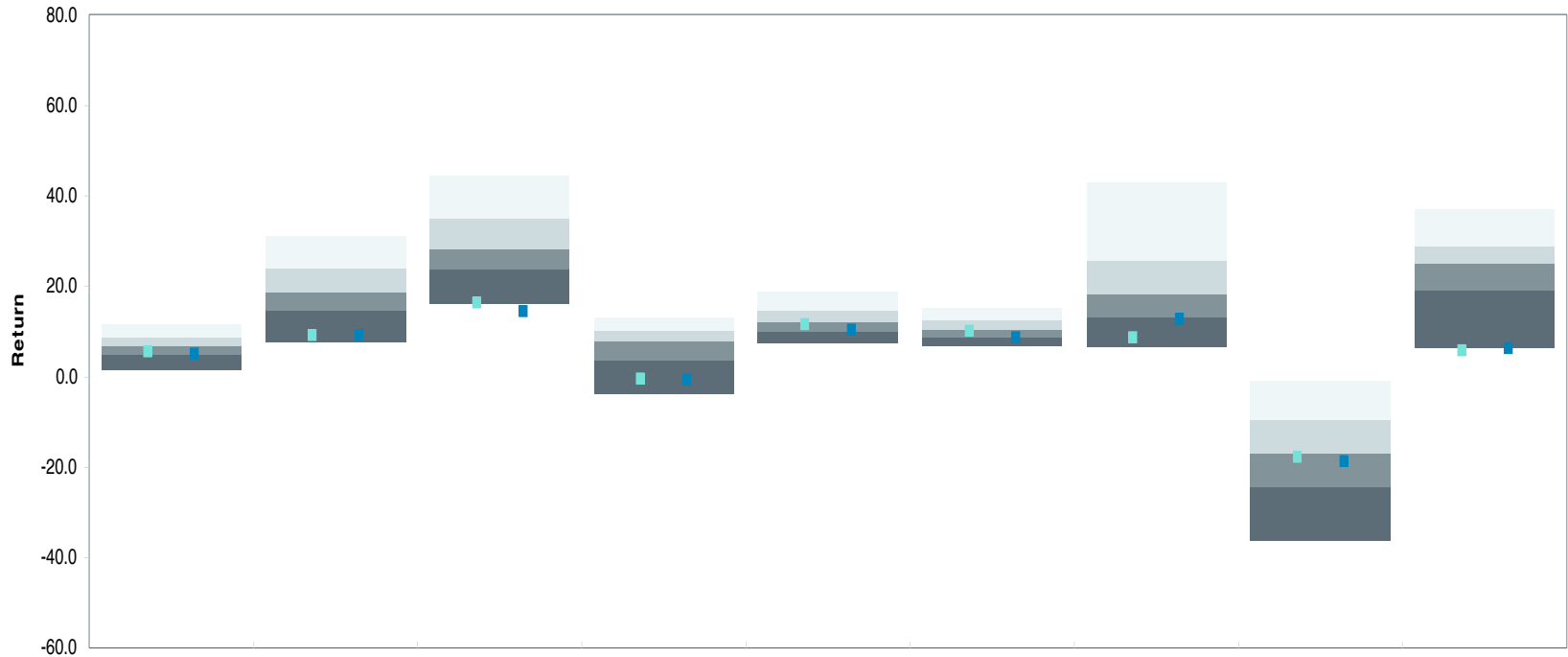




# Voya U.S. Convertibles

As of September 30, 2024

IM U.S. Equity (SA+CF)



	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Voya U.S. Convertibles	5.6 (69)	9.4 (94)	16.4 (95)	-0.4 (90)	11.7 (56)	10.1 (55)	8.8 (91)	-17.7 (54)	5.9 (96)
Performance Benchmark	5.3 (73)	9.3 (94)	14.7 (97)	-0.5 (91)	10.5 (70)	8.8 (76)	12.9 (76)	-18.7 (59)	6.3 (96)
5th Percentile	11.7	31.2	44.3	13.2	18.9	15.4	43.0	-0.7	37.2
1st Quartile	8.8	23.9	35.0	10.3	14.9	12.7	25.6	-9.6	29.0
Median	6.9	18.6	28.2	7.8	12.2	10.4	18.5	-17.0	25.0
3rd Quartile	4.9	14.9	24.0	3.8	10.0	8.9	13.1	-24.3	19.2
95th Percentile	1.7	7.6	16.3	-3.8	7.5	6.9	6.6	-36.2	6.5
Population	1,823	1,802	1,807	1,741	1,667	1,407	2,006	2,083	2,117

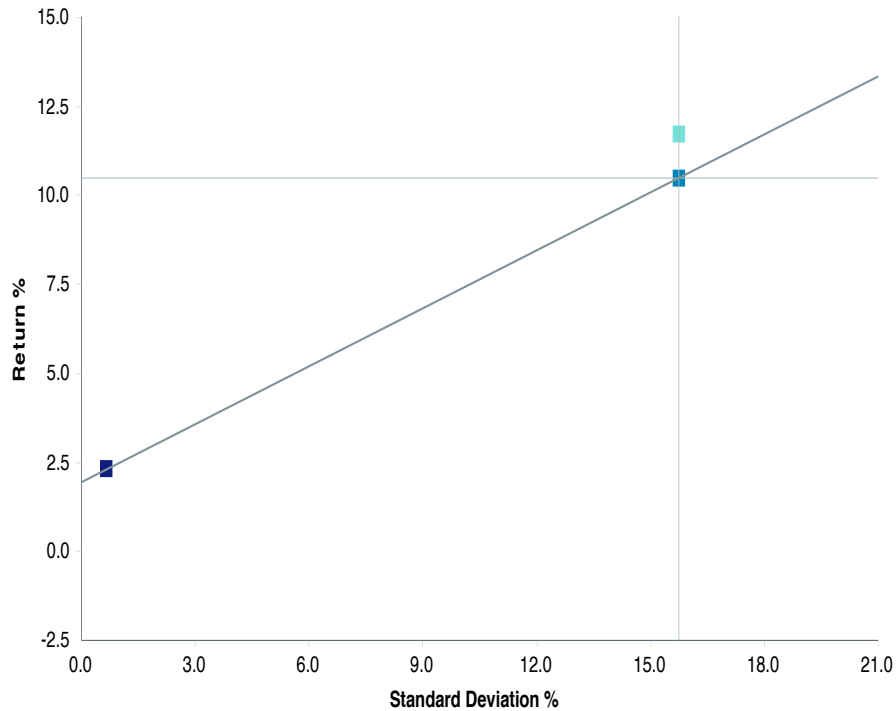
Parentheses contain percentile rankings.



# Risk Profile Voya U.S. Convertibles

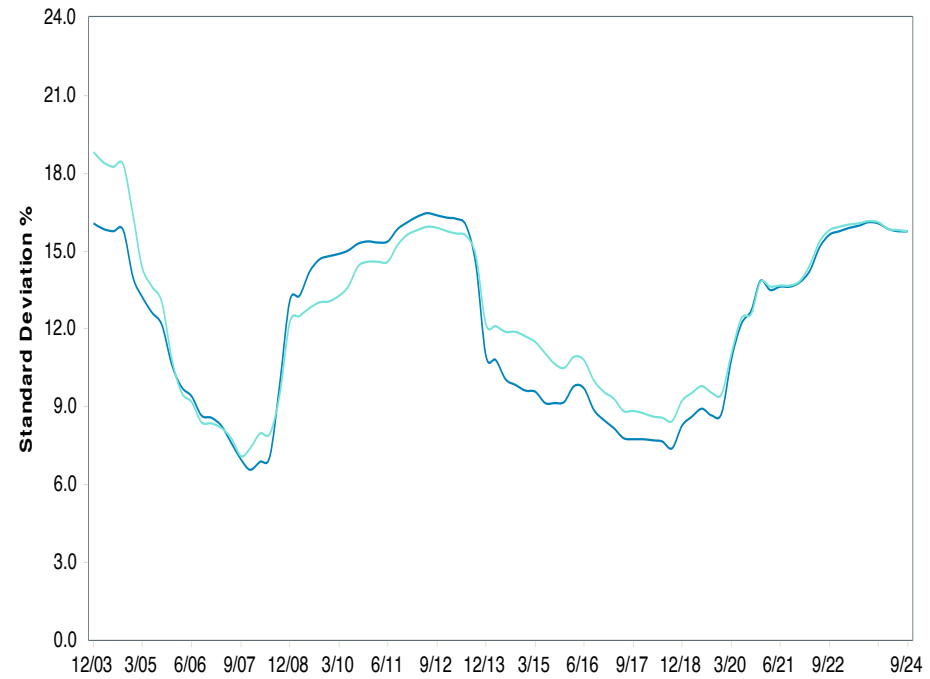
As of September 30, 2024

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



■ Voya U.S. Convertibles   ■ Performance Benchmark   ■ 90 Day U.S. Treasury Bill

**Standard Deviation Rolling 5 Years**



— Voya U.S. Convertibles   — Performance Benchmark

**5 Years Historical Statistics**

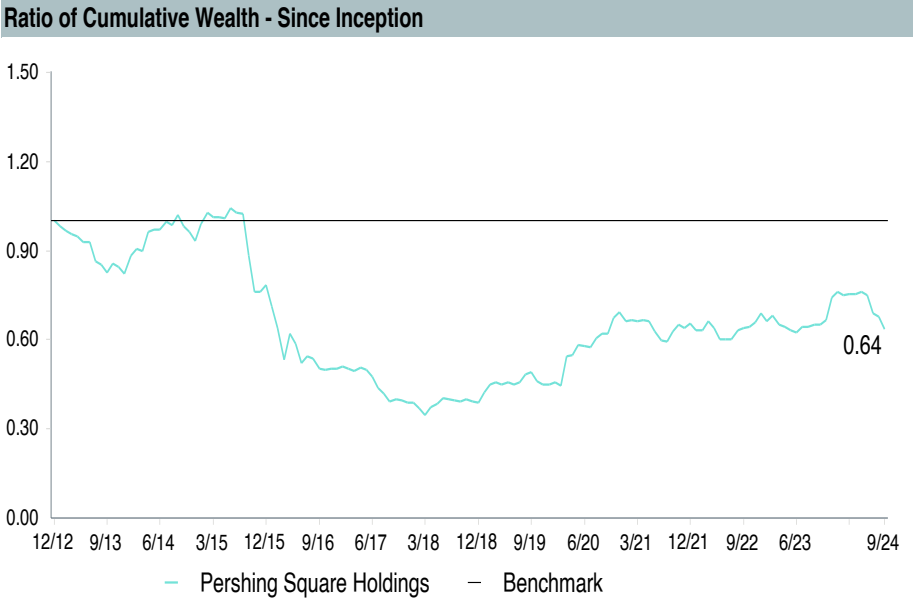
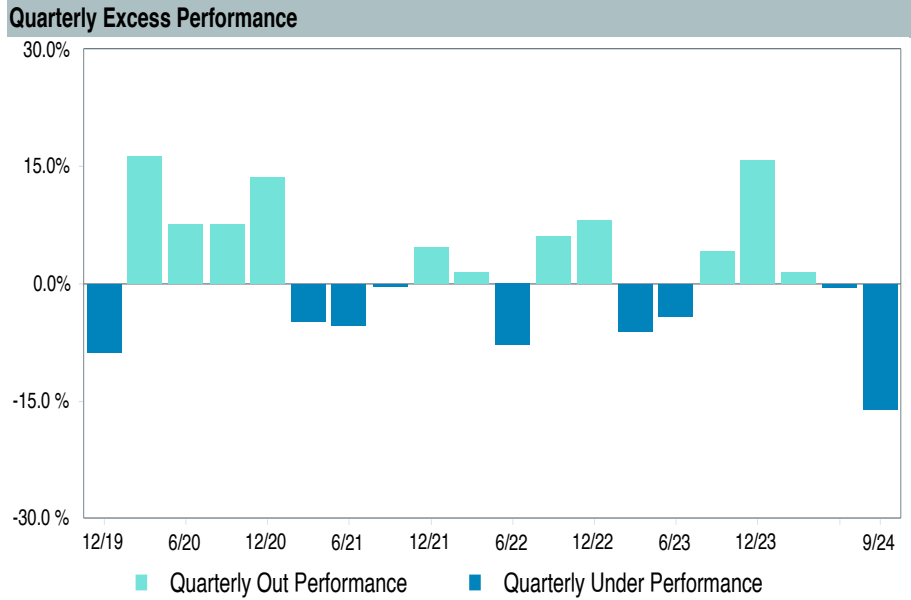
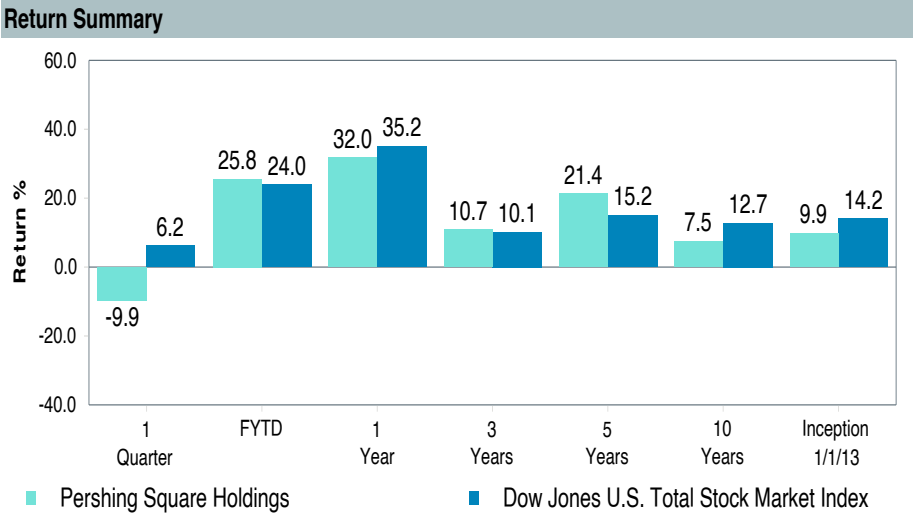
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Voya U.S. Convertibles	1.11	2.41	0.46	0.98	0.63	1.24	0.99	11.72	15.75	0.99
Performance Benchmark	0.00	0.00	-	1.00	0.56	0.00	1.00	10.49	15.75	1.00
90 Day U.S. Treasury Bill	-8.94	15.84	-0.56	0.01	-	2.38	0.00	2.32	0.66	-0.12



# Manager Performance Summary Pershing Square Holdings

As of September 30, 2024

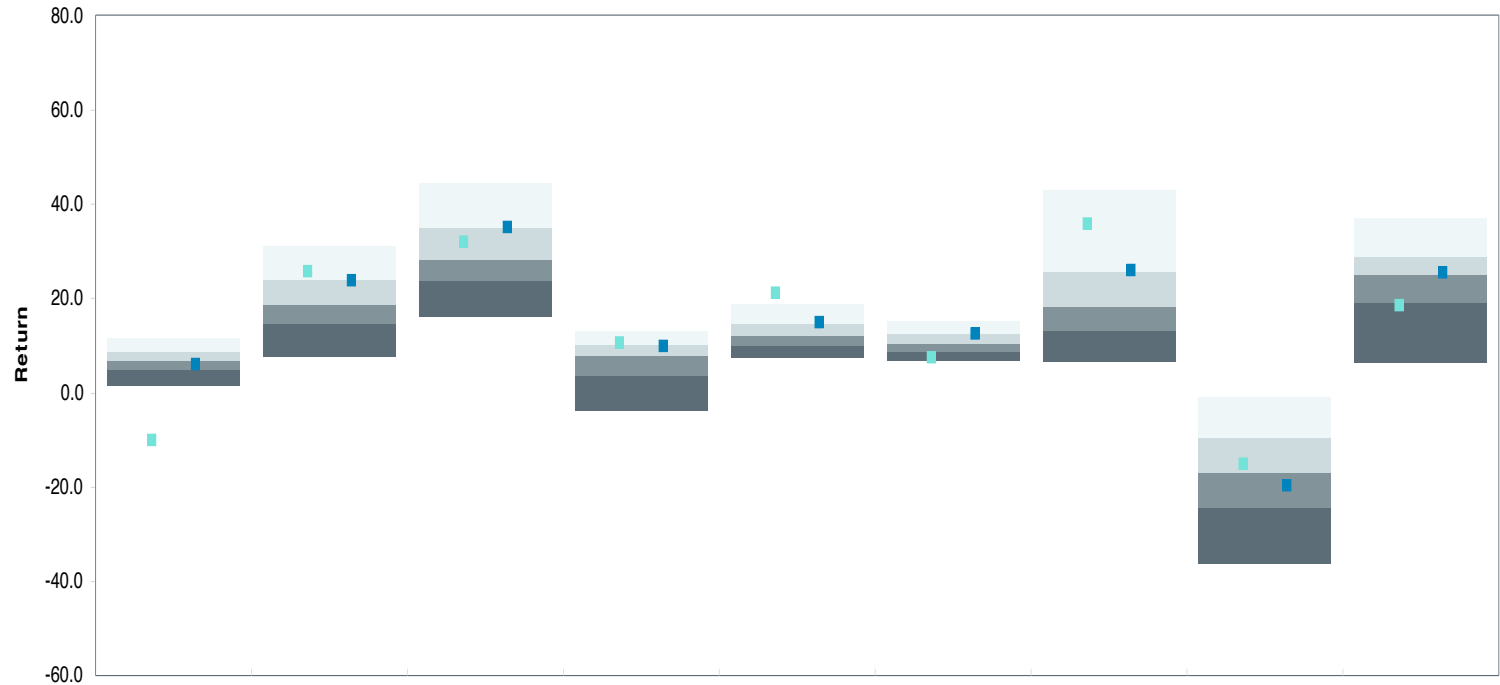
Account Information	
Account Name	Pershing Square Holdings
Inception Date	12/31/2012
Account Structure	Commingled Fund
Asset Class	US Equity
Benchmark	Dow Jones U.S. Total Stock Market Index
Peer Group	IM U.S. Equity (SA+CF)



# Pershing Square Holdings

As of September 30, 2024

IM U.S. Equity (SA+CF)



	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Pershing Square Holdings	-9.9 (100)	25.8 (17)	32.0 (33)	10.7 (22)	21.4 (2)	7.5 (92)	36.0 (11)	-15.1 (44)	18.7 (77)
Dow Jones U.S. Total Stock Market Index	6.2 (59)	24.0 (25)	35.2 (24)	10.1 (28)	15.2 (23)	12.7 (24)	26.1 (24)	-19.5 (63)	25.7 (46)
5th Percentile	11.7	31.2	44.3	13.2	18.9	15.4	43.0	-0.7	37.2
1st Quartile	8.8	23.9	35.0	10.3	14.9	12.7	25.6	-9.6	29.0
Median	6.9	18.6	28.2	7.8	12.2	10.4	18.5	-17.0	25.0
3rd Quartile	4.9	14.9	24.0	3.8	10.0	8.9	13.1	-24.3	19.2
95th Percentile	1.7	7.6	16.3	-3.8	7.5	6.9	6.6	-36.2	6.5
Population	1,823	1,802	1,807	1,741	1,667	1,407	2,006	2,083	2,117

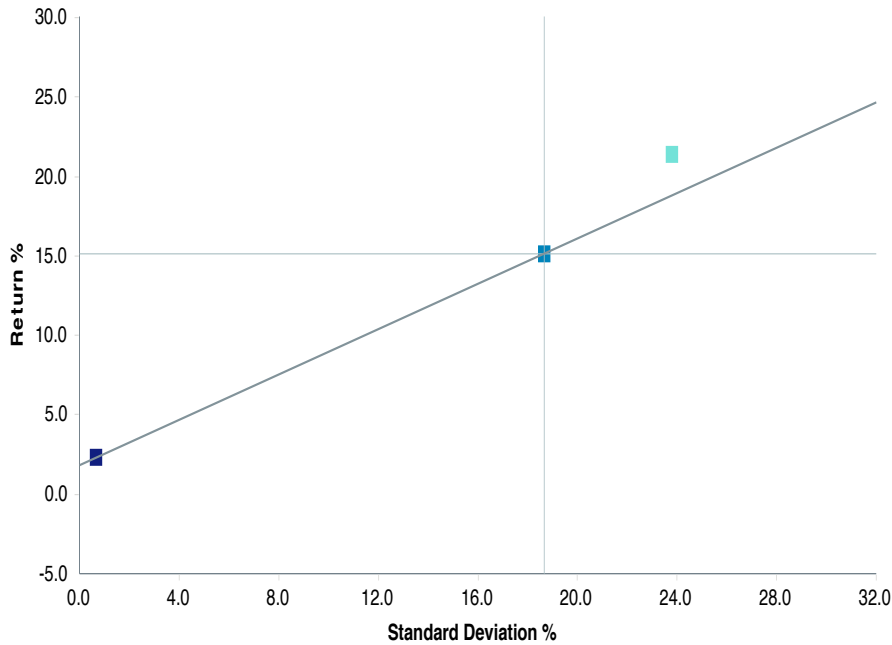
Parentheses contain percentile rankings.



# Risk Profile Pershing Square Holdings

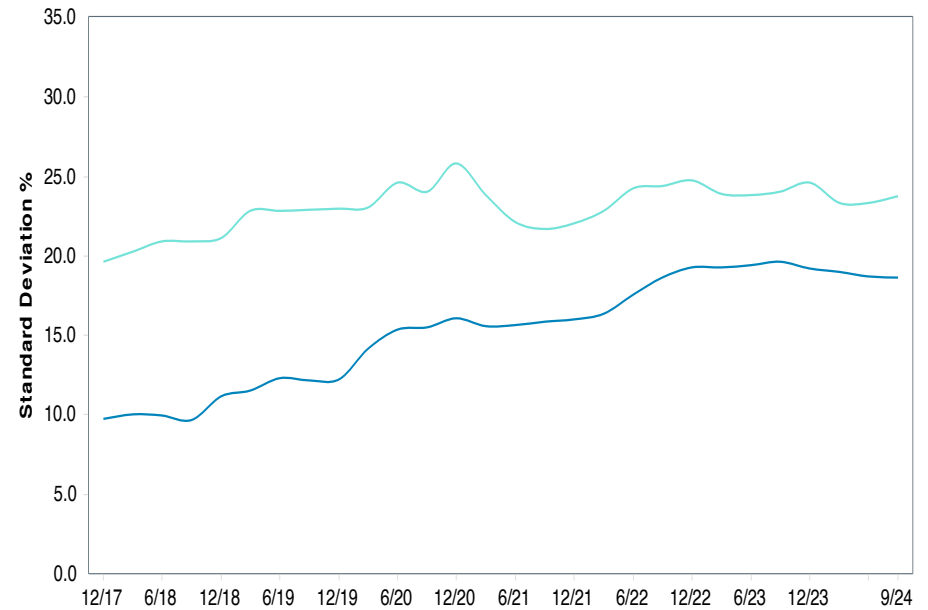
As of September 30, 2024

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



- Pershing Square Holdings
- Dow Jones U.S. Total Stock Market Index
- 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



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

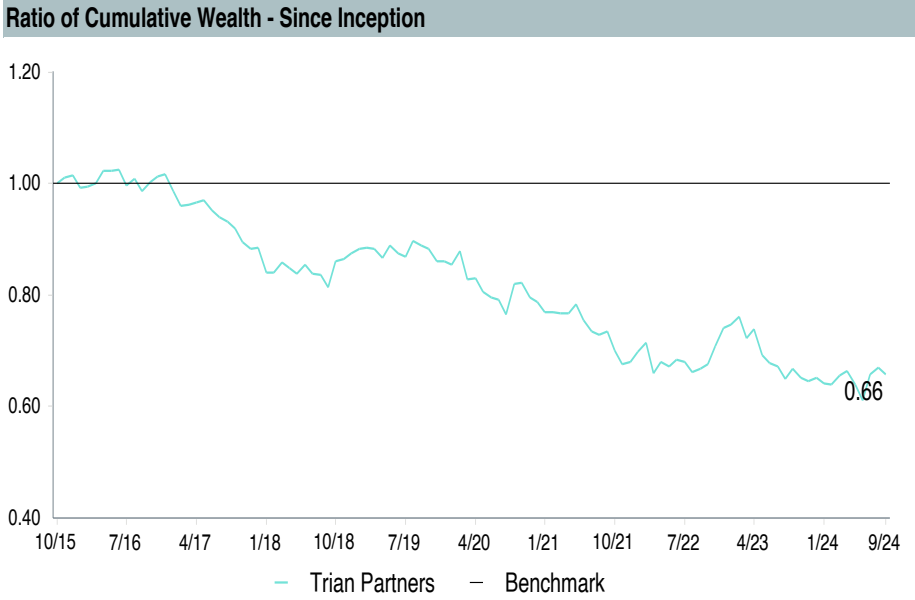
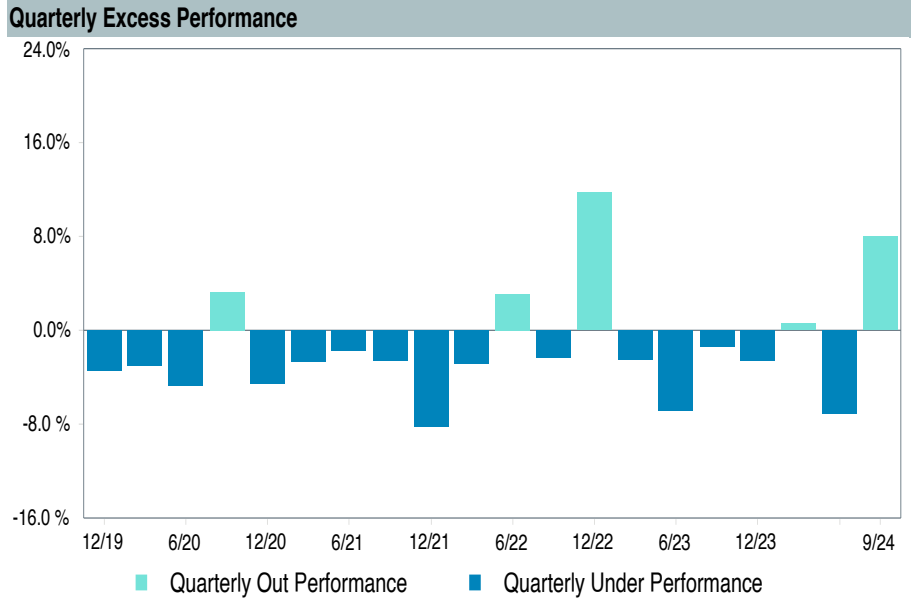
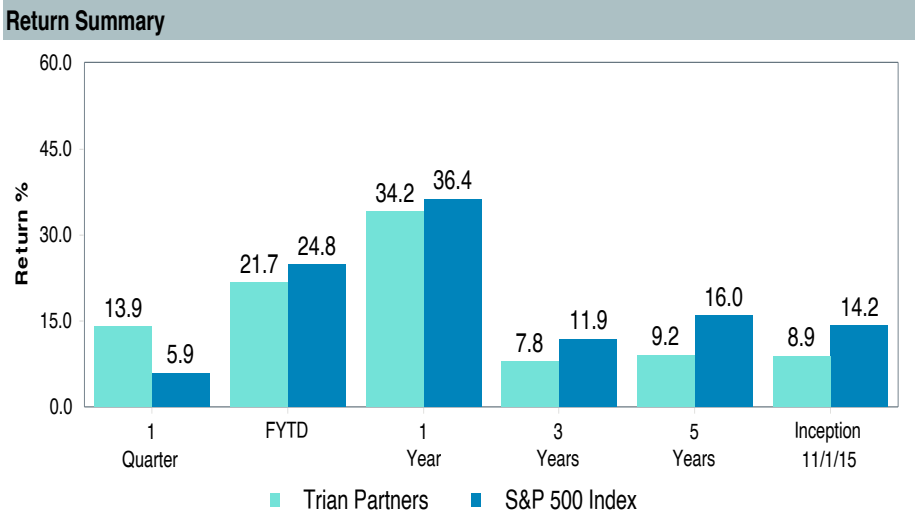
**5 Years Historical Statistics**

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Pershing Square Holdings	6.30	15.52	0.41	0.57	0.84	7.04	0.97	21.37	23.78	0.76
Dow Jones U.S. Total Stock Market Index	0.00	0.00	-	1.00	0.73	0.00	1.00	15.15	18.65	1.00
90 Day U.S. Treasury Bill	-13.61	18.68	-0.73	0.00	-	2.34	0.00	2.32	0.66	-0.03

# Manager Performance Summary Trian Partners

As of September 30, 2024

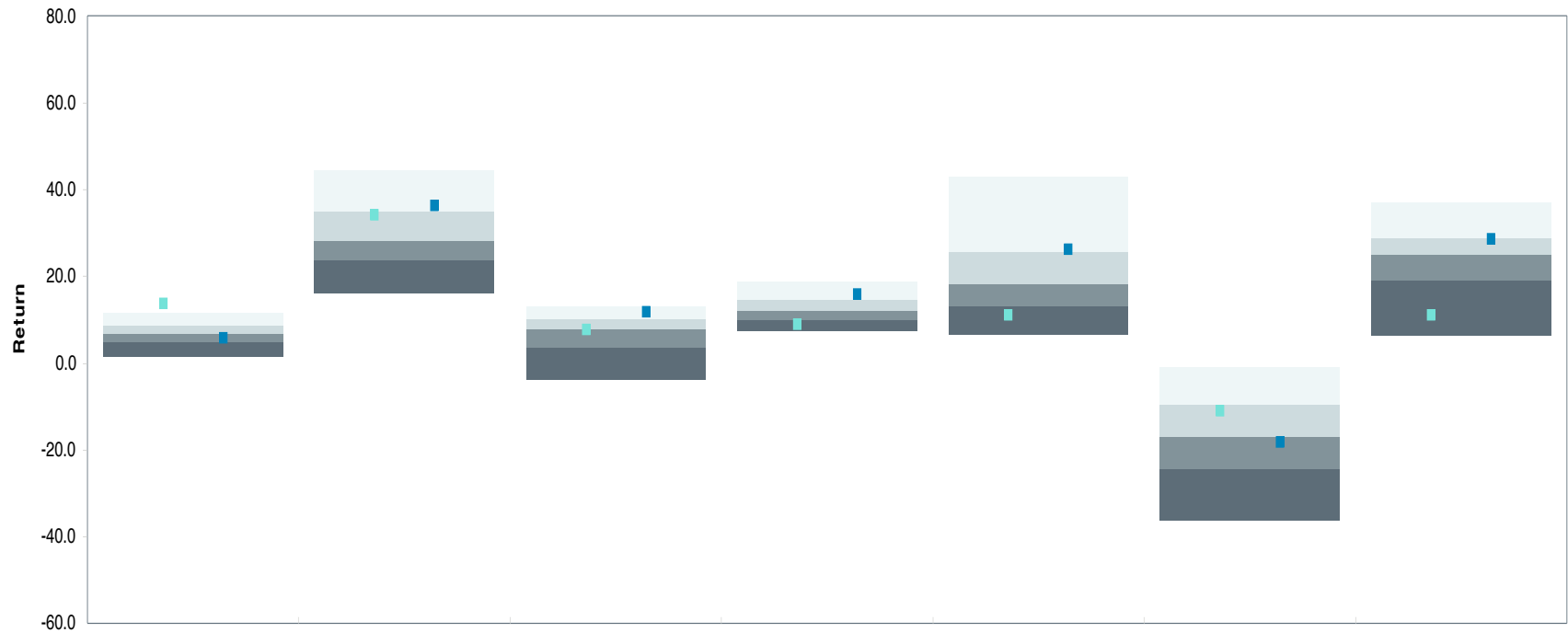
Account Information	
Account Name	Trian Partners
Inception Date	11/01/2015
Account Structure	Commingled Fund
Asset Class	US Equity
Benchmark	S&P 500 Index
Peer Group	IM U.S. Equity (SA+CF)



# Trian Partners

As of September 30, 2024

## IM U.S. Equity (SA+CF)



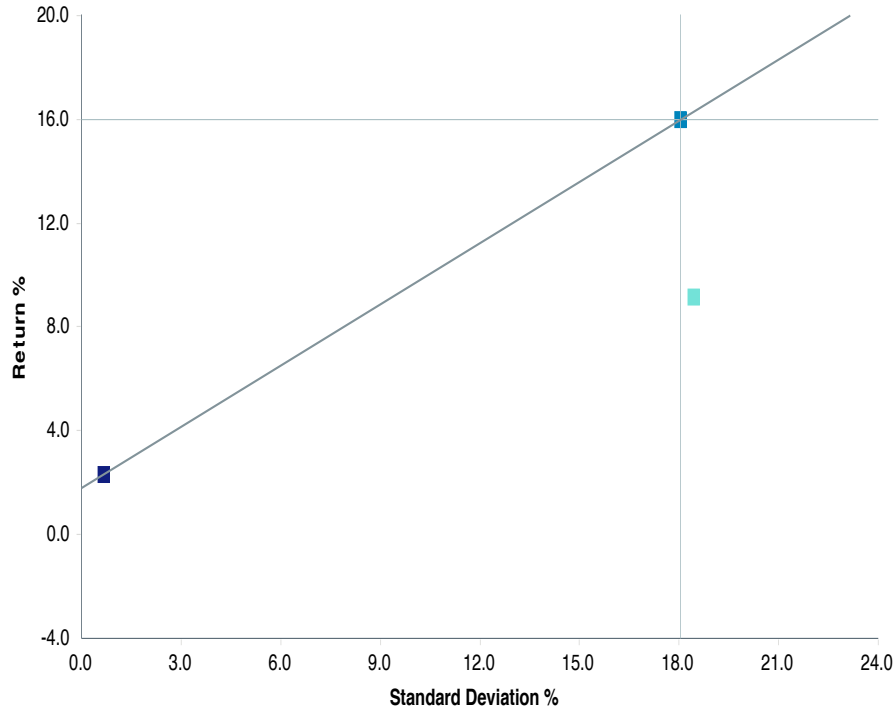
	1 Quarter	1 Year	3 Years	5 Years	2023	2022	2021
Trian Partners	13.9 (2)	34.2 (28)	7.8 (51)	9.2 (83)	11.2 (83)	-10.9 (30)	11.2 (92)
S&P 500 Index	5.9 (64)	36.4 (19)	11.9 (12)	16.0 (16)	26.3 (22)	-18.1 (55)	28.7 (27)
5th Percentile	11.7	44.3	13.2	18.9	43.0	-0.7	37.2
1st Quartile	8.8	35.0	10.3	14.9	25.6	-9.6	29.0
Median	6.9	28.2	7.8	12.2	18.5	-17.0	25.0
3rd Quartile	4.9	24.0	3.8	10.0	13.1	-24.3	19.2
95th Percentile	1.7	16.3	-3.8	7.5	6.6	-36.2	6.5
Population	1,823	1,807	1,741	1,667	2,006	2,083	2,117

Parentheses contain percentile rankings.

# Risk Profile Trian Partners

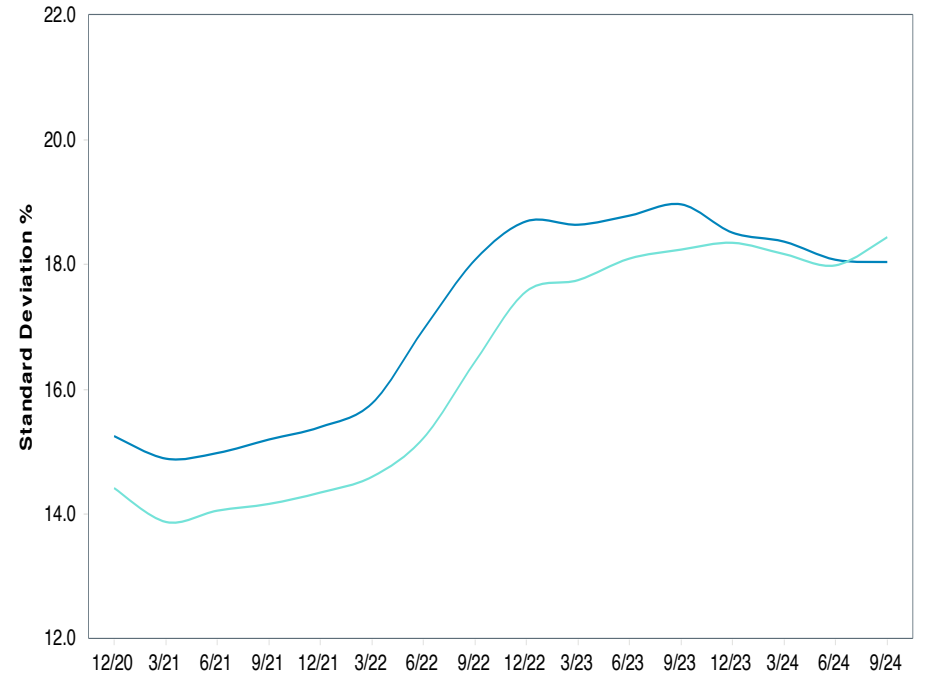
As of September 30, 2024

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



■ Trian Partners    ■ S&P 500 Index    ■ 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



— Trian Partners    — S&P 500 Index

**5 Years Historical Statistics**

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Trian Partners	-6.04	10.43	-0.58	0.70	0.44	-3.59	0.86	9.15	18.44	0.84
S&P 500 Index	0.00	0.00	-	1.00	0.79	0.00	1.00	15.98	18.04	1.00
90 Day U.S. Treasury Bill	-14.22	18.07	-0.79	0.00	-	2.34	0.00	2.32	0.66	-0.02

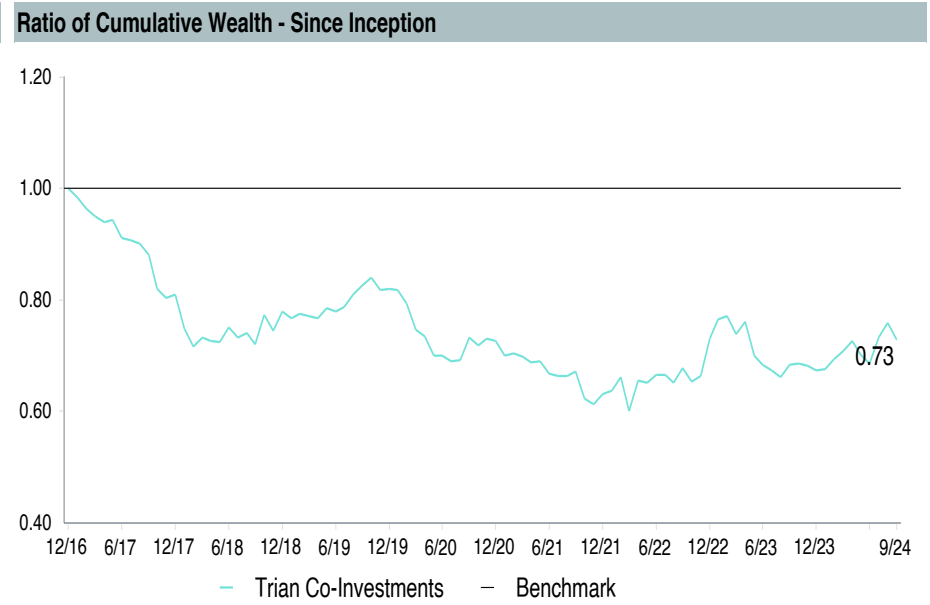
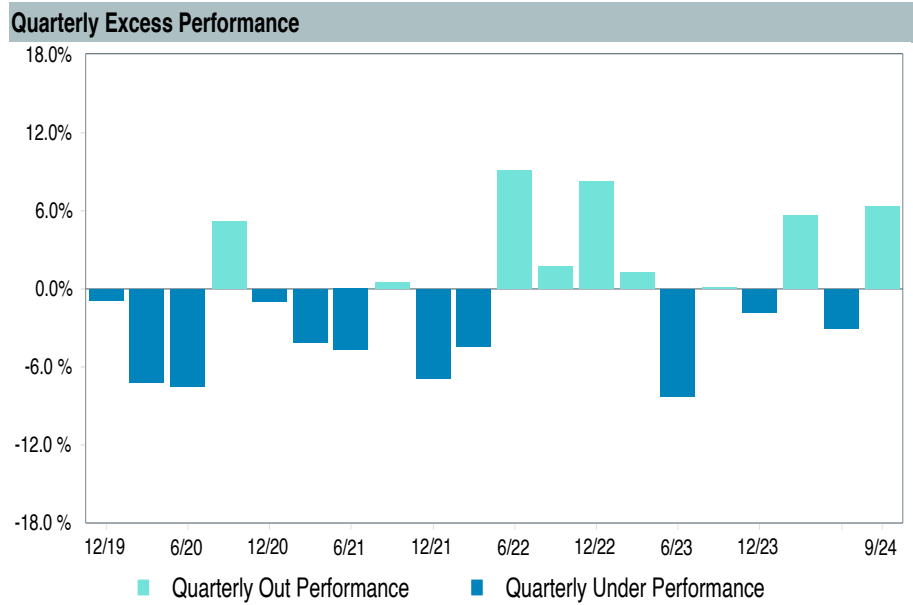
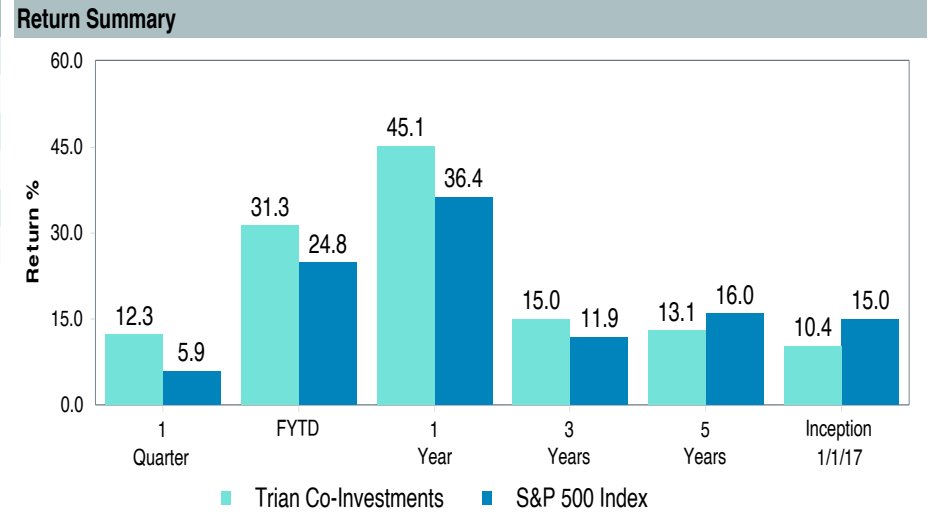




# Manager Performance Summary Trian Co-Investments

As of September 30, 2024

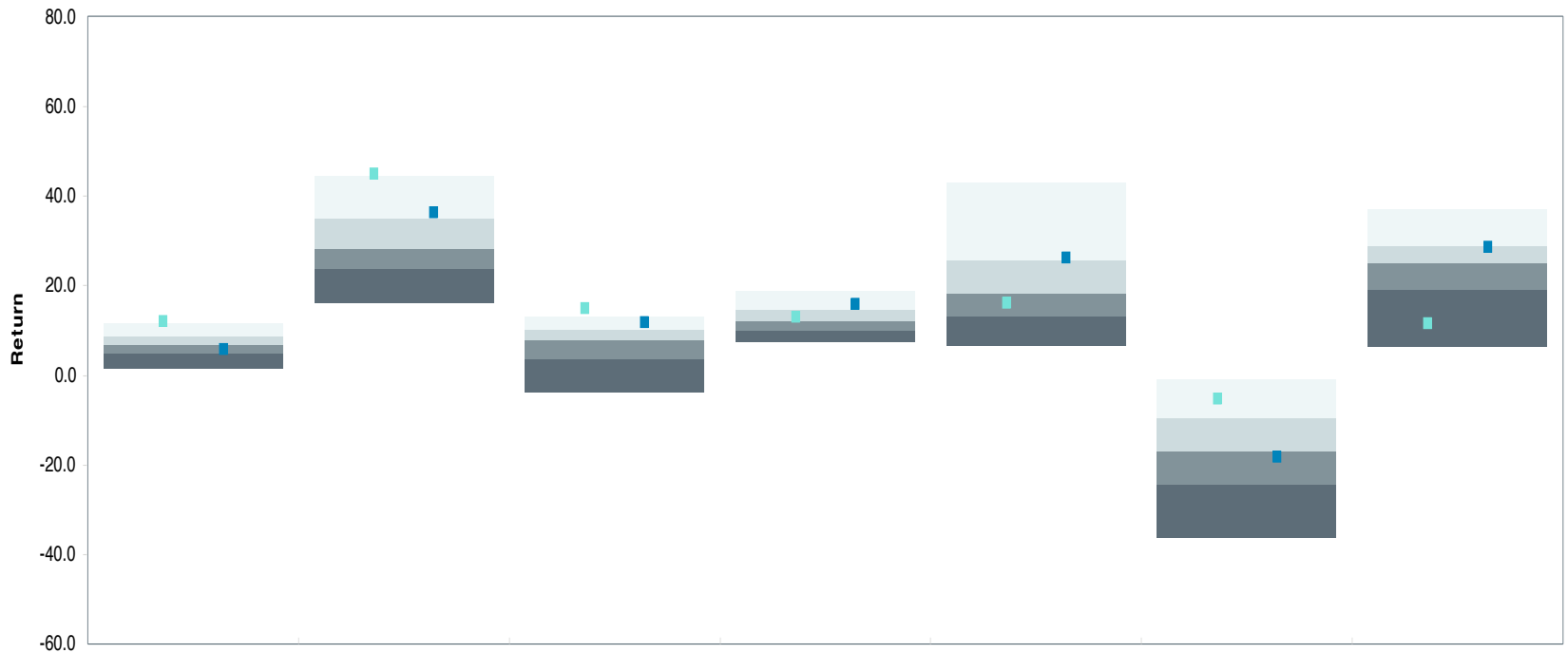
Account Information	
Account Name	Trian Co-Investments
Inception Date	01/01/2017
Account Structure	Commingled Fund
Asset Class	US Equity
Benchmark	S&P 500 Index
Peer Group	IM U.S. Equity (SA+CF)



# Trian Co-Investments

As of September 30, 2024

IM U.S. Equity (SA+CF)



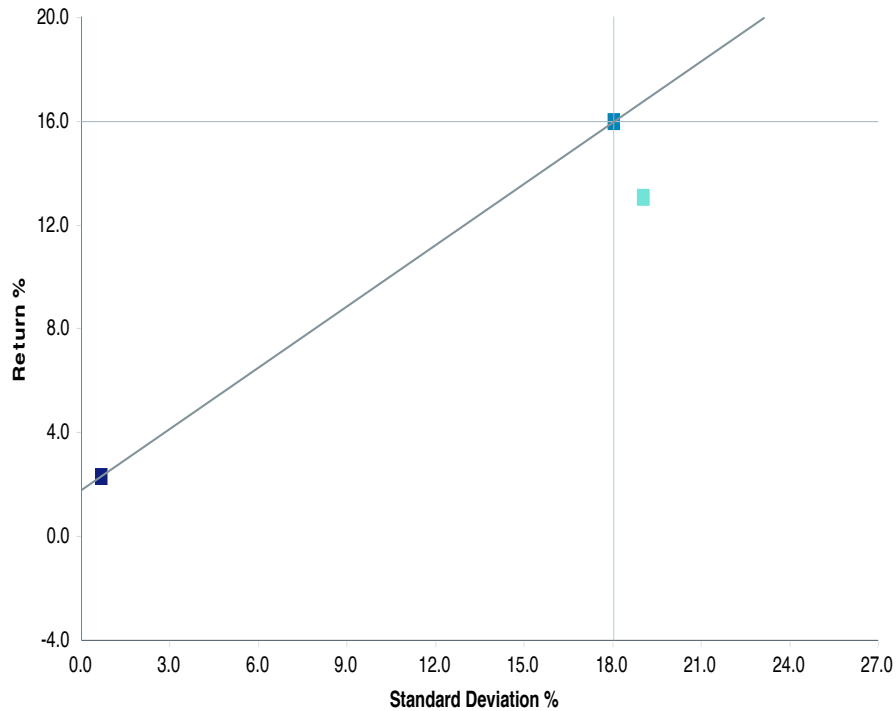
	1 Quarter	1 Year	3 Years	5 Years	2023	2022	2021
Trian Co-Investments	12.3 (4)	45.1 (5)	15.0 (3)	13.1 (40)	16.3 (62)	-5.1 (15)	11.6 (91)
S&P 500 Index	5.9 (64)	36.4 (19)	11.9 (12)	16.0 (16)	26.3 (22)	-18.1 (55)	28.7 (27)
5th Percentile	11.7	44.3	13.2	18.9	43.0	-0.7	37.2
1st Quartile	8.8	35.0	10.3	14.9	25.6	-9.6	29.0
Median	6.9	28.2	7.8	12.2	18.5	-17.0	25.0
3rd Quartile	4.9	24.0	3.8	10.0	13.1	-24.3	19.2
95th Percentile	1.7	16.3	-3.8	7.5	6.6	-36.2	6.5
Population	1,823	1,807	1,741	1,667	2,006	2,083	2,117

Parentheses contain percentile rankings.

# Risk Profile Trian Co-Investments

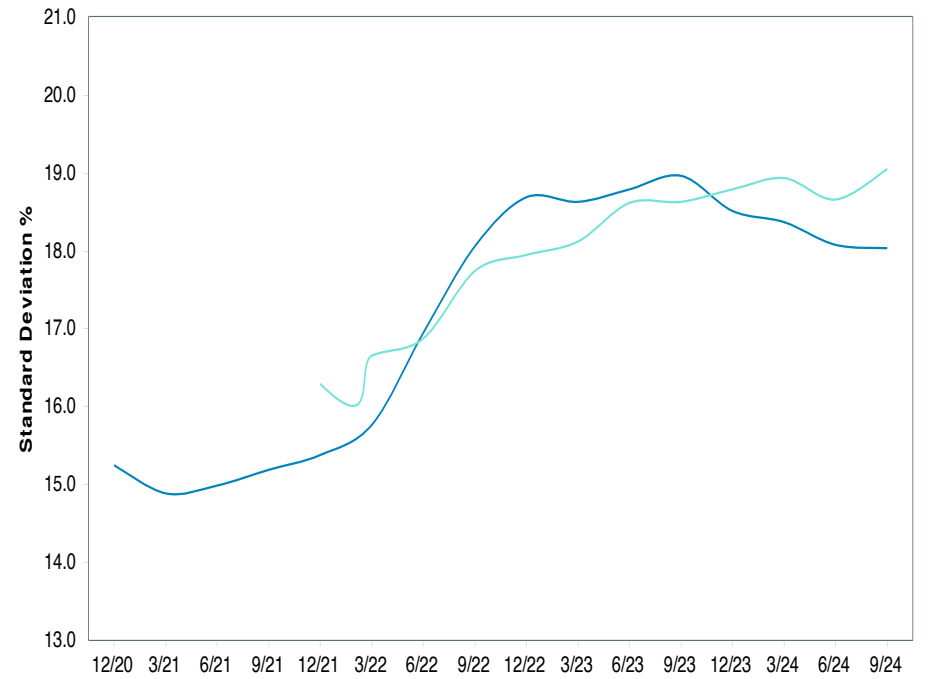
As of September 30, 2024

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



■ Trian Co-Investments    ■ S&P 500 Index    ■ 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



— Trian Co-Investments    — S&P 500 Index

**5 Years Historical Statistics**

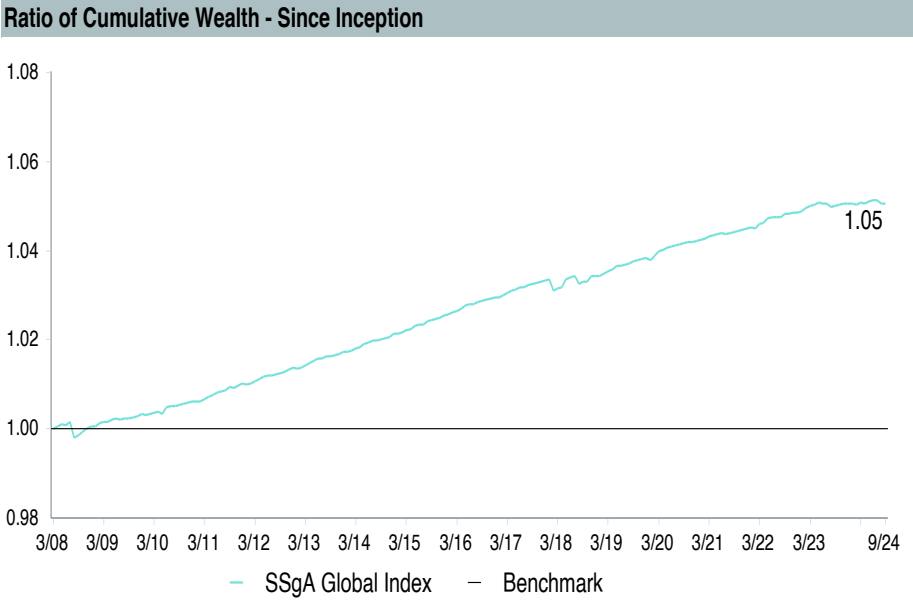
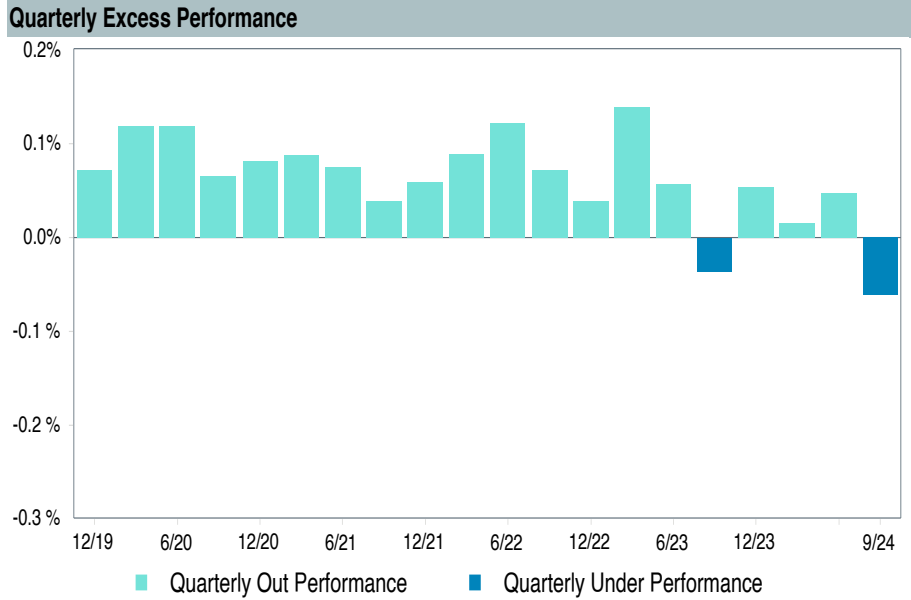
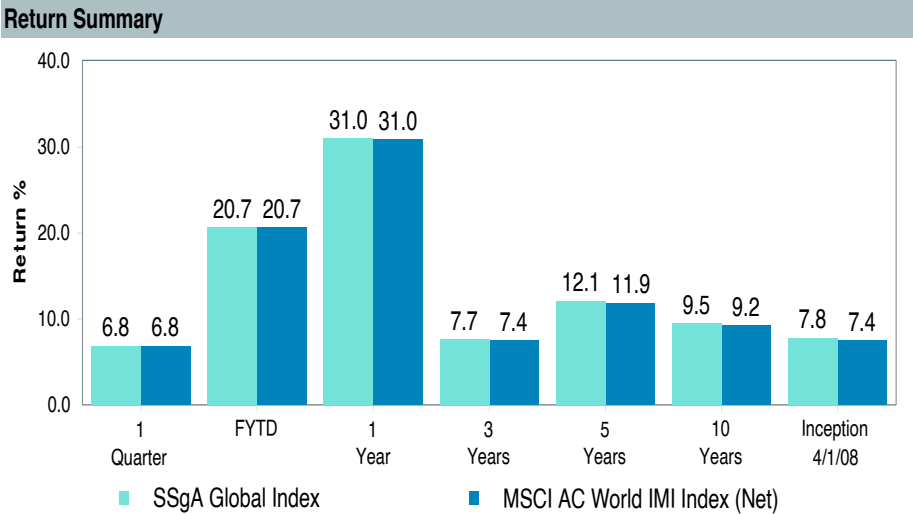
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Trian Co-Investments	-2.36	12.55	-0.19	0.60	0.62	0.68	0.82	13.08	19.06	0.77
S&P 500 Index	0.00	0.00	-	1.00	0.79	0.00	1.00	15.98	18.04	1.00
90 Day U.S. Treasury Bill	-14.22	18.07	-0.79	0.00	-	2.34	0.00	2.32	0.66	-0.02



# Manager Performance Summary SSgA Global Index

As of September 30, 2024

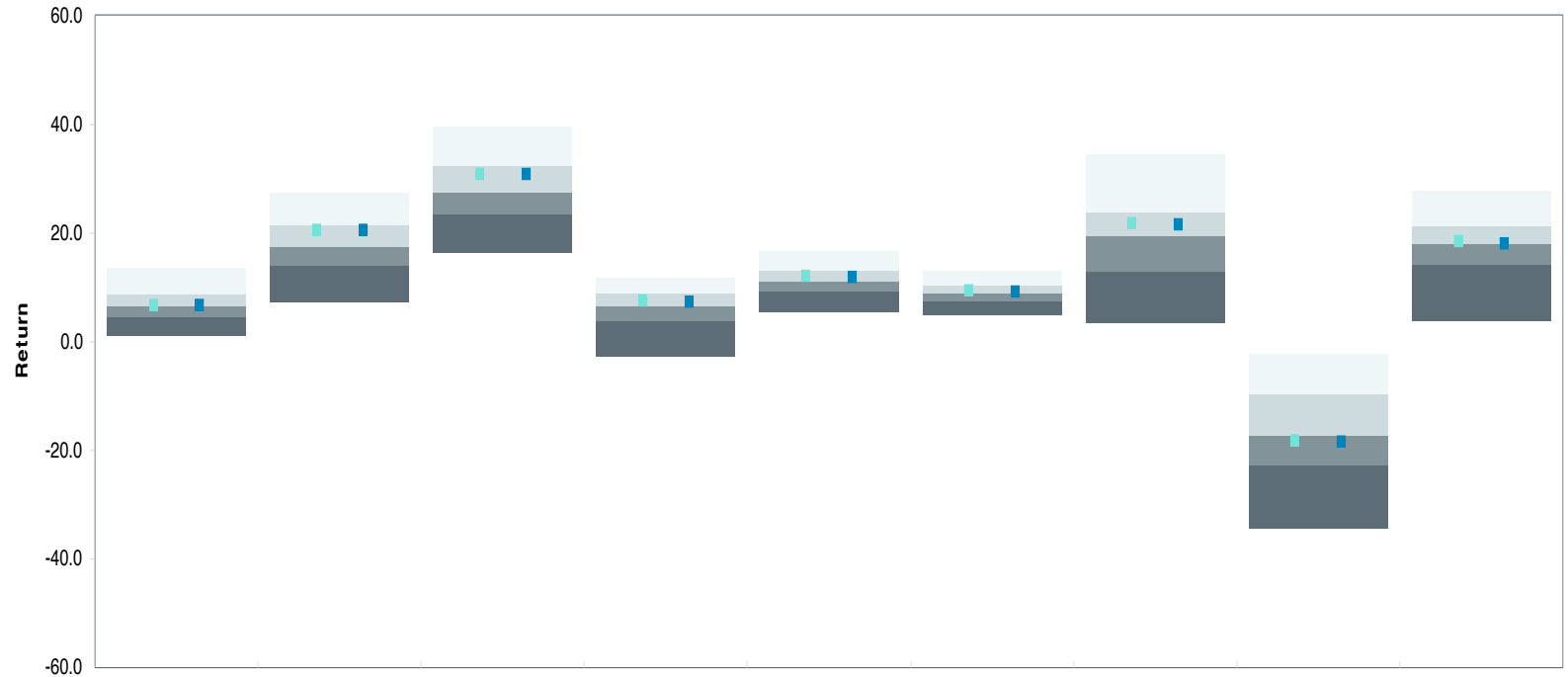
Account Information	
Account Name	SSgA Global Index
Inception Date	03/31/2008
Account Structure	Commingled Fund
Asset Class	Global Equity
Benchmark	MSCI AC World IMI Index (Net)
Peer Group	IM Global Equity (SA+CF)



# SSgA Global Index

As of September 30, 2024

## IM Global Equity (SA+CF)



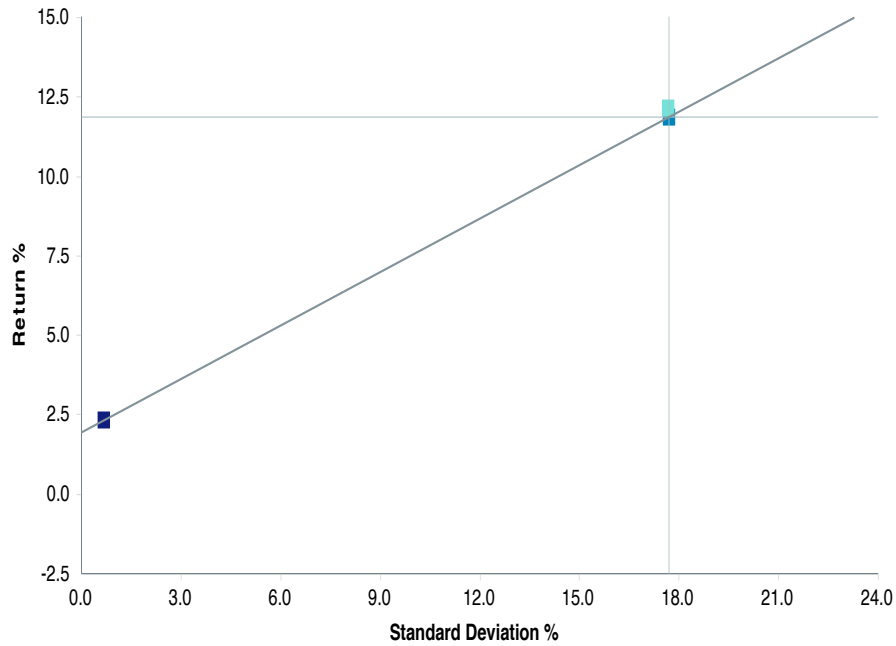
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
SSgA Global Index	6.8 (49)	20.7 (31)	31.0 (35)	7.7 (40)	12.1 (38)	9.5 (41)	21.8 (38)	-18.1 (53)	18.5 (48)
MSCI AC World IMI Index (Net)	6.8 (48)	20.7 (31)	31.0 (35)	7.4 (42)	11.9 (42)	9.2 (47)	21.6 (39)	-18.4 (54)	18.2 (50)
5th Percentile	13.6	27.4	39.5	11.8	16.7	13.1	34.6	-2.2	27.8
1st Quartile	8.8	21.5	32.4	8.9	13.1	10.3	23.9	-9.7	21.4
Median	6.6	17.5	27.7	6.5	11.1	8.9	19.5	-17.4	18.2
3rd Quartile	4.6	13.9	23.5	3.9	9.3	7.4	13.0	-22.7	14.2
95th Percentile	1.2	7.5	16.4	-2.6	5.6	5.0	3.5	-34.5	4.0
Population	485	477	478	449	413	305	528	534	533

Parentheses contain percentile rankings.

# Risk Profile SSgA Global Index

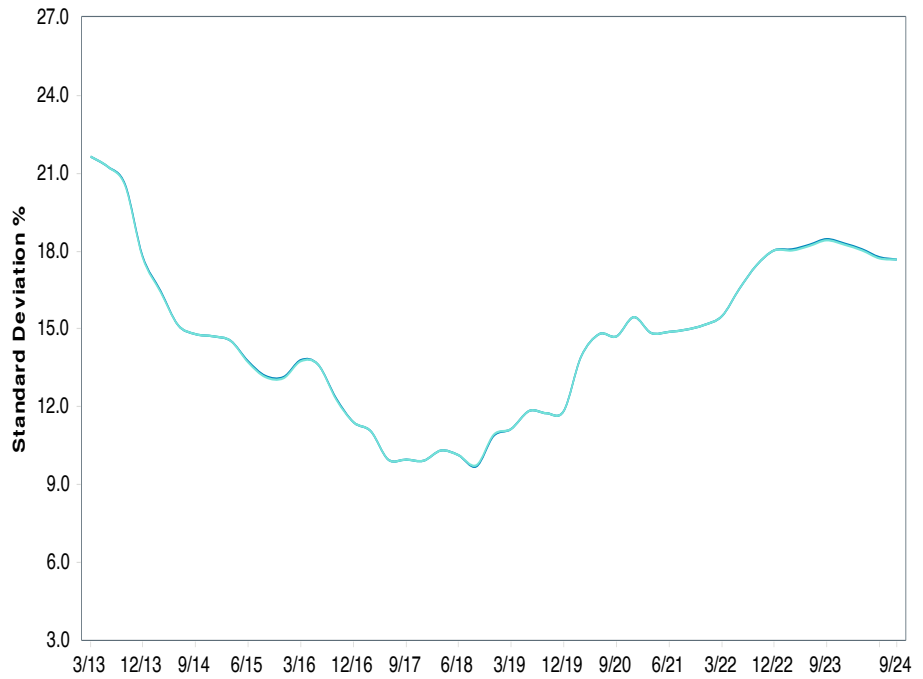
As of September 30, 2024

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



- SSgA Global Index
- MSCI AC World IMI Index (Net)
- 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



- SSgA Global Index
- MSCI AC World IMI Index (Net)

**5 Years Historical Statistics**

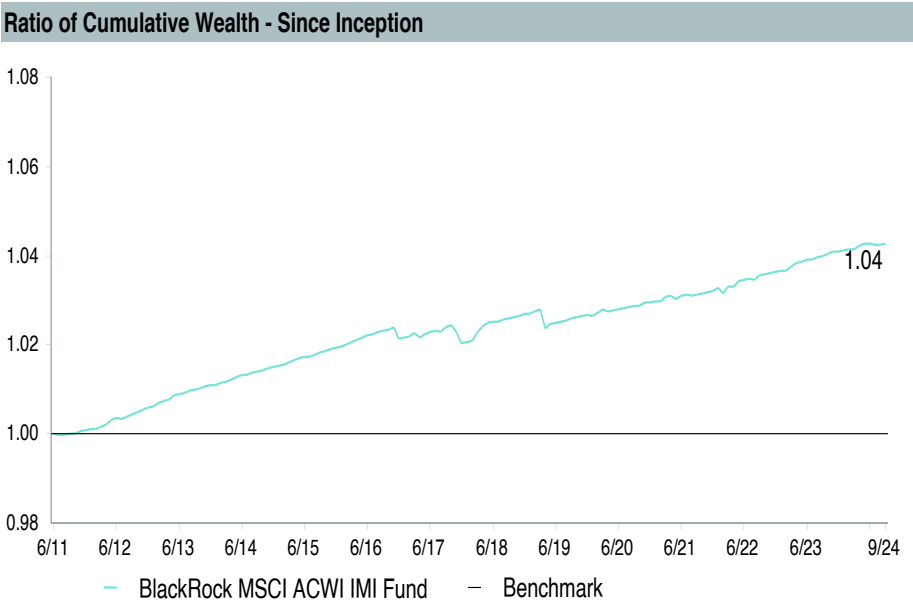
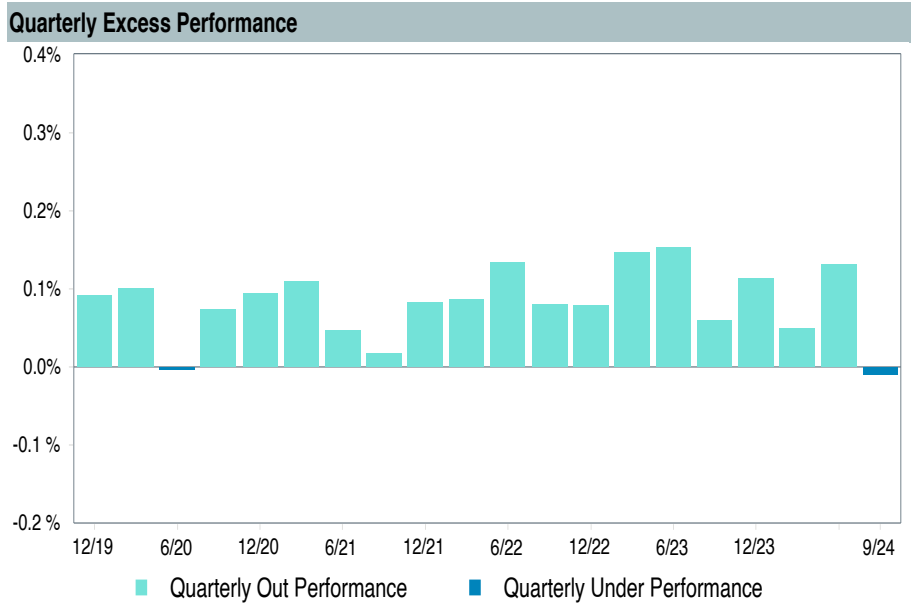
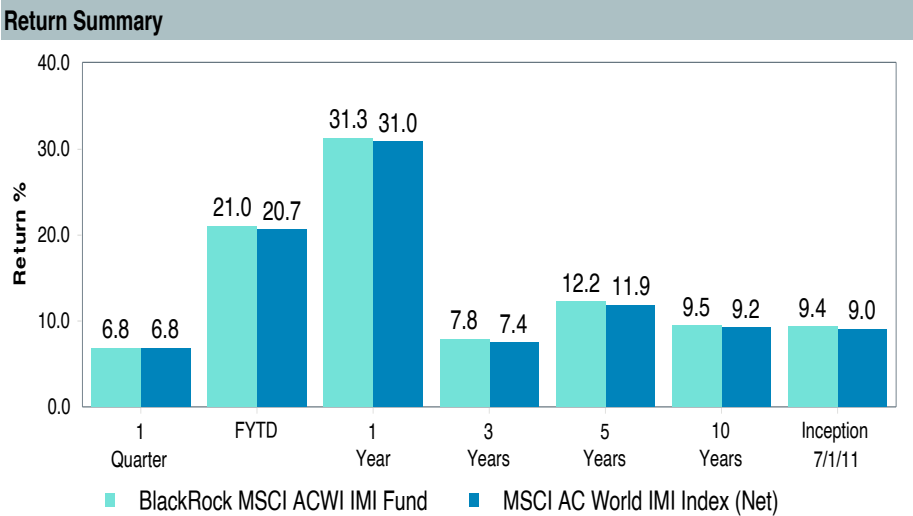
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
SSgA Global Index	0.25	0.11	2.30	1.00	0.61	0.26	1.00	12.15	17.67	1.00
MSCI AC World IMI Index (Net)	0.00	0.00	-	1.00	0.59	0.00	1.00	11.87	17.69	1.00
90 Day U.S. Treasury Bill	-10.52	17.72	-0.59	0.00	-	2.33	0.00	2.32	0.66	-0.02



# Manager Performance Summary BlackRock MSCI ACWI IMI Fund

As of September 30, 2024

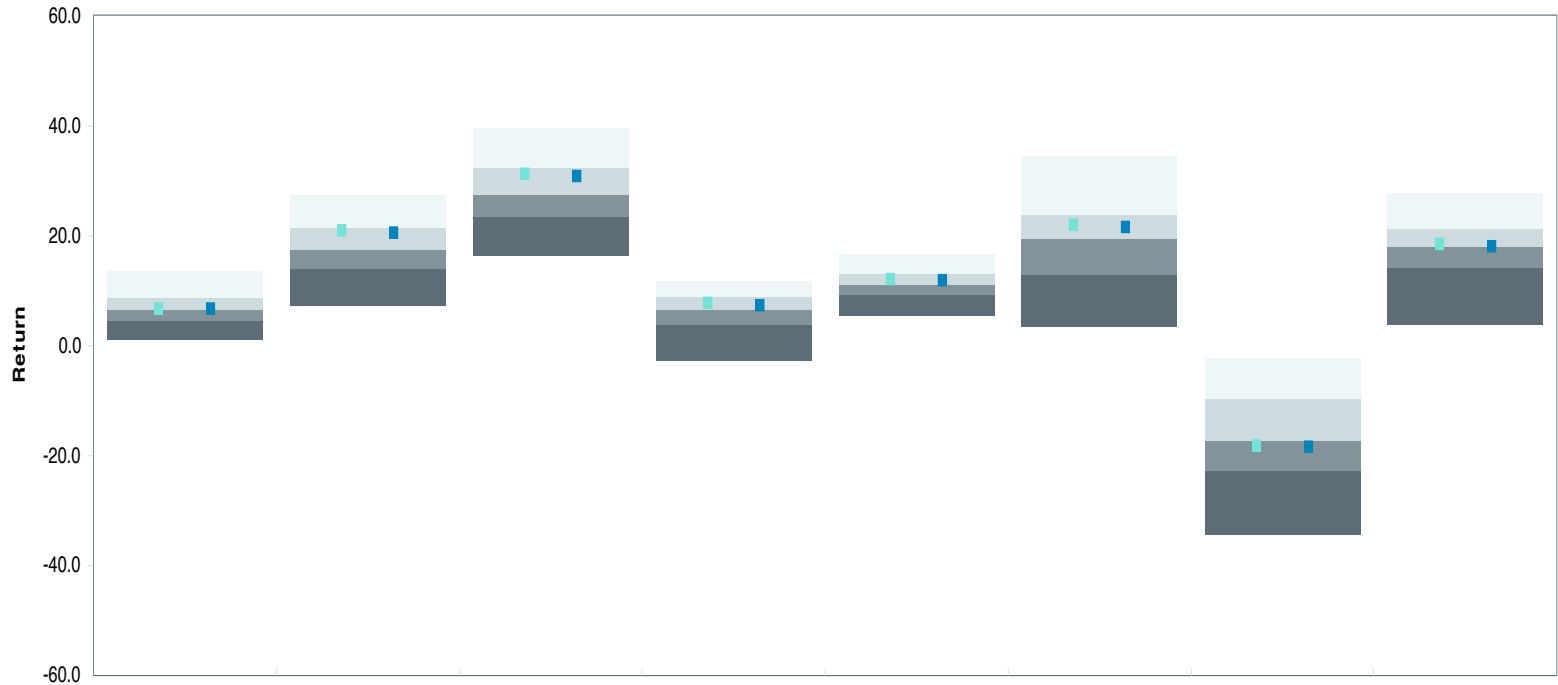
Account Information	
Account Name	BlackRock MSCI ACWI IMI Fund
Inception Date	06/30/2011
Account Structure	Commingled Fund
Asset Class	Global Equity
Benchmark	MSCI AC World IMI Index (Net)
Peer Group	IM Global Equity (SA+CF)



# BlackRock MSCI ACWI IMI Fund

As of September 30, 2024

IM Global Equity (SA+CF)



	1 Quarter	FYTD	1 Year	3 Years	5 Years	2023	2022	2021
BlackRock MSCI ACWI IMI Fund	6.8 (48)	21.0 (28)	31.3 (34)	7.8 (37)	12.2 (37)	22.1 (37)	-18.1 (53)	18.5 (48)
MSCI AC World IMI Index (Net)	6.8 (48)	20.7 (31)	31.0 (35)	7.4 (42)	11.9 (42)	21.6 (39)	-18.4 (54)	18.2 (50)
5th Percentile	13.6	27.4	39.5	11.8	16.7	34.6	-2.2	27.8
1st Quartile	8.8	21.5	32.4	8.9	13.1	23.9	-9.7	21.4
Median	6.6	17.5	27.7	6.5	11.1	19.5	-17.4	18.2
3rd Quartile	4.6	13.9	23.5	3.9	9.3	13.0	-22.7	14.2
95th Percentile	1.2	7.5	16.4	-2.6	5.6	3.5	-34.5	4.0
Population	485	477	478	449	413	528	534	533

Parentheses contain percentile rankings.

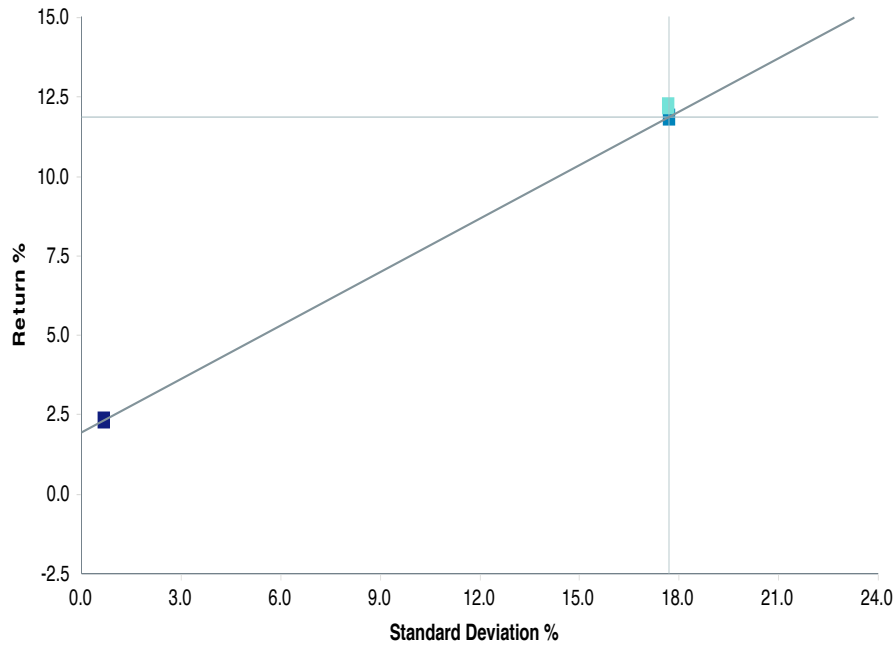




# Risk Profile BlackRock MSCI ACWI IMI Fund

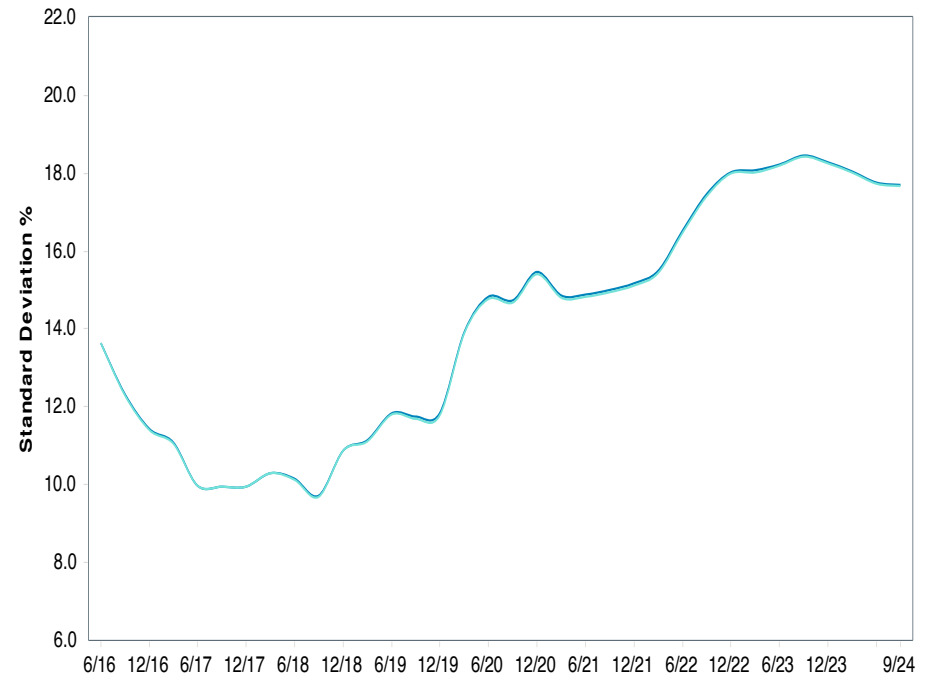
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



- BlackRock MSCI ACWI IMI Fund
- MSCI AC World IMI Index (Net)
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 5 Years



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

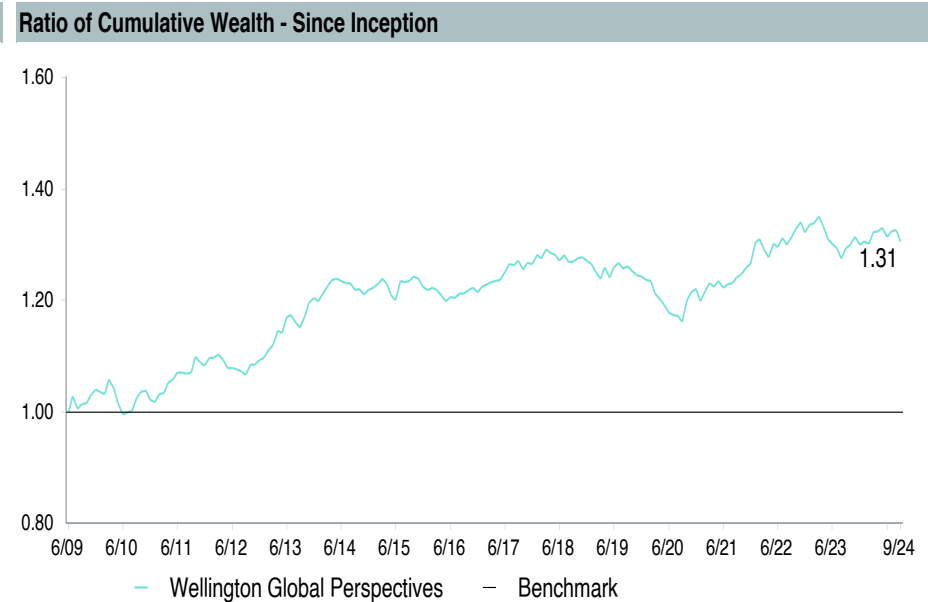
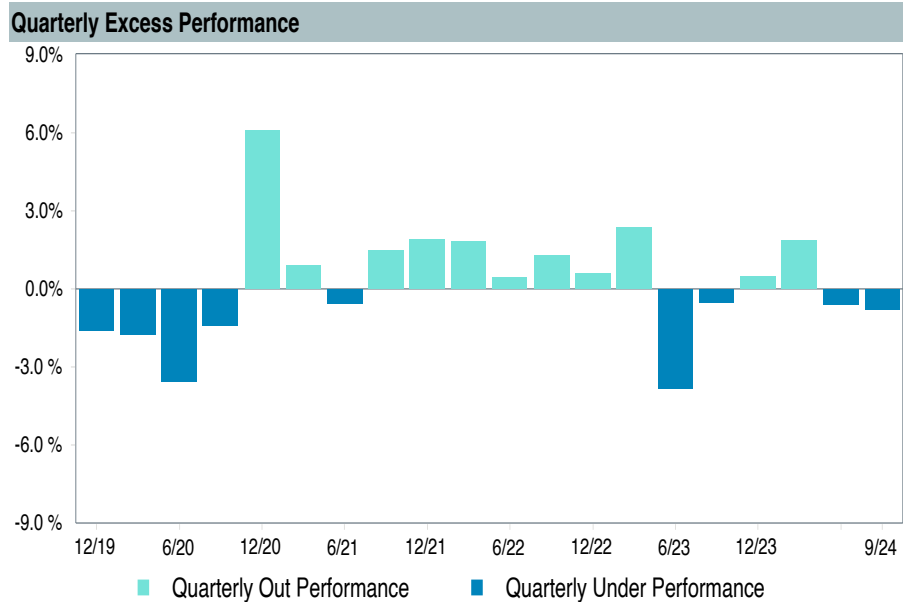
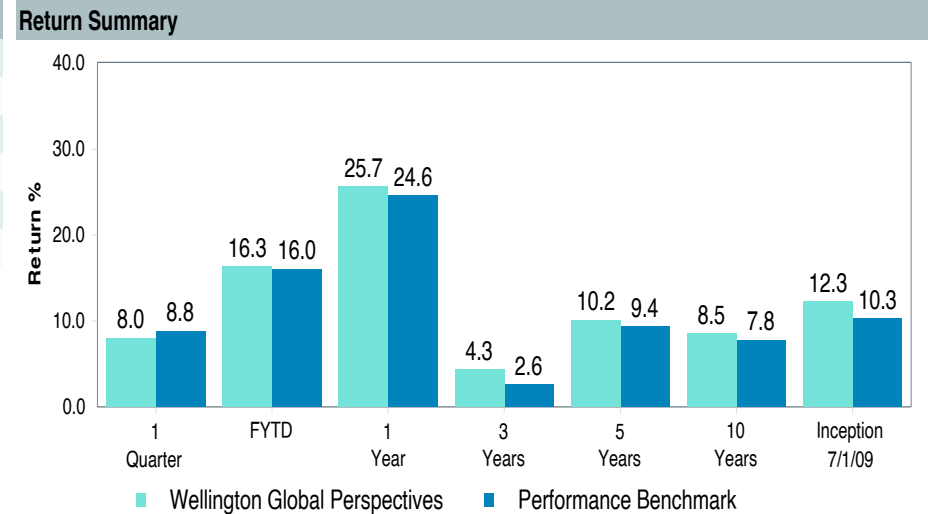
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
BlackRock MSCI ACWI IMI Fund	0.32	0.14	2.28	1.00	0.61	0.34	1.00	12.23	17.68	1.00
MSCI AC World IMI Index (Net)	0.00	0.00	-	1.00	0.59	0.00	1.00	11.87	17.69	1.00
90 Day U.S. Treasury Bill	-10.52	17.72	-0.59	0.00	-	2.33	0.00	2.32	0.66	-0.02

# Manager Performance Summary Wellington Global Perspectives

As of September 30, 2024

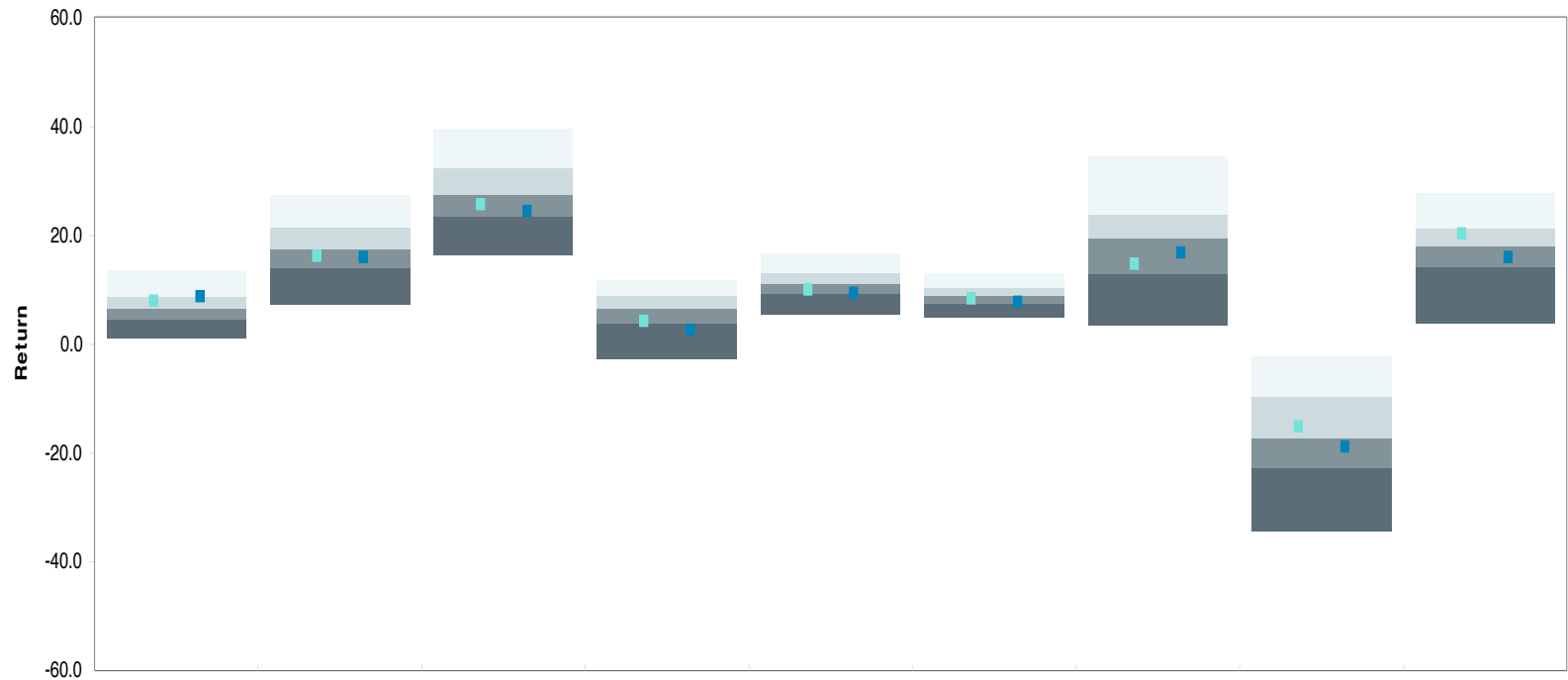
Account Information	
Account Name	Wellington Global Perspectives
Inception Date	06/30/2009
Account Structure	Separate Account
Asset Class	Global Equity
Benchmark	Performance Benchmark
Peer Group	IM Global Equity (SA+CF)



# Wellington Global Perspectives

As of September 30, 2024

## IM Global Equity (SA+CF)



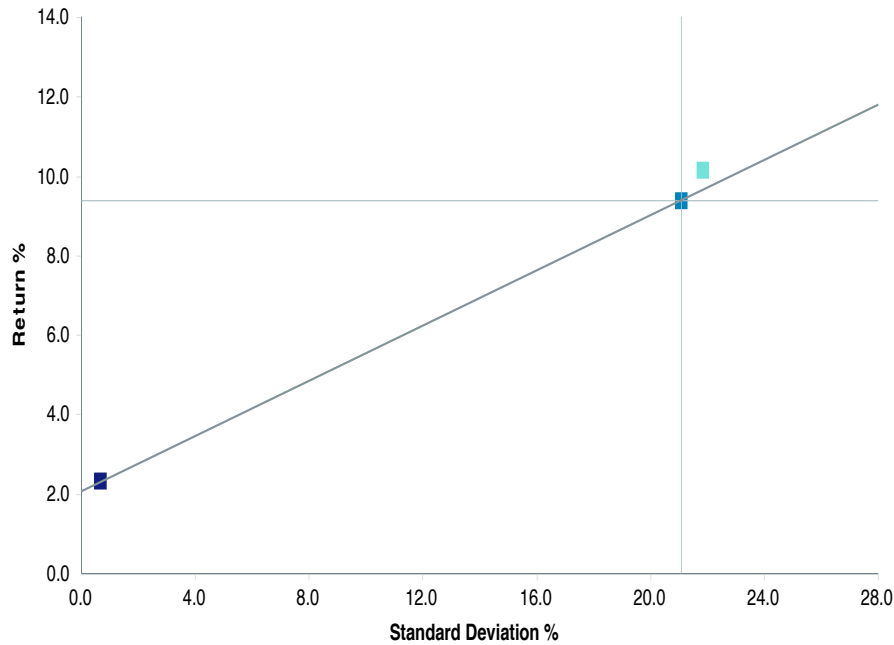
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Wellington Global Perspectives	8.0 (33)	16.3 (59)	25.7 (62)	4.3 (73)	10.2 (63)	8.5 (59)	14.9 (68)	-15.0 (39)	20.4 (31)
Performance Benchmark	8.8 (26)	16.0 (62)	24.6 (70)	2.6 (83)	9.4 (74)	7.8 (69)	16.8 (62)	-18.7 (57)	16.1 (63)
5th Percentile	13.6	27.4	39.5	11.8	16.7	13.1	34.6	-2.2	27.8
1st Quartile	8.8	21.5	32.4	8.9	13.1	10.3	23.9	-9.7	21.4
Median	6.6	17.5	27.7	6.5	11.1	8.9	19.5	-17.4	18.2
3rd Quartile	4.6	13.9	23.5	3.9	9.3	7.4	13.0	-22.7	14.2
95th Percentile	1.2	7.5	16.4	-2.6	5.6	5.0	3.5	-34.5	4.0
Population	485	477	478	449	413	305	528	534	533

Parentheses contain percentile rankings.

# Risk Profile Wellington Global Perspectives

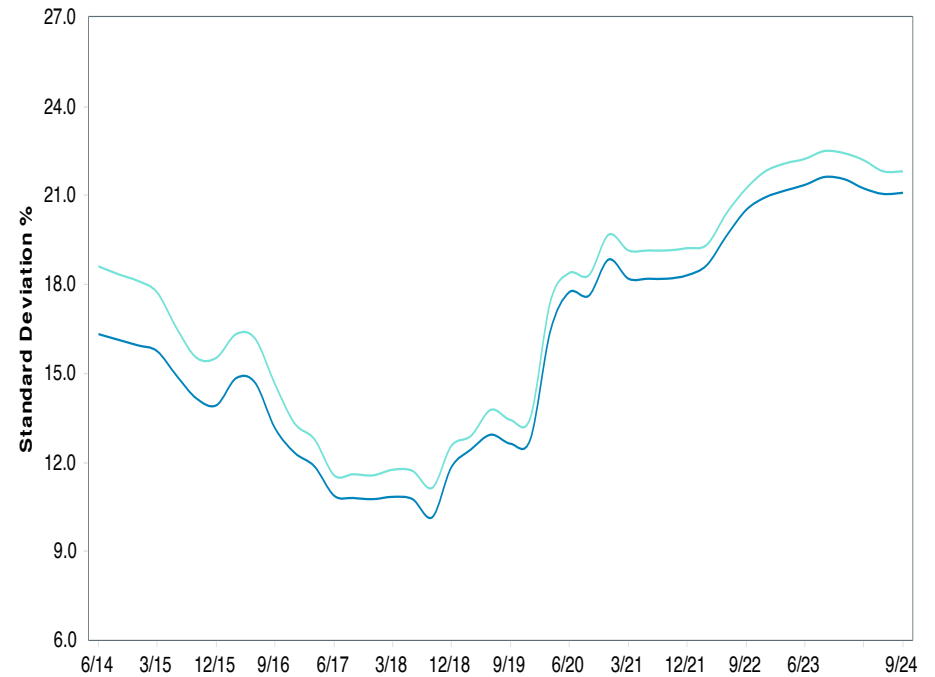
As of September 30, 2024

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



- Wellington Global Perspectives
- Performance Benchmark
- 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



- Wellington Global Perspectives
- Performance Benchmark

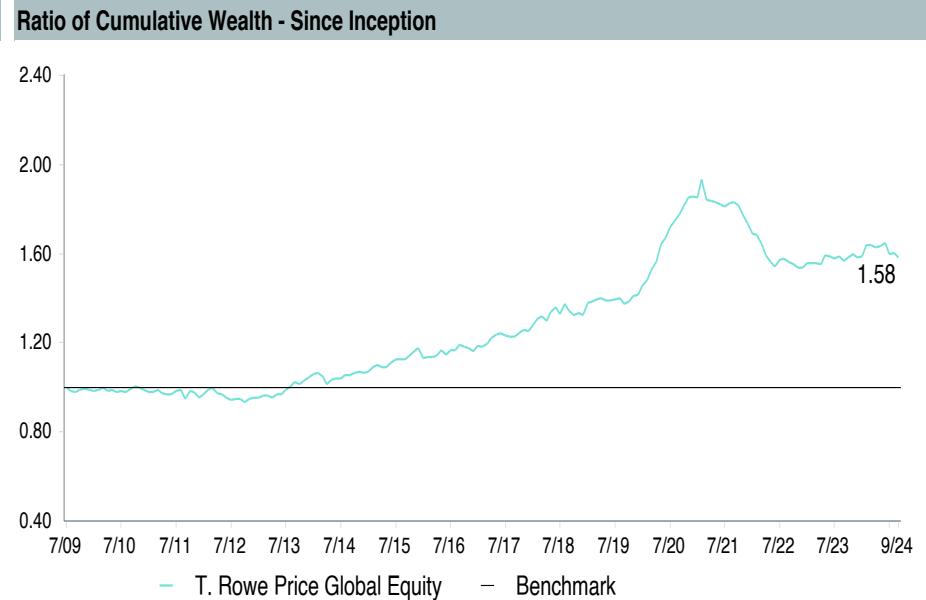
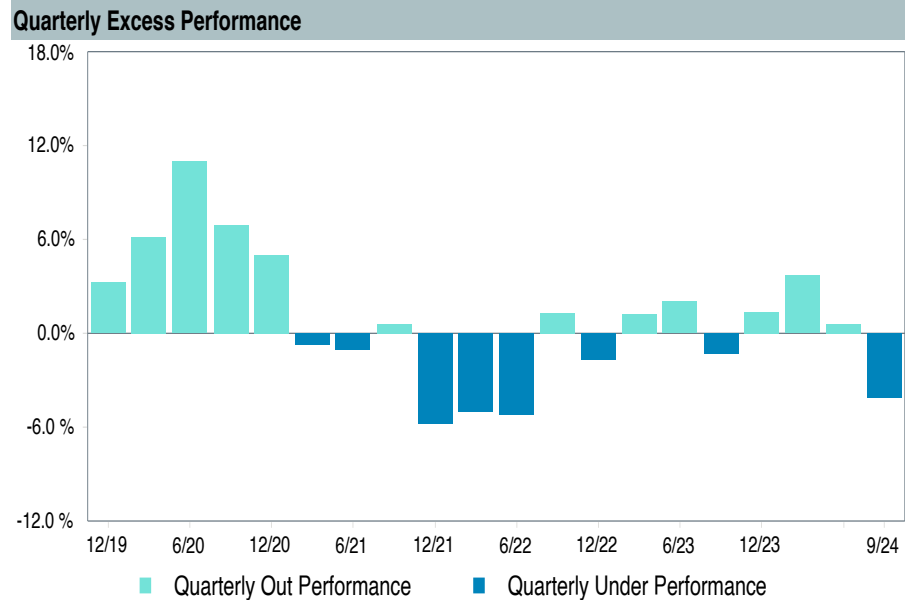
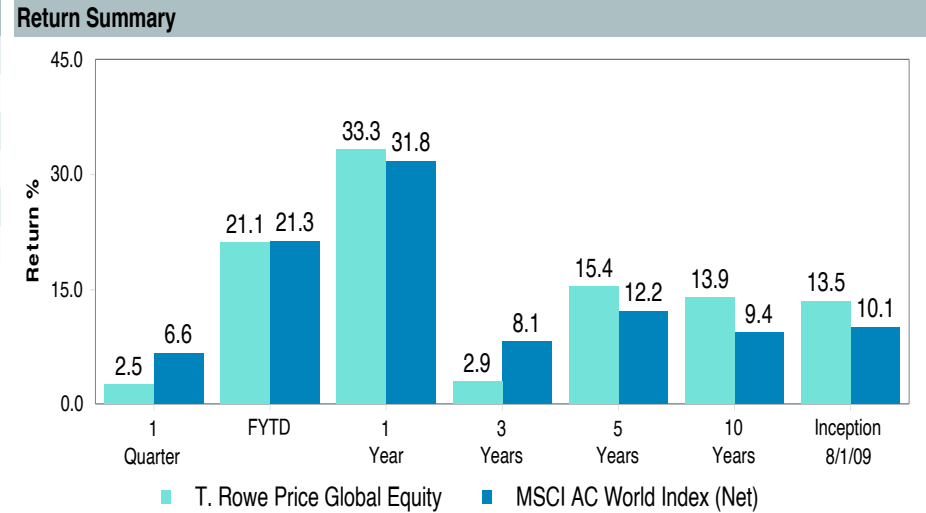
**5 Years Historical Statistics**

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Wellington Global Perspectives	0.85	3.86	0.22	0.97	0.45	0.64	1.02	10.15	21.83	0.98
Performance Benchmark	0.00	0.00	-	1.00	0.42	0.00	1.00	9.40	21.08	1.00
90 Day U.S. Treasury Bill	-8.96	21.14	-0.42	0.01	-	2.35	0.00	2.32	0.66	-0.08

# Manager Performance Summary T. Rowe Price Global Equity

As of September 30, 2024

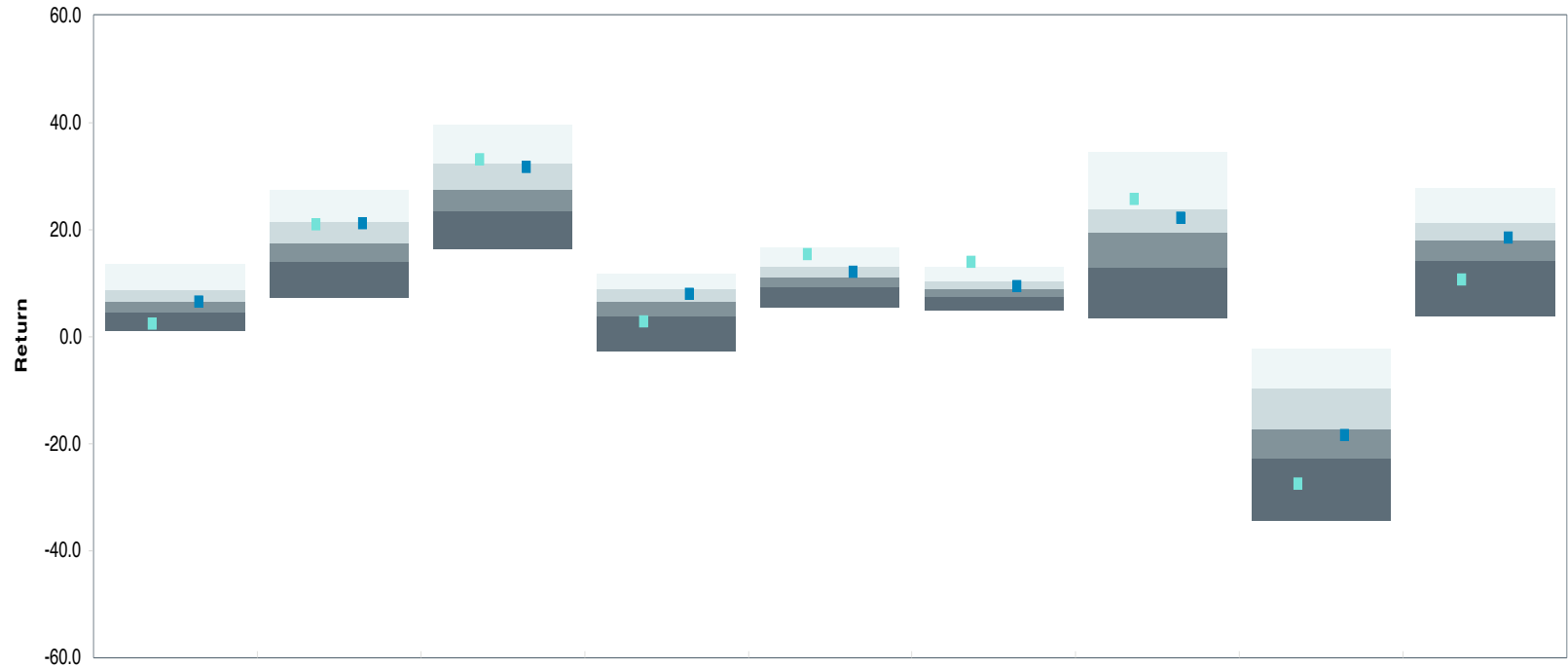
Account Information	
Account Name	T. Rowe Price Global Equity
Inception Date	08/31/2009
Account Structure	Separate Account
Asset Class	Global Equity
Benchmark	MSCI AC World Index (Net)
Peer Group	IM Global Equity (SA+CF)



# T. Rowe Price Global Equity

As of September 30, 2024

IM Global Equity (SA+CF)



	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
T. Rowe Price Global Equity	2.5 (91)	21.1 (28)	33.3 (21)	2.9 (82)	15.4 (8)	13.9 (3)	25.8 (19)	-27.5 (87)	10.8 (88)
MSCI AC World Index (Net)	6.6 (50)	21.3 (26)	31.8 (31)	8.1 (35)	12.2 (37)	9.4 (43)	22.2 (36)	-18.4 (54)	18.5 (48)
5th Percentile	13.6	27.4	39.5	11.8	16.7	13.1	34.6	-2.2	27.8
1st Quartile	8.8	21.5	32.4	8.9	13.1	10.3	23.9	-9.7	21.4
Median	6.6	17.5	27.7	6.5	11.1	8.9	19.5	-17.4	18.2
3rd Quartile	4.6	13.9	23.5	3.9	9.3	7.4	13.0	-22.7	14.2
95th Percentile	1.2	7.5	16.4	-2.6	5.6	5.0	3.5	-34.5	4.0
Population	485	477	478	449	413	305	528	534	533

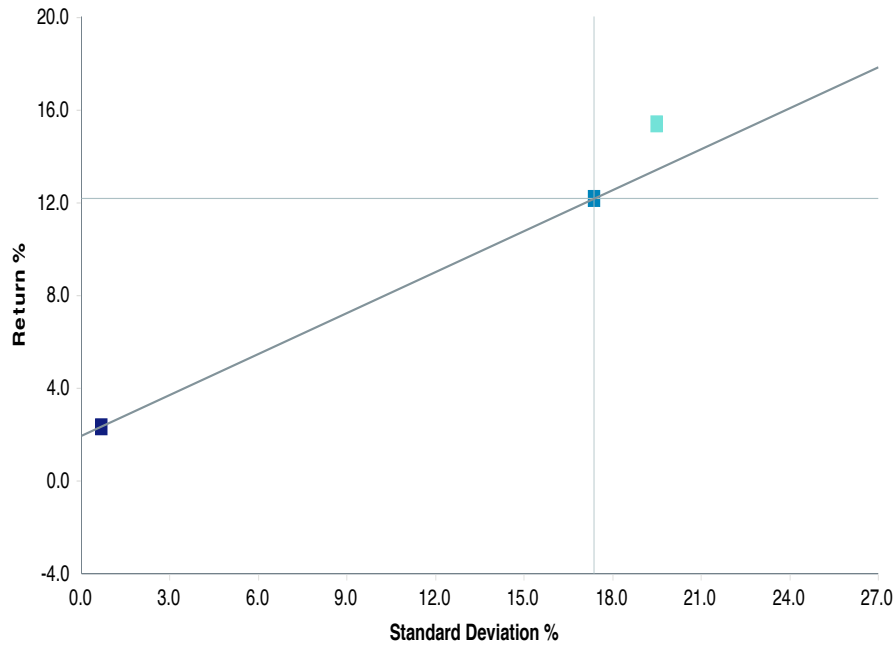
Parentheses contain percentile rankings.



# Risk Profile T. Rowe Price Global Equity

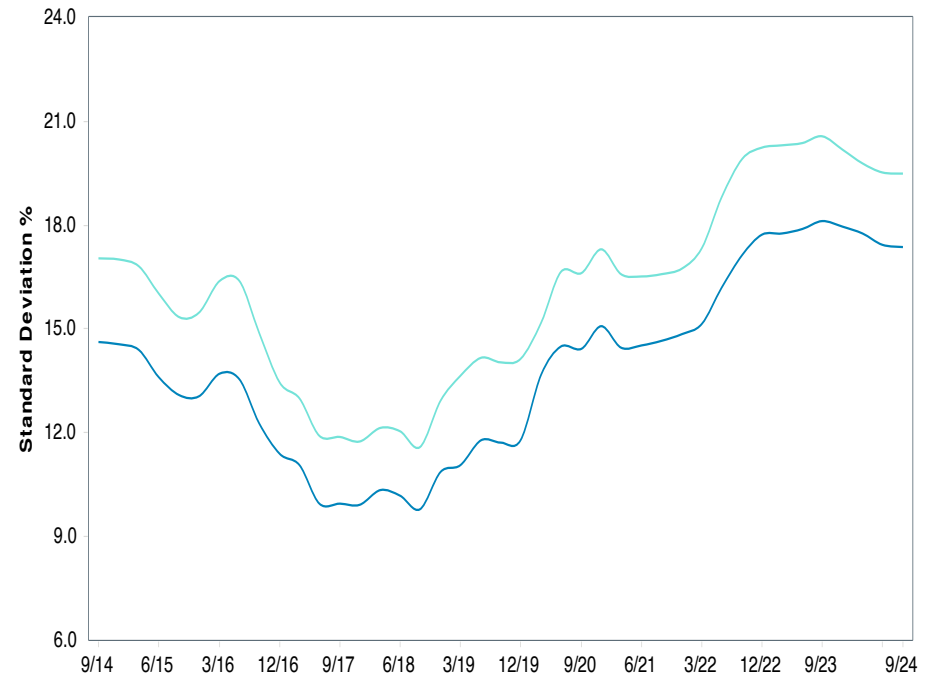
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



- T. Rowe Price Global Equity
- MSCI AC World Index (Net)
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 5 Years



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

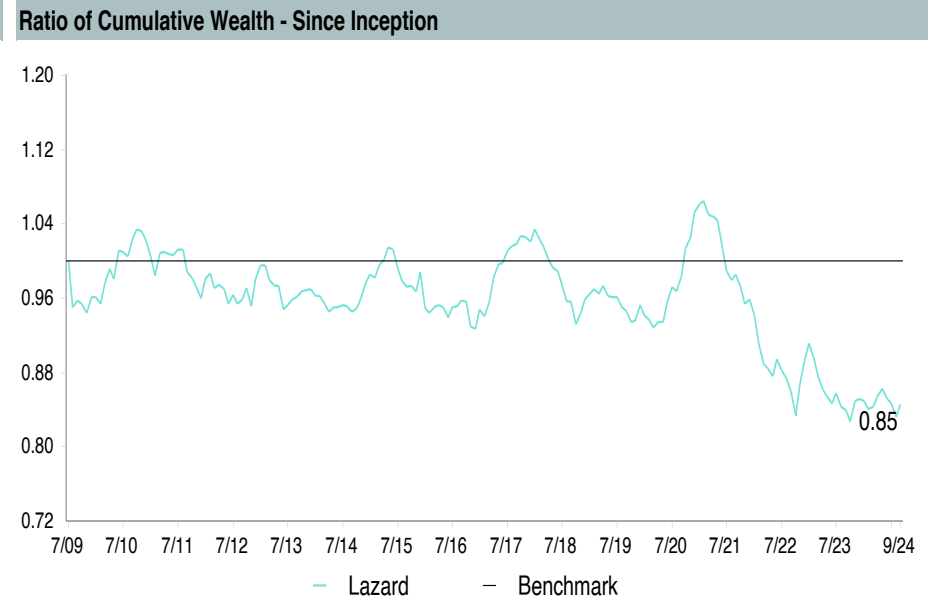
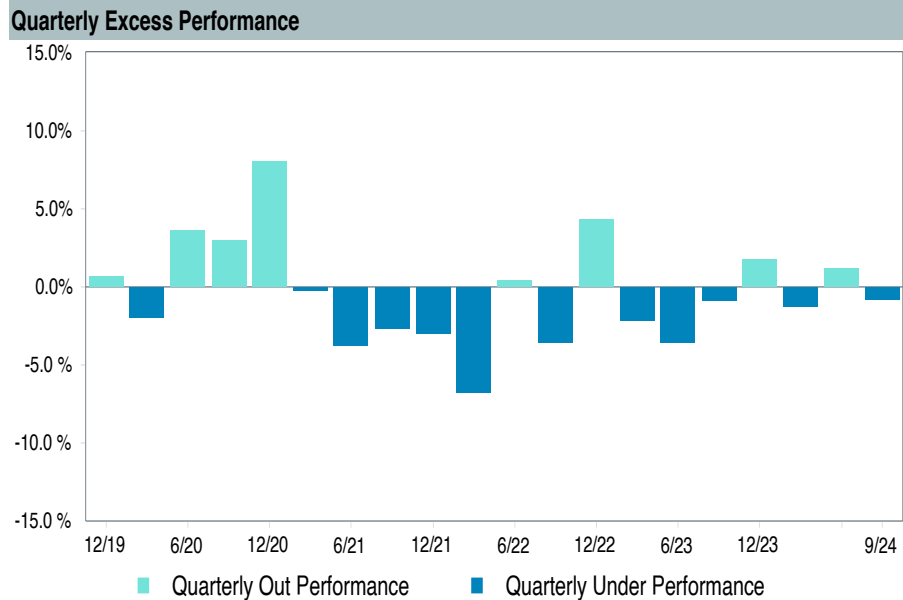
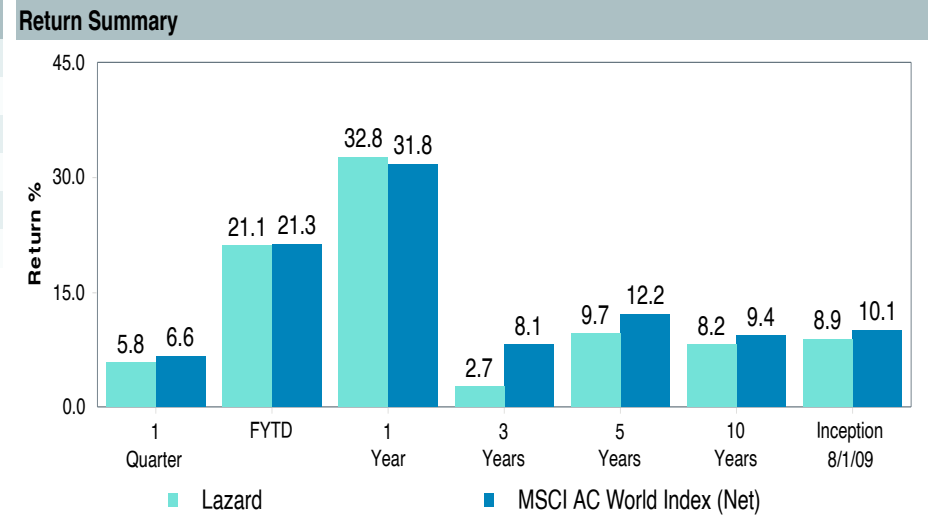
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
T. Rowe Price Global Equity	3.23	6.54	0.49	0.89	0.72	2.48	1.06	15.41	19.50	0.94
MSCI AC World Index (Net)	0.00	0.00	-	1.00	0.62	0.00	1.00	12.19	17.37	1.00
90 Day U.S. Treasury Bill	-10.76	17.39	-0.62	0.00	-	2.33	0.00	2.32	0.66	-0.01

# Manager Performance Summary Lazard

As of September 30, 2024

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)

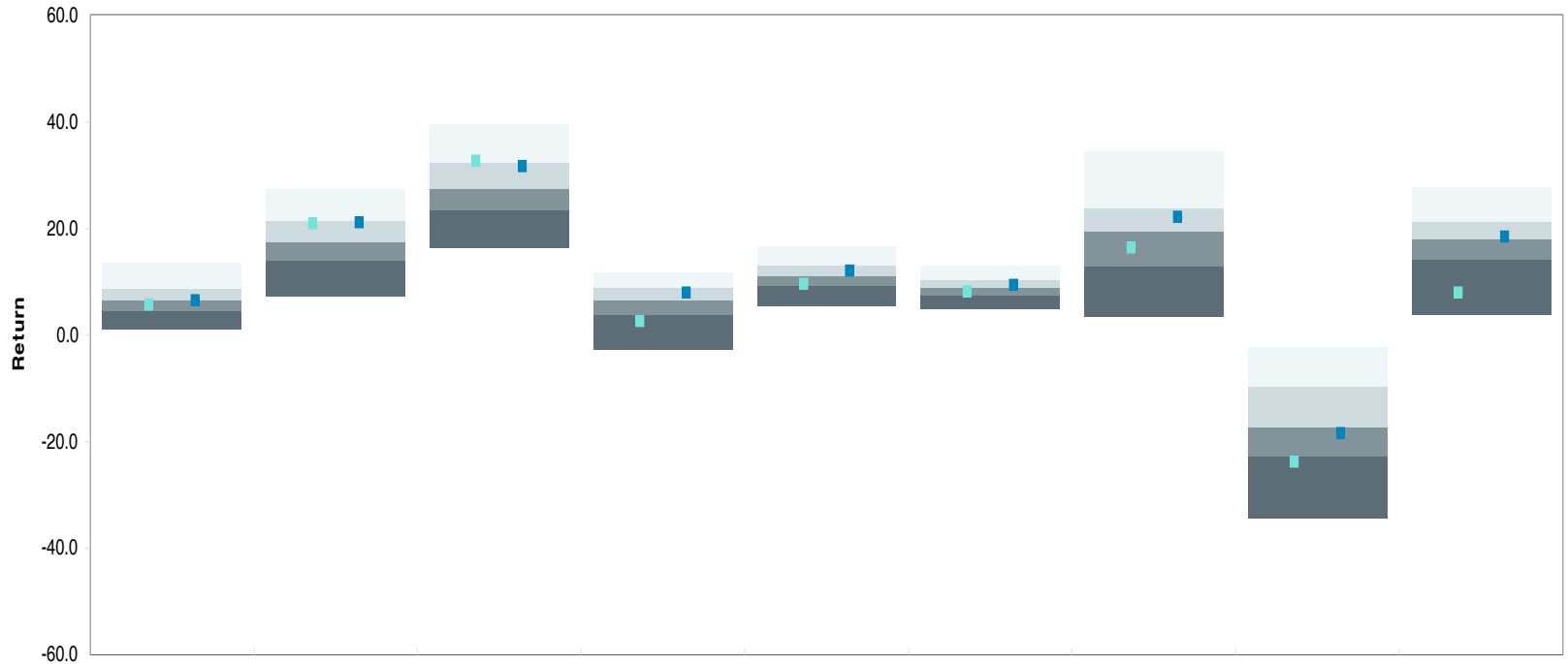




# Lazard

As of September 30, 2024

IM Global Equity (SA+CF)



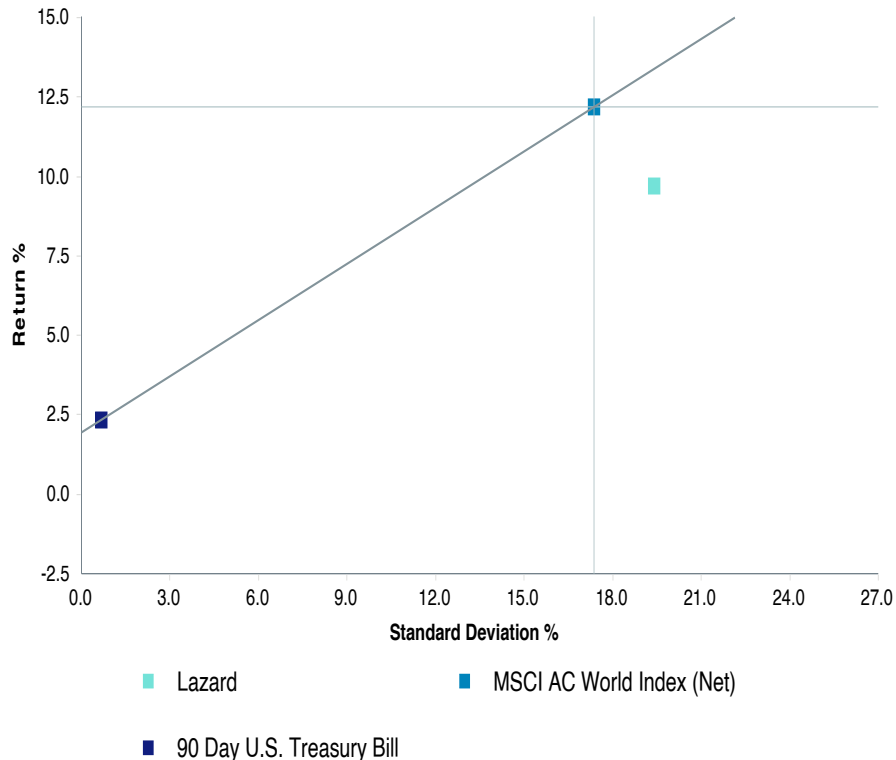
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Lazard	5.8 (58)	21.1 (28)	32.8 (23)	2.7 (83)	9.7 (70)	8.2 (64)	16.4 (63)	-23.8 (79)	8.0 (92)
MSCI AC World Index (Net)	6.6 (50)	21.3 (26)	31.8 (31)	8.1 (35)	12.2 (37)	9.4 (43)	22.2 (36)	-18.4 (54)	18.5 (48)
5th Percentile	13.6	27.4	39.5	11.8	16.7	13.1	34.6	-2.2	27.8
1st Quartile	8.8	21.5	32.4	8.9	13.1	10.3	23.9	-9.7	21.4
Median	6.6	17.5	27.7	6.5	11.1	8.9	19.5	-17.4	18.2
3rd Quartile	4.6	13.9	23.5	3.9	9.3	7.4	13.0	-22.7	14.2
95th Percentile	1.2	7.5	16.4	-2.6	5.6	5.0	3.5	-34.5	4.0
Population	485	477	478	449	413	305	528	534	533

Parentheses contain percentile rankings.

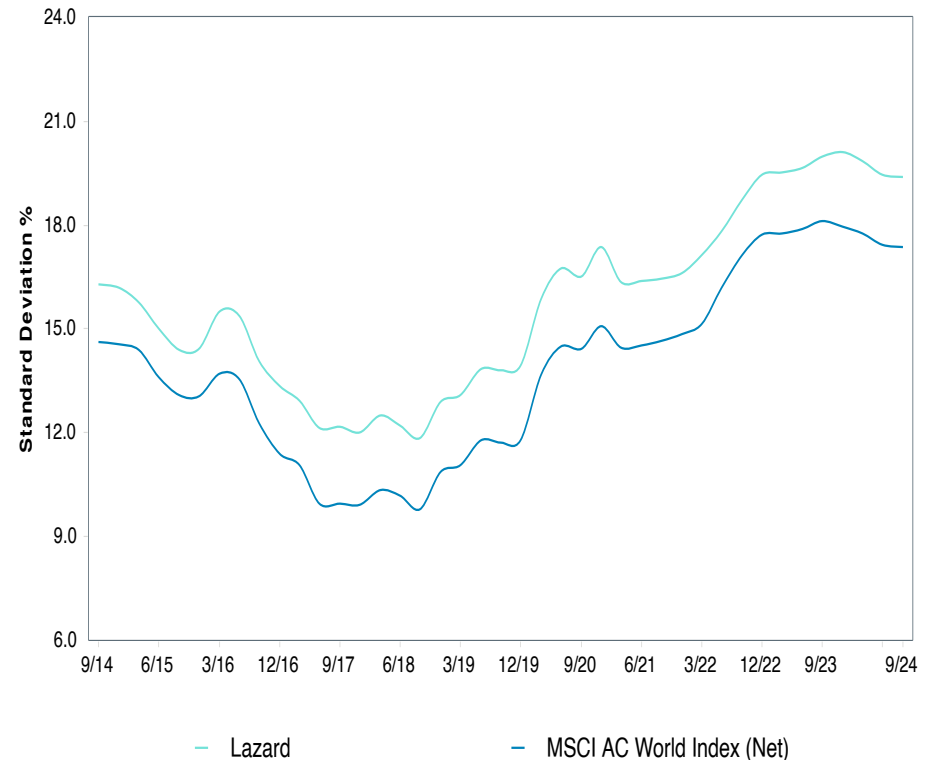
# Risk Profile Lazard

As of September 30, 2024

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



**Standard Deviation  
Rolling 5 Years**



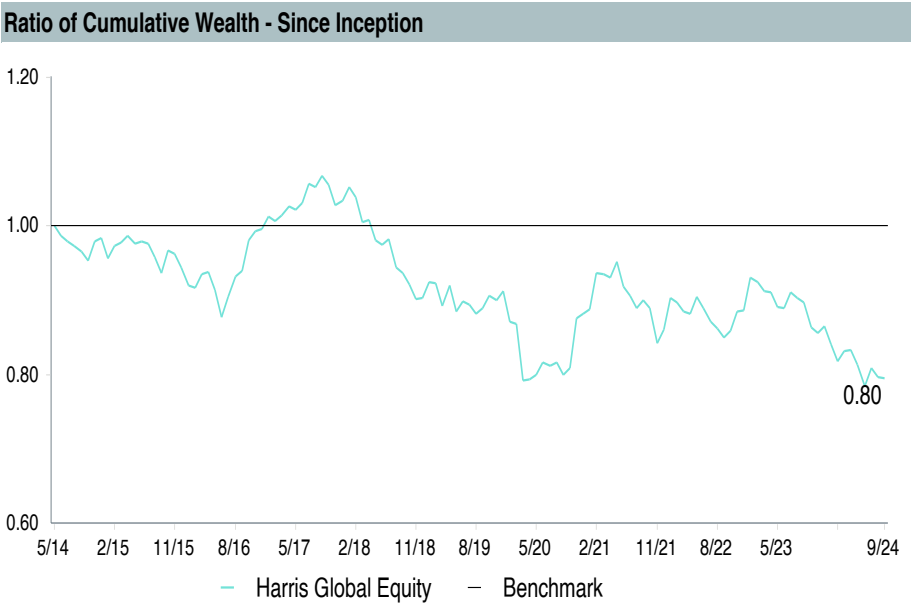
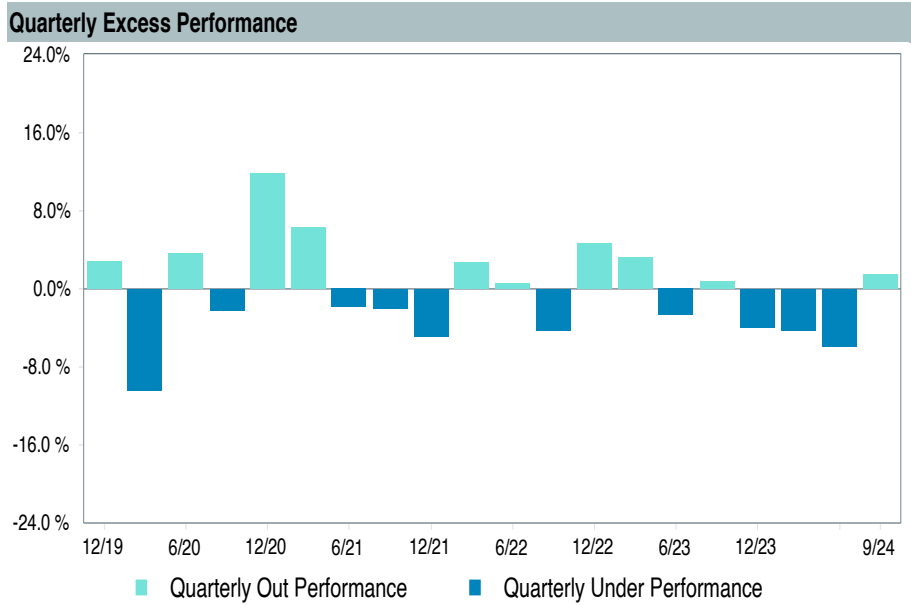
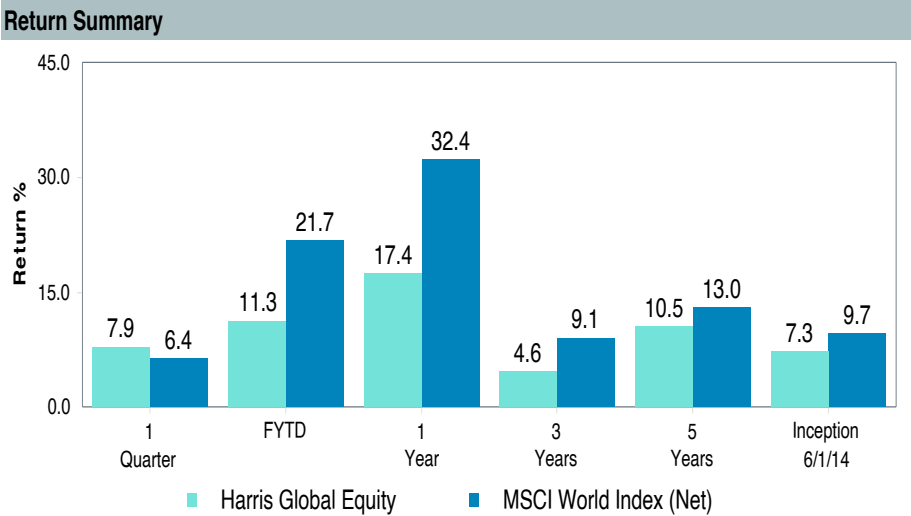
5 Years Historical Statistics										
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Lazard	-1.93	5.91	-0.33	0.91	0.46	-2.74	1.06	9.68	19.39	0.95
MSCI AC World Index (Net)	0.00	0.00	-	1.00	0.62	0.00	1.00	12.19	17.37	1.00
90 Day U.S. Treasury Bill	-10.76	17.39	-0.62	0.00	-	2.33	0.00	2.32	0.66	-0.01



# Manager Performance Summary Harris Global Equity

As of September 30, 2024

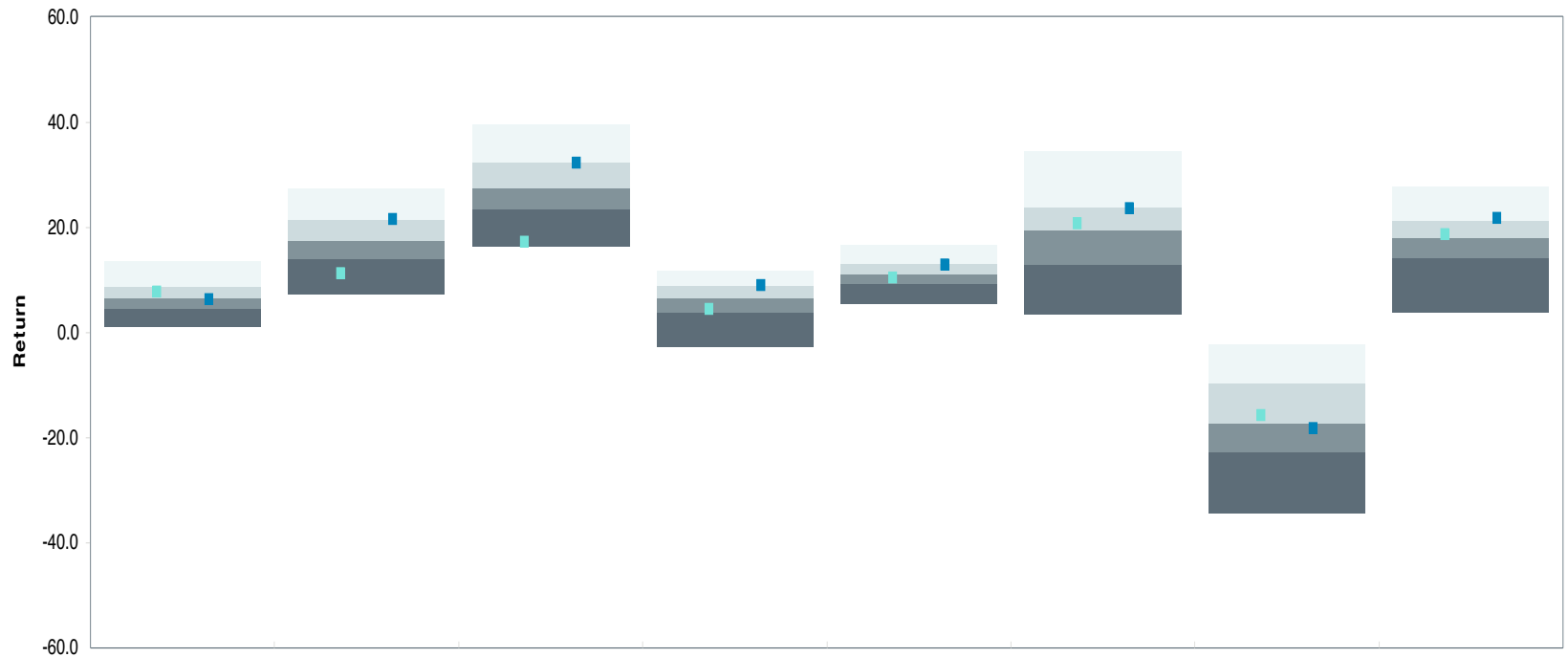
Account Information	
Account Name	Harris Global Equity
Inception Date	06/01/2014
Account Structure	Separate Account
Asset Class	Global Equity
Benchmark	MSCI World Index (Net)
Peer Group	IM Global Equity (SA+CF)



# Harris Global Equity

As of September 30, 2024

## IM Global Equity (SA+CF)



	1 Quarter	FYTD	1 Year	3 Years	5 Years	2023	2022	2021
Harris Global Equity	7.9 (34)	11.3 (90)	17.4 (94)	4.6 (71)	10.5 (58)	20.9 (43)	-15.7 (42)	18.8 (45)
MSCI World Index (Net)	6.4 (54)	21.7 (24)	32.4 (25)	9.1 (25)	13.0 (26)	23.8 (26)	-18.1 (54)	21.8 (24)
5th Percentile	13.6	27.4	39.5	11.8	16.7	34.6	-2.2	27.8
1st Quartile	8.8	21.5	32.4	8.9	13.1	23.9	-9.7	21.4
Median	6.6	17.5	27.7	6.5	11.1	19.5	-17.4	18.2
3rd Quartile	4.6	13.9	23.5	3.9	9.3	13.0	-22.7	14.2
95th Percentile	1.2	7.5	16.4	-2.6	5.6	3.5	-34.5	4.0
Population	485	477	478	449	413	528	534	533

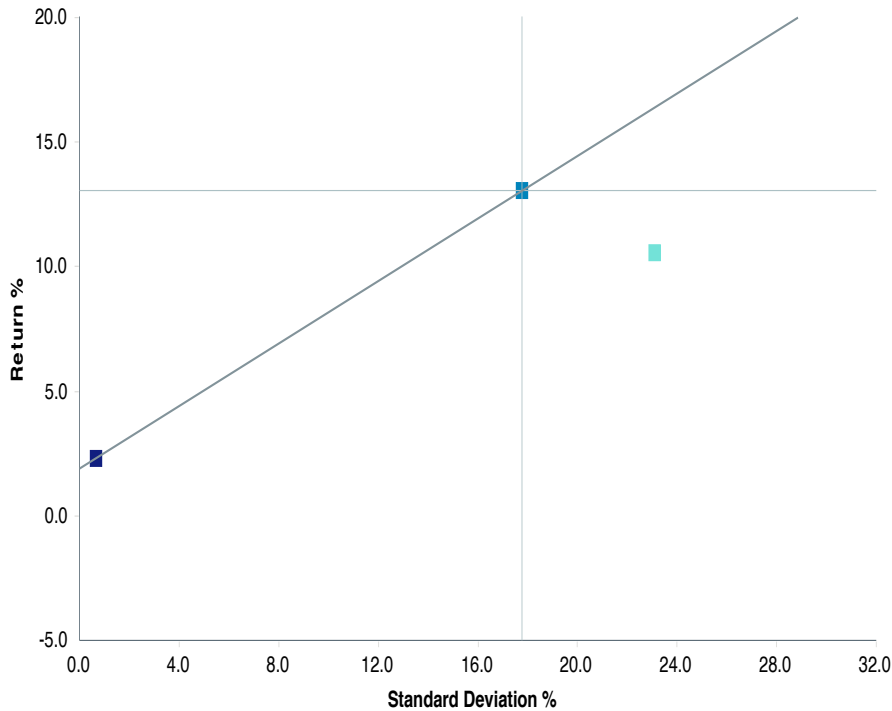
Parentheses contain percentile rankings.



# Risk Profile Harris Global Equity

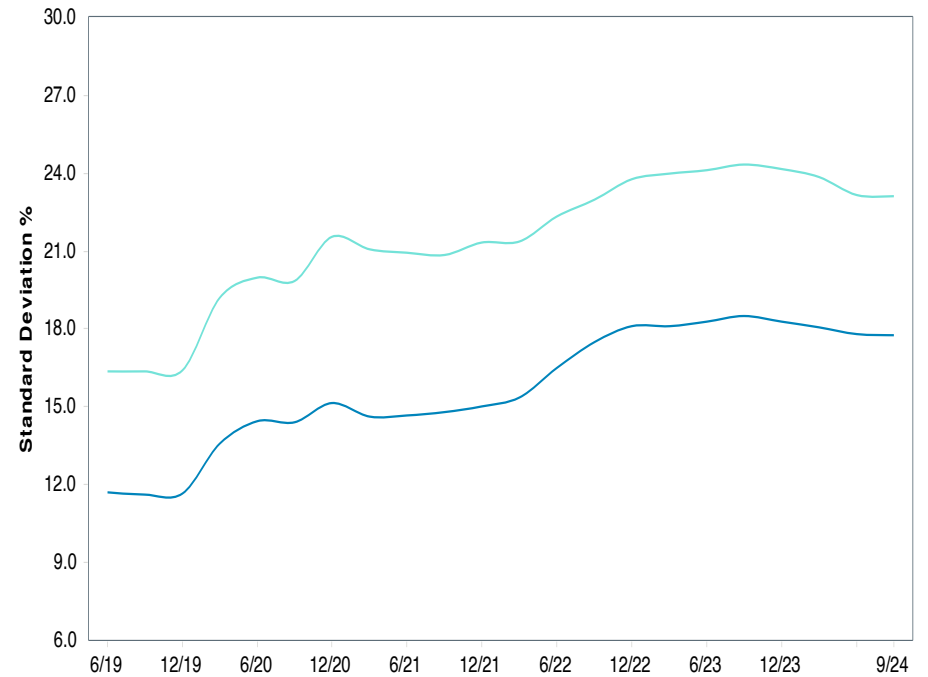
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



■ Harris Global Equity   ■ MSCI World Index (Net)   ■ 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 5 Years



— Harris Global Equity   — MSCI World Index (Net)

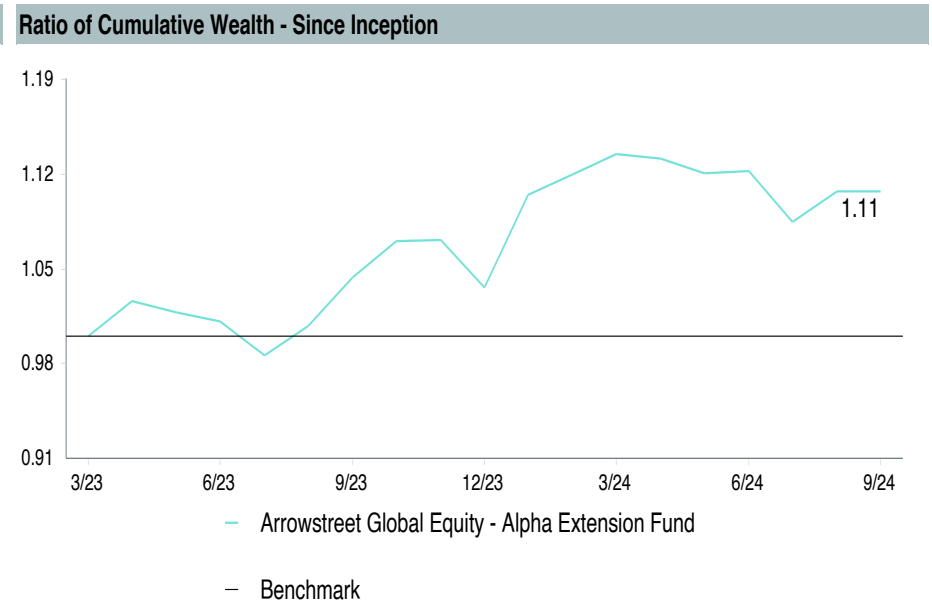
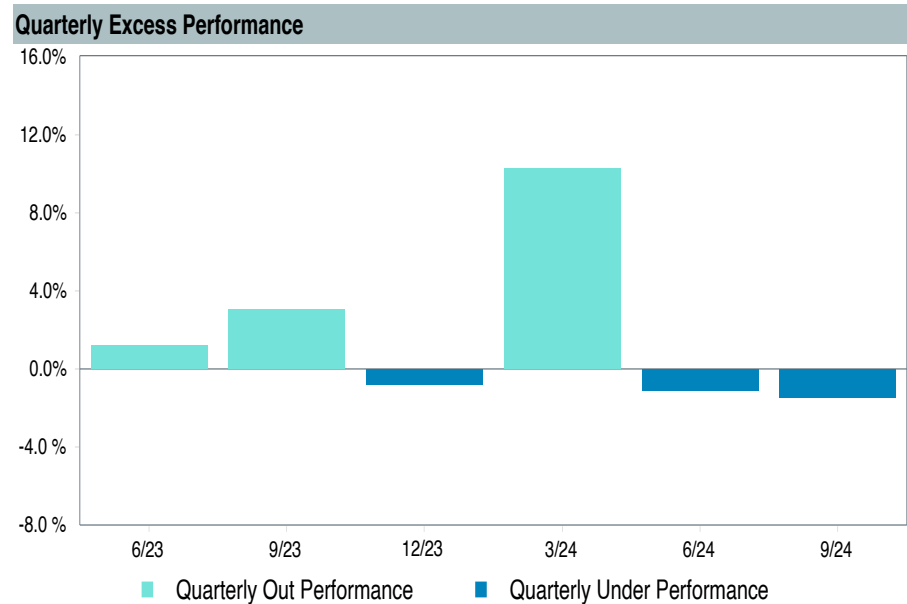
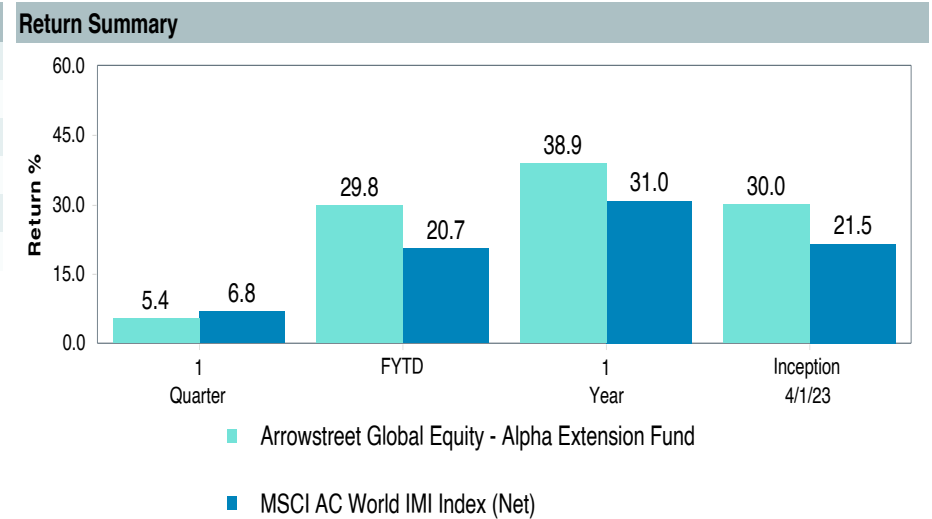
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Harris Global Equity	-1.17	9.47	-0.12	0.86	0.45	-3.94	1.20	10.55	23.11	0.93
MSCI World Index (Net)	0.00	0.00	-	1.00	0.65	0.00	1.00	13.04	17.76	1.00
90 Day U.S. Treasury Bill	-11.59	17.78	-0.65	0.00	-	2.33	0.00	2.32	0.66	-0.01

# Manager Performance Summary Arrowstreet Global Equity - Alpha I

As of September 30, 2024

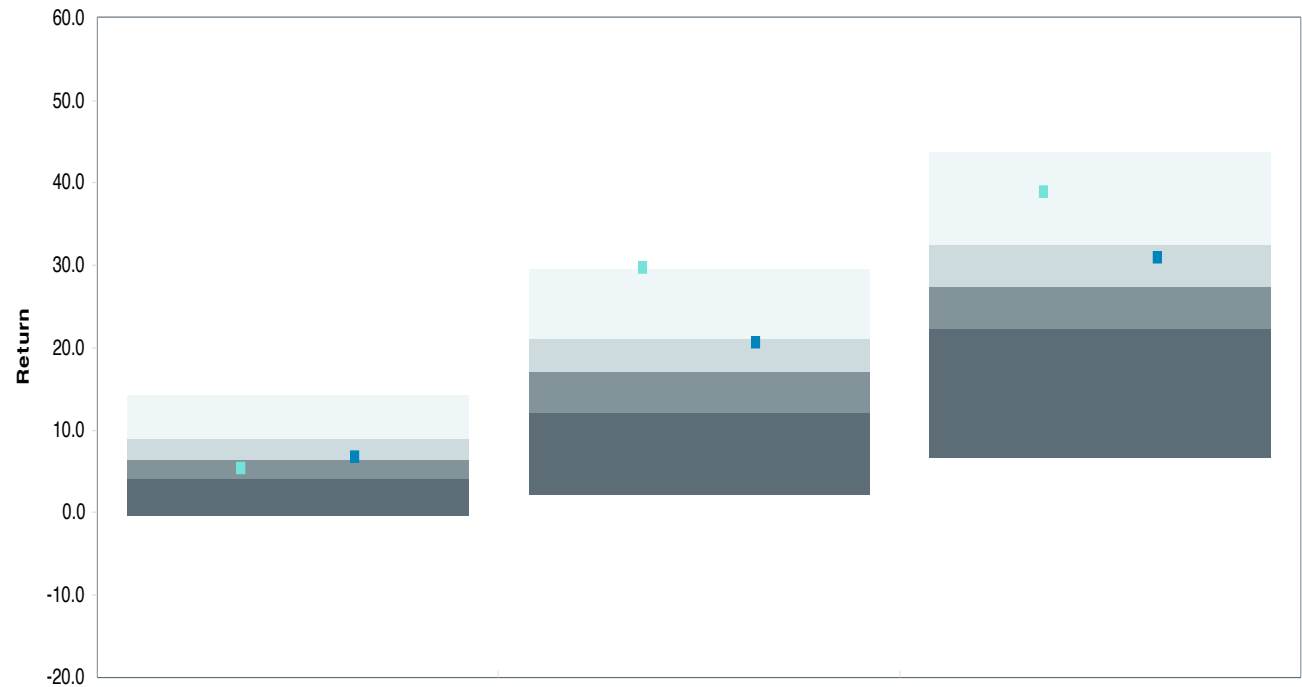
Account Information	
Account Name	Arrowstreet Global Equity - Alpha Extension Fund
Inception Date	03/01/2023
Account Structure	Separate Account
Asset Class	Global Equity
Benchmark	MSCI AC World IMI Index (Net)
Peer Group	IM Global Equity (MF)



# Arrowstreet Global Equity - Alpha Extension Fund

As of September 30, 2024

IM Global Equity (MF)



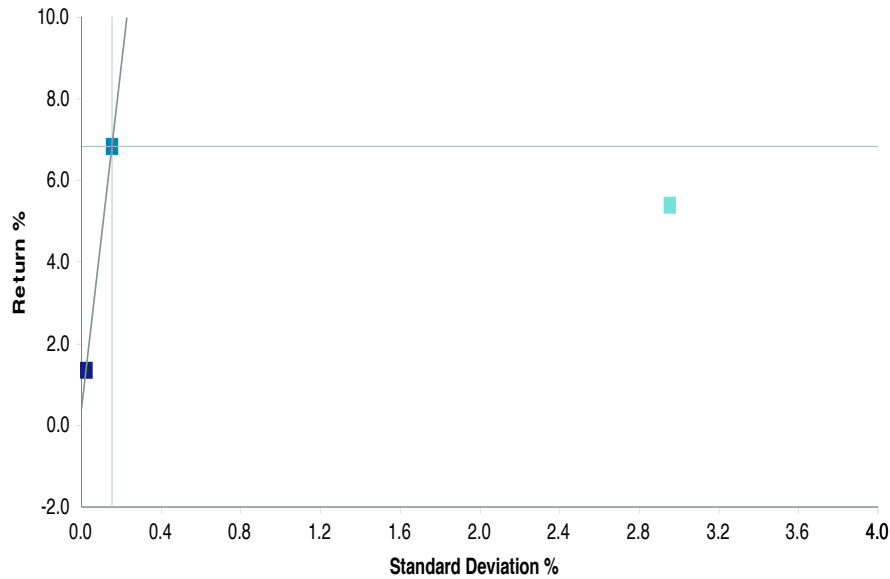
	1 Quarter	FYTD	1 Year
Arrowstreet Global Equity - Alpha Extension Fund	5.4 (64)	29.8 (5)	38.9 (9)
MSCI AC World IMI Index (Net)	6.8 (45)	20.7 (28)	31.0 (33)
5th Percentile	14.2	29.4	43.8
1st Quartile	9.1	21.1	32.5
Median	6.4	17.2	27.4
3rd Quartile	4.1	12.2	22.3
95th Percentile	-0.3	2.1	6.6
Population	460	460	460

Parentheses contain percentile rankings.

# Risk Profile Arrowstreet Global Equity - Alpha Extension

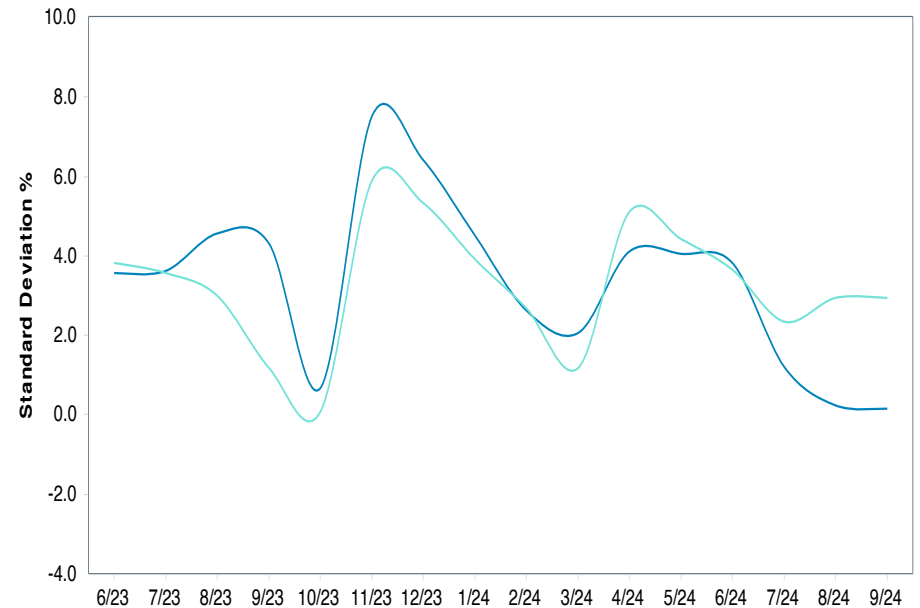
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
1 Quarter



- Arrowstreet Global Equity - Alpha Extension Fund
- MSCI AC World IMI Index (Net)
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 0.25 Year



- Arrowstreet Global Equity - Alpha Extension Fund
- MSCI AC World IMI Index (Net)

## 1 Quarter Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Arrowstreet Global Equity - Alpha Extension Fund	-0.44	2.81	-0.16	0.93	0.46	-40.01	18.73	5.39	2.95	0.96
MSCI AC World IMI Index (Net)	0.00	0.00	-	1.00	12.16	0.00	1.00	6.84	0.15	1.00
90 Day U.S. Treasury Bill	-1.78	0.15	-12.16	0.10	-	0.35	0.05	1.37	0.02	0.31



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# Fixed Income

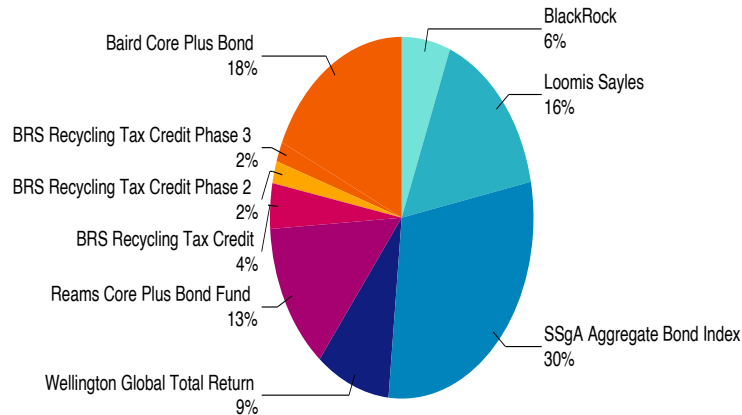


# Composite Portfolio Overview Fixed Income

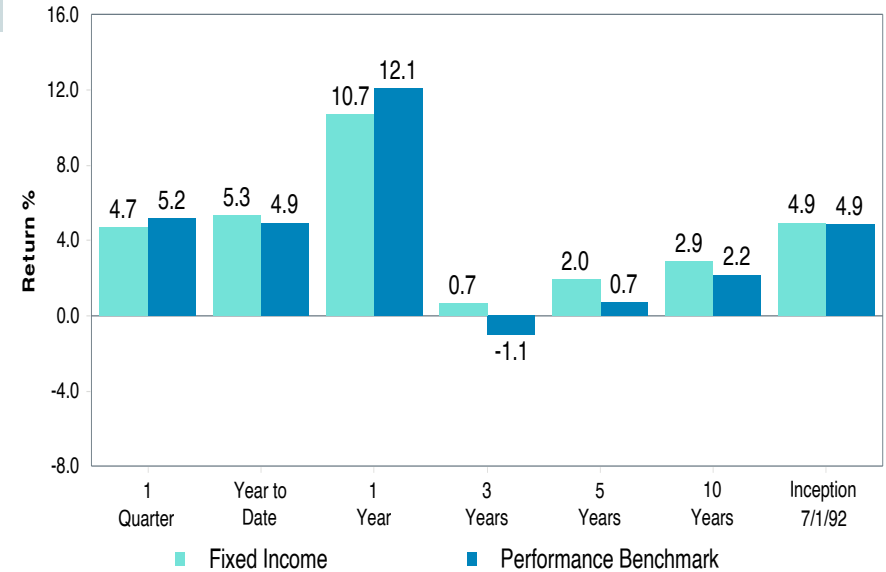
As of September 30, 2024

## Current Allocation

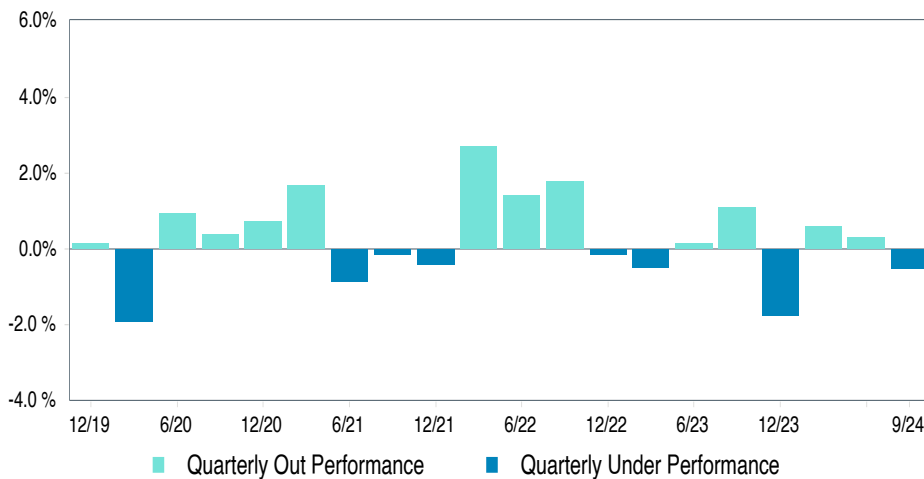
September 30, 2024 : \$4,590,823,124



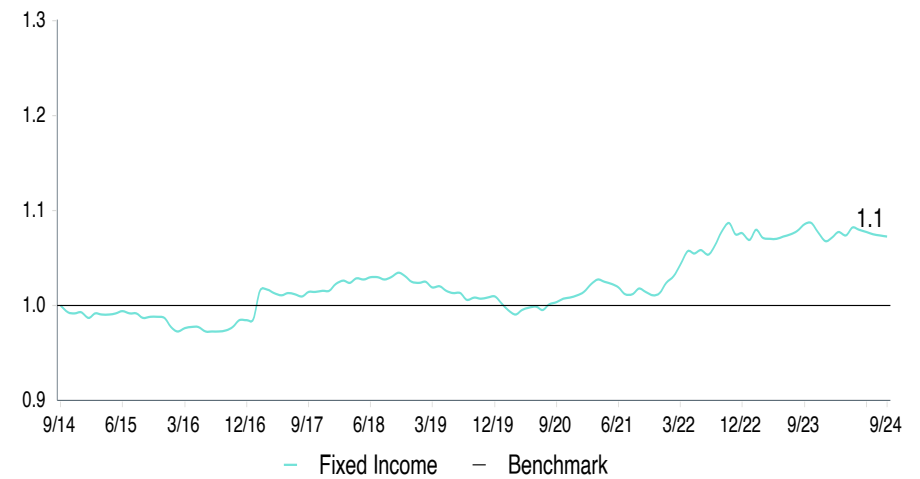
## Return Summary



## Quarterly Excess Performance



## Ratio of Cumulative Wealth - 10 Years



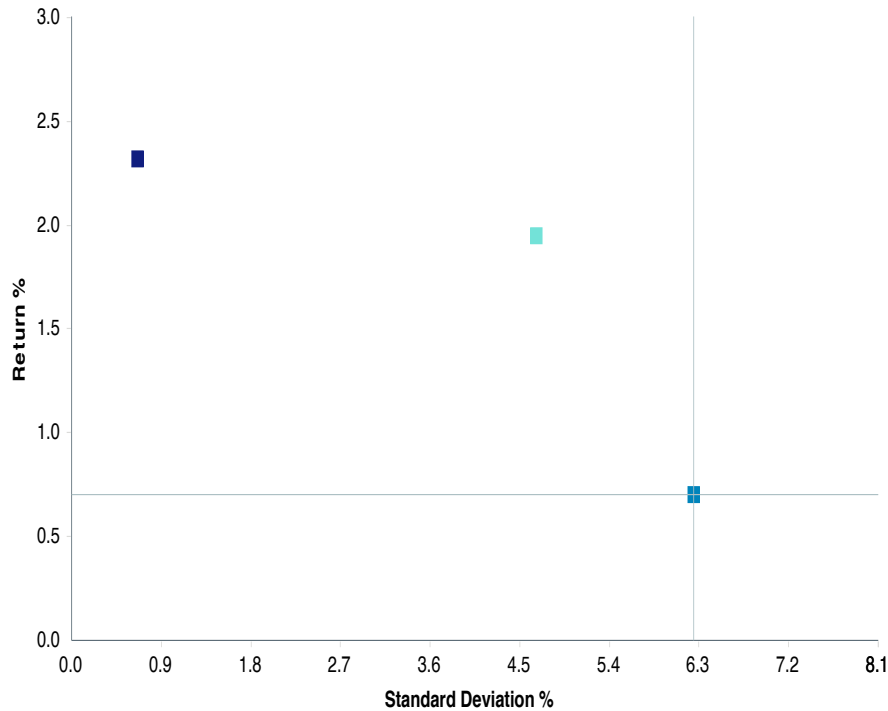
Note: April 1, 2004 represents the inception of the Global Equity Custom Benchmark as the primary performance objective for the Global Equity portfolio.



# Risk Profile Fixed Income

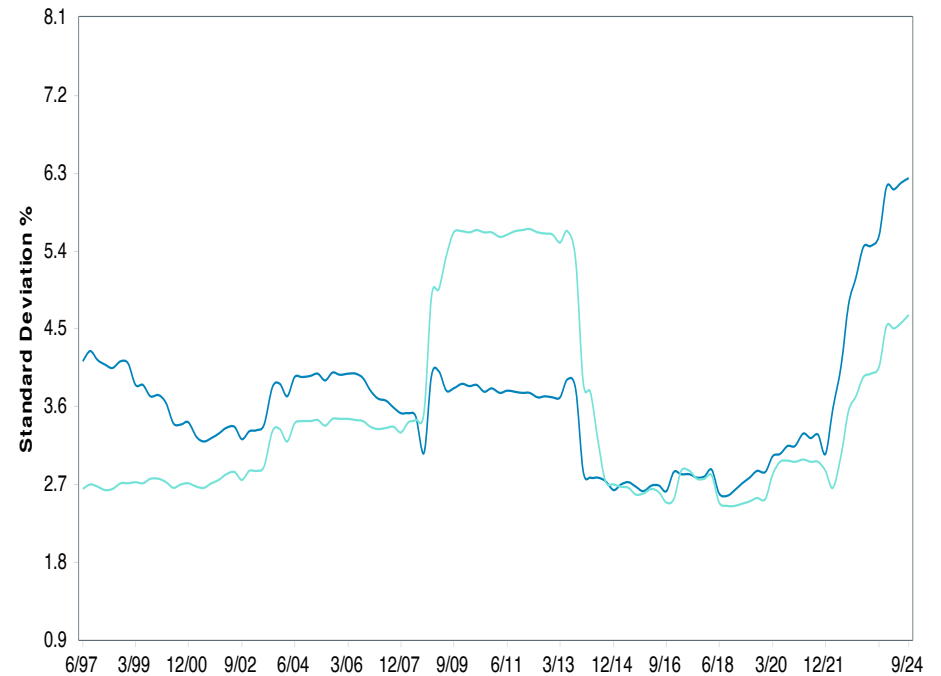
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



■ Fixed Income    ■ Performance Benchmark    ■ 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 5 Years



— Fixed Income    — Performance Benchmark

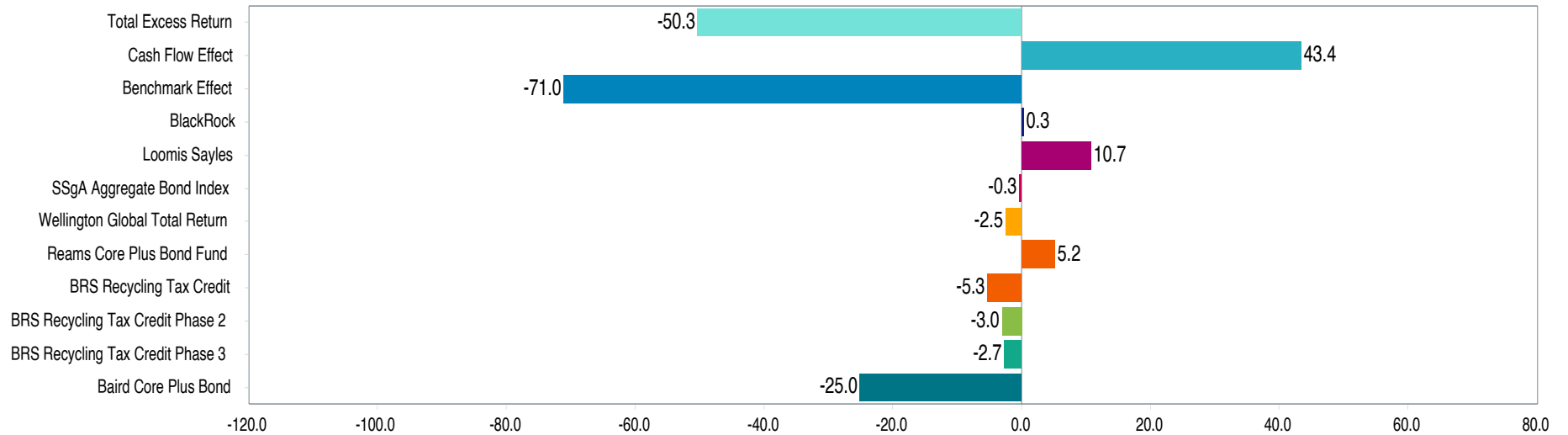
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Fixed Income	1.15	1.98	0.58	0.95	-0.06	1.40	0.73	1.95	4.67	0.98
Performance Benchmark	0.00	0.00	-	1.00	-0.23	0.00	1.00	0.70	6.25	1.00
90 Day U.S. Treasury Bill	1.40	6.17	0.23	0.03	-	2.31	0.02	2.32	0.66	0.18

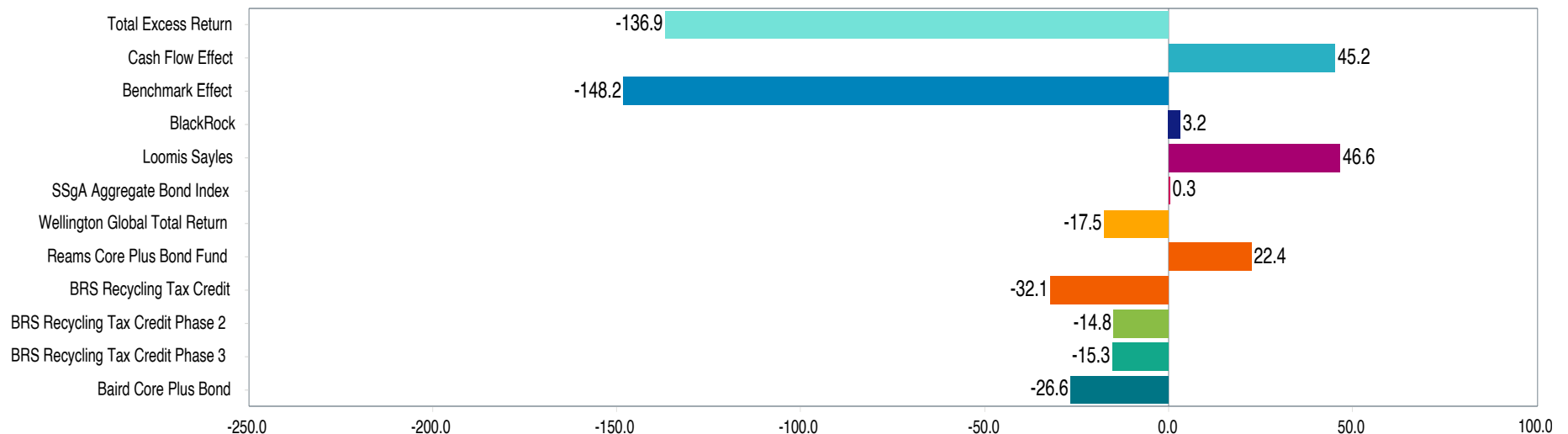
# Asset Class Attribution

As of September 30, 2024

## 1 Quarter



## 1 Year

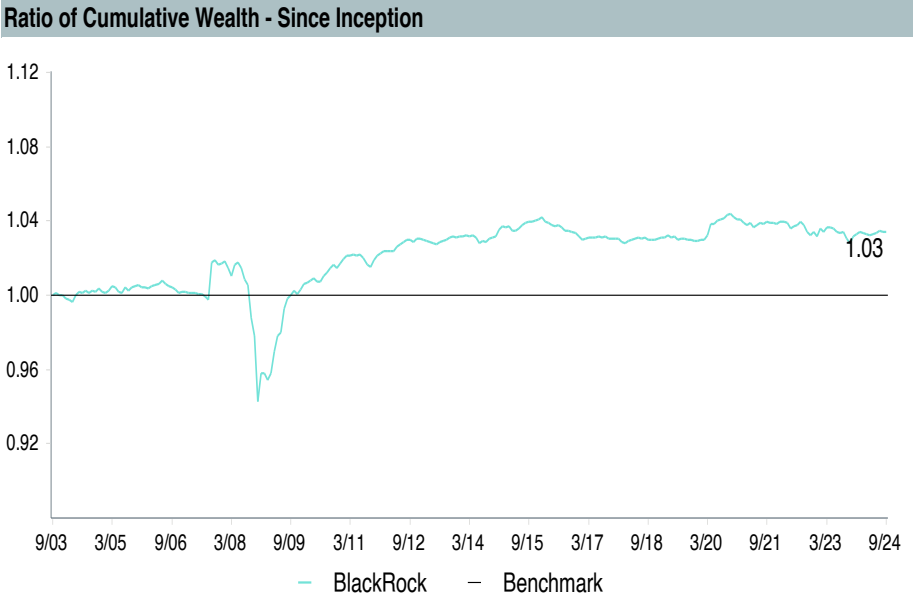
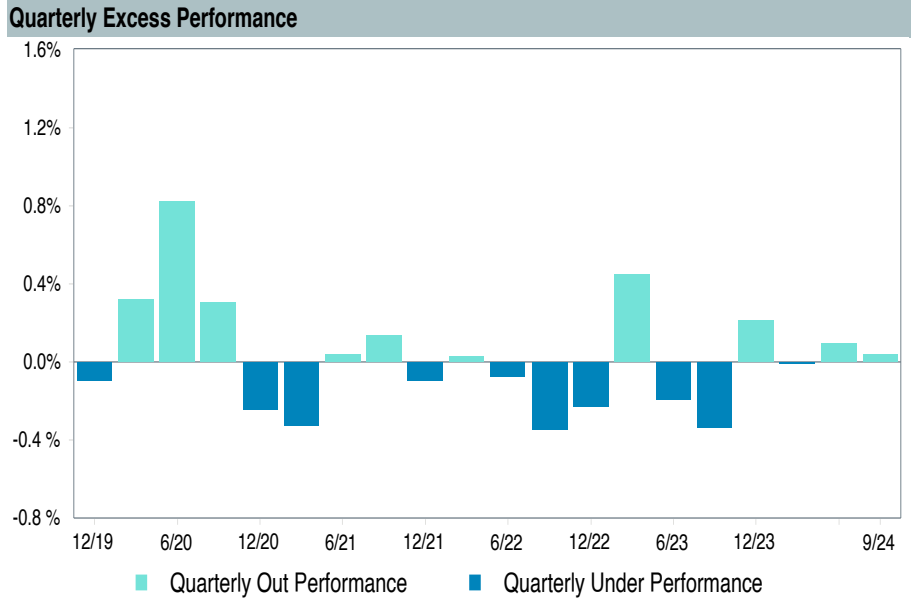
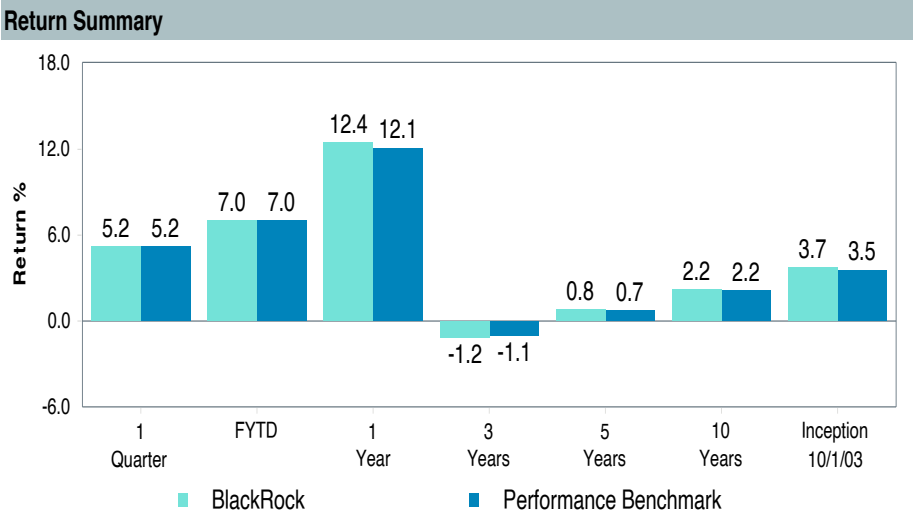


\*The BRS Recycling Tax Credit represents an annual income stream of \$16 million dollars over the next 14 years, which ATRS purchased for approximately \$162 million. This represents an approximate 9.9% yield for the 2017 fiscal year. The value shown above represents the year-end market value in accordance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

# Manager Performance Summary BlackRock

As of September 30, 2024

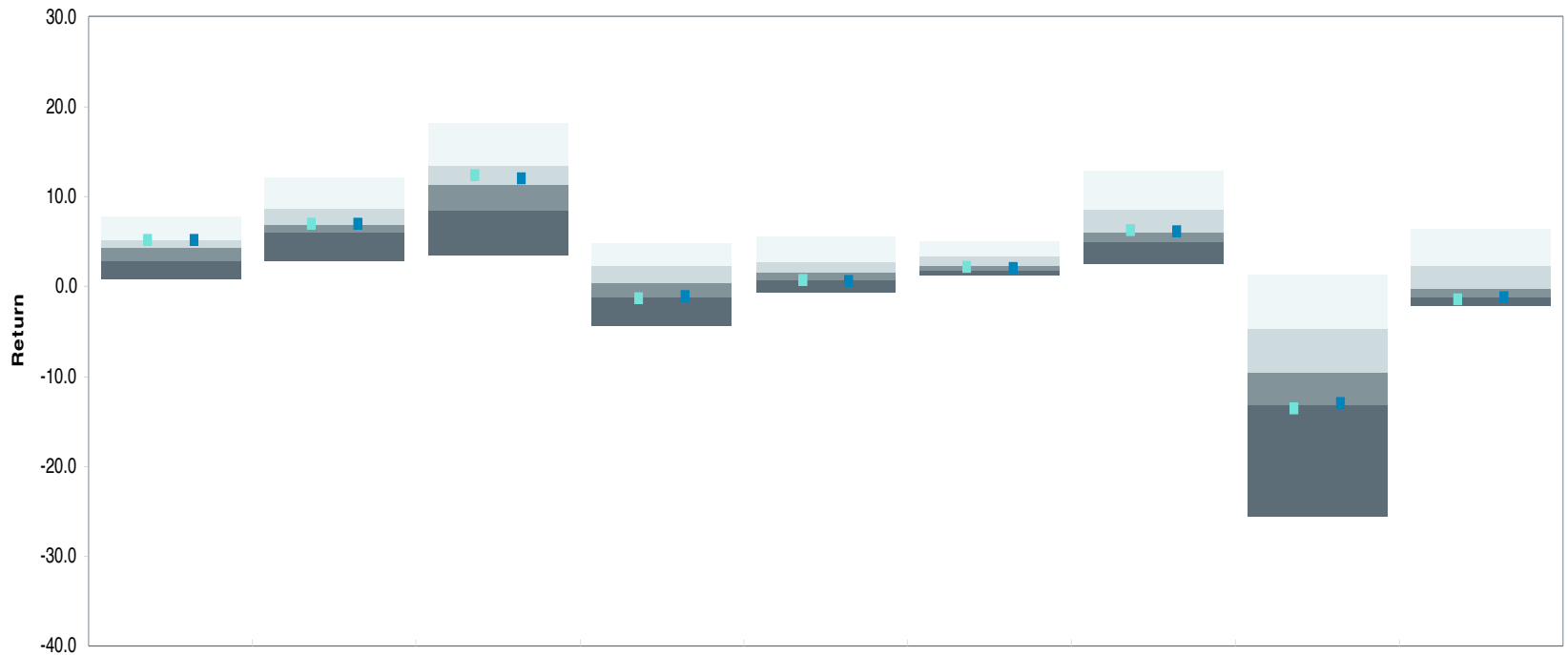
Account Information	
Account Name	BlackRock
Inception Date	09/30/2003
Account Structure	Separate Account
Asset Class	US Fixed Income
Benchmark	Performance Benchmark
Peer Group	IM U.S. Fixed Income (SA+CF)



# BlackRock

As of September 30, 2024

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



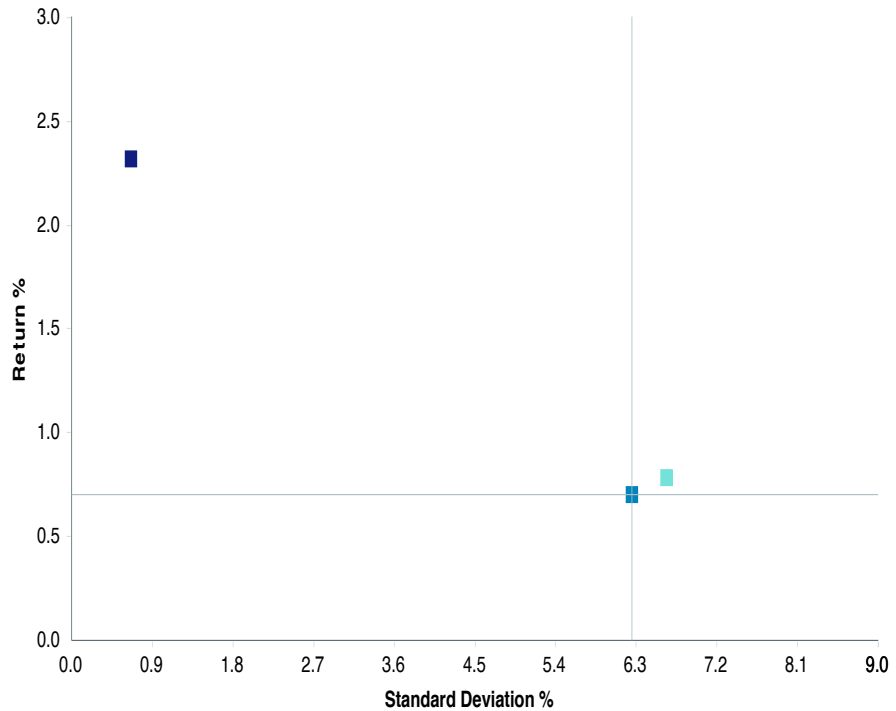
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
BlackRock	5.2 (25)	7.0 (49)	12.4 (36)	-1.2 (79)	0.8 (76)	2.2 (57)	6.3 (46)	-13.5 (79)	-1.4 (81)
Performance Benchmark	5.2 (28)	7.0 (48)	12.1 (42)	-1.1 (73)	0.7 (78)	2.2 (58)	6.2 (48)	-13.0 (72)	-1.1 (74)
5th Percentile	7.9	12.1	18.2	4.8	5.5	5.1	12.9	1.3	6.4
1st Quartile	5.2	8.8	13.6	2.3	2.8	3.5	8.6	-4.7	2.3
Median	4.3	7.0	11.4	0.4	1.6	2.3	6.0	-9.6	-0.1
3rd Quartile	2.9	6.0	8.4	-1.1	0.8	1.9	5.0	-13.2	-1.1
95th Percentile	0.8	2.8	3.5	-4.4	-0.6	1.3	2.5	-25.6	-2.1
Population	1,203	1,189	1,198	1,124	1,097	959	1,318	1,363	1,392

Parentheses contain percentile rankings.

# Risk Profile BlackRock

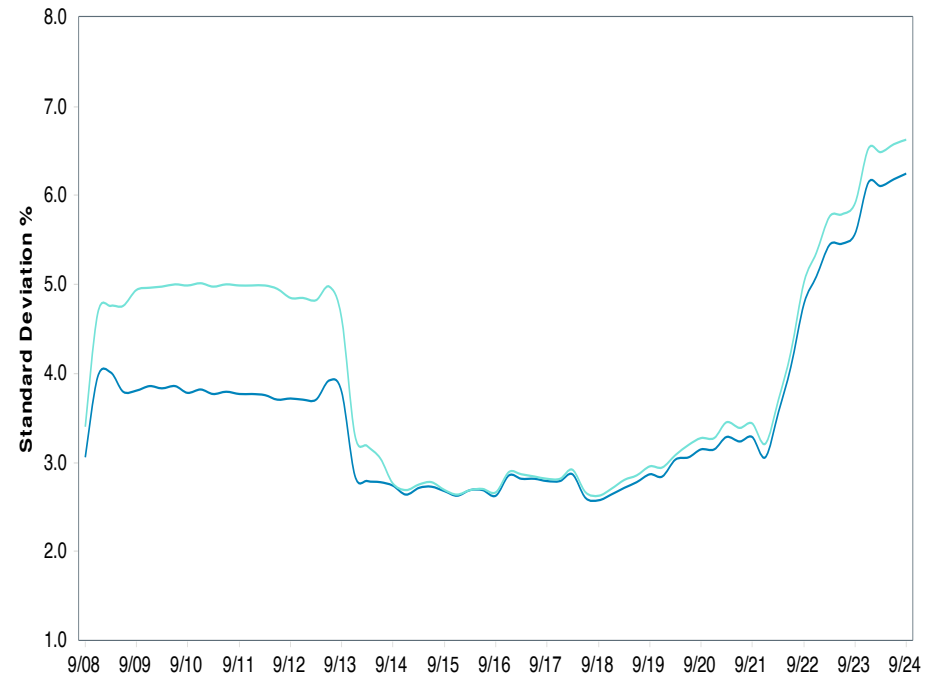
As of September 30, 2024

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



■ BlackRock      ■ Performance Benchmark      ■ 90 Day U.S. Treasury Bill

**Standard Deviation Rolling 5 Years**



— 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	0.11	0.59	0.18	1.00	-0.20	0.05	1.06	0.79	6.63	1.00
Performance Benchmark	0.00	0.00	-	1.00	-0.23	0.00	1.00	0.70	6.25	1.00
90 Day U.S. Treasury Bill	1.40	6.17	0.23	0.03	-	2.31	0.02	2.32	0.66	0.18

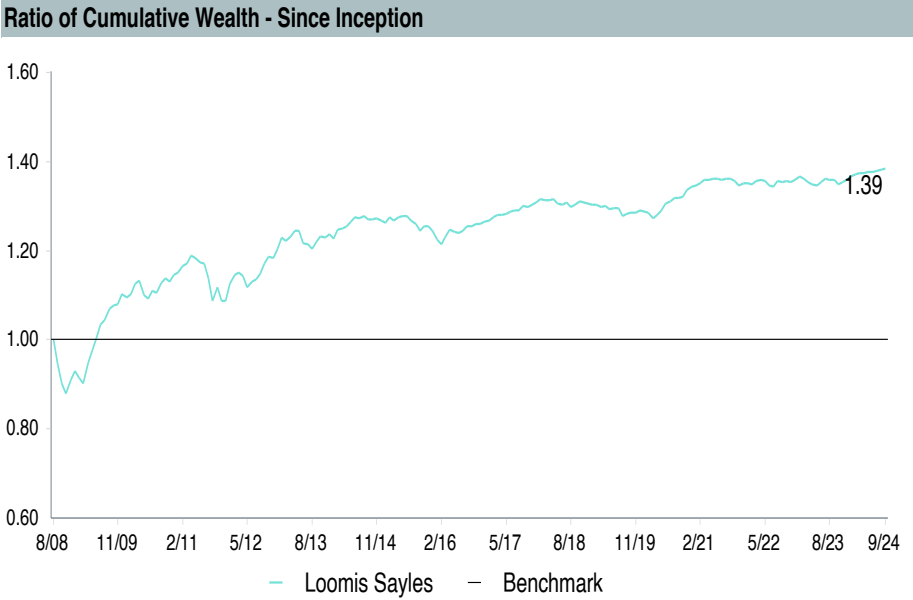
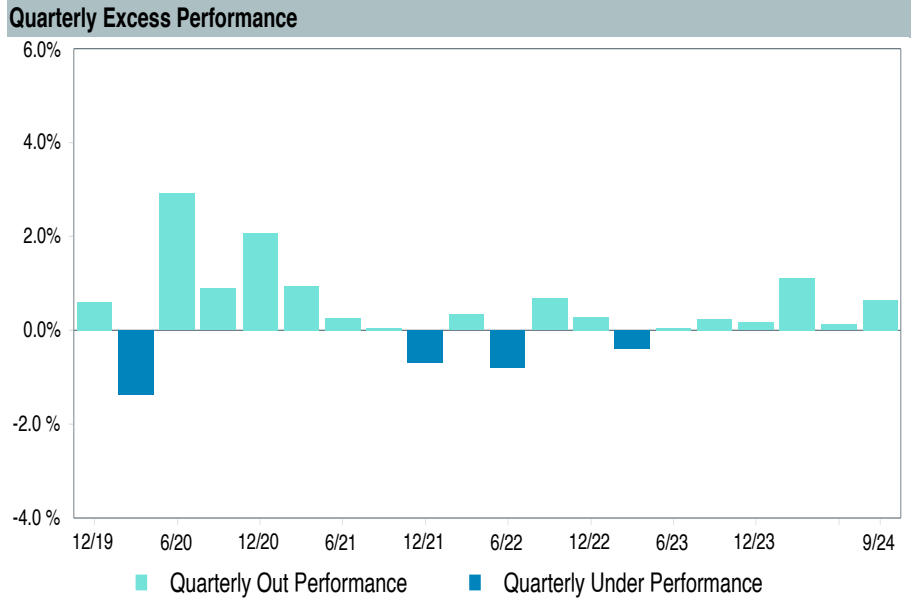
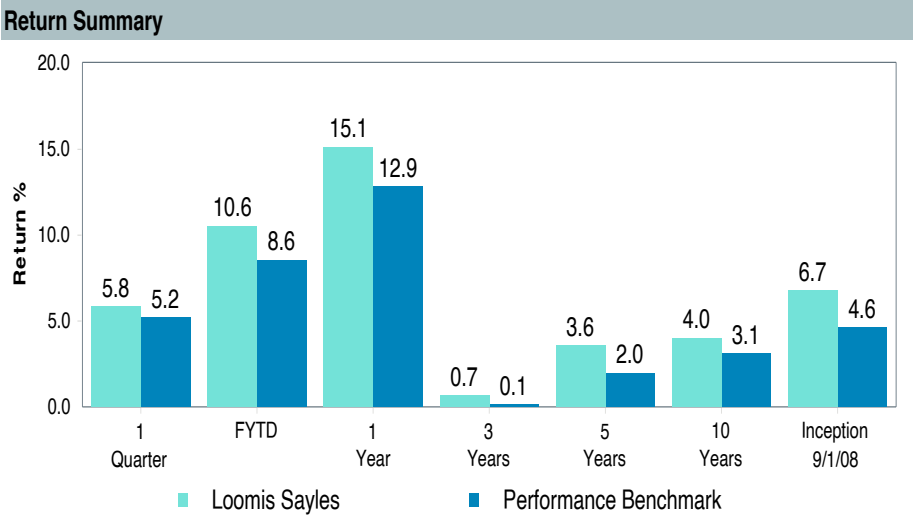




# Manager Performance Summary Loomis Sayles

As of September 30, 2024

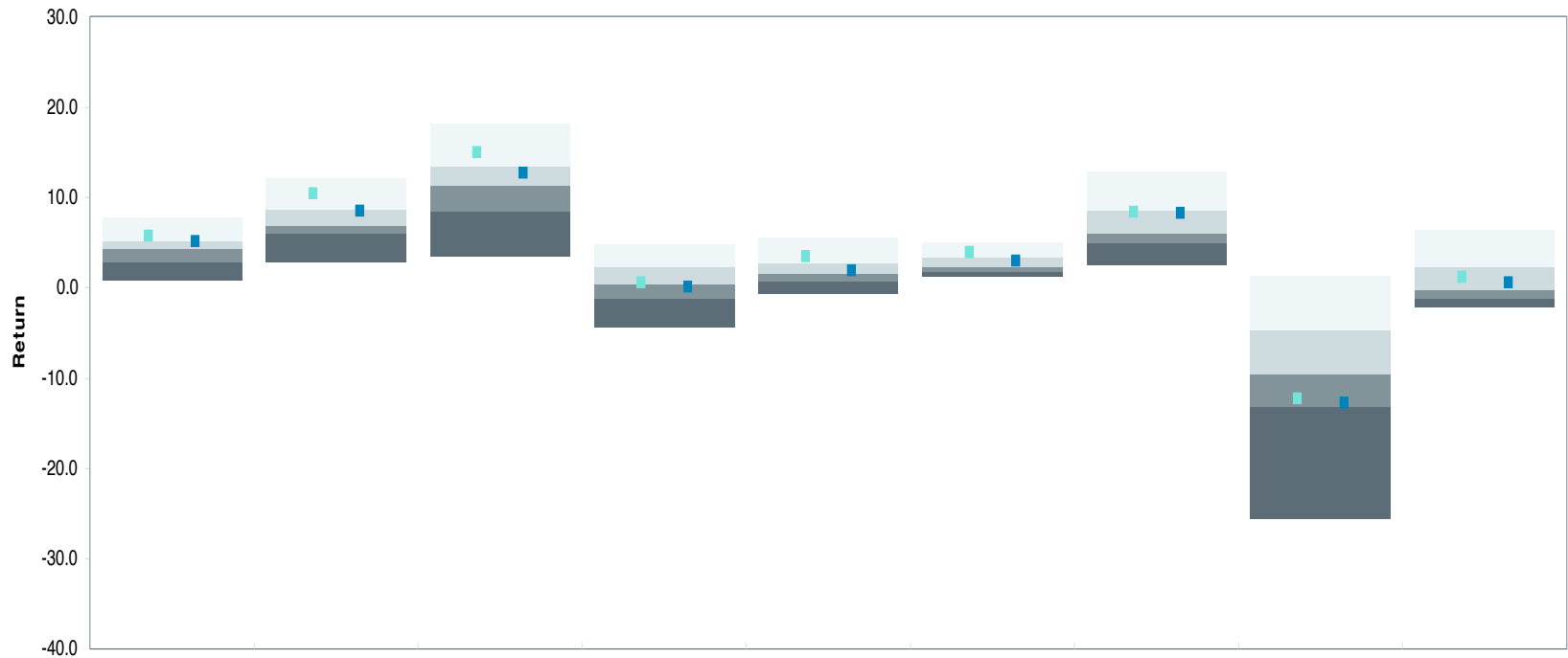
Account Information	
Account Name	Loomis Sayles
Inception Date	06/30/2008
Account Structure	Separate Account
Asset Class	US Fixed Income
Benchmark	Performance Benchmark
Peer Group	IM U.S. Fixed Income (SA+CF)



# Loomis Sayles

As of September 30, 2024

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



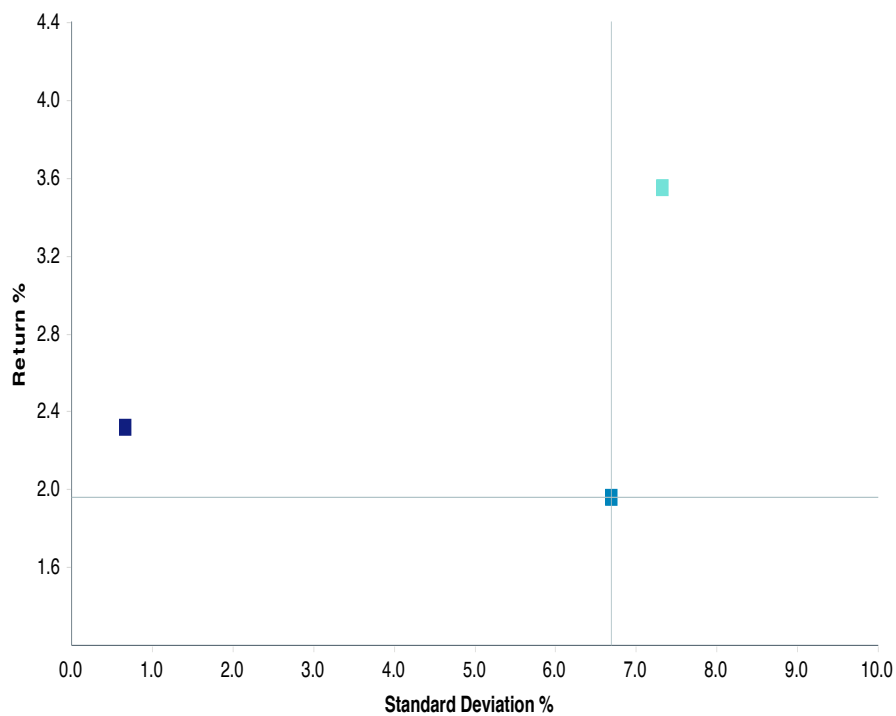
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2023	2022	2021
Loomis Sayles	5.8 (11)	10.6 (14)	15.1 (14)	0.7 (46)	3.6 (20)	4.0 (19)	8.5 (26)	-12.3 (65)	1.2 (33)
Performance Benchmark	5.2 (30)	8.6 (28)	12.9 (32)	0.1 (56)	2.0 (41)	3.1 (31)	8.4 (27)	-12.7 (69)	0.7 (37)
5th Percentile	7.9	12.1	18.2	4.8	5.5	5.1	12.9	1.3	6.4
1st Quartile	5.2	8.8	13.6	2.3	2.8	3.5	8.6	-4.7	2.3
Median	4.3	7.0	11.4	0.4	1.6	2.3	6.0	-9.6	-0.1
3rd Quartile	2.9	6.0	8.4	-1.1	0.8	1.9	5.0	-13.2	-1.1
95th Percentile	0.8	2.8	3.5	-4.4	-0.6	1.3	2.5	-25.6	-2.1
Population	1,203	1,189	1,198	1,124	1,097	959	1,318	1,363	1,392

Parentheses contain percentile rankings.

# Risk Profile Loomis Sayles

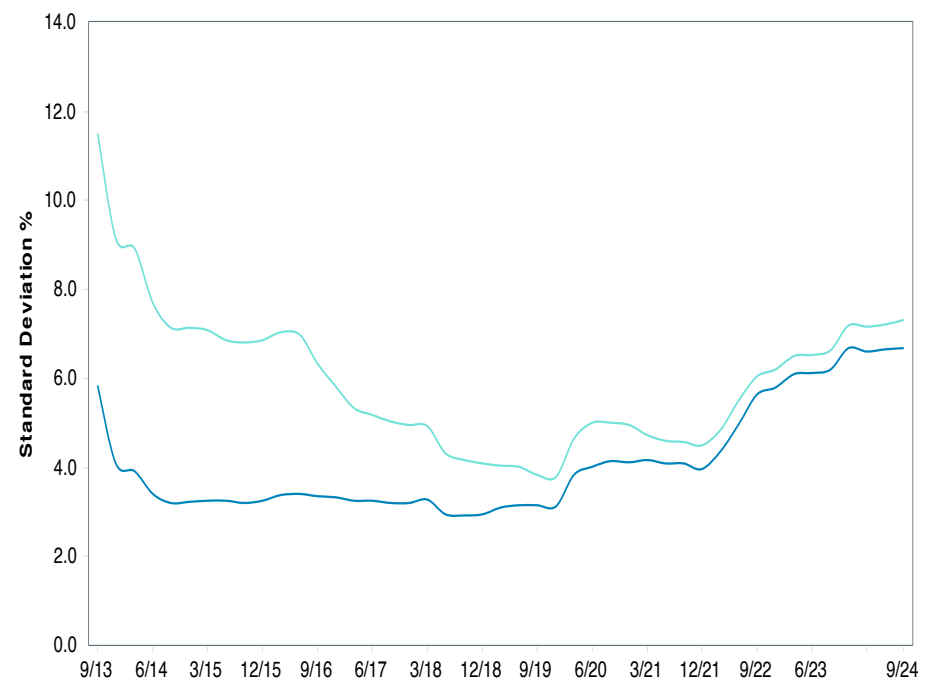
As of September 30, 2024

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



■ Loomis Sayles    ■ Performance Benchmark    ■ 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



— Loomis Sayles    — Performance Benchmark

**5 Years Historical Statistics**

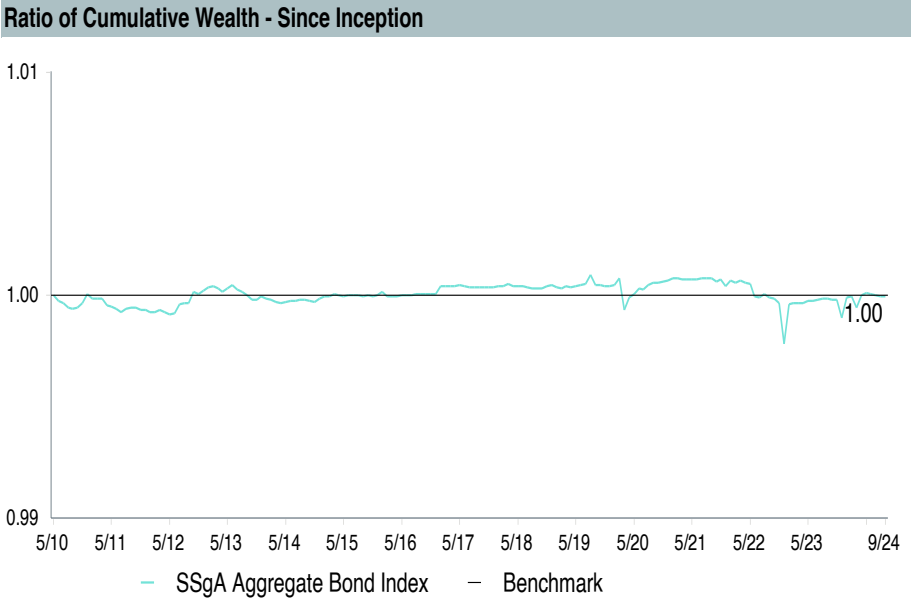
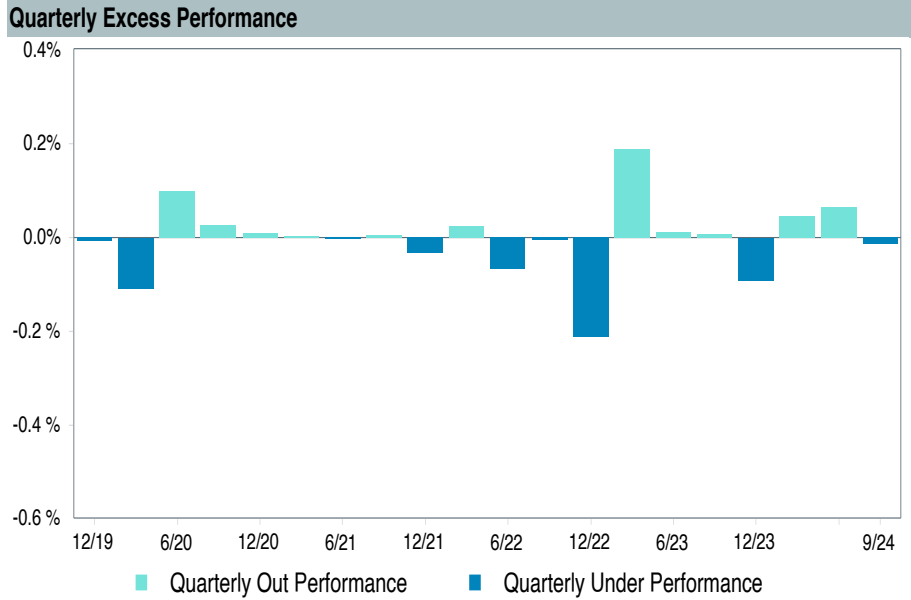
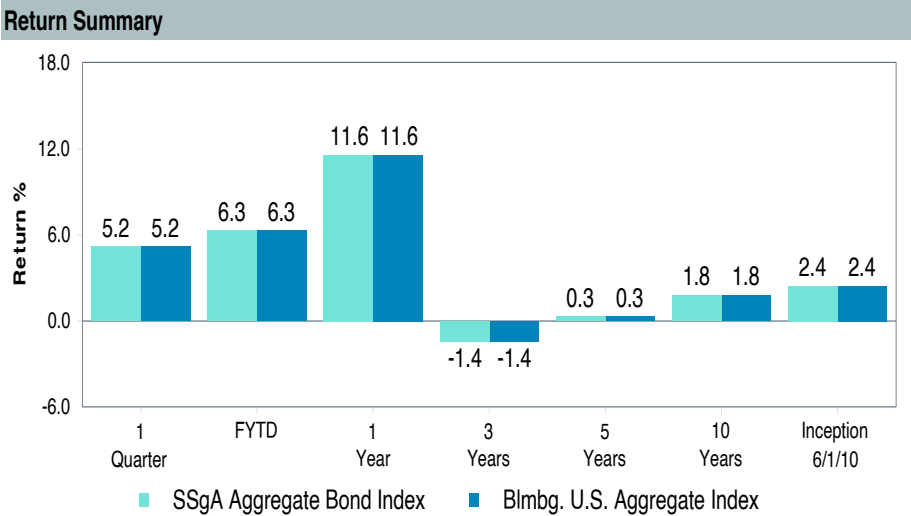
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Loomis Sayles	1.60	1.53	1.04	0.96	0.20	1.44	1.07	3.55	7.33	0.98
Performance Benchmark	0.00	0.00	-	1.00	-0.02	0.00	1.00	1.96	6.69	1.00
90 Day U.S. Treasury Bill	0.13	6.64	0.02	0.01	-	2.30	0.01	2.32	0.66	0.12



# Manager Performance Summary SSgA Aggregate Bond Index

As of September 30, 2024

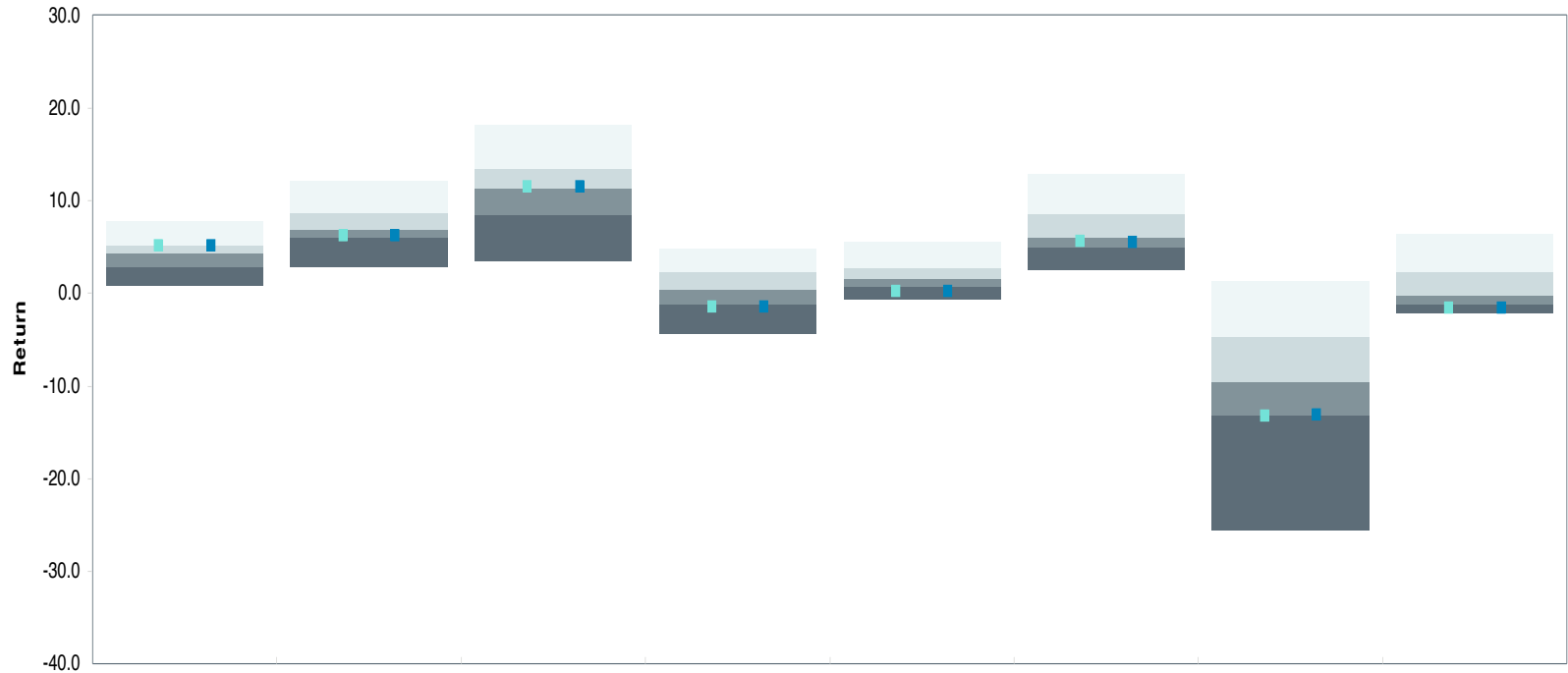
Account Information	
Account Name	SSgA Aggregate Bond Index
Inception Date	01/01/1901
Account Structure	Commingled Fund
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	IM U.S. Fixed Income (SA+CF)



# SSgA Aggregate Bond Index

As of September 30, 2024

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



	1 Quarter	FYTD	1 Year	3 Years	5 Years	2023	2022	2021
SSgA Aggregate Bond Index	5.2 (29)	6.3 (67)	11.6 (48)	-1.4 (85)	0.3 (88)	5.7 (59)	-13.2 (76)	-1.6 (86)
Blmbg. U.S. Aggregate Index	5.2 (28)	6.3 (67)	11.6 (49)	-1.4 (84)	0.3 (88)	5.5 (62)	-13.0 (72)	-1.5 (86)
5th Percentile	7.9	12.1	18.2	4.8	5.5	12.9	1.3	6.4
1st Quartile	5.2	8.8	13.6	2.3	2.8	8.6	-4.7	2.3
Median	4.3	7.0	11.4	0.4	1.6	6.0	-9.6	-0.1
3rd Quartile	2.9	6.0	8.4	-1.1	0.8	5.0	-13.2	-1.1
95th Percentile	0.8	2.8	3.5	-4.4	-0.6	2.5	-25.6	-2.1

Population

1,203

1,189

1,198

1,124

1,097

1,318

1,363

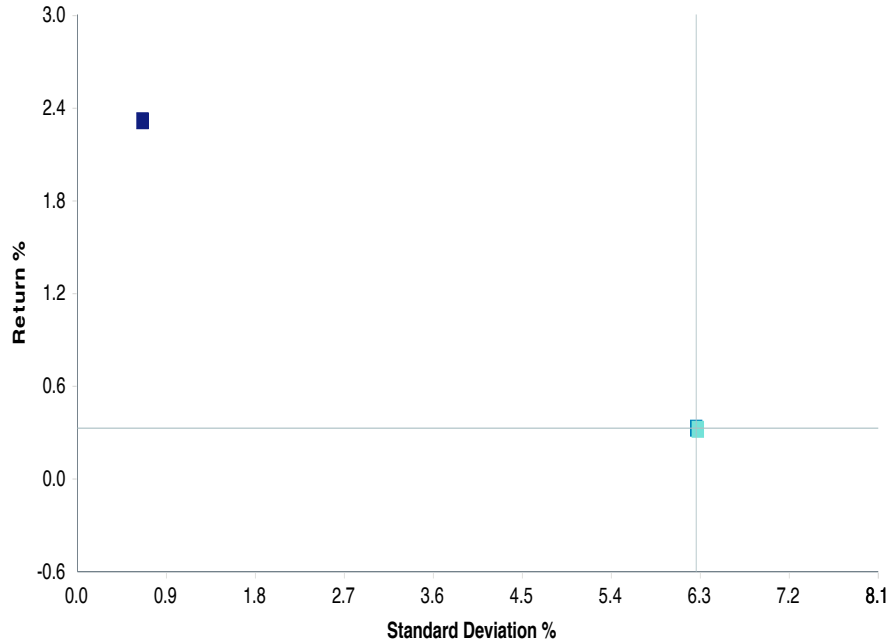
1,392

Parentheses contain percentile rankings.

# Risk Profile SSgA Aggregate Bond Index

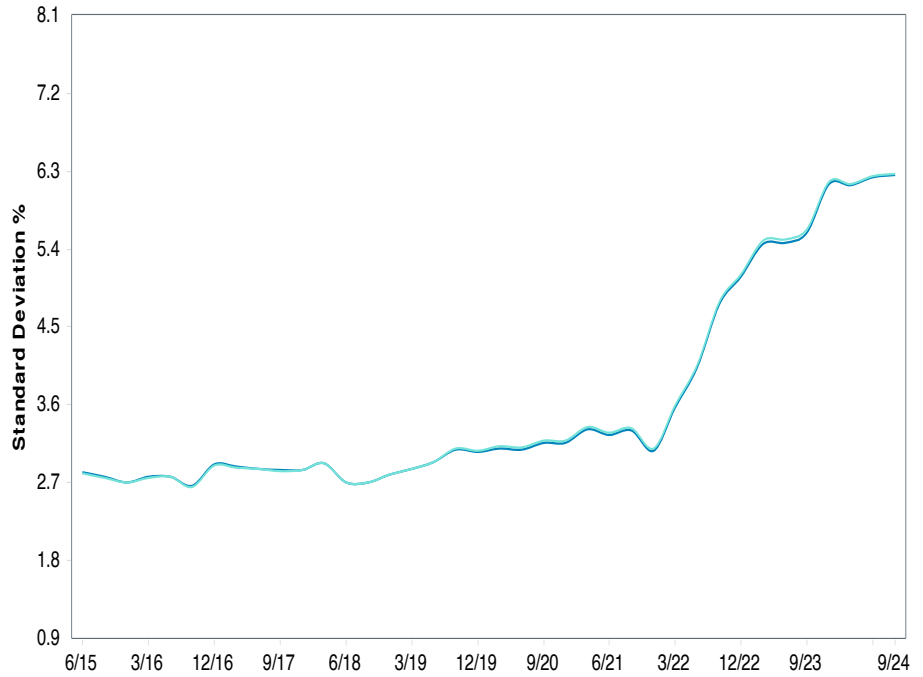
As of September 30, 2024

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



- SSgA Aggregate Bond Index
- Blmbg. U.S. Aggregate Index
- 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



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

**5 Years Historical Statistics**

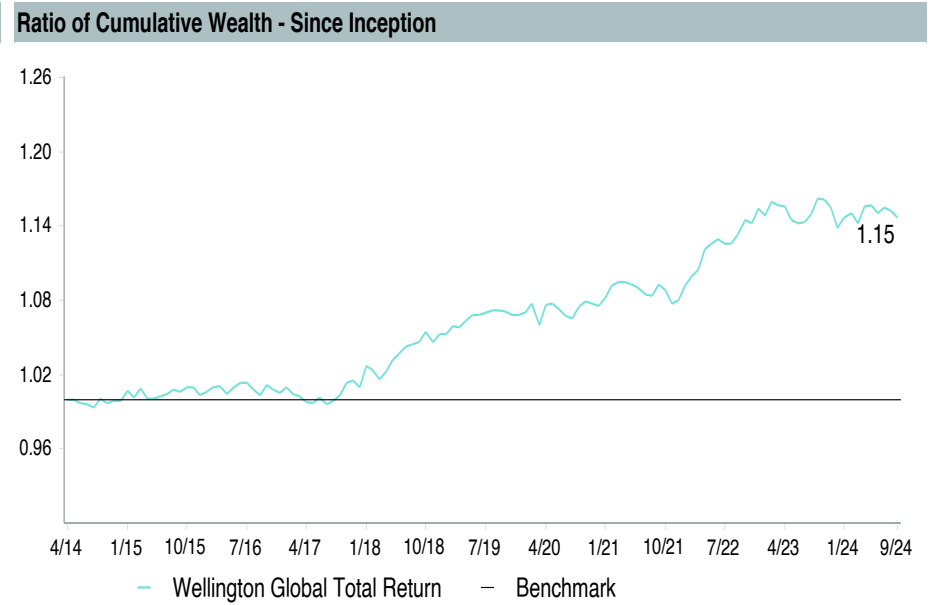
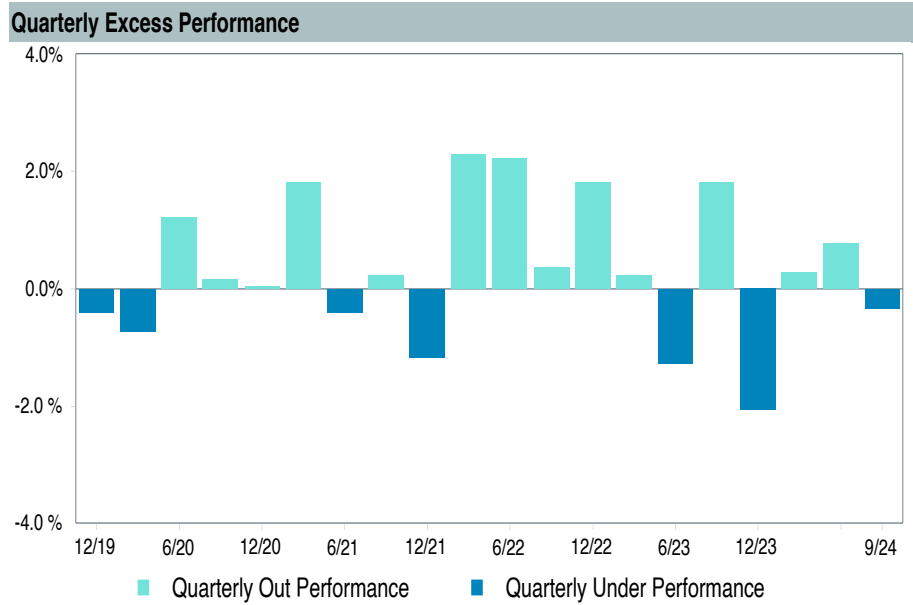
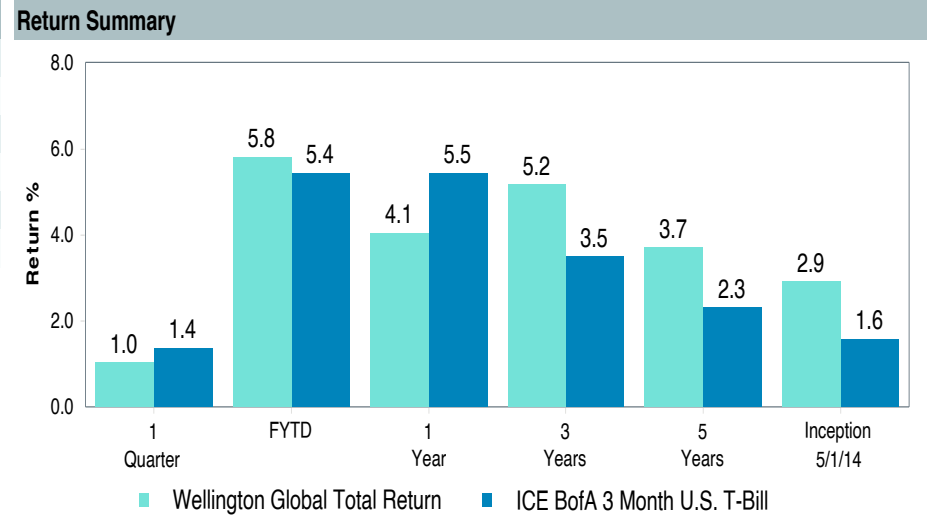
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
SSgA Aggregate Bond Index	-0.01	0.16	-0.06	1.00	-0.29	-0.01	1.00	0.32	6.27	1.00
Blmbg. U.S. Aggregate Index	0.00	0.00	-	1.00	-0.29	0.00	1.00	0.33	6.26	1.00
90 Day U.S. Treasury Bill	1.77	6.17	0.29	0.03	-	2.31	0.02	2.32	0.66	0.19



# Manager Performance Summary Wellington Global Total Return

As of September 30, 2024

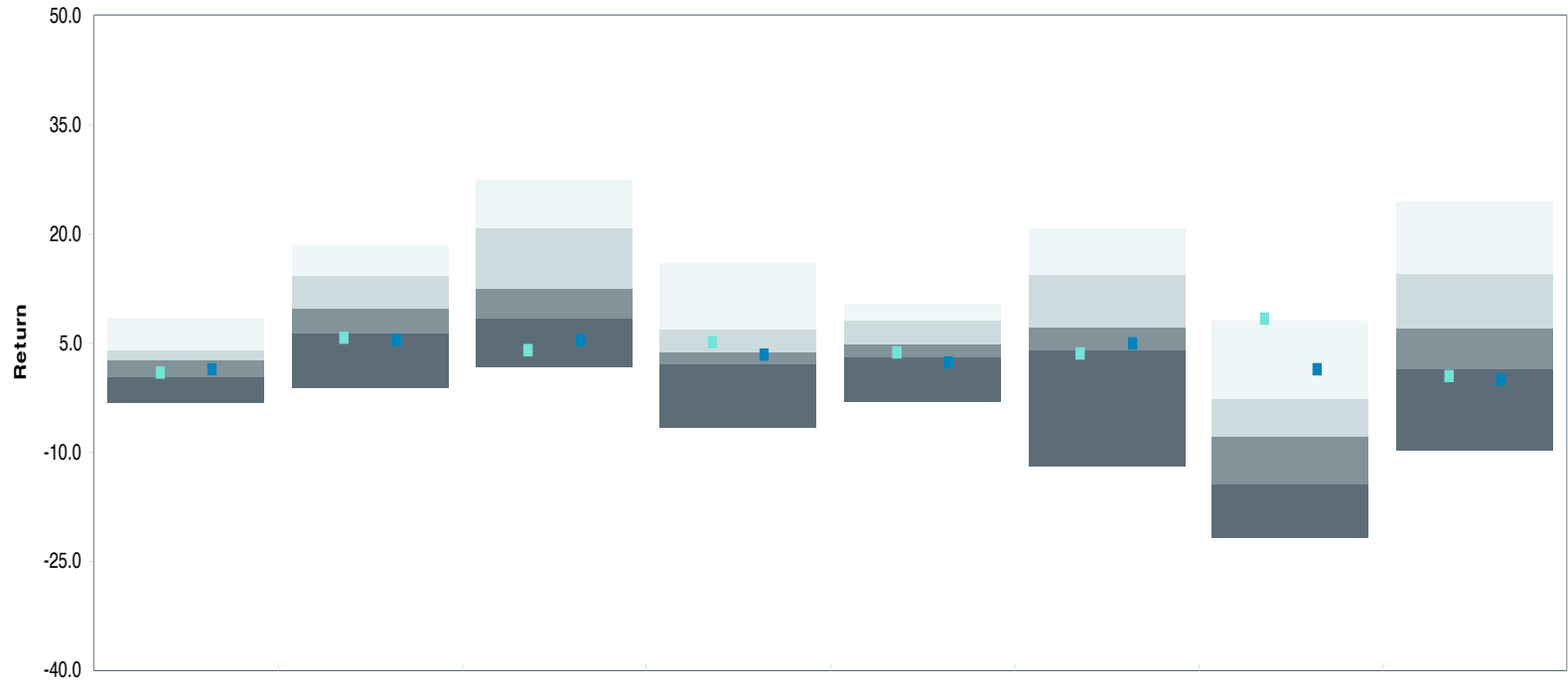
Account Information	
Account Name	Wellington Global Total Return
Inception Date	05/13/2014
Account Structure	Commingled Fund
Asset Class	Global Fixed Income
Benchmark	ICE BofA 3 Month U.S. T-Bill
Peer Group	IM Absolute Return (MF)



# Wellington Global Total Return

As of September 30, 2024

IM Absolute Return (MF)



	1 Quarter	FYTD	1 Year	3 Years	5 Years	2023	2022	2021
Wellington Global Total Return	1.0 (73)	5.8 (78)	4.1 (89)	5.2 (34)	3.7 (70)	3.6 (77)	8.4 (5)	0.5 (82)
ICE BofA 3 Month U.S. T-Bill	1.4 (72)	5.4 (80)	5.5 (87)	3.5 (52)	2.3 (88)	5.0 (65)	1.5 (13)	0.0 (82)
5th Percentile	8.3	18.5	27.4	16.0	10.4	20.7	8.2	24.4
1st Quartile	4.1	14.2	20.7	6.9	8.1	14.4	-2.5	14.6
Median	2.7	9.8	12.6	3.7	4.9	7.2	-7.9	7.1
3rd Quartile	0.4	6.4	8.5	2.3	3.2	4.1	-14.3	1.5
95th Percentile	-3.2	-1.2	1.7	-6.6	-3.0	-11.8	-21.8	-9.7
Population	36	36	36	35	33	39	45	48

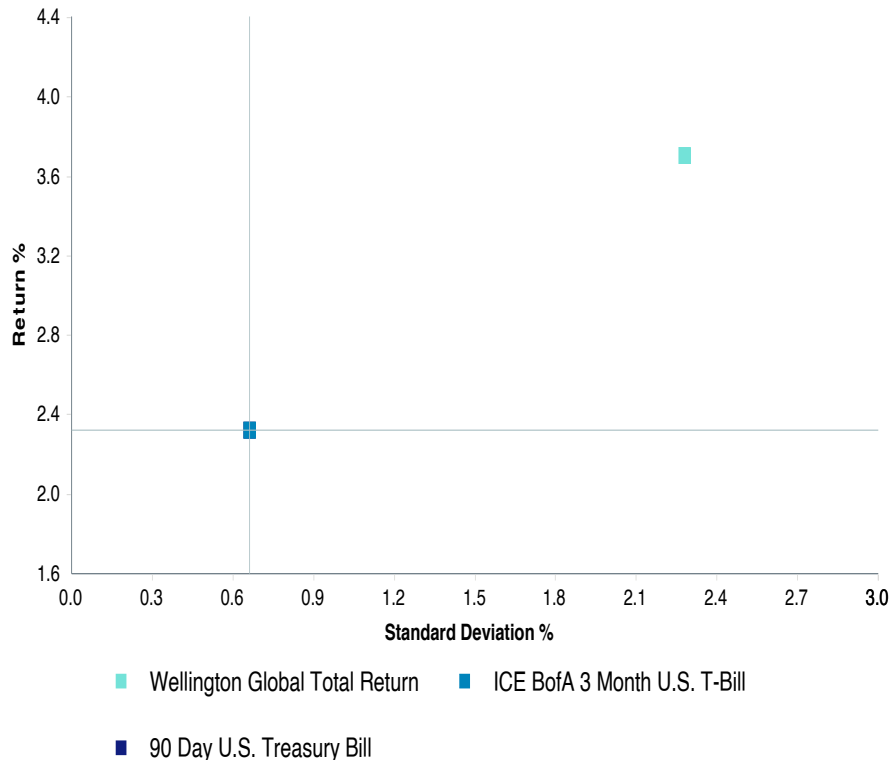
Parentheses contain percentile rankings.



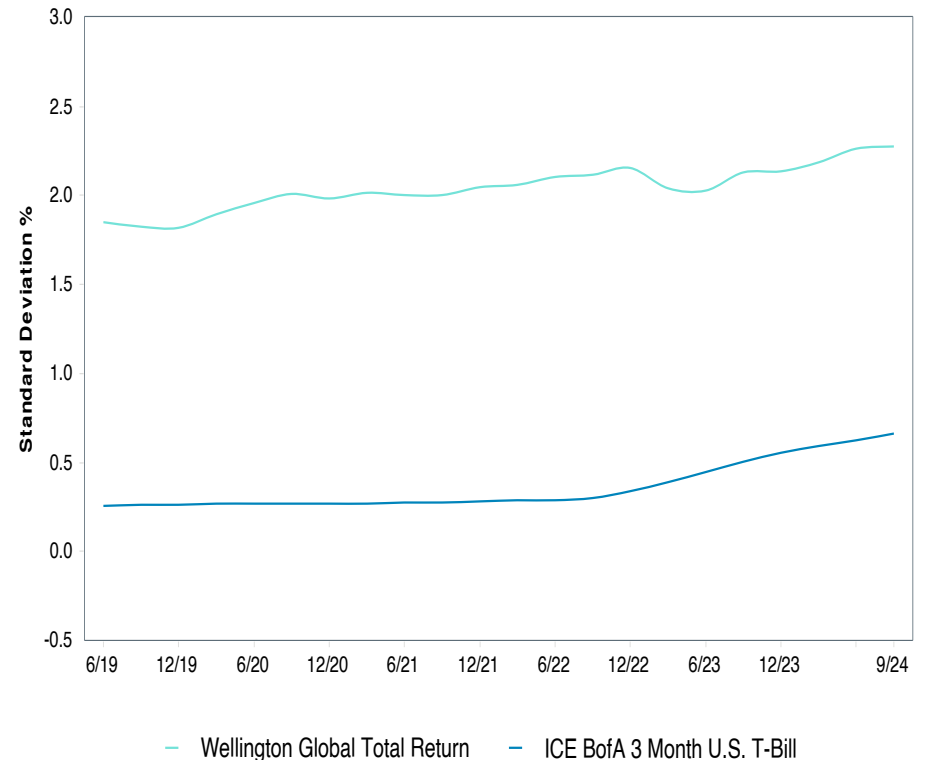
# Risk Profile Wellington Global Total Return

As of September 30, 2024

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



**Standard Deviation Rolling 5 Years**



**5 Years Historical Statistics**

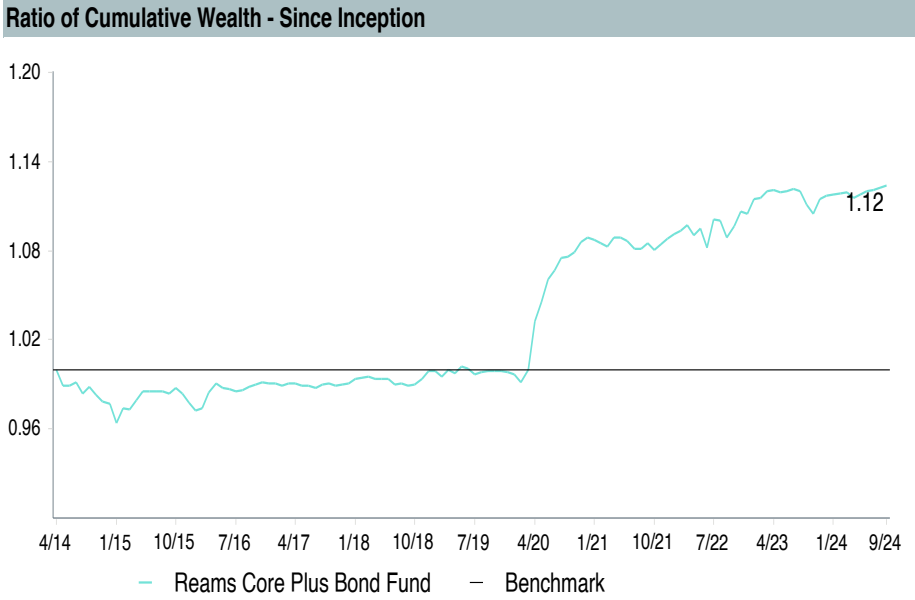
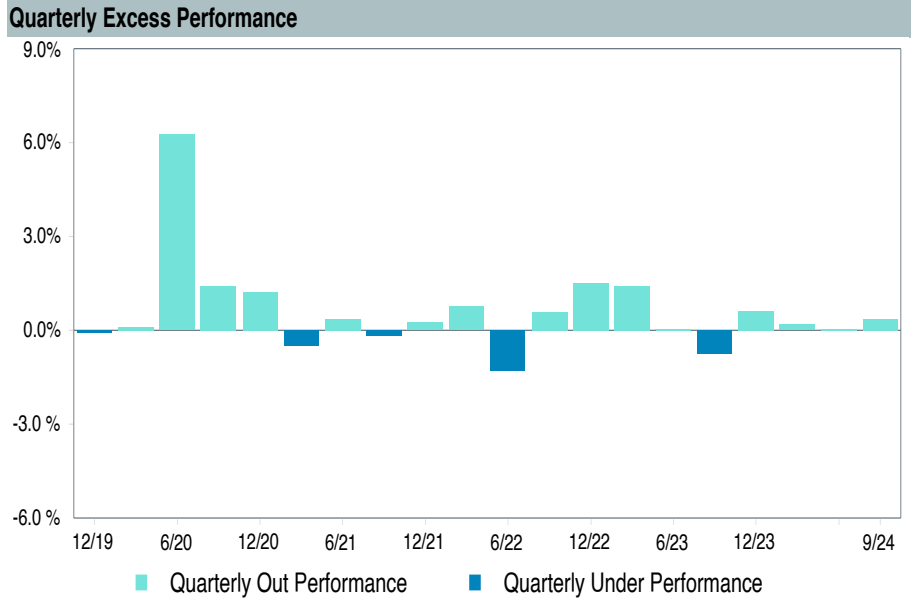
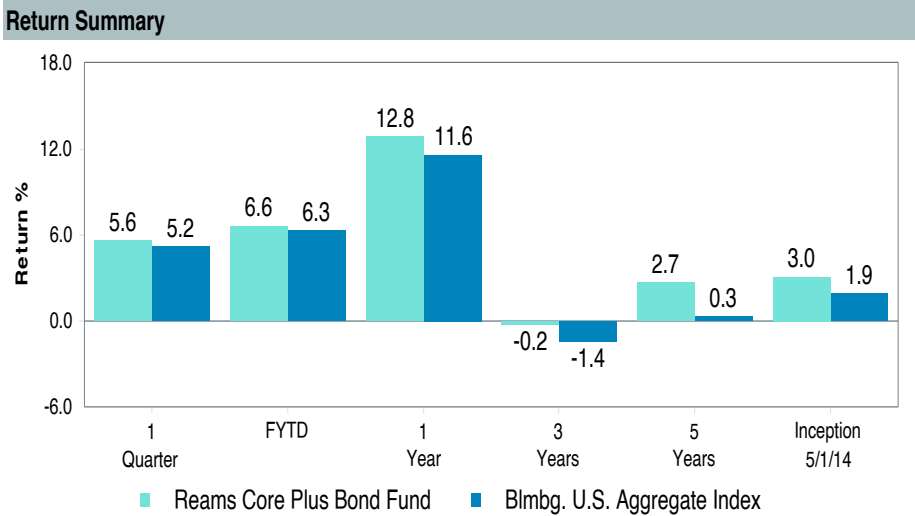
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Wellington Global Total Return	1.37	2.30	0.60	0.01	0.60	2.79	0.40	3.71	2.28	0.12
ICE BofA 3 Month U.S. T-Bill	0.00	0.00	-	1.00	-	0.00	1.00	2.32	0.66	1.00
90 Day U.S. Treasury Bill	0.00	0.00	-	1.00	-	0.00	1.00	2.32	0.66	1.00



# Manager Performance Summary Reams Core Plus Bond Fund

As of September 30, 2024

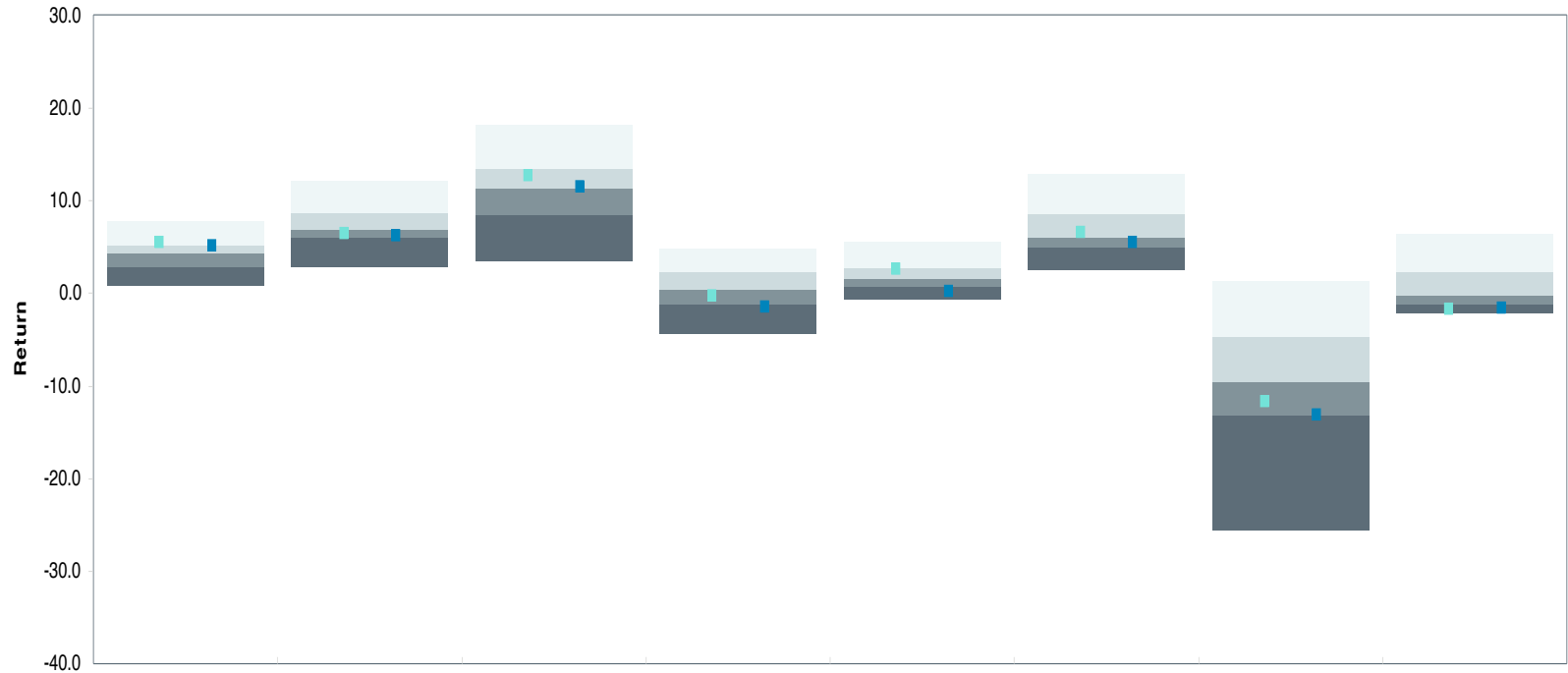
Account Information	
Account Name	Reams Core Plus Bond Fund
Inception Date	05/08/2014
Account Structure	Commingled Fund
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	IM U.S. Fixed Income (SA+CF)



# Reams Core Plus Bond Fund

As of September 30, 2024

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



	1 Quarter	FYTD	1 Year	3 Years	5 Years	2023	2022	2021
Reams Core Plus Bond Fund	5.6 (16)	6.6 (60)	12.8 (32)	-0.2 (60)	2.7 (26)	6.7 (41)	-11.7 (61)	-1.6 (88)
Blmbg. U.S. Aggregate Index	5.2 (28)	6.3 (67)	11.6 (49)	-1.4 (84)	0.3 (88)	5.5 (62)	-13.0 (72)	-1.5 (86)
5th Percentile	7.9	12.1	18.2	4.8	5.5	12.9	1.3	6.4
1st Quartile	5.2	8.8	13.6	2.3	2.8	8.6	-4.7	2.3
Median	4.3	7.0	11.4	0.4	1.6	6.0	-9.6	-0.1
3rd Quartile	2.9	6.0	8.4	-1.1	0.8	5.0	-13.2	-1.1
95th Percentile	0.8	2.8	3.5	-4.4	-0.6	2.5	-25.6	-2.1

Population	1,203	1,189	1,198	1,124	1,097	1,318	1,363	1,392
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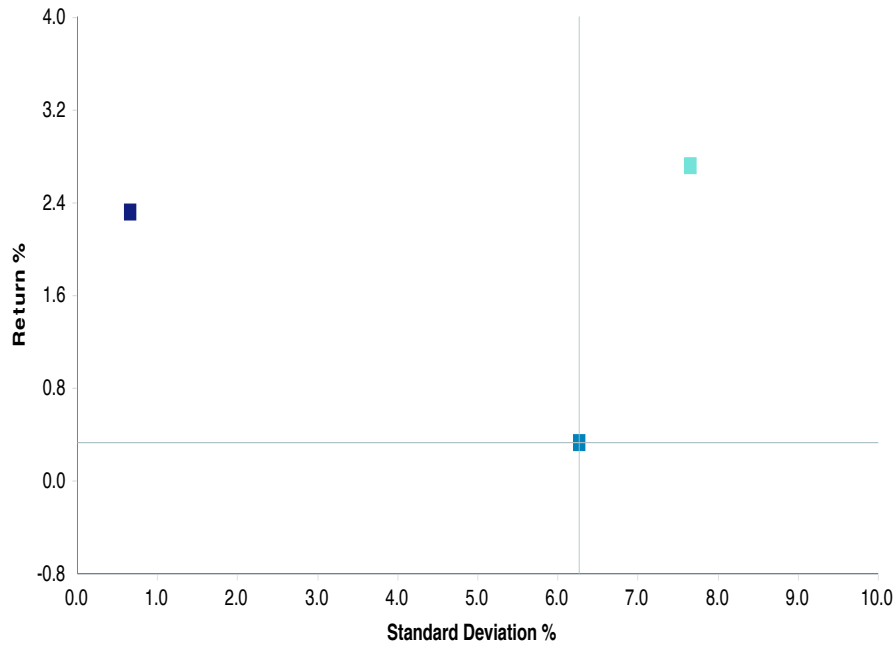
Parentheses contain percentile rankings.



# Risk Profile Reams Core Plus Bond Fund

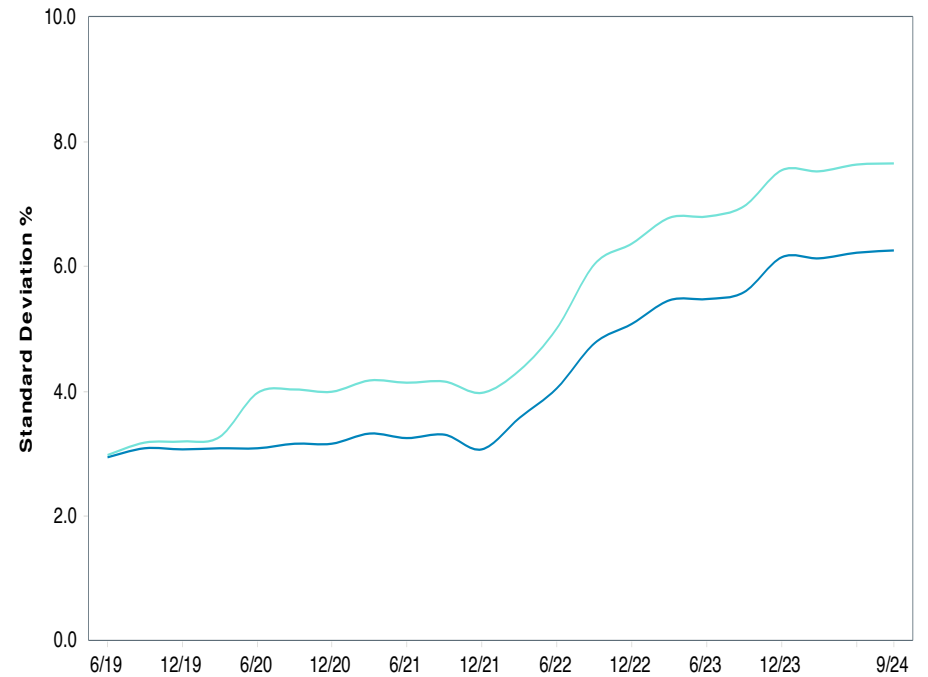
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



- Reams Core Plus Bond Fund
- Blmbg. U.S. Aggregate Index
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 5 Years

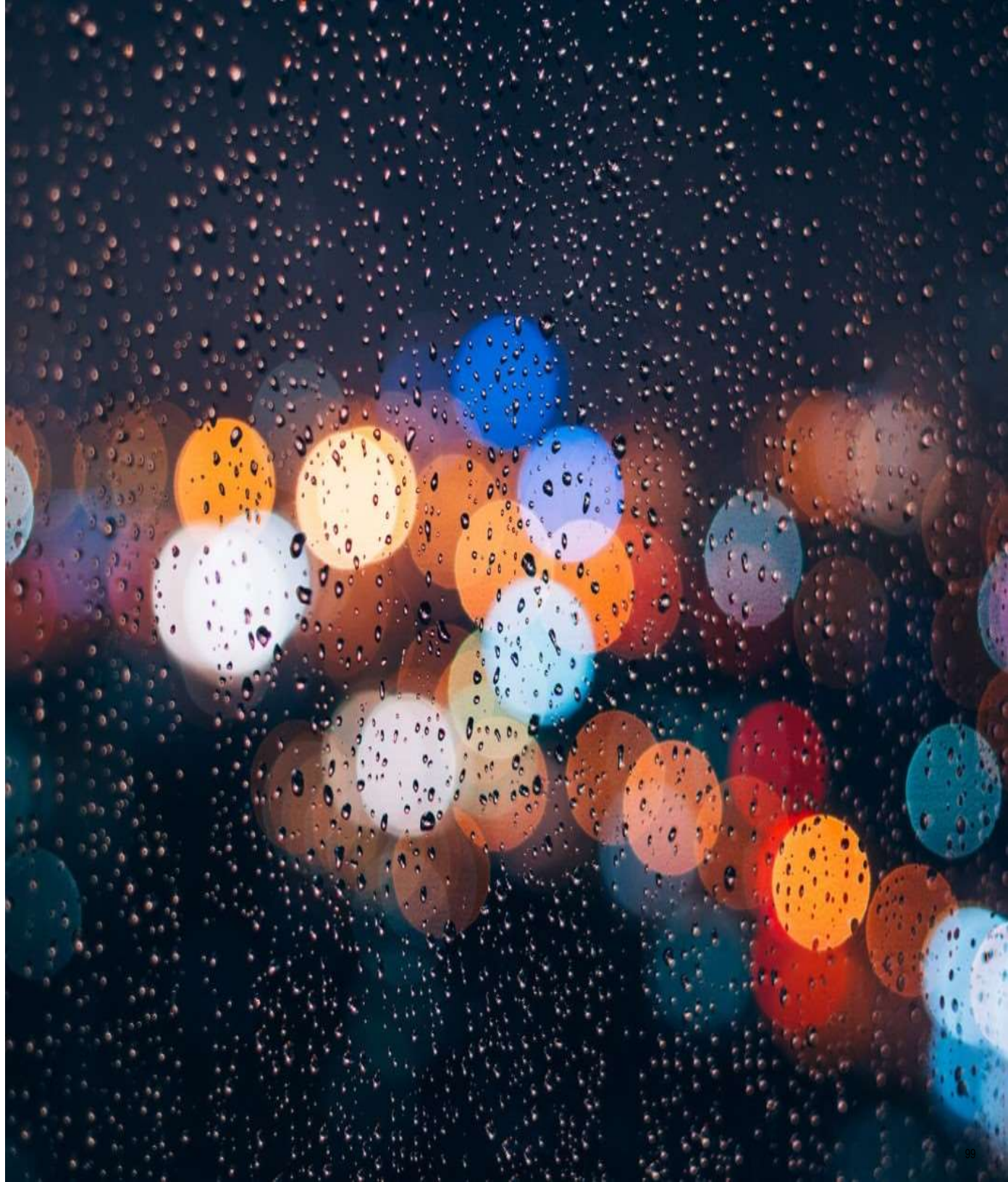


- Reams Core Plus Bond Fund
- Blmbg. U.S. Aggregate Index

5 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	2.45	2.34	1.04	0.93	0.09	2.38	1.18	2.72	7.66	0.96
Blmbg. U.S. Aggregate Index	0.00	0.00	-	1.00	-0.29	0.00	1.00	0.33	6.26	1.00
90 Day U.S. Treasury Bill	1.77	6.17	0.29	0.03	-	2.31	0.02	2.32	0.66	0.19

# Opportunistic/ Alternatives

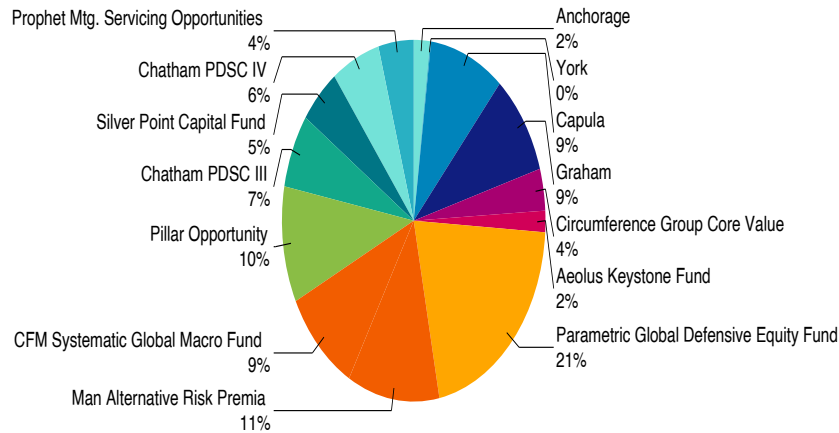


# Composite Portfolio Overview Opportunistic/Alternatives

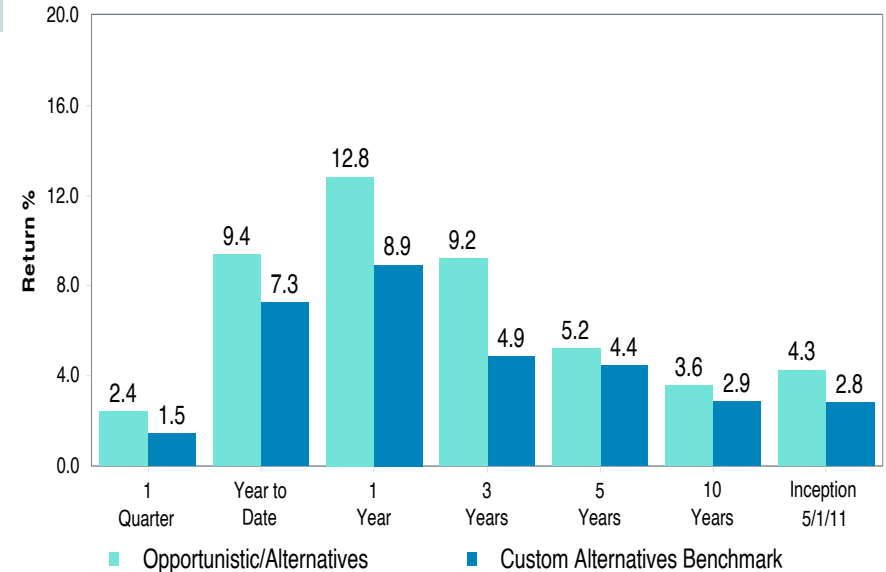
As of September 30, 2024

## Current Allocation

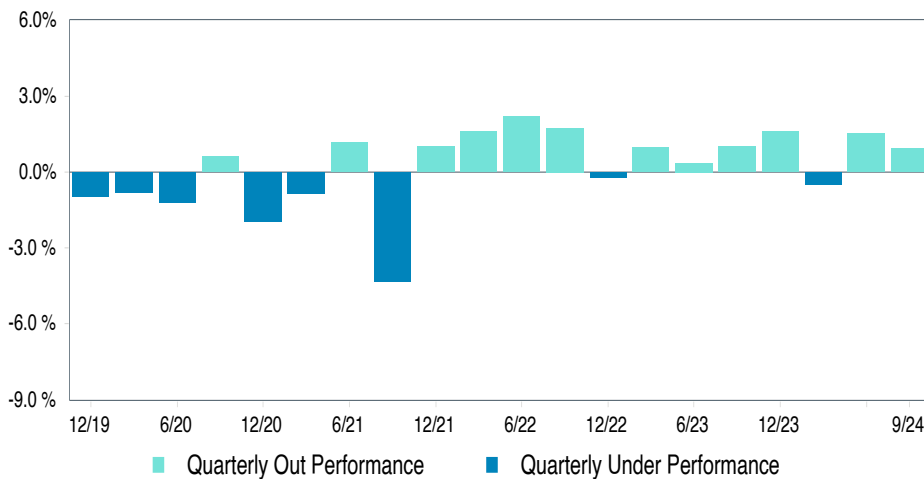
September 30, 2024 : \$1,152,282,676



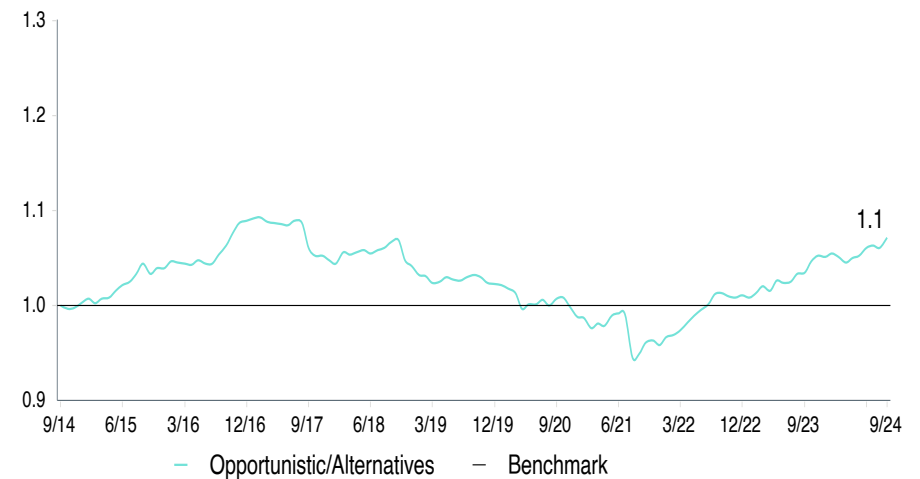
## Return Summary



## Quarterly Excess Performance



## Ratio of Cumulative Wealth - 10 Years

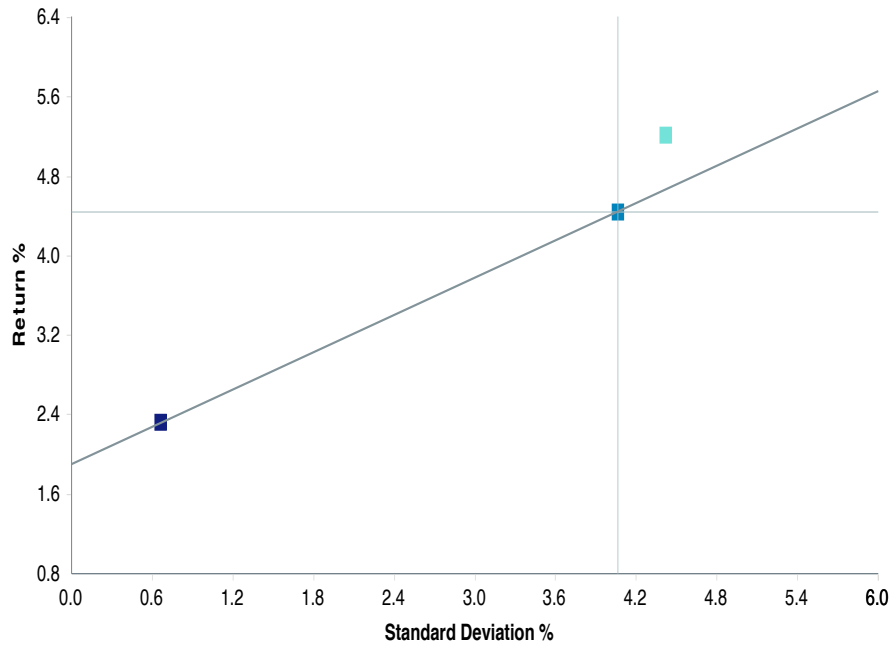


Note: April 1, 2004 represents the inception of the Global Equity Custom Benchmark as the primary performance objective for the Global Equity portfolio.

# Risk Profile Opportunistic/Alternatives

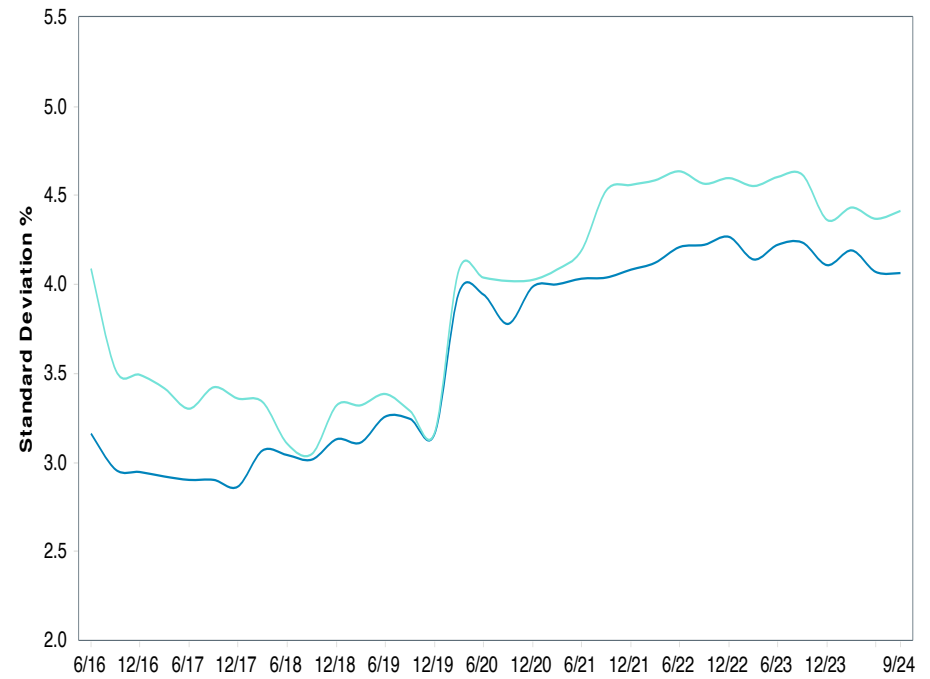
As of September 30, 2024

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



- Opportunistic/Alternatives
- Custom Alternatives Benchmark
- 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



- Opportunistic/Alternatives
- Custom Alternatives Benchmark

**5 Years Historical Statistics**

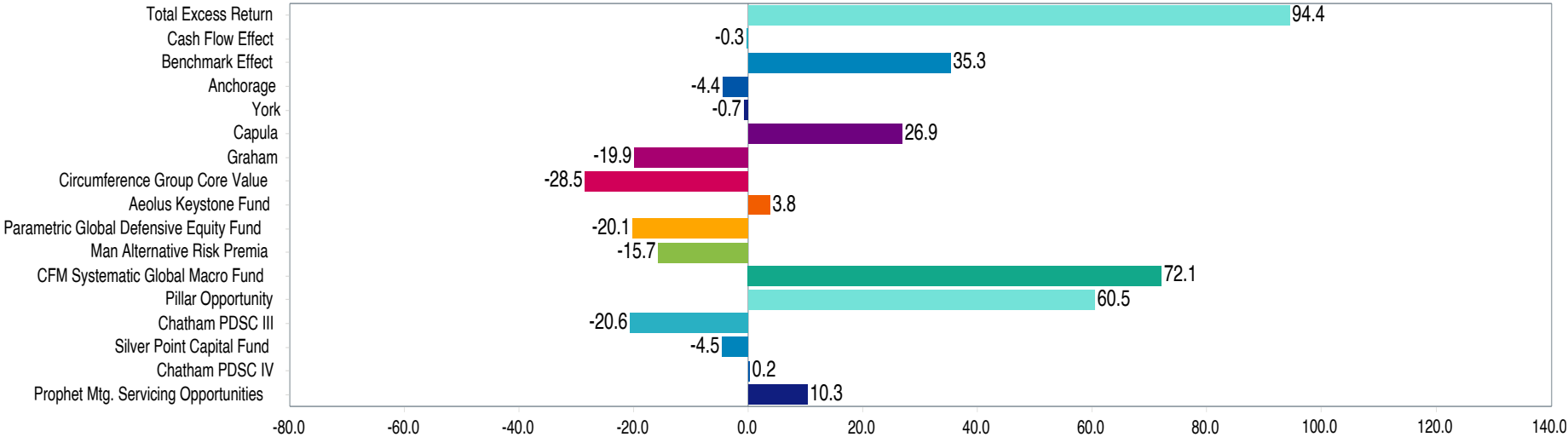
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
<b>Opportunistic/Alternatives</b>	<b>0.75</b>	<b>3.00</b>	<b>0.25</b>	<b>0.57</b>	<b>0.66</b>	<b>1.57</b>	<b>0.82</b>	<b>5.22</b>	<b>4.42</b>	<b>0.75</b>
Custom Alternatives Benchmark	0.00	0.00	-	1.00	0.52	0.00	1.00	4.45	4.07	1.00
90 Day U.S. Treasury Bill	-2.14	4.12	-0.52	0.00	-	2.33	0.00	2.32	0.66	-0.01



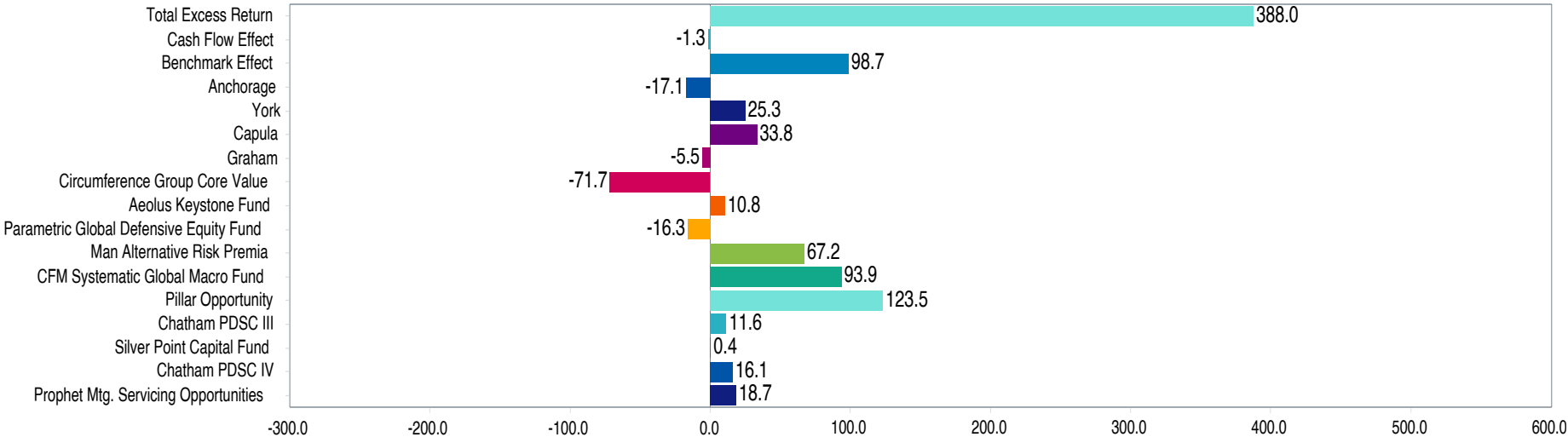
# Asset Class Attribution

As of September 30, 2024

## 1 Quarter



## 1 Year

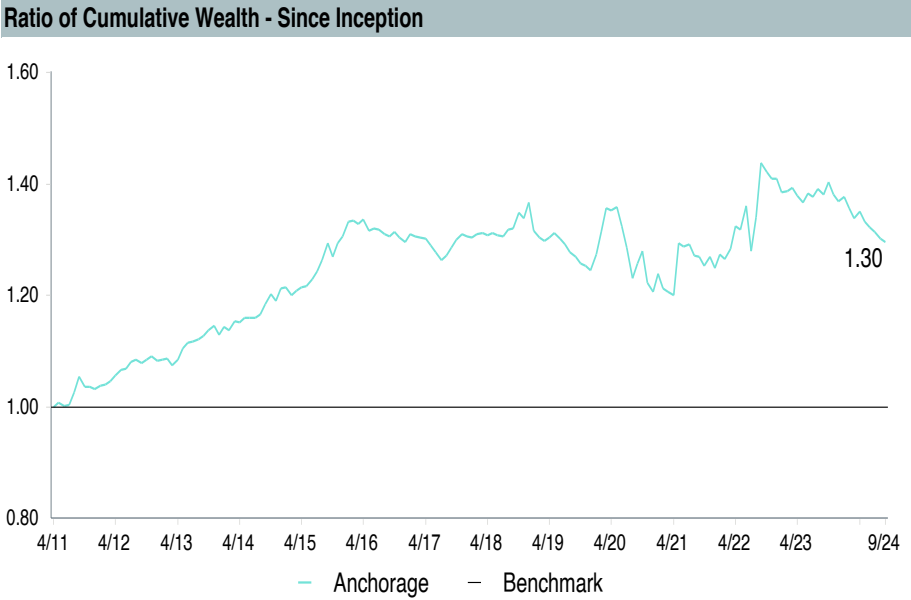
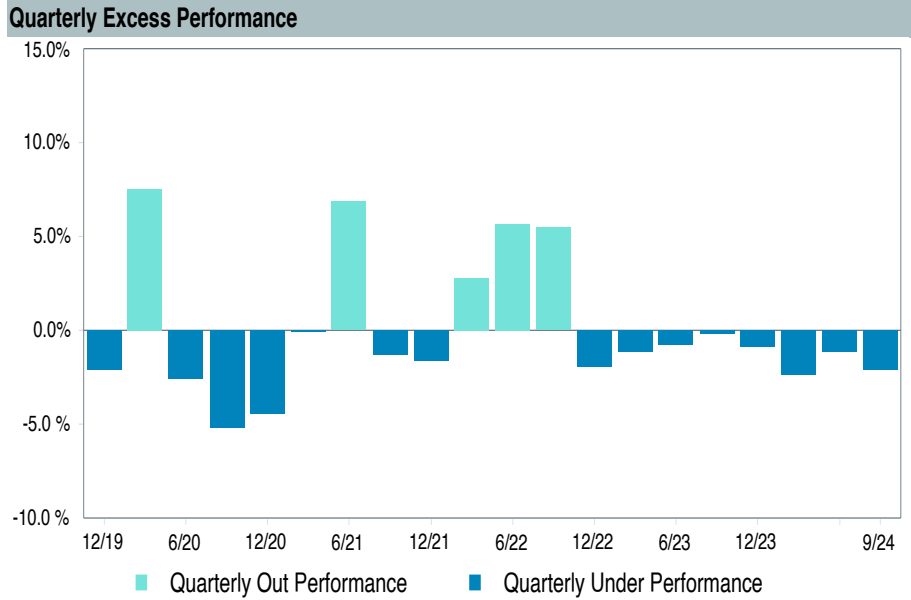
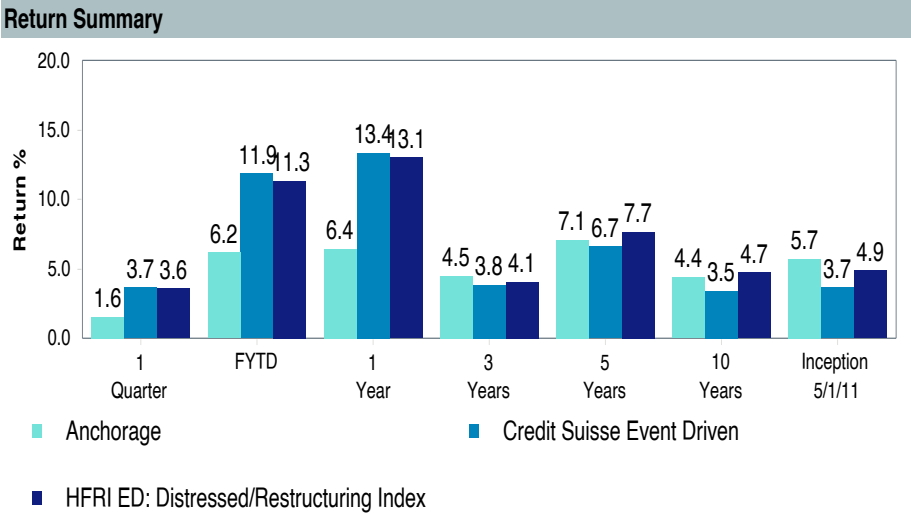




# Manager Performance Summary Anchorage

As of September 30, 2024

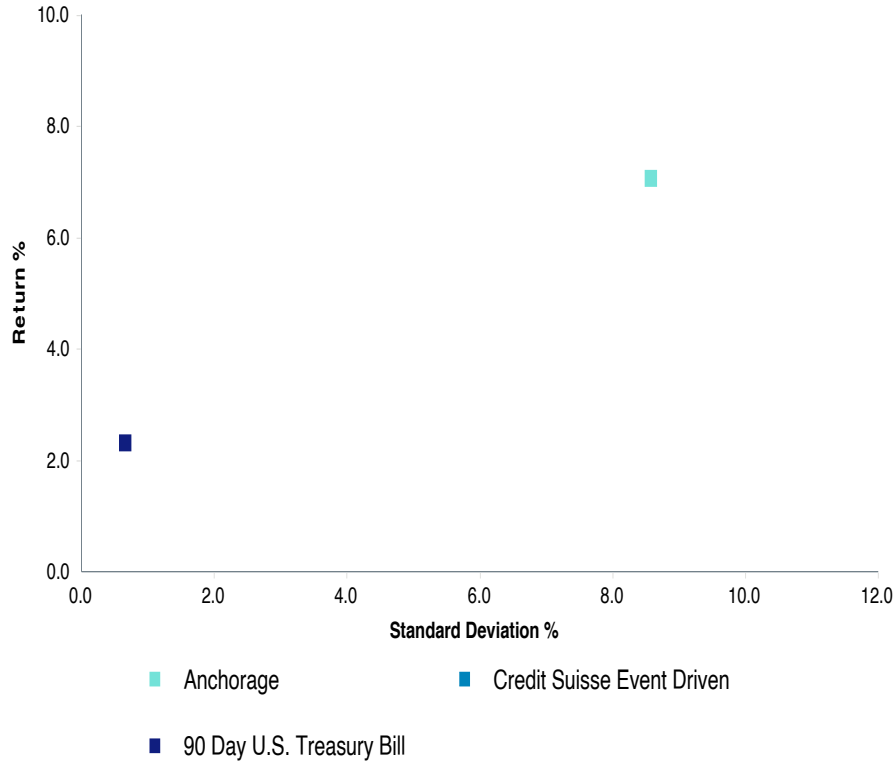
Account Information	
Account Name	Anchorage
Inception Date	05/01/2011
Account Structure	Hedge Fund
Asset Class	US Hedge Fund
Benchmark	Credit Suisse Event Driven
Peer Group	



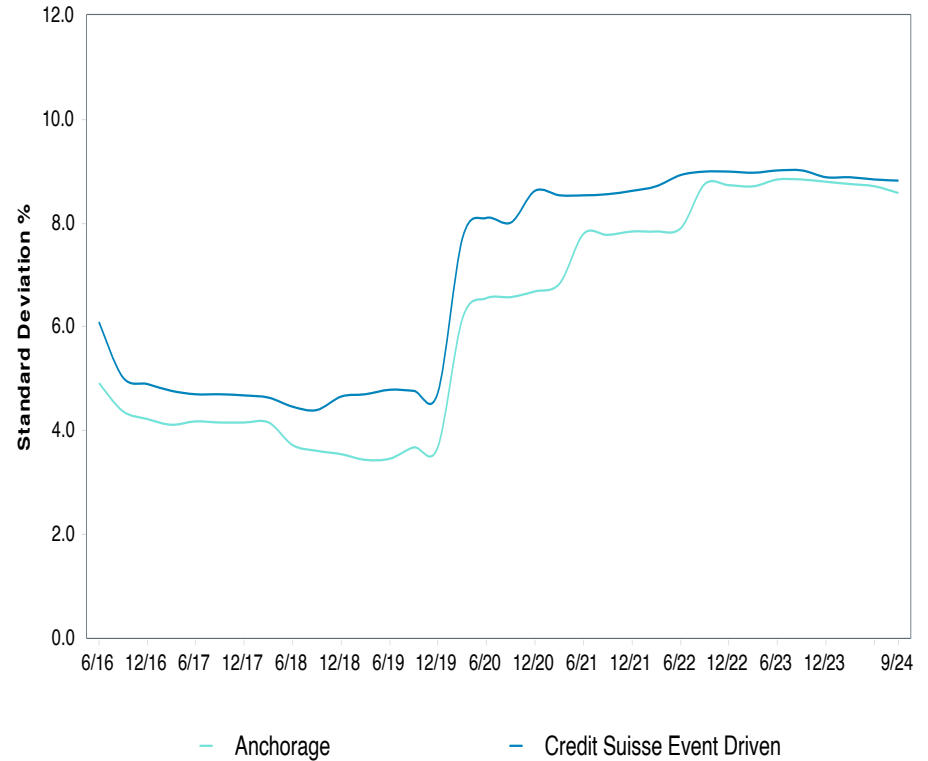
# Risk Profile Anchorage

As of September 30, 2024

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



**Standard Deviation  
Rolling 5 Years**



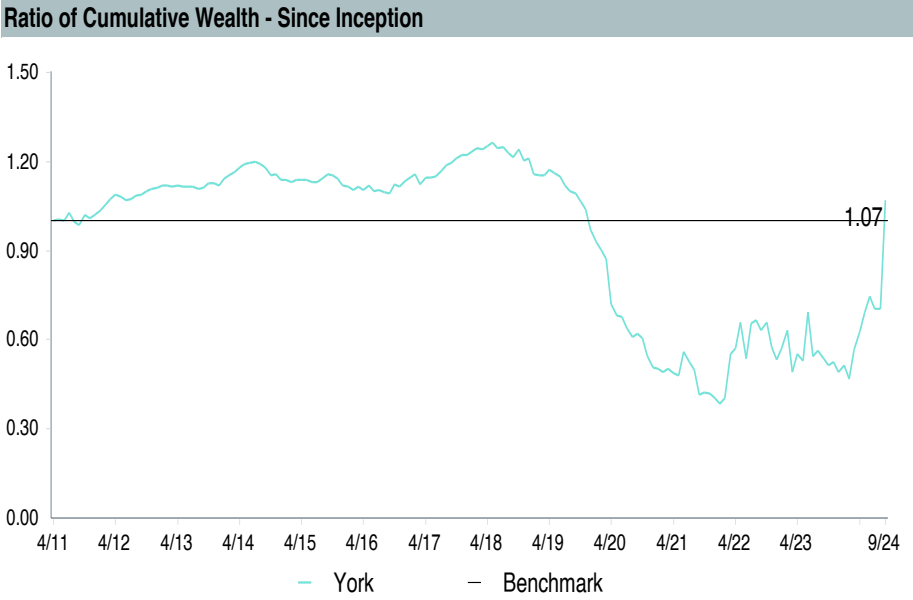
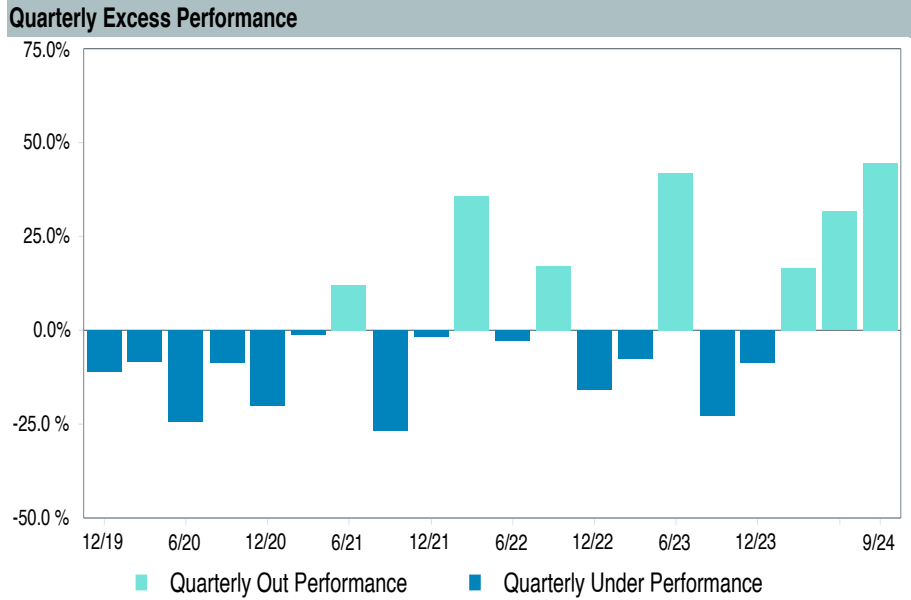
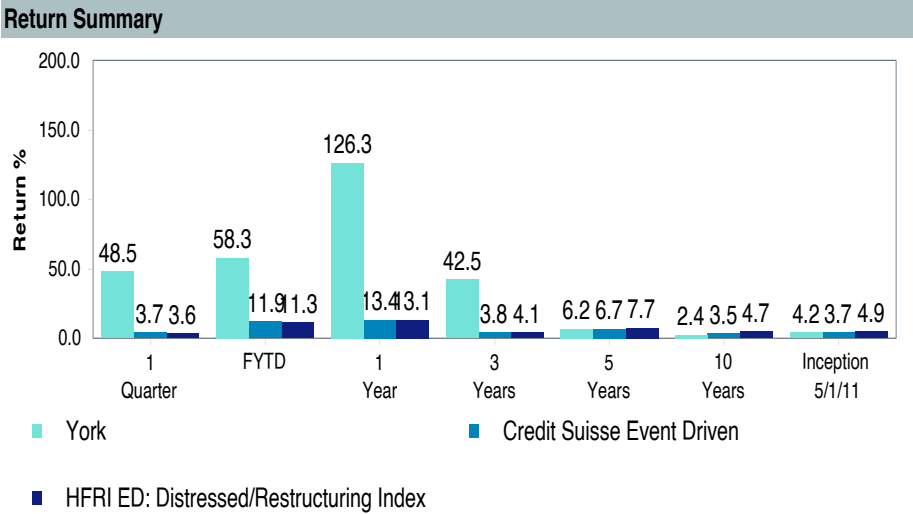
5 Years Historical Statistics										
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Anchorage	-	-	-	-	0.57	-	-	7.08	8.58	-
Credit Suisse Event Driven	-	-	-	-	0.51	-	-	6.65	8.81	-
90 Day U.S. Treasury Bill	-	-	-	-	-	-	-	2.32	0.66	-



# Manager Performance Summary York

As of September 30, 2024

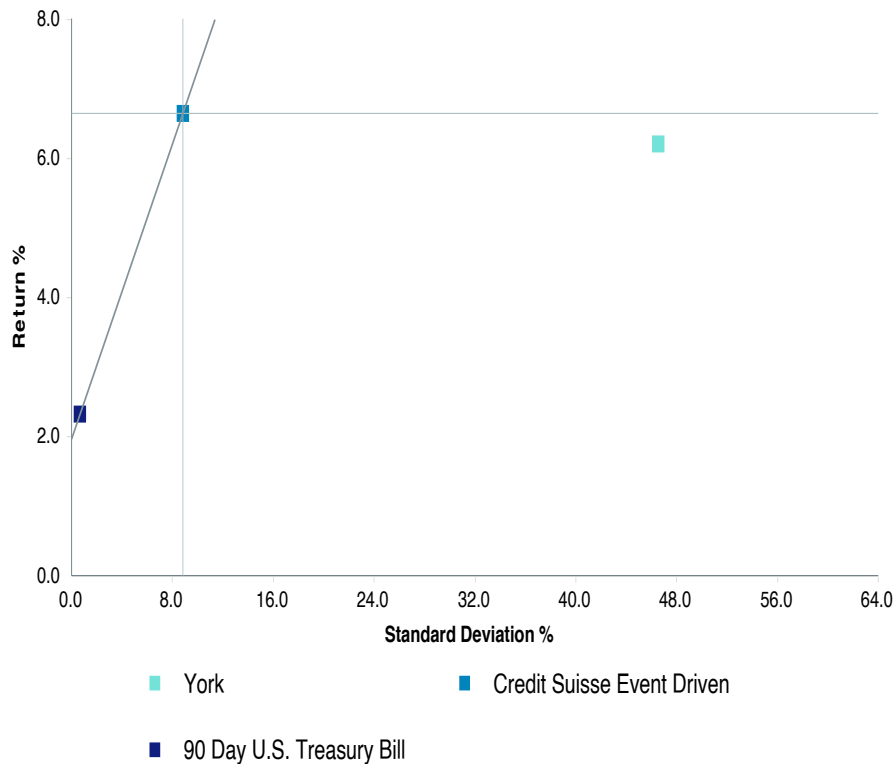
Account Information	
Account Name	York
Inception Date	05/01/2011
Account Structure	Hedge Fund
Asset Class	US Hedge Fund
Benchmark	Credit Suisse Event Driven
Peer Group	



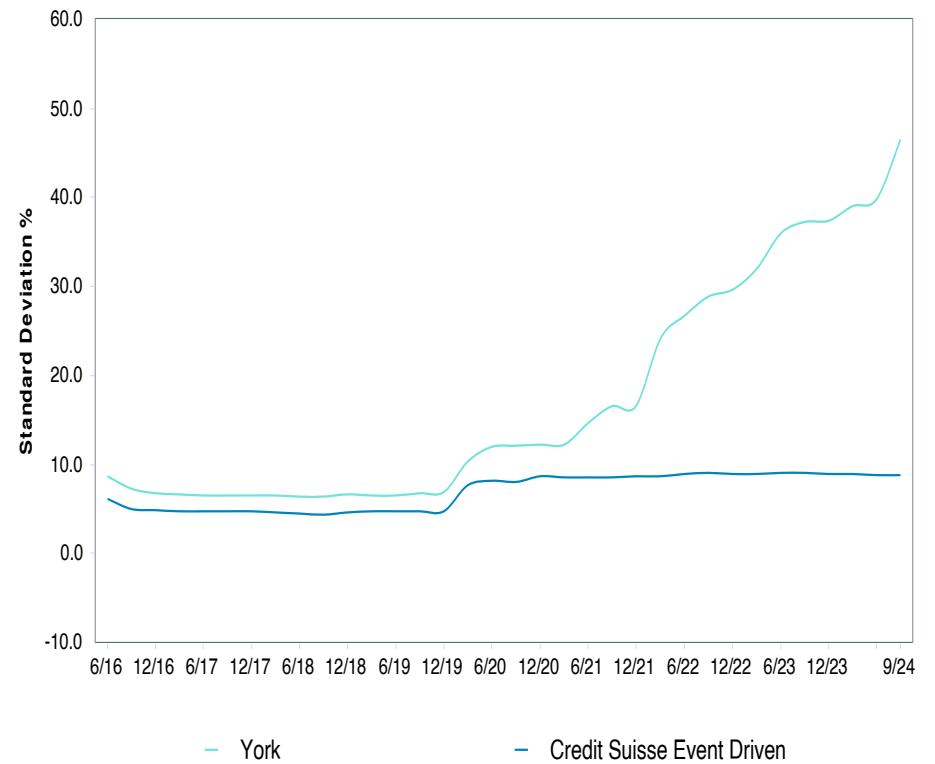
# Risk Profile York

As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



Standard Deviation  
Rolling 5 Years



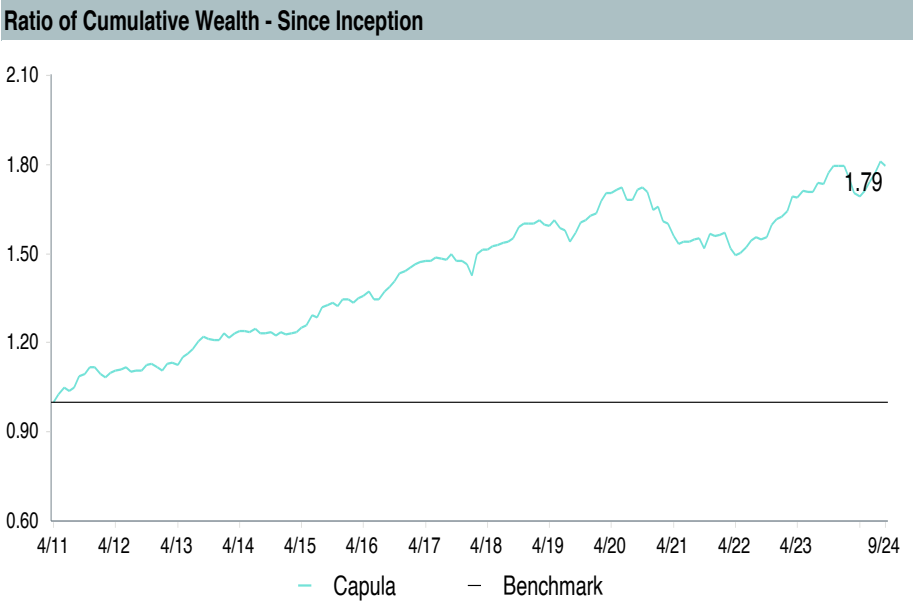
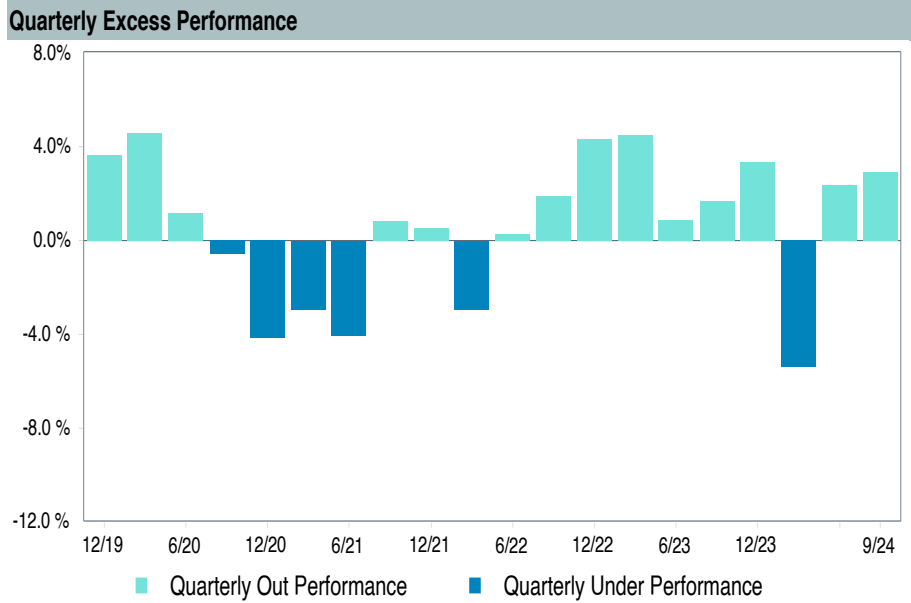
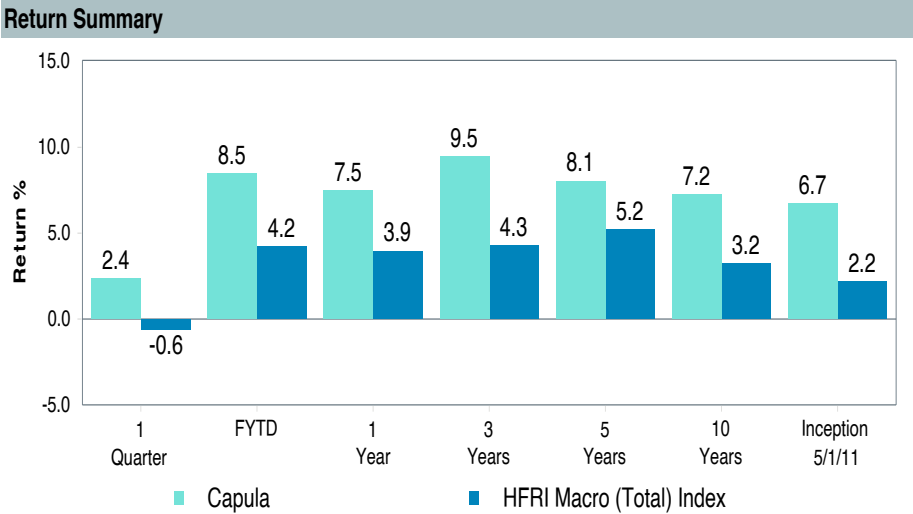
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
York	8.80	45.54	0.19	0.04	0.29	8.41	1.10	6.21	46.56	0.21
Credit Suisse Event Driven	0.00	0.00	-	1.00	0.51	0.00	1.00	6.65	8.81	1.00
90 Day U.S. Treasury Bill	-4.56	8.90	-0.51	0.01	-	2.37	-0.01	2.32	0.66	-0.09

# Manager Performance Summary Capula

As of September 30, 2024

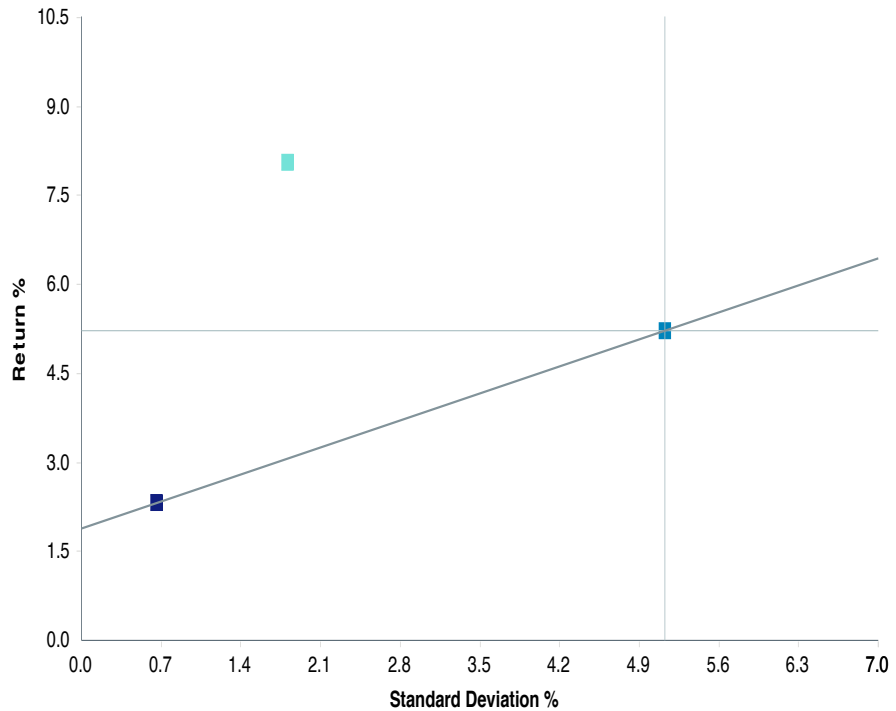
Account Information	
Account Name	Capula
Inception Date	05/01/2011
Account Structure	Hedge Fund
Asset Class	US Hedge Fund
Benchmark	HFRI Macro (Total) Index
Peer Group	



# Risk Profile Capula

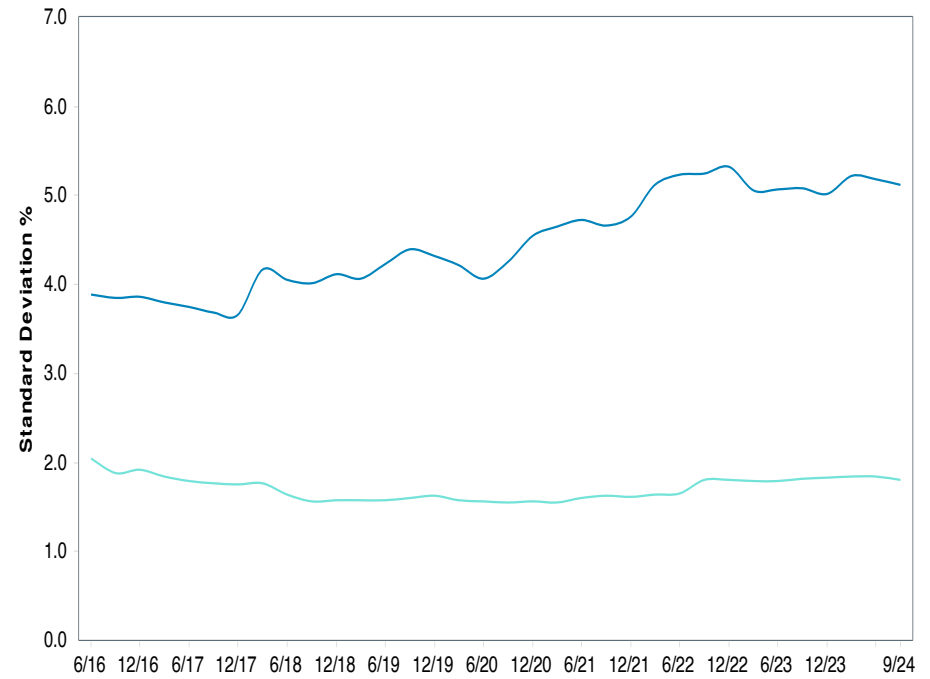
As of September 30, 2024

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



■ Capula      ■ HFRI Macro (Total) Index      ■ 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 5 Years**



— Capula      — HFRI Macro (Total) Index

**5 Years Historical Statistics**

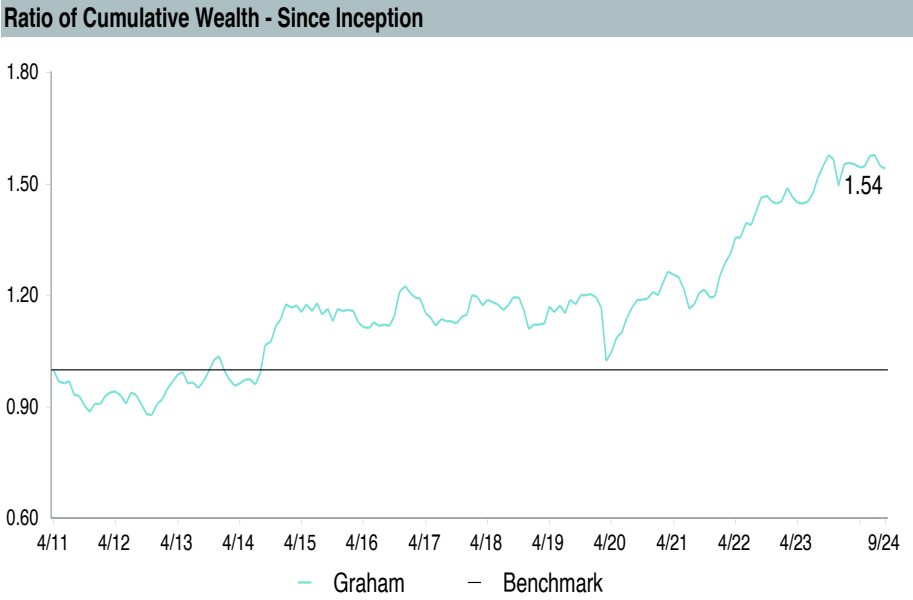
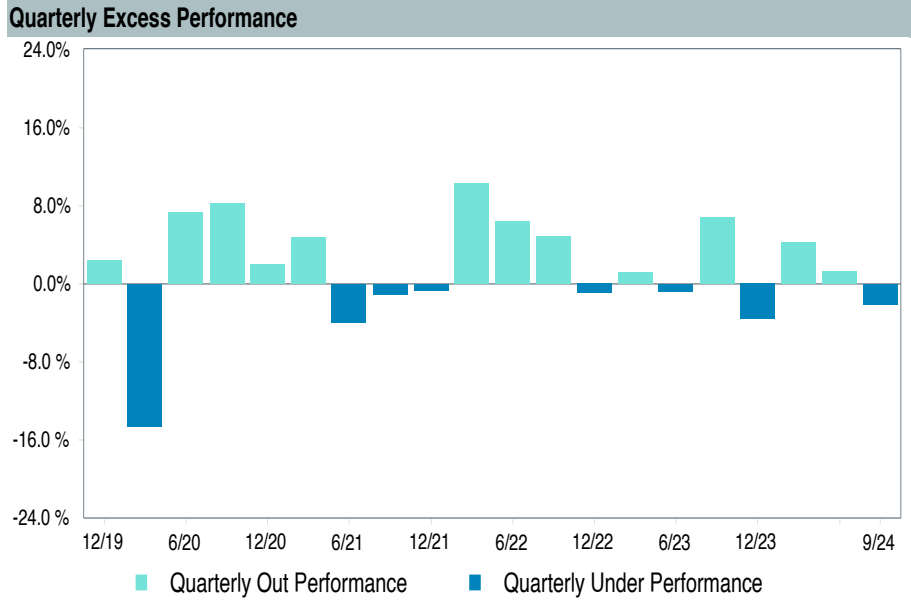
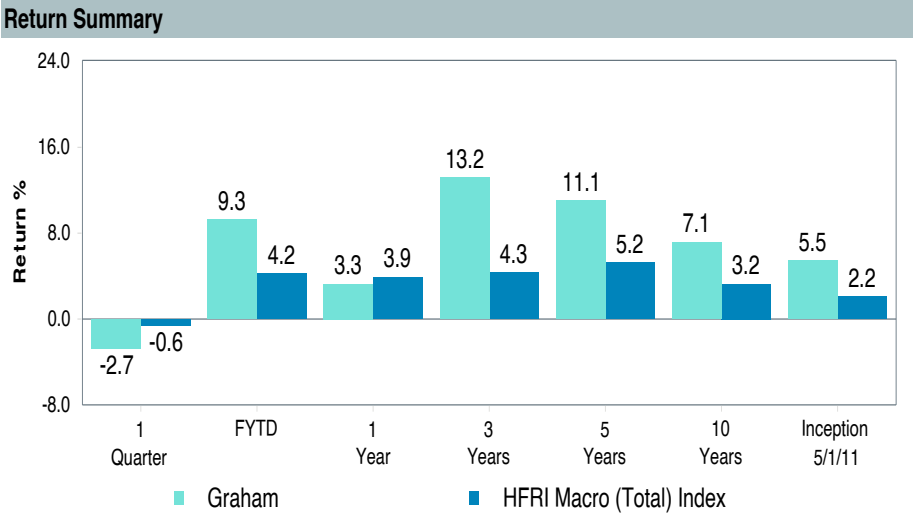
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Capula	2.56	5.55	0.46	0.00	3.12	8.20	-0.02	8.05	1.81	-0.07
HFRI Macro (Total) Index	0.00	0.00	-	1.00	0.55	0.00	1.00	5.22	5.13	1.00
90 Day U.S. Treasury Bill	-2.93	5.30	-0.55	0.04	-	2.46	-0.03	2.32	0.66	-0.20



# Manager Performance Summary Graham

As of September 30, 2024

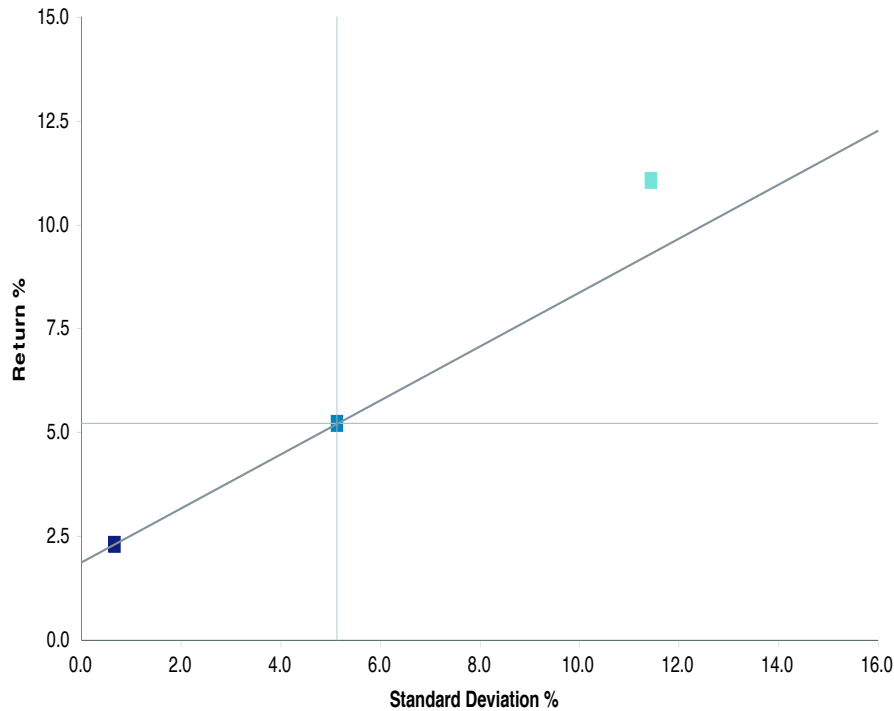
Account Information	
Account Name	Graham
Inception Date	05/01/2011
Account Structure	Hedge Fund
Asset Class	Hedge Fund
Benchmark	HFRI Macro (Total) Index
Peer Group	



# Risk Profile Graham

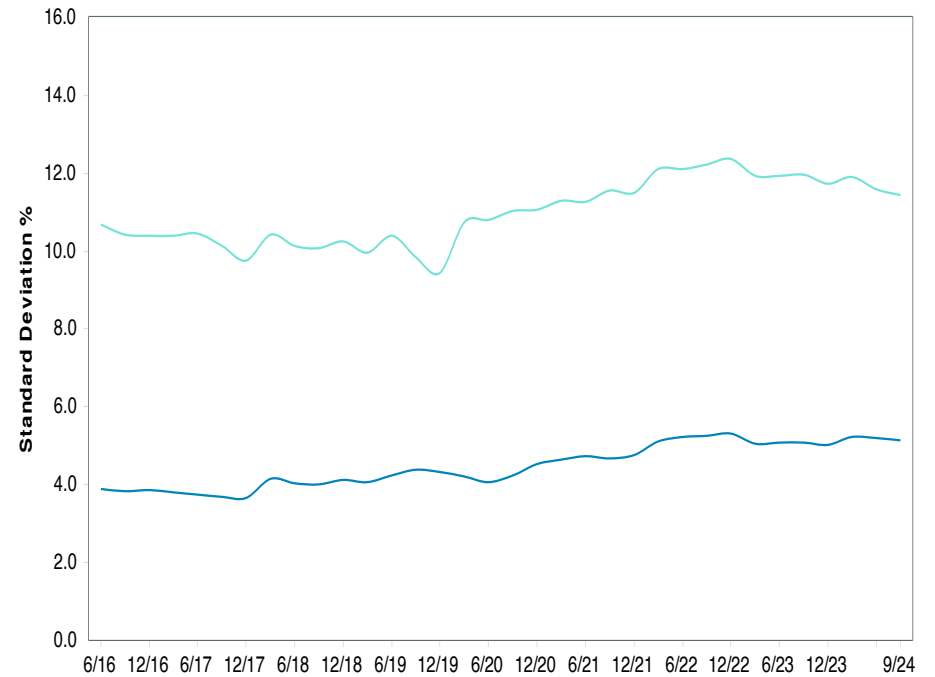
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



■ Graham      ■ HFRI Macro (Total) Index      ■ 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 5 Years



— Graham      — HFRI Macro (Total) Index

5 Years Historical Statistics

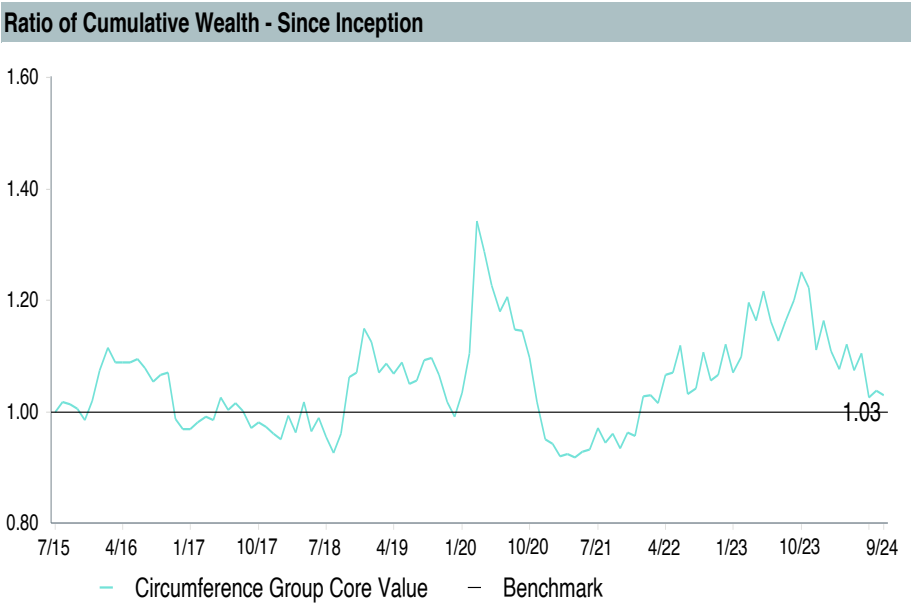
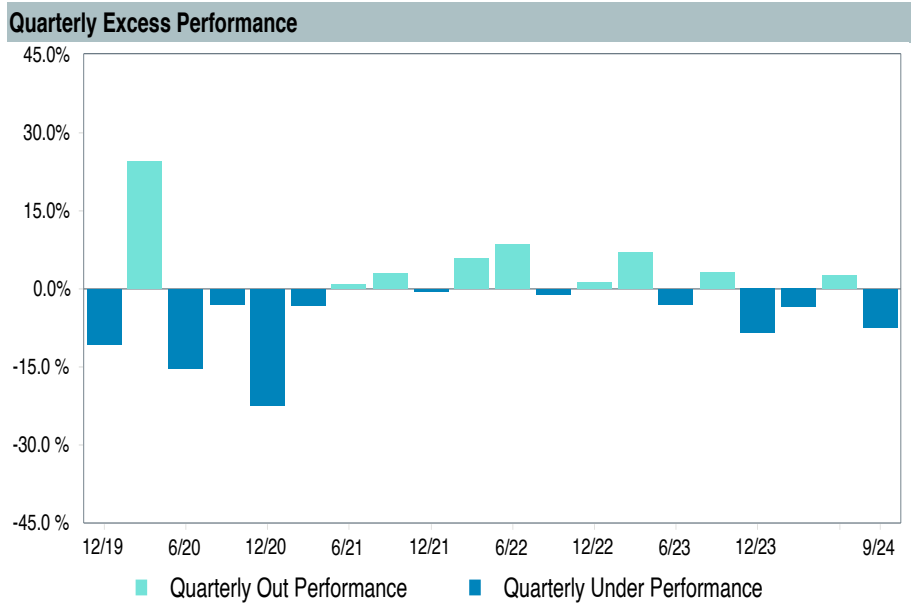
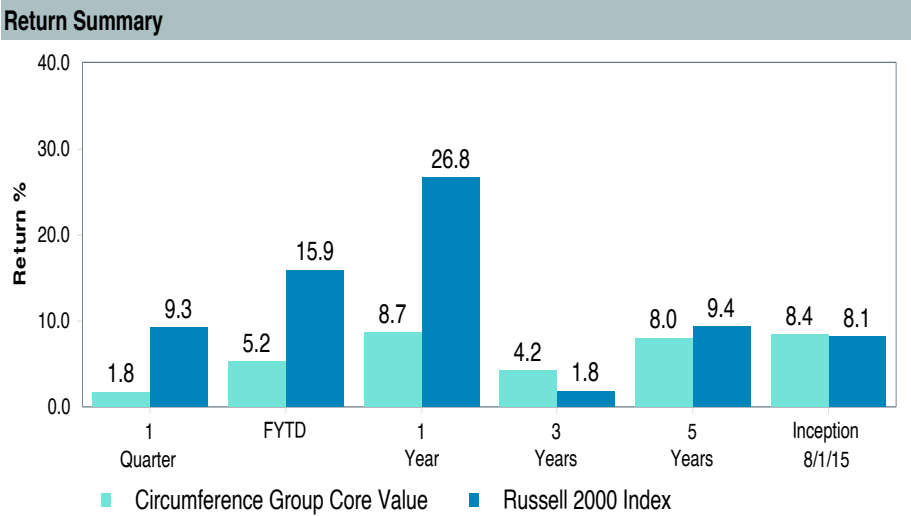
	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Graham	5.99	8.83	0.68	0.46	0.77	3.40	1.51	11.08	11.44	0.67
HFRI Macro (Total) Index	0.00	0.00	-	1.00	0.55	0.00	1.00	5.22	5.13	1.00
90 Day U.S. Treasury Bill	-2.93	5.30	-0.55	0.04	-	2.46	-0.03	2.32	0.66	-0.20



# Manager Performance Summary Circumference Group Core Value

As of September 30, 2024

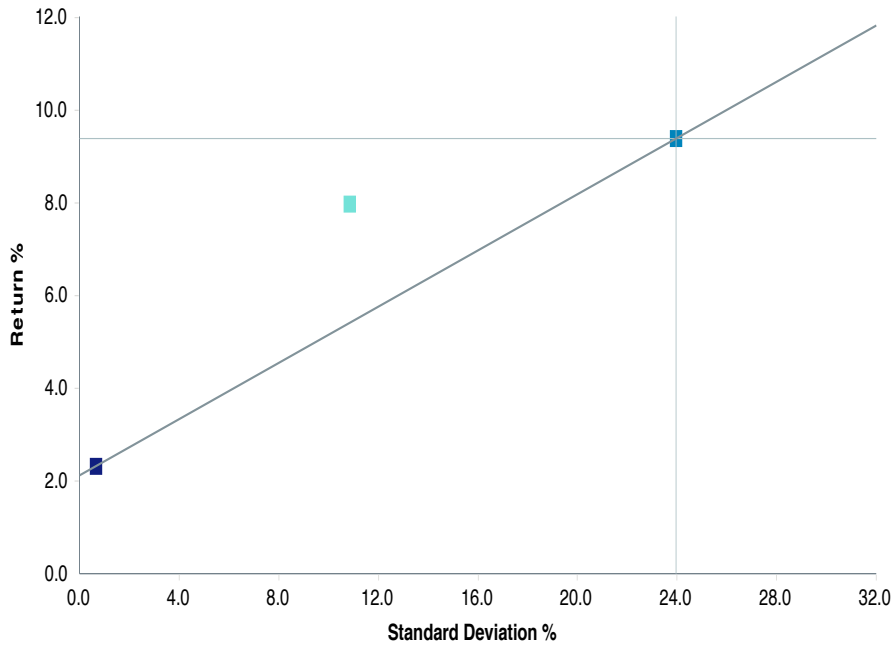
Account Information	
Account Name	Circumference Group Core Value
Inception Date	08/31/2015
Account Structure	Hedge Fund
Asset Class	US Hedge Fund
Benchmark	Russell 2000 Index
Peer Group	



# Risk Profile Circumference Group Core Value

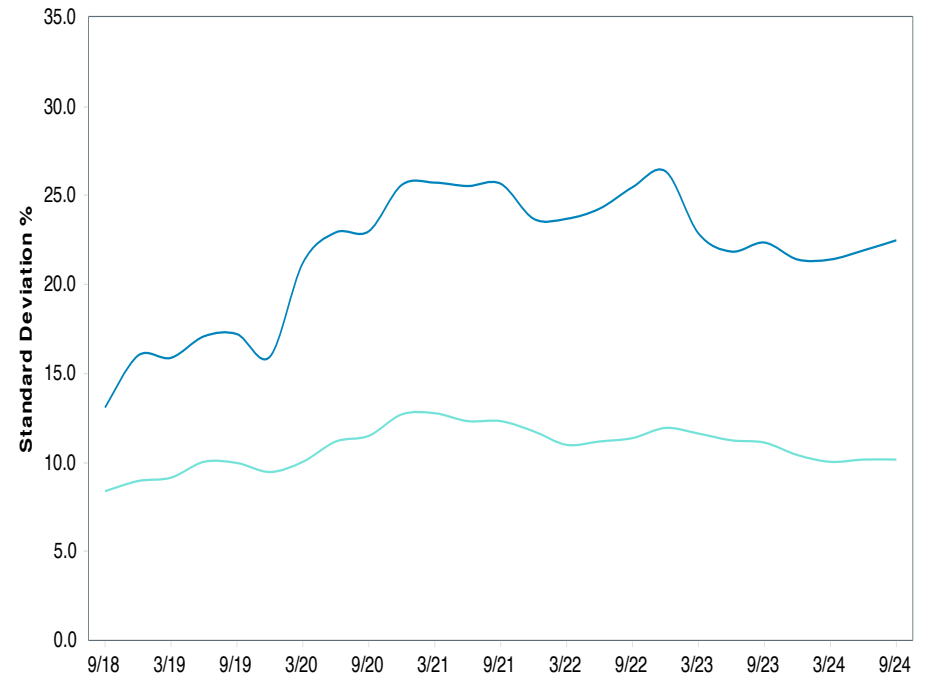
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



■ Circumference Group Core Value ■ Russell 2000 Index  
■ 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 3 Years



— Circumference Group Core Value — Russell 2000 Index

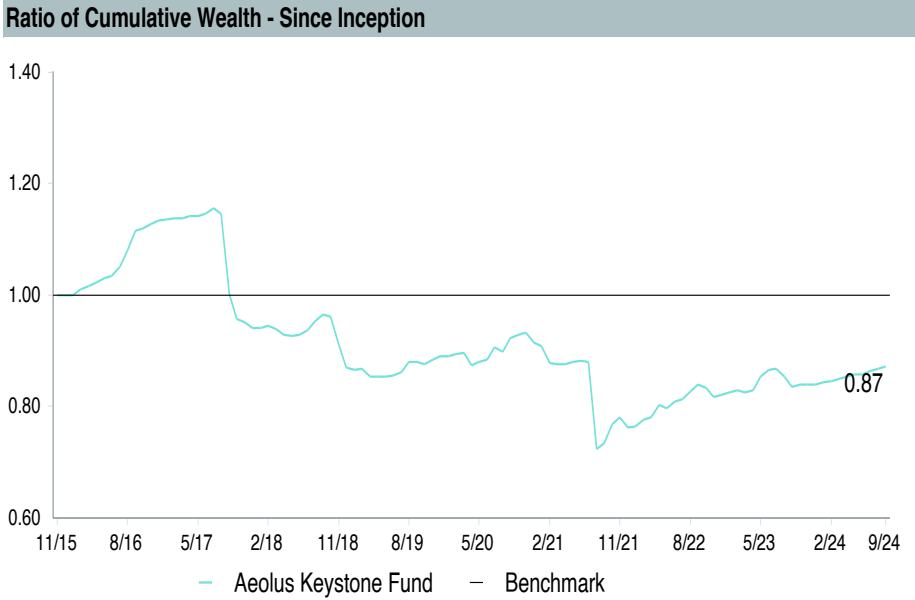
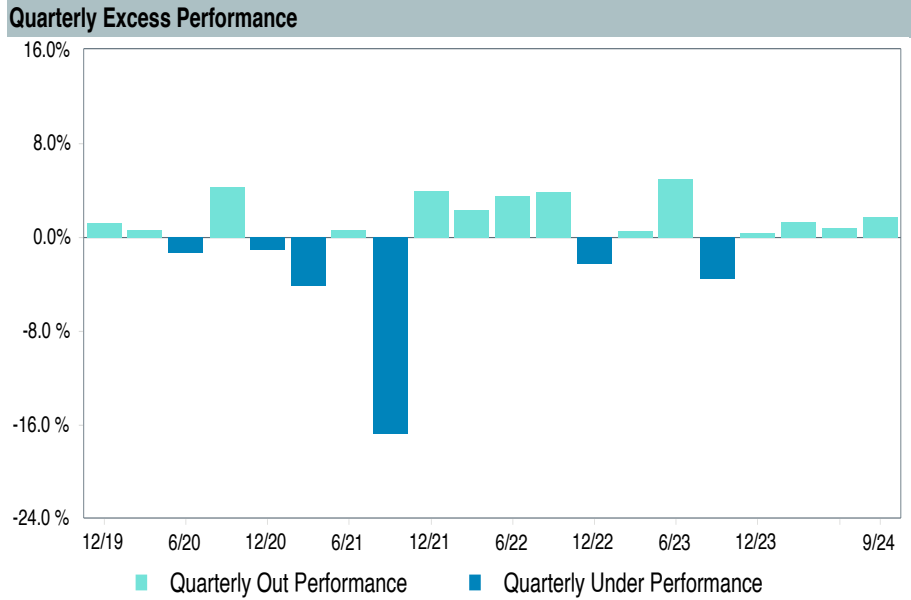
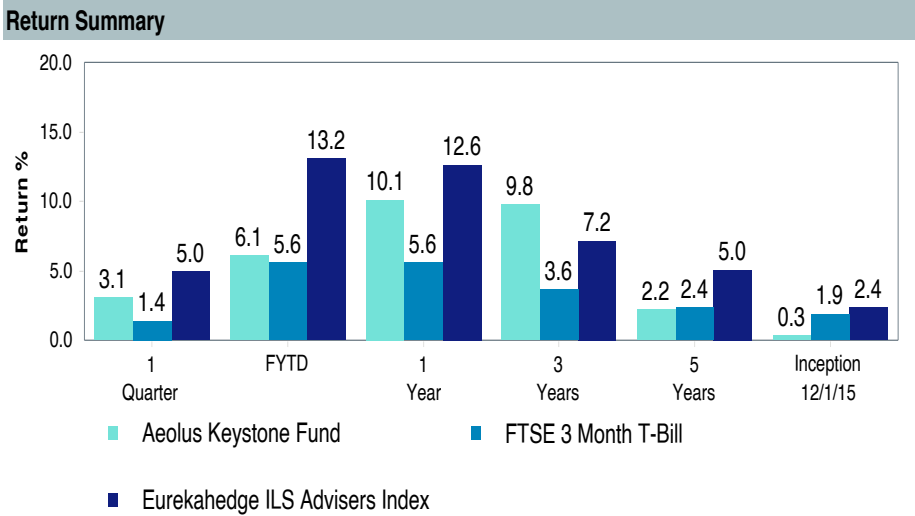
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Circumference Group Core Value	-3.58	16.74	-0.21	0.63	0.55	4.10	0.36	7.99	10.87	0.79
Russell 2000 Index	0.00	0.00	-	1.00	0.40	0.00	1.00	9.39	23.96	1.00
90 Day U.S. Treasury Bill	-9.56	24.03	-0.40	0.01	-	2.35	0.00	2.32	0.66	-0.09

# Manager Performance Summary Aeolus Keystone Fund

As of September 30, 2024

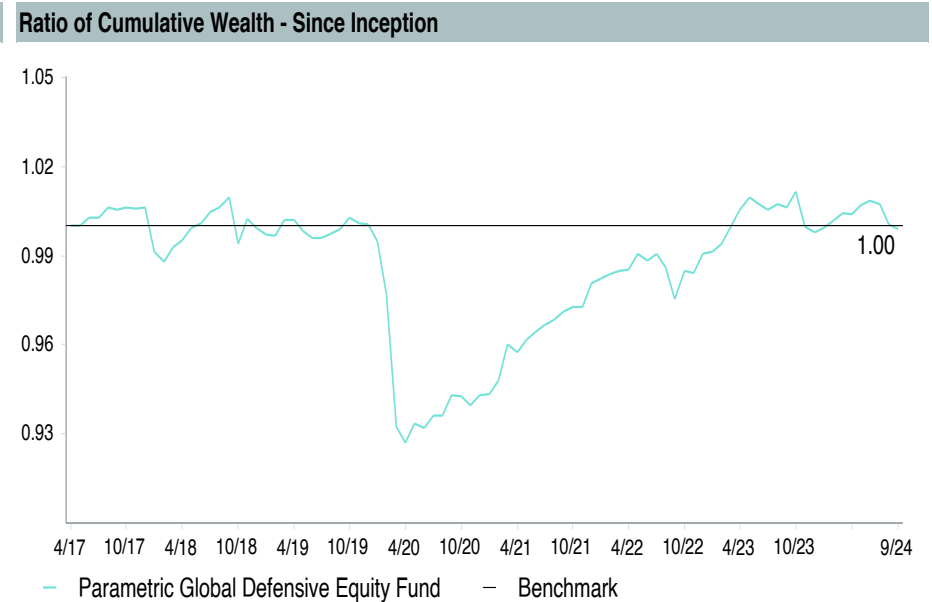
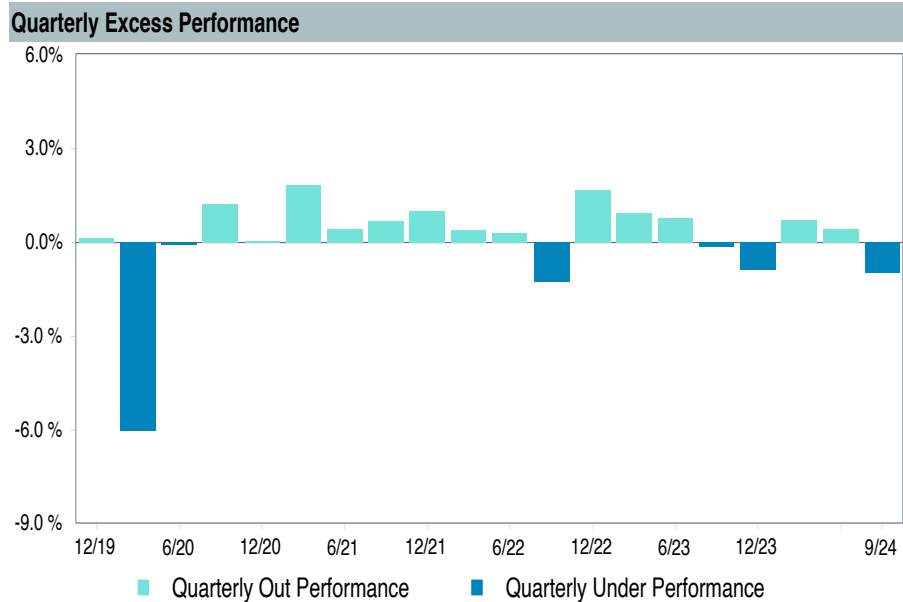
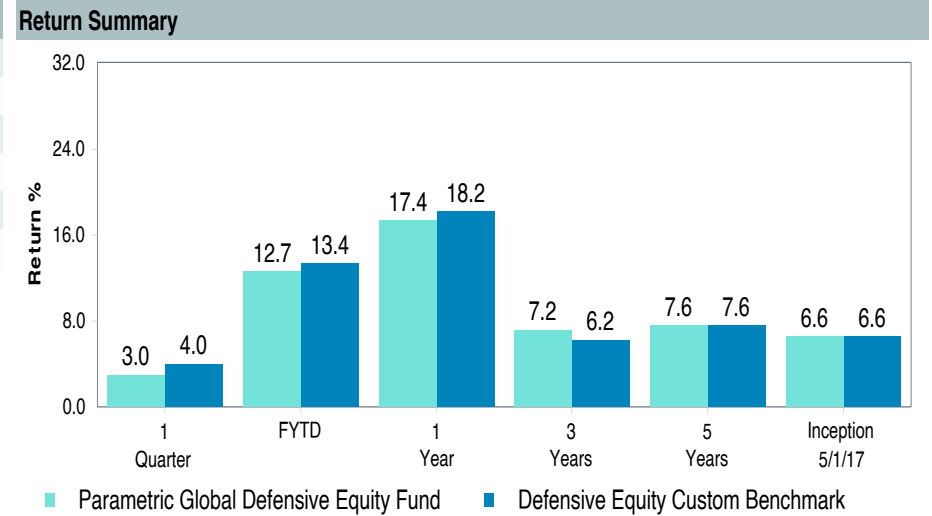
Account Information	
Account Name	Aeolus Keystone Fund
Inception Date	12/01/2015
Account Structure	Hedge Fund
Asset Class	Hedge Fund
Benchmark	FTSE 3 Month T-Bill
Peer Group	



# Manager Performance Summary Parametric Global Defensive Equity

As of September 30, 2024

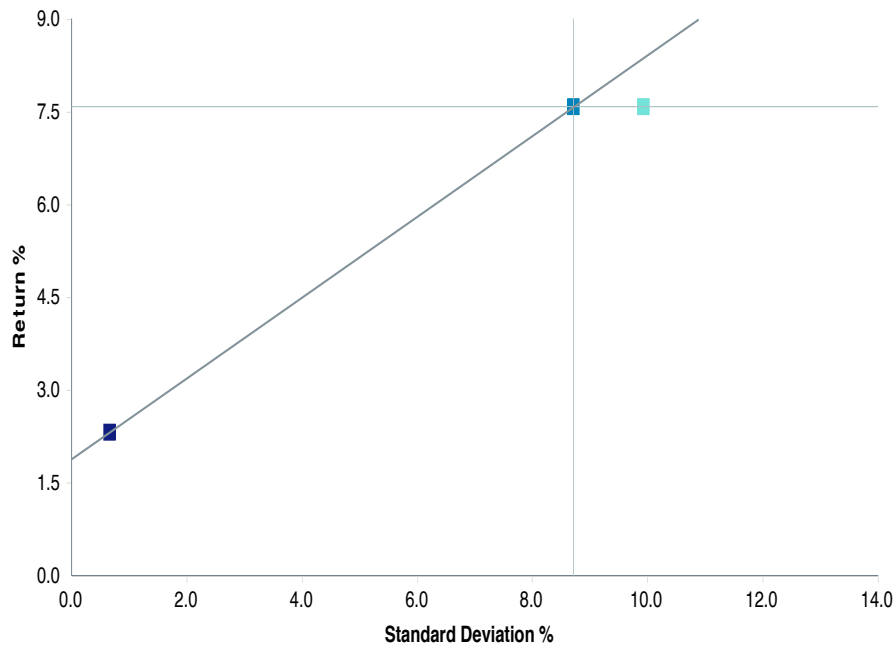
Account Information	
Account Name	Parametric Global Defensive Equity Fund
Inception Date	06/01/2017
Account Structure	Commingled Fund
Asset Class	Global Equity
Benchmark	Defensive Equity Custom Benchmark
Peer Group	



# Risk Profile Parametric Global Defensive Equity Fund

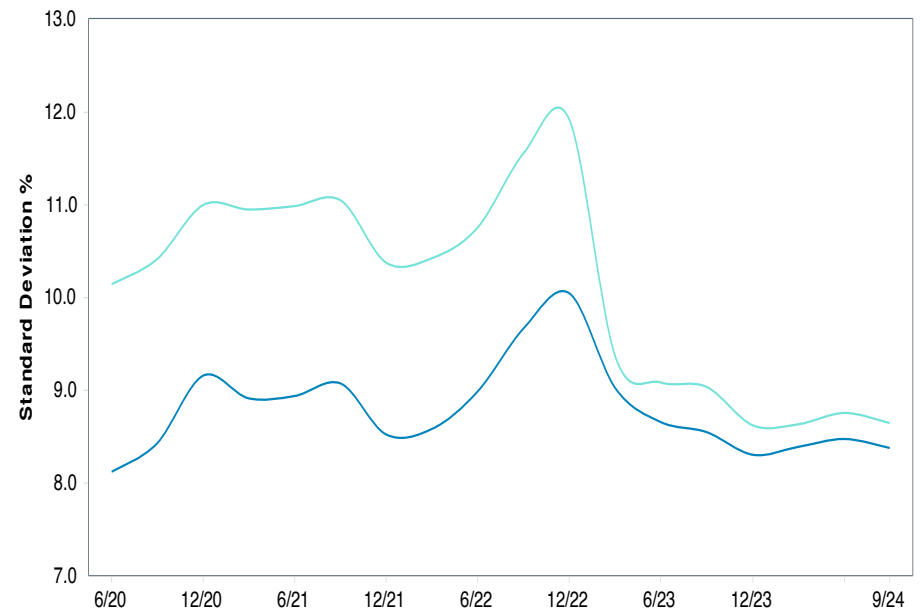
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
5 Years



- Parametric Global Defensive Equity Fund
- Defensive Equity Custom Benchmark
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 3 Years



- Parametric Global Defensive Equity Fund
- Defensive Equity Custom Benchmark

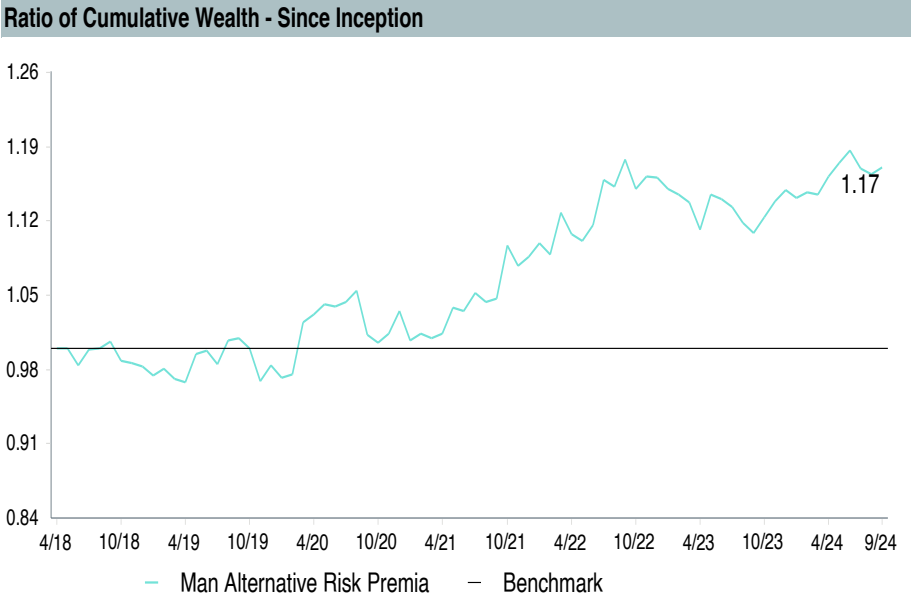
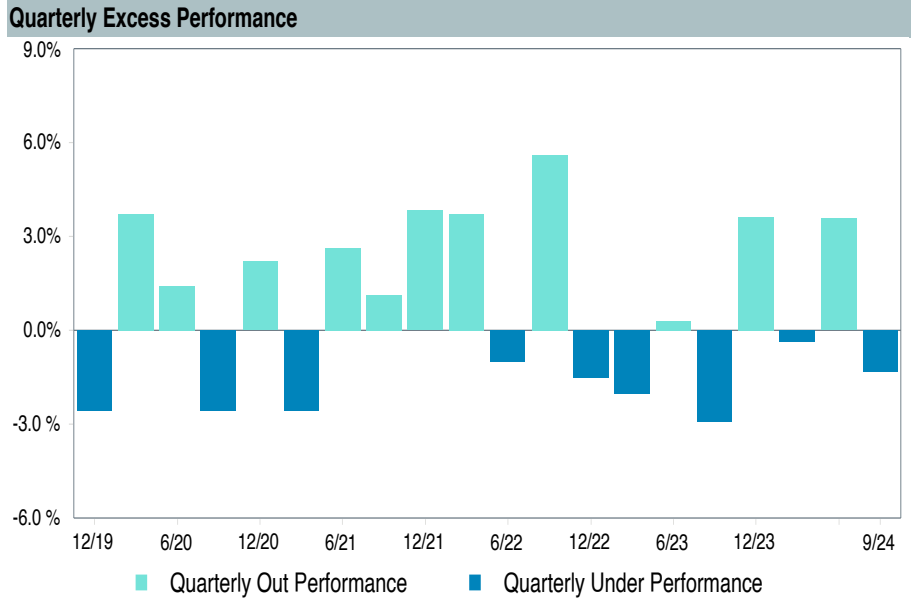
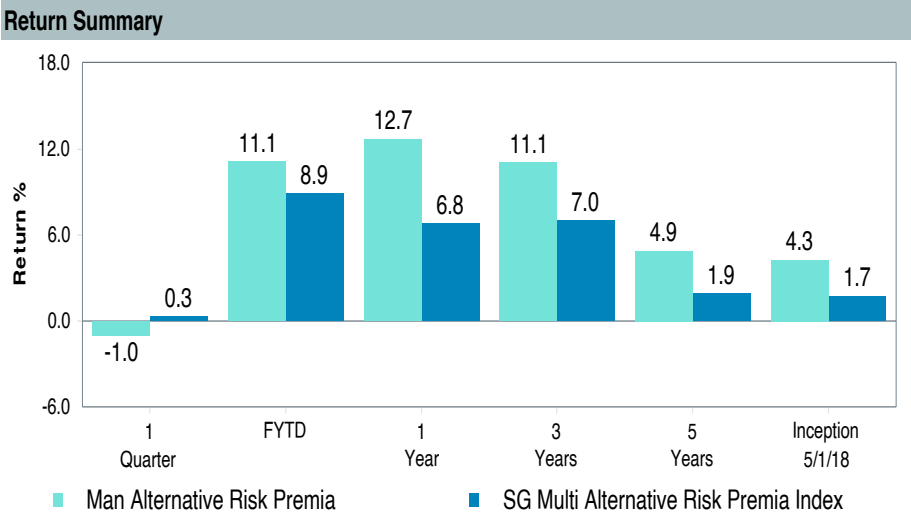
## 5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Parametric Global Defensive Equity Fund	0.12	2.61	0.05	0.94	0.56	-0.68	1.10	7.58	9.93	0.97
Defensive Equity Custom Benchmark	0.00	0.00	-	1.00	0.62	0.00	1.00	7.58	8.72	1.00
90 Day U.S. Treasury Bill	-5.41	8.72	-0.62	0.00	-	2.30	0.00	2.32	0.66	0.03

# Manager Performance Summary Man Alternative Risk Premia

As of September 30, 2024

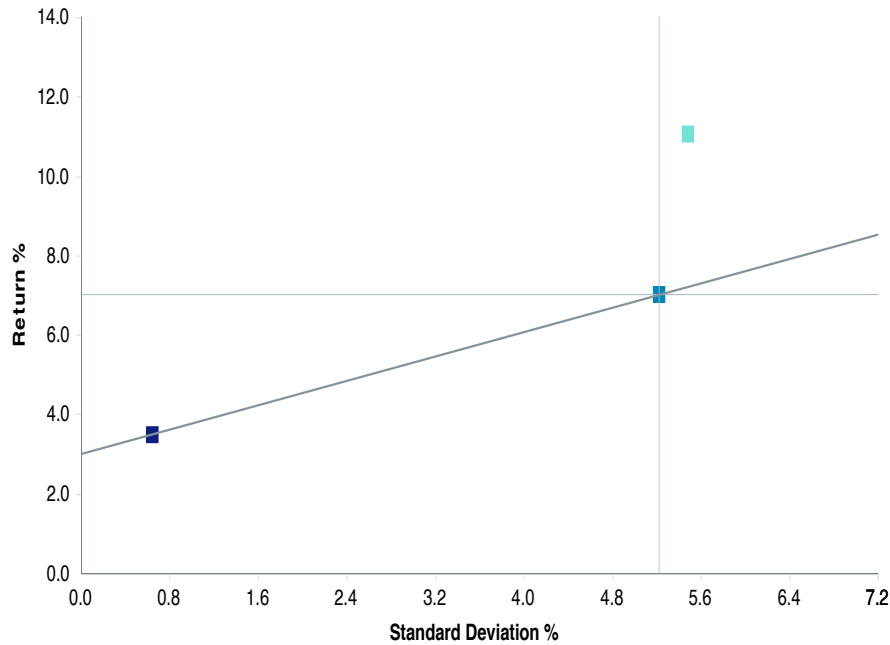
Account Information	
Account Name	Man Alternative Risk Premia
Inception Date	06/01/2018
Account Structure	Commingled Fund
Asset Class	US Equity
Benchmark	SG Multi Alternative Risk Premia Index
Peer Group	



# Risk Profile Man Alternative Risk Premia

As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
3 Years



- Man Alternative Risk Premia
- SG Multi Alternative Risk Premia Index
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 3 Years



- Man Alternative Risk Premia
- SG Multi Alternative Risk Premia Index

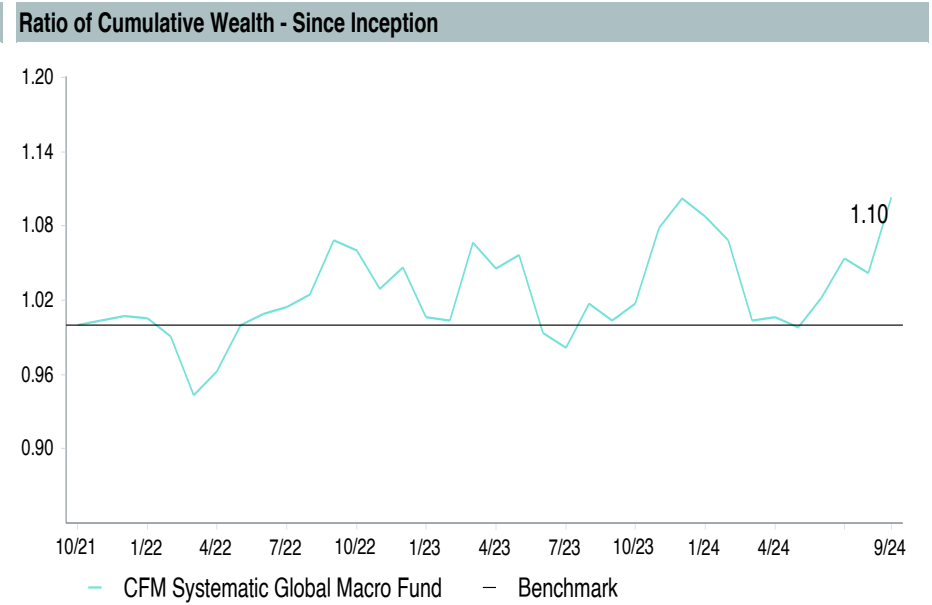
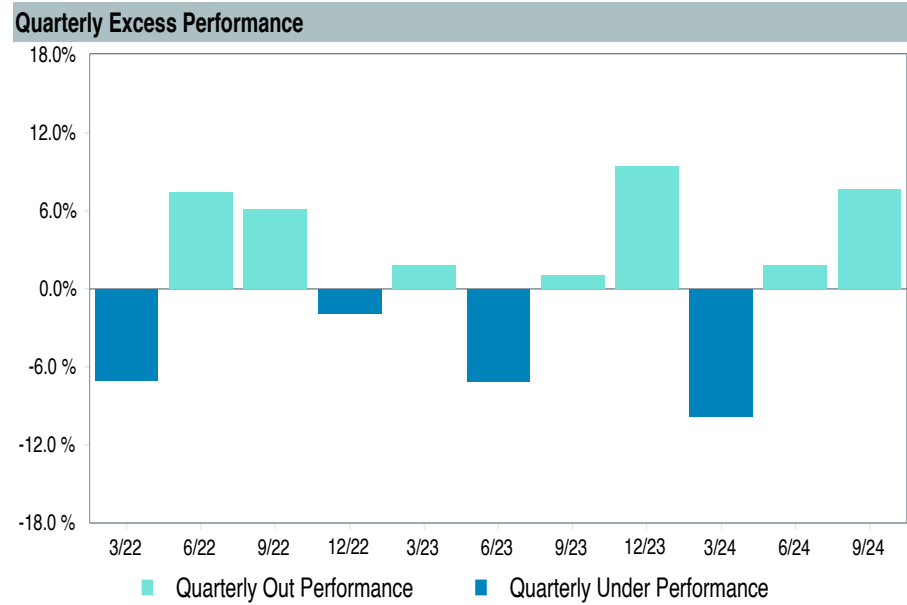
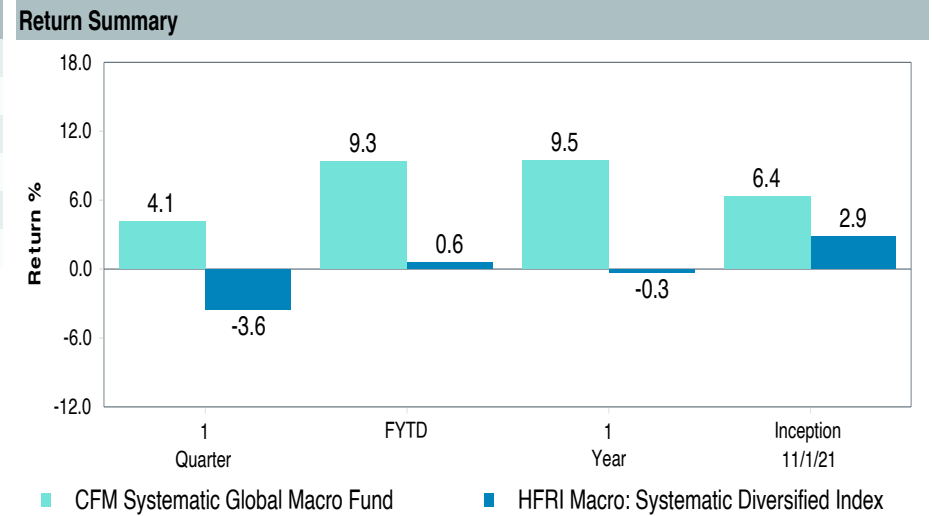
## 3 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Man Alternative Risk Premia	3.75	5.85	0.64	0.16	1.29	8.02	0.42	11.06	5.48	0.40
SG Multi Alternative Risk Premia Index	0.00	0.00	-	1.00	0.67	0.00	1.00	7.02	5.22	1.00
90 Day U.S. Treasury Bill	-3.49	5.22	-0.67	0.00	-	3.44	0.01	3.49	0.64	0.07

# Manager Performance Summary CFM Systematic Global Macro Fund

As of September 30, 2024

Account Information	
Account Name	CFM Systematic Global Macro Fund
Inception Date	11/01/2021
Account Structure	Commingled Fund
Asset Class	US Equity
Benchmark	HFRI Macro: Systematic Diversified Index
Peer Group	

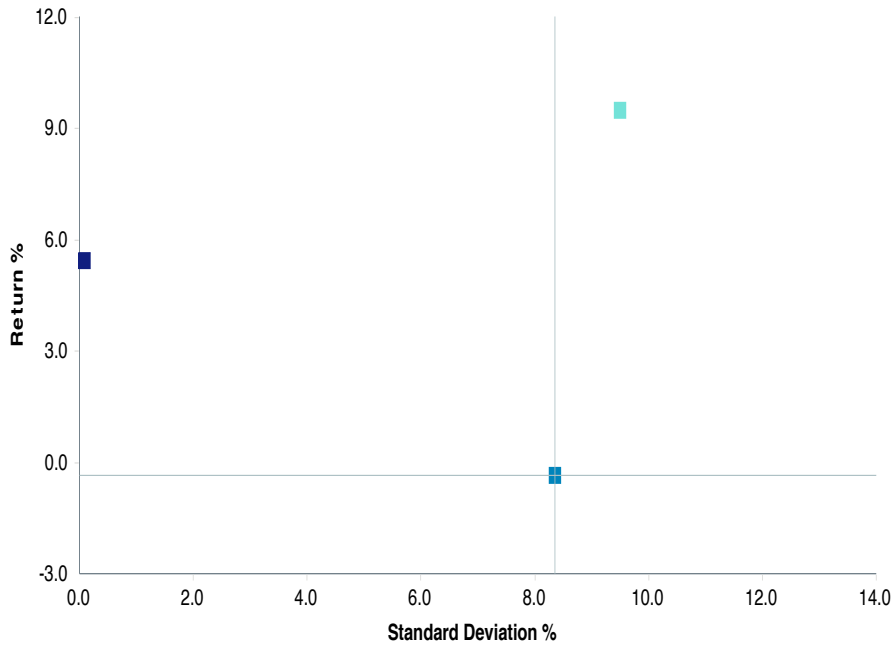




# Risk Profile CFM Systematic Global Macro Fund

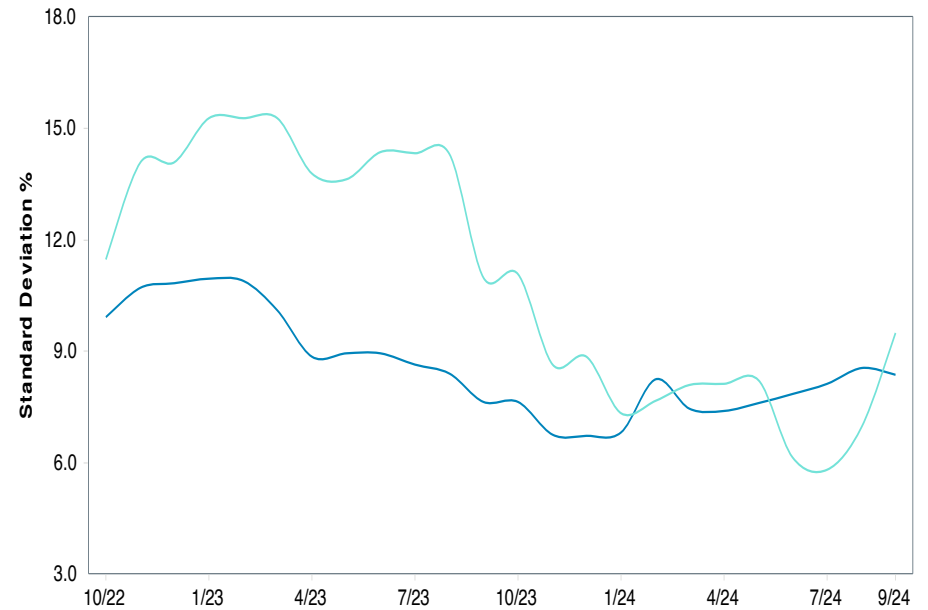
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
1 Year



- CFM Systematic Global Macro Fund
- HFRI Macro: Systematic Diversified Index
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 1 Year



- CFM Systematic Global Macro Fund
- HFRI Macro: Systematic Diversified Index

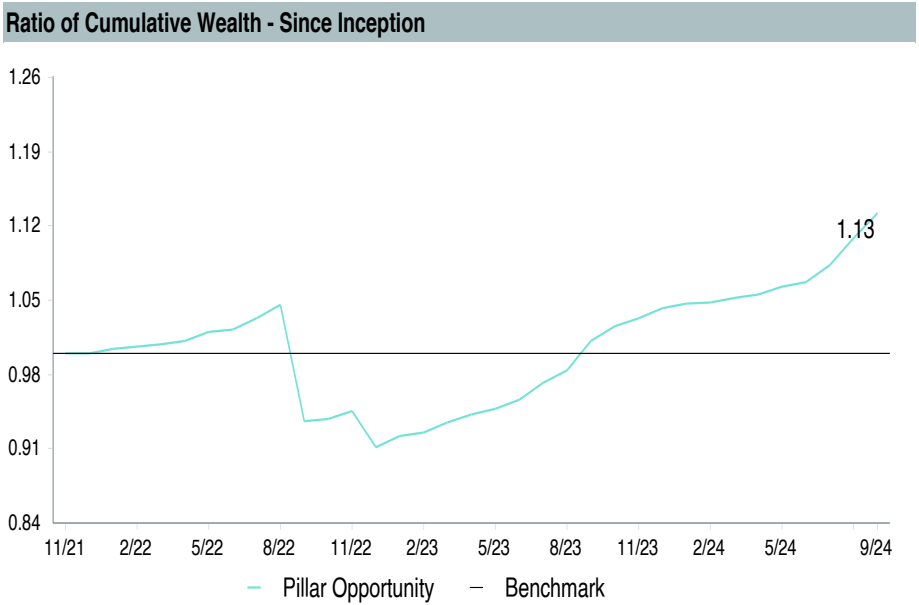
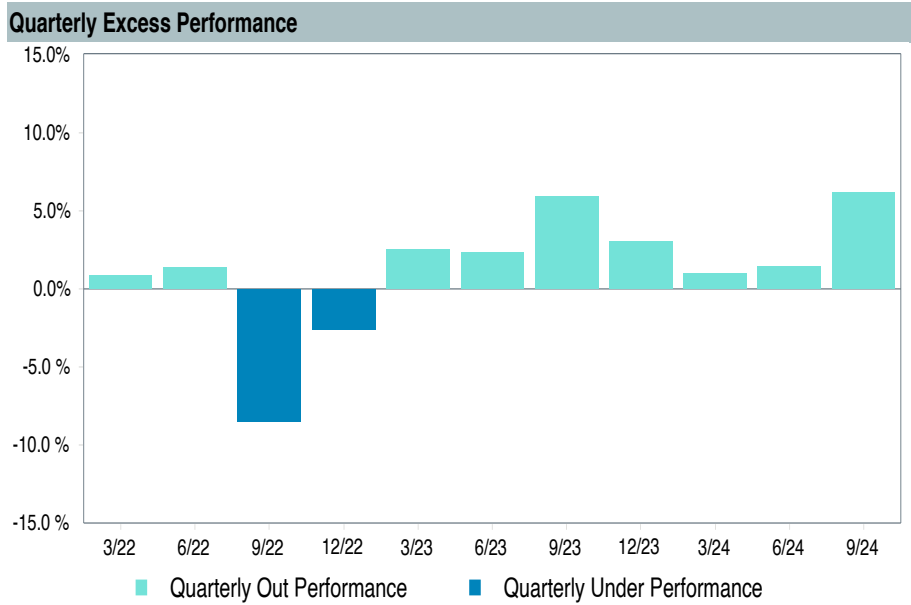
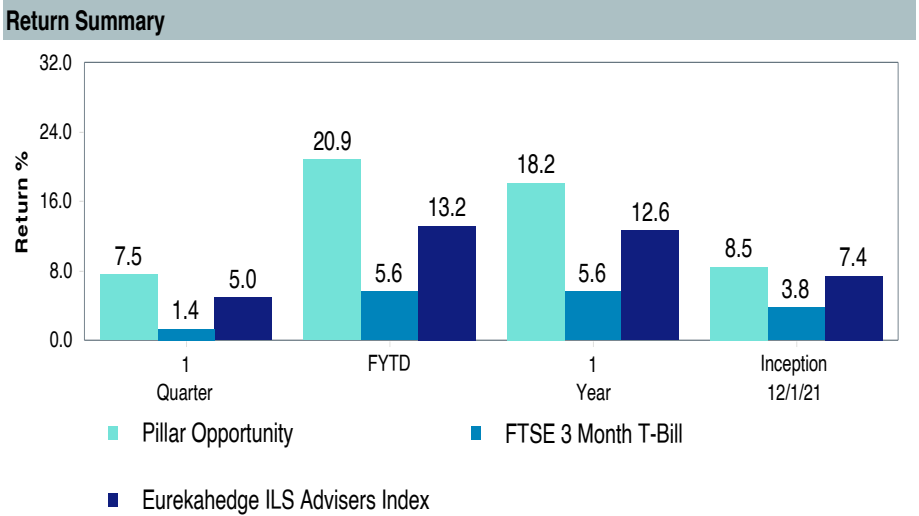
## 1 Year Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
CFM Systematic Global Macro Fund	9.53	11.92	0.80	0.01	0.44	9.94	0.13	9.49	9.50	0.11
HFRI Macro: Systematic Diversified Index	0.00	0.00	-	1.00	-0.64	0.00	1.00	-0.33	8.35	1.00
90 Day U.S. Treasury Bill	5.34	8.39	0.64	0.19	-	5.46	0.00	5.46	0.08	-0.43

# Manager Performance Summary Pillar Opportunity

As of September 30, 2024

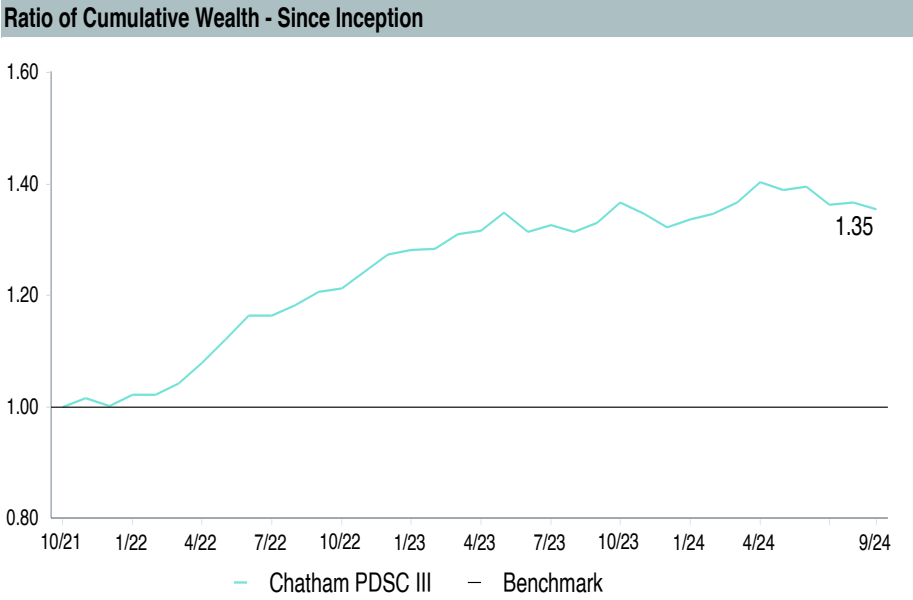
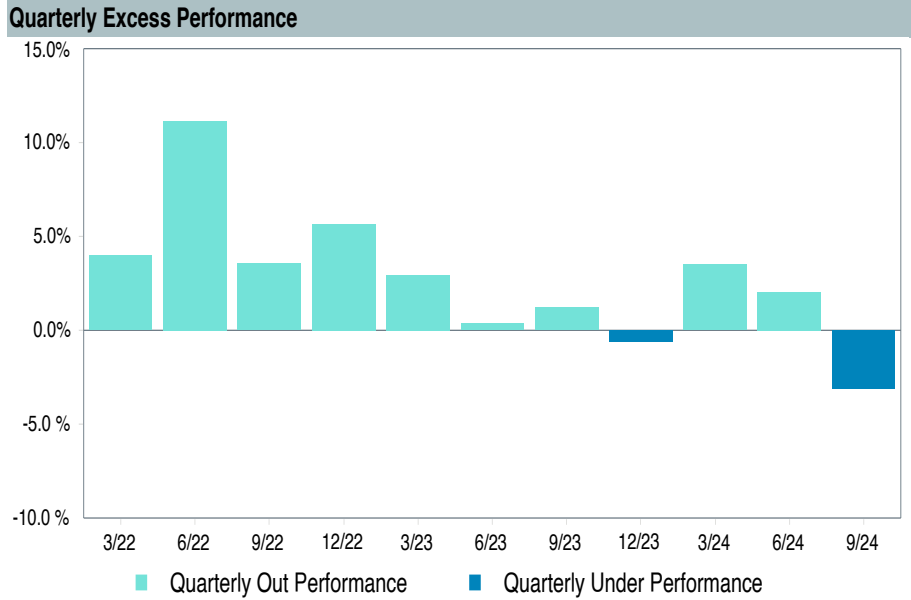
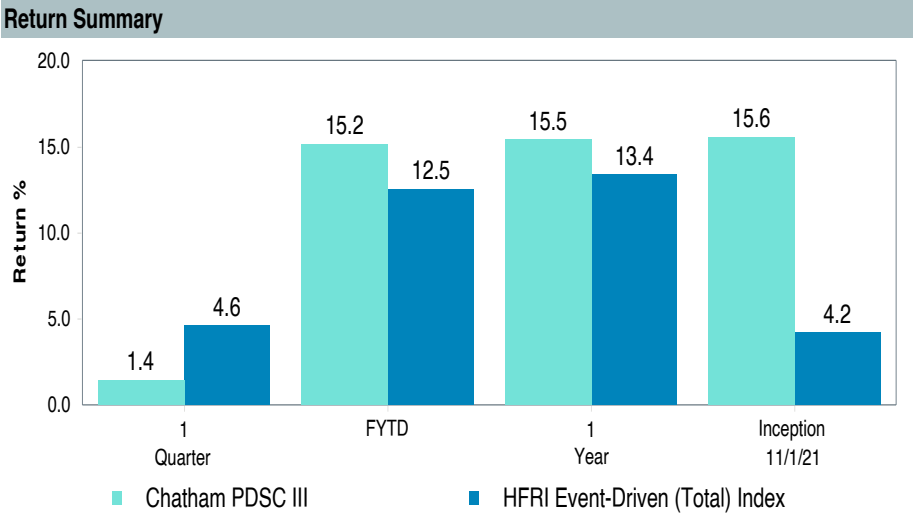
Account Information	
Account Name	Pillar Opportunity
Inception Date	12/01/2021
Account Structure	Commingled Fund
Asset Class	US Equity
Benchmark	FTSE 3 Month T-Bill
Peer Group	



# Manager Performance Summary Chatham PDSC III

As of September 30, 2024

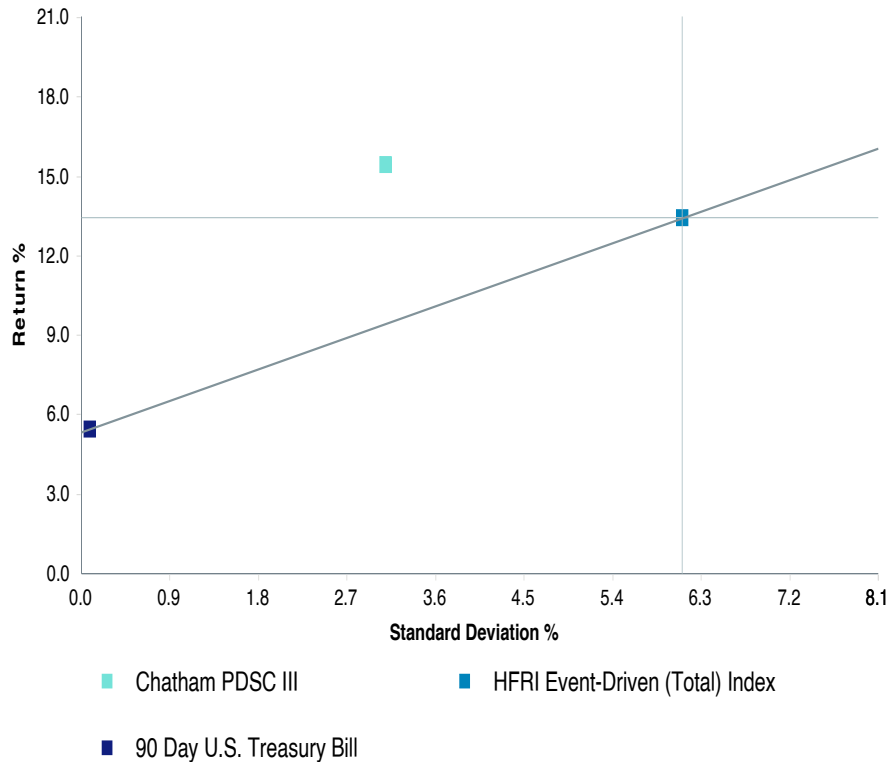
Account Information	
Account Name	Chatham PDSC III
Inception Date	11/01/2021
Account Structure	Separate Account
Asset Class	Hedge Fund
Benchmark	HFRI Event-Driven (Total) Index
Peer Group	



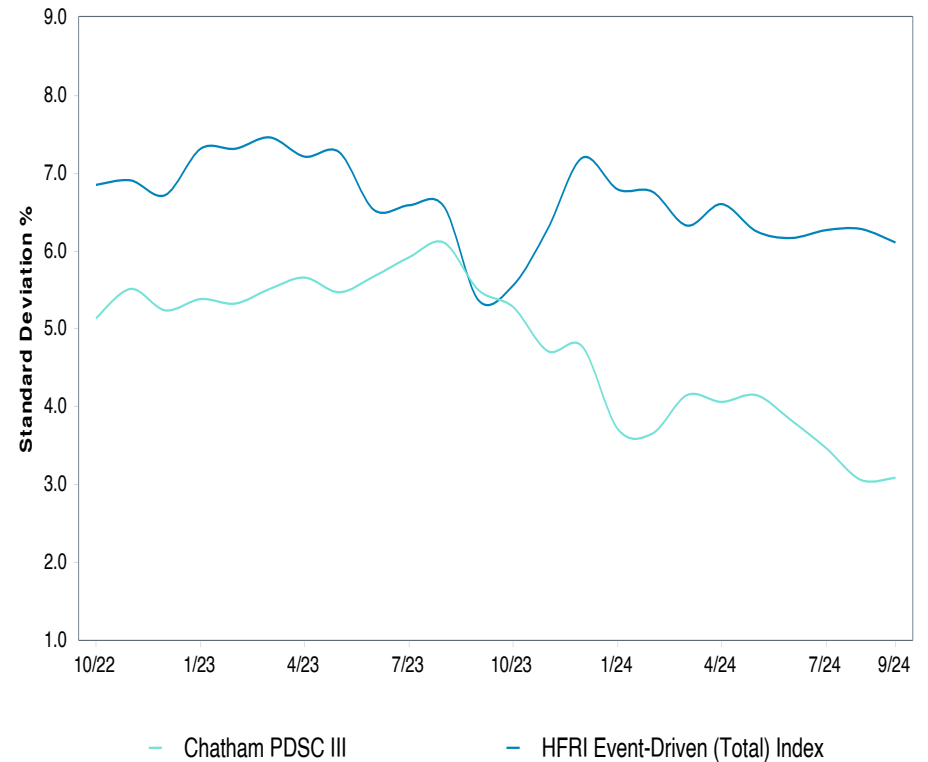
# Risk Profile Chatham PDSC III

As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
1 Year



Standard Deviation  
Rolling 1 Year



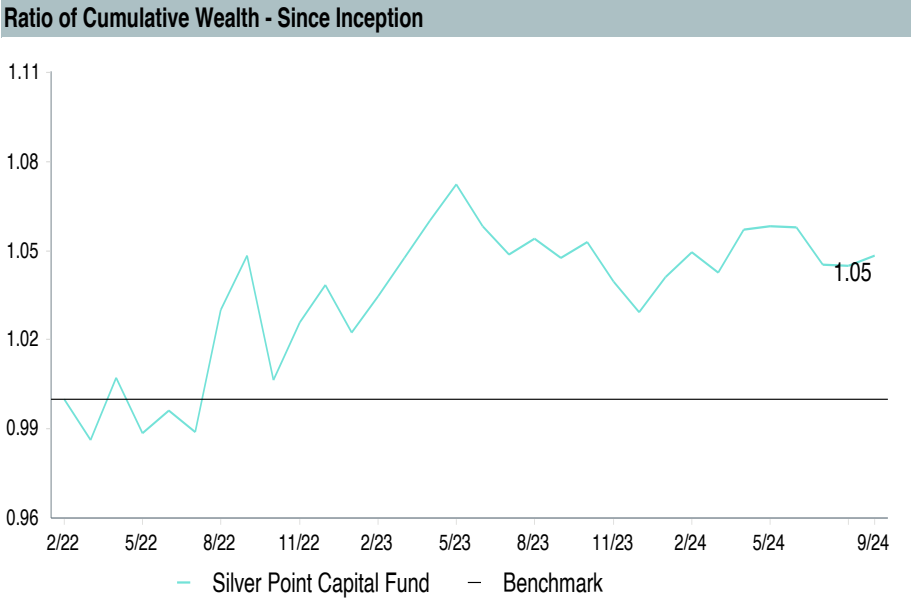
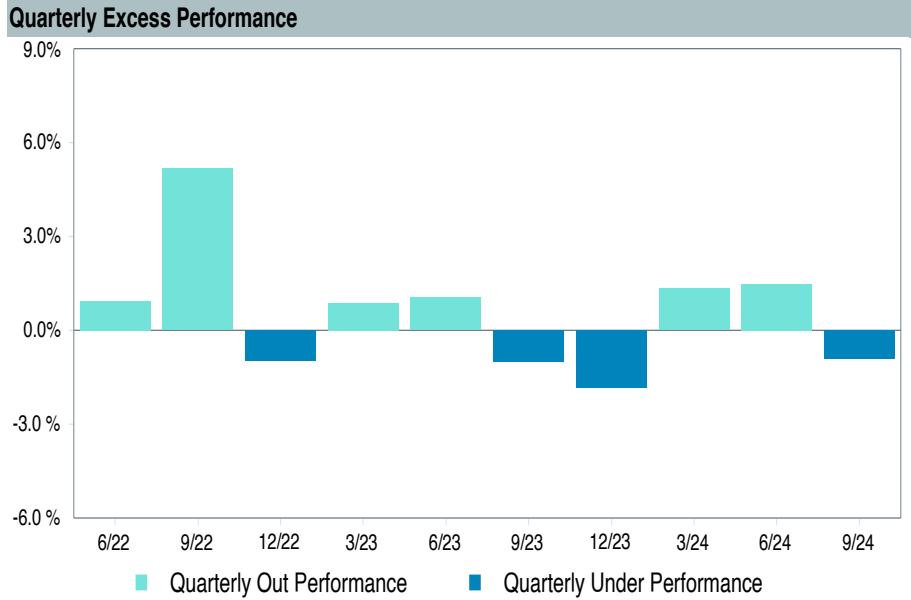
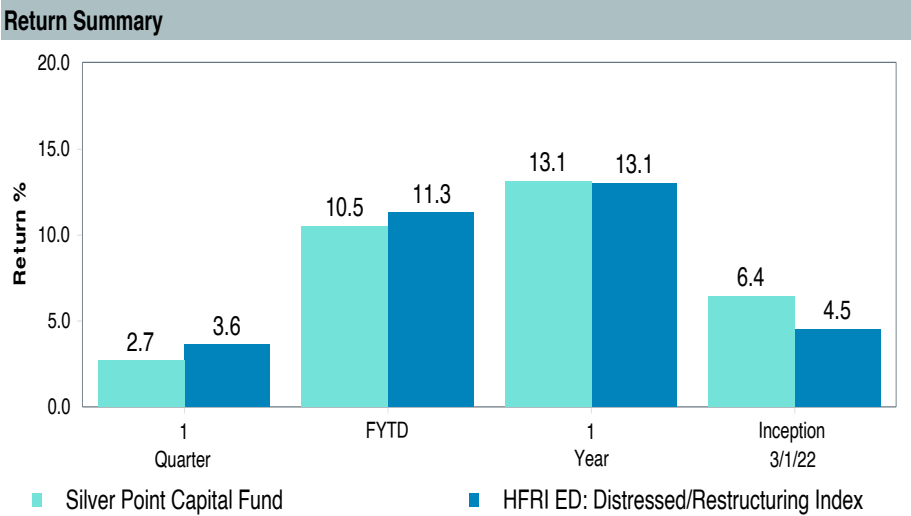
## 1 Year Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Chatham PDSC III	1.66	5.85	0.28	0.11	2.98	13.05	0.17	15.45	3.09	0.33
HFRI Event-Driven (Total) Index	0.00	0.00	-	1.00	1.24	0.00	1.00	13.43	6.11	1.00
90 Day U.S. Treasury Bill	-7.51	6.08	-1.24	0.14	-	5.39	0.00	5.46	0.08	0.37

# Manager Performance Summary Silver Point Capital Fund

As of September 30, 2024

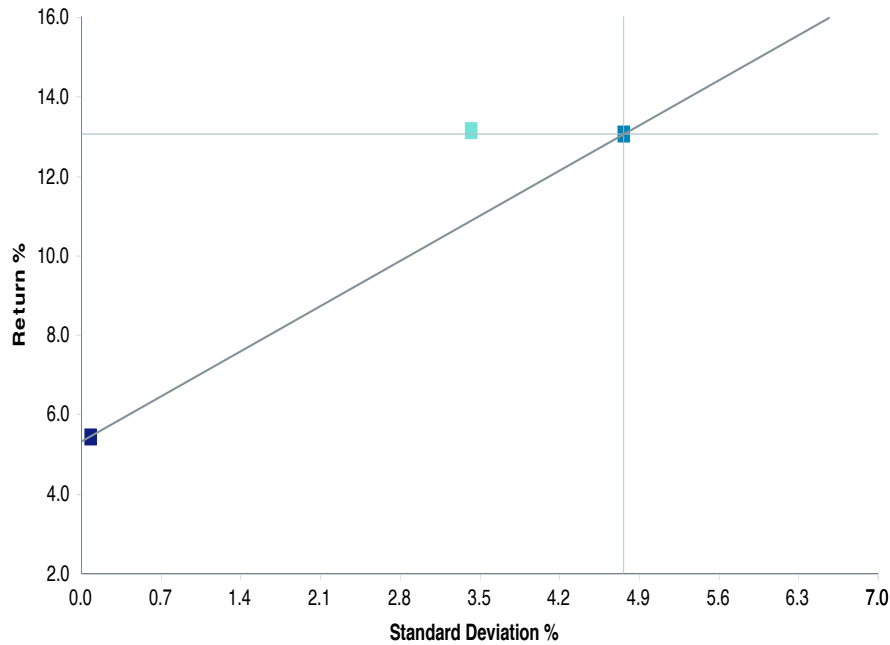
Account Information	
Account Name	Silver Point Capital Fund
Inception Date	03/01/2022
Account Structure	Separate Account
Asset Class	Hedge Fund
Benchmark	HFRI ED: Distressed/Restructuring Index
Peer Group	



# Risk Profile Silver Point Capital Fund

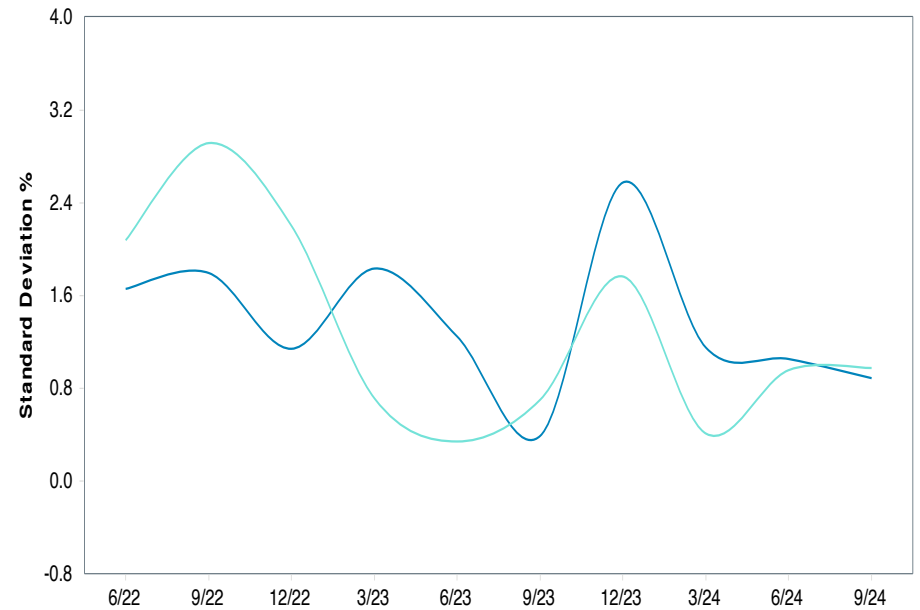
As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
1 Year



- Silver Point Capital Fund
- HFRI ED: Distressed/Restructuring Index
- 90 Day U.S. Treasury Bill

Standard Deviation  
Rolling 0.25 Year



- Silver Point Capital Fund
- HFRI ED: Distressed/Restructuring Index

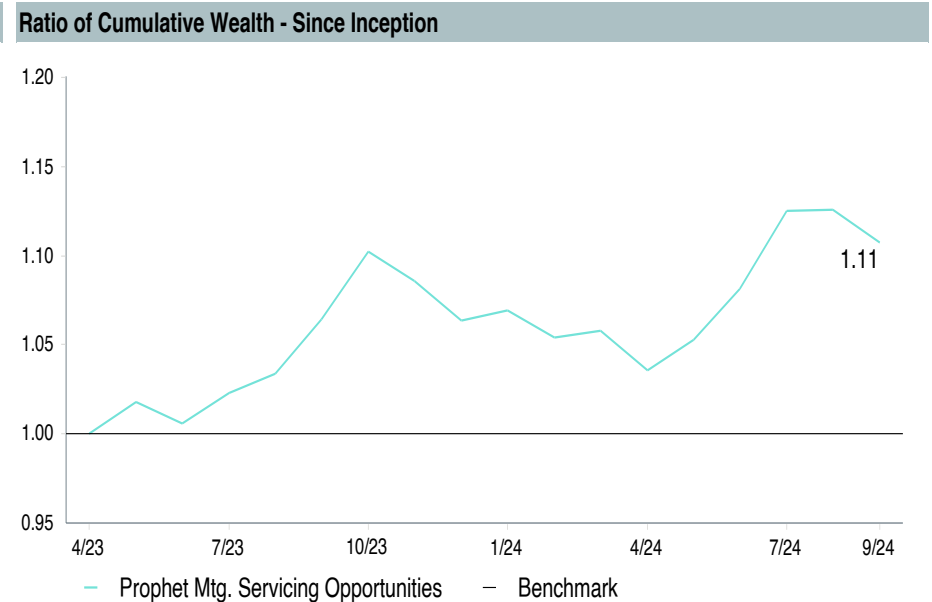
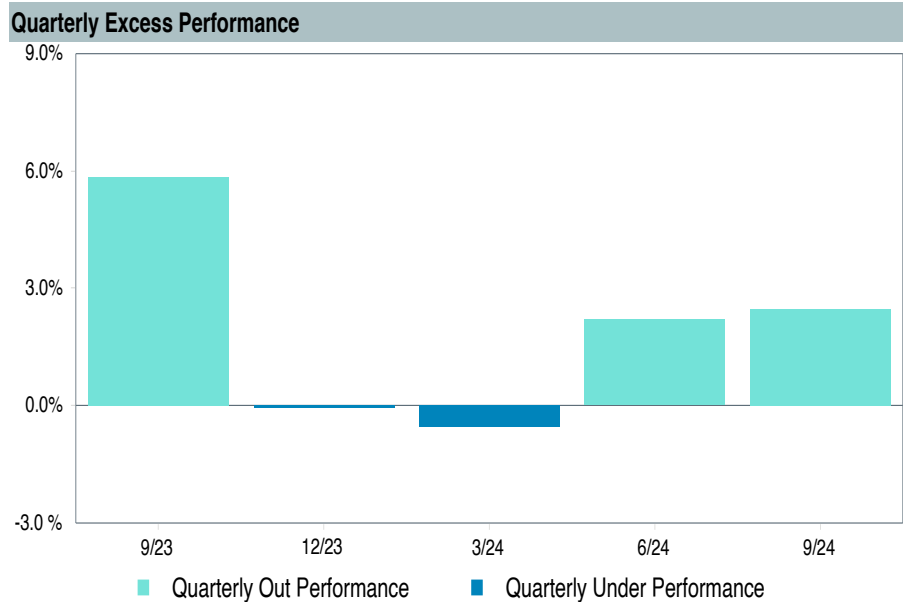
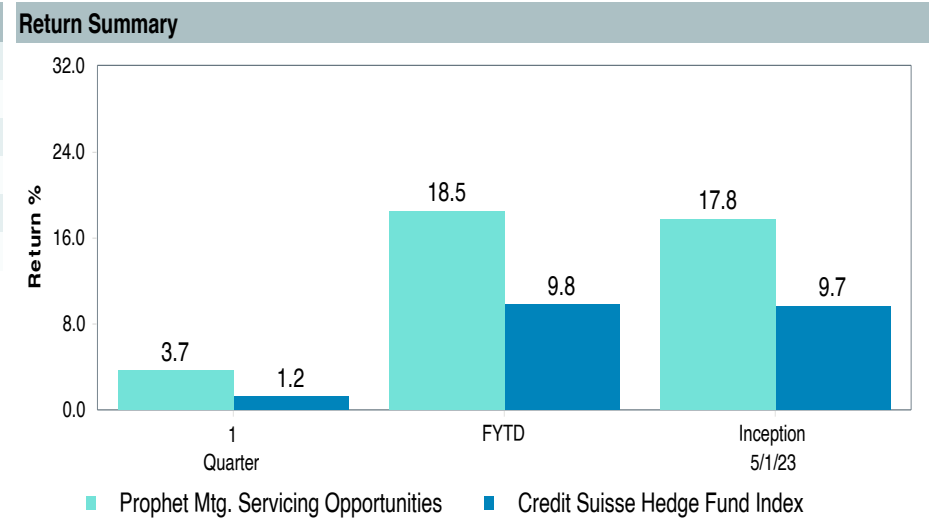
1 Year Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Silver Point Capital Fund	0.03	3.12	0.01	0.57	2.09	5.85	0.54	13.14	3.42	0.76
HFRI ED: Distressed/Restructuring Index	0.00	0.00	-	1.00	1.50	0.00	1.00	13.06	4.76	1.00
90 Day U.S. Treasury Bill	-7.11	4.73	-1.50	0.14	-	5.37	0.01	5.46	0.08	0.38

# Manager Performance Summary Prophet Mtg. Servicing Opportunit

## As of September 30, 2024

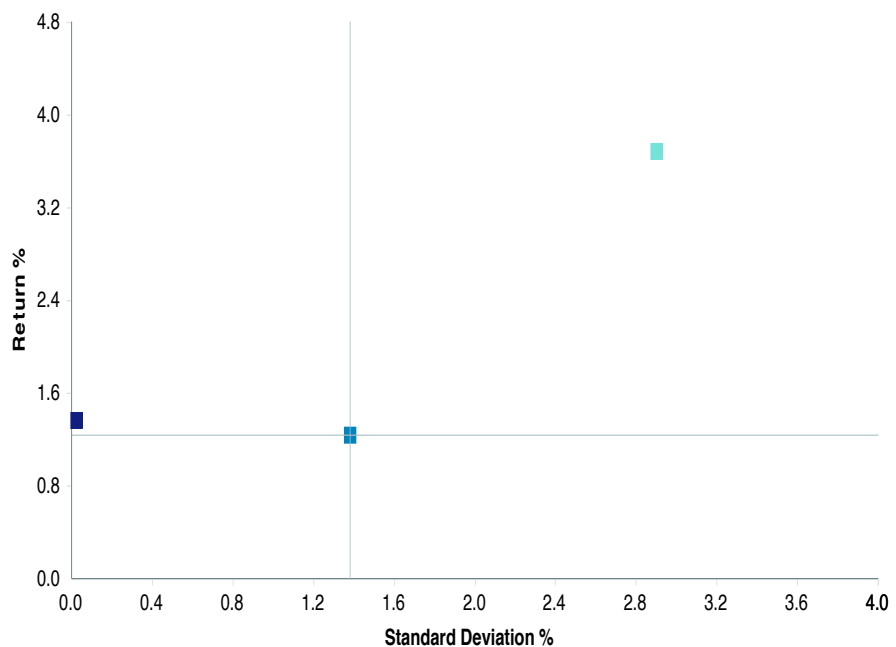
Account Information	
Account Name	Prophet Mtg. Servicing Opportunities
Inception Date	04/01/2023
Account Structure	Separate Account
Asset Class	Hedge Fund
Benchmark	Credit Suisse Hedge Fund Index
Peer Group	



# Risk Profile Prophet Mtg. Servicing Opportunities

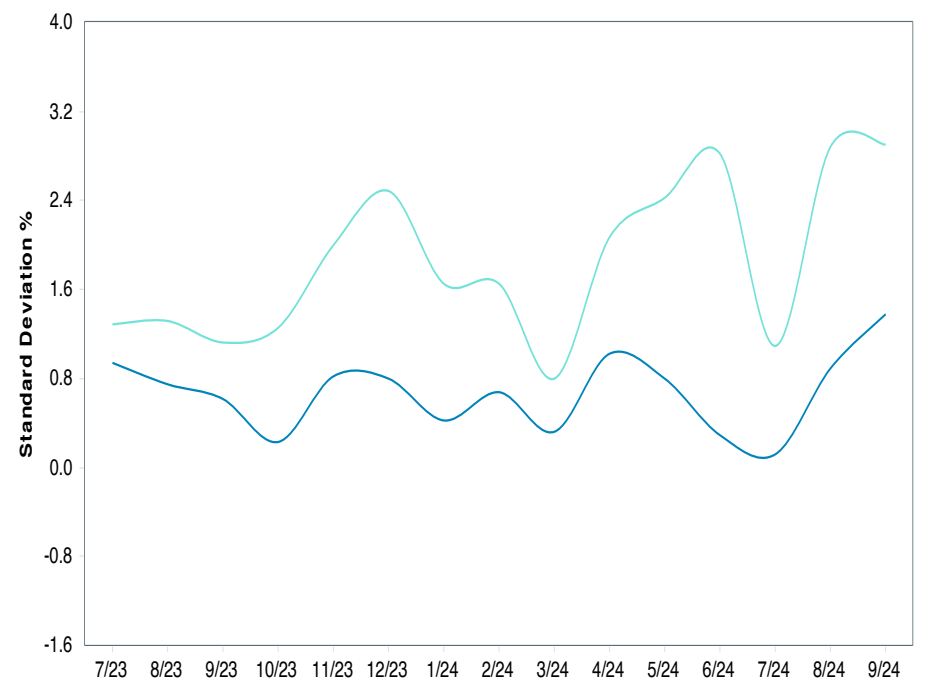
As of September 30, 2024

**Annualized Return vs. Annualized Standard Deviation  
1 Quarter**



- Prophet Mtg. Servicing Opportunities
- Credit Suisse Hedge Fund Index
- 90 Day U.S. Treasury Bill

**Standard Deviation  
Rolling 0.25 Year**



- Prophet Mtg. Servicing Opportunities
- Credit Suisse Hedge Fund Index

**1 Quarter Historical Statistics**

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Prophet Mtg. Servicing Opportunities	0.83	2.93	0.28	0.05	0.27	1.05	0.45	3.69	2.90	0.22
Credit Suisse Hedge Fund Index	0.00	0.00	-	1.00	-0.03	0.00	1.00	1.24	1.38	1.00
90 Day U.S. Treasury Bill	0.04	1.40	0.03	0.97	-	0.46	-0.02	1.37	0.02	-0.98

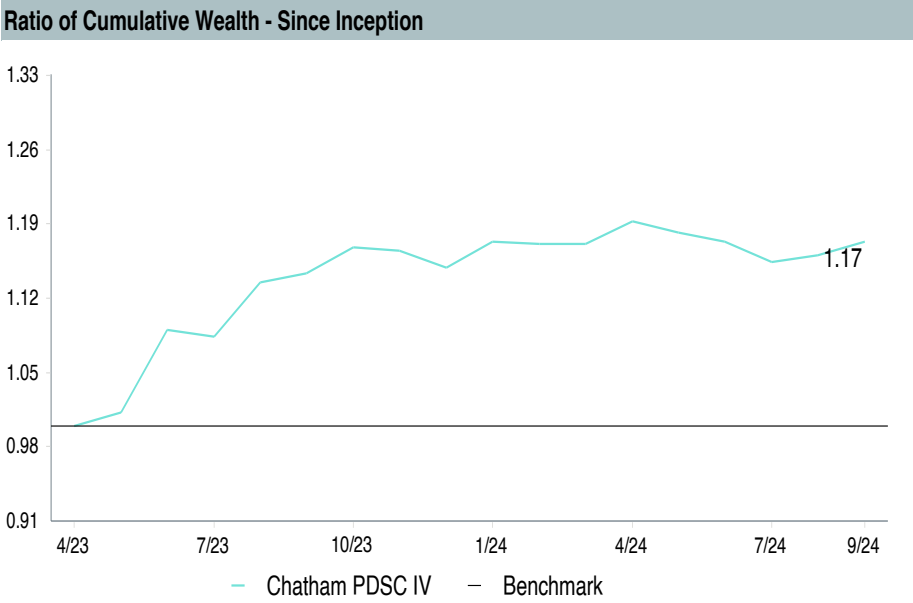
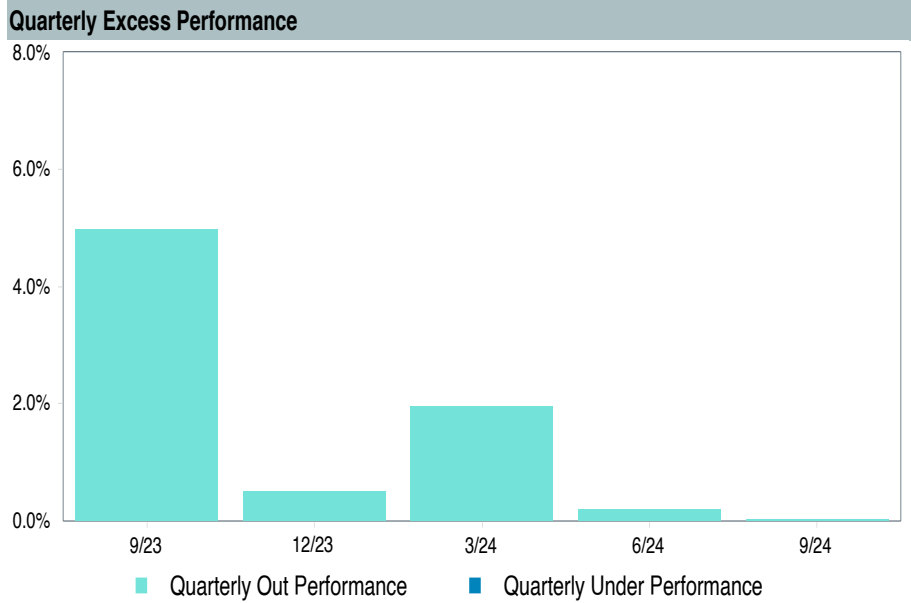
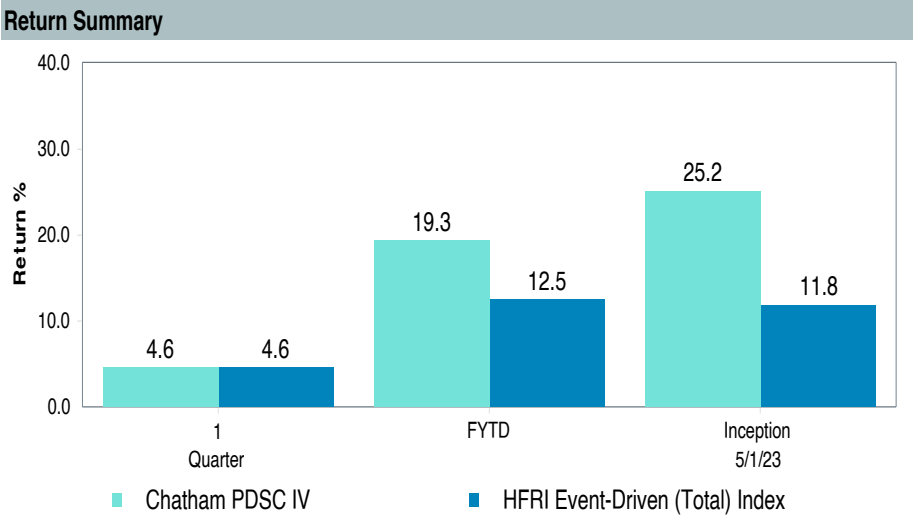




# Manager Performance Summary Chatham PDSC IV

As of September 30, 2024

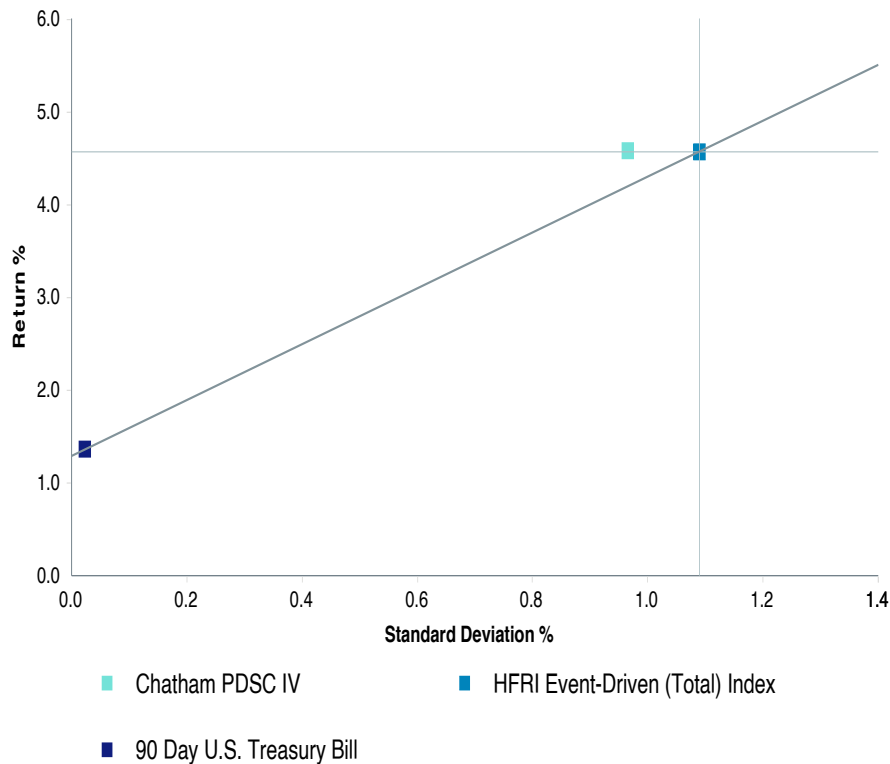
Account Information	
Account Name	Chatham PDSC IV
Inception Date	05/01/2023
Account Structure	Separate Account
Asset Class	Hedge Fund
Benchmark	HFRI Event-Driven (Total) Index
Peer Group	



# Risk Profile Chatham PDSC IV

As of September 30, 2024

Annualized Return vs. Annualized Standard Deviation  
1 Quarter



Standard Deviation  
Rolling 0.25 Year



1 Quarter Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Chatham PDSC IV	0.00	1.48	0.00	0.00	1.08	1.55	-0.03	4.59	0.97	-0.03
HFRI Event-Driven (Total) Index	0.00	0.00	-	1.00	0.95	0.00	1.00	4.58	1.09	1.00
90 Day U.S. Treasury Bill	-1.05	1.11	-0.95	0.43	-	0.47	-0.01	1.37	0.02	-0.66

# Private Equity

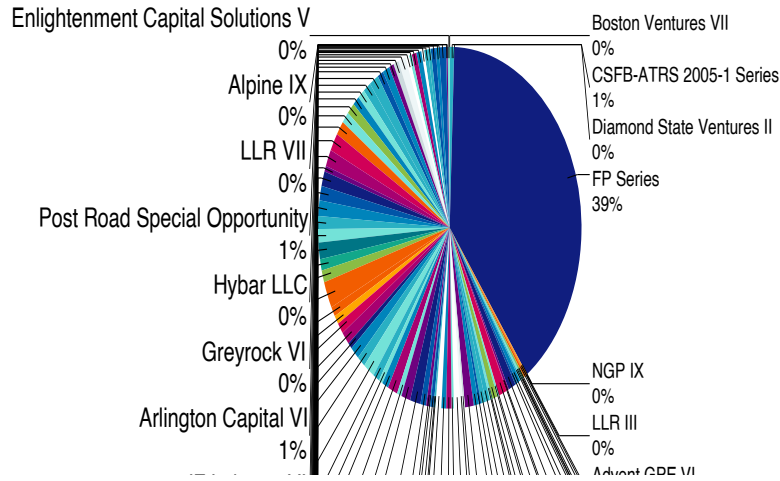


# Composite Portfolio Overview Private Equity

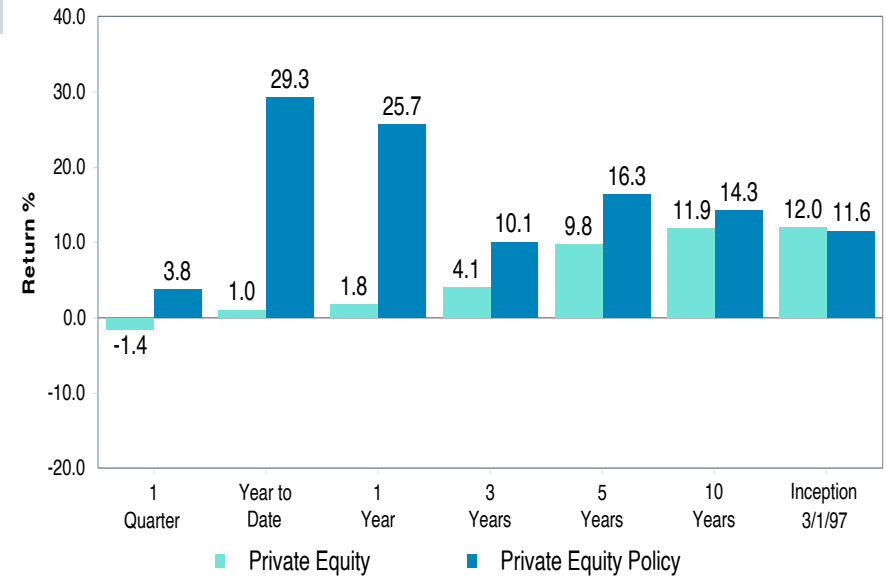
As of September 30, 2024

## Current Allocation

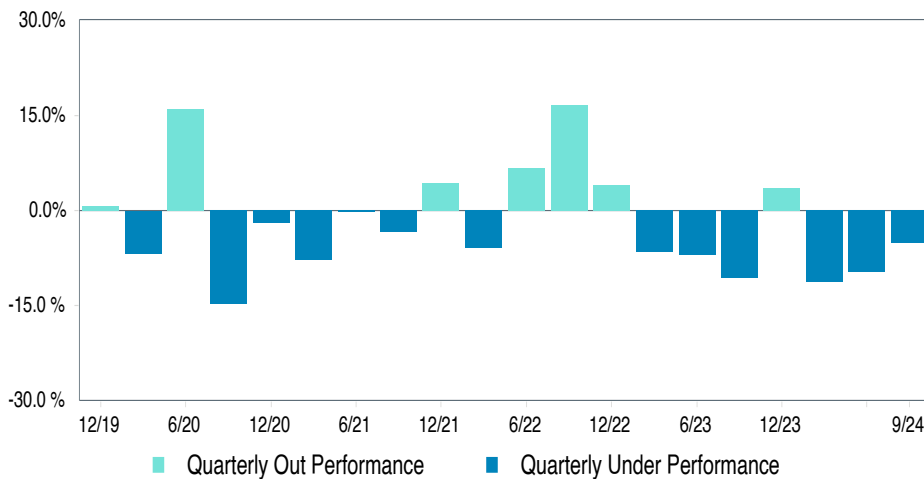
September 30, 2024 : \$2,950,608,572



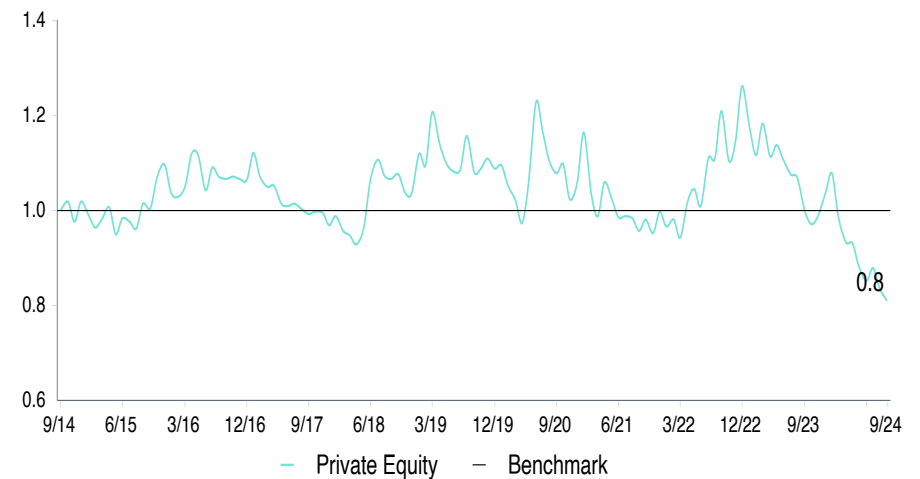
## Return Summary



## Quarterly Excess Performance

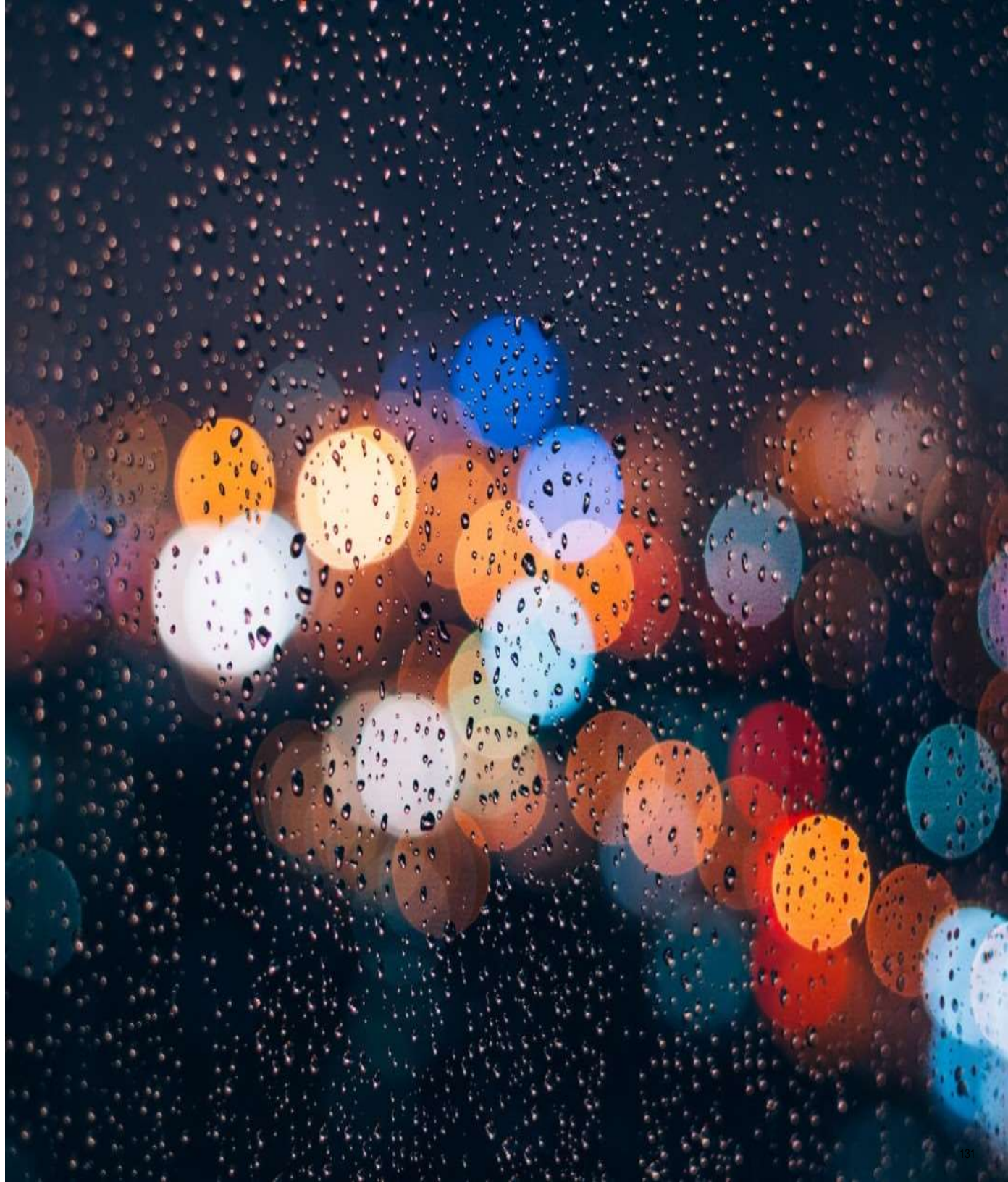


## Ratio of Cumulative Wealth - 10 Years



Note: April 1, 2004 represents the inception of the Global Equity Custom Benchmark as the primary performance objective for the Global Equity portfolio.

# Real Assets

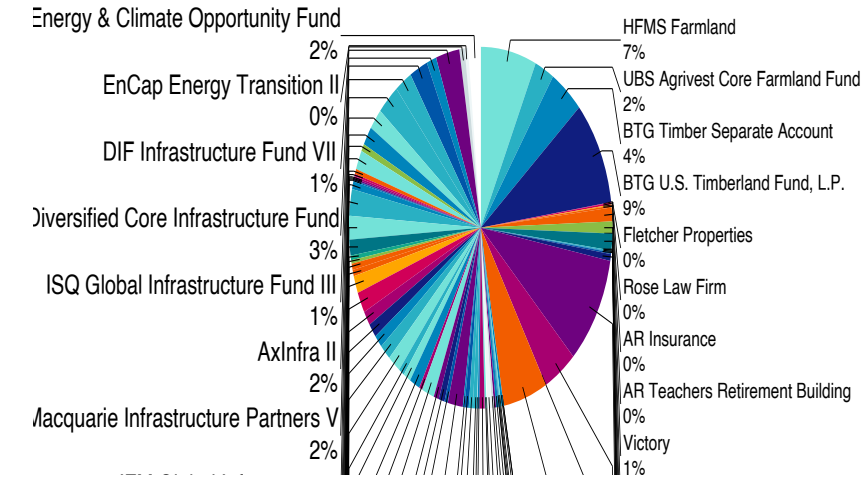


# Composite Portfolio Overview Real Assets

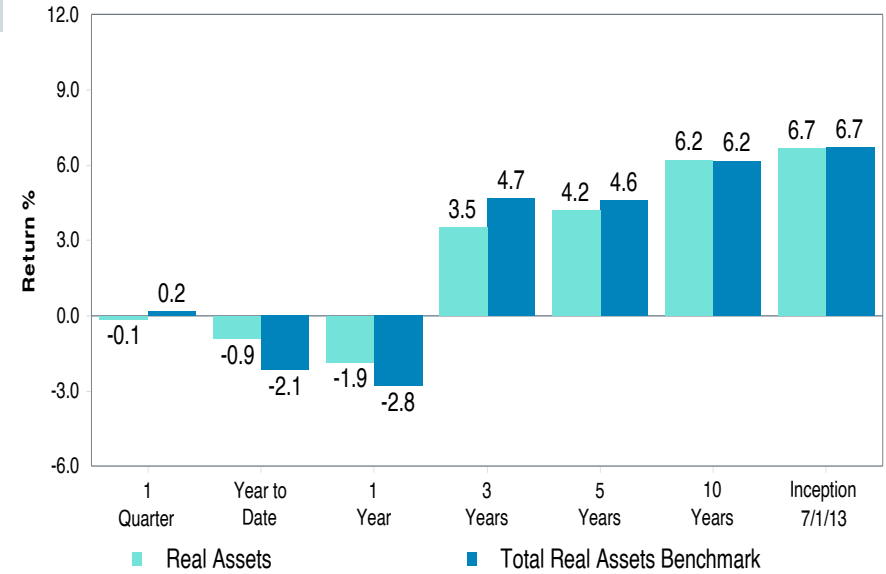
As of September 30, 2024

## Current Allocation

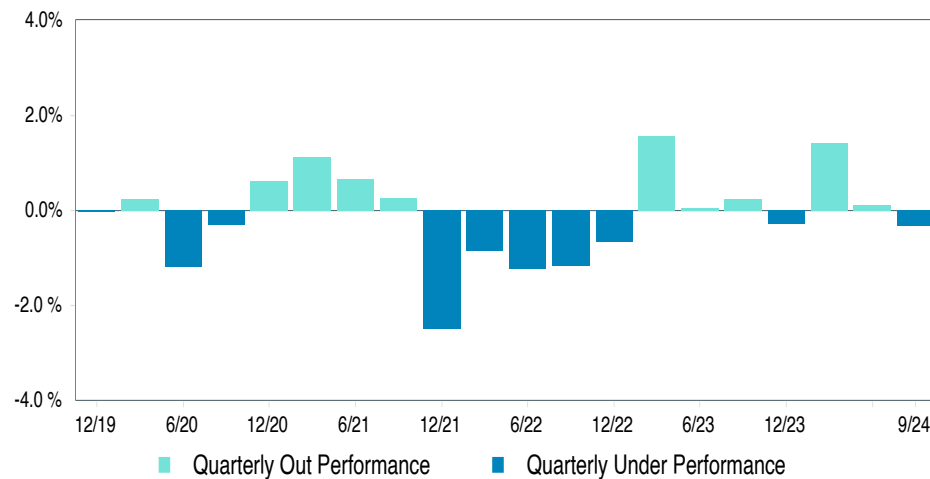
September 30, 2024 : \$2,686,957,407



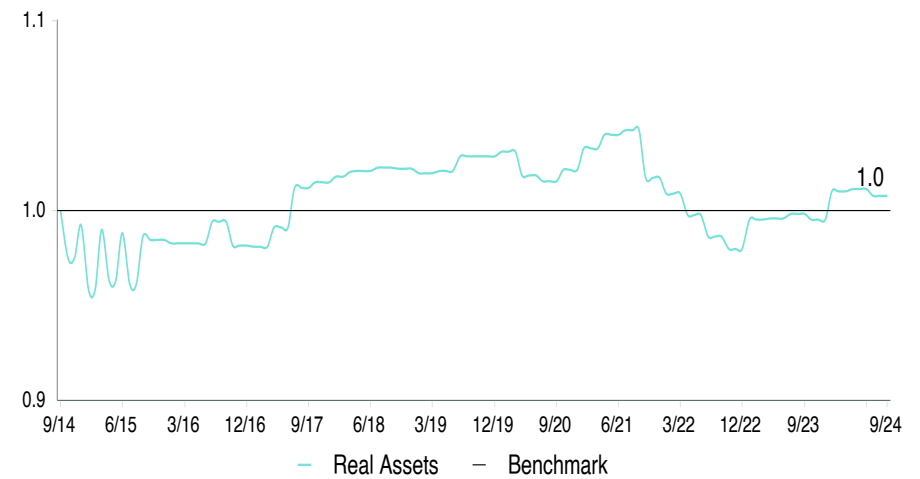
## Return Summary



## Quarterly Excess Performance



## Ratio of Cumulative Wealth - 10 Years



Note: April 1, 2004 represents the inception of the Global Equity Custom Benchmark as the primary performance objective for the Global Equity portfolio.

## Fee Schedule



# Fee Schedule

As of September 30, 2024

	Fee Schedule	Market Value \$000	Estimated Annual Fee \$000	Estimated Annual Fee %
<b>Total Equity</b>		<b>11,458,910</b>	<b>47,396</b>	<b>0.41</b>
Jacobs Levy 130/30	0.60 % of First \$200 M 0.35 % of Next \$300 M 0.30 % Thereafter	1,251,856	4,506	0.36
Kennedy Capital Management	0.60 % of First \$100 M 0.50 % Thereafter	449,293	2,346	0.52
Stephens	0.75 % of First \$150 M 0.70 % of Next \$50 M 0.65 % Thereafter	428,124	2,958	0.69
Voya Absolute Return	0.60 % of First \$250 M 0.40 % Thereafter	1,014,868	4,559	0.45
Voya U.S. Convertibles	0.40 % of First \$100 M 0.30 % of Next \$100 M 0.25 % of Next \$100 M 0.20 % Thereafter	844,641	2,039	0.24
Pershing Square Holdings	1.50 % of Assets	339,202	5,088	1.50
Triam Partners	1.50 % of Assets	106,981	1,605	1.50
Triam Co-Investments	0.50 % of Assets	87,654	438	0.50
SSgA Global Index	0.04 % of First \$1000 M 0.03 % Thereafter	1,056,145	417	0.04
BlackRock MSCI ACWI IMI Fund	0.04 % of First \$250 M 0.03 % Thereafter	1,028,826	295	0.03
Wellington Global Perspectives	0.80 % of Assets	765,896	6,127	0.80
T. Rowe Price Global Equity	0.43 % of First \$500 M 0.40 % Thereafter	1,273,562	5,219	0.41
Lazard	0.68 % of First \$300 M 0.65 % Thereafter	902,484	5,956	0.66
Harris Global Equity	0.60 % of First \$100 M 0.50 % of Next \$100 M 0.45 % Thereafter	742,221	3,540	0.48
Arrowstreet Global Equity - Alpha Extension Fund	Performance Based 0.20 % and 20.00 %	1,150,905	2,302	0.20

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



# Fee Schedule

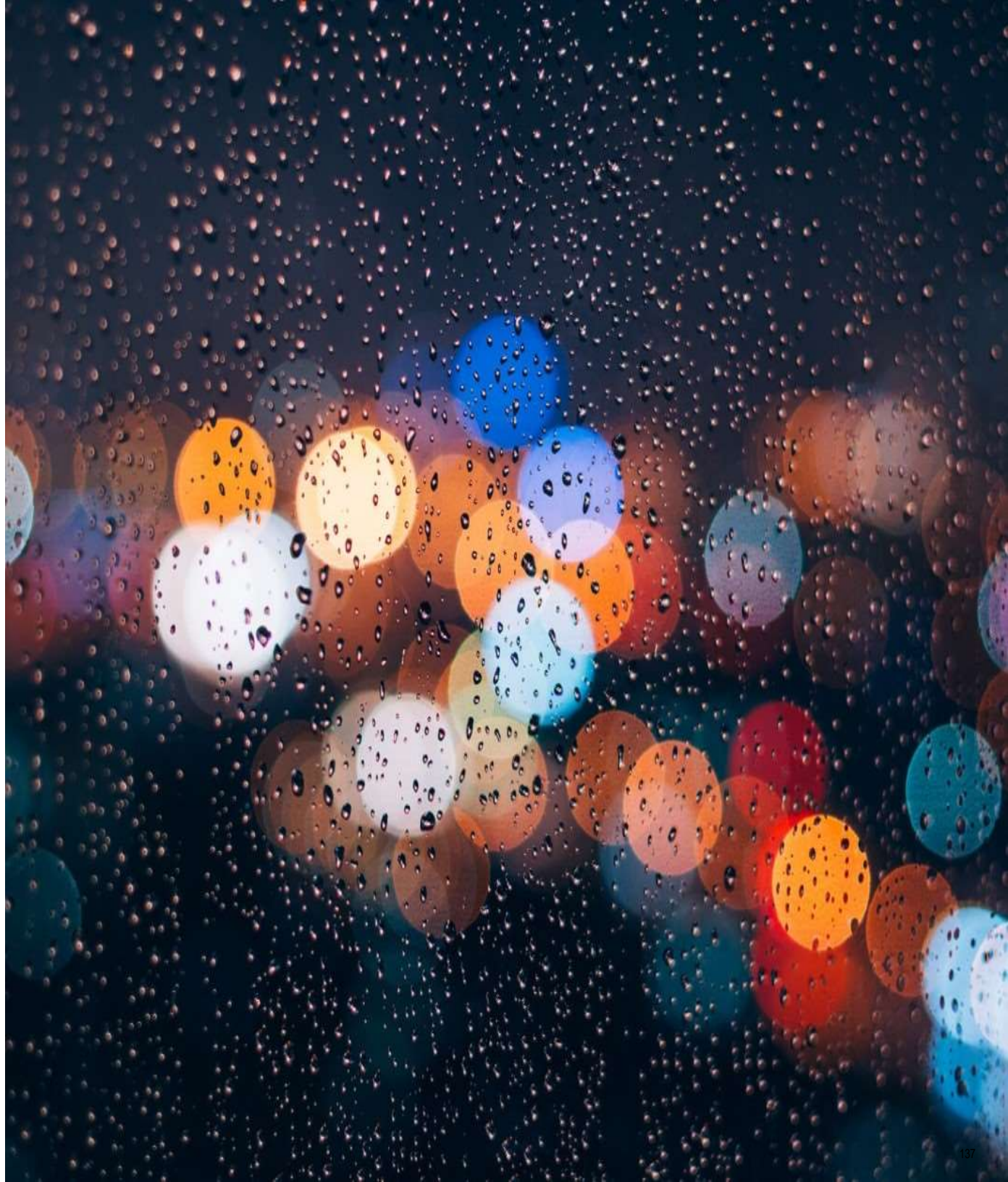
As of September 30, 2024

	Fee Schedule	Market Value \$000	Estimated Annual Fee \$000	Estimated Annual Fee %
<b>Fixed Income</b>		<b>4,590,823</b>	<b>6,977</b>	<b>0.15</b>
BlackRock	0.20 % of First \$200 M 0.15 % of Next \$200 M 0.10 % of Next \$400 M 0.08 % Thereafter	273,201	510	0.19
Loomis Sayles	0.50 % of First \$20 M 0.40 % of Next \$30 M 0.30 % Thereafter	728,055	2,254	0.31
SSgA Aggregate Bond Index	0.04 % of First \$100 M 0.02 % Thereafter	1,367,905	289	0.02
Wellington Global Total Return	0.30 % of Assets	417,532	1,253	0.30
Reams Core Plus Bond Fund	0.20 % of Assets	610,899	1,222	0.20
Baird Core Plus Bond	0.30 % of First \$100 M 0.20 % of Next \$100 M 0.15 % Thereafter	833,411	1,450	0.17
BRS Recycling Tax Credit		186,500	-	-
BRS Recycling Tax Credit Phase 2		91,200	-	-
BRS Recycling Tax Credit Phase 3		82,120	-	-
<b>Opportunistic/Alternatives</b>		<b>1,152,283</b>	<b>11,109</b>	<b>0.96</b>
Anchorage	2.00 % of Assets	22,925	459	2.00
York	1.50 % of Assets	1,385	21	1.50
Capula	2.00 % of Assets	106,010	2,120	2.00
Graham	2.00 % of Assets	104,315	2,086	2.00
Circumference Group Core Value	1.50 % of Assets	43,150	647	1.50
Aeolus Keystone Fund	2.00 % of Assets	22,062	441	2.00
Parametric Global Defensive Equity Fund	0.40 % of First \$150 M 0.35 % Thereafter	240,299	916	0.38
Man Alternative Risk Premia	0.85 % of Assets	130,092	1,106	0.85
CFM Systematic Global Macro Fund	0.36 % of Assets	109,446	394	0.36
Pillar Opportunity	1.30 % of Assets	119,699	1,556	1.30
Chatham PDSC III	0.33 % of Assets	76,134	251	0.33
Prophet Mtg. Servicing Opportunities	0.84 % of Assets	49,832	419	0.84
Chatham PDSC IV	0.33 % of Assets	68,716	227	0.33

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

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## Disclaimers and Notes



# Arkansas Teacher Retirement System

## 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 20%, and Total Equity at its long-term Policy Target of 48% plus the balance of the unfunded or uncommitted assets of the Opportunistic/Alternatives and Real Assets categories. These targets can be found on page 26 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.

# 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, 2024, the Total Equity Performance Benchmark was comprised of 30.6% DJ U.S. Total Stock Market Index and 69.4% 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

**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.

**Voya U.S. 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 Voya U.S. Convertibles 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

## 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.

# Index Definitions

Name	Description
<b>Bloomberg U.S. Corporate High Yield Bond Index</b>	An index that covers the USD-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.
<b>Bloomberg Emerging Markets Index</b>	An unmanaged index that tracks total returns for external-currency-denominated debt instruments of the emerging markets.
<b>Bloomberg Global Aggregate</b>	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 USD investment grade 144A securities.
<b>Bloomberg Global Treasury Ex-US</b>	The Global Treasury ex US Index is a subset of the flagship Global Treasury Index that does not have any exposure to US debt. This multi-currency benchmark includes investment grade, fixed-rate bonds issued by governments in their native currencies.
<b>Bloomberg Universal Index</b>	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.
<b>Bloomberg U.S. Government Index</b>	A market value weighted index of U.S. government and government agency securities (other than mortgage securities) with maturities of one year or more.
<b>Bloomberg U.S. Government/Credit Index</b>	A subcomponent of the Capital Aggregate Index, this benchmark includes treasury securities, government related issues, and high-quality corporate bonds with an outstanding par value of \$250 million or greater and at least one year of maturity remaining.
<b>Bloomberg U.S. High Yield Index</b>	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 million or greater and at least one year of maturity remaining.
<b>Bloomberg U.S. Inflation Index</b>	Measures the performance of the U.S. Treasury Inflation Protected Securities ("TIPS") market.
<b>Bloomberg U.S. Intermediate Aggregate Bond Index</b>	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 million or greater
<b>Bloomberg U.S. Intermediate Government/Credit Index</b>	A market-value weighted index consisting of government bonds and SEC-registered corporate bonds with one to ten years to maturity and an outstanding par value of \$150 million or greater.
<b>Bloomberg U.S. Intermediate Government Bond Index</b>	An unmanaged index considered representative of intermediate- term fixed-income obligations issued by the U.S. treasury, government agencies and quasi-federal corporations.

# Index Definitions

Name	Description
<b>Bloomberg U.S. Intermediate Treasury</b>	An unmanaged index considered representative of intermediate-term fixed- income obligations issued by the U.S. treasury.
<b>Bloomberg U.S. Aggregate Bond Index</b>	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 million or greater. This index is a broad measure of the performance of the investment grade U.S. fixed income market.
<b>Bloomberg U.S. Long Credit Bond Index</b>	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.
<b>Bloomberg U.S. Long Government/Credit Index</b>	The 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 million or more of outstanding face value, and must be fixed rate and non-convertible.
<b>Bloomberg U.S. Long-Term Government Bond Index</b>	An unmanaged index considered representative of long-term fixed- income obligations issued by the U.S. treasury, government agencies and quasi-federal corporations.
<b>Bloomberg U.S. TIPS</b>	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.
<b>Bloomberg U.S. Treasury 20-30 Year STRIPS Index</b>	A subcomponent of the Aggregate Index, this benchmark includes long-term treasury STRIPS.
<b>Bloomberg Commodity Index</b>	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.
<b>BofA Merrill Lynch 3 Month Treasury Bill</b>	An index that measures the average return of the last three-month U.S. Treasury Bill issues .
<b>BofA Merrill Lynch High Yield Master</b>	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.

# Index Definitions

Name	Description
<b>Citigroup 90-Day T-Bill Index</b>	An index that measures the average return of the last three-month U.S. Treasury Bill issues
<b>CRSP US Large Growth Cap Index</b>	An index comprised of nearly 330 US large cap growth companies and includes securities traded on NYSE, NYSEMarket, NASDAQ, or ARCA, representing nearly 45% 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 classifies growth securities using the following factors: future long-term growth in earnings per share (EPS), future short-term growth in EPS, 3-year historical growth in EPS, 3-year historical growth in sales per share, current investment-to-assets ratio, and return on assets.
<b>CRSP US Total Market Index</b>	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.
<b>Credit Suisse Leveraged Loan Index</b>	Designed to mirror the investable universe of the U.S. dollar denominated leveraged loan market.
<b>DJ U.S. Completion Total Stock Market Index</b>	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.
<b>DJ U.S. Total Stock Market Index</b>	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.
<b>FTSE 4Good U.S. Select Index</b>	A socially responsible investment (SRI) index of US stocks that excludes companies with certain business activities such as weapons, tobacco, gambling, alcohol, nuclear power, and adult entertainment
<b>FTSE All-World ex-U.S. Index</b>	A capitalization-weighted stock index representing 46 developed market countries and emerging market countries excluding the U.S.
<b>FTSE EPRA NAREIT Global ex-U.S. Index</b>	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.
<b>FTSE Global All Cap ex US Index</b>	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.
<b>FTSE Global Core Infrastructure Index</b>	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.

# Index Definitions

Name	Description
<b>FTSE NAREIT U.S. Equity REITS</b>	Free float adjusted, market capitalization weighted index of US based equity real estate investment trusts (REITs).
<b>Goldman Sachs Commodity Index</b>	A composite index of commodity sector returns which represents a broadly diversified, unleveraged, long-only position in commodity futures.
<b>HFR Fund-of-Fund Index.</b>	This index is equity-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 million under managements and have been actively trading for at least one year. All funds report net returns on a monthly basis.
<b>HFRI Fund Weighted Composite Index</b>	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 US Dollar and have a minimum of \$50 Million 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.
<b>Hueler Stable Value Index</b>	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.
<b>J.P. Morgan EMBI Global Diversified</b>	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.
<b>iMoneyNet All Taxable Money Funds Index</b>	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.
<b>iMoneyNet Money Fund Average.</b>	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.
<b>MSCI All Country World ex-U.S. Index</b>	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.
<b>MSCI All Country World ex-U.S. Index IMI-.</b>	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-US stock market, covering approximately 99% of the global equity investment opportunity set outside of the United States.

# Index Definitions

Name	Description
<b>MSCI All Country World ex-U.S. Small Cap Index</b>	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.
<b>MSCI All Country World Index IMI</b>	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.
<b>MSCI All Country World Index</b>	A capitalization-weighted index of stocks representing 46 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America.
<b>MSCI EAFE Growth Index</b>	A capitalization-weighted index of 21 stock markets in Europe, Australia, Asia and the Far East designed to capture the growth-oriented companies.
<b>MSCI EAFE Small Cap Index</b>	A capitalization-weighted index of small cap stocks representing 23 developed country markets in Europe, Australia, Asia, and the Far East.
<b>MSCI EAFE Value Index</b>	A capitalization-weighted index of 21 stock markets in Europe, Australia, Asia and the Far East designed to capture the value-oriented companies.
<b>MSCI Emerging Markets Index</b>	A capitalization-weighted index of stocks representing 22 emerging country markets.
<b>MSCI U.S. Broad Market Index</b>	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.
<b>MSCI U.S. REIT Index</b>	A broad index that fairly represents the equity REIT opportunity set with proper invest ability screens to ensure that the index is investable and replicable. The index represents approximately 85% of the U.S. REIT universe
<b>MSCI World Index</b>	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.
<b>NCREIF Property Index</b>	NCREIF Property Index - A capitalization-weighted index of privately owned investment grade income-producing properties representing approximately \$269 billion in assets.

# Index Definitions

Name	Description
<b>NFI ODCE Index</b>	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.
<b>Rolling 3-year Constant Maturity Treasury Index</b>	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.
<b>Russell 1000 Growth Index</b>	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.
<b>Russell 1000 Index</b>	A capitalization-weighted index of the 1,000 largest publicly traded U.S. stocks by capitalization.
<b>Russell 1000 Value Index.</b>	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.
<b>Russell 2000 Growth Index</b>	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.
<b>Russell 2000 Index</b>	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.
<b>Russell 2000 Value Index</b>	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.
<b>Russell 2500 Growth Index</b>	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.
<b>Russell 2500 Index</b>	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.
<b>Russell 2500 Value Index.</b>	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.

# Index Definitions

Name	Description
<b>Russell 3000 Growth Index</b>	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.
<b>Russell 3000 Index</b>	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.
<b>Russell 3000 Value Index</b>	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.
<b>Russell Mid Cap Growth Index</b>	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.
<b>Russell Mid Cap Value Index</b>	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.
<b>S&amp;P 500 Index</b>	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.
<b>S&amp;P Completion Index</b>	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.
<b>S&amp;P GSCI®</b>	Both the first major investable commodity index and one of the most widely recognized benchmarks, the S&P GSCI® is broad-based, production weighted, and meant to be representative of the global commodity market beta.
<b>S&amp;P Leverage Loan Index</b>	A daily total return index that uses LSTA/LPC Mark-to-Market Pricing to calculate market value change.
<b>S&amp;P Midcap 400 Index</b>	A market-capitalization-weighted index of stocks in all major industries in the mid-range of the U.S. stock market.
<b>Wilshire REIT</b>	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 million 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.



# Thought Leadership Highlights

## Public Funds

Topic	Article	Link
<b>Key Themes</b>	Key Investment Themes for Public Funds	<a href="#">Link to Video</a> (~5 minutes)
<b>Market View</b>	Quarterly Market Review and Outlook Video	<a href="#">Link to Article</a> <a href="#">Link to Video</a>
<b>Governance</b>	The Optimal Outsourced Chief Investment Officer	<a href="#">Link</a>
<b>Oversight</b>	A Guide to Identifying "Impact Washing" by Asset Managers	<a href="#">Request from consultant</a>
<b>Asset Allocation</b>	Geopolitics and Portfolio Resilience	<a href="#">Link</a>
	How Public Pensions Should Assess Illiquidity from Alts: 3 Questions with Eric Friedman & John Sullivan	<a href="#">Link</a>
	Client Video: U.S. vs non-U.S. Equity (access code 'aon!')	<a href="#">Link to Video</a>
	The Strength of the U.S. Equity Market and its Impact on Equity Allocations	<a href="#">Link</a>
	Managing Through Today's Environment for Illiquid Assets: 3 Questions with Eric Friedman	<a href="#">Link</a>
<b>Strategy Review</b>	Eyes Wide Open: Considerations for Place-Based Impact Investing	<a href="#">Link</a>
	Cryptocurrencies: Speculative Bubble or Useful Diversifier?	<a href="#">Link</a>
	Investing in Infrastructure: 3 Questions With Iftikhar Ahmed	<a href="#">Link</a>

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## 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.

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Refer to Hedge Fund Research, Inc. [www.hedgefundresearch.com](http://www.hedgefundresearch.com) for information on HFR indices.

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Aon Investments USA Inc.  
200 East Randolph Street  
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Chicago, IL 60601  
ATTN: Aon Investments Compliance Officer

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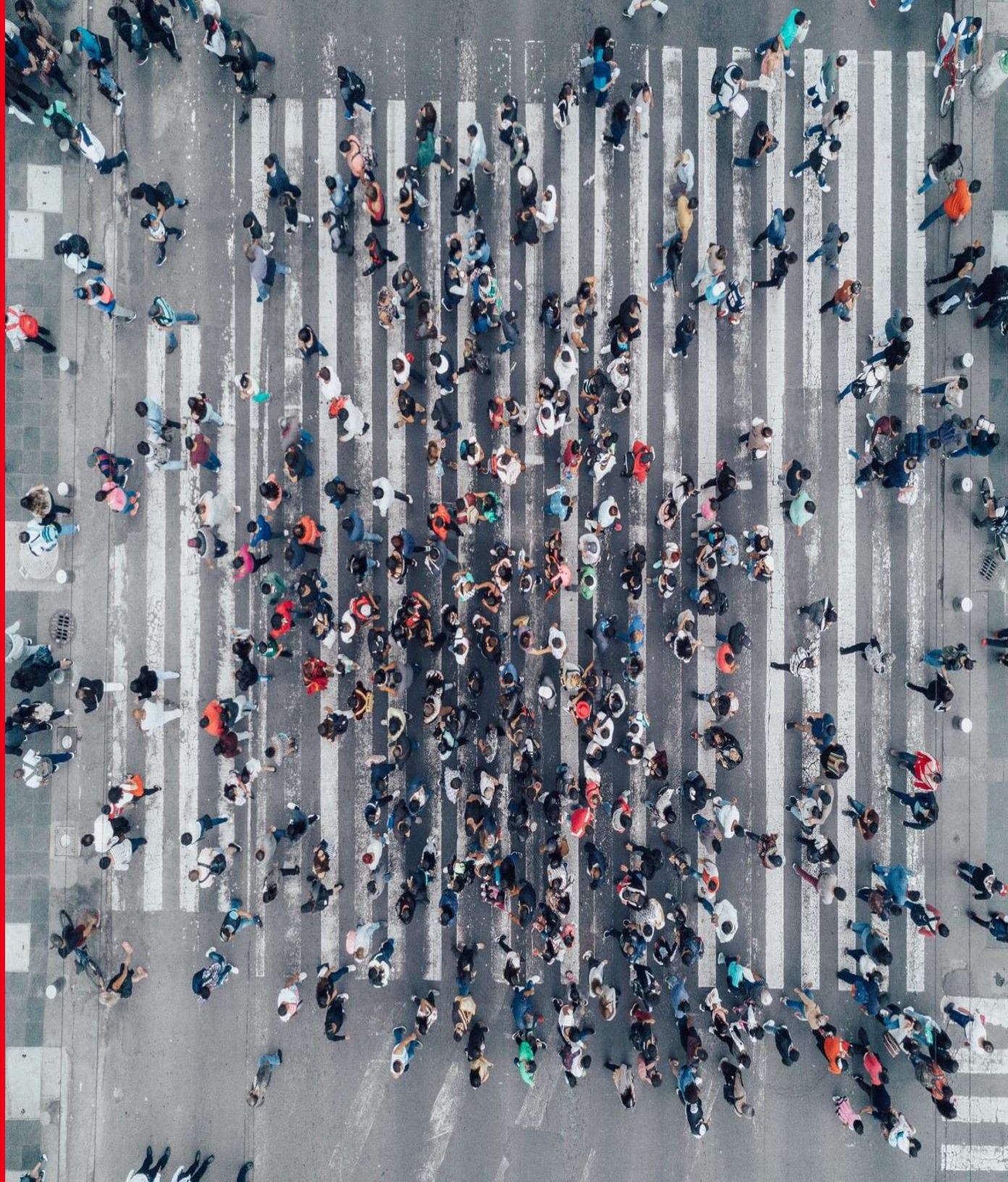
# Preliminary Monthly Investment Review

Arkansas Teacher Retirement System |  
October 31, 2024

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.

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

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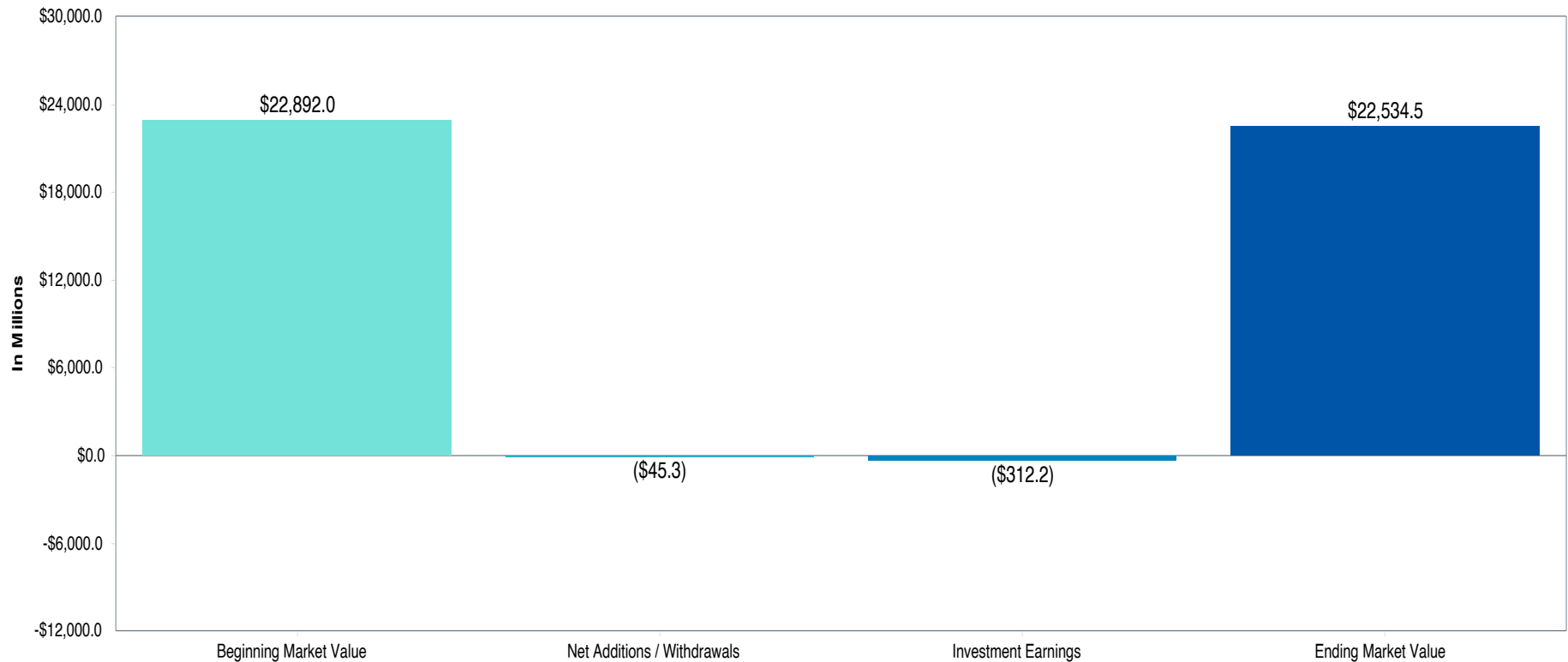
# Asset Allocation & Performance

## Market Environment

	Performance %						
	1 Month	Year to Date	Fiscal YTD	1 Year	3 Years	5 Years	10 Years
Dow Jones U.S. Total Stock Market Index	-0.7	19.7	5.4	38.0	7.5	14.5	12.4
S&P 500 Index	-0.9	21.0	4.9	38.0	9.1	15.3	13.0
Russell 1000 Index	-0.7	20.3	5.3	38.1	8.1	15.0	12.8
Russell 1000 Value Index	-1.1	15.4	8.2	31.0	6.8	10.1	8.9
Russell 1000 Growth Index	-0.3	24.1	2.8	43.8	8.8	19.0	16.2
Russell 2000 Index	-1.4	9.6	7.7	34.1	0.0	8.5	7.9
Russell 2000 Value Index	-1.6	7.5	8.4	31.8	1.9	8.4	7.3
Russell 2000 Growth Index	-1.3	11.7	7.0	36.5	-2.3	7.9	8.1
MSCI AC World IMI Index (Net)	-2.3	15.1	4.4	32.3	4.9	10.7	8.9
MSCI AC World ex USA IMI (Net)	-5.0	8.3	2.8	24.2	1.2	5.8	4.9
MSCI EAFE (Net)	-5.4	6.8	1.4	23.0	2.7	6.2	5.3
MSCI Emerging Markets (Net)	-4.4	11.7	3.9	25.3	-1.4	3.9	3.4
Bimbg. U.S. Universal Index	-2.3	2.5	2.8	11.2	-1.8	0.2	1.8
Bimbg. U.S. Aggregate Index	-2.5	1.9	2.6	10.5	-2.2	-0.2	1.5
Bimbg. U.S. Government Index	-2.4	1.4	2.2	8.4	-2.5	-0.6	1.0
Bimbg. Barc. Credit Bond Index	-2.4	2.7	3.2	13.1	-2.0	0.5	2.4
Bimbg. U.S. Mortgage Backed Securities	-2.8	1.5	2.5	11.4	-2.1	-0.6	1.0
Bimbg. U.S. Corp: High Yield Index	-0.5	7.4	4.7	16.5	3.0	4.5	4.9
Citigroup 90-Day T-Bill	0.4	4.6	1.8	5.6	3.8	2.4	1.7

# Total Plan Asset Summary

As of October 31, 2024



## Summary of Cash Flows

	1 Month	Year to Date	Fiscal YTD	1 Year
<b>Total Fund</b>				
Beginning Market Value	22,892,000,691	21,289,300,596	22,387,955,711	19,556,578,174
+ Additions / Withdrawals	-45,268,643	-571,579,807	-316,529,788	-660,653,129
+ Investment Earnings	-312,223,595	1,816,787,663	463,082,530	3,638,583,408
<b>= Ending Market Value</b>	<b>22,534,508,453</b>	<b>22,534,508,453</b>	<b>22,534,508,453</b>	<b>22,534,508,453</b>

# Asset Allocation & Performance

As of October 31, 2024

	Allocation			Performance %								
	Market Value \$ (\$)	%	Policy %	1 Month	Year to Date	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Total Fund*</b>	22,534,508,453	100.0	100.0	-1.4	8.5	2.0	18.5	4.5	8.6	8.3	8.5	04/01/1986
<i>Performance Benchmark</i>				-1.2	13.3	3.8	23.2	4.9	9.6	8.6	8.7	
<b>Total Equity</b>	11,184,453,876	49.6	51.2	-2.0	13.8	3.2	31.8	6.0	10.7	9.4	9.5	07/01/2015
<i>Total Equity Performance Benchmark</i>				-1.8	16.7	4.7	34.2	5.8	11.9	10.0	10.4	
<b>Fixed Income</b>	4,510,533,475	20.0	20.0	-1.8	3.5	2.9	10.2	0.2	1.5	2.7	4.8	07/01/1992
<i>Performance Benchmark</i>				-2.3	2.5	2.8	11.2	-1.8	0.2	1.8	4.8	
<b>Opportunistic/Alternatives</b>	1,148,353,511	5.1	5.0	-0.3	9.0	2.1	11.9	8.3	5.2	3.7	4.2	05/01/2011
<i>Custom Alternatives Benchmark</i>				-0.5	6.7	0.9	9.0	4.4	4.4	2.9	2.7	
<b>Real Assets</b>	2,701,508,550	12.0	11.8									
<b>Real Estate</b>	1,537,970,147	6.8										
<b>Timber</b>	364,101,356	1.6										
<b>Agriculture</b>	249,115,260	1.1										
<b>Infrastructure</b>	550,321,786	2.4										
<b>Private Equity</b>	2,917,535,778	12.9	12.0									
<b>Cash</b>	72,123,264	0.3	0.0									

\*Preliminary Results

\*Policy % is the interim target used for benchmarking purposes. See page 16 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.

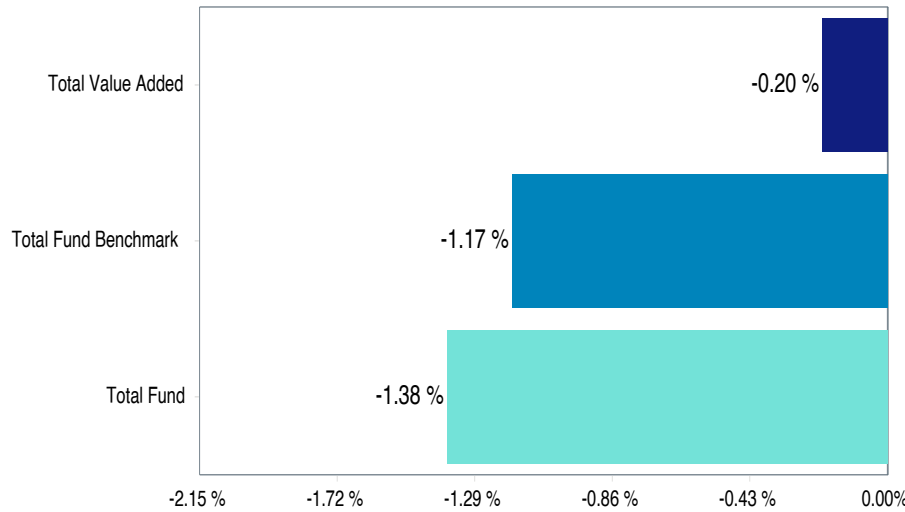
\*The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 21 of this report.

\*Includes investment gains from Allianz litigation income received on 2/28/2022.

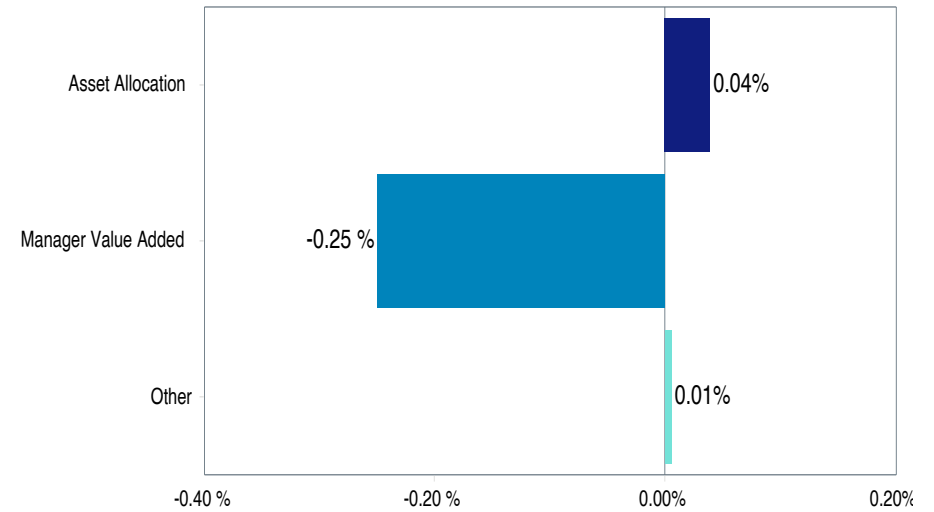
# Total Fund Attribution

1 Month Ending October 31, 2024

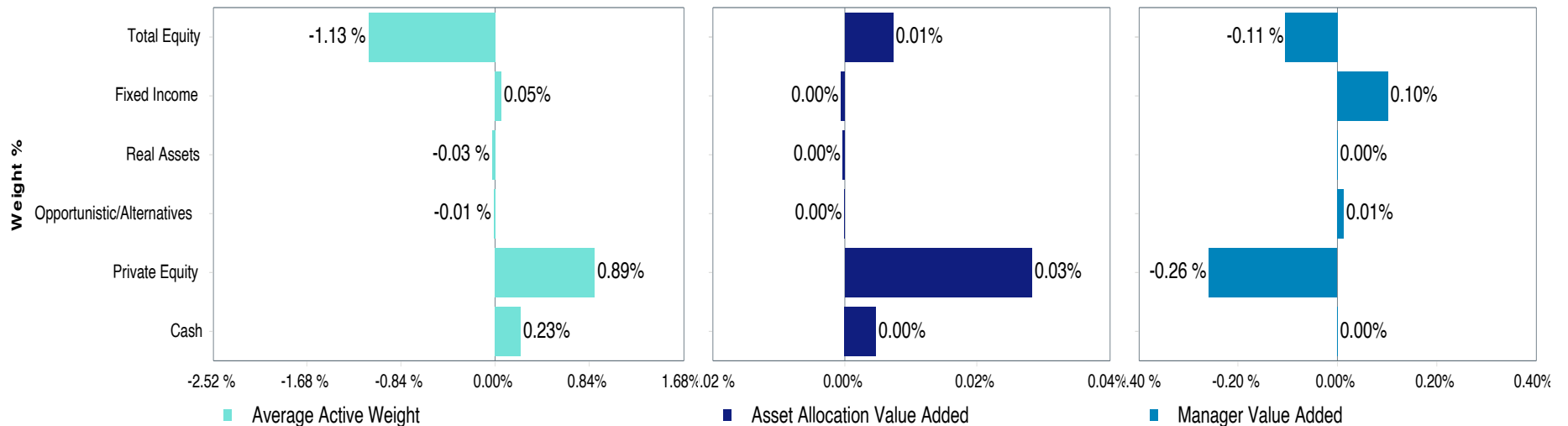
## Total Fund Performance



## Total Value Added: -0.20 %



## Total Asset Allocation: 0.04% Total Manager Value Added: -0.25 %



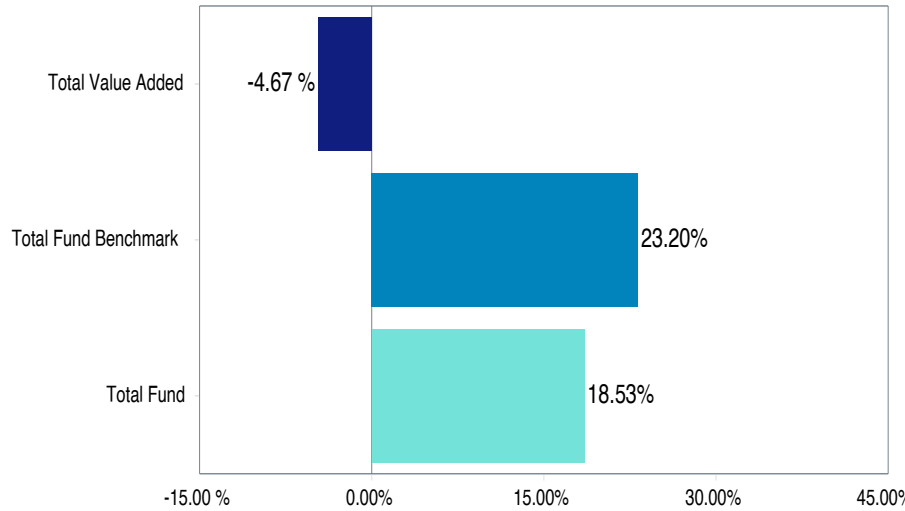
\*Preliminary Results



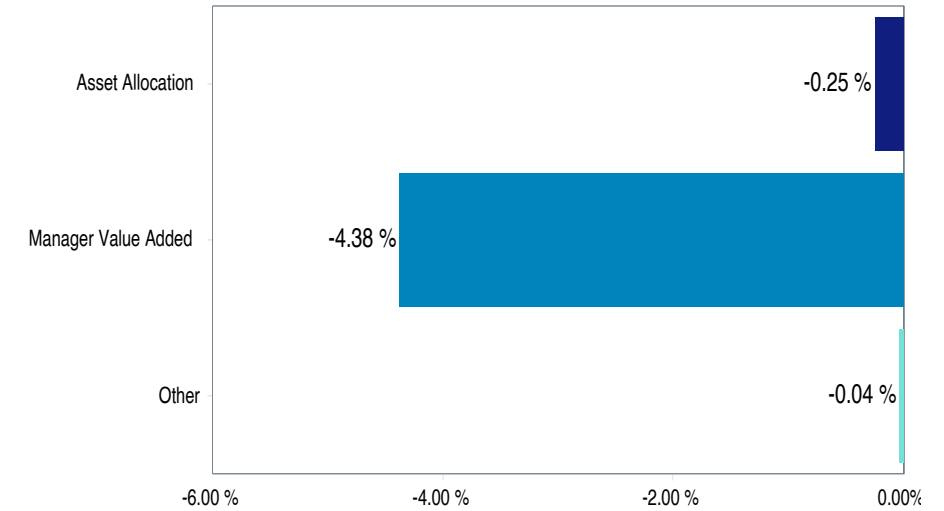
# Total Fund Attribution

1 Year Ending October 31, 2024

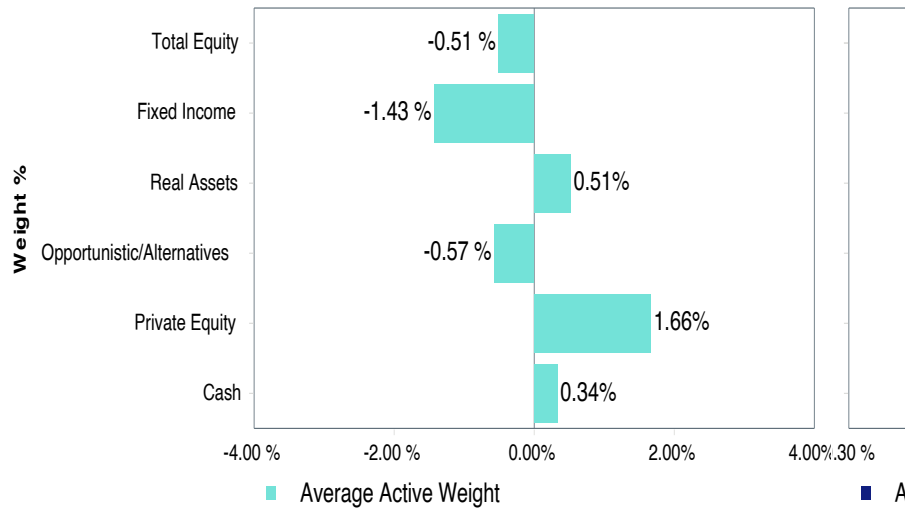
## Total Fund Performance



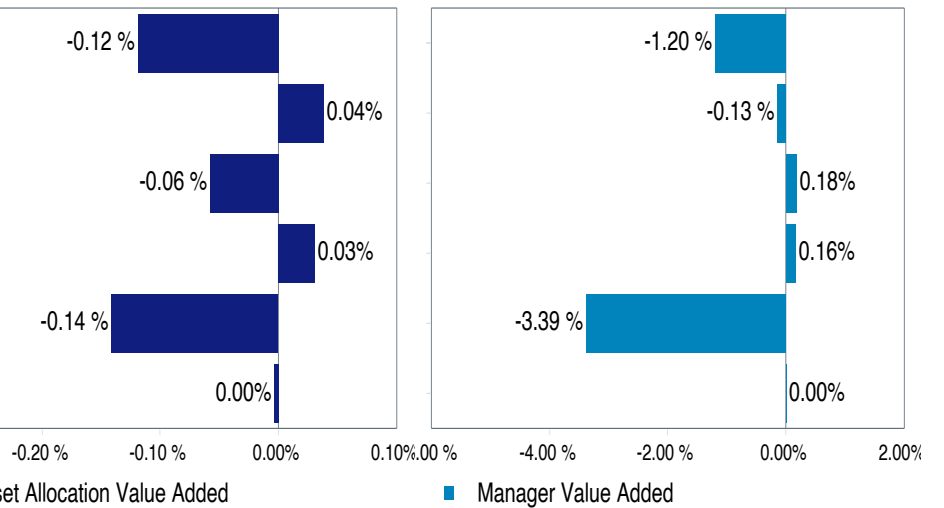
## Total Value Added: -4.67 %



## Total Asset Allocation: -0.25 %



## Total Manager Value Added: -4.38 %



\*Preliminary Results



# Asset Allocation & Performance

As of October 31, 2024

	Allocation		Performance %								
	Market Value \$	%	1 Month	Year to Date	Fiscal YTD	1 Year	3 Years	5 Years	Since Inception	Inception Date	
<b>Total Equity</b>	<b>11,184,453,876</b>	<b>100.0</b>	<b>-2.0</b>	<b>13.8</b>	<b>3.2</b>	<b>31.8</b>	<b>6.0</b>	<b>10.7</b>	<b>9.5</b>	<b>07/01/2015</b>	
<i>Total Equity Performance Benchmark</i>			-1.8	16.7	4.7	34.2	5.8	11.9	10.4		
<b>Jacobs Levy 130/30</b>	<b>1,252,732,735</b>	<b>11.2</b>	<b>0.1</b>	<b>18.6</b>	<b>5.0</b>	<b>39.0</b>	<b>18.8</b>	<b>21.0</b>	<b>13.3</b>	<b>01/01/2008</b>	
<i>Russell 3000 Index</i>			-0.7	19.7	5.4	37.9	7.6	14.6	10.3		
<b>Kennedy Capital Management</b>	<b>442,153,607</b>	<b>4.0</b>	<b>-1.6</b>	<b>8.4</b>	<b>6.0</b>	<b>30.3</b>	<b>1.8</b>	<b>9.4</b>	<b>11.6</b>	<b>01/01/1994</b>	
<i>Russell 2000 Value Index</i>			-1.6	7.5	8.4	31.8	1.9	8.4	9.3		
<b>Stephens</b>	<b>422,034,233</b>	<b>3.8</b>	<b>-1.5</b>	<b>11.6</b>	<b>4.3</b>	<b>32.0</b>	<b>-2.3</b>	<b>10.0</b>	<b>9.6</b>	<b>08/01/2006</b>	
<i>Russell 2000 Growth Index</i>			-1.3	11.7	7.0	36.5	-2.3	7.9	8.7		
<b>Voya Absolute Return</b>	<b>994,586,608</b>	<b>8.9</b>	<b>-2.0</b>	<b>17.0</b>	<b>3.7</b>	<b>33.7</b>	<b>6.6</b>	<b>11.8</b>	<b>10.7</b>	<b>10/01/2008</b>	
<i>Performance Benchmark Voya Absolute Return</i>			-2.2	16.0	4.2	32.8	5.5	11.1	10.5		
<b>Voya U.S. Convertibles</b>	<b>849,068,385</b>	<b>7.6</b>	<b>0.5</b>	<b>9.9</b>	<b>6.1</b>	<b>22.5</b>	<b>-1.7</b>	<b>11.4</b>	<b>10.2</b>	<b>12/01/1998</b>	
<i>Performance Benchmark</i>			0.8	8.4	6.2	21.0	-1.4	10.3	8.1		
<b>Pershing Square Holdings</b>	<b>318,492,748</b>	<b>2.8</b>	<b>-6.1</b>	<b>-3.0</b>	<b>-15.4</b>	<b>27.5</b>	<b>4.7</b>	<b>20.8</b>	<b>9.2</b>	<b>01/01/2013</b>	
<i>Dow Jones U.S. Total Stock Market Index</i>			-0.7	19.7	5.4	38.0	7.5	14.5	14.0		
<b>SSgA Global Index</b>	<b>992,747,853</b>	<b>8.9</b>	<b>-2.3</b>	<b>15.1</b>	<b>4.3</b>	<b>32.4</b>	<b>5.1</b>	<b>11.0</b>	<b>7.6</b>	<b>04/01/2008</b>	
<i>MSCI AC World IMI Index (Net)</i>			-2.3	15.1	4.4	32.3	4.9	10.7	7.3		
<b>BlackRock MSCI ACWI IMI Fund</b>	<b>1,005,019,093</b>	<b>9.0</b>	<b>-2.3</b>	<b>15.3</b>	<b>4.4</b>	<b>32.6</b>	<b>5.3</b>	<b>11.1</b>	<b>9.1</b>	<b>07/01/2011</b>	
<i>MSCI AC World IMI (Net)</i>			-2.3	15.1	4.4	32.3	4.9	10.7	8.8		

\*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 23 of this report.

# Asset Allocation & Performance

As of October 31, 2024

	Allocation		Performance %							
	Market Value \$	%	1 Month	Year to Date	Fiscal YTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
<b>Wellington Global Perspectives</b>	734,855,138	6.6	-4.1	7.2	3.6	27.7	1.7	8.8	11.9	07/01/2009
<i>Performance Benchmark</i>			-2.9	8.1	5.6	28.7	0.5	8.1	10.0	
<b>T. Rowe Price Global Equity</b>	1,243,893,253	11.1	-2.4	15.8	0.0	32.7	0.7	14.1	13.2	08/01/2009
<i>MSCI AC World Index (Net)</i>			-2.2	16.0	4.2	32.8	5.5	11.1	9.9	
<i>MSCI AC World Index Growth (Net)</i>			-2.0	18.6	2.0	37.2	4.4	13.5	11.7	
<b>Lazard</b>	871,063,849	7.8	-3.5	13.6	2.1	34.0	0.3	8.6	8.6	08/01/2009
<i>MSCI AC World Index (Net)</i>			-2.2	16.0	4.2	32.8	5.5	11.1	9.9	
<b>Harris Global Equity</b>	720,075,500	6.4	-3.0	5.9	4.7	21.9	2.1	8.9	6.9	06/01/2014
<i>MSCI World Index (Net)</i>			-2.0	16.5	4.3	33.7	6.4	12.0	9.4	
<i>MSCI World Value (Net)</i>			-2.2	13.8	7.2	28.8	6.8	8.5	6.5	
<b>Arrowstreet Global Equity - Alpha Extension Fund</b>	1,131,561,318	10.1	-1.7	23.8	3.6	37.8			26.9	04/01/2023
<i>MSCI AC World IMI Index (Net)</i>			-2.3	15.1	4.4	32.3			18.5	
<b>Triam Partners</b>	107,765,545	1.0	0.7	23.9	14.8	41.5	7.4	9.0	8.9	11/01/2015
<i>S&amp;P 500 Index</i>			-0.9	21.0	4.9	38.0	9.1	15.3	13.9	
<b>Triam Co-Investments</b>	81,804,013	0.7	-1.1	30.7	11.1	46.2	14.8	12.0	10.1	01/01/2017
<i>S&amp;P 500 Index</i>			-0.9	21.0	4.9	38.0	9.1	15.3	14.7	
<b>Westrock Equity Fund</b>	16,600,000	0.1	2.2	-35.0	-35.1	-19.4			-29.8	09/01/2023
<i>Total Equity Performance Benchmark</i>			-1.8	16.7	4.7	34.2			20.5	

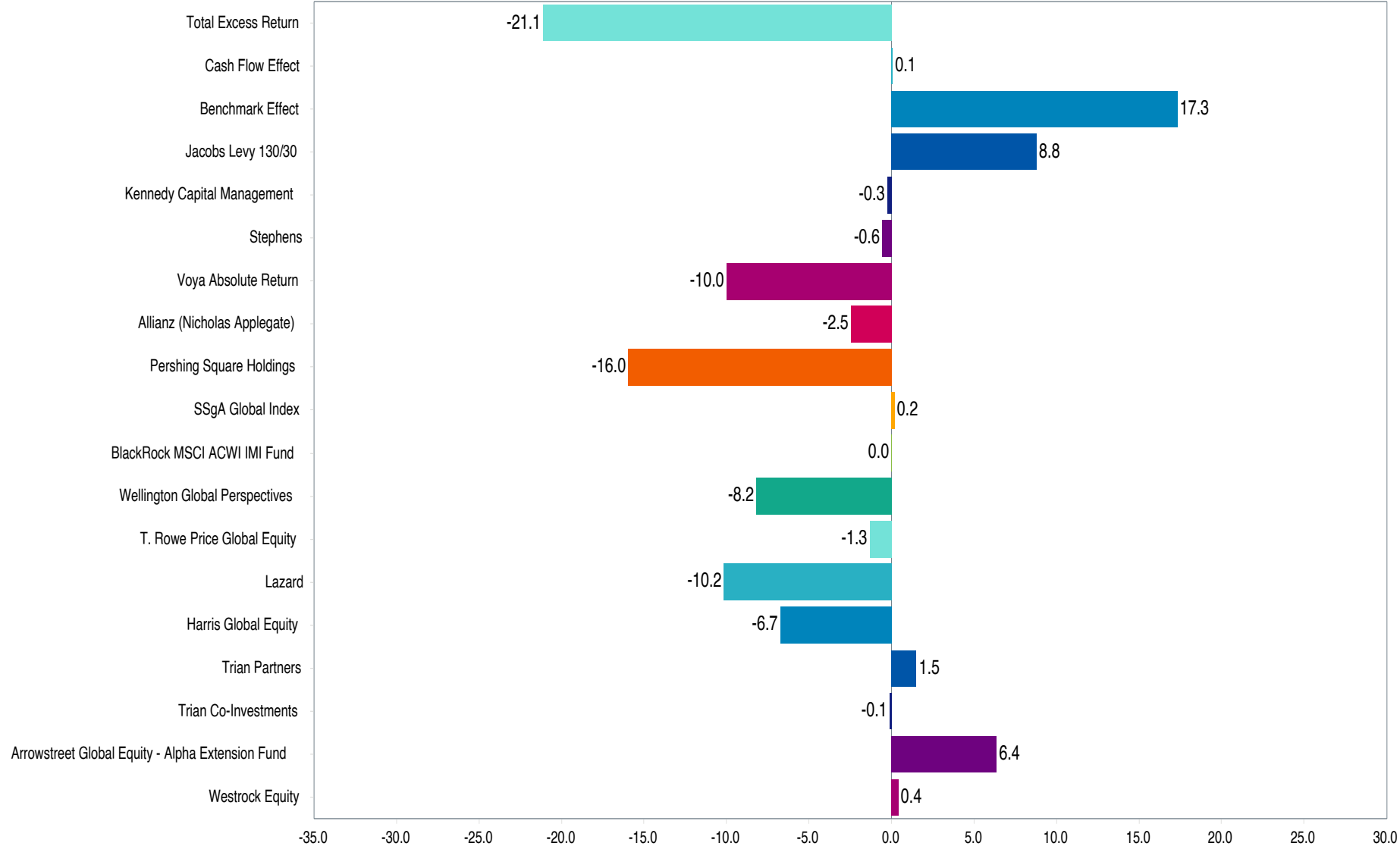
\*Preliminary Results

\*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 23 of this report.

# Asset Class Attribution

1 Month Ending October 31, 2024

1 Month



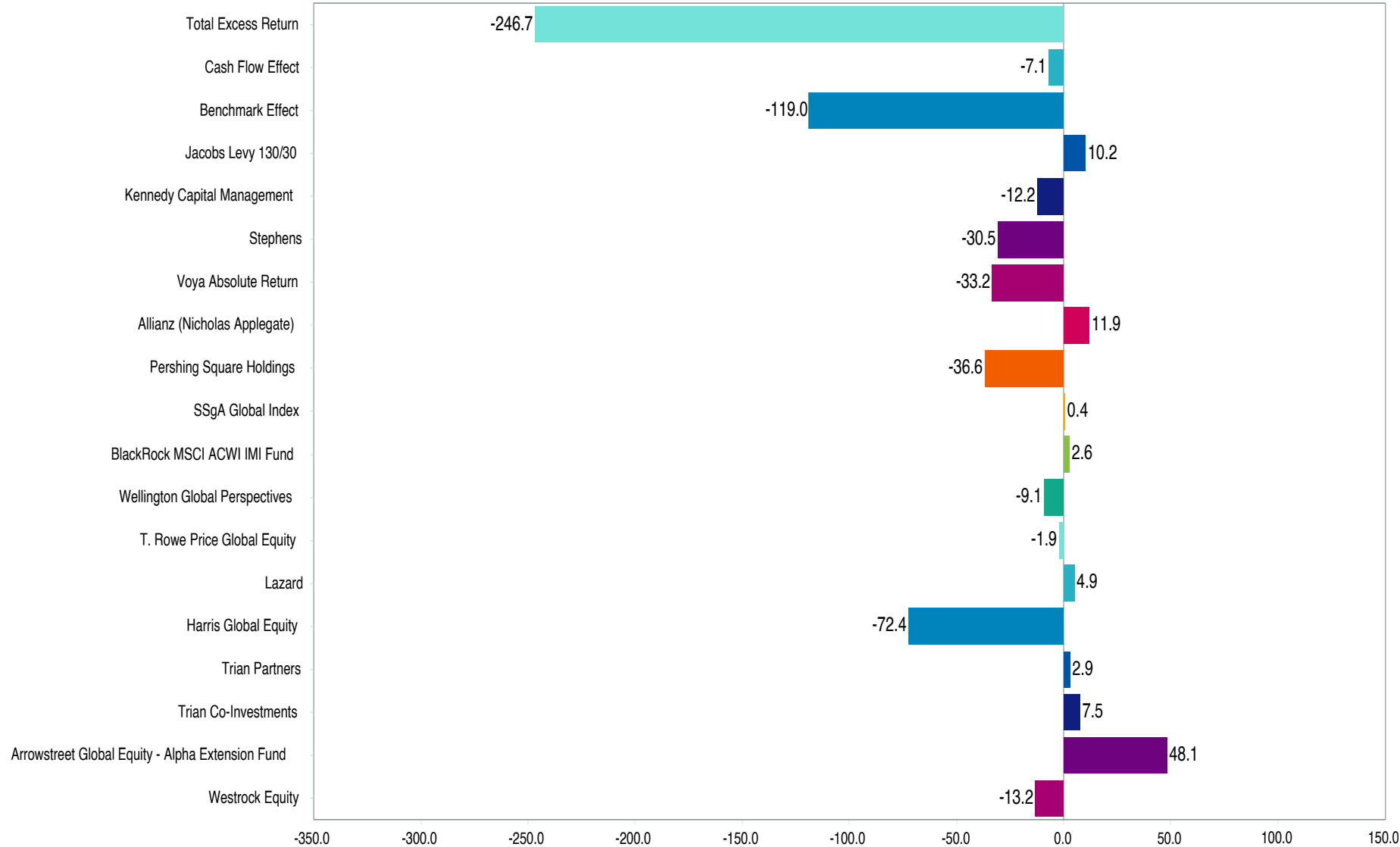
\*Preliminary Results



# Asset Class Attribution

1 Year Ending October 31, 2024

1 Year



\*Preliminary Results



# Asset Allocation & Performance

As of October 31, 2024

	Allocation		Performance %								
	Market Value \$	%	1 Month	Year to Date	Fiscal YTD	1 Year	3 Years	5 Years	Since Inception	Inception Date	
<b>Fixed Income</b>	<b>4,510,533,475</b>	<b>100.0</b>	<b>-1.8</b>	<b>3.5</b>	<b>2.9</b>	<b>10.2</b>	<b>0.2</b>	<b>1.5</b>	<b>4.8</b>	<b>07/01/1992</b>	
<i>Performance Benchmark</i>			-2.3	2.5	2.8	11.2	-1.8	0.2	4.8		
<b>BlackRock</b>	<b>266,380,648</b>	<b>5.9</b>	<b>-2.5</b>	<b>2.4</b>	<b>2.6</b>	<b>11.6</b>	<b>-2.0</b>	<b>0.2</b>	<b>3.6</b>	<b>10/01/2003</b>	
<i>Performance Benchmark</i>			-2.3	2.5	2.8	11.2	-1.8	0.2	3.4		
<b>Loomis Sayles</b>	<b>715,173,738</b>	<b>15.9</b>	<b>-1.8</b>	<b>5.7</b>	<b>3.9</b>	<b>15.3</b>	<b>0.2</b>	<b>3.1</b>	<b>6.6</b>	<b>09/01/2008</b>	
<i>Performance Benchmark</i>			-1.7	3.8	3.3	12.4	-0.5	1.5	4.5		
<b>SSgA Aggregate Bond Index</b>	<b>1,334,019,664</b>	<b>29.6</b>	<b>-2.5</b>	<b>2.0</b>	<b>2.6</b>	<b>10.6</b>	<b>-2.2</b>	<b>-0.2</b>	<b>2.3</b>	<b>06/01/2010</b>	
<i>Blmbg. U.S. Aggregate Index</i>			-2.5	1.9	2.6	10.5	-2.2	-0.2	2.3		
<b>Wellington Global Total Return</b>	<b>425,207,639</b>	<b>9.4</b>	<b>1.8</b>	<b>6.7</b>	<b>2.9</b>	<b>5.6</b>	<b>6.0</b>	<b>4.1</b>	<b>3.1</b>	<b>06/01/2014</b>	
<i>ICE BofA 3 Month U.S. T-Bill</i>			0.4	4.4	1.8	5.4	3.6	2.4	1.6		
<b>Reams Core Plus Bond Fund</b>	<b>595,022,412</b>	<b>13.2</b>	<b>-2.6</b>	<b>2.3</b>	<b>2.8</b>	<b>12.3</b>	<b>-1.0</b>	<b>2.1</b>	<b>2.8</b>	<b>06/01/2014</b>	
<i>Blmbg. U.S. Aggregate Index</i>			-2.5	1.9	2.6	10.5	-2.2	-0.2	1.5		
<b>Baird Core Plus Bond</b>	<b>814,909,608</b>	<b>18.1</b>	<b>-2.2</b>		<b>1.8</b>				<b>1.8</b>	<b>07/01/2024</b>	
<i>Blmbg. U.S. Universal Index</i>			-2.3		2.8				2.8		
<b>BRS Recycling Tax Credit</b>	<b>186,500,000</b>	<b>4.1</b>									
<b>BRS Recycling Tax Credit Phase 2</b>	<b>91,200,000</b>	<b>2.0</b>									
<b>BRS Recycling Tax Credit Phase 2</b>	<b>91,200,000</b>	<b>2.0</b>									

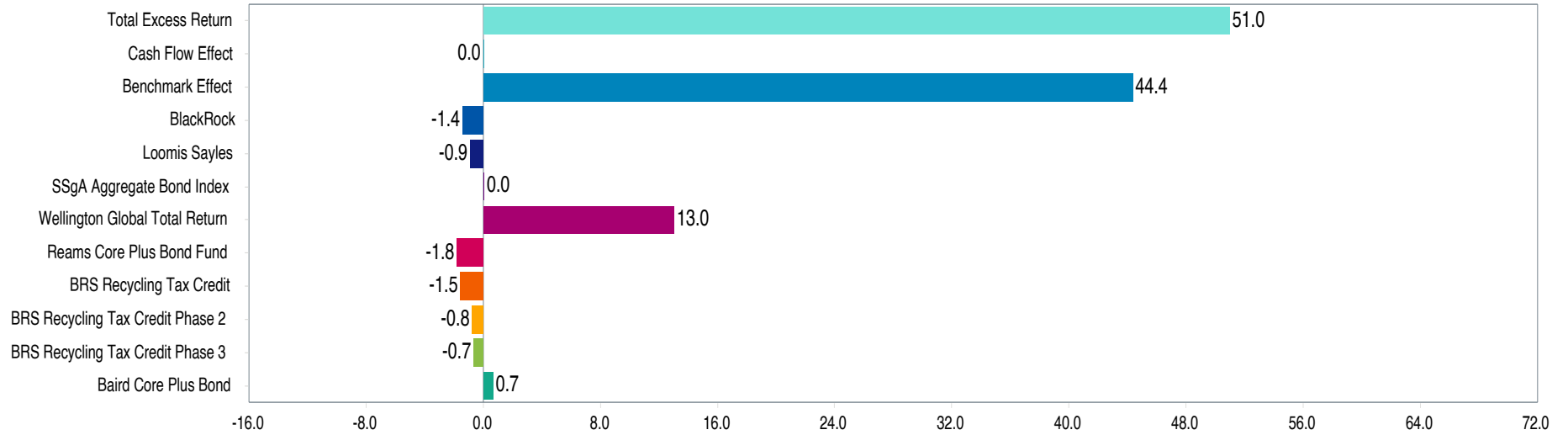
\*Preliminary Results

\*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.

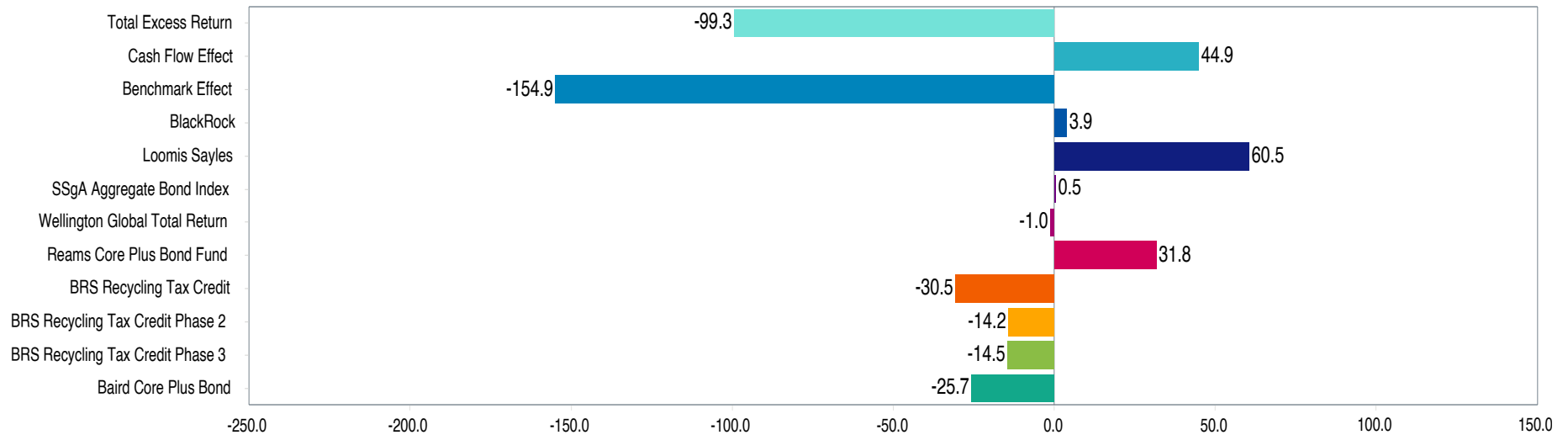
# Asset Class Attribution

As of October 31, 2024

## 1 Month



## 1 Year



\*Preliminary Results

# Asset Allocation & Performance

As of October 31, 2024

	Allocation		Performance %								
	Market Value \$ (\$)	%	1 Month	Year to Date	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Opportunistic/Alternatives</b>	1,148,353,511	100.0	-0.3	9.0	2.1	11.9	8.3	5.2	3.7	4.2	05/01/2011
<i>Custom Alternatives Benchmark</i>			-0.5	6.7	0.9	9.0	4.4	4.4	2.9	2.7	
<b>Anchorage</b>	22,365,621	1.9	-0.1	3.7	1.4	6.1	4.4	7.3	4.4	5.7	05/01/2011
<i>Credit Suisse Event Driven</i>			0.0	9.7	3.7	15.2	3.2	6.7	3.7	3.7	
<i>HFRI ED: Distressed/Restructuring Index</i>			-0.1	8.2	3.5	14.5	3.6	7.7	4.9	4.9	
<b>York</b>	1,386,016	0.1	0.1	139.6	48.6	139.4	40.8	6.7	2.9	4.2	05/01/2011
<i>Credit Suisse Event Driven</i>			0.0	9.7	3.7	15.2	3.2	6.7	3.7	3.7	
<i>HFRI ED: Distressed/Restructuring Index</i>			-0.1	8.2	3.5	14.5	3.6	7.7	4.9	4.9	
<b>Capula</b>	106,879,187	9.3	0.8	5.7	3.2	6.9	10.1	8.0	7.3	6.7	05/01/2011
<i>HFRI Macro (Total) Index</i>			-1.9	2.8	-2.5	2.7	3.2	5.0	3.1	2.0	
<b>Graham</b>	101,853,097	8.9	-2.4	5.5	-5.0	-0.1	11.6	10.3	6.8	5.3	05/01/2011
<i>HFRI Macro (Total) Index</i>			-1.9	2.8	-2.5	2.7	3.2	5.0	3.1	2.0	
<b>Circumference Group Core Value</b>	43,692,174	3.8	1.3	4.2	3.1	13.2	4.1	8.3		8.5	08/01/2015
<i>Russell 2000 Index</i>			-1.4	9.6	7.7	34.1	0.0	8.5		7.9	
<b>Aeolus Keystone Fund</b>	22,214,364	1.9	0.7	8.9	3.8	9.9	8.3	2.4		0.4	12/01/2015
<i>FTSE 3 Month T-Bill</i>			0.4	4.6	1.8	5.6	3.8	2.4		1.9	
<i>Eurekahedge ILS Advisers Index</i>			1.0	10.7	6.0	12.1	7.4	5.3		2.5	
<b>Parametric Global Defensive Equity Fund</b>	238,635,168	20.8	-0.7	10.6	2.3	17.4	6.0	7.0		6.5	06/01/2017
<i>Performance Benchmark</i>			-0.9	10.3	3.0	18.6	5.0	7.1		6.4	
<i>MSCI AC World Index</i>			-2.2	16.4	4.4	33.4	6.0	11.6		10.7	
<b>Man Alternative Risk Premia</b>	126,625,465	11.0	-2.7	7.3	-3.7	7.8	8.9	4.8		3.8	06/01/2018
<i>SG Multi Alternative Risk Premia Index</i>			-0.3	7.9	0.0	6.0	7.5	2.0		1.7	
<b>CFM Systematic Global Macro Fund</b>	111,045,531	9.7	1.5	5.6	5.6	10.6	6.7			6.7	11/01/2021
<i>HFRI Macro: Systematic Diversified Index</i>			-2.7	1.2	-6.2	-2.2	1.8			1.8	

\*Preliminary Results



# Asset Allocation & Performance

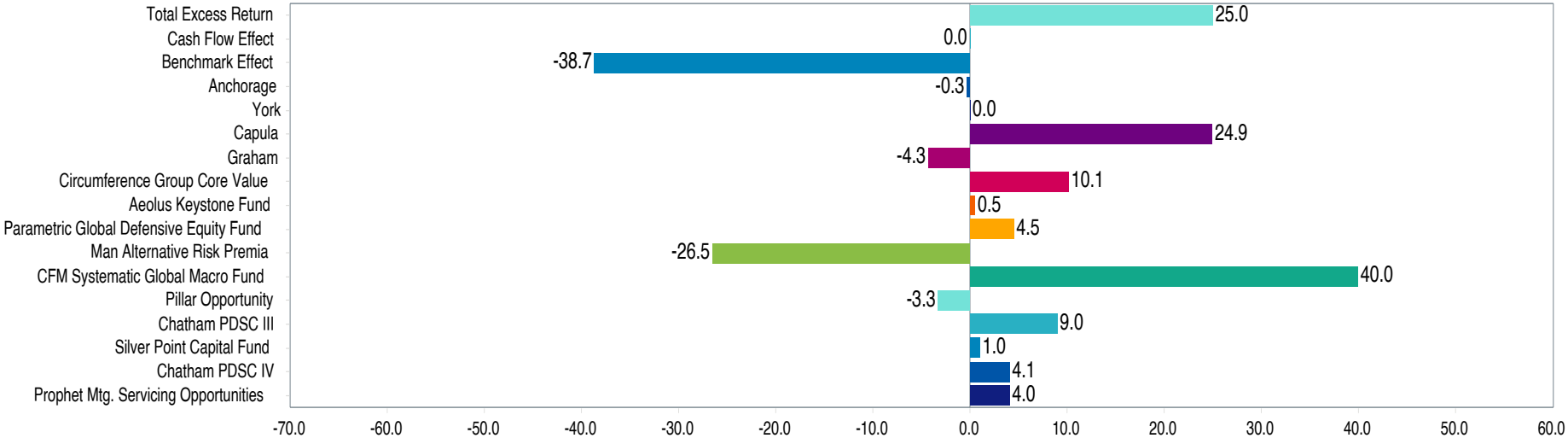
As of October 31, 2024

	Allocation		Performance %								
	Market Value \$ (\$)	%	1 Month	Year to Date	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Pillar Opportunity</b>	119,838,228	10.4	0.1	13.3	7.6	16.2				8.3	12/01/2021
<i>FTSE 3 Month T-Bill</i>			0.4	4.6	1.8	5.6				3.9	
<i>Eurekahedge ILS Advisers Index</i>			1.0	10.7	6.0	12.1				7.5	
<b>Chatham PDSC III</b>	76,846,237	6.7	0.9	11.1	2.4	15.7	15.5			15.5	11/01/2021
<i>HFRI Event-Driven (Total) Index</i>			-0.4	7.1	4.1	15.2	3.9			3.9	
<b>Silver Point Capital Fund</b>	58,246,226	5.1	0.1	10.5	2.7	14.2				6.3	03/01/2022
<i>HFRI ED: Distressed/Restructuring Index</i>			-0.1	8.2	3.5	14.5				4.3	
<b>Prophet Mtg. Servicing Opportunities</b>	49,832,363	4.3	0.0	12.6	3.7	11.0				16.8	05/01/2023
<i>Credit Suisse Hedge Fund Index</i>			-0.9	7.2	0.3	9.5				8.4	
<b>Chatham PDSC IV</b>	68,893,834	6.0	0.3	10.1	4.9	16.5				23.8	05/01/2023
<i>HFRI Event-Driven (Total) Index</i>			-0.4	7.1	4.1	15.2				10.8	

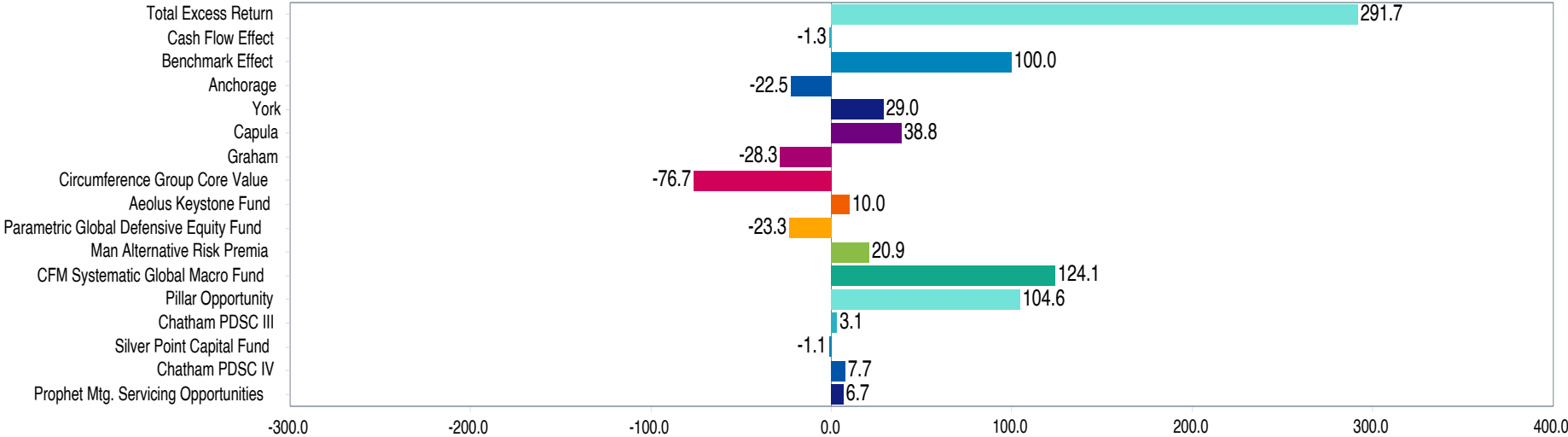
# Asset Class Attribution

As of October 31, 2024

## 1 Month



## 1 Year



# Total Fund Asset Allocation

Asset Allocation as of 10/31/2024							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	\$1,252,732.7	--	--	--	--	\$1,252,732.7	5.56%			
Kennedy Capital Management	\$442,153.6	--	--	--	--	\$442,153.6	1.96%			
Stephens	\$422,034.2	--	--	--	--	\$422,034.2	1.87%			
Voya Absolute Return	\$994,586.6	--	--	--	--	\$994,586.6	4.41%			
Voya U.S. Convertibles	\$849,068.4	--	--	--	--	\$849,068.4	3.77%			
Pershing Square Holdings	\$318,492.7	--	--	--	--	\$318,492.7	1.41%			
SSgA Global Index	\$992,747.9	--	--	--	--	\$992,747.9	4.41%			
BlackRock MSCI ACWI IMI Fund	\$1,005,019.1	--	--	--	--	\$1,005,019.1	4.46%			
Wellington Global Perspectives	\$734,855.1	--	--	--	--	\$734,855.1	3.26%			
T. Rowe Price Global Equity	\$1,243,893.3	--	--	--	--	\$1,243,893.3	5.52%			
Lazard	\$871,063.8	--	--	--	--	\$871,063.8	3.87%			
Harris Global Equity	\$720,075.5	--	--	--	--	\$720,075.5	3.20%			
Triar Partners	\$107,765.5	--	--	--	--	\$107,765.5	0.48%			
Triar Partners Co-Investments	\$81,804.0	--	--	--	--	\$81,804.0	0.36%			
Global Equity Transition Account	\$0.0	--	--	--	--	\$0.0	0.00%			
Arrowstreet	\$1,131,561.3	--	--	--	--	\$1,131,561.3	5.02%			
Westrock Equity Fund	\$16,600.0	--	--	--	--	\$16,600.0	0.07%			
<b>Total Equity</b>						\$11,184,453.9	49.63%	54.84%	53.00%	
BlackRock	--	\$266,380.6	--	--	--	\$266,380.6	1.18%			
Loomis Sayles	--	\$715,173.7	--	--	--	\$715,173.7	3.17%			
SSgA Aggregate Bond Index	--	\$1,334,019.7	--	--	--	\$1,334,019.7	5.92%			
Wellington Global Total Return	--	\$425,207.6	--	--	--	\$425,207.6	1.89%			
Reams Core Plus Bond Fund	--	\$595,022.4	--	--	--	\$595,022.4	2.64%			
Baird Core Plus Bond Fund	--	\$814,909.6	--	--	--	\$814,909.6	3.62%			
BRS Recycling Tax Credit	--	\$186,500.0	--	--	--	\$186,500.0	0.83%			
BRS Recycling Tax Credit Phase 2	--	\$91,200.0	--	--	--	\$91,200.0	0.40%			
BRS Recycling Tax Credit Phase 3	--	\$82,119.8	--	--	--	\$82,119.8	0.36%			
<b>Total Fixed Income</b>						\$4,510,533.5	20.02%	15.00%	15.00%	
Anchorage	--	--	--	\$22,365.6	--	\$22,365.6	0.10%			
Capula	--	--	--	\$106,879.2	--	\$106,879.2	0.47%			
Graham	--	--	--	\$101,853.1	--	\$101,853.1	0.45%			
York	--	--	--	\$1,386.0	--	\$1,386.0	0.01%			
Circumference Group Core Value	--	--	--	\$43,692.2	--	\$43,692.2	0.19%			
Aeolus Keystone Fund	--	--	--	\$22,214.4	--	\$22,214.4	0.10%			
Nephila Rubik Holdings	--	--	--	\$0.0	--	\$0.0	0.00%			
Parametric Global Defensive Equity	--	--	--	\$238,635.2	--	\$238,635.2	1.06%			
Man Alternative Risk Premia	--	--	--	\$126,625.5	--	\$126,625.5	0.56%			
CFM Systematic Global Macro	--	--	--	\$111,045.5	--	\$111,045.5	0.49%			
Juniperus	--	--	--	\$119,838.2	--	\$119,838.2	0.53%			
Chatham PDSC III	--	--	--	\$76,846.2	--	\$76,846.2	0.34%			
Silver Point Capital	--	--	--	\$58,246.2	--	\$58,246.2	0.26%			
Chatham PDSC IV	--	--	--	\$68,893.8	--	\$68,893.8	0.31%			
Prophet	--	--	--	\$49,832.4	--	\$49,832.4	0.22%			
<b>Total Opportunistic/Alternatives</b>						\$1,148,353.5	5.10%	5.23%	5.00%	
<b>Real Estate</b>			\$1,537,970.1			\$1,537,970.1	6.82%			
<b>Timber</b>			\$364,101.4			\$364,101.4	1.62%			
<b>Agriculture</b>			\$249,115.3			\$249,115.3	1.11%			
<b>Infrastructure</b>			\$550,321.8			\$550,321.8	2.44%			
<b>Total Real Assets</b>						\$2,701,508.5	11.99%	12.92%	15.00%	
<b>Total Private Equity</b>				\$2,917,535.8		\$2,917,535.8	12.95%	12.00%	12.00%	
<b>Total Cash</b>					\$72,123.3	\$72,123.3	0.32%	0.00%	0.00%	
<b>Total Fund</b>	<b>\$11,184,453.9</b>	<b>\$4,510,533.5</b>	<b>\$2,701,508.5</b>	<b>\$4,065,889.3</b>	<b>\$72,123.3</b>	<b>\$22,534,508.5</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 total due to rounding.

# Real Estate Asset Allocation

Asset Allocation as of 10/31/2024				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	\$50.9	0.00%	0.00%	LaSalle Asia Opportunity Fund VI	\$11,383.0	0.74%	0.05%
Almanac Realty Securities Fund VI	\$2,926.6	0.19%	0.01%	LaSalle Income & Growth Fund VI	\$2,235.9	0.15%	0.01%
Almanac Realty Securities Fund VII	\$19,237.0	1.25%	0.09%	LaSalle Income & Growth Fund VII	\$5,602.4	0.36%	0.02%
Almanac Realty Securities Fund VIII	\$25,181.9	1.64%	0.11%	LaSalle Income & Growth Fund VIII	\$34,658.4	2.25%	0.15%
Almanac Realty Securities Fund IX	\$8,496.7	0.55%	0.04%	LaSalle US Value Partners IX	-\$3,808.8	-0.25%	-0.02%
American Center	\$28,951.4	1.88%	0.13%	LBA Logistics Value Fund	\$37,879.3	2.46%	0.17%
AR Insurance	\$2,387.4	0.16%	0.01%	Lone Star Real Estate Fund IV	\$6,876.6	0.45%	0.03%
AR Teachers Retirement Building	\$4,822.4	0.31%	0.02%	Lone Star Real Estate Fund VII	-\$1,321.2	-0.09%	-0.01%
Blackstone Real Estate Partners VII	\$7,382.9	0.48%	0.03%	Long Wharf Real Estate Partners V	\$15,027.9	0.98%	0.07%
Blackstone RE Europe VI	\$41,613.4	2.71%	0.18%	Long Wharf Real Estate Partners VI	\$32,709.4	2.13%	0.15%
Blackstone RE Europe VII	\$4,905.9	0.32%	0.02%	Mesa West Income Fund V	\$14,300.6	0.93%	0.06%
Blackston RE X	\$19,268.7	1.25%	0.09%	Metropolitan RE Co-Investments	\$6,418.5	0.42%	0.03%
Carlyle Realty Partners VII	\$6,491.0	0.42%	0.03%	Met Life Commercial Mtg Inc Fund	\$42,858.5	2.79%	0.19%
Carlyle Realty VIII	\$10,888.8	0.71%	0.05%	Morgan Stanley Prime Property Fund	\$57,157.2	3.72%	0.25%
Carlyle Realty IX	\$15,349.2	1.00%	0.07%	New Boston Fund VII	\$15,261.9	0.99%	0.07%
CBREI SP U.S. Opportunity V	\$120.1	0.01%	0.00%	O'Connor NAPP II	\$2,927.6	0.19%	0.01%
CBREI SP VIII	\$13,495.1	0.88%	0.06%	PRISA	\$260,729.6	16.95%	1.16%
CBREI SP IX	\$41,642.1	2.71%	0.18%	Recoveries Land	\$70.0	0.00%	0.00%
Cerberus Institutional RE Partners III	\$8,115.2	0.53%	0.04%	Rockwood Capital RE Partners IX	\$2,478.3	0.16%	0.01%
Calmwater	\$11,397.8	0.74%	0.05%	Rockwood Capital RE XI	\$30,578.2	1.99%	0.14%
Fletcher Properties	\$1,087.0	0.07%	0.00%	Rose Law Firm	\$4,538.7	0.30%	0.02%
FPA Core Plus IV	\$34,643.3	2.25%	0.15%	RREEF Core Plus Industrial Fund	\$63,833.8	4.15%	0.28%
GCP GLP IV	\$40,360.4	2.62%	0.18%	Torchlight Debt Opportunity Fund IV	\$1,625.9	0.11%	0.01%
Harbert European Real Estate	\$1,174.7	0.08%	0.01%	Torchlight Debt Opportunity Fund V	\$2,540.3	0.17%	0.01%
Heitman European Property IV	\$277.8	0.02%	0.00%	Torchlight Debt Opportunity Fund VI	\$19,192.2	1.25%	0.09%
JP Morgan Strategic Property Fund	\$147,693.8	9.60%	0.66%	Torchlight Debt Opportunity Fund VII	\$49,992.3	3.25%	0.22%
Kayne Anderson V	\$17,364.1	1.13%	0.08%	UBS Trumbull Property Fund	\$117,163.9	7.62%	0.52%
Kayne Anderson VI	\$40,970.6	2.66%	0.18%	UBS Trumbull Property Income Fund	\$52,241.2	3.40%	0.23%
Landmark Fund VI	\$114.8	0.01%	0.00%	Victory	\$33,162.4	2.16%	0.15%
Landmark Real Estate IX	\$3,365.2	0.22%	0.01%	Walton Street Real Estate Debt II	\$18,941.4	1.23%	0.08%
Landmark Real Estate VIII	\$14,015.2	0.91%	0.06%	West Mphs. DHS	\$0.0	0.00%	0.00%
LaSalle Asia Opportunity Fund IV	\$1,773.7	0.12%	0.01%	Westbrook IX	\$4,181.6	0.27%	0.02%
LaSalle Asia Opportunity Fund V	\$14,479.2	0.94%	0.06%	Westbrook Real Estate Fund X	\$6,488.9	0.42%	0.03%
				<b>Total Real Estate</b>	<b>\$1,537,970.1</b>	<b>100.00%</b>	<b>6.82%</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 total due to rounding.

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# Private Equity Asset Allocation

Asset Allocation as of 10/31/2024				Values in \$1,000			
	Private Equity	Percent of Private Equity	Percent of Total Fund		Private Equity	Percent of Private Equity	Percent of Total Fund
Alpine IX	\$7,505.8	0.26%	0.03%	Insight Mezzanine I	\$2,055.3	0.07%	0.01%
Alpine VIII	\$26,219.9	0.90%	0.12%	JF Lehman III	\$26,174.9	0.90%	0.12%
Arlington Capital IV	\$35,395.7	1.21%	0.16%	JF Lehman IV	\$5,073.9	0.17%	0.02%
Arlington Capital V	\$37,930.3	1.30%	0.17%	JF Lehman V	\$44,159.2	1.51%	0.20%
Arlington Capital VI	\$17,752.0	0.61%	0.08%	JF Lehman VI	\$10,736.7	0.37%	0.05%
Advent GPE VI	\$3,121.4	0.11%	0.01%	KPS III	\$0.0	0.00%	0.00%
Altus Capital II	\$4,754.7	0.16%	0.02%	KPS IV	\$11,943.6	0.41%	0.05%
American Industrial Partners VI	\$30,804.3	1.06%	0.14%	KPS V	\$29,214.7	1.00%	0.13%
American Industrial Partners VII	\$41,130.0	1.41%	0.18%	KPS Mid-Cap	\$15,159.9	0.52%	0.07%
Altaris Constellation Partners	\$23,270.7	0.80%	0.10%	Levine Leichtman V	\$823.5	0.03%	0.00%
Altaris Health Partners IV	\$22,920.6	0.79%	0.10%	Lime Rock III	\$18,582.7	0.64%	0.08%
Atlas Capital II	\$7,731.2	0.26%	0.03%	LLR III	\$795.5	0.03%	0.00%
Audax Mezzanine III	\$1,604.0	0.05%	0.01%	LLR VI	\$28,197.6	0.97%	0.13%
Big River - Equity	\$1,863.0	0.06%	0.01%	LLR VII	-\$600.3	-0.02%	0.00%
Big River - Holdings Note 2023	\$0.0	0.00%	0.00%	Mason Wells III	\$0.0	0.00%	0.00%
Big River - Holdings Note 3/16/23	\$0.0	0.00%	0.00%	NGP IX	\$28.4	0.00%	0.00%
Bison V	\$23,409.6	0.80%	0.10%	NGP X	\$2,881.4	0.10%	0.01%
Bison VI	\$16,921.0	0.58%	0.08%	NGP XI	\$11,852.6	0.41%	0.05%
Boston Ventures VII	\$879.4	0.03%	0.00%	NGP XII	\$16,535.6	0.57%	0.07%
Boston Ventures IX	\$31,180.0	1.07%	0.14%	One Rock Capital Partners II	\$29,265.3	1.00%	0.13%
Boston Ventures X	\$37,380.3	1.28%	0.17%	PineBridge	\$9,528.5	0.33%	0.04%
Boston Ventures XI	\$13,501.4	0.46%	0.06%	Revelstoke	\$21,005.1	0.72%	0.09%
BV VIII	\$8,680.4	0.30%	0.04%	Post Road	\$17,274.0	0.59%	0.08%
Castlelake II	\$5,766.7	0.20%	0.03%	Riverside Value Fund I	\$26,804.6	0.92%	0.12%
Castlelake III	\$8,375.4	0.29%	0.04%	Riverside V	\$23,994.0	0.82%	0.11%
Clearlake V	\$34,438.9	1.18%	0.15%	Riverside VI	\$33,910.7	1.16%	0.15%
Clearlake VI	\$47,189.7	1.62%	0.21%	Siris III	\$18,481.9	0.63%	0.08%
Clearlake VII	\$19,313.0	0.66%	0.09%	Siris IV	\$35,624.5	1.22%	0.16%
Court Square III	\$29,782.8	1.02%	0.13%	SK Capital V	\$31,735.3	1.09%	0.14%
CSFB-ATRS 2005-1 Series	\$15,103.7	0.52%	0.07%	Sk Capital VI	\$18,258.5	0.63%	0.08%
CSFB-ATRS 2006-1 Series	\$18,969.0	0.65%	0.08%	Sycamore Partners II	\$15,444.5	0.53%	0.07%
Diamond State Ventures II	\$21.6	0.00%	0.00%	Sycamore Partners III	\$28,628.2	0.98%	0.13%
DW Healthcare III	\$1,444.9	0.05%	0.01%	TA XI	\$4,446.3	0.15%	0.02%
DW Healthcare IV	\$20,602.5	0.71%	0.09%	Tennenbaum VI	\$162.6	0.01%	0.00%
DW Healthcare V	\$38,922.0	1.33%	0.17%	Thoma Bravo Discover	\$5,482.9	0.19%	0.02%
EnCap IX	\$5,712.7	0.20%	0.03%	Thoma Bravo Discover II	\$25,448.8	0.87%	0.11%
EnCap VIII	\$17,211.4	0.59%	0.08%	Thoma Bravo Discover III	\$25,147.7	0.86%	0.11%
EnCap X	\$14,790.5	0.51%	0.07%	Thomas Bravo Discover IV	\$12,515.2	0.43%	0.06%
EnCap XI	\$27,930.2	0.96%	0.12%	Thoma Bravo Explore I	\$25,950.5	0.89%	0.12%
Enlightenment Capital Solutions V	\$7,540.9	0.26%	0.03%	Thoma Bravo XI	\$16,579.0	0.57%	0.07%
Franklin Park Series	\$1,166,150.7	39.97%	5.17%	Thoma Bravo XII	\$38,248.0	1.31%	0.17%
Greenbriar V	\$32,979.5	1.13%	0.15%	Thoma Bravo XIII	\$42,238.5	1.45%	0.19%
Greenbriar VI	\$9,941.2	0.34%	0.04%	Thoma Bravo XIV	\$21,370.0	0.73%	0.09%
GCG IV	\$14,439.0	0.49%	0.06%	Thoma Bravo XV	\$13,414.3	0.46%	0.06%
GCG V	\$29,944.3	1.03%	0.13%	Vista Equity III	\$2,398.3	0.08%	0.01%
GCG VI	\$12,145.5	0.42%	0.05%	Vista Foundation II	\$6,204.2	0.21%	0.03%
GTLA Holdings	\$70,000.0	2.40%	0.31%	Vista Foundation III	\$32,670.2	1.12%	0.14%
Highland	\$16,938.4	0.58%	0.08%	Wellspring V	\$10,381.4	0.36%	0.05%
Hybar LLC	\$200.5	0.01%	0.00%	Wicks IV	\$7,706.3	0.26%	0.03%
Insight Equity II	\$6,505.0	0.22%	0.03%	WNG II	\$27,285.7	0.94%	0.12%
<b>Total Private Equity</b>					<b>\$2,917,535.8</b>	<b>100.00%</b>	<b>12.95%</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 total due to rounding.

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# Arkansas Teacher Retirement System

## 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 20% and 12%, respectively, and Total Equity at its long-term Policy Target of 48% plus the balance of the unfunded or uncommitted assets of the Opportunistic/Alternatives and Real Assets categories. These targets can be found on page 16 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

**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, 2024, the Total Equity Performance Benchmark was comprised of 30.8% DJ U.S. Total Stock Market Index and 69.2% 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

## 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.

**Voya U.S. 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 Voya U.S. Convertibles 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.



**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 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.

**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

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

As of June 30, 2015	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
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.

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Refer to Hedge Fund Research, Inc. [www.hedgefundresearch.com](http://www.hedgefundresearch.com) for information on HFR indices.

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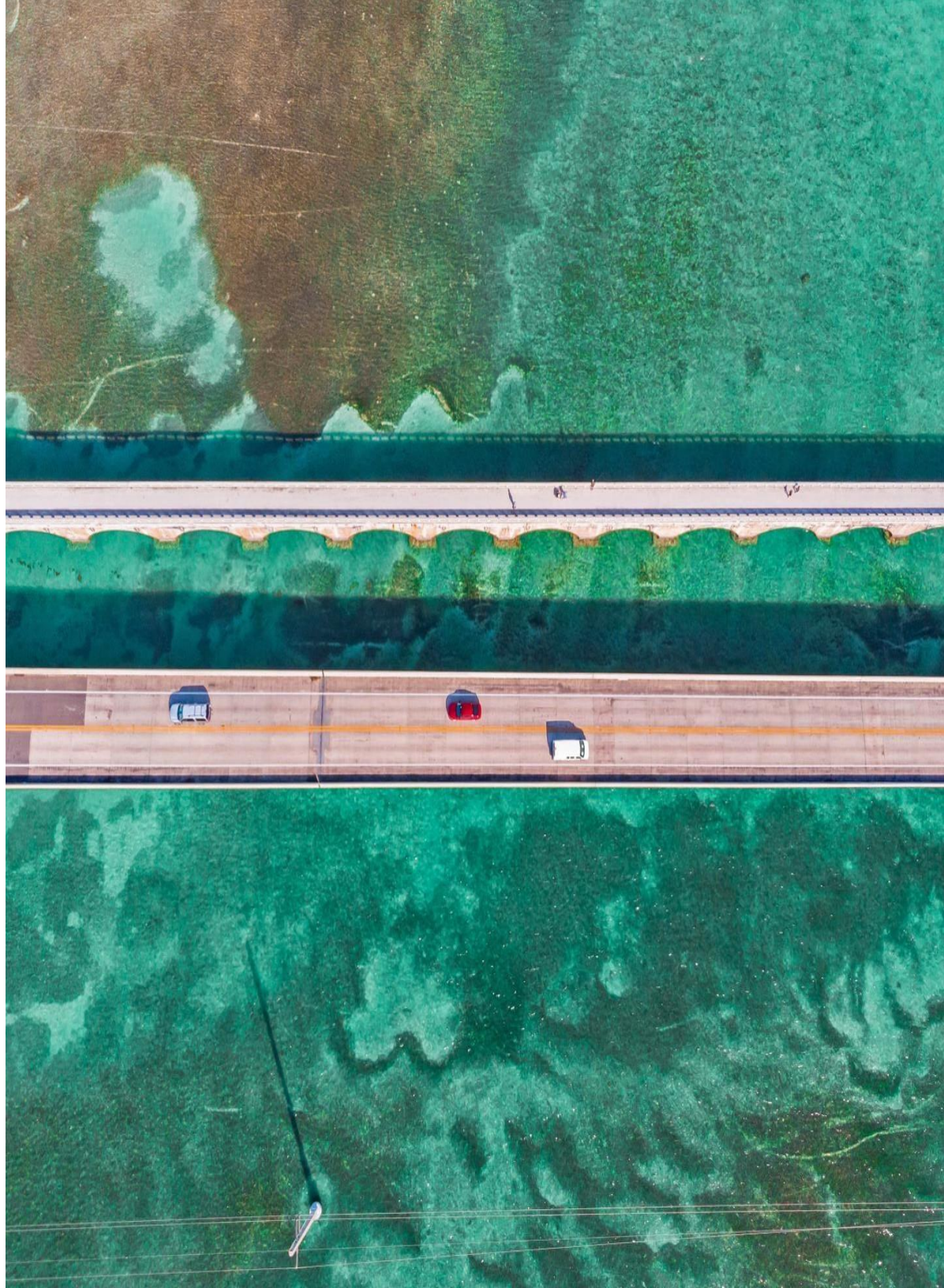
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# 2Q 2024 Real Assets Performance Review

Arkansas Teachers Retirement  
System

December 2024



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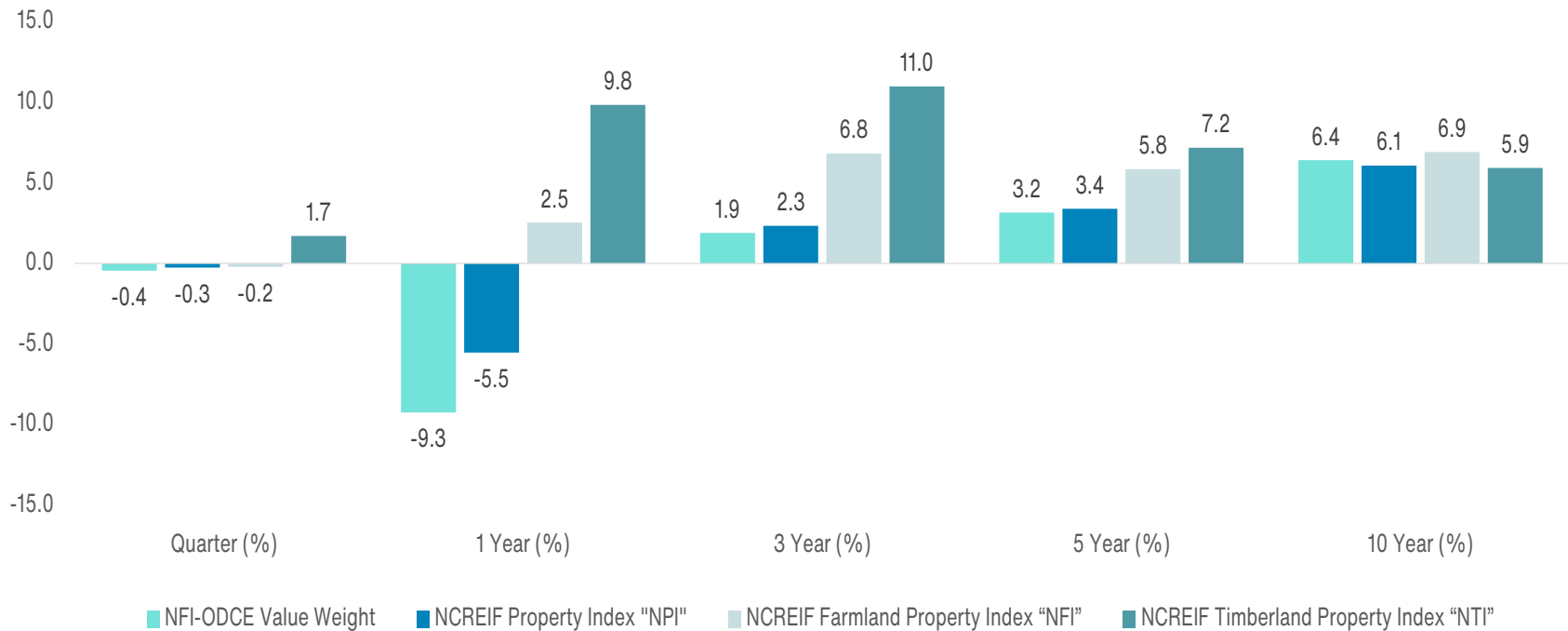
# 1

## Executive Summary



# 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	-0.4	-0.7	-9.3	-10.0	1.9	1.0	3.2	2.3	6.4	5.5
NCREIF Property Index "NPI"	-0.3		-5.5		2.3		3.4		6.1	
NCREIF Farmland Property Index "NFI"	-0.2		2.5		6.8		5.8		6.9	
NCREIF Timberland Property Index "NTI"	1.7		9.8		11.0		7.2		5.9	



# Portfolio Funding Status and Composition

As of June 30, 2024

ATRS' Portfolio <sup>1</sup> (\$ in Millions)	
Number of Investments	93
Total Commitments	4,752.8
Unfunded Commitments	796.7
Total Paid-In Capital	4,253.8
Total Distributions	3,723.1
Net Asset Value	2,607.9
Gross Asset Value	3,967.7
DPI	0.9x
TVPI	1.5x
Since Inception IRR	6.8%

Portfolio Composition to Targets		
	Target	Actual Funded
Target Real Asset Allocation	15%	11.6%
Portfolio Style Composition		
Real Estate	10%	6.6%
Core <sup>2</sup>	50-70%	54.9%
Non-Core	30-50%	45.1%
Value-Added <sup>3</sup>	NA	26.9%
Opportunistic <sup>3</sup>	NA	18.2%
Agriculture	1%	1.1%
Timber	2%	1.6%
Infrastructure	2%	2.3%
Leverage	50%	34.3%

The portfolio is in compliance with its Statement of Investment Policy.

<sup>1</sup> Active and liquidated

<sup>2</sup> Includes Arkansas Investments

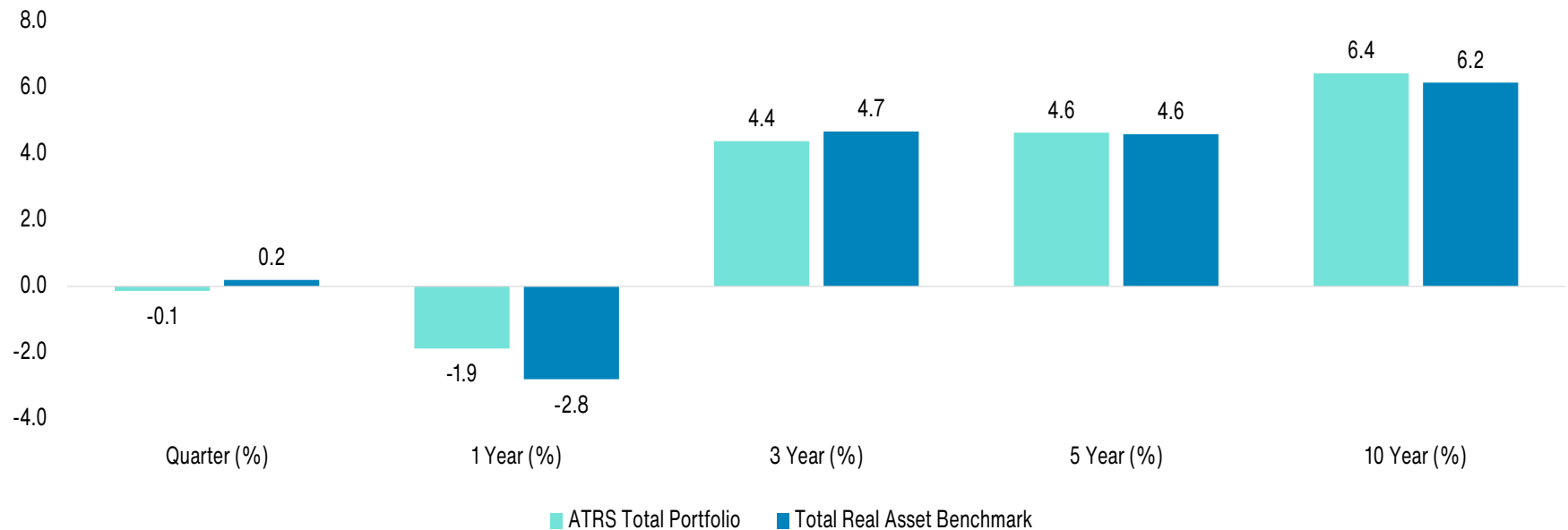
<sup>3</sup> No stated targets



# 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	0.3	-0.1	-0.6	-1.9	5.9	4.4	6.1	4.6	7.9	6.4	6.8	1.5
Total Real Assets Benchmark <sup>1</sup>		0.2		-2.8		4.7		4.6		6.2		

## Gross Time Weighted Returns



<sup>1</sup> The ATRS Total Real Assets Benchmark was comprised of the NFI-ODCE returns, the NCREIF Timberland returns, the NCREIF Agriculture returns, and CPI plus 500 weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Assets benchmark, Timber benchmark, Agriculture benchmark, and Infrastructure benchmarks prior to 3Q2020. As of 3Q2020, 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.

# ATRS' Real Asset Performance Summary

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	-0.3	-0.6	-6.0	-7.1	2.8	1.4	3.3	1.9	6.9	5.5	7.0	1.4
NFI-ODCE Value Weight	-0.4	-0.7	-9.3	-10.0	1.9	1.0	3.2	2.3	6.4	5.5		
Timberland	1.8	1.6	9.3	8.4	8.4	7.4	8.1	7.1	6.6	5.7	5.5	2.1
Timberland Property Benchmark <sup>1</sup>	1.7		9.8		11.0		7.6		5.7			
Agriculture	0.0	-0.3	4.2	3.1	9.4	8.3	7.9	6.7	6.6	5.5	6.0	1.5
Agriculture Benchmark <sup>1</sup>	-0.2		2.5		6.8		6.0		5.4			
Infrastructure	1.3	0.2	7.0	4.9	12.8	10.2	14.4	11.9	N/A	N/A	12.1	1.5
Infrastructure Benchmark <sup>1</sup>	1.8		8.1		10.0		8.8		N/A			

<sup>1</sup> The ATRS Total Real Assets Benchmark was comprised of the NFI-ODCE returns, the NCREIF Timberland returns, the NCREIF Agriculture returns, and CPI plus 500 weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Assets benchmark, Timber benchmark, Agriculture benchmark, and Infrastructure benchmarks prior to 3Q2020. As of 3Q2020, 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.

# ATRS' Real Assets Portfolio Highlights

## Commitment activity update

- ATRS made the following commitments during, or subsequent to quarter end:
  - Carlyle Realty Partners X: \$50 million
- ATRS is in the queue with a partial redemption of UBS TPF
  - As of June 30, 2024, the TPF redemption queue is \$5.7 billion and expect full repayment by YE26

# Significant Events

- In Q2 of 2024, Paul Wasserman of KKR has departed from KKR and his role of Head of Real Estate Portfolio & Asset Management.
- In Q2 2024, Josh Myerberg, the Deputy Portfolio Manager of Prime Property Fund has departed and joined the JP Morgan team as Head of Open-End Funds.

# 2

## Market Overview



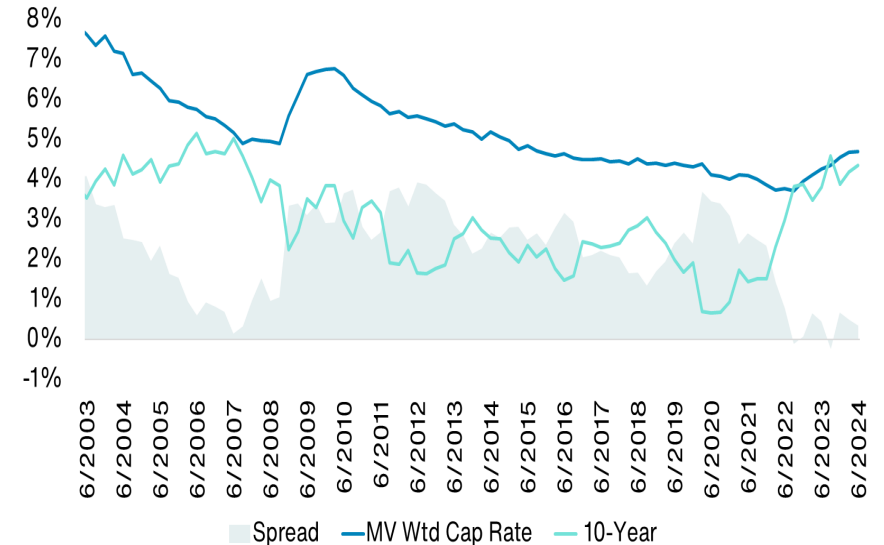
# United States Real Estate Market Update

2Q 2024

## General

- The economy remained fast paced in the first quarter, leading the Fed to indicate its intentions to maintain a steady pace, keeping interest rates within the 5.25%-5.00% target.
- During the second quarter, GDP increased at an annualized rate of 2.8%, up from 1.4% in the first quarter. Growth was led by increases in consumer spending, private inventory investment, and nonresidential fixed imports partially offset by imports. Investors will continue to monitor economic growth, coupled with headline inflation, as an indication of a soft landing out of the current cycle.

NPI Current Value Cap Rate versus 10yr Treasury



Sources: Bureau of Economic Analysis, U.S. Census Bureau, St. Louis Fed, NCREIF, Real Capital Analytics, Bloomberg LP., Prequin.

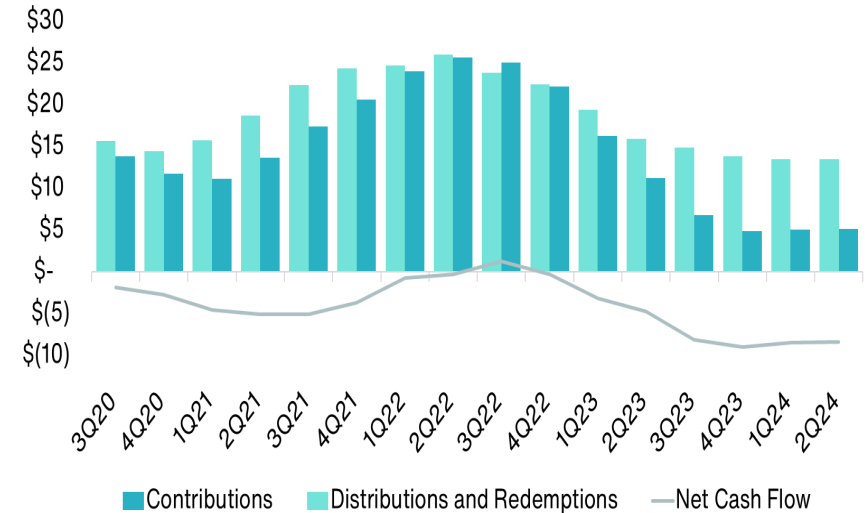
# United States Real Estate Market Update

2Q 2024

## Commercial Real Estate

- 10yr Treasury bond yields remained elevated, ending the quarter at 4.4%. However, recent dovish sentiment from the Fed could indicate a potential plateau, and recovery, from a multi-year high. Even so, the spread between the 10yr Treasury and current value cap rates remain relatively tight, indicating minimal risk premium for commercial real estate.
- Capital flows in and out of U.S. stabilized commercial real estate remain negative, albeit at an improving rate. Contributions are showing signs of growth, with distributions and redemptions plateauing. Current investor redemption queues remain elevated at around \$39 billion (or 18-19% of the index), manager payouts remain the range of 5-10%.

NFI-ODCE: Rolling 4 Quarter Cash Flows



Sources: Bureau of Economic Analysis, U.S. Census Bureau, St. Louis Fed, NCREIF, Real Capital Analytics, Bloomberg LP., Preqin.

# United States Property Detail

## 2Q 2024

### Industrial

Strong NOI growth continues to support capital values despite cap rates moving out. Softening demand contributes to slowing rent growth; however, fundamentals still present resilience for industrial properties.

### Residential

Expanded NPI now includes manufactured housing, single-family rental, and student housing along with apartments. Weak rental growth at apartments was a factor for negative appreciation; however, positive appreciation from the new property subtypes helped support overall returns.

### Office

Expanded NPI now includes life sciences and medical office along with traditional office. Losses were broad-based across subtypes, with life sciences and medical office exhibiting losses to a lesser extent.

### Retail

Malls entered this cycle at depressed values, offering investors a value proposition which supported property values. NOI growth has also been strong at select properties. Necessity based retail (i.e., grocery and pharmacy anchored) has performed well as of late.

### Other Property Types

Seniors Housing: as seniors delay assisted living, independent living outperforms due to relative demand

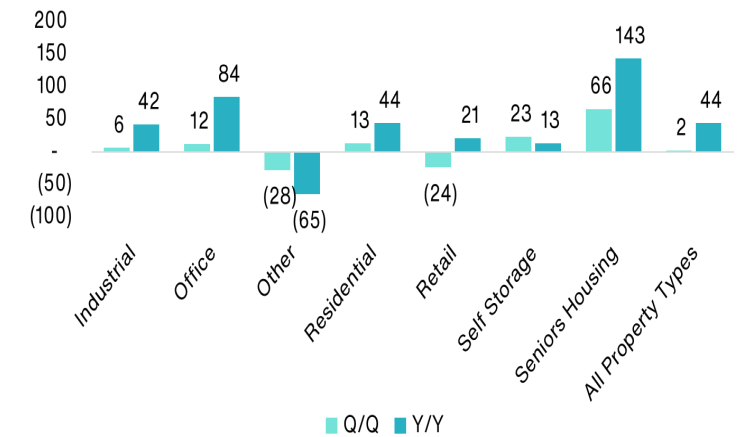
Self-Storage: tends to do well in down cycles when tenants require more storage space

Other: roughly 1.5% of NPI and is made up of data centers, land, parking, and other

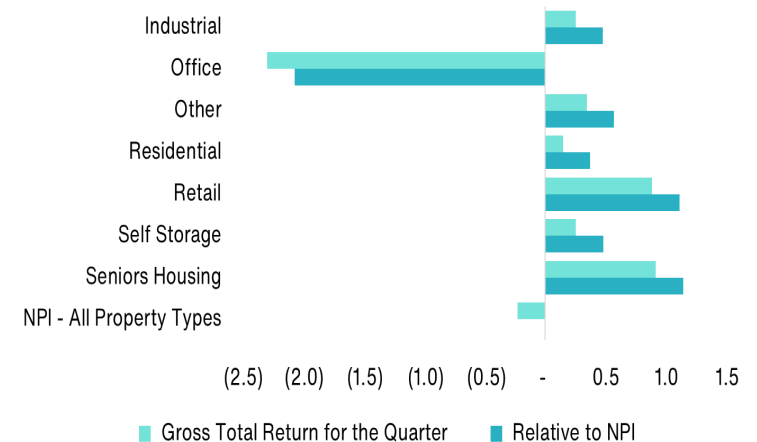
Source: NCREIF

### Current Value Cap Rate Change by Property Type

(in basis points)



### NPI - Property Type Returns

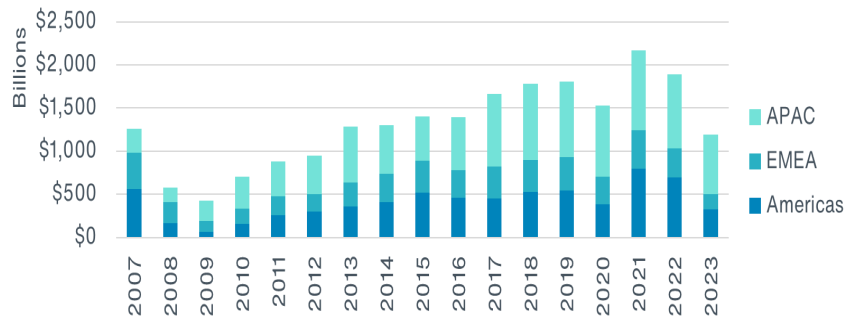




# Global Real Estate Market Conditions

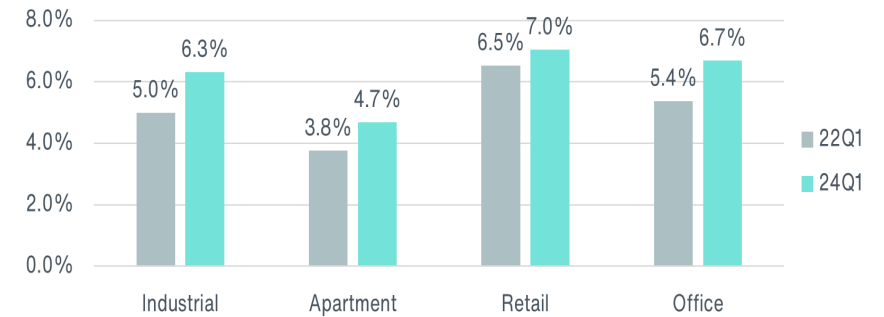
## Transaction volume down but signs of pickup

Global Commercial Real Estate Transaction Volume



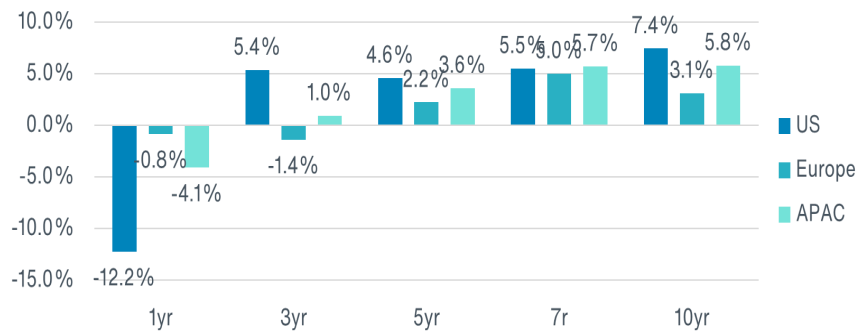
## Valuations have reset considerably from '22 lows

Europe Average Cap Rate



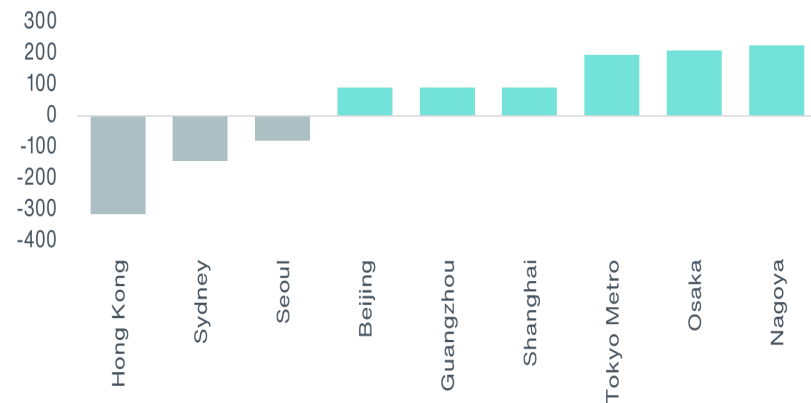
## Real estate returns declined globally in 2023

Regional Returns Annualized (Net of Fees)



## Industrial spreads positive in Japan; negative in Australia

Spread Between APAC Logistics Yields and Lending Rates (bps)

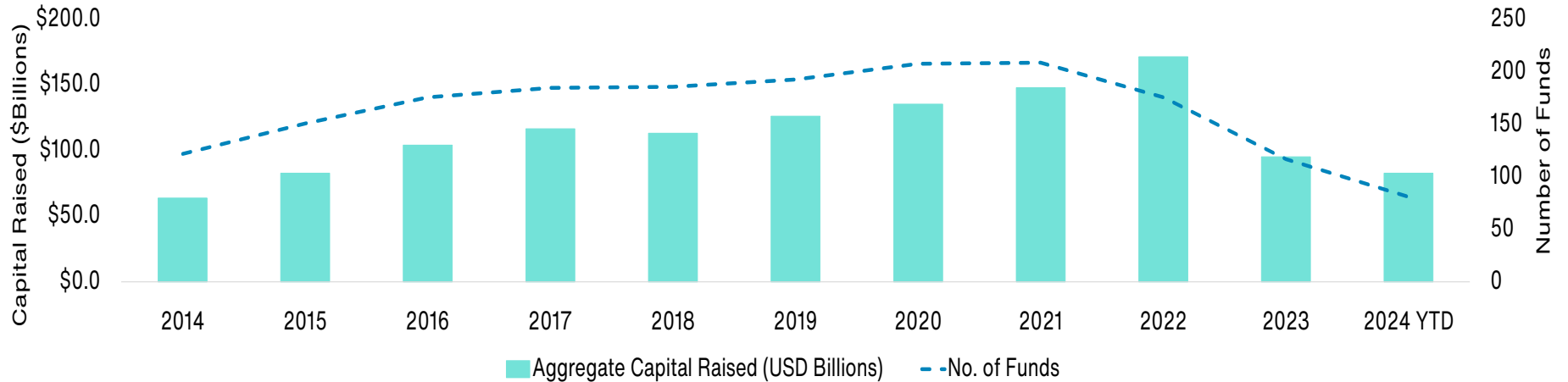


Source: The Townsend Group, NCREIF, MSCI Real Assets, St. Louis Fed, CBRE (June 2024), DWS (June 2024), Dexis Research (June 2024).

Townsend's views are as of the date of this publication and may be changed or modified at any time and without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

# Infrastructure

## Global Infrastructure Fundraising



## Fundraising

- \$18.6 billion of capital was raised by 27 funds in Q2 2024 compared to \$45.1 billion of capital raised by 32 funds in Q1 2024. This fell short of the five-year quarterly average of \$34.1 billion. By primary region focus, approximately 48% of funds closed in Q2 2024 were targeting Europe.
  - Igneo Infrastructure Partners European Diversified Infrastructure Fund III was the largest fund to hold a final close during 2Q24 raising \$4.45 billion of commitments
- As of the end of Q2 2024, there were an estimated 650 funds in the market seeking roughly \$554.6 billion.
  - The largest funds in market, BlackRock Global AI Infrastructure Investment Partnership and Brookfield Infrastructure Fund V had target fund sizes of \$30.0 billion and \$28.0 billion, respectively.
  - The 10 largest funds in market are currently seeking a combined \$230 billion in capital.
- Despite a slow down in fundraising, the market remains competitive and should see strong capital deployment in the coming quarters stemming from sidelined capital and investor appetite.

Chart source: Preqin

# Infrastructure

## Infrastructure Deals Completed

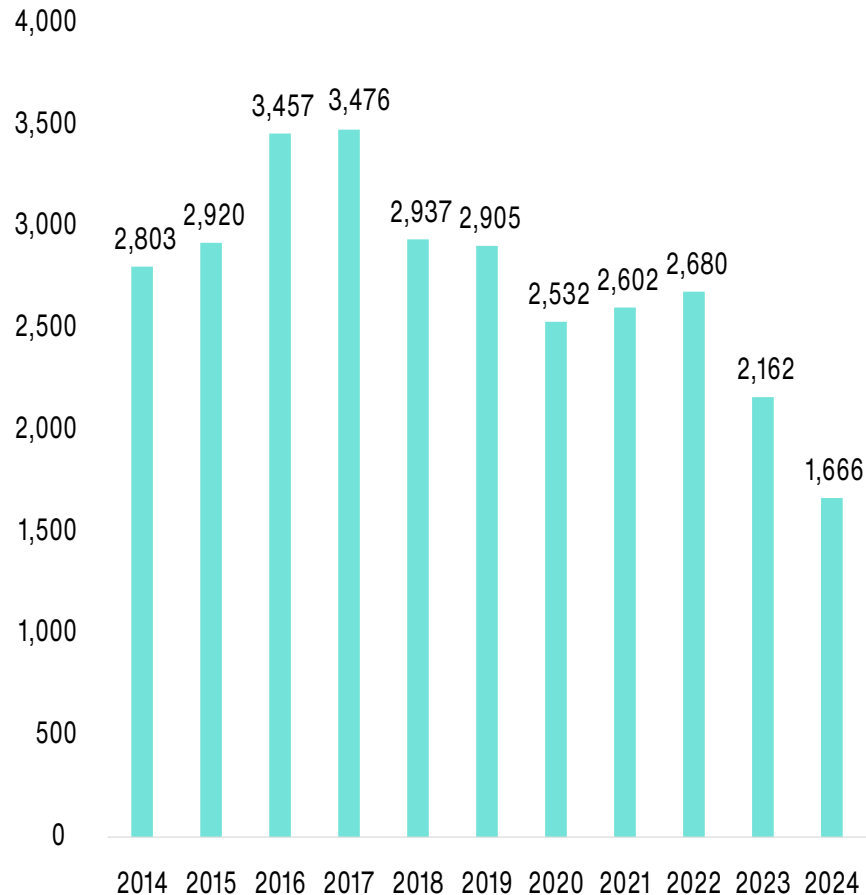


Chart source: Preqin

## Activity

- Infrastructure managers completed 431 deals for an aggregate deal value of \$65.4 billion in Q2 2024, compared to 533 deals totaling \$64.9 billion in Q1 2024. Q2 2024's total continues to be significantly lower than the five-year quarterly average of \$99.7 billion in deal value.
  - By region, Europe saw the largest number of deals, with 49.7% being completed in the region, followed by North America at 35.9%. APAC amassed 14.4% of activity through the end of Q2 2024.

## Opportunity

- Mid-market core+ and value-add infrastructure as well as a platform investing approach continue to offer the best relative value.
- Assess funds with pre-specified assets with caution due to possible lag in and uncertainty around valuation impact.
- Blind-pool funds may be better positioned to take advantage of the market dislocation in certain sub-sectors, however careful review of such strategies is required.
- Build-to-core greenfield strategies particularly in the social / PPP infrastructure space offer a premium for investors willing to take on construction / development risk.

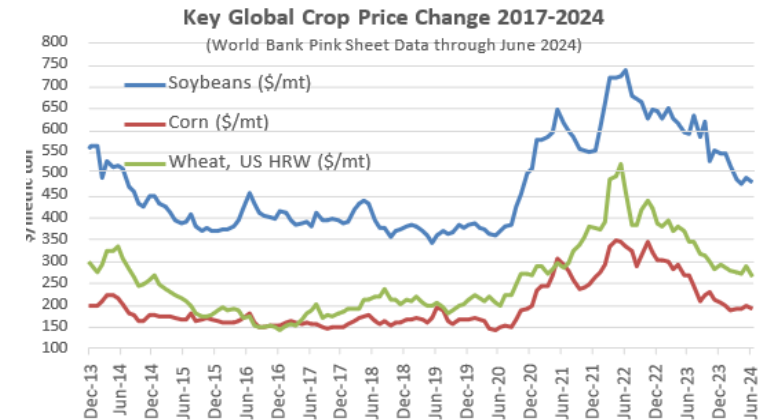
# Farmland

## Second Quarter 2024 Market Update

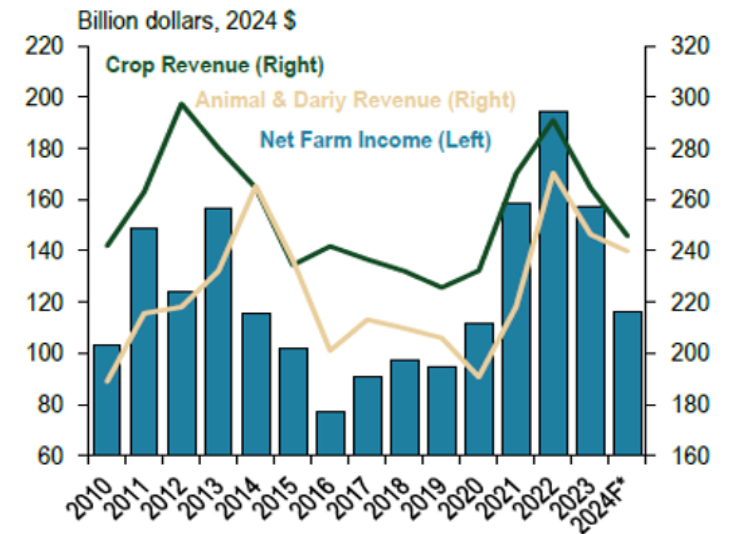
### Farmland markets

- Agricultural markets remained pressured during the quarter, as value write-downs continued within permanent crops, most notably in the tree nut complex, and row crops continued to moderate off recent outperformance. Farm incomes remain above long-term averages but have softened significantly, as elevated production levels, U.S. dollar strength, and reduced export volumes will continue to pressure markets throughout 2024/25. Tight credit conditions and elevated interest rates are also adding to the challenges, particularly for permanent crop valuations and operating margins.
- Row crop prices generally trended sideways during 2Q24, reflecting stable but softer market conditions, while farmer margins remain under pressure from reduced commodity prices, though declines in input costs for fuel and fertilizer have helped stabilize profitability, with fertilizer prices declining 17% YoY.
- Many permanent crops remain challenged from ongoing price weakness, high water risks, and discounted valuations by appraisers. The tree nut segment, particularly almonds and pistachios, continues to be hit hardest.
- Farmland values in the U.S. remained firm but have started to moderate due to tighter credit conditions and increased borrowing costs. Farm real estate values increased by 4.7% year-over-year, though growth has slowed considerably compared to the rapid pace of the past two years. Despite market headwinds, cropland cash rents rose slightly offering some stability to landowners despite softening markets.

**FIG 1: Major Global Crop Prices Quarterly % Change**



**FIG 2: U.S. Farm Income and Revenue**



Second Quarter 2024  
Sources by Figure: (1) World Bank Pink Sheet Monthly Data – March 2024; Figure (2) Federal Reserve District Surveys of Ag Credit Conditions

# Farmland

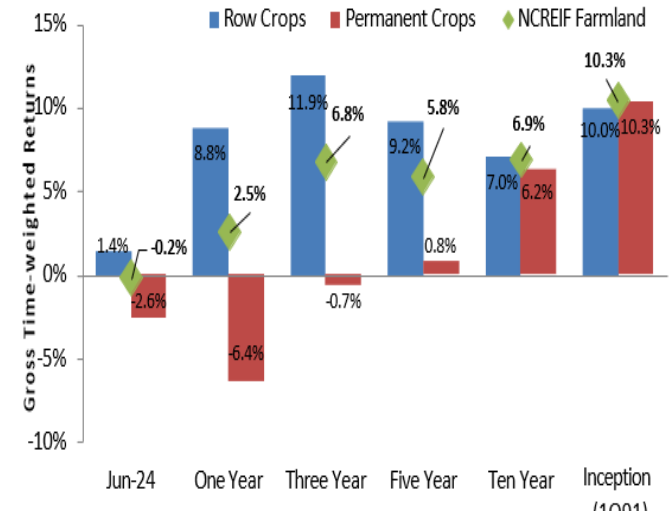
## Second Quarter 2024 Performance Update

### Farmland index commentary 2Q24

- The NCREIF Farmland Index ("NFI") reported a slightly negative return of -0.21% in Q2 2024, reflecting a notable shift from the 0.7% gain last quarter. This quarter's performance is largely attributed to the ongoing divergence between row crops and permanent crop returns.
- The total return was composed of 0.5% income and -0.7% depreciation. Over the trailing 12 months (TTM), the NFI posted a 2.54% total return, composed of 2.89% income and -0.33% depreciation. The results illustrate that row crops have remained a stabilizing factor, while permanent crops continue to experience negative returns due to challenging market conditions in tree nuts.
- Row crops returned 1.5%, split evenly at 0.7% of appreciation and 0.7% of income during the quarter. Permanent crop performance was negative for the fifth consecutive quarter returning -2.6% comprised of -2.7% appreciation and 0.1% income.
- Over the TTM, Row crops returned 8.8% while permanent crops posted a -6.4% return, marking the new lowest return (over last quarter's TTM period) over any 12-month period as both almonds and pistachios continuing to experience write-downs as pricing in the tree nut segment has been under pressure due to a period of oversupply initially driven by COVID-19 supply-chain disruptions and has led to multiple bankruptcies within the nut sector.
- Australian farmland has faced similar pressure as the ANREV Australian Farmland Index ("AFI") has hit its lowest point on an annualized basis, returning -1.7% through 2Q24. Similar to the U.S., the sharp divide between row and permanent crops remained as row crops generated 5.3% over the TTM period, while permanent crops generated a -9.5% return.

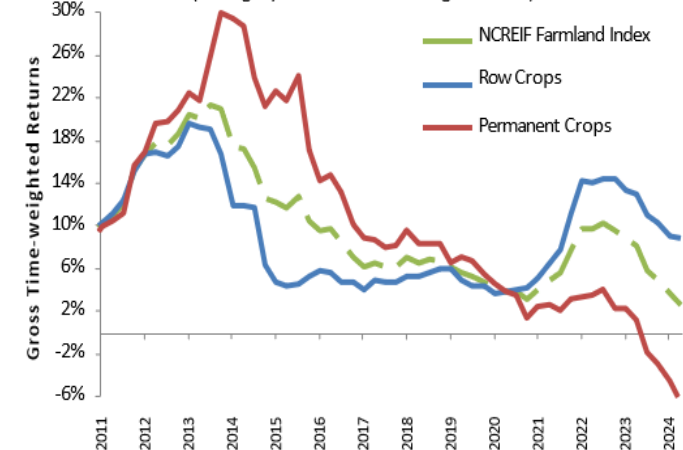
Second Quarter 2024  
Source: NCREIF, ANREV

### NCREIF Farmland Index Farm Type Returns June 2024



### NCREIF Farm Type Performance

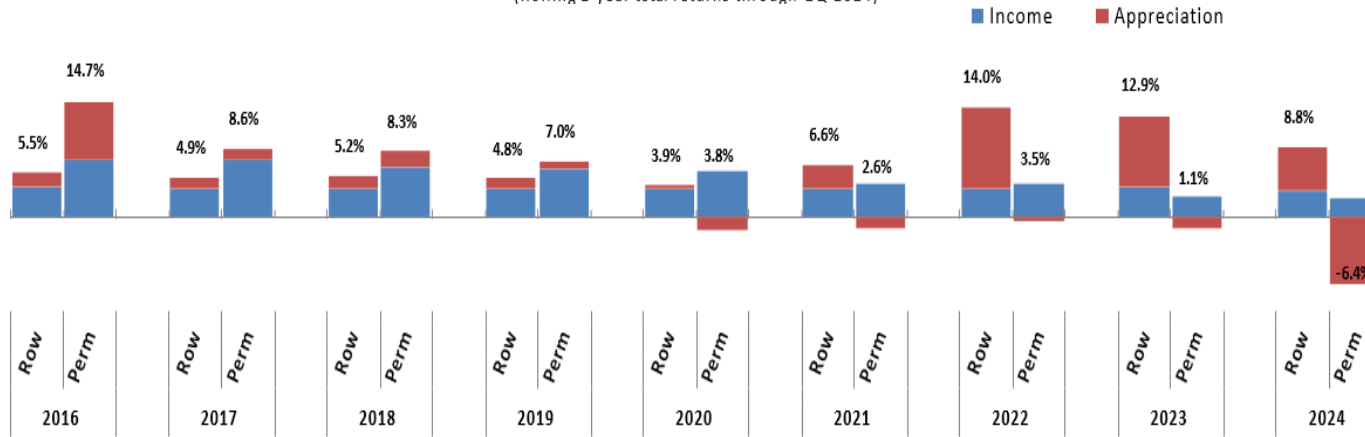
(Rolling 1-year total returns through 2Q2024)



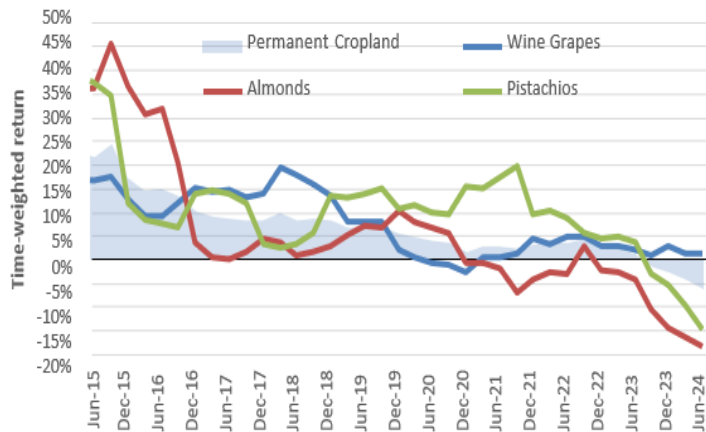
# Farmland

## Second Quarter 2024 Performance Update

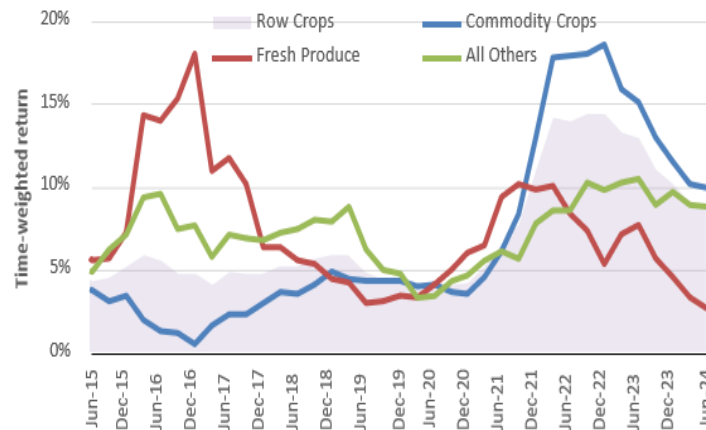
**NCREIF Farm Type Performance Attribution June '16 - June '24**  
(Rolling 1-year total returns through 2Q 2024)



**NCREIF Permanent Crop Performance by Crop Type**  
(Rolling 1-year total returns through 2Q 2024)



**NCREIF Row Crop Performance by Crop Category**  
(Rolling 1-year total returns through 2Q 2024)



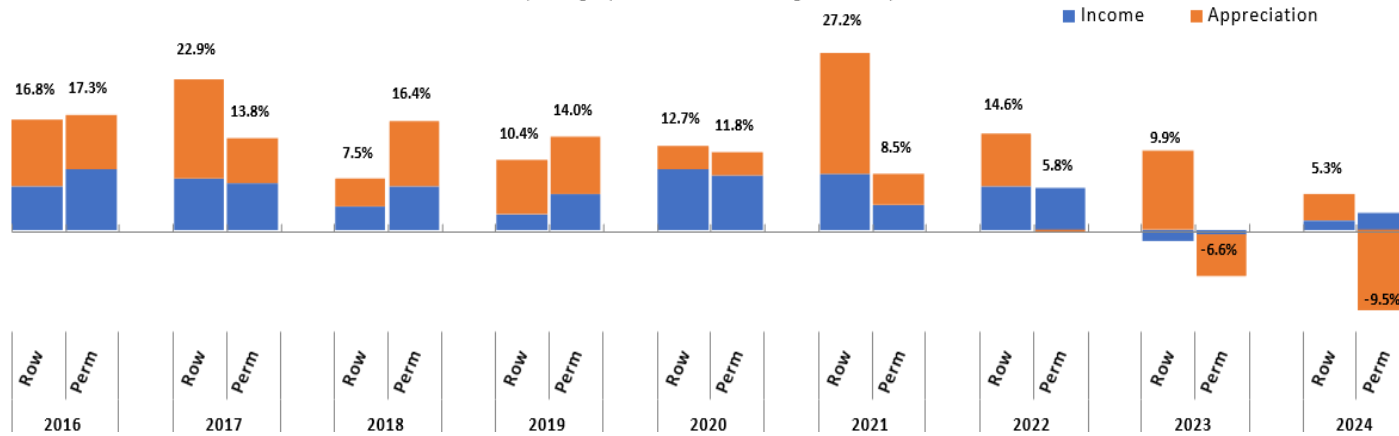
Second Quarter 2024

Source: NCREIF; Permanent Crop Types included in chart above (bottom left) account for approximately 70% of the NFI by market value as of June 30, 2024.

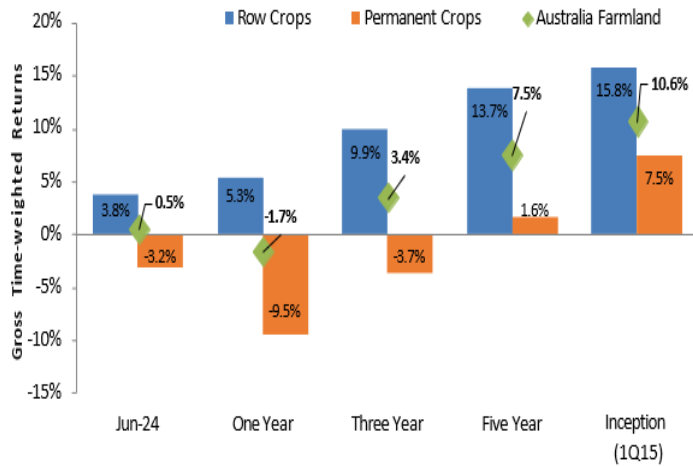
# Farmland

## Second Quarter 2024 Performance Update

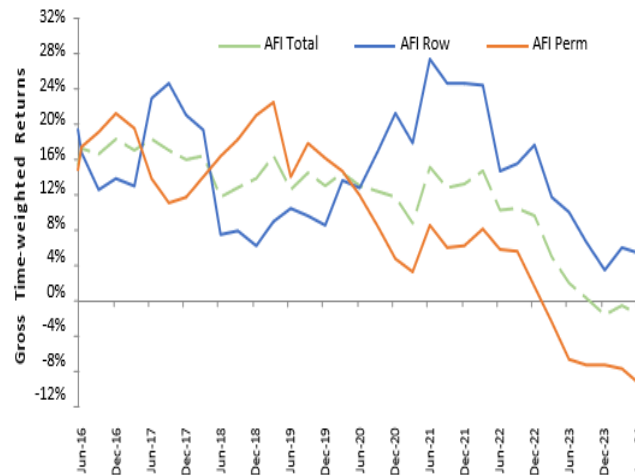
ANREV Australian Farmland Index Farm Type Performance Attribution June '16 - June '24  
(Rolling 1-year total returns through 2Q 2024)



ANREV Australian Farm Index Farm Type Returns June 2024



ANREV Australian Farm Index Farm Type Performance  
(Rolling 1-year total returns through 2Q 2024)



Second Quarter 2024  
Source: ANREV



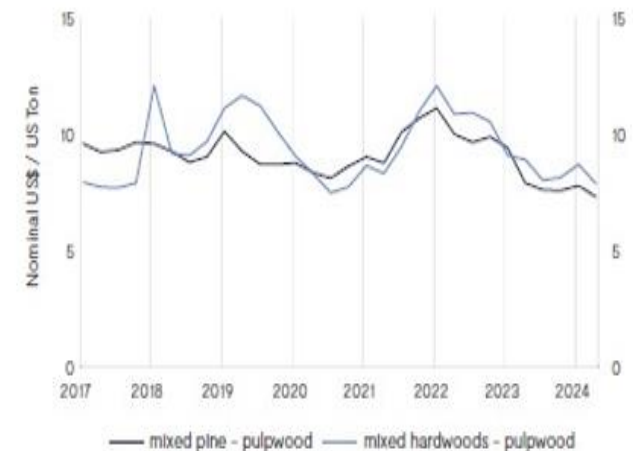
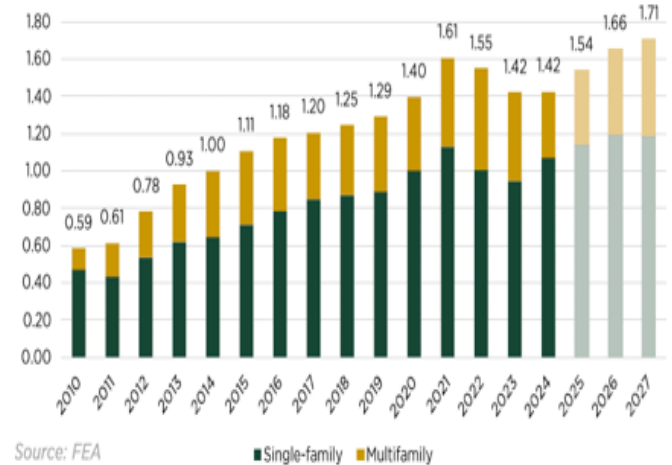
# Timberland

## Second Quarter 2024 Market Update

### Timberland Markets

- Timberland markets relatively stable in 2Q24, although China's weak property sector continues to weigh on global lumber and log markets, despite slight improvements in market activity. The growing focus on natural capital investments and ESG-related opportunities continues to attract investor interest, with timberland serving as a key asset for carbon sequestration and biodiversity enhancement.
- U.S. housing starts remained stable above the 1.3 million mark, driven by pent-up demographic demand and an aging U.S. housing stock. However, starts declined by 4% YoY, reflecting some economic uncertainty and higher borrowing costs.
- In the U.S. south, stumpage prices softened, driven by improved logging conditions increasing supply. Sawtimber prices declined by 8.3%, while pulpwood prices declined 14.2%, reflecting lower short-term demand and operational shifts at pulp mills. In the Northwest, Douglas-fir prices decreased slightly, but remain competitive due to steady export demand from Japan. However, whitewoods saw a 7.0% decline as demand from China and other Pacific Rim countries remained weak.
- New Zealand softwood log prices began stabilizing after earlier declines driven by China's economic slowdown. Log inventories in China remained high but have started to contract, suggesting potential price support for export markets later in the year.
- Brazil's timber markets exhibited mixed but stable conditions with pulp markets elevated, driven by steady demand for paperboard.

FIGURE 1: U.S. Housing Starts, SAAR (millions)



Second Quarter 2024  
 Sources by Figure: (1) TimberMart South; BTG; (2) Fastmarkets RISI via FIA; (3) Fed Reserve St. Louis & U.S. Dept. of Commerce via TIG (4) STCP; TIG

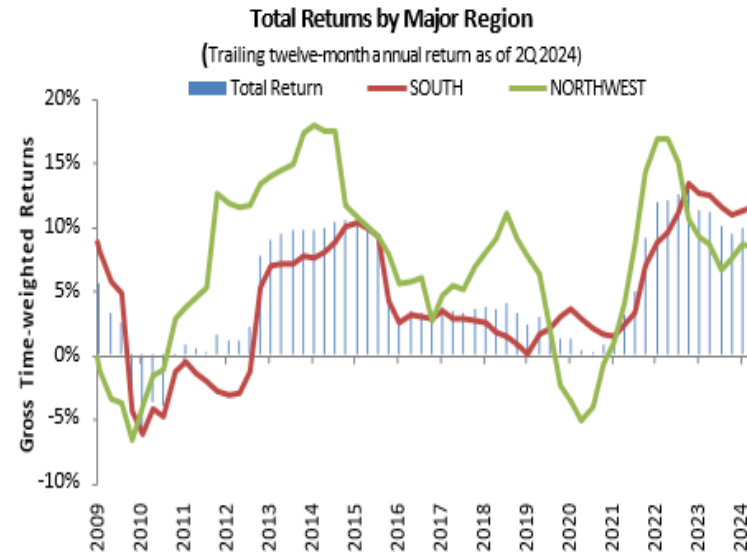
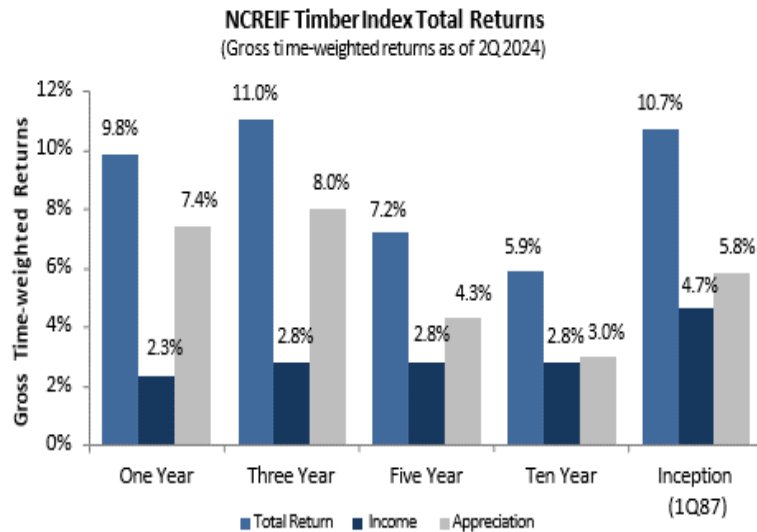


# Timberland

## Second Quarter 2024 Performance Update

### Timberland Performance

- The NTI returned 1.7% for the quarter, slightly down from last quarter's 2.1% and the same return from last year's 1Q return; performance was comprised of 0.5% income and 1.2% appreciation.
- The NTI's trailing twelve-month ("TTM") return of 9.8% consisted of appreciation of 7.4% and income of 2.3% - and was unchanged over last quarter's TTM of 9.8% but below last year's same TTM period return of 11.1% as the market continues to moderate off recent performance highs not reached in over ten years.
- Returns for the quarter were positive across all regions except the Northeast as hardwood markets remained pressured by persistent softness in export demand. The U.S. South and Northwest, the largest regions, had quarterly returns of 1.9% and 1.7%, respectively, down from last quarter's returns, respectively, of 2.1% and 2.7%. The South's return was comprised of 0.5% income and 1.5% appreciation, while the Northwest consisted of a 0.5% income return and 1.2% appreciation.
- Market values (per acre) were up a slight 1.1% over last quarter, at \$2,186/ac; all regions except the Northeast increased in value on a per acre basis. Discount rates, which have declined over the last few quarters, have appeared to stabilize keeping values relatively flat during the quarter.

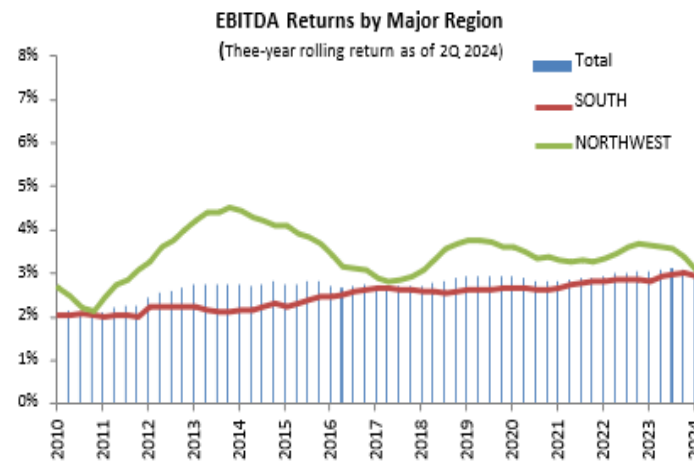
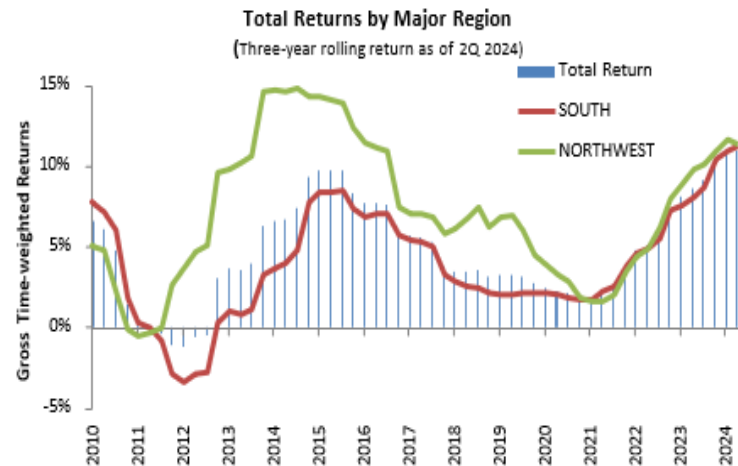
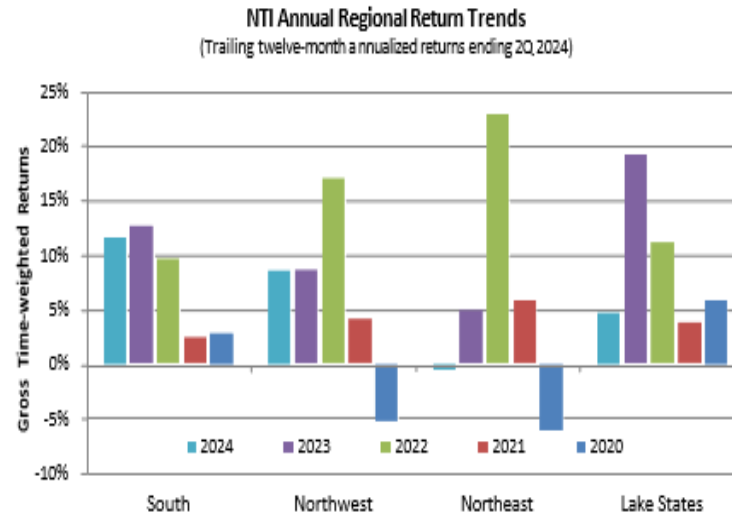
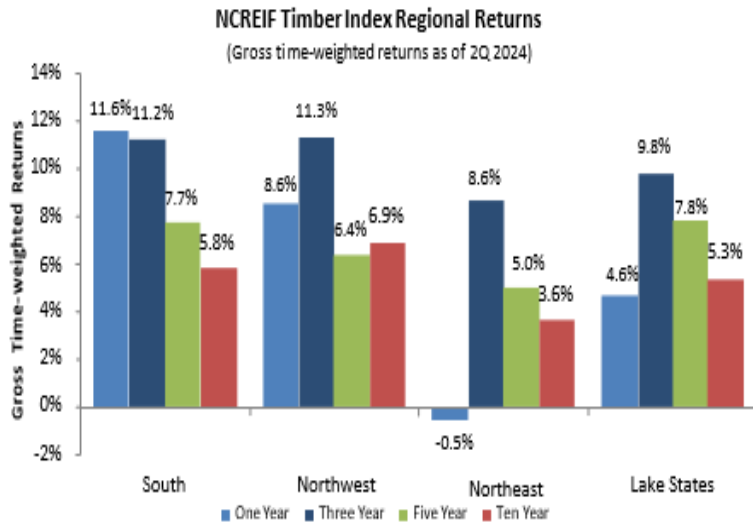


Second Quarter 2024  
Source: NCREIF



# Timberland

## Second Quarter 2024 Performance Update



Second Quarter 2024  
Source: NCREIF

# 3

## Real Assets Portfolio Update



# ATRS' Real Estate Performance: Core Portfolio

As of June 30, 2024

Partnership Name	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Arkansas Investments	2007	142,694,200	144,624,546	0	210,861,123	75,019,219	2.9	2.2
JP Morgan Strategic Property Fund	2007	170,000,000	170,000,000	0	231,970,297	147,416,487	5.7	4.3
Metlife Commercial Mortgage Income Fund	2019	50,000,000	50,000,000	0	13,383,543	43,610,878	1.7	1.3
Prime Property Fund	2022	70,000,000	70,000,000	0	5,254,771	57,973,887	2.2	1.7
PRISA SA	2005	170,000,000	184,182,196	0	143,676,706	263,301,304	10.1	7.7
RREEF Core Plus Industrial Fund L.P.	2022	70,000,000	70,000,000	0	2,323,134	64,220,641	2.5	1.9
UBS Trumbull Property Fund	2006	170,000,000	190,587,980	0	227,782,519	115,008,720	4.4	3.4
UBS Trumbull Property Income Fund	2017	50,000,000	50,000,000	0	11,282,823	50,179,414	1.9	1.5
<b>Total Core</b>	<b>2005</b>	<b>892,694,200</b>	<b>929,394,723</b>	<b>0</b>	<b>846,534,917</b>	<b>816,730,550</b>	<b>31.3</b>	<b>24.0</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			
Arkansas Investments	0.0	2.0	2.0	2.0	0.0	10.1	10.1	10.1	0.0	5.2	5.2	5.2	0.0	0.5	0.5	0.5	0.0	6.8	6.8	6.8	7.0	7.0	1Q08	8.0	2.0
JP Morgan Strategic Property Fund	0.9	0.4	1.4	1.1	3.7	-17.2	-14.0	-14.8	3.4	-3.7	-0.5	-1.4	3.5	-1.9	1.5	0.6	3.9	1.3	5.2	4.3	5.0	4.1	2Q07	6.1	2.2
Metlife Commercial Mortgage Income Fund	2.3	-0.1	2.1	1.9	9.4	-6.6	2.3	1.4	7.4	-4.1	3.1	2.3	6.7	-2.8	3.7	2.9					3.7	2.9	3Q19	3.0	1.1
Prime Property Fund	1.0	-0.9	0.1	-0.2	3.9	-6.5	-2.8	-3.9													-2.6	-3.7	2Q22	-5.0	0.9
PRISA SA	1.2	-2.7	-1.5	-1.7	4.4	-15.1	-11.3	-12.0	3.9	-2.4	1.5	0.7	4.0	-0.8	3.2	2.4	4.3	2.2	6.6	5.8	6.2	5.3	3Q05	5.7	2.2
RREEF Core Plus Industrial Fund L.P.	0.8	-1.4	-0.7	-0.8	3.1	-4.1	-1.1	-1.8													-2.6	-3.3	3Q22	-3.3	1.0
UBS Trumbull Property Fund	0.9	-1.8	-0.9	-1.1	3.8	-11.2	-7.8	-8.5	3.7	-4.3	-0.7	-1.5	3.9	-4.1	-0.3	-1.0	4.3	-0.9	3.4	2.6	4.4	3.5	2Q06	4.8	1.8
UBS Trumbull Property Income Fund	1.0	-1.4	-0.4	-0.6	4.0	-9.2	-5.5	-6.3	3.8	-2.0	1.8	1.0	3.8	-0.9	2.9	2.1					4.0	3.2	3Q17	3.4	1.2
<b>Total Core</b>	<b>1.0</b>	<b>-1.2</b>	<b>-0.2</b>	<b>-0.3</b>	<b>3.9</b>	<b>-11.0</b>	<b>-7.4</b>	<b>-8.1</b>	<b>3.6</b>	<b>-1.8</b>	<b>1.7</b>	<b>1.0</b>	<b>3.6</b>	<b>-1.4</b>	<b>2.2</b>	<b>1.4</b>	<b>3.8</b>	<b>1.9</b>	<b>5.7</b>	<b>5.0</b>	<b>6.8</b>	<b>6.0</b>	<b>3Q05</b>	<b>5.7</b>	<b>1.8</b>

Note: Arkansas Investments are included in Core portfolio

# ATRS' Real Estate Funding: Value-Add Portfolio

As of June 30, 2024

Partnership Name	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Almanac Realty Securities IX, L.P.	2022	40,000,000	8,569,395	31,430,605	0	8,074,078	0.3	1.2
Almanac Realty Securities V, LP	2008	50,000,000	21,787,314	0	48,380,466	50,941	0.0	0.0
Almanac Realty Securities VI	2012	30,000,000	19,102,008	0	21,152,797	2,926,619	0.1	0.1
Almanac Realty Securities VII	2015	30,000,000	31,795,401	4,129,617	27,027,777	17,009,052	0.7	0.6
Almanac Realty Securities VIII	2018	30,000,000	23,212,358	8,351,214	4,599,565	23,291,502	0.9	0.9
Calmwater Real Estate Credit Fund III	2017	30,000,000	23,113,383	7,427,676	18,697,713	11,397,783	0.4	0.6
CBRE Strategic Partners U.S. Value 8	2017	25,000,000	24,252,597	747,403	10,377,578	13,495,079	0.5	0.4
CBRE Strategic Partners U.S. Value 9	2020	50,000,000	43,150,766	12,356,963	5,879,589	31,831,030	1.2	1.3
FPA Core Plus Fund IV	2018	30,000,000	30,000,000	0	5,496,528	34,983,592	1.3	1.0
GLP Capital Partners IV	2021	50,000,000	40,652,308	11,648,211	2,300,519	40,458,003	1.6	1.5
Harbert European Real Estate Fund IV	2016	25,011,918	23,920,550	1,630,254	20,809,457	1,174,748	0.0	0.1
LaSalle Income & Growth Fund VI	2013	20,000,000	19,047,619	0	22,379,425	2,235,930	0.1	0.1
LaSalle Income & Growth Fund VII	2017	20,000,000	20,307,423	0	13,425,555	5,602,386	0.2	0.2
LaSalle Income & Growth Fund VIII	2020	50,000,000	42,593,082	7,406,918	12,932,416	34,658,372	1.3	1.2
LaSalle Value Partners U.S. IX		75,000,000	0	75,000,000	0	-3,808,761	-0.1	2.1
LBA Logistics Value Fund IX	2022	55,000,000	35,961,538	19,038,462	0	34,353,691	1.3	1.6
Long Wharf Real Estate Partners V	2015	30,000,000	29,828,371	0	22,620,031	15,027,910	0.6	0.4
Long Wharf Real Estate Partners VI, L.P.	2020	50,000,000	49,958,652	0	28,047,572	33,431,828	1.3	1.0
Mesa West Real Estate Income Fund V	2021	40,000,000	15,040,134	24,959,866	956,553	15,201,553	0.6	1.2
PGIM Real Estate Capital VII (USD Feeder) SCSp	2021	40,000,000	21,636,820	25,160,042	7,973,944	16,273,397	0.6	1.2
Rockwood Capital Real Estate Partners Fund IX	2012	30,000,000	27,422,960	1,692,085	33,814,339	2,478,288	0.1	0.1
Rockwood Capital Real Estate Partners Fund XI	2019	40,000,000	33,117,790	7,875,558	1,623,581	28,804,371	1.1	1.1
Walton Street Real Estate Debt Fund II, L.P.	2019	40,000,000	35,193,209	23,623,133	18,827,658	19,986,567	0.8	1.3
Westbrook Real Estate Fund IX	2013	40,000,000	46,574,928	3,603,488	48,361,088	4,156,748	0.2	0.2
Westbrook Real Estate Fund X	2016	25,000,000	25,842,842	613,257	21,324,570	6,462,463	0.2	0.2
<b>Total Value Added</b>	<b>2007</b>	<b>945,011,918</b>	<b>692,081,448</b>	<b>266,694,751</b>	<b>397,008,720</b>	<b>399,557,170</b>	<b>15.3</b>	<b>19.6</b>

# ATRS' Real Estate Performance: Value-Add Portfolio

As of June 30, 2024

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			
Almanac Realty Securities IX, L.P.	0.3	4.6	4.9	3.4	2.2	5.4	7.8	0.6									5.6	-3.7	3Q22	-4.1	0.9
Almanac Realty Securities V, LP	-10.3	2.1	-8.3	-8.3	-35.4	8.4	-29.2	-29.2	-19.9	4.0	-16.4	-16.4	-20.0	1.4	-18.2	-18.4	1.7	0.5	4Q09	11.9	2.2
Almanac Realty Securities VI	-0.1	-10.0	-10.1	-10.4	-0.3	-20.4	-20.6	-21.7	0.2	-7.3	-7.2	-8.3	1.7	-11.3	-9.6	-10.6	1.9	0.5	1Q13	7.8	1.3
Almanac Realty Securities VII	1.5	2.5	4.0	3.7	6.2	-0.5	5.6	4.4	6.8	-0.7	6.1	4.9	7.5	0.8	8.3	7.1	12.0	9.6	3Q15	10.3	1.4
Almanac Realty Securities VIII	0.9	1.8	2.7	2.4	4.5	-0.5	4.0	2.9	6.4	5.1	11.8	10.4	6.7	6.1	13.1	6.5	13.1	6.5	3Q19	8.5	1.2
Calmwater Real Estate Credit Fund III	-0.1	0.0	-0.1	0.9	-0.5	0.0	-0.5	3.6	4.0	0.0	4.0	5.2	6.7	0.0	6.7	6.2	7.9	6.4	1Q18	6.7	1.3
CBRE Strategic Partners U.S. Value 8	0.7	-11.8	-11.1	-11.4	2.1	-24.2	-22.5	-23.4	4.2	-16.8	-13.2	-13.9	5.4	-10.1	-5.2	-5.8	0.5	-0.6	2Q17	-0.4	1.0
CBRE Strategic Partners U.S. Value 9	-0.5	1.4	0.9	0.4	-3.1	-7.4	-10.4	-12.5	-1.1	0.5	-0.7	-3.8					1.4	-2.2	4Q20	-7.3	0.9
FPA Core Plus Fund IV	1.2	0.0	1.2	1.0	4.9	-2.5	2.3	1.7	4.8	4.0	9.0	8.4	4.6	3.3	8.0	7.4	7.3	6.6	4Q18	7.2	1.3
GLP Capital Partners IV	1.6	-5.0	-3.4	-3.5	3.0	0.5	3.6	3.3									7.5	6.8	4Q21	2.3	1.1
Harbert European Real Estate Fund IV	-0.1	-4.4	-4.5	-6.8	-4.1	-27.5	-30.9	-35.3	9.8	-43.5	-37.3	-39.4	9.6	-31.3	-24.0	-24.9	-11.9	-13.6	3Q16	-2.0	0.9
LaSalle Income & Growth Fund VI	1.3	-28.4	-27.1	-27.1	11.3	-40.2	-33.0	-33.0	6.1	-32.0	-27.6	-25.0	5.1	-23.9	-19.8	-17.5	-3.7	-3.4	4Q13	7.4	1.3
LaSalle Income & Growth Fund VII	-3.5	-3.4	-6.9	-7.4	-10.8	-24.0	-32.7	-34.3	-4.7	-16.5	-20.9	-21.9	-2.9	-9.5	-12.4	-13.3	-5.6	-6.9	3Q17	-2.0	0.9
LaSalle Income & Growth Fund VIII	-1.6	-1.2	-2.8	-2.9	-6.2	1.6	-4.6	-3.4	-4.6	20.8	15.4	11.0					18.5	12.9	2Q20	6.9	1.1
LaSalle Value Partners U.S. IX																	N/M	N/M	4Q24	N/M	N/M
LBA Logistics Value Fund IX	-0.4	4.0	3.6	3.1	-2.5	4.3	1.7	-0.7									-1.6	-5.9	2Q22	-3.6	1.0
Long Wharf Real Estate Partners V	0.0	-3.9	-3.9	-4.2	0.3	-13.0	-12.7	-13.8	0.8	-1.3	-0.5	-1.7	1.1	0.5	1.6	1.1	6.6	4.1	1Q16	5.7	1.3
Long Wharf Real Estate Partners VI, L.P.	0.6	-0.4	0.2	-0.1	2.6	1.4	4.0	2.0	3.2	21.0	24.7	17.3					32.6	21.8	2Q20	14.5	1.2
Mesa West Real Estate Income Fund V	2.4	-0.7	1.7	0.8	11.9	-3.8	7.8	3.6									13.1	6.4	1Q22	4.3	1.1
PGIM Real Estate Capital VII (USD Feeder) SCSp	0.0	2.0	2.0	2.0	-0.1	8.1	7.9	7.9	1.0	9.8	10.9	10.8					11.2	10.8	2Q21	9.5	1.1
Rockwood Capital Real Estate Partners Fund IX	-0.4	-4.3	-4.6	-5.0	-0.5	-14.3	-14.7	-16.6	1.7	-6.5	-5.0	-7.3	2.1	-9.8	-8.0	-10.4	5.3	2.5	4Q13	9.3	1.3
Rockwood Capital Real Estate Partners Fund XI	0.0	-0.6	-0.6	-1.0	-0.5	-12.0	-12.5	-13.9	1.6	-2.6	-1.1	-3.1					3.9	0.7	4Q20	-3.5	0.9
Walton Street Real Estate Debt Fund II, L.P.	2.8	0.0	2.8	2.4	12.2	0.0	12.2	10.7	12.2	-3.7	8.2	6.5	11.7	-2.9	8.6	6.8	8.6	6.8	3Q19	7.3	1.1
Westbrook Real Estate Fund IX	-4.8	-12.5	-17.3	-17.8	-5.2	-40.7	-44.2	-45.3	-2.0	-16.9	-18.8	-19.9	-1.5	-15.6	-17.0	-18.1	-1.2	-3.5	3Q13	4.7	1.1
Westbrook Real Estate Fund X	0.0	-4.6	-4.6	-5.0	-0.6	-37.5	-38.0	-39.1	0.5	-14.2	-13.8	-15.1	0.4	-5.4	-5.0	-6.4	3.5	-0.7	4Q16	3.4	1.1
<b>Total Value Added</b>	<b>0.3</b>	<b>-1.2</b>	<b>-0.9</b>	<b>-1.3</b>	<b>0.9</b>	<b>-5.5</b>	<b>-4.6</b>	<b>-5.9</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>	<b>0.4</b>	<b>3.5</b>	<b>0.3</b>	<b>3.8</b>	<b>1.7</b>	<b>6.1</b>	<b>3.7</b>	<b>2Q07</b>	<b>4.8</b>	<b>1.2</b>



# ATRS' Real Estate Funding: Opportunistic Portfolio

As of June 30, 2024

Partnership Name	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	2019	49,096,184	41,953,553	16,343,571	14,431,024	36,513,033	1.4	1.6
Blackstone Real Estate Partners Europe VII (USD Vehicle)	2023	50,000,000	4,288,560	45,780,190	0	4,718,442	0.2	1.5
Blackstone Real Estate Partners VII	2012	50,000,000	66,638,931	3,804,804	100,329,361	7,550,804	0.3	0.3
Blackstone Real Estate Partners X	2023	75,000,000	19,214,448	57,341,893	0	18,828,180	0.7	2.2
Carlyle Realty Partners IX	2022	35,000,000	14,120,779	21,216,135	336,914	13,026,013	0.5	1.0
Carlyle Realty Partners VII	2014	30,000,000	29,455,892	8,650,485	37,213,307	6,491,007	0.2	0.4
Carlyle Realty Partners VIII	2018	25,000,000	21,986,651	16,033,323	21,620,989	11,900,324	0.5	0.8
CBRE Strategic Partners U.S. Opportunity 5	2008	50,000,000	48,619,365	1,380,660	67,848,535	120,050	0.0	0.0
Cerberus Institutional Real Estate Partners III	2013	30,000,000	37,777,980	7,307,395	51,425,610	8,115,241	0.3	0.5
Heitman European Property Partners IV	2008	44,089,700	34,546,944	0	26,841,177	277,836	0.0	0.0
Kayne Anderson Real Estate Partners V	2018	25,000,000	26,184,595	0	17,553,664	17,739,087	0.7	0.5
Kayne Anderson Real Estate Partners VI	2021	50,000,000	34,500,000	16,891,393	1,391,393	38,470,621	1.5	1.6
Landmark Real Estate Fund VI	2010	40,000,000	35,090,608	4,909,392	53,488,103	114,831	0.0	0.1
Landmark Real Estate Fund VIII	2017	25,000,000	19,310,098	8,850,742	11,191,575	13,547,061	0.5	0.7
Landmark Real Estate Partners IX, L.P.	2024	50,000,000	1,452,659	48,547,341	0	65,003	0.0	1.4
LaSalle Asia Opportunity Fund IV	2014	30,000,000	28,823,325	466,781	39,655,278	1,773,745	0.1	0.1
LaSalle Asia Opportunity V	2016	30,000,000	33,386,243	4,000,371	20,870,330	14,479,156	0.6	0.5
LaSalle Asia Opportunity VI	2023	50,000,000	8,730,168	42,624,723	1,354,891	4,107,852	0.2	1.4
Lone Star Real Estate Fund IV	2015	24,260,817	21,578,323	2,682,494	19,779,413	5,519,860	0.2	0.2
Lone Star Real Estate Fund VII		50,000,000	0	50,000,000	0	-1,321,169	-0.1	1.4
Metropolitan Real Estate Partners Co-Investments Fund, L.P.	2015	20,000,000	19,132,876	867,124	17,632,804	7,563,870	0.3	0.2
O'Connor North American Property Partners II, L.P.	2008	50,000,000	58,407,308	5,000,000	44,564,013	2,927,550	0.1	0.2
Torchlight Debt Fund VII, LP	2020	50,000,000	32,500,000	17,500,000	388,117	35,055,869	1.3	1.5
Torchlight Debt Opportunity Fund IV	2013	30,000,000	29,369,211	0	39,667,838	1,625,868	0.1	0.0
Torchlight Debt Opportunity Fund V	2015	25,000,000	20,001,024	5,000,000	23,787,472	2,540,338	0.1	0.2
Torchlight Debt Opportunity Fund VI	2018	25,000,000	22,479,558	2,500,000	10,439,738	19,463,198	0.7	0.6
<b>Total Opportunistic</b>	<b>1998</b>	<b>1,012,446,701</b>	<b>709,549,099</b>	<b>387,698,817</b>	<b>621,811,545</b>	<b>271,213,671</b>	<b>10.4</b>	<b>19.4</b>

# ATRS' Real Estate Performance: Opportunistic Portfolio

As of June 30, 2024

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			
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	-0.1	-0.8	-0.8	-1.0	0.1	1.9	2.0	-0.1	0.0	14.3	14.3	8.6					12.9	6.4	1Q20	10.5	1.2
Blackstone Real Estate Partners Europe VII (USD Vehicle)																			3Q24	N/M	N/M
Blackstone Real Estate Partners VII	-0.1	-3.1	-3.2	-2.5	0.0	-28.0	-28.0	-23.1	2.0	-9.0	-7.1	-5.7	2.1	-8.5	-6.5	-5.5	9.6	6.6	2Q12	14.4	1.6
Blackstone Real Estate Partners X	-2.0	11.8	9.8	5.8	0.7	24.4	25.6	-7.1									39.0	-13.9	2Q23	-7.4	1.0
Carlyle Realty Partners IX	-1.4	8.0	6.6	6.0	-11.8	21.3	7.6	0.1									-25.5	-46.9	4Q22	-7.7	0.9
Carlyle Realty Partners VII	-0.6	-2.1	-2.8	0.3	-3.4	-12.6	-15.7	-12.2	5.4	-6.8	-1.7	-0.7	12.7	-8.6	3.6	4.7	11.3	8.4	1Q15	13.1	1.5
Carlyle Realty Partners VIII	-0.5	0.8	0.2	-0.2	5.6	-6.8	-1.4	-1.4	21.1	7.1	29.0	24.9	18.1	13.5	33.1	25.2	30.1	20.2	4Q18	24.1	1.5
CBRE Strategic Partners U.S. Opportunity 5	-2.2	0.0	-2.2	-2.2	-3.9	-2.3	-6.2	-6.2	-2.9	5.3	2.1	2.1	-2.3	7.7	5.3	5.3	-7.8	-9.2	4Q08	5.4	1.4
Cerberus Institutional Real Estate Partners III	-10.9	0.2	-10.7	-8.6	-22.7	6.3	-17.8	-14.3	-8.5	21.4	11.2	9.8	-5.3	19.3	13.0	10.2	14.7	11.1	4Q13	12.7	1.6
Heitman European Property Partners IV	0.6	-0.7	-0.2	-0.2	1.1	-6.2	-5.1	-5.1	-10.8	-5.5	-15.5	-15.5	-6.9	-0.1	-7.0	-7.1	-6.9	-8.0	1Q11	-3.9	0.8
Kayne Anderson Real Estate Partners V	-2.8	1.7	-1.1	-1.2	-22.7	15.6	-9.4	-8.6	-13.0	21.1	6.7	4.1	-6.3	20.8	14.0	9.9	12.6	8.2	3Q18	9.4	1.3
Kayne Anderson Real Estate Partners VI	0.4	4.3	4.6	3.4	1.8	18.8	20.8	13.7	5.2	15.5	21.3	7.1					21.3	7.1	3Q21	11.3	1.2
Landmark Real Estate Fund VI	0.1	0.5	0.6	0.6	0.6	-2.7	-2.2	-2.2	N/A	80.0	-19.9	-20.2	N/A	39.5	-17.1	-17.6	14.7	12.7	3Q10	18.5	1.5
Landmark Real Estate Fund VIII	-1.1	-0.4	-1.5	-1.7	4.9	-14.8	-9.9	-10.0	16.4	-1.4	14.6	11.3	14.4	-0.8	13.4	9.6	20.1	14.1	3Q17	11.1	1.3
Landmark Real Estate Partners IX, L.P.	-55.3	17.9	-37.4	-78.6													N/M	N/M	2Q24	N/M	N/M
LaSalle Asia Opportunity Fund IV	0.8	7.5	8.2	8.1	-2.7	14.4	11.6	10.9	-3.1	3.3	0.5	-0.2	-8.6	5.4	-2.2	-3.9	13.2	7.5	4Q14	31.8	1.4
LaSalle Asia Opportunity V	-1.6	-7.5	-9.2	-9.5	-4.5	-3.2	-7.7	-9.6	-7.5	2.0	-5.6	-8.1	-5.9	7.0	1.2	-1.5	7.5	2.6	4Q16	3.5	1.1
LaSalle Asia Opportunity VI																	N/M	N/M	3Q23	N/M	N/M
Lone Star Real Estate Fund IV	0.1	-10.1	-10.0	-10.1	-19.7	-37.0	-50.9	-42.5	-10.2	-14.4	-23.9	-18.4	-4.6	-12.3	-16.7	-13.8	-2.9	-1.9	4Q15	6.6	1.2
Lone Star Real Estate Fund VII	11.2	0.0	11.2	28.9													N/M	N/M	2Q24	N/M	N/M
Metropolitan Real Estate Partners Co-Investments Fund	-0.1	-8.9	-9.0	-7.1	-11.7	-12.3	-21.8	-14.3	-0.2	-5.4	-5.0	-2.9	0.2	-4.9	-4.3	-3.2	2.7	2.4	1Q16	7.4	1.3
O'Connor North American Property Partners II, L.P.	0.1	0.2	0.3	0.0	0.2	-33.4	-33.2	-34.0	0.0	-12.0	-12.0	-12.8	0.1	-11.1	-11.0	-11.7	-6.8	-9.2	2Q08	-3.6	0.8
Torchlight Debt Fund VII, LP	1.9	-0.8	1.1	0.6	6.8	-2.1	4.7	2.7	7.1	0.5	7.6	4.7					9.8	5.5	4Q20	4.1	1.1
Torchlight Debt Opportunity Fund IV	-0.2	2.4	2.2	1.8	2.2	-33.6	-31.7	-20.4	2.6	-17.2	-14.9	-9.8	2.7	-14.6	-12.1	-6.7	0.8	2.3	4Q13	8.9	1.4
Torchlight Debt Opportunity Fund V	0.6	-0.7	-0.1	0.5	2.7	0.6	3.3	3.9	3.0	-1.5	1.4	3.0	4.0	-1.2	2.8	4.0	9.9	6.9	3Q15	10.0	1.3
Torchlight Debt Opportunity Fund VI	1.1	0.7	1.8	1.5	4.3	0.7	5.0	4.7	5.1	4.8	10.0	9.1	6.6	1.7	8.3	6.7	11.7	6.9	2Q18	7.5	1.3
<b>Total Opportunistic</b>	<b>-0.9</b>	<b>0.9</b>	<b>0.0</b>	<b>-0.6</b>	<b>-3.5</b>	<b>0.3</b>	<b>-3.2</b>	<b>-5.1</b>	<b>0.5</b>	<b>7.8</b>	<b>8.2</b>	<b>4.6</b>	<b>2.1</b>	<b>5.7</b>	<b>7.9</b>	<b>4.7</b>	<b>9.1</b>	<b>6.6</b>	<b>1Q98</b>	<b>10.0</b>	<b>1.3</b>



# ATRS' Agriculture, Timber, & Infrastructure Funding:

As of June 30, 2024

Partnership Name	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Agrivest Farmland Fund	2015	50,000,000	50,000,000	0	11,124,198	65,079,359	2.5	1.9
HFMS Farmland Separate Account	2011	125,000,000	178,054,470	14,240,587	87,664,318	184,446,389	7.1	5.8
<b>Agriculture</b>	<b>2011</b>	<b>175,000,000</b>	<b>228,054,470</b>	<b>14,240,587</b>	<b>98,788,515</b>	<b>249,525,747</b>	<b>9.6</b>	<b>7.7</b>
BTG Pactual Open Ended Core U.S. Timberland Fund, LP	2019	182,930,629	182,930,628	0	12,449,182	251,174,920	9.6	7.4
BTG Timber Separate Account	1998	133,069,371	158,159,518	0	331,750,000	112,768,417	4.3	3.3
<b>Timber</b>	<b>1998</b>	<b>316,000,000</b>	<b>341,090,146</b>	<b>0</b>	<b>344,199,182</b>	<b>363,943,336</b>	<b>14.0</b>	<b>10.7</b>
AxInfra NA II LP	2021	50,000,000	52,170,210	0	5,772,939	61,297,693	2.4	1.8
DIF Infrastructure Fund VII	2023	53,140,610	16,323,313	37,378,420	6,785	16,845,874	0.6	1.6
DIF Infrastructure V	2018	47,762,784	43,036,045	6,788,243	6,889,642	50,156,120	1.9	1.7
IFM Global Infrastructure	2018	50,000,000	50,000,000	0	6,922,324	74,711,600	2.9	2.2
KKR Diversified Core Infrastructure Fund	2022	75,000,000	75,075,604	0	5,207,895	79,149,758	3.0	2.3
Macquarie Infrastructure Partners III	2013	50,000,000	51,760,357	5,418,501	73,468,297	47,723,412	1.8	1.6
Macquarie Infrastructure Partners V	2020	50,000,000	47,189,231	3,668,543	857,774	56,648,656	2.2	1.8
<b>Infrastructure - Core</b>	<b>2015</b>	<b>375,903,394</b>	<b>335,554,760</b>	<b>53,253,707</b>	<b>99,125,656</b>	<b>386,533,113</b>	<b>14.8</b>	<b>12.9</b>
Antin Infrastructure Partners Fund II	2014	47,696,920	35,953,565	1,874,866	65,739,757	5,317,344	0.2	0.2
EnCap Energy Transition Fund II	2024	50,000,000	12,506,114	37,493,886	0	11,047,710	0.4	1.4
Global Energy & Power Infrastructure Fund II	2014	50,000,000	55,612,312	1,491,773	55,200,128	12,357,228	0.5	0.4
Global Infrastructure Partners III	2016	50,000,000	52,063,602	5,427,140	32,399,845	46,101,302	1.8	1.5
ISQ Global Infrastructure Fund III	2021	50,000,000	23,901,381	26,324,481	225,862	27,262,160	1.0	1.6
KKR Global Infrastructure Investors II	2014	50,000,000	55,436,493	2,151,478	84,656,310	18,305,777	0.7	0.6
<b>Infrastructure - Non-Core</b>	<b>2014</b>	<b>297,696,920</b>	<b>235,473,467</b>	<b>74,763,624</b>	<b>238,221,903</b>	<b>120,391,520</b>	<b>4.6</b>	<b>5.7</b>
<b>Infrastructure</b>	<b>2014</b>	<b>673,600,314</b>	<b>571,028,226</b>	<b>128,017,332</b>	<b>337,347,559</b>	<b>506,924,634</b>	<b>19.4</b>	<b>18.6</b>

# ATRS' Agriculture, Timber, & Infrastructure Performance:

## As of June 30, 2024

Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception		TWR Calculation Inception	Net Equity IRR Multiple	
	INC	APPT	GRS	TNET	INC	APPT	GRS	TNET	INC	APPT	GRS	TNET	INC	APPT	GRS	TNET	INC	APPT	GRS	TNET	TGRS	TNET			
Agrivest Farmland Fund	0.8	0.4	1.2	0.9	3.2	3.7	7.0	5.9	3.2	5.0	8.4	7.3	3.2	3.6	6.9	5.9					6.4	5.4	2Q15	5.3	1.5
HFMS Farmland Separate Account	0.7	-1.2	-0.4	-0.7	2.4	0.8	3.3	2.1	2.8	6.8	9.8	8.6	3.2	4.8	8.2	6.9	3.5	3.2	6.8	5.6	7.5	6.2	3Q11	6.2	1.5
<b>Agriculture</b>	<b>0.7</b>	<b>-0.8</b>	<b>0.0</b>	<b>-0.3</b>	<b>2.6</b>	<b>1.6</b>	<b>4.2</b>	<b>3.1</b>	<b>2.9</b>	<b>6.4</b>	<b>9.4</b>	<b>8.3</b>	<b>3.2</b>	<b>4.5</b>	<b>7.9</b>	<b>6.7</b>	<b>3.5</b>	<b>3.0</b>	<b>6.6</b>	<b>5.5</b>	<b>7.4</b>	<b>6.1</b>	<b>3Q11</b>	<b>6.0</b>	<b>1.5</b>
Agriculture Benchmark*			<b>-0.2</b>				<b>2.5</b>				<b>6.8</b>				<b>6.0</b>				<b>5.4</b>		<b>7.8</b>		3Q11		
BTG Pactual Open Ended Core U.S. Timberland Fund	-0.2	0.6	0.4	0.2	1.3	5.6	6.9	5.8	4.4	4.6	9.6	8.5									9.8	8.7	1Q20	8.7	1.4
BTG Timber Separate Account	-0.3	5.2	4.8	4.7	-0.7	15.8	15.0	14.3	1.9	3.7	5.8	5.1	10.6	-11.0	5.1	4.4	6.7	-4.7	5.1	4.4	7.2	6.4	2Q98	5.2	2.8
<b>Timber</b>	<b>-0.2</b>	<b>2.0</b>	<b>1.8</b>	<b>1.6</b>	<b>0.7</b>	<b>8.6</b>	<b>9.3</b>	<b>8.4</b>	<b>3.6</b>	<b>4.4</b>	<b>8.4</b>	<b>7.4</b>	<b>10.8</b>	<b>-8.4</b>	<b>8.1</b>	<b>7.1</b>	<b>6.8</b>	<b>-3.3</b>	<b>6.6</b>	<b>5.7</b>	<b>7.8</b>	<b>7.0</b>	<b>2Q98</b>	<b>5.5</b>	<b>2.1</b>
Timberland Property Benchmark*			<b>1.7</b>				<b>9.8</b>				<b>11.0</b>				<b>7.6</b>				<b>5.7</b>		<b>5.9</b>		2Q98		
AxInfra NA II LP	0.9	1.5	2.4	2.0	3.2	8.3	11.7	9.2	2.5	8.5	11.1	8.5									13.5	10.9	2Q21	9.1	1.3
DIF Infrastructure Fund VII	0.0	6.4	6.4	5.0	0.0	15.0	15.0	7.6													15.0	7.6	3Q23	4.0	1.0
DIF Infrastructure V	1.4	1.9	3.3	2.0	2.7	3.0	5.7	3.5	2.6	3.6	6.3	4.5	3.5	5.5	9.1	7.1					9.6	7.1	3Q18	7.1	1.3
IFM Global Infrastructure	0.6	0.6	1.2	1.0	2.2	1.8	4.1	2.9	2.3	7.7	10.2	8.4	3.1	7.4	10.6	8.8					11.2	9.3	4Q18	9.4	1.6
KKR Diversified Core Infrastructure Fund	0.6	1.8	2.5	2.3	4.3	3.8	8.3	7.8													7.6	7.2	2Q22	7.5	1.1
Macquarie Infrastructure Partners III	1.3	-0.6	0.6	-6.4	7.3	7.0	14.4	10.8	9.6	22.8	33.7	25.7	5.9	24.2	30.9	23.5					24.6	18.5	2Q15	18.0	2.3
Macquarie Infrastructure Partners V	-0.2	-2.7	-2.8	-3.1	0.5	1.1	1.6	0.3	0.7	15.2	16.0	14.0									13.5	11.0	1Q21	8.6	1.2
<b>Infrastructure - Core</b>	<b>0.7</b>	<b>0.7</b>	<b>1.4</b>	<b>0.1</b>	<b>3.2</b>	<b>4.4</b>	<b>7.7</b>	<b>5.8</b>	<b>3.6</b>	<b>10.3</b>	<b>14.1</b>	<b>11.2</b>	<b>3.3</b>	<b>11.6</b>	<b>15.2</b>	<b>12.0</b>					<b>16.0</b>	<b>12.1</b>	<b>2Q15</b>	<b>11.7</b>	<b>1.4</b>
Antin Infrastructure Partners Fund II	0.2	-0.7	-0.5	-0.7	0.2	-1.7	-1.5	-2.2	2.5	3.8	6.4	5.5	2.1	11.2	13.6	12.7					13.7	12.3	4Q14	13.0	2.0
EnCap Energy Transition Fund II	0.3	-0.5	-0.2	-1.9																	-0.2	-1.9	2Q24	-14.6	0.9
Global Energy & Power Infrastructure Fund II	0.2	0.1	0.3	-0.4	1.6	-23.7	-22.3	-20.9	2.7	-13.1	-10.7	-10.9	6.1	-12.7	-6.8	-7.6					8.0	1.7	1Q15	9.9	1.2
Global Infrastructure Partners III	1.2	-1.1	0.1	-0.3	6.7	-2.1	4.5	3.1	5.4	6.7	12.4	10.9	5.2	5.1	10.7	9.4					11.6	8.3	4Q16	9.1	1.5
ISQ Global Infrastructure Fund III	0.0	3.5	3.5	2.2	-1.2	27.3	25.9	15.9													33.1	18.5	1Q22	12.0	1.2
KKR Global Infrastructure Investors II	0.0	2.5	2.5	2.0	15.5	-5.6	12.0	11.9	16.8	-5.8	11.9	11.6	20.2	-4.0	19.2	18.5					17.7	14.6	1Q15	16.8	1.9
<b>Infrastructure - Non-Core</b>	<b>0.5</b>	<b>0.6</b>	<b>1.1</b>	<b>0.5</b>	<b>6.2</b>	<b>-1.6</b>	<b>4.6</b>	<b>1.8</b>	<b>7.1</b>	<b>2.0</b>	<b>9.2</b>	<b>7.1</b>	<b>9.5</b>	<b>2.3</b>	<b>12.2</b>	<b>10.5</b>					<b>14.1</b>	<b>10.8</b>	<b>4Q14</b>	<b>12.6</b>	<b>1.5</b>
<b>Infrastructure</b>	<b>0.7</b>	<b>0.7</b>	<b>1.3</b>	<b>0.2</b>	<b>3.9</b>	<b>3.0</b>	<b>7.0</b>	<b>4.9</b>	<b>4.7</b>	<b>7.9</b>	<b>12.8</b>	<b>10.2</b>	<b>6.2</b>	<b>7.8</b>	<b>14.4</b>	<b>11.9</b>					<b>15.0</b>	<b>11.1</b>	<b>4Q14</b>	<b>12.1</b>	<b>1.5</b>
Infrastructure Benchmark			<b>1.8</b>				<b>8.1</b>				<b>10.0</b>				<b>8.8</b>						<b>7.5</b>				

\*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.

# ATRS' Portfolio Funding Detail: By Vintage Year

As of June 30, 2024

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	271,022,167	0	479,689,777	112,768,417	4.3	3.3
1999	178,794,401	189,842,518	0	316,052,650	0	0.0	0.0
2000	209,242,960	228,396,220	0	289,773,858	0	0.0	0.0
2005	170,000,000	184,182,196	0	143,676,706	263,301,304	10.1	7.7
2006	170,000,000	190,587,980	0	227,782,519	115,008,720	4.4	3.4
2007	417,694,200	418,942,712	0	555,757,130	222,435,706	8.5	6.5
2008	264,089,700	229,805,708	6,380,660	277,539,154	3,376,377	0.1	0.3
2010	40,000,000	35,090,608	4,909,392	53,488,103	114,831	0.0	0.1
2011	125,000,000	178,054,470	14,240,587	87,664,318	184,446,389	7.1	5.8
2012	110,000,000	113,163,899	5,496,888	155,296,497	12,955,711	0.5	0.5
2013	170,000,000	184,530,095	16,329,384	235,302,259	63,857,199	2.4	2.4
2014	207,696,920	205,281,587	14,635,383	282,464,780	44,245,101	1.7	1.7
2015	179,260,817	172,335,994	12,679,236	121,971,695	112,740,389	4.3	3.7
2016	130,011,918	135,213,237	11,671,022	95,404,202	68,217,669	2.6	2.3
2017	150,000,000	136,983,501	17,025,821	64,975,243	94,221,723	3.6	3.3
2018	232,762,784	216,899,207	33,672,780	73,522,450	232,245,423	8.9	7.8
2019	362,026,813	343,195,180	47,842,262	60,714,987	380,089,768	14.6	12.6
2020	250,000,000	215,391,731	40,932,424	48,105,467	191,625,756	7.3	6.8
2021	280,000,000	187,900,853	104,983,993	18,621,210	198,963,426	7.6	8.9
2022	345,000,000	273,727,317	71,685,201	13,122,714	256,798,069	9.8	9.6
2023	453,140,610	62,515,262	394,166,453	1,361,676	50,483,131	1.9	13.1
	<b>\$4,752,790,494</b>	<b>\$4,253,799,978</b>	<b>\$796,651,486</b>	<b>\$3,723,082,625</b>	<b>\$2,607,895,109</b>	<b>100</b>	<b>100</b>

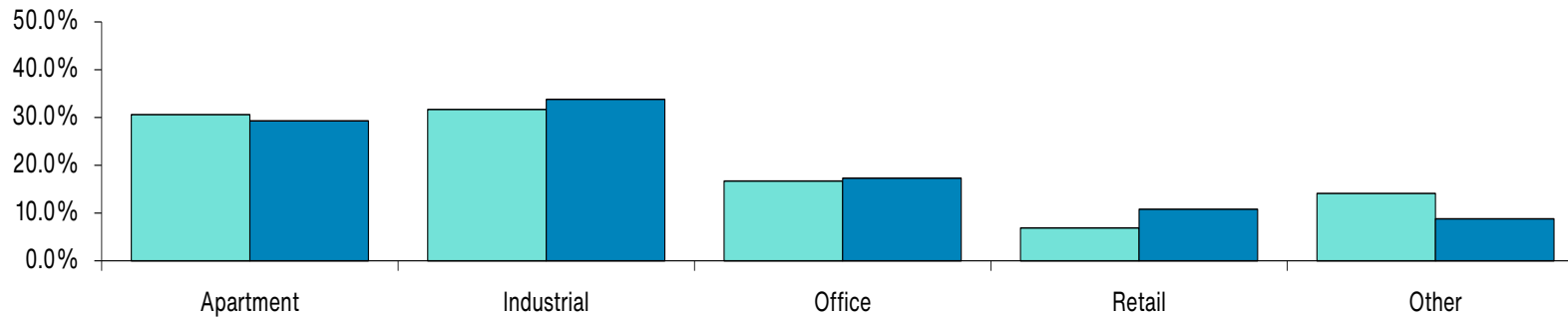
# ATRS' Portfolio Performance Detail: By Vintage Year

As of June 30, 2024

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																			1Q98	13.4	1.5
1998	-0.3	5.2	4.8	4.7	-0.7	15.8	15.0	14.3	1.9	3.7	5.8	5.1	10.6	-11.0	5.1	4.4	7.2	6.3	2Q98	5.6	2.2
1999																			4Q99	15.9	1.7
2000																			4Q00	8.5	1.3
2005	1.2	-2.7	-1.5	-1.7	4.4	-15.1	-11.3	-12.0	3.9	-2.4	1.5	0.7	4.0	-0.8	3.2	2.4	6.2	5.3	3Q05	5.7	2.2
2006	0.9	-1.8	-0.9	-1.1	3.8	-11.2	-7.8	-8.5	3.7	-4.3	-0.7	-1.5	3.9	-4.1	-0.3	-1.0	4.4	3.5	2Q06	4.8	1.8
2007	0.6	0.9	1.6	1.4	2.5	-9.4	-7.1	-7.7	2.4	-0.6	1.8	1.1	2.6	-0.8	1.7	1.1	5.9	5.2	2Q07	5.8	1.9
2008	-0.1	0.1	0.0	-0.3	-0.6	-29.5	-29.9	-30.6	-1.2	-10.6	-11.7	-12.4	-0.8	-6.4	-7.2	-7.8	-3.4	-5.8	2Q08	3.8	1.2
2010	0.1	0.5	0.6	0.6	0.6	-2.7	-2.2	-2.2		80.0	-19.9	-20.2		39.5	-17.1	-17.6	14.7	12.7	3Q10	18.5	1.5
2011	0.7	-1.2	-0.4	-0.7	2.4	0.8	3.3	2.1	2.8	6.8	9.8	8.6	3.2	4.8	8.2	6.9	7.5	6.2	3Q11	6.2	1.5
2012	-0.2	-5.0	-5.2	-5.0	-0.2	-23.0	-23.2	-21.2	1.8	-6.5	-4.8	-5.3	2.1	-8.1	-6.2	-6.6	9.0	5.8	2Q12	12.4	1.5
2013	-0.8	-2.5	-3.3	-8.2	1.8	-1.7	0.0	-1.9	5.3	13.7	19.3	14.2	3.4	13.4	17.1	12.4	16.2	11.6	3Q13	12.0	1.6
2014	0.0	0.9	0.9	1.0	7.0	-10.8	-3.9	-3.0	9.1	-6.2	2.8	2.5	11.9	-3.4	8.7	8.2	14.0	11.2	4Q14	14.9	1.6
2015	0.7	-1.2	-0.5	-0.6	0.9	-3.1	-2.2	-1.8	2.5	1.4	3.8	3.4	2.9	1.0	4.0	3.4	7.5	5.9	2Q15	6.6	1.4
2016	0.4	-2.9	-2.4	-2.8	3.5	-7.4	-4.1	-5.6	3.9	-2.3	1.5	-0.1	4.0	-0.3	3.9	2.6	7.2	4.3	3Q16	5.5	1.2
2017	0.2	-2.8	-2.6	-2.7	2.2	-12.6	-10.6	-10.9	4.3	-5.8	-1.7	-2.5	4.9	-3.2	1.6	0.5	5.1	3.4	2Q17	3.3	1.2
2018	0.6	1.0	1.6	1.2	0.9	1.8	2.7	1.7	3.0	7.0	10.2	8.4	3.9	7.4	11.5	9.2	9.7	1.7	2Q18	9.1	1.4
2019	0.3	0.3	0.6	0.3	2.5	2.0	4.5	3.3	4.6	3.3	8.2	6.6	3.6	4.7	8.5	6.9	8.5	6.9	3Q19	7.1	1.3
2020	0.0	-1.0	-1.0	-1.3	0.0	-0.5	-0.4	-1.6	1.0	12.3	13.4	9.5					13.8	7.5	2Q20	5.8	1.1
2021	0.9	0.8	1.6	1.0	2.7	9.5	12.5	9.0	2.2	9.5	11.8	7.9					13.3	8.9	2Q21	7.7	1.2
2022	0.5	1.0	1.5	1.2	2.6	-0.2	2.4	1.1									0.9	-0.9	2Q22	-0.9	1.0
2023	-4.0	8.5	4.5	-0.4	-23.6	19.3	-7.7	-39.9									26.2	-40.6	2Q23	-41.8	

# Portfolio Diversification: Real Estate

**Property Type Diversification**  
(As of 06/30/2024)

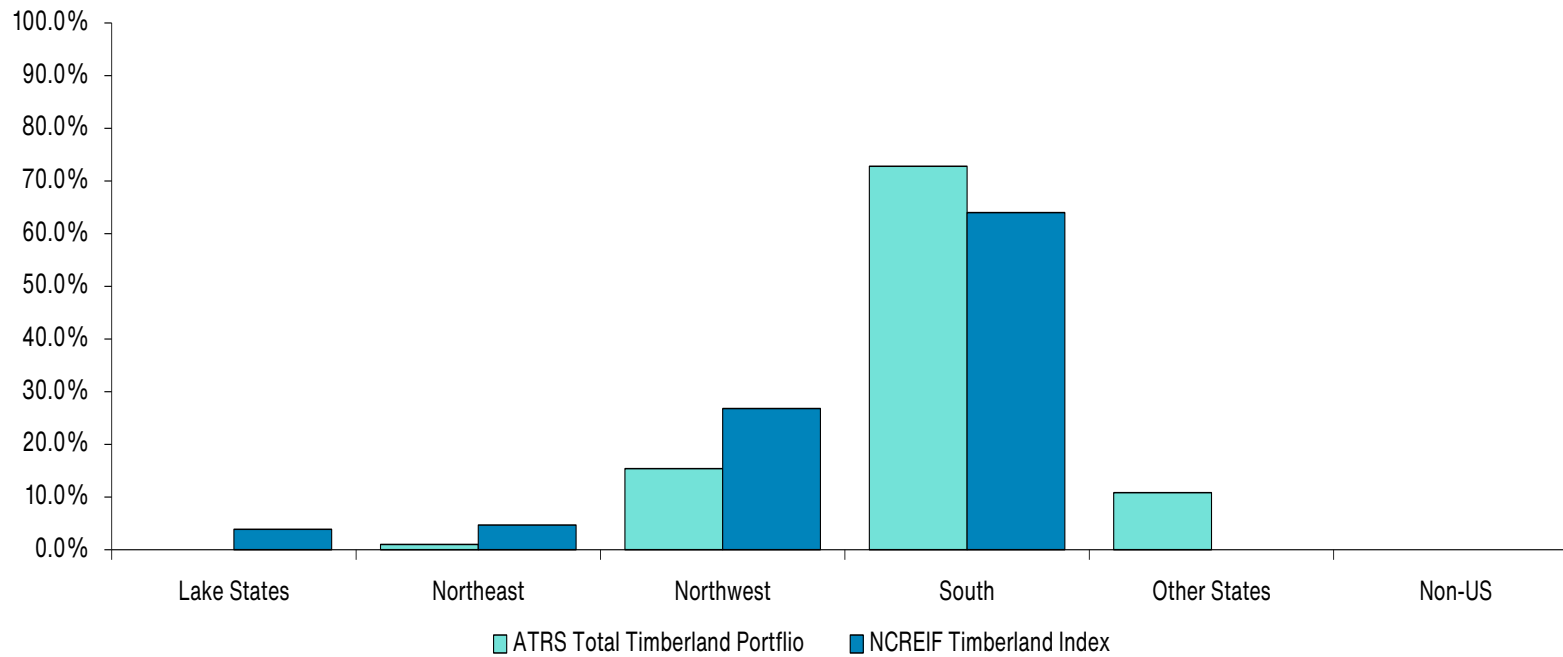


**Geographic Type Diversification**  
(As of 06/30/2024)



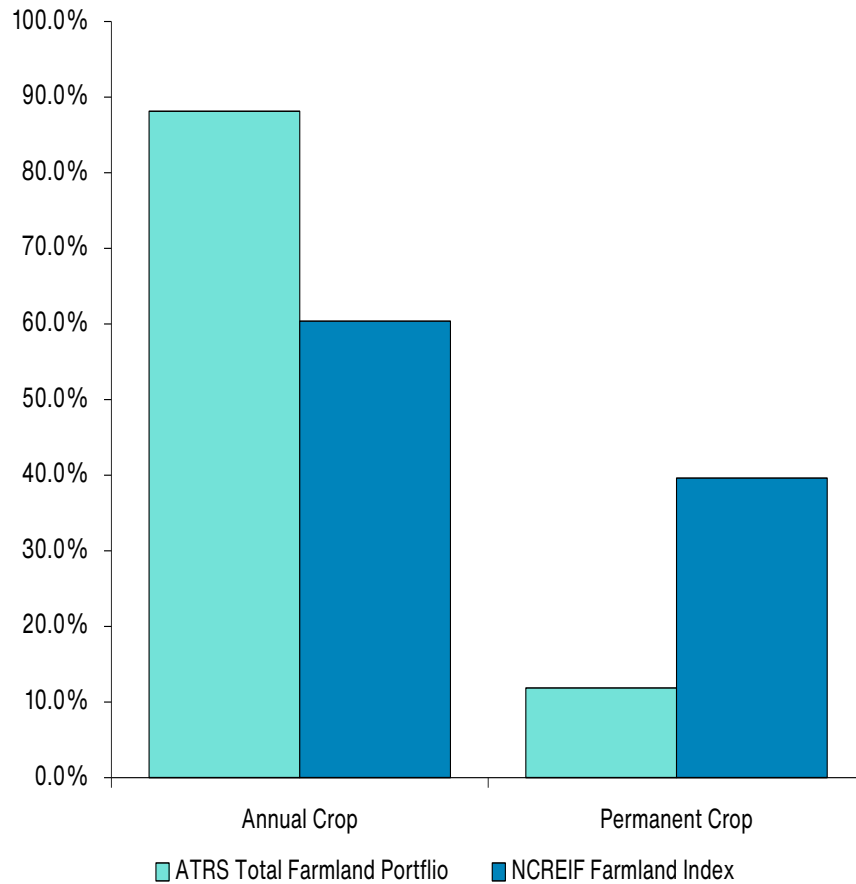
# Portfolio Diversification: Timberland

Geographic Type Diversification  
(As of 06/30/2024)

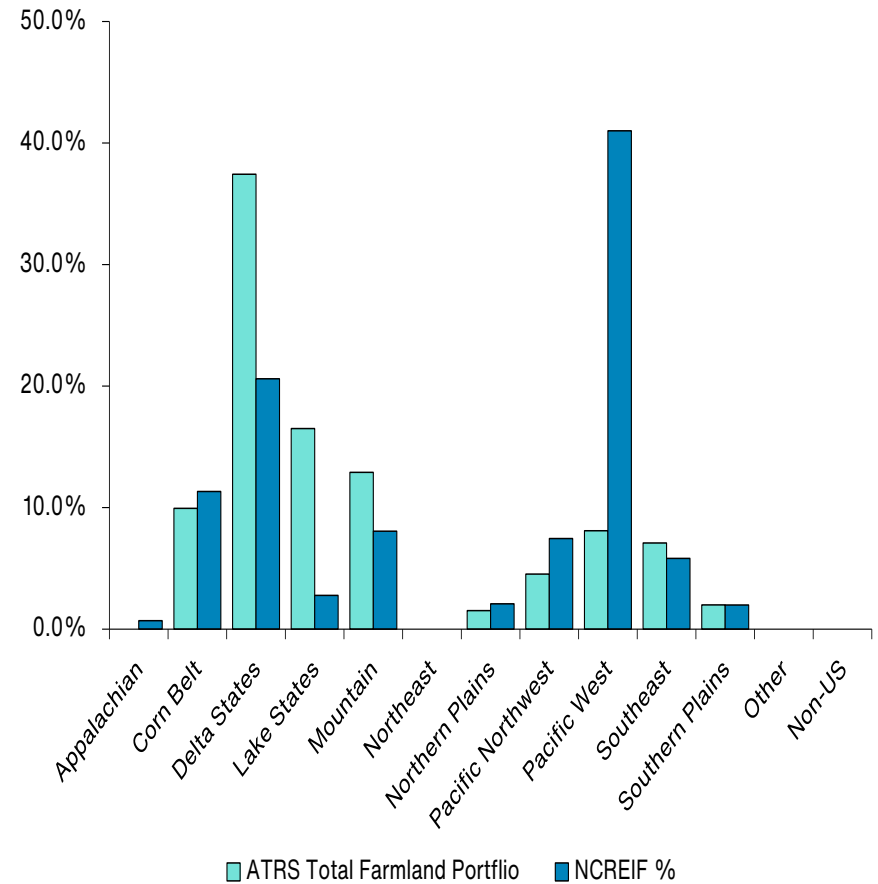


# Portfolio Diversification: Agriculture

**Crop Type Diversification**  
(As of 06/30/2024)



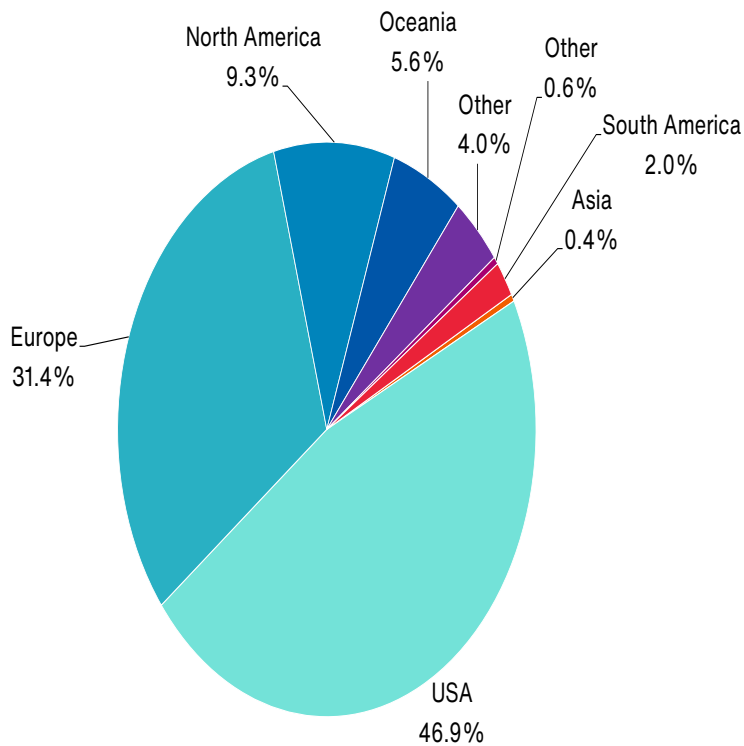
**Geographic Type Diversification**  
(As of 06/30/2024)



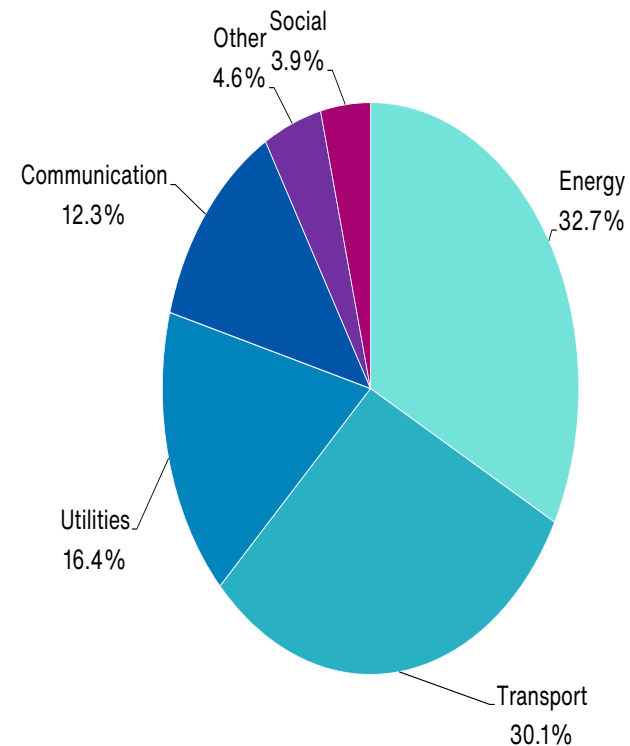
# Portfolio Diversification: Infrastructure

As of June 30, 2024

**Geographic Diversification**  
as % of Portfolio Company Value



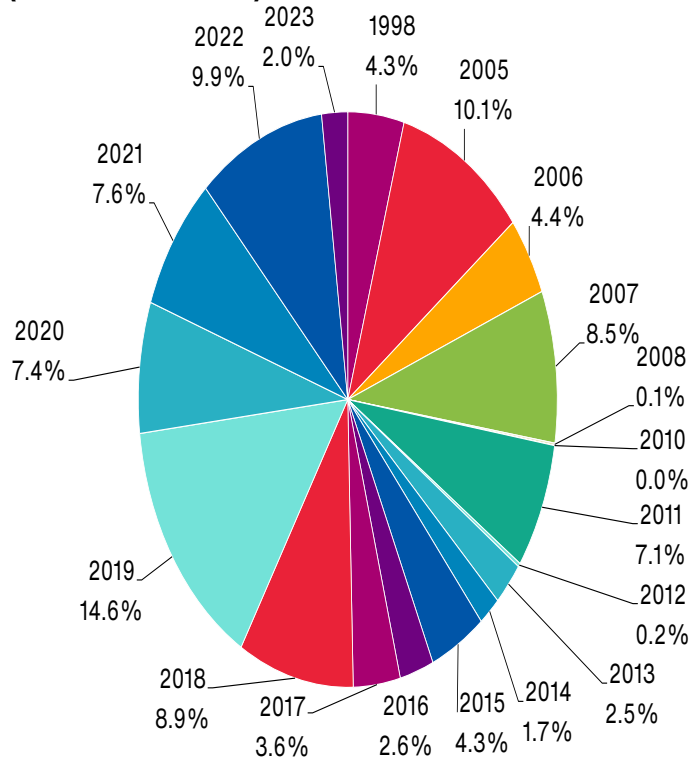
**Industry Diversification**  
as % of Portfolio Company Value



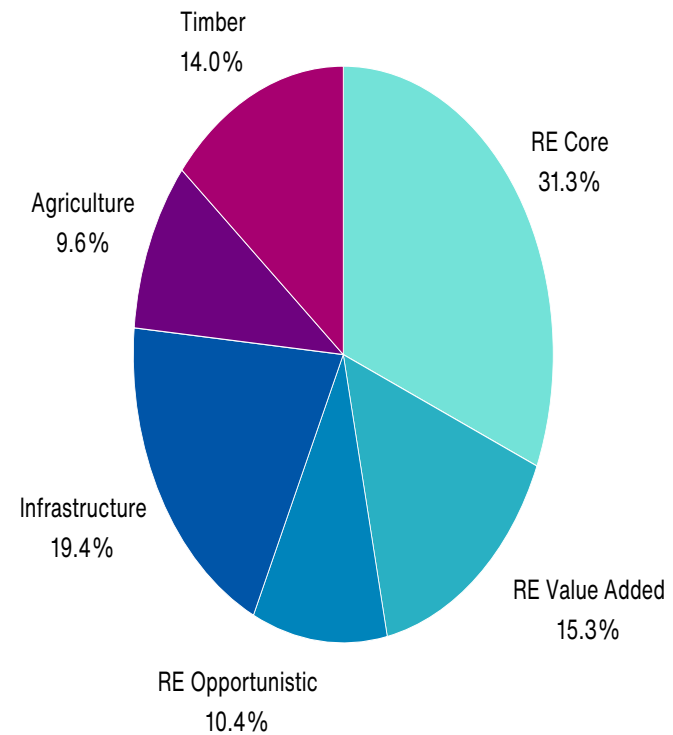


# Portfolio Diversification: Continued

**Vintage Year Diversification by Net Asset Value**  
(As of 06/30/2024)

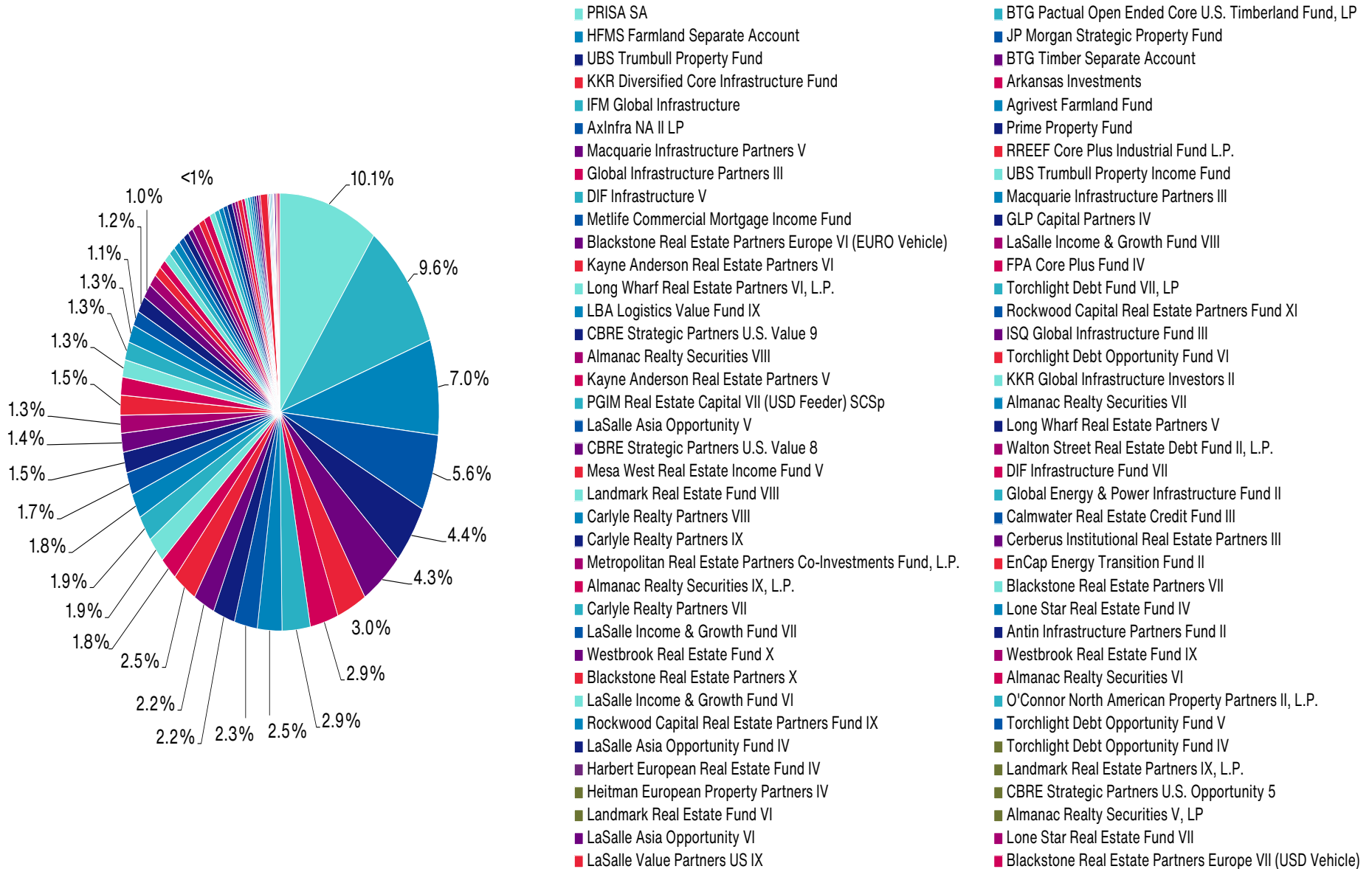


**Style Diversification by Net Asset Value**  
(As of 06/30/2024)



Note: Arkansas Investments are included in Core portfolio

# Manager Diversification



# Management Fees

As of June 30, 2024

Partnership Name	Current Quarter Management Fees	YTD Management Fees
Arkansas Investments	0	0
JP Morgan Strategic Property Fund	-319,003	-666,616
Metlife Commercial Mortgage Income Fund	-100,000	-200,000
Prime Property Fund	-123,179	-249,299
PRISA SA	-538,715	-1,095,692
RREEF Core Plus Industrial Fund L.P.	-113,477	-215,194
UBS Trumbull Property Fund	-216,568	-444,231
UBS Trumbull Property Income Fund	-102,897	-209,656
<b>Core</b>	<b>-1,513,838</b>	<b>-3,080,688</b>
Almanac Realty Securities IX, L.P.	-114,372	-228,744
Almanac Realty Securities V, LP	0	0
Almanac Realty Securities VI	-10,841	-21,682
Almanac Realty Securities VII	-49,713	-99,287
Almanac Realty Securities VIII	-62,809	-119,552
Calmwater Real Estate Credit Fund III	-44,684	-88,597
CBRE Strategic Partners U.S. Value 8	-41,316	-85,024
CBRE Strategic Partners U.S. Value 9	-156,249	-312,498
FPA Core Plus Fund IV	-52,363	-106,569
GLP Capital Partners IV	-57,491	-113,545
Harbert European Real Estate Fund IV	-28,184	-55,038
LaSalle Income & Growth Fund VI	0	0
LaSalle Income & Growth Fund VII	-33,988	-67,975
LaSalle Income & Growth Fund VIII	-90,793	-181,587
LaSalle Value Partners U.S. IX	-200,169	-399,953
LBA Logistics Value Fund IX	-158,125	-316,250
Long Wharf Real Estate Partners V	-53,368	-104,400
Long Wharf Real Estate Partners VI, L.P.	-118,226	-237,596
Mesa West Real Estate Income Fund V	-134,481	-268,743
PGIM Real Estate Capital VII (USD Feeder) SCSp	-340	-680
Rockwood Capital Real Estate Partners Fund IX	-10,453	-21,126
Rockwood Capital Real Estate Partners Fund XI	-117,538	-234,217
Walton Street Real Estate Debt Fund II, L.P.	-71,748	-130,065
Westbrook Real Estate Fund IX	-24,543	-49,086
Westbrook Real Estate Fund X	-26,496	-52,970
<b>Value Added</b>	<b>-1,783,290</b>	<b>-3,545,183</b>

# Management Fees

As of June 30, 2024

Partnership Name	Current Quarter Management Fees	YTD Management Fees
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	-115,499	-232,805
Blackstone Real Estate Partners Europe VII (USD Vehicle)	-68,967	-68,967
Blackstone Real Estate Partners VII	0	0
Blackstone Real Estate Partners X	-281,250	-562,500
Carlyle Realty Partners IX	-62,231	-184,817
Carlyle Realty Partners VII	-24,797	-49,595
Carlyle Realty Partners VIII	-49,684	-99,369
CBRE Strategic Partners U.S. Opportunity 5	0	0
Cerberus Institutional Real Estate Partners III	-3,774	-8,538
Heitman European Property Partners IV	0	0
Kayne Anderson Real Estate Partners V	-66,472	-132,944
Kayne Anderson Real Estate Partners VI	-156,250	-312,500
Landmark Real Estate Fund VI	0	0
Landmark Real Estate Fund VIII	-46,005	-91,289
Landmark Real Estate Partners IX, L.P.	-125,000	-250,000
LaSalle Asia Opportunity Fund IV	-2,532	-5,151
LaSalle Asia Opportunity V	-60,968	-127,578
LaSalle Asia Opportunity VI	-174,044	-348,088
Lone Star Real Estate Fund IV	-8,363	-16,726
Lone Star Real Estate Fund VII	-181,250	-362,500
Metropolitan Real Estate Partners Co-Investments Fund, L.P.	-18,706	-37,395
O'Connor North American Property Partners II, L.P.	-9,705	-19,410
Torchlight Debt Fund VII, LP	-137,500	-275,000
Torchlight Debt Opportunity Fund IV	-6,519	-12,947
Torchlight Debt Opportunity Fund V	-5,867	-11,734
Torchlight Debt Opportunity Fund VI	-46,009	-93,217
<b>Opportunistic</b>	<b>-1,526,393</b>	<b>-3,053,069</b>
<b>Real Estate</b>	<b>-4,823,521</b>	<b>-9,678,941</b>

# Management Fees

As of June 30, 2024

Partnership Name	Current Quarter Management Fees	YTD Management Fees
AxInfra NA II LP	-175,799	-352,864
DIF Infrastructure Fund VII	-200,879	-403,188
DIF Infrastructure V	-136,711	-276,093
IFM Global Infrastructure	-142,865	-284,106
KKR Diversified Core Infrastructure Fund	-94,268	-187,397
Macquarie Infrastructure Partners III	-69,835	-167,804
Macquarie Infrastructure Partners V	-179,632	-357,968
<b>Infrastructure - Core</b>	<b>-999,988</b>	<b>-2,029,420</b>
Antin Infrastructure Partners Fund II	-9,855	-21,088
EnCap Energy Transition Fund II	-162,500	-1,031,986
Global Energy & Power Infrastructure Fund II	-84,733	-148,105
Global Infrastructure Partners III	-170,019	-340,020
ISQ Global Infrastructure Fund III	-189,074	-379,397
KKR Global Infrastructure Investors II	-41,133	-83,748
<b>Infrastructure - Non-Core</b>	<b>-657,314</b>	<b>-2,004,344</b>
<b>Infrastructure</b>	<b>-1,657,302</b>	<b>-4,033,764</b>
Agrivest Farmland Fund	-161,496	-320,184
HFMS Farmland Separate Account	-522,733	-1,033,053
<b>Agriculture</b>	<b>-684,229</b>	<b>-1,353,237</b>
BTG Pactual Open Ended Core U.S. Timberland Fund, LP	-629,632	-1,258,470
BTG Timber Separate Account	-158,019	-311,102
<b>Timber</b>	<b>-787,651</b>	<b>-1,569,572</b>
<b>Total Real Assets</b>	<b>-3,129,182</b>	<b>-6,956,572</b>
<b>Arkansas Teachers Retirement System</b>	<b>-7,952,703</b>	<b>-16,635,513</b>

# Compliance Matrix

Risk Management						
Property Type - Real Estate	NFI-ODCE	Target/Constraint	Minimum	Maximum	Actual	Compliant?
Office	17.30	NFI-ODCE +/- 50%	8.65	25.95	16.71	Yes
Retail	10.80	NFI-ODCE +/- 50%	5.40	16.20	6.89	Yes
Industrial	33.80	NFI-ODCE +/- 50%	16.90	50.70	31.68	Yes
Apartment	29.30	NFI-ODCE +/- 50%	14.65	43.95	30.61	Yes
Other	8.80	20%	0.00	20.00	14.12	Yes
Geography - Real Estate	NFI-ODCE	Target/Constraint	Minimum	Maximum	Actual	Compliant?
West	43.80	NFI-ODCE +/- 50%	21.90	65.70	42.40	Yes
East	28.70	NFI-ODCE +/- 50%	14.35	43.05	26.23	Yes
Midwest	5.80	NFI-ODCE +/- 50%	2.90	8.70	6.24	Yes
South	21.60	NFI-ODCE +/- 50%	10.80	32.40	13.13	Yes
Other	0.00	NA	NA	NA	2.90	Yes
Non-U.S.	0.00	40%	0.00	40.00	9.09	Yes
Geography - Timber	NCREIF Timberland	Target/Constraint	Minimum	Maximum	Actual	Compliant?
Lake States	3.87	0%-20%	0.00	20.00	0.00	Yes
Northeast	4.69	0%-20%	0.00	20.00	1.00	Yes
Northwest	26.80	0%-50%	0.00	50.00	15.39	Yes
South	63.99	40%-80%	40.00	80.00	72.79	Yes
Other	0.00	0%-20%	0.00	20.00	10.82	Yes

\*Due to a rounding error on behalf of NCREIF, the Timberland amounts will not sum to 100%.

# Compliance Matrix: Continued

Risk Management						
Geography - Agriculture	NCREIF Farmland	Target/Constraint	Minimum	Maximum	Actual	Compliant?
Appalachian	0.70		0.00	50.00	0.00	Yes
Corn Belt	11.33		0.00	50.00	9.94	Yes
Delta States	20.60		0.00	50.00	37.43	Yes
Lake States	2.77		0.00	50.00	16.50	Yes
Mountain	8.06		0.00	50.00	12.90	Yes
Northeast	0.00		0.00	50.00	0.00	Yes
Northern Plains	2.08		0.00	50.00	1.52	Yes
Pacific Northwest	7.46		0.00	50.00	4.53	Yes
Pacific West	39.13		0.00	50.00	8.09	Yes
Southeast	5.82		0.00	50.00	7.09	Yes
Southern Plains	1.99		0.00	50.00	1.99	Yes
Other	0.00		0.00	50.00	0.00	Yes
Non-U.S.	0.00		0.00	50.00	0.00	Yes
Geography - Infrastructure	Target/Constraint		Minimum	Maximum	Actual	Compliant?
U.S.			40.0	100.0	46.90	Yes
Non-U.S.			0.00	60.00	53.10	Yes
Asset Type - Infrastructure	Target/Constraint		Minimum	Maximum	Actual	Compliant?
Energy/Utilities			0.00	70.00	46.99	Yes
Transportation			0.00	70.00	30.13	Yes
Social			0.00	70.00	3.86	Yes
Communications			0.00	70.00	12.30	Yes
Other			0.00	70.00	6.72	Yes
Manager	Target/Constraint		Minimum	Maximum	Max	Compliant?
			0.00	30.00	13.96	Yes
Style - Real Estate	Target/Constraint		Minimum	Maximum	Actual	Compliant?
Core			50.00	70.00	54.91	Yes
Non-Core			30.00	50.00	45.09	Yes

\*Due to a rounding error on behalf of NCREIF, the Timberland amounts will not sum to 100%.

# 4

## Glossary





# Glossary of Terms

<b>Catch-up</b>	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.
<b>Core</b>	The most conservative institutional real estate investing style.
<b>Core Plus</b>	A style whereby investments have a slightly higher level of risk and expected return than Core, primarily through use of leverage.
<b>Development</b>	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.
<b>DPI</b>	Distributions to Paid In; the ratio of distributions from investments to total invested capital.
<b>First Closing</b>	The point at which a manager receives and executes the subscription documents and can begin drawing capital from investors.
<b>Final Closing</b>	The final date at which new investors can subscribe to a fund.
<b>Internal Rate of Return (IRR)</b>	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.
<b>NFI-ODCE</b>	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.
<b>NPI</b>	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.
<b>FTSE-NAREIT Equity REIT</b>	An unmanaged capitalization-weighted index of all equity real estate investment trusts.
<b>FTSE EPRA/NAREIT Global REIT</b>	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.

# Glossary of Terms

<b>Opportunistic</b>	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.
<b>Pre-Specified Deals</b>	Investments that are purchased for a fund before its final close. The assets are typically warehoused on a line of credit.
<b>Promote (Carrier Interest)</b>	The performance fee a manager receives once the investors have received their return of capital and the preferred return (return promised by the manager).
<b>RVPI</b>	Residual Value to Paid In; the ratio of the residual value of an investment to total invested capital.
<b>Time-Weighted Return</b>	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.
<b>TVPI</b>	Total value to paid-in ratio; the ratio of total value from an investment, including distributions, to total invested capital.
<b>Value-Added</b>	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.
<b>Vintage Year</b>	The year in which a fund has its final closing. Typically coincides with the year a fund begins making investments.
<b>NCREIF Timberland Index</b>	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.
<b>NCREIF Farmland Index</b>	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

## **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.

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Aon Investments USA Inc.  
200 East Randolph Street  
Suite 600  
Chicago, IL 60601  
ATTN: Aon Investments Compliance Officer

Investment performance is comprised of data submitted by investment managers into a proprietary system owned and operated by The Townsend Group. The Townsend Investment Performance System ("TIPS") collects investment performance data on a quarterly basis via investment managers including, but not limited to, returns, diversification, management and performance fees, as well as market indices.

In late April 2024, Aon plc signed a definitive agreement for The Riverside Company to acquire The Townsend Group (Townsend). Please reference the information contained on the Aon Media page for additional details, <https://aon.mediaroom.com/Aon-Signs-Agreement-for-The-Townsend-Group-to-be-Acquired-by-The-Riverside-Company>. Following the close of the transaction, which is subject to final regulatory approvals, Aon will maintain a team dedicated to serving its clients' real estate investment programs, while collaborating with specialists like Townsend to support specific client needs.

Post-close, Aon and Riverside will have a services agreement in place, including a sub-advisory agreement directly between Aon Investments and Townsend. The sub-advisory agreement enables us to provide seamless support and continued resources to our clients to ensure a smooth and successful transition. Aon is committed to preserving its own private real asset investment consulting practice, which is led by a team of nine investment professionals averaging 20 years of industry experience between the seven senior members of the team. The team's leadership is comprised of private and public real asset investment professionals and is currently staffed in San Francisco, New York, Toronto, Chicago, and London.



## Memorandum

**To:** Arkansas Teacher Retirement System (“ATRS”)  
**From:** Chae Hong, Jack Dowd, CFA  
**CC:** PJ Kelly; Matthew Hooker  
**Date:** December 02, 2024  
**Re:** Long Wharf Real Estate Partners VII – \$50 million Commitment Recommendation

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### Background and Recommendation

Long Wharf Capital L.L.C. (“Long Wharf”, the “Sponsor”, or the “Manager”) is raising Long Wharf Real Estate Partners VII, L.P. (“Fund VII” or the “Fund”), as a continuation of its U.S. value-add strategy (series short name “LREP”) acquiring various property types across the U.S. The Fund will target a 12%-15% net IRR utilizing 65% leverage over an 8-year fund life. The Fund will strategically acquire 25 to 35 middle market commercial real estate properties across the U.S., executing value-add business plans through a diverse set of operating partners. The Sponsor will seek diversification across property types including industrial (30-40%), multifamily (20-30%), office (0-5%), retail (10-20%), hospitality (10-15%), and other (5-10%). Geographically speaking, the fund will be diversified across Long Wharf’s 20 primary and secondary/growth markets in the U.S. Business plans are bifurcated between property types in today’s market, with office and hospitality investment to be higher yield/greater discount driven and multifamily and industrial to be demand/rent growth driven. Fund VII is limited to 25% development.

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 VII Investment Summary is attached as **Exhibit A**. We recommend that ATRS invest \$50 million in the Fund to fulfill ATRS’ 2024 real estate allocation, in accordance with the previously approved 2024 ATRS Real Asset Pacing Schedule. Additionally, Fund VII may provide investors with various investment vehicles. Aon recommends ATRS consult with its tax and legal counsel to determine the most appropriate vehicle for the Plan.

## Exhibit A



## INVESTMENT SUMMARY

# LONG WHARF REAL ESTATE PARTNERS VII, L.P.

A Multiple Property Type Value-Add Fund

October 2024



## EXECUTIVE SUMMARY

### OVERVIEW

Review Date	Rating	Predecessor Fund Rating
October 2024	Buy	Buy

Long Wharf Capital L.L.C. (“Long Wharf”, the “Sponsor”, or the “Manager”) is raising Long Wharf Real Estate Partners VII, L.P. (“Fund VII” or the “Fund”), as a continuation of its U.S. value-add strategy (series short name “LREP”) acquiring various property types across the U.S. The Fund will target a 12%-15% net IRR utilizing 65% leverage over an 8-year fund life.

Aon Investments, USA 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
- Organization Expenses
- Management Fee
- Incentive Fees/ Waterfall Distribution
- Fund Size
- Sponsor Commitment
- Investment Period
- Fund Term
- Key Person Provision
- Turnover/Tenure
- GP Attribution Concentration
- Consistency/ Volatility of Returns
- Write-offs
- Transaction Experience in Strategy
- Ability to Create Value in Deals
- Valuation Discipline
- Reporting Transparency
- Back-Office Resources
- 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 Long Wharf 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’ 2024 real estate allocation, in accordance with the previously approved 2024 ATRS Real Asset Pacing Schedule.

### Sponsor:

<b>Ownership</b>	100% partner-owned	<b>HQ Location</b>	Boston, MA
<b>Founded</b>	2011	<b>AUM</b>	\$2.0 billion gross (\$894 million equity)
<b>Employees</b>	23	<b>RIA</b>	Yes
<b>Organization</b>	Private market real estate investment management company		



*Portfolio Characteristics:*

<b>Vehicle Structure</b>	Closed-end commingled fund	<b>Risk Segment</b>	Value-add
<b>Targeted Size</b>	\$500 million (\$650 million max)	<b>Sponsor Commitment</b>	\$5 million
<b>Commitment Period</b>	3 years from Final Close	<b>Fund Term</b>	8 years from Final Close
<b>Avg Transaction</b>	\$10-25 million equity	<b>Typical Business Plan</b>	Ranges from 3 to 5 years
<i>Fees:</i>			
<b>Management Fee</b>	1.5% on committed during the Commitment period, then 1.5% on invested.	<b>Incentive Fee</b>	20% subject to an 9% preferred return; 50/50 catch-up.

*Status:* To date, the fund has closed on \$323 million with another \$155 million in various stages of due diligence, which would round out Fund VII at \$478 million. Final Close anticipated scheduled for December 31, 2024.

*Strategy:* Acquire 25 to 35 middle market commercial real estate properties across the U.S., executing value-add business plans through a diverse set of operating partners. The Sponsor will seek diversification across property types including industrial (30-40%), multifamily (20-30%), office (0-5%), retail (10-20%), hospitality (10-15%), and other (5-10%). Geographically speaking, the fund will be diversified across Long Wharf's 20 primary and secondary/growth markets in the U.S. Business plans are bifurcated between property types in today's market, with office and hospitality investment to be higher yield/greater discount driven and multifamily and industrial to be demand/rent growth driven. Fund VII is limited to 25% development.

*Commingled Fund Performance (as of 6/30/2024):*

Vehicle	Vintage	Vehicle Size (M)	Fair Market Value				% Realized
			Net IRR	Net Equity Multiple	Quartile Ranking* by Net IRR / Multiple	# of Constituent Funds	% of Projected Distributions
<i>Fidelity Series (opportunistic)</i>							
Fidelity Real Estate Growth Fund	2001	\$320	17.5%	1.5x	2Q/2Q	24	100%
Fidelity Real Estate Growth Fund II	2003	\$626	-8.2%	0.7x	4Q/4Q	25	100%
Fidelity Real Estate Growth Fund III	2007	\$875	7.4%	1.3x	2Q/2Q	49	100%
<i>Long Wharf Series (value-add)</i>							
Long Wharf Real Estate Partners IV	2012	\$254	11.0%	1.4x	3Q/3Q	25	99%
Long Wharf Real Estate Partners V	2015	\$438	5.7%	1.3x	3Q/3Q	26	59%
Long Wharf Real Estate Partners VI	2019	\$505	13.8%	1.2x	1Q/1Q	19	42%



## SPONSOR OVERVIEW

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Fidelity Investments formed an institutional real estate group in 1993 to invest in direct private market deals as well as real estate public securities (REITS, REIT bonds, and later CMBS). Initial activity was through separate accounts until it entered the fund-sponsorship business in 2001. Fidelity balance sheet provided sponsor co-invest capital and the firm provided shared infrastructure to the real estate group. The firm raised three funds in its flagship series from 2001 to 2007. In 2009 Fidelity chose to shut down the business, facilitating the group's exit and re-formation as an independent company by 2011 and provided a \$20 million fund commitment. The group's four Managing Directors responsible for investing and asset management, Michael Elizondo, John Barrie, Jeff Tapley, and Jeff Gandel comprised the new entity ownership and its Executive Committee and its Investment Committee.

Following the Firm's establishment in 2011, Jeff Tapley and John Barrie have left the firm. Jeff Tapley was originally brought on board to manage out assets acquired under Fidelity, and soon thereafter departed in 2012 for Digital Realty. John Barrie was originally brought on board to build out Long Wharf's operations infrastructure, and soon thereafter departed in 2015 for Digital Realty.

**Ownership:** Current ownership can be attributed to Michael Elizondo (68%) and Jeff Gandel (32%).

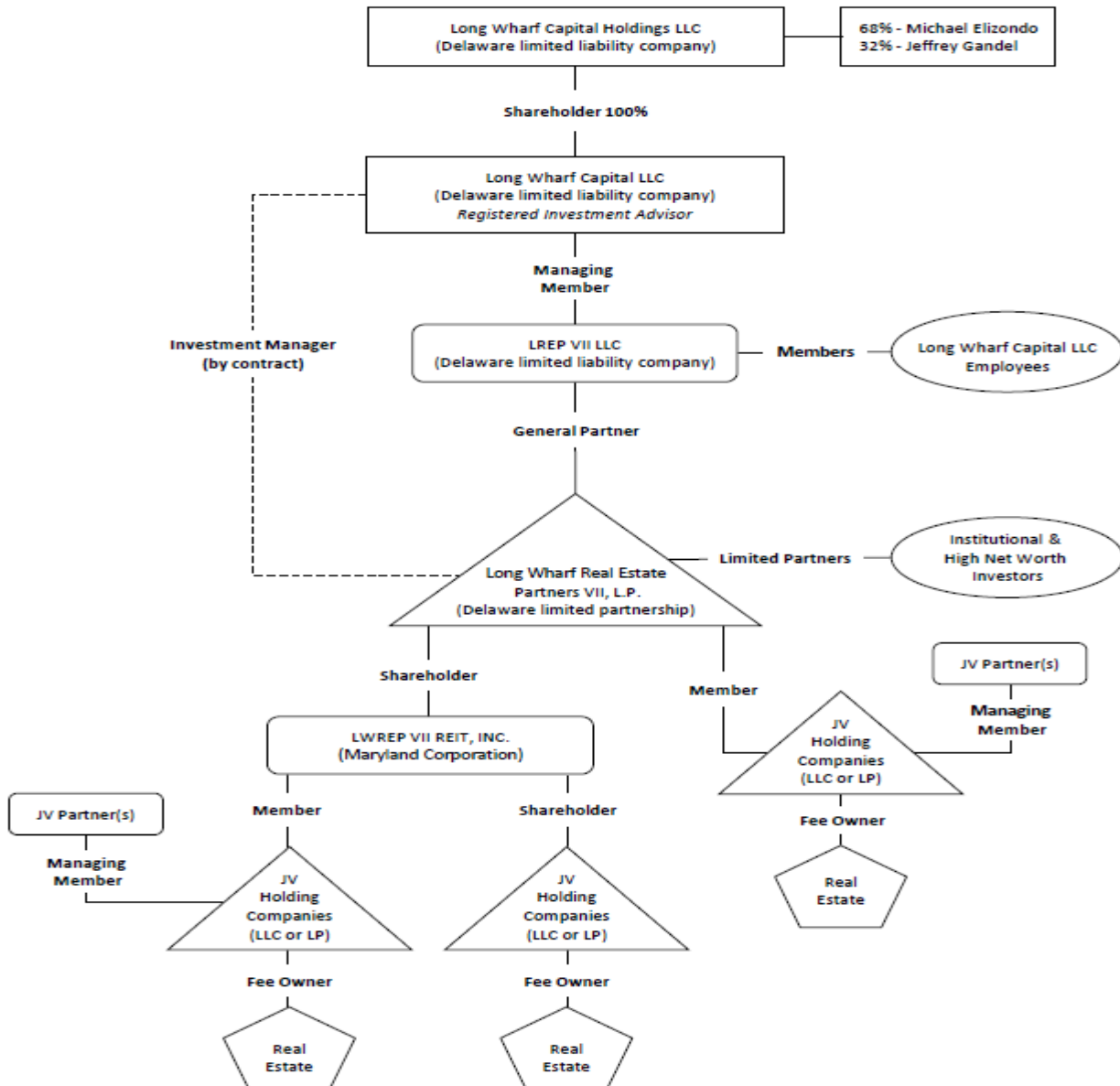
**Staffing and Office Locations:** Long Wharf is comprised of 2 owners and 22 employees located in Boston, MA. Their sole focus is on value-added investment and fund management.

- Functional Areas: Acquisitions (7), Asset Management (6), and Operations & Investor Relations (11)

**Assets Under Management:** \$2.0 billion gross equity; \$894 million net equity (excludes \$221 million of unfunded commitments).

- By risk profile: 100% non-core (the Sponsor's full dedication is to the value-added series of funds with no immediate anticipation of launching addition product lines)
- By Property Type: 31% office, 18% industrial, 21% multifamily, 20% retail, 6% land, 4% hotel.

## EXHIBIT F: LEGAL STRUCTURE





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As of December 31, 2023, Aon's quantitative model is run on approximately 13,098 strategies from an external database. Aon assigned a quantitative rating of "Qualified" to 34% of these strategies and "Not Recommended" to 29% of these strategies. The remainder were not rated. A "Buy" rating cannot be assigned via quantitative analysis. Across asset classes (excludes private real estate and real assets), Aon had approximately 24,500 strategies in its internal database. Aon assigned a qualitative rating of "Buy" to approximately 5% of strategies in the database; "Qualified" to approximately 1% of strategies in the database; "Sell" to <1% of strategies in the database; and "In Review" to <1% of strategies in the database. The remaining strategies in the database are not rated. Some strategies may be included in both the internal and external database. Where a qualitative rating exists, it prevails over the quantitative rating. These statistics exclude real estate / Townsend databases and ratings.

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

**RESOLUTION**  
**No. 2024-36**

**Approving Investment in Long Wharf Real Estate Partners VII,  
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 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 **Long Wharf Real Estate Partners VII, L.P.**, a real estate fund whose strategy will be to pursue a diversified portfolio of properties with a focus on acquiring assets at significant discounts to peak and replacement values.

**THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$50 million dollars (\$50,000,000.00)** in **Long Wharf Real Estate Partners VII, 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 2nd day of December, 2024.**

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

# ATRS Board Policy 6

## REAL ASSETS INVESTMENT POLICIES

A.C.A. § 24-7-305

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### I. Board - Investment Policies and Procedures

#### A. Real Assets Investment Policies

##### 1. Scope

This policy applies to the Real Asset category ("Real Assets") of the Arkansas Teacher Retirement System's ("ATRS") investment portfolio. This policy governs the private market investments and not the public real asset securities exposure within the ~~Domestic Equity or Global Total~~ Equity asset classes.

##### 2. Purpose and Objectives

The purpose of this statement of investment policy is to formalize the ATRS' Board of Trustees' (the "Board") investment objectives, policies, and procedures, with respect to Real Assets, and to define the duties and responsibilities of the various entities involved in the Real Assets investment process. This statement is to be considered an extension of ATRS' general Statement of Investment Policy.

#### B. Investment Philosophy

1. ATRS allocates a portion of its total assets to Real Assets. ATRS defines Real Assets as investments relating to the ownership, financing, or operation of real estate, timber, agriculture, and infrastructure assets. ATRS allocates capital to Real Assets with the following goals:

- a. *Diversification with Other Asset Classes*

Real Asset returns have historically performed differently than the returns of other asset classes in which ATRS invests. ATRS believes that Real Asset returns will continue to perform differently than those of other asset classes, allowing ATRS to lower the risk of its overall portfolio through diversification by allocating to the asset class.

- b. *Potential Inflation Hedge*

Real Asset returns have historically shown the ability to provide a hedge against rising inflation. By allocating a portion of its investments to an asset class with these characteristics the overall risk of rising inflation to the ATRS portfolio is reduced.

## C. Allocation

1. ATRS controls allocation risk at the total fund level. The allocation establishes a 15% target for the Real Asset class. As provided in ATRS' general Statement of Investment Policy, a range of minimum and maximum relative to the target has not been set as it is not prudent to set rebalancing ranges for the real asset classes due to their illiquid nature. This target allocation is to be reached and maintained over a reasonable period of time using a pacing schedule established by the joint effort of the Executive Director and Real Asset Consultant. There will be no fixed targets for the Real Assets subasset classes but the following general parameters have been identified for the Real Asset subasset classes:

- ~~108~~% Real Estate
- 2% Timber
- 1% Agriculture
- ~~24~~% Infrastructure

## D. Performance Benchmark

1. ATRS' Real Asset portfolio is benchmarked on a net of fee basis against the following sub-asset class benchmarks over rolling five year periods.

- a. Real Estate Benchmark: The net return for ATRS' real estate investments is expected to meet or exceed the net NCREIF Fund Index Open-end Diversified Core Equity Index ("NFI-ODCE") over five year rolling period.
- b. Timber Benchmark: The net return for ATRS' timber investments is expected to meet or exceed the NCREIF Timberland Property Index ("NTPI") over a five year rolling period.
  - Given the highly concentrated nature of the NTPI, it is advised that an additional performance measurement tool be utilized in order to gauge the timber portfolio's performance compared to the opportunity cost of investing in timber. The Consumer Price Index plus 300 basis points will be used for measurement.
- c. Agriculture Benchmark: The net return for ATRS' agriculture investments is expected to meet or exceed the NCREIF Farmland Index ("NFI") over a five year rolling period.
  - Much like NTPI, NFI also has a concentrated nature and it is advised that an additional performance measurement tool be utilized in order to gauge the agriculture portfolio's performance

compared to the opportunity cost of investing in agriculture. The Consumer Price Index plus 300 basis points will be used for measurement.

d. Infrastructure Benchmark: Over the long term (10 years or longer), the infrastructure portfolio is expected to generate a minimum internal rate of return ("IRR") equal to the Consumer Price Index plus 500 basis points, net of all investment management fees and expenses. The Consumer Price Index plus 500 basis points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure.

2. The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark, and Infrastructure benchmark. The net of fee return for ATRS' Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five year periods.

#### E. Portfolio Composition

1. The majority of the Real Asset class investments should consist of equity ownership of privately-held institutional real estate, timber, agriculture, and infrastructure investments.
2. This policy authorizes the use of all types of investment structures including, but not limited to:
  - Separate Accounts
  - Co-investments
  - Joint ventures
  - Open and closed-end funds
  - Partnerships
  - Private and public Real Estate Investment Trusts ("REITs") and Real Estate Operating Companies ("REOCs")
  - Listed or publicly traded infrastructure

#### F. Risk Management

1. For ATRS' Real Asset investments, the following sections identify the most significant risks and the method of control. Compliance with the following risk parameters shall be based on the percentage of ATRS' Real Asset portfolio's Net Asset Value at Fair Value at the end of each quarter.

a. *Investment Manager Diversification*

Investment manager risk consists of two elements: the exposure to an investment manager and the number of investment managers in ATRS' Real Asset portfolio. To control investment manager exposure, the allocation to a single Real Asset manager is typically limited to 30% of ATRS' Real Asset target allocation.

b. *Individual Investment Diversification*

In order to mitigate the risk of large losses, ATRS will diversify its Real Asset investments across many different individual investments. Individual investments, measured by gross asset value, shall generally not exceed 10% of the overall Real Asset target allocation. For Real Estate, the 10% individual investment limitation will apply to Core properties, but Non-Core properties will be generally limited to 5%. Core properties are generally defined as industrial, apartment, retail, and office portfolios that are at least 80% leased, located in major metropolitan areas, and typically use no more than 50% leverage. Non-core is generally defined as the remainder of the Real Estate property opportunity set.

c. *Liquidity*

The majority of Real Assets are illiquid. As such, ATRS understands and recognizes that the Real Asset class will not be structured in a way to provide liquidity. Should market values for the Real Asset class change such that the asset class falls outside of these and the below risk management parameters, the Executive Director and Real Asset Consultant will determine the most effective solution and timeframe to bring the Real Asset exposure into compliance.

2. Additional risk parameters at the subasset class level are defined below and compliance shall be based on the percentage of each subasset class' Net Asset Value at Fair Value at the end of each quarter:

a. Real Estate:

*Property Diversification* - ATRS seeks to minimize the risk of its Real Estate portfolio by allocating its assets across the spectrum of property types, with the majority of its investments allocated to the primary sectors of the NFI-ODCE. No single traditional property type shall account for greater than 50% of the portfolio. In addition, the general range of property type allocations will be 0.5x - 1.5x the NFI-ODCE's weight in each property type. Other property types, as



defined by NFI-ODCE, are allowed but (on a combined basis) should not exceed 20% of the real estate portfolio.

*Geographic Diversification* - The Plan seeks to minimize the risk of its real estate portfolio by allocating its investments across the geographic spectrum. Within the United States, the general range of geographic allocations will be 0.5x - 1.5x the NFI-ODCE weight in each region. With respect to non-U.S. investing, no more than 40% of the portfolio may be invested outside of the U.S. ATRS may initiate Arkansas-related mortgage loans and direct Real Estate investments to meet the goal of investing in quality Arkansas related investments. The Executive Director and Real Estate Consultant will monitor the Arkansas-related Real Estate holdings to protect against excessive risk due to sector or geographic exposure. The goal of Arkansas-related investments shall be to achieve a total rate of return, net of all fees and costs that will exceed the real estate performance benchmark over time.

*Leverage* - ATRS allows some of its investment managers the ability to use modest amounts of leverage in their investment strategy as a means of enhancing the overall risk-adjusted returns available to ATRS. In keeping with its goal of risk mitigation, leverage at the total asset class level should be kept below a 50% loan-to-value ratio.

*Life Cycle* - ATRS will endeavor to invest the majority of its assets in fully established, income-producing Real Estate, commonly referred to as Core Real Estate. As defined above, the ATRS goal will be to have between 50% and 70% of its Real Estate asset class in Core investments. Non-Core opportunities, such as Value Added and Opportunistic real estate strategies, may provide better alpha generation but will be viewed tactically and have an operating allocation range of 30% to 50% of the real estate portfolio.

b. Timber:

*Geographic Diversification* - The Plan seeks to minimize the risk of its timber portfolio by allocating its investments across the geographic spectrum. Within the United States, the allowable range of geographic allocations will fall within the following target ranges as defined by the NCREIF timberland index.

<u>Region</u>	<u>Range</u>
<u>South</u>	<u>40% to 80%</u>
<u>Northwest</u>	<u>0% to 50%</u>
<u>Northeast</u>	<u>0% to 20%</u>

<u>Lake States</u>	<u>0% to 20%</u>
<u>Other</u>	<u>0% to 20%</u>

c. Agriculture:

*Crop Diversification* - The majority of the portfolio will be comprised of existing crop properties. With the exception of the portfolio creation stage, no crop shall comprise in excess of 40% of the agriculture portfolio.

*Geographic Diversification* - Investments will be primarily located within the continental United States. Properties located within the state of Arkansas are preferred within a prudent range of exposure for the total portfolio. It is desired that the investments will have attractive locations with good market access. No region, as defined by the NCREIF Farm Index regional definitions, will comprise more than 40% of the agriculture portfolio.

*Leverage* - In keeping with its goal of risk mitigation, leverage at the total asset class level should be kept below a 20% loan-to-value ratio.

d. Infrastructure: ATRS will use diversification of its infrastructure portfolio as a risk mitigation tactic. Relevant risk factors considered are strategy, manager, firm, vintage year, asset type, geographic and liquidity issues. However, initial allocations during early implementation may result in temporary variances.

*Strategy* - The portfolio should be appropriately diversified across infrastructure asset classes and vehicles due to various risk/return characteristics.

*Manager* - Manager risk consists of two elements, the exposure within an investment vehicle, and the number of managers (general partners) in a given infrastructure fund. The exposure to a specific manager within an investment vehicle is controlled by limiting its commitment size. The cohesion of the general partners and the vesting rights to interest carry are important elements of insuring a successfully performing general partnership as are the past success of the business model employed and the length of time the team has remained stable.

*Vintage* - Vintage reflects the year of first capital draw and vintage risk refers to the variability of infrastructure commitments over time. Commitments to partnership investments will be staged over time such that the infrastructure portfolio invests over business cycles and insulates the portfolio from event risk.

*Asset Type* - Typically, infrastructure partnerships are permitted to invest in assets in a wide variety of industries (Transportation, Energy/Utility and Other) with limited controls. Risk from investing in assets with different return characteristics is controlled primarily through appropriate diversification across business sectors and sub-sectors. No infrastructure asset class shall account for more than 70% of the portfolio.

*Geographic* - Over the long-term, the infrastructure portfolio should seek diversification with regard to major regional areas both domestically and internationally. The infrastructure portfolio will accept the currency risks consistent with the geographic constraints. Infrastructure partnerships generally do not hedge currency risk, though with increasing globalization, one can see this practice increasing. With respect to U.S. investing, the portfolio should generally target at least 40%.

#### G. Distinction of Responsibilities

1. The Board, as Trustees, is responsible for approving the Real Asset Statement of Investment Policy.
2. ATRS' Board of Trustees is responsible for selecting the investment managers used to implement the Real Asset Statement of Investment Policy.
3. ATRS' Investment Staff and the Real Asset Consultant are jointly responsible for recommending the Investment Managers to the Board, as well as managing the Real Asset class, as described by the Real Asset Statement of Investment Policy, on an on-going basis, including monitoring the investment managers.
4. The Real Asset Consultant will assist ATRS' Investment Staff in recommending investment managers to the Board, monitoring investment managers, presenting Real Asset class performance to the Board, and will assist Investment Staff in developing and recommending the Real Asset Statement of Investment Policy and any changes to this document.
5. Investment Managers are utilized by ATRS to implement the specific investment strategies selected by ATRS.

#### H. Reporting and Monitoring

1. The Investment Staff and the Real Asset Consultant will monitor performance on a quarterly basis, providing a quarterly report to the Board. The report will provide a comprehensive review of the Real Asset portfolio in a form approved by ATRS' Investment Staff and the Real Asset Consultant.

## HISTORY

Adopted October 7, 2013

Adopted October 5, 2015

Amended February 3, 2020

Amended December 7, 2020

Amended June 5, 2023

Amended December 2, 2024

# ATRS Board Policy 6

## REAL ASSETS INVESTMENT POLICIES

A.C.A. § 24-7-305

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### I. Board - Investment Policies and Procedures

#### A. Real Assets Investment Policies

##### 1. Scope

This policy applies to the Real Asset category ("Real Assets") of the Arkansas Teacher Retirement System's ("ATRS") investment portfolio. This policy governs the private market investments and not the public real asset securities exposure within the Total Equity asset class.

##### 2. Purpose and Objectives

The purpose of this statement of investment policy is to formalize the ATRS' Board of Trustees' (the "Board") investment objectives, policies, and procedures, with respect to Real Assets, and to define the duties and responsibilities of the various entities involved in the Real Assets investment process. This statement is to be considered an extension of ATRS' general Statement of Investment Policy.

#### B. Investment Philosophy

1. ATRS allocates a portion of its total assets to Real Assets. ATRS defines Real Assets as investments relating to the ownership, financing, or operation of real estate, timber, agriculture, and infrastructure assets. ATRS allocates capital to Real Assets with the following goals:

##### a. *Diversification with Other Asset Classes*

Real Asset returns have historically performed differently than the returns of other asset classes in which ATRS invests. ATRS believes that Real Asset returns will continue to perform differently than those of other asset classes, allowing ATRS to lower the risk of its overall portfolio through diversification by allocating to the asset class.

##### b. *Potential Inflation Hedge*

Real Asset returns have historically shown the ability to provide a hedge against rising inflation. By allocating a portion of its investments to an asset class with these characteristics the overall risk of rising inflation to the ATRS portfolio is reduced.

#### C. Allocation

1. ATRS controls allocation risk at the total fund level. The allocation establishes a 15% target for the Real Asset class. As provided in ATRS' general Statement of Investment Policy, a range of minimum and maximum relative to the target has not been set as it is not prudent to set rebalancing ranges for the real asset classes due to their illiquid nature. This target allocation is to be reached and maintained over a reasonable period of time using a pacing schedule established by the joint effort of the Executive Director and Real Asset Consultant. There will be no fixed targets for the Real Assets subasset classes but the following general parameters have been identified for the Real Asset subasset classes:

- 8% Real Estate
- 2% Timber
- 1% Agriculture
- 4% Infrastructure

#### D. Performance Benchmark

1. ATRS' Real Asset portfolio is benchmarked on a net of fee basis against the following sub-asset class benchmarks over rolling five year periods.

- a. Real Estate Benchmark: The net return for ATRS' real estate investments is expected to meet or exceed the net NCREIF Fund Index Open-end Diversified Core Equity Index ("NFI-ODCE") over five year rolling period.
- b. Timber Benchmark: The net return for ATRS' timber investments is expected to meet or exceed the NCREIF Timberland Property Index ("NTPI") over a five year rolling period.
  - Given the highly concentrated nature of the NTPI, it is advised that an additional performance measurement tool be utilized in order to gauge the timber portfolio's performance compared to the opportunity cost of investing in timber. The Consumer Price Index plus 300 basis points will be used for measurement.
- c. Agriculture Benchmark: The net return for ATRS' agriculture investments is expected to meet or exceed the NCREIF Farmland Index ("NFI") over a five year rolling period.
  - Much like NTPI, NFI also has a concentrated nature and it is advised that an additional performance measurement tool be utilized in order to gauge the agriculture portfolio's performance compared to the opportunity cost of investing in agriculture. The

Consumer Price Index plus 300 basis points will be used for measurement.

d. Infrastructure Benchmark: Over the long term (10 years or longer), the infrastructure portfolio is expected to generate a minimum internal rate of return ("IRR") equal to the Consumer Price Index plus 500 basis points, net of all investment management fees and expenses. The Consumer Price Index plus 500 basis points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure.

2. The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark, and Infrastructure benchmark. The net of fee return for ATRS' Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five year periods.

#### E. Portfolio Composition

1. The majority of the Real Asset class investments should consist of equity ownership of privately-held institutional real estate, timber, agriculture, and infrastructure investments.
2. This policy authorizes the use of all types of investment structures including, but not limited to:
  - Separate Accounts
  - Co-investments
  - Joint ventures
  - Open and closed-end funds
  - Partnerships
  - Private and public Real Estate Investment Trusts ("REITs") and Real Estate Operating Companies ("REOCs")
  - Listed or publicly traded infrastructure

#### F. Risk Management

1. For ATRS' Real Asset investments, the following sections identify the most significant risks and the method of control. Compliance with the following risk parameters shall be based on the percentage of ATRS' Real Asset portfolio's Net Asset Value at Fair Value at the end of each quarter.

a. *Investment Manager Diversification*

Investment manager risk consists of two elements: the exposure to an investment manager and the number of investment managers in ATRS' Real Asset portfolio. To control investment manager exposure, the allocation to a single Real Asset manager is typically limited to 30% of ATRS' Real Asset target allocation.

b. *Individual Investment Diversification*

In order to mitigate the risk of large losses, ATRS will diversify its Real Asset investments across many different individual investments. Individual investments, measured by gross asset value, shall generally not exceed 10% of the overall Real Asset target allocation. For Real Estate, the 10% individual investment limitation will apply to Core properties, but Non-Core properties will be generally limited to 5%. Core properties are generally defined as industrial, apartment, retail, and office portfolios that are at least 80% leased, located in major metropolitan areas, and typically use no more than 50% leverage. Non-core is generally defined as the remainder of the Real Estate property opportunity set.

c. *Liquidity*

The majority of Real Assets are illiquid. As such, ATRS understands and recognizes that the Real Asset class will not be structured in a way to provide liquidity. Should market values for the Real Asset class change such that the asset class falls outside of these and the below risk management parameters, the Executive Director and Real Asset Consultant will determine the most effective solution and timeframe to bring the Real Asset exposure into compliance.

2. Additional risk parameters at the subasset class level are defined below and compliance shall be based on the percentage of each subasset class' Net Asset Value at Fair Value at the end of each quarter:

a. Real Estate:

*Property Diversification* - ATRS seeks to minimize the risk of its Real Estate portfolio by allocating its assets across the spectrum of property types, with the majority of its investments allocated to the primary sectors of the NFI-ODCE. No single traditional property type shall account for greater than 50% of the portfolio. In addition, the general range of property type allocations will be 0.5x - 1.5x the NFI-ODCE's weight in each property type. Other property types, as



defined by NFI-ODCE, are allowed but (on a combined basis) should not exceed 20% of the real estate portfolio.

*Geographic Diversification* - The Plan seeks to minimize the risk of its real estate portfolio by allocating its investments across the geographic spectrum. Within the United States, the general range of geographic allocations will be 0.5x - 1.5x the NFI-ODCE weight in each region. With respect to non-U.S. investing, no more than 40% of the portfolio may be invested outside of the U.S. ATRS may initiate Arkansas-related mortgage loans and direct Real Estate investments to meet the goal of investing in quality Arkansas related investments. The Executive Director and Real Estate Consultant will monitor the Arkansas-related Real Estate holdings to protect against excessive risk due to sector or geographic exposure. The goal of Arkansas-related investments shall be to achieve a total rate of return, net of all fees and costs that will exceed the real estate performance benchmark over time.

*Leverage* - ATRS allows some of its investment managers the ability to use modest amounts of leverage in their investment strategy as a means of enhancing the overall risk-adjusted returns available to ATRS. In keeping with its goal of risk mitigation, leverage at the total asset class level should be kept below a 50% loan-to-value ratio.

*Life Cycle* - ATRS will endeavor to invest the majority of its assets in fully established, income-producing Real Estate, commonly referred to as Core Real Estate. As defined above, the ATRS goal will be to have between 50% and 70% of its Real Estate asset class in Core investments. Non-Core opportunities, such as Value Added and Opportunistic real estate strategies, may provide better alpha generation but will be viewed tactically and have an operating allocation range of 30% to 50% of the real estate portfolio.

b. Timber:

*Geographic Diversification* - The Plan seeks to minimize the risk of its timber portfolio by allocating its investments across the geographic spectrum. Within the United States, the allowable range of geographic allocations will fall within the following target ranges as defined by the NCREIF timberland index.

<u>Region</u>	<u>Range</u>
<u>South</u>	<u>40% to 80%</u>
<u>Northwest</u>	<u>0% to 50%</u>
<u>Northeast</u>	<u>0% to 20%</u>

<u>Lake States</u>	<u>0% to 20%</u>
<u>Other</u>	<u>0% to 20%</u>

c. Agriculture:

*Crop Diversification* - The majority of the portfolio will be comprised of existing crop properties. With the exception of the portfolio creation stage, no crop shall comprise in excess of 40% of the agriculture portfolio.

*Geographic Diversification* - Investments will be primarily located within the continental United States. Properties located within the state of Arkansas are preferred within a prudent range of exposure for the total portfolio. It is desired that the investments will have attractive locations with good market access. No region, as defined by the NCREIF Farm Index regional definitions, will comprise more than 40% of the agriculture portfolio.

*Leverage* - In keeping with its goal of risk mitigation, leverage at the total asset class level should be kept below a 20% loan-to-value ratio.

d. Infrastructure: ATRS will use diversification of its infrastructure portfolio as a risk mitigation tactic. Relevant risk factors considered are strategy, manager, firm, vintage year, asset type, geographic and liquidity issues. However, initial allocations during early implementation may result in temporary variances.

*Strategy* - The portfolio should be appropriately diversified across infrastructure asset classes and vehicles due to various risk/return characteristics.

*Manager* - Manager risk consists of two elements, the exposure within an investment vehicle, and the number of managers (general partners) in a given infrastructure fund. The exposure to a specific manager within an investment vehicle is controlled by limiting its commitment size. The cohesion of the general partners and the vesting rights to interest carry are important elements of insuring a successfully performing general partnership as are the past success of the business model employed and the length of time the team has remained stable.

*Vintage* - Vintage reflects the year of first capital draw and vintage risk refers to the variability of infrastructure commitments over time. Commitments to partnership investments will be staged over time such that the infrastructure portfolio invests over business cycles and insulates the portfolio from event risk.

*Asset Type* - Typically, infrastructure partnerships are permitted to invest in assets in a wide variety of industries (Transportation, Energy/Utility and Other) with limited controls. Risk from investing in assets with different return characteristics is controlled primarily through appropriate diversification across business sectors and sub-sectors. No infrastructure asset class shall account for more than 70% of the portfolio.

*Geographic* - Over the long-term, the infrastructure portfolio should seek diversification with regard to major regional areas both domestically and internationally. The infrastructure portfolio will accept the currency risks consistent with the geographic constraints. Infrastructure partnerships generally do not hedge currency risk, though with increasing globalization, one can see this practice increasing. With respect to U.S. investing, the portfolio should generally target at least 40%.

#### G. Distinction of Responsibilities

1. The Board, as Trustees, is responsible for approving the Real Asset Statement of Investment Policy.
2. ATRS' Board of Trustees is responsible for selecting the investment managers used to implement the Real Asset Statement of Investment Policy.
3. ATRS' Investment Staff and the Real Asset Consultant are jointly responsible for recommending the Investment Managers to the Board, as well as managing the Real Asset class, as described by the Real Asset Statement of Investment Policy, on an on-going basis, including monitoring the investment managers.
4. The Real Asset Consultant will assist ATRS' Investment Staff in recommending investment managers to the Board, monitoring investment managers, presenting Real Asset class performance to the Board, and will assist Investment Staff in developing and recommending the Real Asset Statement of Investment Policy and any changes to this document.
5. Investment Managers are utilized by ATRS to implement the specific investment strategies selected by ATRS.

#### H. Reporting and Monitoring

1. The Investment Staff and the Real Asset Consultant will monitor performance on a quarterly basis, providing a quarterly report to the Board. The report will provide a comprehensive review of the Real Asset portfolio in a form approved by ATRS' Investment Staff and the Real Asset Consultant.

## **HISTORY**

Adopted October 7, 2013

Adopted October 5, 2015

Amended February 3, 2020

Amended December 7, 2020

Amended June 5, 2023

Amended December 2, 2024

# ATRS Board Policy 4

## STATEMENT OF INVESTMENT POLICY

A.C.A. § 24-7-305

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### I. Board - Investment Policies and Procedures

#### A. Statement of Investment Policy

1. This Investment Policy has been prepared within the context of applicable Arkansas laws and is intended to allow for sufficient flexibility in the investment process to capture opportunities, yet ensure that both prudence and care are maintained in the execution of the investment program. While safety of principal is given primary consideration, the Arkansas Teacher Retirement System Board of Trustees (“Board”) may take appropriate levels of risk to earn higher levels of investment return.
2. The Board has arrived at this policy through careful study of the rates of return and risks associated with various investment strategies in relation to the current and projected liabilities of the Arkansas Teacher Retirement System (“the System”). This policy has been chosen as the most appropriate for achieving the financial objectives of the System. The policy will be reviewed periodically as circumstances dictate.
3. The Board has adopted a long-term investment horizon so that the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets. The assets of the System will be invested in a manner that provides the safeguards and diversity to which a prudent investor would adhere. All transactions undertaken on behalf of the System will be in the sole interest of the System’s plan beneficiaries.
4. To achieve the overall investment goal of the System, one or more investment consultants may be retained by the Board as investment advisors. The scope of duties, together with the terms and conditions of engagement, of any investment consultant will be set forth in a contract approved by the Board. Throughout this document, investment advisors are referred to as investment consultants.
5. The System shall manage those assets not specifically allocated to investment managers. No investment shall be made without an investment consultant's recommendation. The System shall not approve any material changes in any direct investment without first receiving written advice or a written recommendation from a third-party investment consultant and, if needed, outside legal counsel, and,

without thereafter receiving written approval by the Investment Committee and Board.

B. Divestment of Direct Holdings Held with Certain Financial Services Providers

1. The System shall divest from all direct holdings that it has with a financial services provider included on the list published on the Treasurer of State's website under § 25-1-1002. Divestment shall occur as soon as practicable, but no later than three hundred sixty-five (365) calendar days after the financial services provider's inclusion on the list published on the Treasurer of State's website.
2. However, in order to prevent financial harm to the System and to ensure that the System's fiduciary duty is met, the System shall not divest from an investment that it has with a financial services provider included on the list published on the Treasurer of State's website under § 25-1-1002 if the investment is locked into a maturity date and an early divestment would result in a financial penalty and cause a negative financial impact to the System.

C. Investments in Countries of Concern

1. In order to comply with Arkansas Code § 25-1-1201 et seq. and also to ensure that System funds are not invested in the development of technologies and products that may threaten the national security of the United States, the System shall not directly hold any equity interest or debt financing interest in any entity that is:
  - a. Owned in whole or with a majority ownership by the government of the People's Republic of China; or
  - b. Subject to any investment restrictions imposed by the United States Department of the Treasury because the entity is located in a country of concern and is engaged in activities that may contribute to a threat to the national security of the United States.
2. For any prohibited investment held by the System as of the adoption of this section, the Executive Director, in cooperation with the investment consultant and other necessary parties, shall divest the System of any excluded holdings as soon as divestment is practicable and would not result in a financial penalty or cause a material negative impact to the System.

#### D. Standard of Care

1. When investing and reinvesting trust assets and in acquiring, retaining, managing and disposing of investments of the trust assets, there shall be exercised the reasonable care, skill, and caution that a prudent investor would use after considering the purposes, terms, distribution requirements, and other circumstances of the trust. Investment and management decisions respecting individual assets shall be evaluated not in isolation, but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust. The investments of the trust shall be diversified unless the Board reasonably determines that, because of special circumstances, the purposes of the trust are better served without diversifying. The trust assets shall be invested and managed solely in the interest of the members and benefit recipients of the trust. The trust assets shall be invested in a manner to only incur costs that are appropriate and reasonable in relation to the assets and purposes of the investment. Compliance with the standard of care is determined in light of facts and circumstances at the time of action, not in hindsight.
2. Investment and management functions may be delegated to an investment agent that a prudent trustee of comparable skills could properly delegate under the circumstances. When making such delegation, the Board shall establish the scope and terms of the delegation, consistent with the purposes and terms of the trust, and shall monitor the investment agent performance and compliance with the terms of the delegation. In performing a delegated function, an investment agent owes a duty to the System and the trust to exercise reasonable care to comply with the terms of the delegation. The assets of the System allocated to the investment managers shall be diligently managed, which may include selling investments and realizing losses, if such action is considered advantageous to longer-term return maximization. In addition, the Executive Director may delegate certain duties to the System's investment staff without relieving the Executive Director from the ultimate responsibility.
3. Each party serving in a fiduciary capacity for the trust shall discharge his or her duties solely in the pecuniary interest of the participants and beneficiaries and in compliance with Arkansas Code § 24-2-801 et seq. A fiduciary's evaluation of an investment, or evaluation or exercise of any right appurtenant to an investment, shall take into account only pecuniary factors.
4. Each party serving in a fiduciary capacity for the trust shall apply the standard of care set forth herein.

## E. Asset Allocation

1. The Board is responsible for the prudent investment of funds and to maintain a proper allocation of the System's investment assets. The Board, in conjunction with its investment consultants, shall set and adjust the System's asset allocation ranges as necessary to provide an optimal allocation to obtain its target returns. The general investment consultant shall notify the Executive Director and the Board when an asset liability modeling study should be undertaken. It shall be the goal of the System to maintain the following asset allocation targets and ranges:

<b>Asset Category</b>	<b>Minimum*</b>	<b>Target</b>	<b>Maximum*</b>
Total Equity	43.0%	48.0%	53.0%**
Fixed Income	17.0%	20.0%	23.0%
Opportunistic/Alternatives	N/A	5.0%	N/A
Real Assets***	N/A	15.0%	N/A
Private Equity	N/A	12.0%	N/A
Cash Equivalentents	0.0%	0.0%	5.0%

\* Due to the illiquid nature of opportunistic/alternatives, real assets, and private equity, it is not prudent to set rebalancing ranges for these asset classes.

\*\*Additional allocations to total equity may be made beyond the maximum range to serve as a placeholder for unfunded and uncommitted opportunistic/alternatives, real assets, and private equity.

\*\*\*Real assets includes real estate, timber, agriculture, and infrastructure.

## F. Rebalancing

1. The asset allocation ranges established by the Board represent the Board's judgment of a portfolio mix that provides the greatest risk/return value. Allowing the portfolio to exceed the Board limits strays from the financial discipline, which the Board believes will - over time - provide the appropriate risk-adjusted return to the System.
2. The Executive Director is responsible for rebalancing the allowable asset classes and the individual portfolios if any of the asset classes falls outside of the designated range. The general investment consultant shall provide guidance and advice to the Executive Director to best achieve the rebalancing.
3. Rebalancing among individual investment manager portfolios within asset classes may also be necessary to ensure the appropriate level of diversification is achieved by investment style, market capitalization or



risk levels (see total asset class guidelines) and/or to take advantage of market conditions, fund manager expertise, opportunities, or other circumstances that could be beneficial to ATRS.

4. The Executive Director may rebalance across all equity managers, all equity holdings, all fixed income managers, and all fixed income holdings. A Board approved transition manager may be used for rebalancing. Rebalancing including the use of a Board approved transition manager, as needed, may be initiated by the Executive Director after recommendation from the appropriate investment consultant and positive notice to the Board Chair. The Executive Director and general investment consultant will monitor the asset values by classification for each asset manager on a monthly basis, based on month-end data provided by the custodial bank. The Executive Director and general investment consultant shall regularly inform the Board on the rebalancing pacing and strategy.
5. Whenever the minimum or maximum range of total equity or fixed income has been exceeded, a transfer of funds or other appropriate action will occur to bring the actual allocation within the prescribed range within a time frame determined to be prudent by the Executive Director in consultation with the general investment consultant.
6. Normal plan cash flows should be used to the extent possible to rebalance. Interest, dividends, and plan contributions should be used to the extent possible to fund asset classes that are below their target. Withdrawals should be made from asset classes that are above their target.

#### G. Investment Manager Selection

1. The System may hire and retain individual investment managers to implement the System's investment strategy.
2. Arkansas Code § 24-2-610 et seq. requires ATRS to always operate under the prudent investor rule. The prudent investor rule requires all investment decisions to be made based on the experience of management, rates of return, appropriate risk, reasonable cost, and all other relevant factors that should be used by prudent investors.
3. It is the policy of the Board to include, whenever appropriate, qualified minority-owned and women-owned business enterprises in the System's investment manager selection process and to objectively evaluate all qualified investment manager candidates regardless of race, gender or disability.
4. The Board will evaluate all qualified investment manager candidates with emphasis on demonstrated professional performance,

organizational depth, institutional investment management capability, and reasonableness of fee structure regardless of the amount of investment assets under management or the age of the investment management firm.

5. The Board shall only hire and retain professional consultants that do not use discriminatory practices in the creation and maintenance of their investment manager databases and will require the investment consultants to affirm their use of non-discriminatory practices when recommending investment manager candidates to the Board.
6. The Board shall only hire and retain investment managers and professional consultants that agree to provide services to the System in a manner that complies with Arkansas Code § 24-2-601 et seq., 24-2-801 et seq., 25-1-1001 et seq., and 25-1-1201 et seq.

#### H. Goals

1. Recognizing the purpose of the System is to remain actuarially sound and pay member benefits, the overall investment goal is to achieve, over a period of years, the greatest rate of return for the System with due consideration given to preserving capital and its purchasing power, and to maintain an appropriate level of risk consistent with the obligations of a prudent investor. The return of the System should exceed, net of fees, a policy benchmark comprised of the respective asset class benchmarks weighted by the asset class policy targets over a full market cycle (approximately five years). During periods of transition to and from nonmarketable and illiquid asset classes such as private equity and real assets, actual allocations may be used over extended periods to reflect these changes in the policy targets. Periodic performance reports will provide a detailed description of the policy benchmark composition over time.
2. The System's actuary sets an expected return based on the Board's policy decisions. Market cycles may result in the System earning a return materially above or below the actuarial rate of return for extended periods of time. Therefore, the actuarial rate of return will not be used for performance comparison purposes.

#### I. Total Equity

1. The total equity exposure of the portfolio shall be well diversified with broad exposures to small, mid, and large capitalization companies and growth and value style sectors across U.S. and non-U.S. markets.

2. The goal for total equity shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the aggregate global equity market as measured by the Morgan Stanley Capital International (MSCI) All Country World Index (ACWI) Investable Market Index (IMI) over a full market cycle (approximately five years). Because the total equity portfolio was previously segregated into domestic and global equity components, the total equity portfolio has a bias to domestic equity relative to the MSCI ACWI IMI. Therefore, to ensure appropriate performance measurement, the benchmark for total equity will be appropriately weighted between the Dow Jones U.S. Total Stock Market Index and the MSCI ACWI IMI Index to reflect the current domestic / global asset mix until the domestic allocation is in line with the global opportunity set as defined by the MSCI ACWI IMI. The manager structure of the total equity portfolio should resemble the weighted average of their respective benchmarks and avoid any material biases due to a concentration of managers or management styles. To achieve this goal, the Board may employ various actively managed and passive mandates. The structure of the equity component will be analyzed annually to ensure proper diversification is achieved.

#### J. Fixed Income

1. The manager structure of the aggregate fixed income portfolio's risk exposure should resemble the aggregate domestic fixed income market as measured by the Barclays U.S. Universal Bond Index. To help achieve this goal, the Board will employ investment managers that invest assets in a broad array of sectors (government, mortgage backed, credits, asset backed, and commercial mortgage backed bonds), maturities, and credit qualities so that the overall portfolio structure is not materially different from that of the domestic and global fixed income markets. To provide a broad base of low-cost diversification and readily available liquidity, the Board may allocate a portion of the fixed income assets to a passive investment portfolio that approximates the return of the broad fixed income market.
2. The goal for fixed income investments shall be to achieve a total rate of return that will exceed, net of all costs and fees, the return of the Barclays U.S. Universal Bond Index over a full market cycle (approximately five years).

#### K. Opportunistic/Alternative Investments

1. The Opportunistic/Alternatives asset class may include investments in direct hedge funds, hedge fund of funds, commodities, currency mandates, and other alternative strategies that are not closely correlated or related to the traditional asset classes (fixed income,

equities, private equity, and real assets). Unique investments that do not fit within the other asset class categories may also be included in the Opportunistic/Alternative category at the Board's discretion. Because this category may include illiquid investments made through closed end investment partnerships, it may take a period of time to reach and maintain the target allocation of 5%. Assets will be invested in the total equity asset class when the opportunity/alternative allocation is below its long-term target of 5%. The benchmark for the category will be a weighted average of the benchmarks of the underlying strategies.

2. The goal of the credit, global macro, and other liquid alternative investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the appropriate institutional quality hedge fund index over a full market cycle (approximately five years). Appropriate benchmarks will be determined as investments are added to the portfolio.

#### L. Real Assets

1. The Real Asset category may include real estate, timber, agriculture, and infrastructure. While no fixed targets are set, the following general parameters have been identified:

- ~~10~~8% Real Estate
- 2% Timber
- 1% Agriculture
- ~~2~~4% Infrastructure

The total target of the asset class will be 15%. Because this category may include illiquid investments made through closed end investment partnerships, it will take a period of time to reach these targets. Assets will be invested in the total equity asset class until the total target is attained.

The System may initiate investments in real estate as governed by the Real Asset Statement of Investment Policy. The System's goal for real estate is to not materially exceed the System's approved target asset allocation for total real estate investments as determined by the Board at the beginning of each fiscal year. Should the real estate target asset allocation be exceeded, the Executive Director, working with the Real Estate Consultant, shall develop a pacing and strategy plan to address the over allocation.

ATRS' Real Estate portfolio is benchmarked on a net of fee basis against the NCREIF Fund Index Open-end Diversified Core Equity

Index ("NFIODCE"). Once ATRS' Real Estate portfolio reaches its full target allocation for a five-year period, it is expected to meet or exceed the NFIODCE over rolling five-year periods.

The System may initiate direct ownership in timberland or indirect investments in fund of funds, partnerships, corporations, or real estate investment trusts ("REITs") investing in investment grade properties of like kind.

2. The goal of the timberland investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Timberland Property Index ("NTPI") over a five-year rolling period. The Consumer Price Index plus 300 basis points will be used as a secondary measurement to gauge the timber portfolio's performance compared to the opportunity cost of investing in timber.

The goal of the agriculture investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Farmland Index ("NFI") over a five-year rolling period. The Consumer Price Index plus 300 basis points will be used as a secondary measurement to gauge the agriculture portfolio's performance compared to the opportunity cost of investing in agriculture.

The goal of the infrastructure investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the Consumer Price Index (CPI) plus 5 percentage points over a full market cycle (approximately ten years). The Consumer Price Index plus 5 percentage points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure. Similar infrastructure programs of institutional investors will also be used as a secondary benchmark to the extent such data is made available.

The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark and Infrastructure benchmark. The net of fee return for ATRS' Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five year periods.

#### K. Private Equity

1. The System may initiate investments in private equity as governed by the Private Equity Statement of Investment Policy. Private equity investments may include domestic and foreign private equity partnerships, venture capital, and mezzanine financing partnerships that are intended to diversify the assets and reduce the likelihood of material losses in any individual investment classification. The

investment consultant responsible for private equity shall advise the Executive Director and Board on the Private Equity Statement of Investment Policy and the structure of private equity investments best suited for the System.

2. The System's goal for private equity investments is to achieve a total rate of return that will exceed, net of all costs and fees, the return of the public equity markets, as measured by the Dow Jones U.S. Total Stock Market Index, plus a liquidity premium of 2 percentage points per year over a full market cycle for private equity (approximately ten years).

#### L. Cash Equivalents

1. The System may hold direct ownership in short-term investments or may permit or require managers to hold cash or cash equivalents to meet liquidity needs of the investment manager or of the System.
2. The System's cash management goal shall be to preserve capital and maintain liquidity.

#### M. Arkansas-Related Investments

1. The System may initiate Arkansas-related mortgage loans, promissory notes, direct real estate investments, or purchase insured certificates of deposit or short-term securities of Arkansas financial institutions to meet the goals of the mandated requirements. Arkansas-related investments are categorized according to the appropriate asset class for each investment. In addition, Arkansas related investments include, but are not limited to, investments managed by an Arkansas related manager, Arkansas related investments held by other fund managers, Arkansas timberland, partnerships based in Arkansas, and partnerships holding Arkansas properties.

#### N. Commingled or Mutual Funds

1. If a commingled fund or mutual fund is utilized, the portfolio will be governed by the prospectus or similar document for the fund. In those cases, the System will utilize the prudent investor rule and advice of the investment consultant in selecting and evaluating funds initially and in monitoring them on an on-going basis.

#### O. Derivatives

1. Derivatives may be used to reduce the risk in a portfolio and provide desired market and security level positions as an alternative to purchasing cash securities. Excessive leverage shall not be created through the use of derivatives in a manner that substantially increases the System's portfolio risk. Each investment manager's derivative

usage shall be specified in the investment management agreement or specific guidelines.

2. The use of futures and options shall be matched by cash or cash equivalent securities, and all short futures positions shall be matched by equivalent long security positions, unless otherwise stated in the investment manager guidelines or authorizing fund documents.

#### P. Loaning of Securities

1. The lending agent will evaluate the credit-worthiness of potential borrowers of securities, and will loan securities only to financially sound borrowers. The lending agent will maintain a diversified list of such borrowers in order to mitigate the counterparty risk that is inherent in securities lending.
2. Collateral levels should be based on the nature of the loaned security and will generally be between 102% and 105% of the market value of the borrowed security. Marking to market will be performed every business day subject to de minimis rules of change in value, and borrowers will be required to deliver additional assets as necessary to maintain overcollateralization of securities loans.

#### Q. Securities Lending Reinvestment Guidelines

1. The cash collateral portfolio will be managed on an amortized cost basis (maintain a \$1 net asset value) and have investment guidelines that are 2a-7-like in nature (money market fund guidelines) to ensure that only a moderate amount of risk is taken on the reinvestment of the cash collateral. This will control the amount of credit and duration risk that can be taken by the short duration fixed income manager, which will help to mitigate losses due to insufficient collateral relative to the amount on loan. In addition, guidelines for the cash collateral portfolio will be created in conjunction with the lending strategy and with input from the securities lending agent.
2. The collateral pool should also maintain a reasonable level of overnight liquidity in order to allow for the smooth recall of securities over time.

#### R. Investment Manager Reporting

1. The System will require all investment managers, managing partners, and general partners to provide on at least a quarterly and an annual basis, reporting appropriate for the investment.

#### S. Roles

1. The Executive Director and investment consultant are jointly responsible for the initial selection of investment managers and any increase or decrease in an investment manager's funding. The

Executive Director and investment consultant are jointly responsible for monitoring existing investment managers on performance, stability, and compliance. The Executive Director and investment consultant may also recommend termination of an investment manager when circumstances justify termination. Reasons for termination include, but are not limited to, relative performance, relative stability, costs, strategic allocation of assets, or other relevant factors that a prudent investor would use.

#### T. Proxies

1. All shares held directly or indirectly by or on behalf of the System shall be voted on solely in the pecuniary interest of the System's plan beneficiaries, in compliance with Arkansas Code § 24-2-801 et seq.
2. Unless an economically practicable alternative is unavailable, the System shall not: (A) Follow the recommendations of a proxy advisory firm or other service provider unless the firm or service provider has a practice of and provides a written commitment to adhere to the practice of following proxy voting guidelines that are consistent with the System's obligation to act based only on pecuniary factors, or (B) Entrust the System's plan assets to a fiduciary unless the fiduciary has a practice of and provides a written commitment to adhere to the practice of following guideline when engaging with portfolio companies and voting shares or proxies that match the obligation of the System's obligation to act based only on pecuniary factors.
3. The System authorizes the investment manager to vote all proxies related to stocks in which it invests the System's assets. The System requires the investment manager to vote all proxies in a manner that complies with Arkansas Code § 24-2-801 et seq. The System requires the investment manager to cast votes solely in the best interest of plan beneficiaries.

#### U. Soft Dollars

1. Commissions paid by investment managers for the purchase of equity securities are System assets and must be used for the sole benefit of the System members. Whenever possible, investment managers should seek to execute trades at the lowest possible commission rate but not to the detriment of best execution, which can result in a higher cost to the System. So that the Board may fulfill its obligation to ensure that System assets are being used appropriately, relevant equity investment managers shall provide periodic reports to the general investment consultant on brokerage activity, commissions, services, and such other information as may be requested by the investment



consultant or Board. The investment consultant shall provide a periodic report to the Board summarizing such equity investment managers' reports and highlighting any questionable or problem areas.

## **HISTORY**

Amended: October 4, 2010

Amended: February 7, 2011

Amended: June 3, 2013

Amended: October 7, 2013

Amended: February 17, 2014

Amended: June 1, 2015

Amended: April 21, 2016

Amended: November 13, 2017

Amended: April 1, 2019

Amended: February 3, 2020 as Board Policy 4

Amended: December 7, 2020

Amended: June 7, 2021

Amended: September 25, 2023

Amended: February 5, 2024

Amended: December 2, 2024

# ATRS Board Policy 4

## STATEMENT OF INVESTMENT POLICY

A.C.A. § 24-7-305

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### I. Board - Investment Policies and Procedures

#### A. Statement of Investment Policy

1. This Investment Policy has been prepared within the context of applicable Arkansas laws and is intended to allow for sufficient flexibility in the investment process to capture opportunities, yet ensure that both prudence and care are maintained in the execution of the investment program. While safety of principal is given primary consideration, the Arkansas Teacher Retirement System Board of Trustees (“Board”) may take appropriate levels of risk to earn higher levels of investment return.
2. The Board has arrived at this policy through careful study of the rates of return and risks associated with various investment strategies in relation to the current and projected liabilities of the Arkansas Teacher Retirement System (“the System”). This policy has been chosen as the most appropriate for achieving the financial objectives of the System. The policy will be reviewed periodically as circumstances dictate.
3. The Board has adopted a long-term investment horizon so that the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets. The assets of the System will be invested in a manner that provides the safeguards and diversity to which a prudent investor would adhere. All transactions undertaken on behalf of the System will be in the sole interest of the System’s plan beneficiaries.
4. To achieve the overall investment goal of the System, one or more investment consultants may be retained by the Board as investment advisors. The scope of duties, together with the terms and conditions of engagement, of any investment consultant will be set forth in a contract approved by the Board. Throughout this document, investment advisors are referred to as investment consultants.
5. The System shall manage those assets not specifically allocated to investment managers. No investment shall be made without an investment consultant's recommendation. The System shall not approve any material changes in any direct investment without first receiving written advice or a written recommendation from a third-party investment consultant and, if needed, outside legal counsel, and,

without thereafter receiving written approval by the Investment Committee and Board.

B. Divestment of Direct Holdings Held with Certain Financial Services Providers

1. The System shall divest from all direct holdings that it has with a financial services provider included on the list published on the Treasurer of State's website under § 25-1-1002. Divestment shall occur as soon as practicable, but no later than three hundred sixty-five (365) calendar days after the financial services provider's inclusion on the list published on the Treasurer of State's website.
2. However, in order to prevent financial harm to the System and to ensure that the System's fiduciary duty is met, the System shall not divest from an investment that it has with a financial services provider included on the list published on the Treasurer of State's website under § 25-1-1002 if the investment is locked into a maturity date and an early divestment would result in a financial penalty and cause a negative financial impact to the System.

C. Investments in Countries of Concern

1. In order to comply with Arkansas Code § 25-1-1201 et seq. and also to ensure that System funds are not invested in the development of technologies and products that may threaten the national security of the United States, the System shall not directly hold any equity interest or debt financing interest in any entity that is:
  - a. Owned in whole or with a majority ownership by the government of the People's Republic of China; or
  - b. Subject to any investment restrictions imposed by the United States Department of the Treasury because the entity is located in a country of concern and is engaged in activities that may contribute to a threat to the national security of the United States.
2. For any prohibited investment held by the System as of the adoption of this section, the Executive Director, in cooperation with the investment consultant and other necessary parties, shall divest the System of any excluded holdings as soon as divestment is practicable and would not result in a financial penalty or cause a material negative impact to the System.

#### D. Standard of Care

1. When investing and reinvesting trust assets and in acquiring, retaining, managing and disposing of investments of the trust assets, there shall be exercised the reasonable care, skill, and caution that a prudent investor would use after considering the purposes, terms, distribution requirements, and other circumstances of the trust. Investment and management decisions respecting individual assets shall be evaluated not in isolation, but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust. The investments of the trust shall be diversified unless the Board reasonably determines that, because of special circumstances, the purposes of the trust are better served without diversifying. The trust assets shall be invested and managed solely in the interest of the members and benefit recipients of the trust. The trust assets shall be invested in a manner to only incur costs that are appropriate and reasonable in relation to the assets and purposes of the investment. Compliance with the standard of care is determined in light of facts and circumstances at the time of action, not in hindsight.
2. Investment and management functions may be delegated to an investment agent that a prudent trustee of comparable skills could properly delegate under the circumstances. When making such delegation, the Board shall establish the scope and terms of the delegation, consistent with the purposes and terms of the trust, and shall monitor the investment agent performance and compliance with the terms of the delegation. In performing a delegated function, an investment agent owes a duty to the System and the trust to exercise reasonable care to comply with the terms of the delegation. The assets of the System allocated to the investment managers shall be diligently managed, which may include selling investments and realizing losses, if such action is considered advantageous to longer-term return maximization. In addition, the Executive Director may delegate certain duties to the System's investment staff without relieving the Executive Director from the ultimate responsibility.
3. Each party serving in a fiduciary capacity for the trust shall discharge his or her duties solely in the pecuniary interest of the participants and beneficiaries and in compliance with Arkansas Code § 24-2-801 et seq. A fiduciary's evaluation of an investment, or evaluation or exercise of any right appurtenant to an investment, shall take into account only pecuniary factors.
4. Each party serving in a fiduciary capacity for the trust shall apply the standard of care set forth herein.

## E. Asset Allocation

1. The Board is responsible for the prudent investment of funds and to maintain a proper allocation of the System's investment assets. The Board, in conjunction with its investment consultants, shall set and adjust the System's asset allocation ranges as necessary to provide an optimal allocation to obtain its target returns. The general investment consultant shall notify the Executive Director and the Board when an asset liability modeling study should be undertaken. It shall be the goal of the System to maintain the following asset allocation targets and ranges:

<b>Asset Category</b>	<b>Minimum*</b>	<b>Target</b>	<b>Maximum*</b>
Total Equity	43.0%	48.0%	53.0%**
Fixed Income	17.0%	20.0%	23.0%
Opportunistic/Alternatives	N/A	5.0%	N/A
Real Assets***	N/A	15.0%	N/A
Private Equity	N/A	12.0%	N/A
Cash Equivalents	0.0%	0.0%	5.0%

\* Due to the illiquid nature of opportunistic/alternatives, real assets, and private equity, it is not prudent to set rebalancing ranges for these asset classes.

\*\*Additional allocations to total equity may be made beyond the maximum range to serve as a placeholder for unfunded and uncommitted opportunistic/alternatives, real assets, and private equity.

\*\*\*Real assets includes real estate, timber, agriculture, and infrastructure.

## F. Rebalancing

1. The asset allocation ranges established by the Board represent the Board's judgment of a portfolio mix that provides the greatest risk/return value. Allowing the portfolio to exceed the Board limits strays from the financial discipline, which the Board believes will - over time - provide the appropriate risk-adjusted return to the System.
2. The Executive Director is responsible for rebalancing the allowable asset classes and the individual portfolios if any of the asset classes falls outside of the designated range. The general investment consultant shall provide guidance and advice to the Executive Director to best achieve the rebalancing.
3. Rebalancing among individual investment manager portfolios within asset classes may also be necessary to ensure the appropriate level of diversification is achieved by investment style, market capitalization or

risk levels (see total asset class guidelines) and/or to take advantage of market conditions, fund manager expertise, opportunities, or other circumstances that could be beneficial to ATRS.

4. The Executive Director may rebalance across all equity managers, all equity holdings, all fixed income managers, and all fixed income holdings. A Board approved transition manager may be used for rebalancing. Rebalancing including the use of a Board approved transition manager, as needed, may be initiated by the Executive Director after recommendation from the appropriate investment consultant and positive notice to the Board Chair. The Executive Director and general investment consultant will monitor the asset values by classification for each asset manager on a monthly basis, based on month-end data provided by the custodial bank. The Executive Director and general investment consultant shall regularly inform the Board on the rebalancing pacing and strategy.
5. Whenever the minimum or maximum range of total equity or fixed income has been exceeded, a transfer of funds or other appropriate action will occur to bring the actual allocation within the prescribed range within a time frame determined to be prudent by the Executive Director in consultation with the general investment consultant.
6. Normal plan cash flows should be used to the extent possible to rebalance. Interest, dividends, and plan contributions should be used to the extent possible to fund asset classes that are below their target. Withdrawals should be made from asset classes that are above their target.

#### G. Investment Manager Selection

1. The System may hire and retain individual investment managers to implement the System's investment strategy.
2. Arkansas Code § 24-2-610 et seq. requires ATRS to always operate under the prudent investor rule. The prudent investor rule requires all investment decisions to be made based on the experience of management, rates of return, appropriate risk, reasonable cost, and all other relevant factors that should be used by prudent investors.
3. It is the policy of the Board to include, whenever appropriate, qualified minority-owned and women-owned business enterprises in the System's investment manager selection process and to objectively evaluate all qualified investment manager candidates regardless of race, gender or disability.
4. The Board will evaluate all qualified investment manager candidates with emphasis on demonstrated professional performance,

organizational depth, institutional investment management capability, and reasonableness of fee structure regardless of the amount of investment assets under management or the age of the investment management firm.

5. The Board shall only hire and retain professional consultants that do not use discriminatory practices in the creation and maintenance of their investment manager databases and will require the investment consultants to affirm their use of non-discriminatory practices when recommending investment manager candidates to the Board.
6. The Board shall only hire and retain investment managers and professional consultants that agree to provide services to the System in a manner that complies with Arkansas Code § 24-2-601 et seq., 24-2-801 et seq., 25-1-1001 et seq., and 25-1-1201 et seq.

#### H. Goals

1. Recognizing the purpose of the System is to remain actuarially sound and pay member benefits, the overall investment goal is to achieve, over a period of years, the greatest rate of return for the System with due consideration given to preserving capital and its purchasing power, and to maintain an appropriate level of risk consistent with the obligations of a prudent investor. The return of the System should exceed, net of fees, a policy benchmark comprised of the respective asset class benchmarks weighted by the asset class policy targets over a full market cycle (approximately five years). During periods of transition to and from nonmarketable and illiquid asset classes such as private equity and real assets, actual allocations may be used over extended periods to reflect these changes in the policy targets. Periodic performance reports will provide a detailed description of the policy benchmark composition over time.
2. The System's actuary sets an expected return based on the Board's policy decisions. Market cycles may result in the System earning a return materially above or below the actuarial rate of return for extended periods of time. Therefore, the actuarial rate of return will not be used for performance comparison purposes.

#### I. Total Equity

1. The total equity exposure of the portfolio shall be well diversified with broad exposures to small, mid, and large capitalization companies and growth and value style sectors across U.S. and non-U.S. markets.

2. The goal for total equity shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the aggregate global equity market as measured by the Morgan Stanley Capital International (MSCI) All Country World Index (ACWI) Investable Market Index (IMI) over a full market cycle (approximately five years). Because the total equity portfolio was previously segregated into domestic and global equity components, the total equity portfolio has a bias to domestic equity relative to the MSCI ACWI IMI. Therefore, to ensure appropriate performance measurement, the benchmark for total equity will be appropriately weighted between the Dow Jones U.S. Total Stock Market Index and the MSCI ACWI IMI Index to reflect the current domestic / global asset mix until the domestic allocation is in line with the global opportunity set as defined by the MSCI ACWI IMI. The manager structure of the total equity portfolio should resemble the weighted average of their respective benchmarks and avoid any material biases due to a concentration of managers or management styles. To achieve this goal, the Board may employ various actively managed and passive mandates. The structure of the equity component will be analyzed annually to ensure proper diversification is achieved.

#### J. Fixed Income

1. The manager structure of the aggregate fixed income portfolio's risk exposure should resemble the aggregate domestic fixed income market as measured by the Barclays U.S. Universal Bond Index. To help achieve this goal, the Board will employ investment managers that invest assets in a broad array of sectors (government, mortgage backed, credits, asset backed, and commercial mortgage backed bonds), maturities, and credit qualities so that the overall portfolio structure is not materially different from that of the domestic and global fixed income markets. To provide a broad base of low-cost diversification and readily available liquidity, the Board may allocate a portion of the fixed income assets to a passive investment portfolio that approximates the return of the broad fixed income market.
2. The goal for fixed income investments shall be to achieve a total rate of return that will exceed, net of all costs and fees, the return of the Barclays U.S. Universal Bond Index over a full market cycle (approximately five years).

#### K. Opportunistic/Alternative Investments

1. The Opportunistic/Alternatives asset class may include investments in direct hedge funds, hedge fund of funds, commodities, currency mandates, and other alternative strategies that are not closely correlated or related to the traditional asset classes (fixed income,



equities, private equity, and real assets). Unique investments that do not fit within the other asset class categories may also be included in the Opportunistic/Alternative category at the Board's discretion. Because this category may include illiquid investments made through closed end investment partnerships, it may take a period of time to reach and maintain the target allocation of 5%. Assets will be invested in the total equity asset class when the opportunity/alternative allocation is below its long-term target of 5%. The benchmark for the category will be a weighted average of the benchmarks of the underlying strategies.

2. The goal of the credit, global macro, and other liquid alternative investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the appropriate institutional quality hedge fund index over a full market cycle (approximately five years). Appropriate benchmarks will be determined as investments are added to the portfolio.

#### L. Real Assets

1. The Real Asset category may include real estate, timber, agriculture, and infrastructure. While no fixed targets are set, the following general parameters have been identified:
  - 8% Real Estate
  - 2% Timber
  - 1% Agriculture
  - 4% Infrastructure

The total target of the asset class will be 15%. Because this category may include illiquid investments made through closed end investment partnerships, it will take a period of time to reach these targets. Assets will be invested in the total equity asset class until the total target is attained.

The System may initiate investments in real estate as governed by the Real Asset Statement of Investment Policy. The System's goal for real estate is to not materially exceed the System's approved target asset allocation for total real estate investments as determined by the Board at the beginning of each fiscal year. Should the real estate target asset allocation be exceeded, the Executive Director, working with the Real Estate Consultant, shall develop a pacing and strategy plan to address the over allocation.

ATRS' Real Estate portfolio is benchmarked on a net of fee basis against the NCREIF Fund Index Open-end Diversified Core Equity

Index ("NFIODCE"). Once ATRS' Real Estate portfolio reaches its full target allocation for a five-year period, it is expected to meet or exceed the NFIODCE over rolling five-year periods.

The System may initiate direct ownership in timberland or indirect investments in fund of funds, partnerships, corporations, or real estate investment trusts ("REITs") investing in investment grade properties of like kind.

2. The goal of the timberland investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Timberland Property Index ("NTPI") over a five-year rolling period. The Consumer Price Index plus 300 basis points will be used as a secondary measurement to gauge the timber portfolio's performance compared to the opportunity cost of investing in timber.

The goal of the agriculture investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Farmland Index ("NFI") over a five-year rolling period. The Consumer Price Index plus 300 basis points will be used as a secondary measurement to gauge the agriculture portfolio's performance compared to the opportunity cost of investing in agriculture.

The goal of the infrastructure investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the Consumer Price Index (CPI) plus 5 percentage points over a full market cycle (approximately ten years). The Consumer Price Index plus 5 percentage points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure. Similar infrastructure programs of institutional investors will also be used as a secondary benchmark to the extent such data is made available.

The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark and Infrastructure benchmark. The net of fee return for ATRS' Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five year periods.

#### K. Private Equity

1. The System may initiate investments in private equity as governed by the Private Equity Statement of Investment Policy. Private equity investments may include domestic and foreign private equity partnerships, venture capital, and mezzanine financing partnerships that are intended to diversify the assets and reduce the likelihood of material losses in any individual investment classification. The

investment consultant responsible for private equity shall advise the Executive Director and Board on the Private Equity Statement of Investment Policy and the structure of private equity investments best suited for the System.

2. The System's goal for private equity investments is to achieve a total rate of return that will exceed, net of all costs and fees, the return of the public equity markets, as measured by the Dow Jones U.S. Total Stock Market Index, plus a liquidity premium of 2 percentage points per year over a full market cycle for private equity (approximately ten years).

#### L. Cash Equivalents

1. The System may hold direct ownership in short-term investments or may permit or require managers to hold cash or cash equivalents to meet liquidity needs of the investment manager or of the System.
2. The System's cash management goal shall be to preserve capital and maintain liquidity.

#### M. Arkansas-Related Investments

1. The System may initiate Arkansas-related mortgage loans, promissory notes, direct real estate investments, or purchase insured certificates of deposit or short-term securities of Arkansas financial institutions to meet the goals of the mandated requirements. Arkansas-related investments are categorized according to the appropriate asset class for each investment. In addition, Arkansas related investments include, but are not limited to, investments managed by an Arkansas related manager, Arkansas related investments held by other fund managers, Arkansas timberland, partnerships based in Arkansas, and partnerships holding Arkansas properties.

#### N. Commingled or Mutual Funds

1. If a commingled fund or mutual fund is utilized, the portfolio will be governed by the prospectus or similar document for the fund. In those cases, the System will utilize the prudent investor rule and advice of the investment consultant in selecting and evaluating funds initially and in monitoring them on an on-going basis.

#### O. Derivatives

1. Derivatives may be used to reduce the risk in a portfolio and provide desired market and security level positions as an alternative to purchasing cash securities. Excessive leverage shall not be created through the use of derivatives in a manner that substantially increases the System's portfolio risk. Each investment manager's derivative

usage shall be specified in the investment management agreement or specific guidelines.

2. The use of futures and options shall be matched by cash or cash equivalent securities, and all short futures positions shall be matched by equivalent long security positions, unless otherwise stated in the investment manager guidelines or authorizing fund documents.

#### P. Loaning of Securities

1. The lending agent will evaluate the credit-worthiness of potential borrowers of securities, and will loan securities only to financially sound borrowers. The lending agent will maintain a diversified list of such borrowers in order to mitigate the counterparty risk that is inherent in securities lending.
2. Collateral levels should be based on the nature of the loaned security and will generally be between 102% and 105% of the market value of the borrowed security. Marking to market will be performed every business day subject to de minimis rules of change in value, and borrowers will be required to deliver additional assets as necessary to maintain overcollateralization of securities loans.

#### Q. Securities Lending Reinvestment Guidelines

1. The cash collateral portfolio will be managed on an amortized cost basis (maintain a \$1 net asset value) and have investment guidelines that are 2a-7-like in nature (money market fund guidelines) to ensure that only a moderate amount of risk is taken on the reinvestment of the cash collateral. This will control the amount of credit and duration risk that can be taken by the short duration fixed income manager, which will help to mitigate losses due to insufficient collateral relative to the amount on loan. In addition, guidelines for the cash collateral portfolio will be created in conjunction with the lending strategy and with input from the securities lending agent.
2. The collateral pool should also maintain a reasonable level of overnight liquidity in order to allow for the smooth recall of securities over time.

#### R. Investment Manager Reporting

1. The System will require all investment managers, managing partners, and general partners to provide on at least a quarterly and an annual basis, reporting appropriate for the investment.

#### S. Roles

1. The Executive Director and investment consultant are jointly responsible for the initial selection of investment managers and any increase or decrease in an investment manager's funding. The

Executive Director and investment consultant are jointly responsible for monitoring existing investment managers on performance, stability, and compliance. The Executive Director and investment consultant may also recommend termination of an investment manager when circumstances justify termination. Reasons for termination include, but are not limited to, relative performance, relative stability, costs, strategic allocation of assets, or other relevant factors that a prudent investor would use.

#### T. Proxies

1. All shares held directly or indirectly by or on behalf of the System shall be voted on solely in the pecuniary interest of the System's plan beneficiaries, in compliance with Arkansas Code § 24-2-801 et seq.
2. Unless an economically practicable alternative is unavailable, the System shall not: (A) Follow the recommendations of a proxy advisory firm or other service provider unless the firm or service provider has a practice of and provides a written commitment to adhere to the practice of following proxy voting guidelines that are consistent with the System's obligation to act based only on pecuniary factors, or (B) Entrust the System's plan assets to a fiduciary unless the fiduciary has a practice of and provides a written commitment to adhere to the practice of following guideline when engaging with portfolio companies and voting shares or proxies that match the obligation of the System's obligation to act based only on pecuniary factors.
3. The System authorizes the investment manager to vote all proxies related to stocks in which it invests the System's assets. The System requires the investment manager to vote all proxies in a manner that complies with Arkansas Code § 24-2-801 et seq. The System requires the investment manager to cast votes solely in the best interest of plan beneficiaries.

#### U. Soft Dollars

1. Commissions paid by investment managers for the purchase of equity securities are System assets and must be used for the sole benefit of the System members. Whenever possible, investment managers should seek to execute trades at the lowest possible commission rate but not to the detriment of best execution, which can result in a higher cost to the System. So that the Board may fulfill its obligation to ensure that System assets are being used appropriately, relevant equity investment managers shall provide periodic reports to the general investment consultant on brokerage activity, commissions, services, and such other information as may be requested by the investment

consultant or Board. The investment consultant shall provide a periodic report to the Board summarizing such equity investment managers' reports and highlighting any questionable or problem areas.

## **HISTORY**

Amended: October 4, 2010

Amended: February 7, 2011

Amended: June 3, 2013

Amended: October 7, 2013

Amended: February 17, 2014

Amended: June 1, 2015

Amended: April 21, 2016

Amended: November 13, 2017

Amended: April 1, 2019

Amended: February 3, 2020 as Board Policy 4

Amended: December 7, 2020

Amended: June 7, 2021

Amended: September 25, 2023

Amended: February 5, 2024

Amended: December 2, 2024

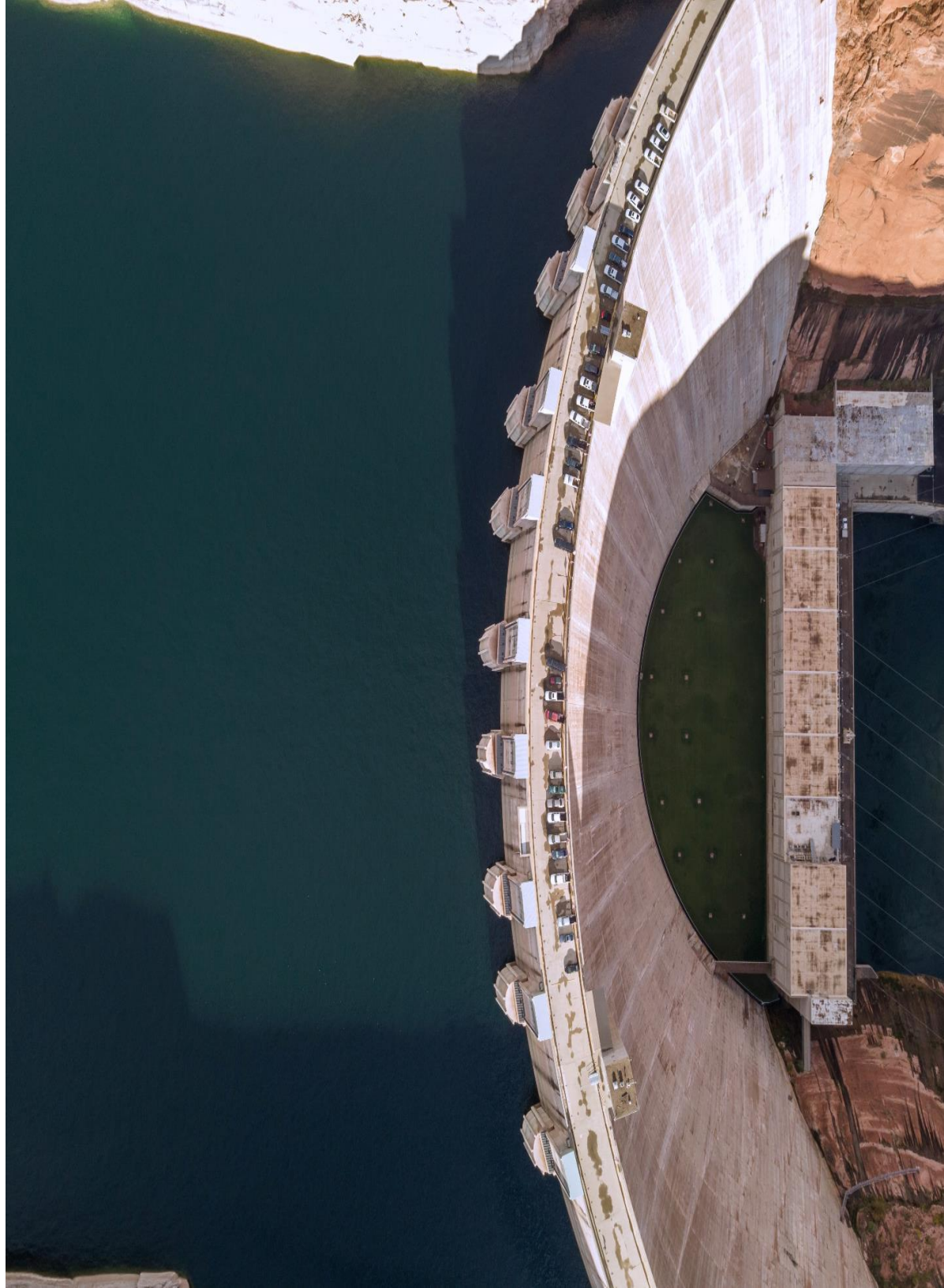


# 2025 Annual Planning

## Arkansas Teachers' Retirement System

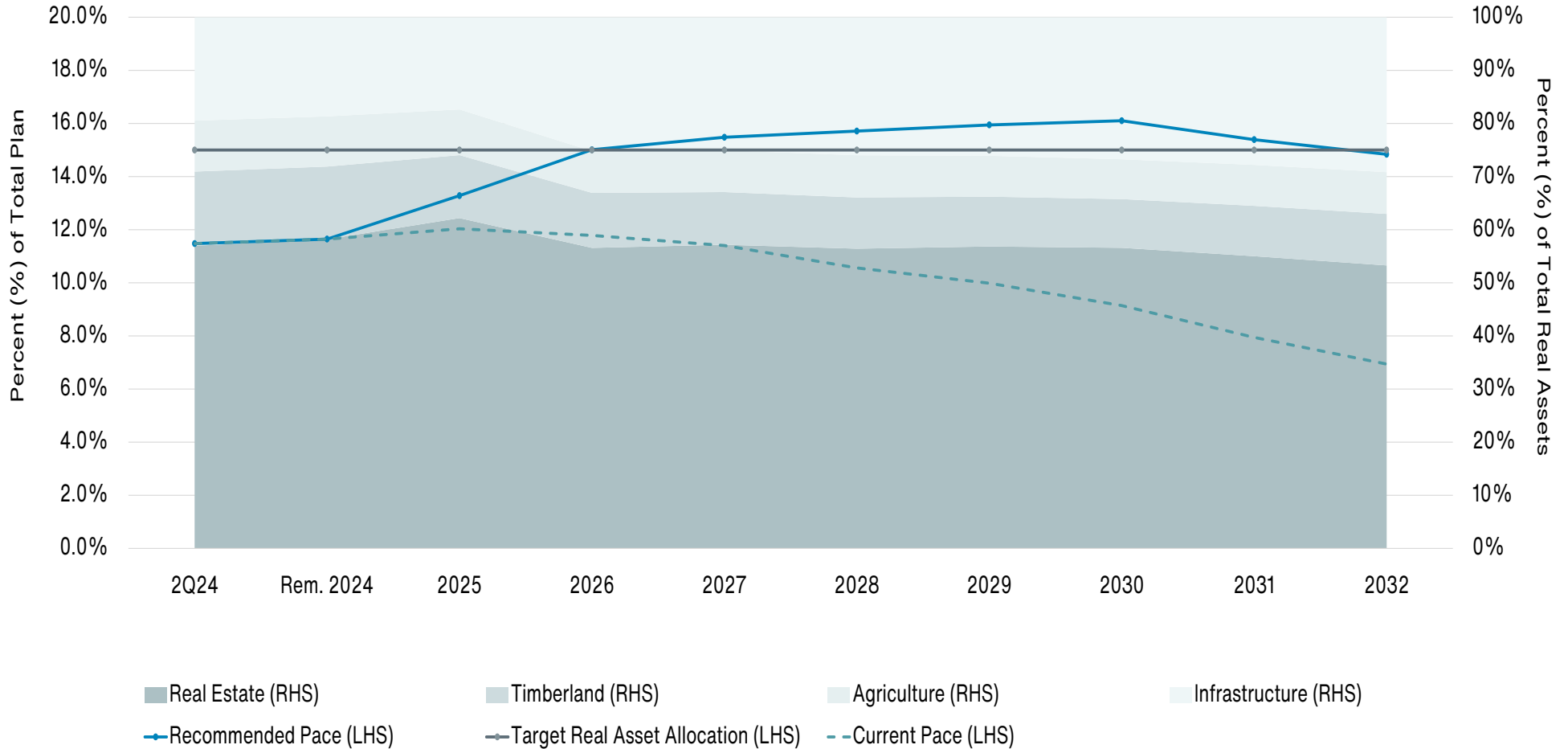
December 2024

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# 2025 Real Assets Pacing

## ATRS Real Assets Pacing





# Real Assets Commitment Overview

Risk \ Return of Profile	2024		2025	2026	2027	2027 Forecasted Allocations
	Recommended	Complete				
Non-Core (30-50%)	\$150	\$150	\$100	\$100	\$100	42%
Core (50-70%)	\$250	\$0	\$300	\$100	\$100	58%
<b>Real Estate Total</b>			<b>\$400</b>	<b>\$200</b>	<b>\$200</b>	<b>100%</b>
Infrastructure (4%)	\$50	\$100	\$350	\$150	\$100	4%
Agriculture (1%)	\$0	\$0	\$0	\$0	\$0	1%
Timberland (2%)	\$0	\$0	\$0	\$0	\$0	2%
<b>Real Assets Total</b>			<b>\$350</b>	<b>\$150</b>	<b>\$100</b>	
<b>Real Estate + Real Assets Total</b>			<b>\$750</b>	<b>\$350</b>	<b>\$300</b>	

# 2025 Investment Themes

Strategic investment themes for 2025 include...

## **Thematically approach new commitments to Core Real Estate in tandem with the Townsend View of the World**

- Utilize sidelined capital to make investments into property types driven by secular tailwinds such as multifamily and industrial
- Continue to reduce allocations to office investments

## **Commit non-core capital towards high conviction managers with the ability to take advantage of market inefficiencies**

- Seek out opportunities to invest in performing assets with capital distress that face near-term debt maturities with strong fundamentals
- Strategically place capital into development opportunities to take advantage of the limited housing supply and obsolete stock of industrial assets
- Reduce non-core commitments to maintain a healthy risk tolerance within the real estate portfolio resulting in an allocation of \$100 million for 2025

## **Continue to upsize infrastructure commitments to land on the 4% target towards infrastructure**

- In 2025, we recommend placing \$350 million towards infrastructure investments to increase infrastructure exposure and meet the long-term goal of 4%

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Arkansas Teacher Retirement System  
Private Equity Portfolio Review  
Second Quarter 2024

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## Portfolio Overview

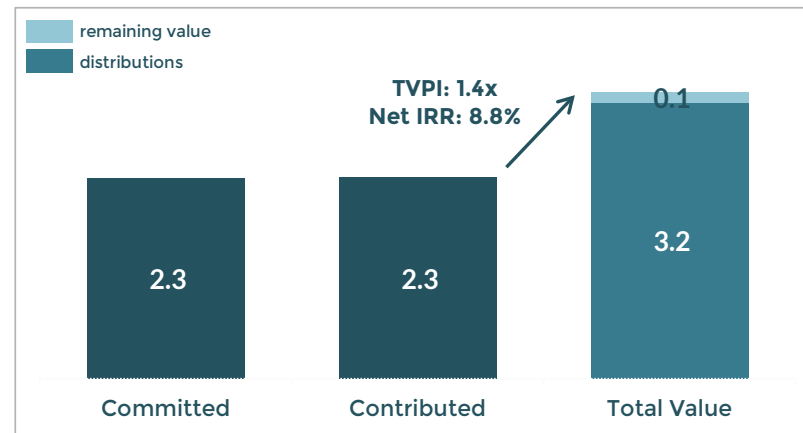
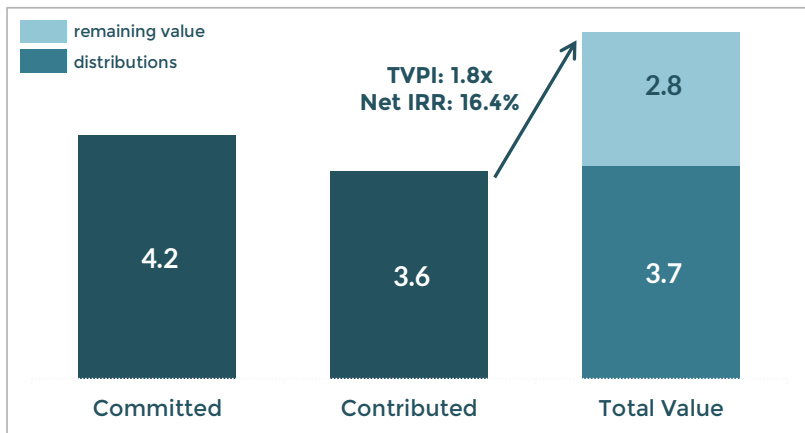
The Post 2006 Fund Portfolio has generated a net IRR of 16.4% as of June 30, 2024

### Post 2006 Fund Portfolio

Inception	2007
Total Commitments	\$4.2 billion
Number of Funds	126
% Contributed/Committed	85%
% Distributed/Contributed	102%

### Rest of Portfolio

Inception	1996
Total Commitments	\$2.3 billion
Number of Investments	29
% Contributed/Committed	101%
% Distributed/Contributed	137%



Notes:

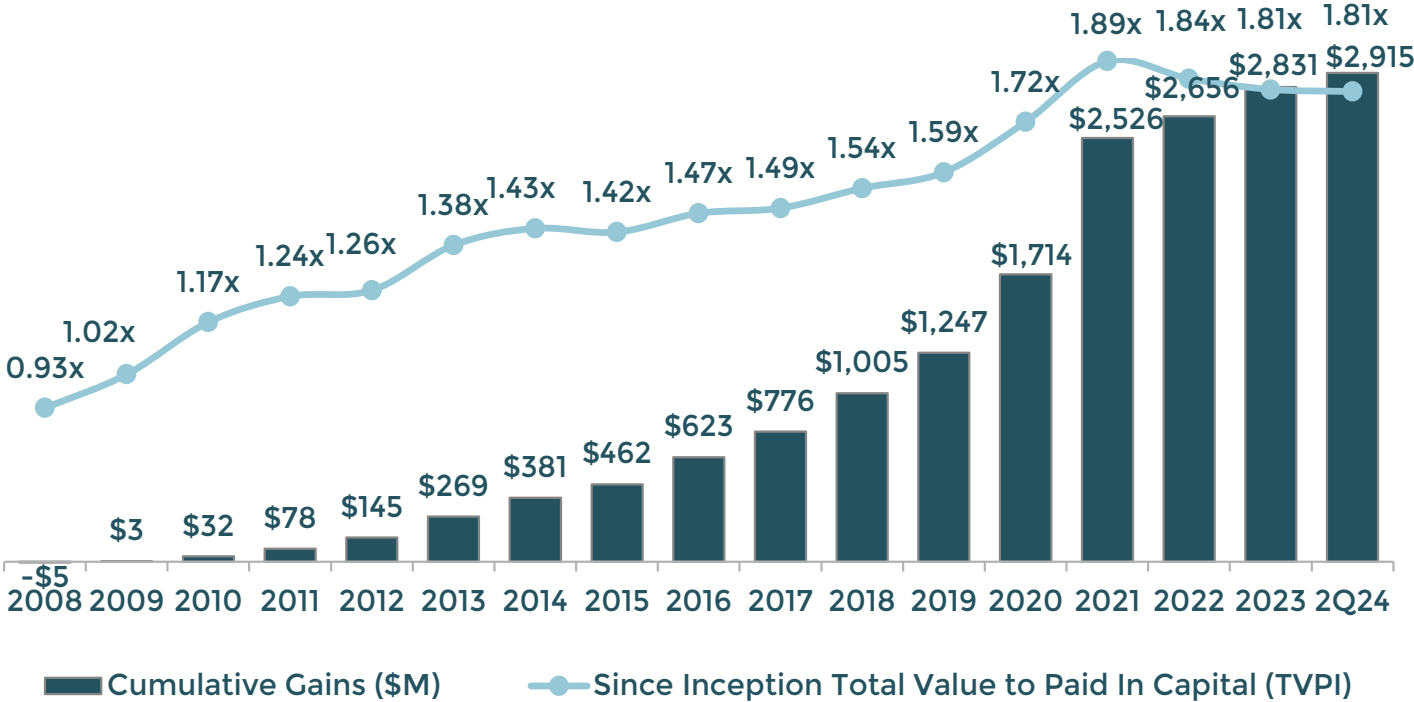
(1) Data as of June 30, 2024. \$Billions

(2) Performance information is net of portfolio funds' management fees, expenses and carried interest, but gross of fees and expenses paid to Franklin Park.

(3) TVPI = total value to paid-in multiple, or remaining value plus distributions divided by contributed capital.

# Post 2006 Fund Portfolio Performance Summary

The portfolio since 2006 has generated cumulative gains of \$2.9 billion since inception

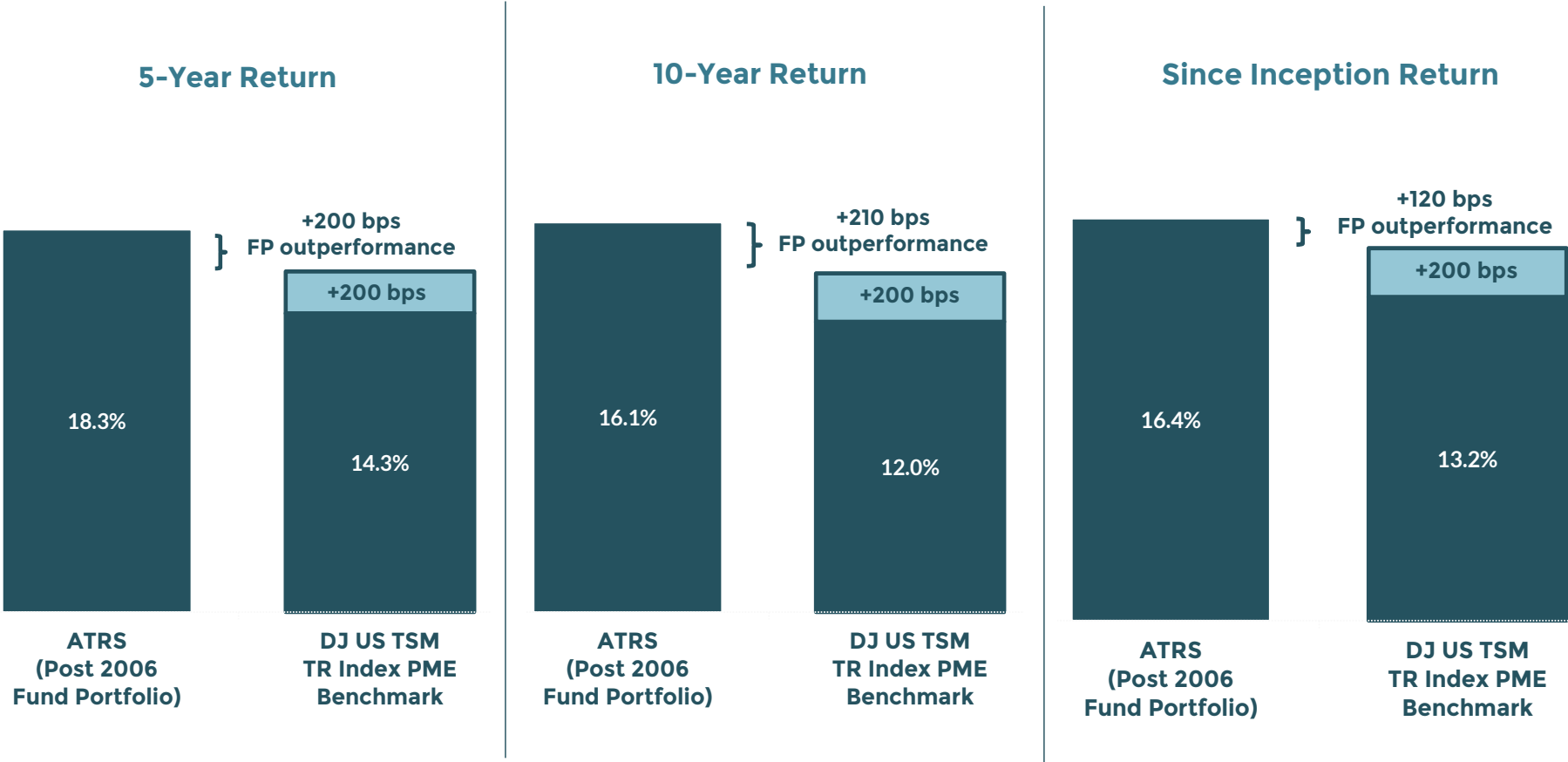


Notes:  
 (1) Performance data is net of portfolio funds' management fees, expenses and carried interest, but gross of fees and expenses paid to Franklin Park.  
 (2) Cumulative gains represent total distributions plus remaining value less total contributions. \$ Millions.



# Post 2006 Fund Portfolio Benchmarking

The portfolio since 2006 has exceeded the benchmark in the 5-Year, 10-Year and Since Inception periods



Notes:  
 (1) Data as of June 30, 2024  
 (2) Performance data is net of portfolio funds' management fees, expenses and carried interest; but gross of fees and expenses paid to Franklin Park.  
 (3) 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 ATRS could have achieved by investing in the public market. The PME return assumes cash flows are invested at the end of each day.





## Post 2006 Fund Portfolio Breakdown

ATRS makes commitments directly to funds as well as through specialized vehicles managed by Franklin Park

Strategy	Method of Access	% of Post-2006 Portfolio Exposure	ATRS Net IRR 6/30/24
U.S. corporate finance (core funds)	Direct Commitments	56.6%	15.8%
U.S. corporate finance (smaller funds)	Franklin Park Corporate Finance Access Funds	5.3%	19.7%
Corporate finance (co-investments)	Franklin Park Co-Investment Funds & ATRS/FP	16.1%	18.9%
Non-U.S. corporate finance	Franklin Park International Funds	7.8%	10.5%
Global Venture Capital (all stage)	Franklin Park Venture Capital Funds	14.2%	19.4%
<b>Total</b>		<b>100.0%</b>	<b>16.4%</b>

Notes:

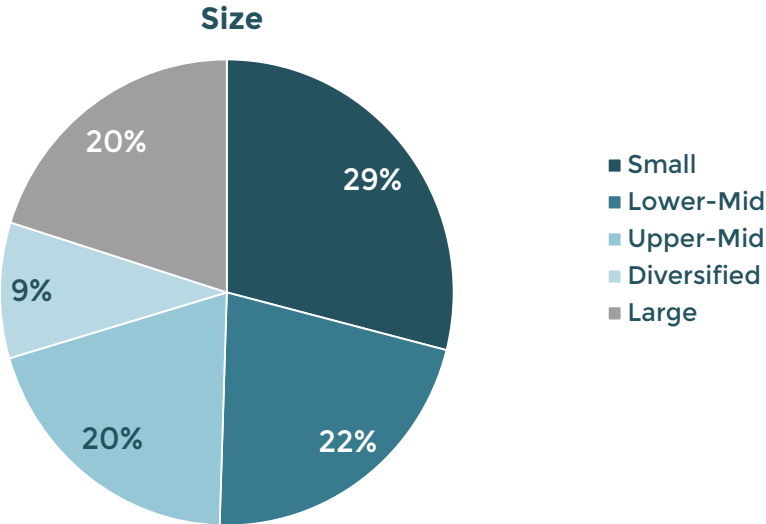
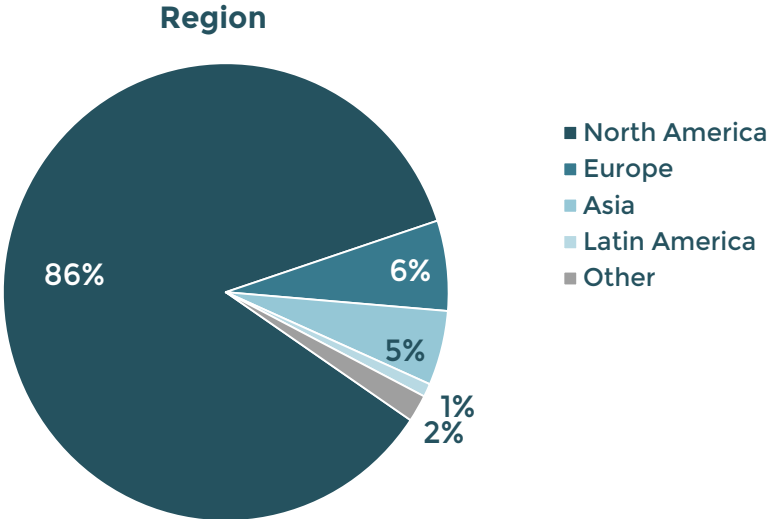
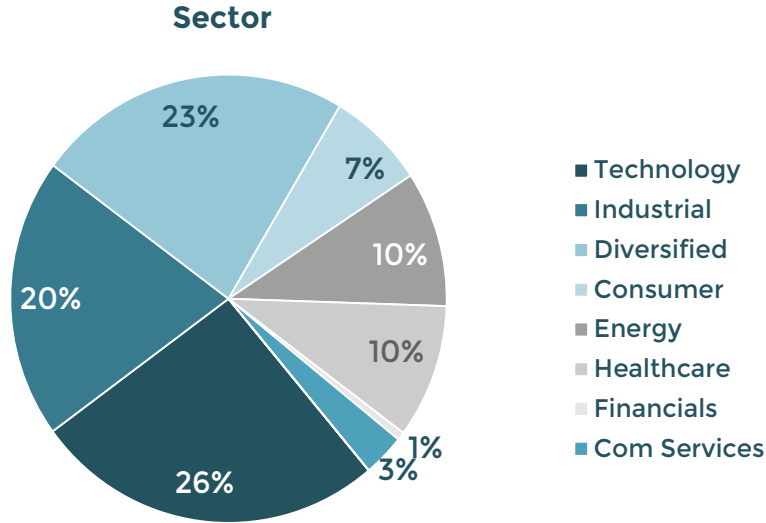
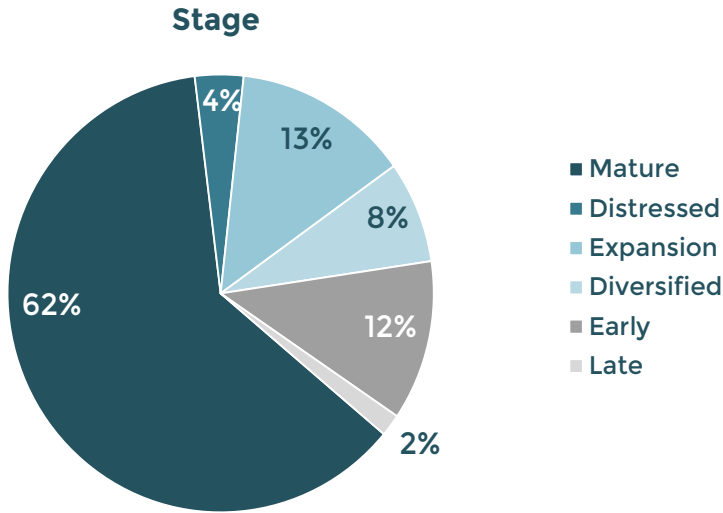
(1) Data as of June 30, 2024

(2) Performance data for all Franklin Park-managed funds are net of portfolio funds' management fees, expenses and carried interest, as well as fees and expenses paid to Franklin Park by the managed funds.

(3) Performance data for core funds (Direct Commitments) is net of portfolio funds' management fees, expenses and carried interest, but gross of fees and expenses paid to Franklin Park.

# Portfolio Composition

The aggregate portfolio is diversified by stage, sector, region and size as expected



Note: Data is as of June 30, 2024, and based on unrealized value of holdings as reported by portfolio fund managers. Values are estimated based on the investor's percent interest in each fund's portfolio holdings. Values are converted to USD where applicable, as of June 30, 2024.

## 2024 Commitment Plan

### Progress of commitment plan to date

Investment	Strategy	Region	ATRS Commitment	Board Approval
Enlightenment V	Private Debt - Structured Capital	U.S.	\$35m	Apr 2024
Veritas IX	Buyout (mid/large market)	U.S.	\$35m	Sept 2024
Riverside Value II	Buyout (small market)	U.S.	\$35m	Dec 2024*
NovaCap VII	Buyout (mid market)	Canada/U.S.	\$35m	Dec 2024*
Revelstoke IV	Buyout (small/mid market)	U.S.	\$35m	Dec 2024*
Peak Rock IV	Buyout (mid market)	U.S.	\$35m	Dec 2024*
FP CF Access III	Buyout/Growth/Turnaround	U.S.	\$40m	Jun 2024
FP Venture Opps II	Mid/Late Stage VC	U.S./Non-U.S.	\$40m	Jun 2024
FP Venture XV	Early Stage VC	U.S./Non-U.S.	\$40m	Dec 2023
FP Co-Invest VI	Buyout/Growth/Turnaround	U.S./Non-U.S.	\$60m	Dec 2023
<b>Total</b>			<b>\$390m</b>	

\* Riverside Value II, NovaCap VII, Revelstoke IV and Peak Rock IV are to be presented for approval at the December ATRS IC and board meetings, subject to completion of Franklin Park's due diligence.

# Arkansas Teacher Retirement System Private Equity Portfolio Review

June 30, 2024

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## Portfolio Overview

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## 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	1,641,243,527	0	0.0%	0	1.5 x	1.5 x	9.2%
2005-2006: CSFB Portfolio	2	654,300,000	690,134,581	63,148,325	1,085,782,300	35,867,022	1.2%	99,015,347	1.6 x	1.6 x	8.9%
Post 2006 Fund Portfolio	126	4,223,323,718	3,603,602,347	1,282,206,355	3,691,754,903	2,826,521,491	95.8%	4,108,727,847	1.0 x	1.8 x	16.4%
Big River Steel	8	257,880,449	257,940,356	0	430,039,782	1,863,004	0.1%	1,863,004	1.7 x	1.7 x	14.4%
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	3	258,244,727	274,114,727	0	31,674,525	16,938,440	0.6%	16,938,440	0.1 x	0.2 x	-69.8%
GTLA Holdings	1	20,700,000	20,700,000	0	0	70,000,000	2.4%	70,000,000	0.0 x	3.4 x	23.7%
Hybar LLC	1	206,200	206,200	0	109,200	220,500	0.0%	220,500	0.5 x	1.6 x	87.4%
<b>Total</b>	<b>155</b>	<b>6,539,045,555</b>	<b>5,937,114,450</b>	<b>1,345,354,680</b>	<b>6,885,989,372</b>	<b>2,951,410,457</b>	<b>100.0%</b>	<b>4,296,765,137</b>	<b>1.2 x</b>	<b>1.7 x</b>	<b>11.2%</b>
<b>By Fund Type</b>											
Co-Investment Fund	2	388,823,718	469,108,762	221,678,872	424,692,777	440,565,402	14.9%	662,244,274	0.9 x	1.8 x	18.9%
Fund-of-Funds	31	1,704,300,000	1,359,953,431	465,290,544	1,687,240,151	755,032,440	25.6%	1,220,322,984	1.2 x	1.8 x	11.2%
Operating Company	14	555,031,376	572,701,284	0	467,208,642	89,021,944	3.0%	89,021,944	0.8 x	1.0 x	-1.1%
Primary Fund	108	3,890,890,461	3,535,350,974	658,385,264	4,306,847,801	1,666,790,671	56.5%	2,325,175,936	1.2 x	1.7 x	11.3%
<b>Total</b>	<b>155</b>	<b>6,539,045,555</b>	<b>5,937,114,450</b>	<b>1,345,354,680</b>	<b>6,885,989,372</b>	<b>2,951,410,457</b>	<b>100.0%</b>	<b>4,296,765,137</b>	<b>1.2 x</b>	<b>1.7 x</b>	<b>11.2%</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	81	3,202,390,461	2,729,247,574	731,200,440	3,165,986,805	1,556,540,256	52.7%	2,287,740,696	1.2 x	1.7 x	11.7%
Distressed Debt	3	100,000,000	93,881,464	37,207,326	118,145,902	16,344,994	0.6%	53,552,320	1.3 x	1.4 x	6.5%
Growth Equity	4	150,000,000	113,404,590	39,457,033	253,590,947	33,975,543	1.2%	73,432,576	2.2 x	2.5 x	20.6%
Hard Assets	13	586,444,727	614,673,529	12,680,366	355,661,509	228,953,183	7.8%	241,633,550	0.6 x	1.0 x	-1.5%
Infrastructure	9	271,086,649	272,882,870	0	427,308,827	2,083,504	0.1%	2,083,504	1.6 x	1.6 x	12.3%
Mezzanine	8	315,000,000	232,874,071	29,508,764	247,741,109	61,539,274	2.1%	91,048,038	1.1 x	1.3 x	10.2%
Multi-Strategy	6	974,123,718	1,181,496,500	204,959,398	1,546,578,296	429,691,859	14.6%	634,651,257	1.3 x	1.7 x	9.1%
Special Assets	1	30,000,000	31,905,954	2,090,420	8,569,979	31,255,117	1.1%	33,345,537	0.3 x	1.2 x	10.2%
Structured Capital	5	145,000,000	127,796,819	44,494,464	102,886,123	67,714,397	2.3%	112,208,861	0.8 x	1.3 x	11.3%
Turnaround	9	240,000,000	192,620,425	69,000,159	220,801,779	114,427,065	3.9%	183,427,224	1.1 x	1.7 x	15.9%
Venture Capital	16	525,000,000	346,330,654	174,756,310	438,718,097	408,885,265	13.9%	583,641,575	1.3 x	2.4 x	19.4%
<b>Total</b>	<b>155</b>	<b>6,539,045,555</b>	<b>5,937,114,450</b>	<b>1,345,354,680</b>	<b>6,885,989,372</b>	<b>2,951,410,457</b>	<b>100.0%</b>	<b>4,296,765,137</b>	<b>1.2 x</b>	<b>1.7 x</b>	<b>11.2%</b>
<b>By Sub-Asset Class</b>											
Corporate Finance	125	5,459,014,179	5,018,082,512	1,170,598,370	5,980,062,633	2,453,503,248	83.1%	3,624,101,619	1.2 x	1.7 x	11.1%
Direct Investments	14	555,031,376	572,701,284	0	467,208,642	89,021,944	3.0%	89,021,944	0.8 x	1.0 x	-1.1%
Venture Capital	16	525,000,000	346,330,654	174,756,310	438,718,097	408,885,265	13.9%	583,641,575	1.3 x	2.4 x	19.4%
<b>Total</b>	<b>155</b>	<b>6,539,045,555</b>	<b>5,937,114,450</b>	<b>1,345,354,680</b>	<b>6,885,989,372</b>	<b>2,951,410,457</b>	<b>100.0%</b>	<b>4,296,765,137</b>	<b>1.2 x</b>	<b>1.7 x</b>	<b>11.2%</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.



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# Performance Analysis

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## 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	50,857,200	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>302,417,377</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	21,987,447	0	0.4 x	-16.5%
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>881,678,537</b>	<b>0</b>	<b>1.7 x</b>	<b>14.8%</b>
<b>2005</b>								
CSFB-ATRS 2005-1 Series	Multi-Strategy	250,000,000	277,788,144	10,753,193	414,936,395	15,129,440	1.5 x	7.5%
<b>Total 2005</b>		<b>250,000,000</b>	<b>277,788,144</b>	<b>10,753,193</b>	<b>414,936,395</b>	<b>15,129,440</b>	<b>1.5 x</b>	<b>7.5%</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	48,914,085	879,362	1.2 x	2.7%
CSFB-ATRS 2006-1 Series	Multi-Strategy	404,300,000	412,346,437	52,395,132	670,845,905	20,737,582	1.7 x	10.1%
<b>Total 2006</b>		<b>454,300,000</b>	<b>455,363,206</b>	<b>60,654,079</b>	<b>719,759,990</b>	<b>21,616,944</b>	<b>1.6 x</b>	<b>9.4%</b>
<b>2007</b>								
Diamond State II	Multi-Strategy	4,000,000	3,517,000	483,000	11,617,000	596,636	3.5 x	12.3%
NGP IX	Hard Assets	50,000,000	54,229,094	201,825	77,660,463	28,408	1.4 x	10.8%
Vista Equity III	Buyout	50,000,000	54,392,542	3,838,140	131,285,918	2,395,716	2.5 x	28.5%
<b>Total 2007</b>		<b>104,000,000</b>	<b>112,138,636</b>	<b>4,522,965</b>	<b>220,563,381</b>	<b>3,020,760</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	3,121,421	2.1 x	16.4%
FP Venture 2008	Venture Capital	30,000,000	30,000,000	293,951	78,493,365	16,400,979	3.2 x	17.6%
LLR III	Growth Equity	50,000,000	48,504,590	4,357,033	108,800,951	795,503	2.3 x	16.5%
<b>Total 2008</b>		<b>120,000,000</b>	<b>118,671,818</b>	<b>4,650,984</b>	<b>267,787,046</b>	<b>20,317,903</b>	<b>2.4 x</b>	<b>16.8%</b>
<b>2009</b>								
FP Venture 2009	Venture Capital	25,000,000	24,629,310	737,273	54,210,835	7,472,395	2.5 x	16.6%
Insight Equity II	Turnaround	30,000,000	31,028,312	884,343	42,854,623	6,504,988	1.6 x	8.3%
Insight Mezzanine I	Mezzanine	10,000,000	9,971,470	479,507	11,860,178	2,055,344	1.4 x	6.6%
KPS III Supplemental *	Turnaround	40,000,000	37,785,704	0	80,540,979	0	2.1 x	22.8%
Riverside IV *	Buyout	40,000,000	31,433,665	0	74,838,992	0	2.4 x	21.3%
<b>Total 2009</b>		<b>145,000,000</b>	<b>134,848,461</b>	<b>2,101,123</b>	<b>264,305,607</b>	<b>16,032,727</b>	<b>2.1 x</b>	<b>16.7%</b>
<b>2010</b>								
Altus Capital II	Buyout	20,000,000	20,436,560	2,714,467	31,904,309	4,754,721	1.8 x	13.4%
EnCap VIII	Hard Assets	47,500,000	54,132,700	0	37,627,884	18,281,764	1.0 x	0.6%
FP Venture 2010	Venture Capital	25,000,000	16,156,250	1,592,593	24,813,446	23,529,324	3.0 x	14.9%
Mason Wells III *	Buyout	30,000,000	28,553,580	0	86,225,697	0	3.0 x	20.6%
TA XI	Growth Equity	40,000,000	39,400,000	600,000	144,526,273	4,446,316	3.8 x	26.7%
Tennenbaum VI	Distressed Debt	40,000,000	38,075,687	32,716,981	53,999,291	162,551	1.4 x	7.3%
<b>Total 2010</b>		<b>202,500,000</b>	<b>196,754,777</b>	<b>37,624,041</b>	<b>379,096,900</b>	<b>51,174,676</b>	<b>2.2 x</b>	<b>15.4%</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	25,962,085	6,675,000	33,085,160	1,604,017	1.3 x	9.8%
Castlelake II	Distressed Debt	35,000,000	32,656,036	2,625,461	39,195,187	7,208,869	1.4 x	5.8%
FP Intl 2011	Buyout	25,000,000	23,611,111	1,916,867	30,836,171	8,188,603	1.7 x	9.0%
FP Venture 2011	Venture Capital	25,000,000	24,946,429	393,972	137,405,644	27,828,704	6.6 x	34.1%
JF Lehman III	Buyout	39,000,000	48,566,430	1,113,253	52,405,737	25,266,495	1.6 x	10.7%
Wellspring V	Buyout	40,000,000	46,519,845	13,745,308	67,847,674	12,507,568	1.7 x	16.0%
Wicks IV	Buyout	40,000,000	43,050,453	3,757,221	88,101,911	7,706,303	2.2 x	20.9%
<b>Total 2011</b>		<b>229,000,000</b>	<b>245,312,389</b>	<b>30,227,082</b>	<b>448,877,484</b>	<b>90,310,559</b>	<b>2.2 x</b>	<b>16.8%</b>
<b>2012</b>								
ATRS-FP PE	Multi-Strategy	263,823,718	424,373,885	141,328,073	424,094,349	393,228,201	1.9 x	19.0%
BV VIII	Buyout	30,000,000	27,779,906	2,501,280	54,778,564	8,527,212	2.3 x	44.3%
Court Square III	Buyout	40,000,000	44,903,742	1,318,652	75,788,544	31,709,835	2.4 x	20.9%
DW Healthcare III	Buyout	40,000,000	37,138,408	2,861,592	71,497,419	7,649,373	2.1 x	19.1%
FP Intl 2012	Buyout	25,000,000	17,607,143	7,717,432	18,408,702	5,008,725	1.3 x	6.3%
FP Venture 2012	Venture Capital	25,000,000	22,515,625	2,753,335	45,362,003	26,507,622	3.2 x	19.3%
NGP X	Hard Assets	35,000,000	36,623,245	70,485	33,350,506	2,982,792	1.0 x	-0.2%
<b>Total 2012</b>		<b>458,823,718</b>	<b>610,941,954</b>	<b>158,550,849</b>	<b>723,280,087</b>	<b>475,613,760</b>	<b>2.0 x</b>	<b>18.1%</b>
<b>2013</b>								
EnCap IX	Hard Assets	25,000,000	28,785,857	972,514	37,998,773	5,765,735	1.5 x	10.9%
FP Intl 2013	Buyout	20,000,000	14,515,464	5,697,260	9,279,853	14,005,716	1.6 x	7.5%
FP Venture 2013	Venture Capital	20,000,000	18,505,747	1,675,683	33,148,166	30,577,396	3.4 x	22.5%
Levine Leichtman V	Structured Capital	20,000,000	28,041,672	2,968,199	53,758,393	823,514	1.9 x	17.2%
Riverside V	Buyout	35,000,000	37,668,888	1,308,498	46,375,254	23,989,306	1.9 x	12.3%
Vista Foundation II	Buyout	15,000,000	16,195,748	6,938,888	25,854,133	5,259,338	1.9 x	13.8%
<b>Total 2013</b>		<b>135,000,000</b>	<b>143,713,376</b>	<b>19,561,042</b>	<b>206,414,572</b>	<b>80,421,005</b>	<b>2.0 x</b>	<b>14.4%</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	22,313,168	4,282,425	28,935,950	12,302,812	1.8 x	19.5%
Big River - Equity	Infrastructure	151,090,000	151,090,000	0	296,427,836	1,863,004	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	24,951,424	8,973,574	1.5 x	6.3%
FP Intl 2014	Buyout	25,000,000	18,389,175	6,835,705	17,242,688	13,369,511	1.7 x	12.1%
FP Venture 2014	Venture Capital	25,000,000	23,991,935	1,216,362	28,002,164	43,956,550	3.0 x	18.2%
KPS IV	Turnaround	25,000,000	22,169,590	3,501,536	35,525,659	11,943,631	2.1 x	23.7%
Lime Rock Resources III	Hard Assets	25,000,000	25,847,849	48,771	16,334,295	19,556,289	1.4 x	4.2%
NGP XI	Hard Assets	30,000,000	30,908,097	947,387	34,463,197	14,727,321	1.6 x	10.0%
Sycamore Partners II	Turnaround	25,000,000	23,779,319	2,347,423	13,705,544	15,369,956	1.2 x	4.8%
Thoma Bravo XI	Buyout	20,000,000	20,785,558	2,135,646	58,204,339	16,578,990	3.6 x	26.5%
<b>Total 2014</b>		<b>389,090,000</b>	<b>387,168,118</b>	<b>23,180,139</b>	<b>567,403,521</b>	<b>158,641,638</b>	<b>1.9 x</b>	<b>13.1%</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	31,334,997	1,093,091	42,946,746	21,037,120	2.0 x	16.4%
FP Intl 2015	Buyout	25,000,000	21,305,310	3,870,519	12,476,244	18,012,853	1.4 x	8.4%
FP Venture 2015	Venture Capital	25,000,000	24,015,487	1,172,342	12,410,431	27,975,598	1.7 x	9.4%
Siris III	Buyout	25,000,000	33,804,471	1,368,254	25,586,430	18,427,387	1.3 x	8.4%
<b>Total 2015</b>		<b>131,910,000</b>	<b>137,426,486</b>	<b>7,504,206</b>	<b>129,119,416</b>	<b>85,452,958</b>	<b>1.6 x</b>	<b>11.8%</b>
<b>2016</b>								
American Industrial VI	Buyout	20,000,000	25,369,667	3,099,340	34,760,008	32,485,822	2.7 x	23.7%
Arlington IV	Buyout	23,000,000	25,179,591	930,941	25,065,382	35,730,860	2.4 x	22.5%
DW Healthcare IV	Buyout	30,000,000	30,628,235	900,731	28,157,299	20,602,498	1.6 x	15.4%
FP Intl 2016	Buyout	25,000,000	20,695,876	4,513,099	9,858,880	16,091,891	1.3 x	5.1%
FP Venture 2016	Venture Capital	25,000,000	22,759,146	2,469,107	11,927,468	34,273,187	2.0 x	16.2%
Highland Equity	Hard Assets	66,000,000	81,870,000	0	16,674,525	-200,527,003	-2.2 x	N/A
JF Lehman IV	Buyout	30,000,000	29,868,817	2,657,668	68,072,378	13,465,052	2.7 x	35.1%
PineBridge Structured III	Structured Capital	30,000,000	28,724,946	9,545,478	16,912,151	9,528,519	0.9 x	-2.6%
Thoma Bravo Discover	Buyout	10,000,000	11,411,862	1,705,917	29,623,745	5,984,335	3.1 x	35.2%
Thoma Bravo XII	Buyout	30,000,000	32,733,395	7,380,854	33,981,416	38,247,963	2.2 x	16.5%
Vista Foundation III	Buyout	30,000,000	34,763,189	6,677,444	35,539,412	31,605,755	1.9 x	20.8%
<b>Total 2016</b>		<b>319,000,000</b>	<b>344,004,724</b>	<b>39,880,579</b>	<b>310,572,664</b>	<b>37,488,878</b>	<b>1.0 x</b>	<b>0.4%</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	16,329,789	5,543,214	25,996,773	23,270,708	3.0 x	24.5%
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	39,960,253	2,992,174	31,989,767	23,165,132	1.4 x	11.9%
BV IX	Buyout	30,000,000	30,651,433	5,348,568	36,775,586	33,888,254	2.3 x	29.0%
EnCap XI	Hard Assets	35,000,000	33,840,786	3,502,470	20,179,580	42,327,325	1.8 x	22.2%
FP Intl 2017	Buyout	25,000,000	23,558,674	1,665,547	12,011,440	27,416,591	1.7 x	15.4%
FP Venture 2017	Venture Capital	25,000,000	17,599,557	7,547,556	4,768,167	26,181,400	1.8 x	15.4%
Greyrock IV	Mezzanine	30,000,000	28,875,215	2,260,771	29,386,806	14,896,807	1.5 x	12.8%
NGP XII	Hard Assets	30,000,000	24,156,177	5,843,823	23,425,540	17,307,990	1.7 x	15.2%
One Rock II	Buyout	30,000,000	27,364,015	7,053,505	11,260,894	30,177,325	1.5 x	9.1%
<b>Total 2017</b>		<b>317,730,449</b>	<b>300,066,348</b>	<b>41,757,628</b>	<b>264,653,443</b>	<b>238,631,532</b>	<b>1.7 x</b>	<b>16.7%</b>
<b>2018</b>								
Altaris IV	Buyout	24,000,000	23,814,600	1,907,548	24,433,179	22,920,615	2.0 x	25.9%
Big River - Holdings Note 2023 *	Infrastructure	12,000,000	12,000,000	0	14,582,469	0	1.2 x	5.6%
Big River - Holdings Note 2023-2 *	Infrastructure	5,150,000	5,150,000	0	6,245,733	0	1.2 x	6.5%
Clearlake V	Buyout	30,000,000	44,517,797	5,261,821	60,085,356	34,438,890	2.1 x	37.4%
FP Intl 2018	Buyout	25,000,000	23,549,618	1,750,941	4,123,986	27,354,800	1.3 x	8.6%
FP Venture 2018	Venture Capital	25,000,000	23,649,068	1,573,892	3,739,721	34,621,833	1.6 x	14.5%
GTLA Holdings	Hard Assets	20,700,000	20,700,000	0	0	70,000,000	3.4 x	23.7%
Highland Contingent Note	Hard Assets	152,244,727	152,244,727	0	15,000,000	171,488,825	1.2 x	5.4%
SK Capital V	Buyout	30,000,000	32,113,591	6,763,693	9,141,060	30,244,127	1.2 x	6.8%
Sycamore Partners III	Turnaround	25,000,000	23,919,459	9,937,138	8,856,597	28,016,602	1.5 x	18.7%
Thoma Bravo Discover II	Buyout	17,000,000	18,184,658	4,726,837	12,228,968	25,893,566	2.1 x	24.0%
<b>Total 2018</b>		<b>366,094,727</b>	<b>379,843,518</b>	<b>31,921,870</b>	<b>158,437,069</b>	<b>444,979,258</b>	<b>1.6 x</b>	<b>14.3%</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	34,470,363	7,099,737	11,539,155	40,793,941	1.5 x	21.0%
Arlington V	Buyout	25,000,000	24,384,845	3,325,239	7,745,066	37,708,509	1.9 x	27.2%
DW Healthcare V	Buyout	30,000,000	25,507,523	4,492,477	0	38,922,011	1.5 x	15.4%
FP Intl 2019	Buyout	30,000,000	23,659,574	6,692,904	22,683,203	28,021,855	2.1 x	34.5%
FP Venture 2019	Venture Capital	30,000,000	19,583,851	10,633,729	2,425,138	27,496,745	1.5 x	13.5%
KPS Mid-Market I	Turnaround	20,000,000	11,736,824	6,488,306	4,260,143	15,416,662	1.7 x	19.3%
Riverside VI	Buyout	30,000,000	27,586,550	2,413,450	456,893	33,910,699	1.2 x	8.0%
Siris IV	Buyout	30,000,000	33,234,767	450,753	5,464,428	39,326,950	1.3 x	10.7%
Thoma Bravo XIII	Buyout	30,000,000	36,599,355	2,495,077	25,266,442	44,899,776	1.9 x	25.3%
WNG II	Special Assets	30,000,000	31,905,954	2,090,420	8,569,979	31,255,117	1.2 x	10.2%
<b>Total 2019</b>		<b>285,000,000</b>	<b>268,669,606</b>	<b>46,182,092</b>	<b>88,410,447</b>	<b>337,752,265</b>	<b>1.6 x</b>	<b>18.4%</b>
<b>2020</b>								
BV X	Buyout	30,000,000	28,622,473	7,377,526	12,811,603	36,749,767	1.7 x	37.7%
Clearlake VI	Buyout	30,000,000	31,327,201	1,487,323	4,787,600	47,189,687	1.7 x	19.5%
FP CF Access	Buyout	90,000,000	78,545,663	34,303,729	22,858,459	91,353,664	1.5 x	21.8%
FP Venture XIII	Venture Capital	60,000,000	42,901,758	17,470,103	1,889,824	49,261,135	1.2 x	8.2%
Greyrock V	Mezzanine	35,000,000	33,009,849	3,180,713	7,961,191	30,837,622	1.2 x	8.4%
JF Lehman V	Buyout	30,000,000	27,963,576	2,036,424	363,774	44,288,885	1.6 x	18.5%
KPS V	Turnaround	30,000,000	19,888,048	11,558,988	6,122,285	24,872,414	1.6 x	20.5%
Thoma Bravo Explore I	Buyout	20,000,000	19,635,848	5,248,416	4,884,264	25,950,456	1.6 x	23.3%
<b>Total 2020</b>		<b>325,000,000</b>	<b>281,894,417</b>	<b>82,663,222</b>	<b>61,679,001</b>	<b>350,503,630</b>	<b>1.5 x</b>	<b>18.9%</b>
<b>2021</b>								
Alpine Investors VIII	Buyout	30,000,000	19,025,389	10,974,611	0	25,417,270	1.3 x	20.2%
FP Intl X	Buyout	60,000,000	32,374,101	27,874,999	2,732,135	36,400,014	1.2 x	12.3%
Greenbriar V	Buyout	30,000,000	30,435,733	838,996	1,277,373	34,011,391	1.2 x	8.2%
LLR VI	Growth Equity	30,000,000	25,500,000	4,500,000	263,723	29,334,016	1.2 x	7.4%
Revelstoke III	Buyout	30,000,000	19,720,738	12,908,836	2,782,796	17,273,973	1.0 x	1.2%
Riverside Value Fund I	Buyout	30,000,000	14,594,736	18,250,596	2,404,140	22,947,474	1.7 x	73.8%
Thoma Bravo Discover III	Buyout	20,000,000	20,136,476	779,357	915,833	25,147,736	1.3 x	10.5%
Thoma Bravo XIV	Buyout	20,000,000	20,248,828	2,355,819	2,604,652	21,955,847	1.2 x	7.5%
<b>Total 2021</b>		<b>250,000,000</b>	<b>182,036,001</b>	<b>78,483,214</b>	<b>12,980,652</b>	<b>212,487,722</b>	<b>1.2 x</b>	<b>11.9%</b>

## Investment Performance by Vintage Year



Investment	Strategy	Committed Capital (\$)	Contributed Capital (\$)	Unfunded Commitment (\$)	Distributed Capital (\$)	Remaining Value (\$)	TVPI	Net IRR
<b>2022</b>								
Bison VI	Structured Capital	30,000,000	12,921,146	17,137,416	78,209	13,693,855	1.1 x	8.8%
Clearlake VII	Buyout	30,000,000	17,354,956	12,692,538	80,684	19,313,008	1.1 x	6.5%
FP CF Access II	Buyout	90,000,000	17,513,490	72,486,510	226,818	18,250,616	1.1 x	4.1%
FP Intl XI	Buyout	60,000,000	8,162,997	52,060,397	1,176	6,805,314	0.8 x	-22.9%
FP Venture Opp	Venture Capital	60,000,000	23,062,500	37,076,250	0	21,965,545	1.0 x	-3.3%
FP Venture XIV	Venture Capital	60,000,000	12,013,991	48,150,162	121,725	10,836,852	0.9 x	-8.8%
Thoma Bravo Discover IV	Buyout	15,000,000	8,577,024	6,422,976	0	10,252,396	1.2 x	17.5%
Thoma Bravo XV	Buyout	15,000,000	10,697,712	4,302,288	3,250	13,414,337	1.3 x	15.0%
<b>Total 2022</b>		<b>360,000,000</b>	<b>110,303,815</b>	<b>250,328,537</b>	<b>511,862</b>	<b>114,531,923</b>	<b>1.0 x</b>	<b>3.3%</b>
<b>2023</b>								
Alpine Investors IX	Buyout	30,000,000	4,037,389	25,962,611	0	4,527,420	1.1 x	NMF
Arlington VI	Buyout	30,000,000	13,618,551	16,381,449	51,222	16,057,805	1.2 x	NMF
BV XI	Buyout	30,000,000	11,872,642	18,127,358	0	12,023,501	1.0 x	NMF
FP Co-Invest VI	Buyout	125,000,000	44,734,877	80,350,799	598,428	47,337,201	1.1 x	NMF
Greenbriar VI	Buyout	30,000,000	9,048,532	20,951,468	1,787	8,341,867	0.9 x	NMF
Greyrock VI	Mezzanine	30,000,000	13,087,227	16,912,773	24,468	12,145,484	0.9 x	NMF
Highland Note 2025	Hard Assets	40,000,000	40,000,000	0	0	45,976,617	1.1 x	NMF
Hybar LLC	Infrastructure	206,200	206,200	0	109,200	220,500	1.6 x	NMF
JF Lehman VI	Buyout	30,000,000	11,956,025	18,043,975	312,593	12,551,759	1.1 x	NMF
Post Road III	Structured Capital	30,000,000	18,148,803	11,851,197	147,603	20,503,377	1.1 x	NMF
SK Capital VI	Buyout	30,000,000	12,782,173	21,226,205	4,711,008	18,217,640	1.8 x	NMF
<b>Total 2023</b>		<b>405,206,200</b>	<b>179,492,419</b>	<b>229,807,835</b>	<b>5,956,309</b>	<b>197,903,171</b>	<b>1.1 x</b>	<b>NMF</b>
<b>2024</b>								
Beekman V	Buyout	35,000,000	0	35,000,000	0	0	N/A	NMF
Clearlake VIII	Buyout	35,000,000	0	35,000,000	0	0	N/A	NMF
FP Venture XV	Venture Capital	40,000,000	0	40,000,000	0	0	N/A	NMF
KPS Mid Cap II	Turnaround	30,000,000	0	30,000,000	0	0	N/A	NMF
LLR VII	Growth Equity	30,000,000	0	30,000,000	0	-600,292	N/A	NMF
Thoma Bravo Explore II	Buyout	15,000,000	0	15,000,000	0	0	N/A	NMF
<b>Total 2024</b>		<b>185,000,000</b>	<b>0</b>	<b>185,000,000</b>	<b>0</b>	<b>-600,292</b>	<b>N/A</b>	<b>NMF</b>
<b>Total Portfolio</b>		<b>6,539,045,555</b>	<b>5,937,114,450</b>	<b>1,345,354,680</b>	<b>6,885,989,372</b>	<b>2,951,410,457</b>	<b>1.7 x</b>	<b>11.2%</b>

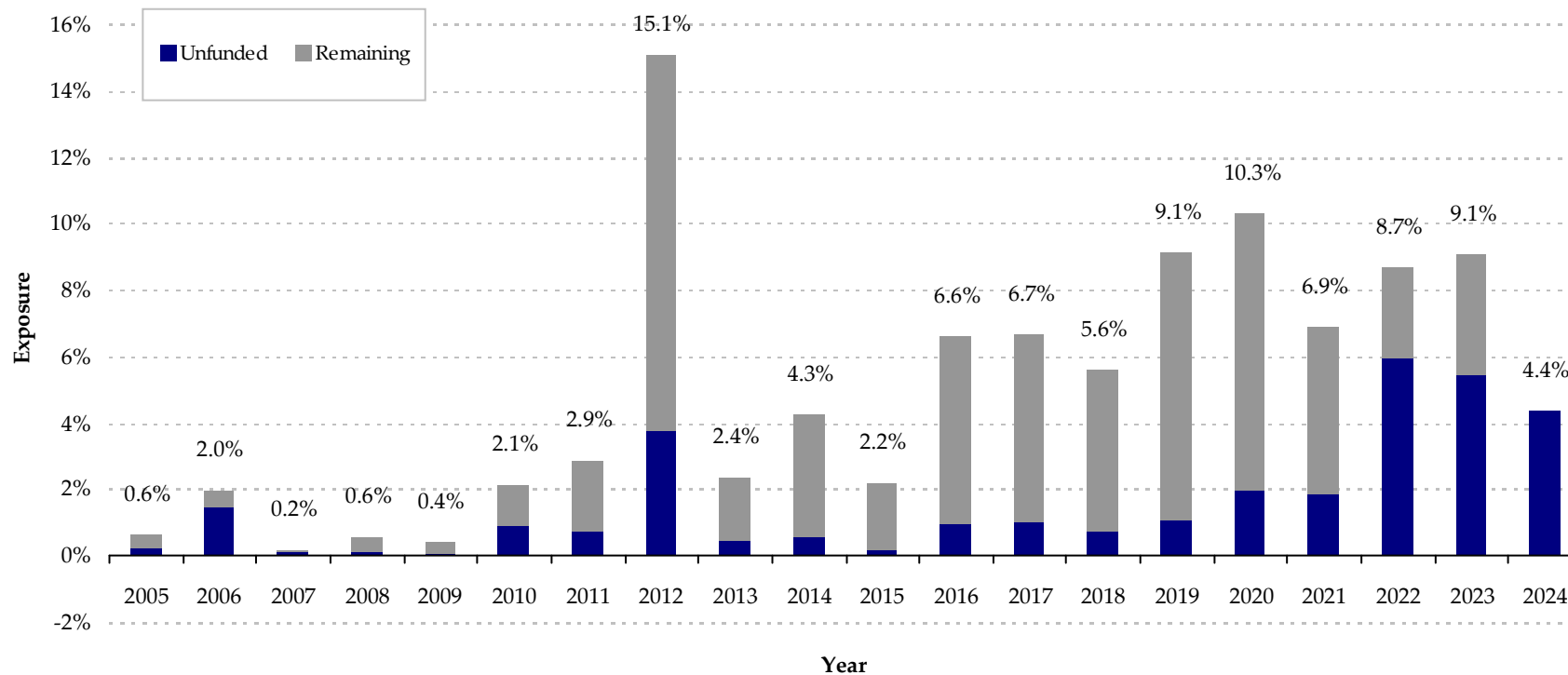


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- Remaining Value is defined as the investor's value as reported by the fund's manager.
  - TVPI is the ratio of Distributed Capital plus Remaining Value to Contributed Capital.
  - Net IRR is defined as the annualized, compound rate of return using 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").

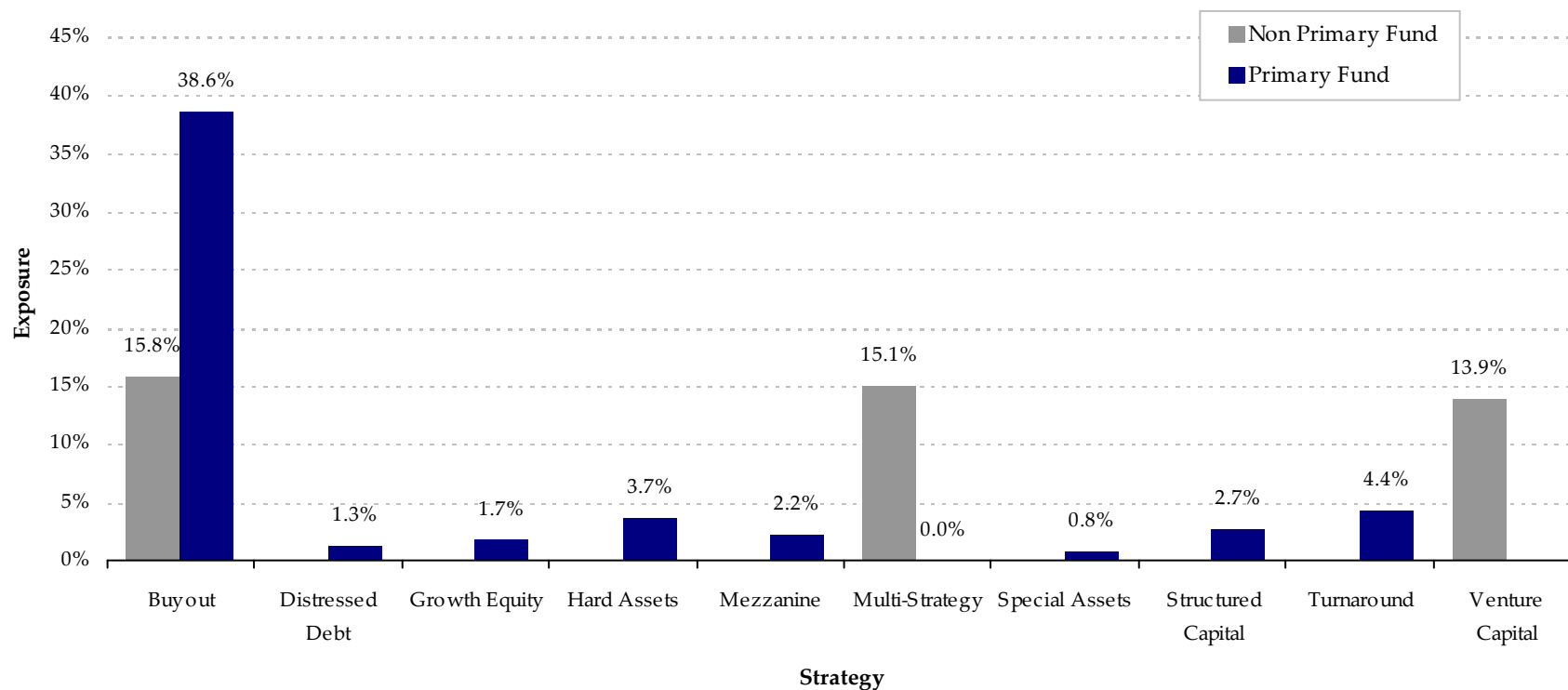
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## Diversification Analysis

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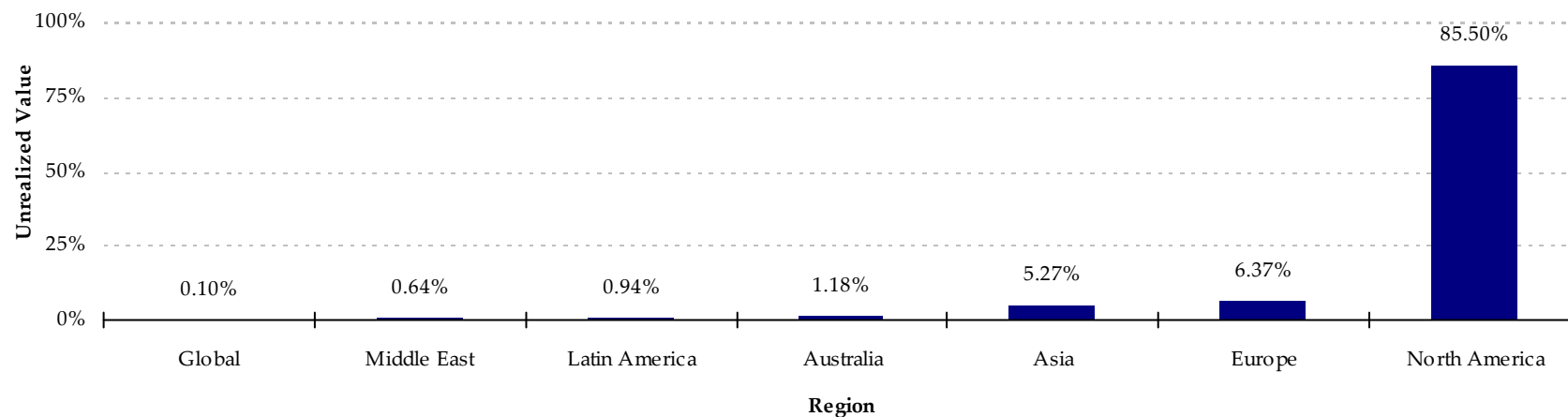


- Exposure is defined as the sum of the investor's Remaining Value plus Unfunded Commitment.
- Data includes commitments through the Report Date.

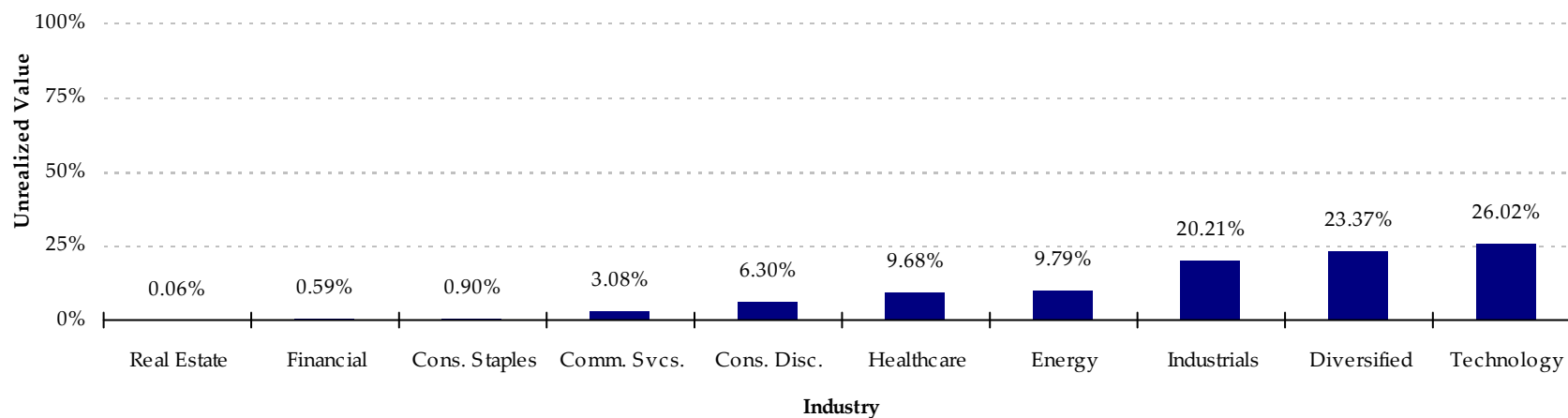


- Exposure is defined as the sum of the investor's Remaining Value plus Unfunded Commitment.
- Primary Fund represents interests in private equity funds acquired directly from the seller (i.e. fund manager). Non Primary Fund represents interests in private equity funds acquired through a commitment to a fund-of-funds or secondary fund-of-funds.

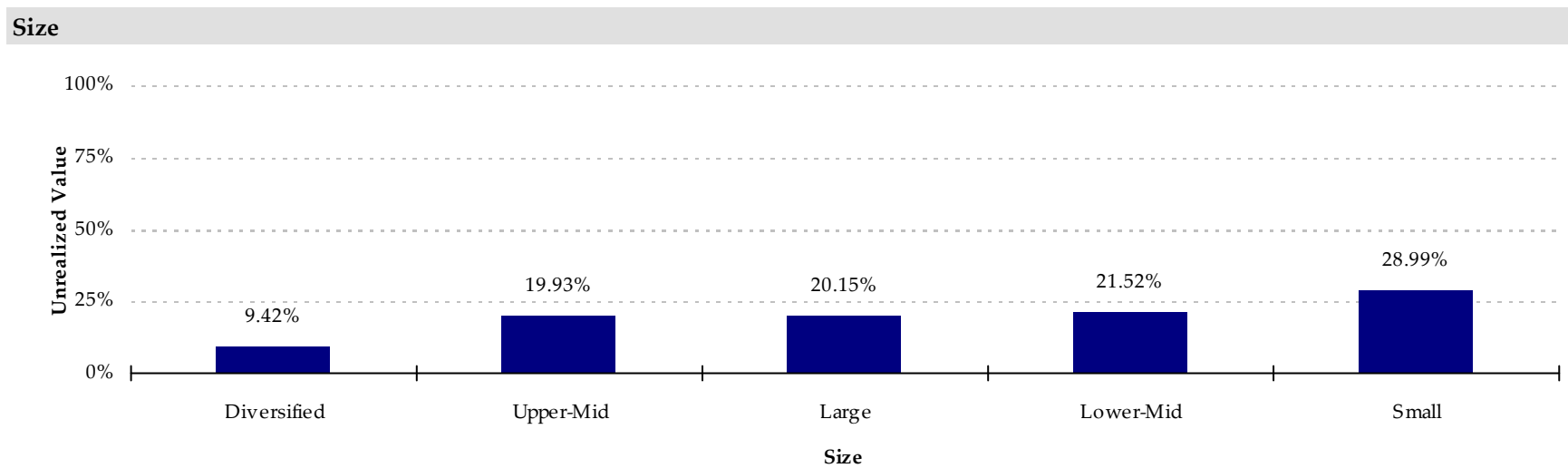
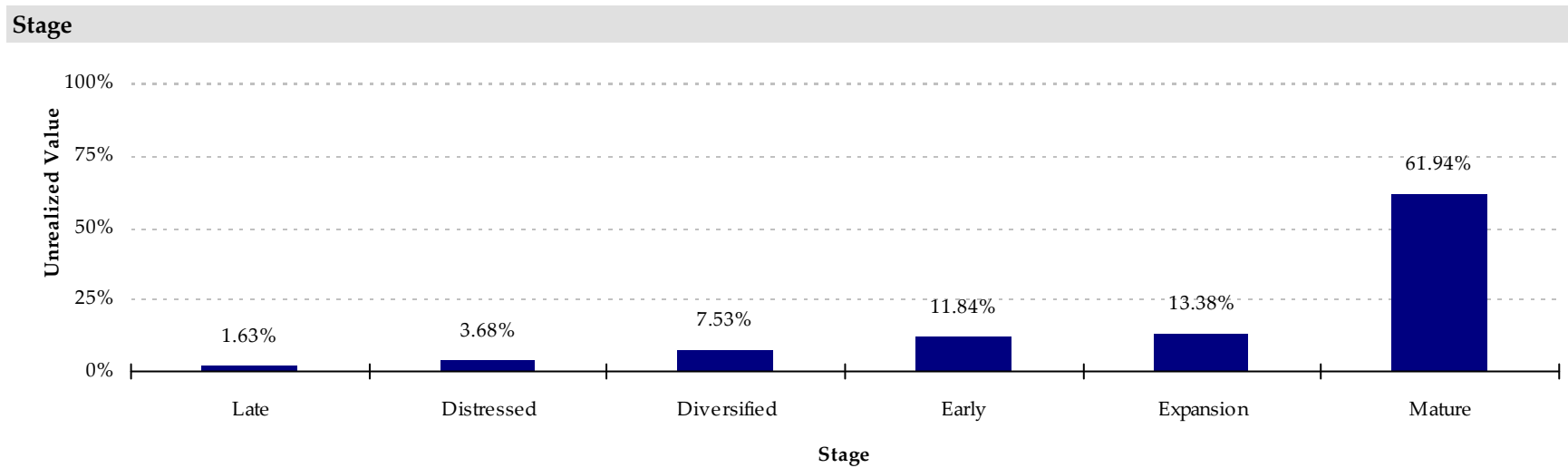
**Region**



**Industry**

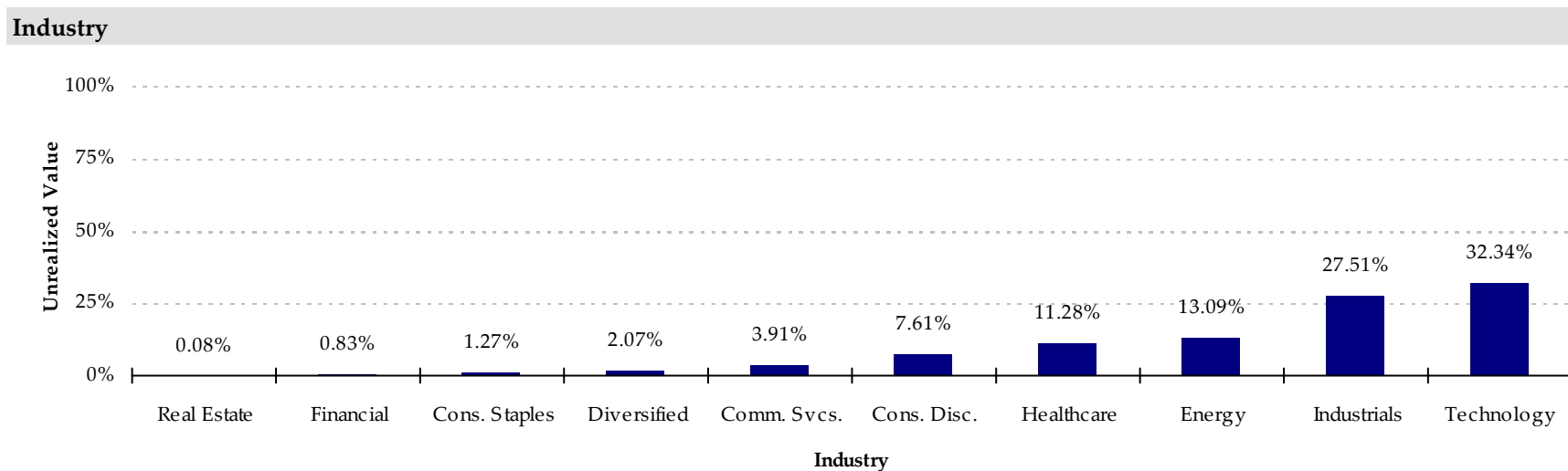
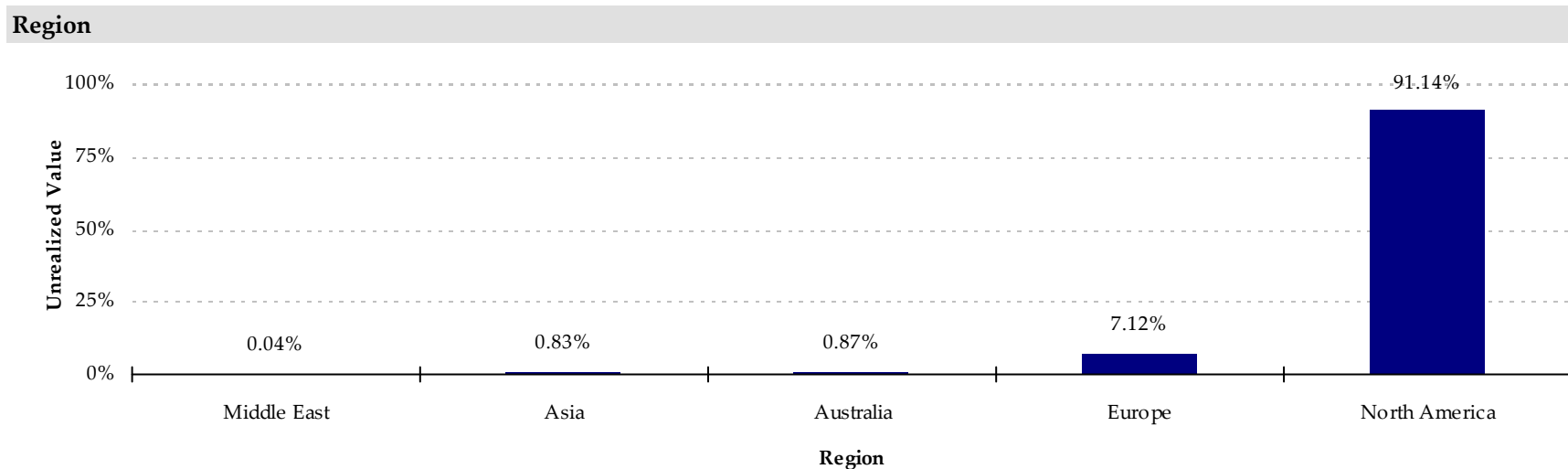


- Unrealized Value represents the value of portfolio holdings as reported by fund managers.
- Values are estimated based on the investor's percent interest in each fund's portfolio holdings.
- Values are converted to the investor's currency, when applicable, as of the Report Date.



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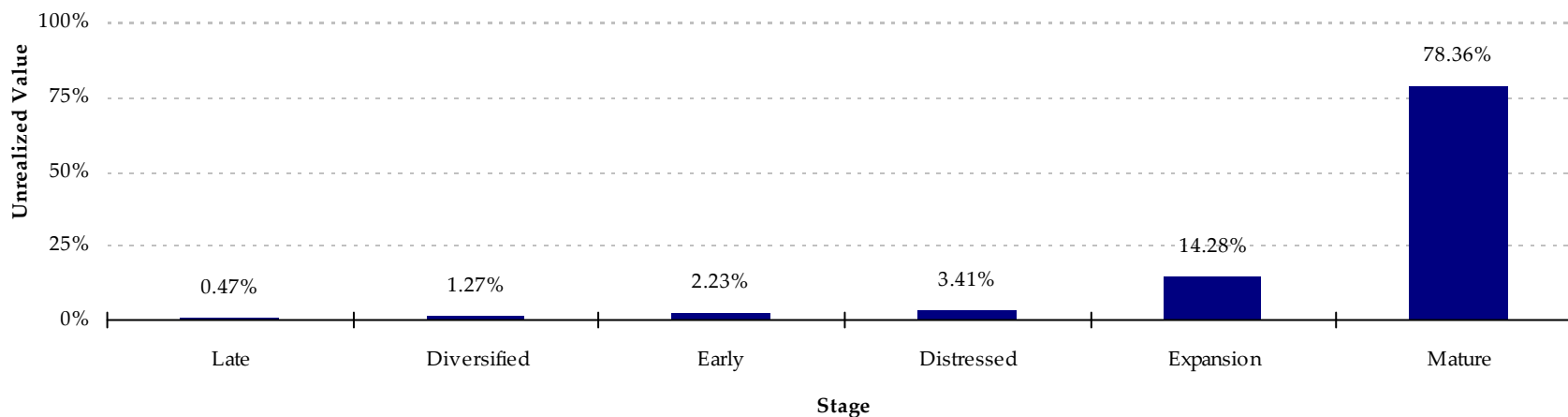
## Holdings by Region and Industry (ex Fund Holdings)



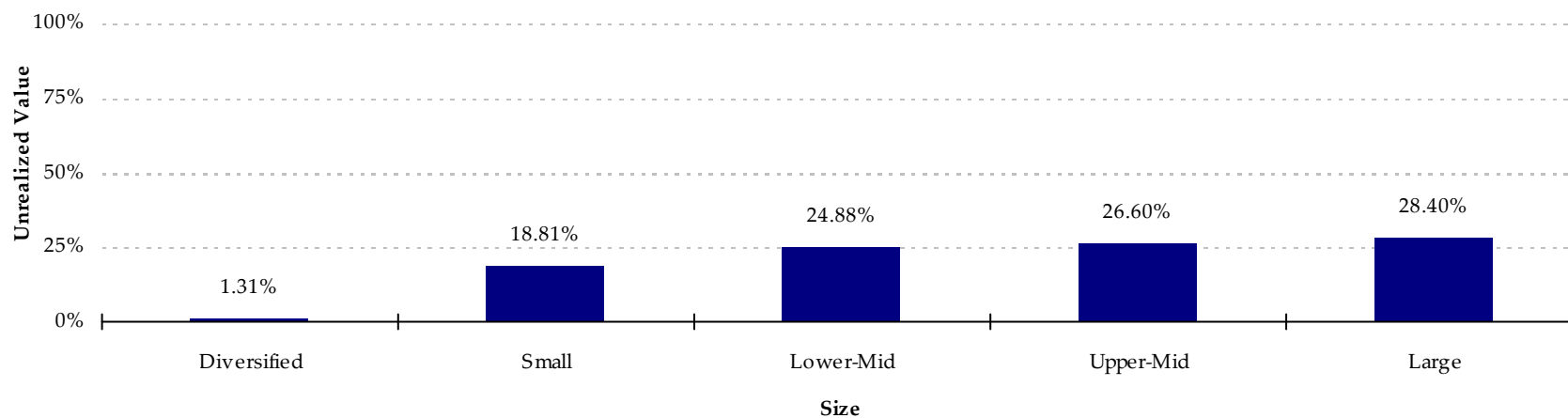
- Fund investments in other funds were excluded from this analysis.
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- Values are converted to the investor's currency, when applicable, as of the Report Date.

## Holdings by Stage and Size (ex Fund Holdings)

### Stage



### Size



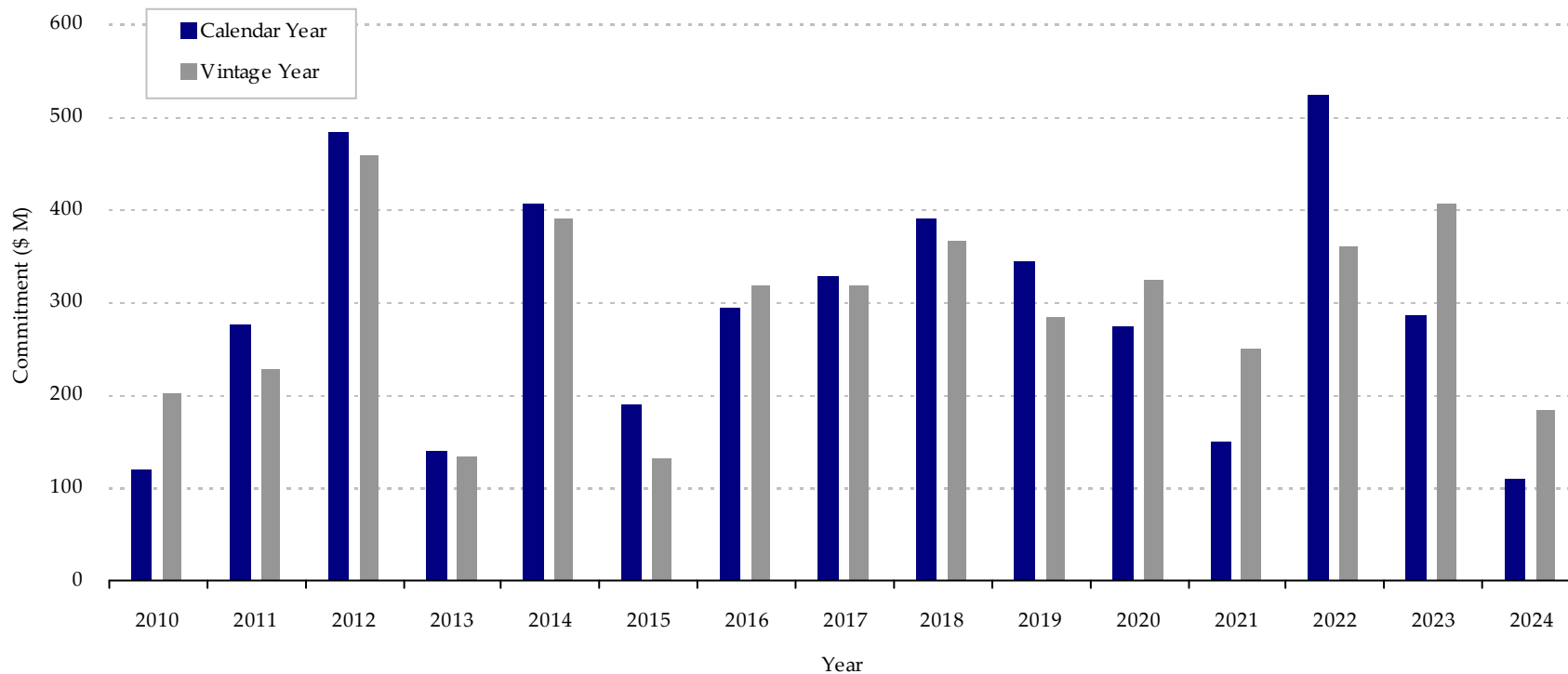
- Fund investments in other funds were excluded from this analysis.
- Unrealized Value represents the value of portfolio holdings as reported by fund managers.
- Values are estimated based on the investor's percent interest in each fund's portfolio holdings.
- Values are converted to the investor's currency, when applicable, as of the Report Date.



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## Recent Activity

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- 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.

## Recent Commitments



### Commitments for Year Ended December 31, 2023

Fund	Strategy	Date	Commitment (\$)
FP Co-Invest VI	Buyout	Feb 2023	65,000,000
Greyrock VI	Mezzanine	Mar 2023	30,000,000
KPS Mid Cap II	Turnaround	Jun 2023	30,000,000
LLR VII	Growth Equity	Jul 2023	30,000,000
Hybar LLC	Infrastructure	Jul 2023	206,200
Highland Note 2025	Hard Assets	Sep 2023	40,000,000
Post Road III	Structured Capital	Oct 2023	30,000,000
<b>Total</b>			<b>225,206,200</b>

### Year to Date Commitments as of October 15, 2024

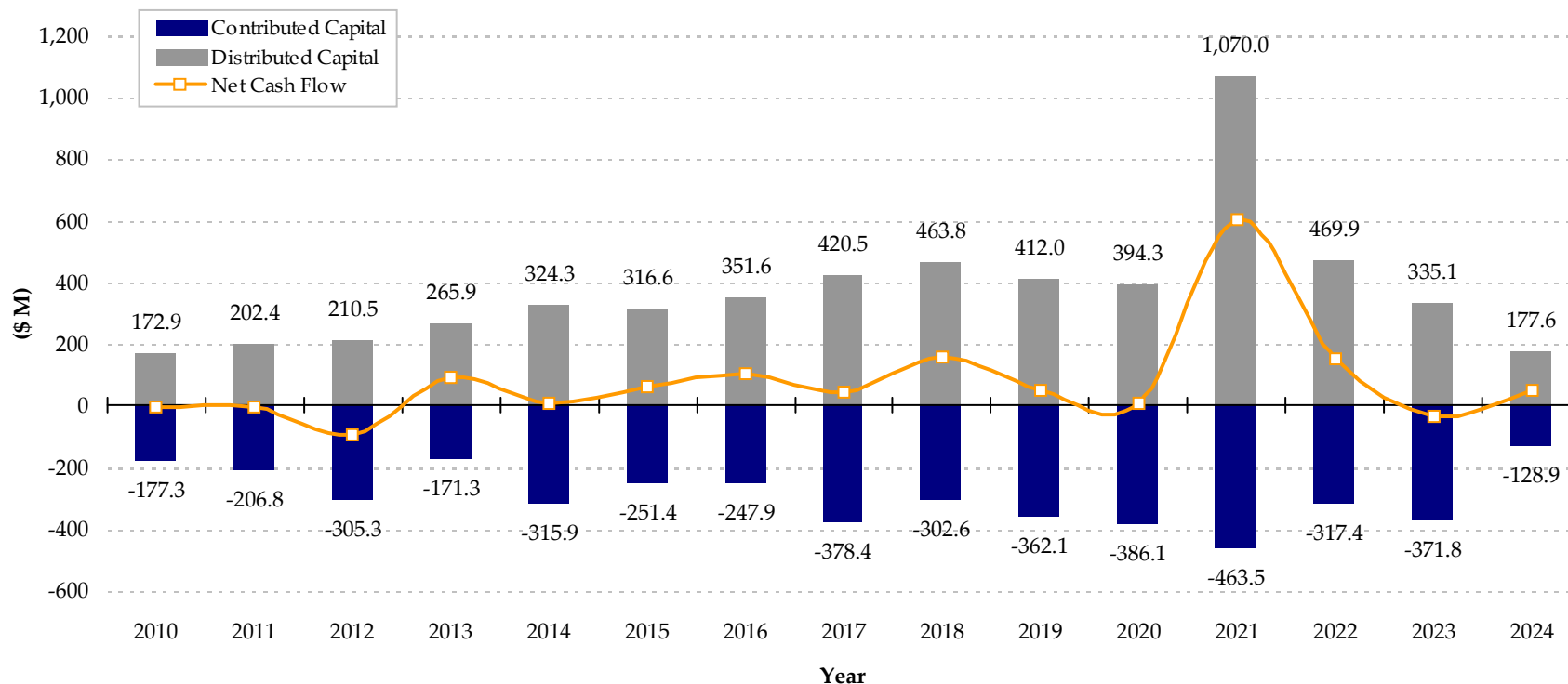
Fund	Strategy	Date	Commitment (\$)
Beekman V	Buyout	Jan 2024	35,000,000
Clearlake VIII	Buyout	Jan 2024	35,000,000
FP Venture XV	Venture Capital	Feb 2024	40,000,000
Enlightenment Capital Solutions V	Structured Capital	Jul 2024	35,000,000
FP CF Access III	Buyout	Jul 2024	40,000,000
<b>Total</b>			<b>185,000,000</b>

### Approved and Pending Commitments as of October 15, 2024

Fund	Strategy	Date	Commitment (\$)	Target
Veritas IX	Buyout	N/A	35,000,000	
FP Venture Opp II	Venture Capital	N/A	40,000,000	

- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.
- In February 2023, ATRS closed on additional \$30.0 million commitments to both FP International XI and FP VC Opps, bringing total commitments to each Fund to \$60.0 million.
- In January 2024, ATRS closed on an additional \$60.0 million commitment to FP Co-Invest VI, bringing total commitments to the Fund to \$125.0 million.

# Annual Cash Flow

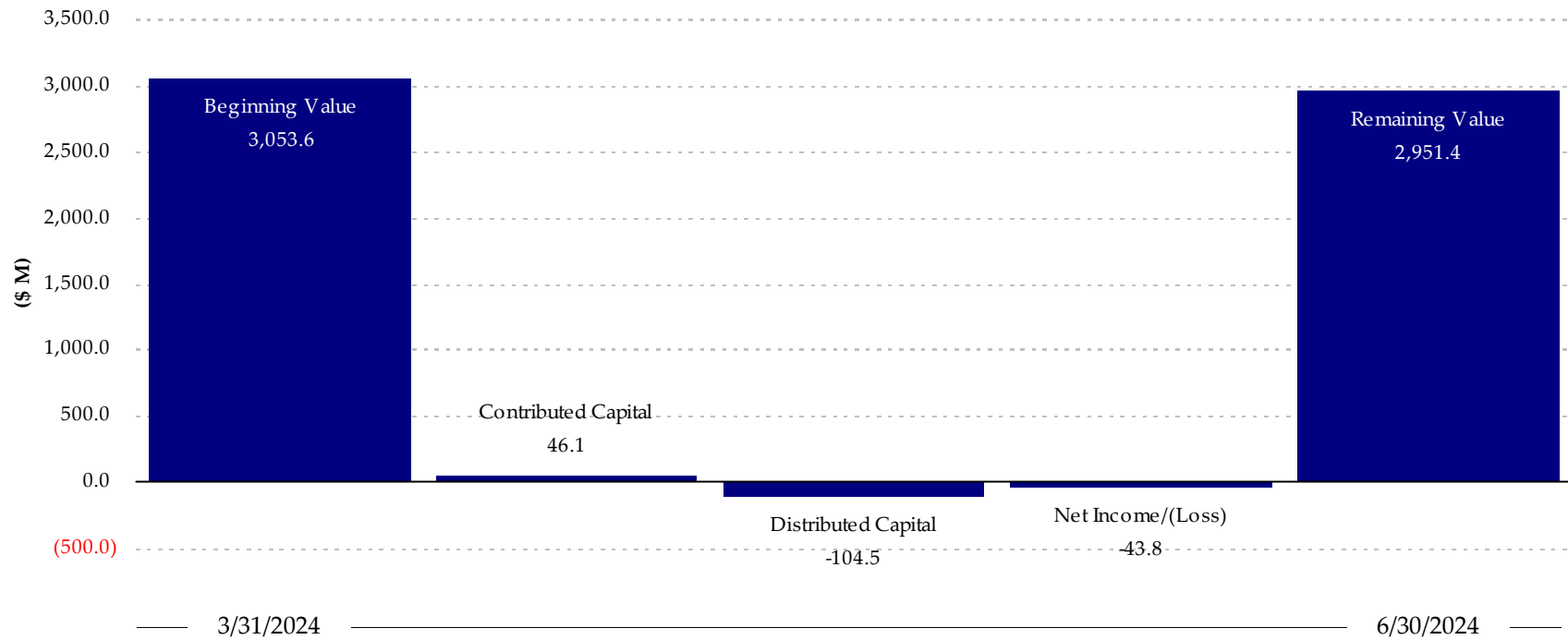


2024 (\$)		
Distributed	Contributed	Net Cash Flow
177,591,846	-128,868,413	48,723,433

▫ Cash flow data was compiled through the Report Date.

# Capital Account Change Since Prior Quarter

## Quarterly Portfolio Activity

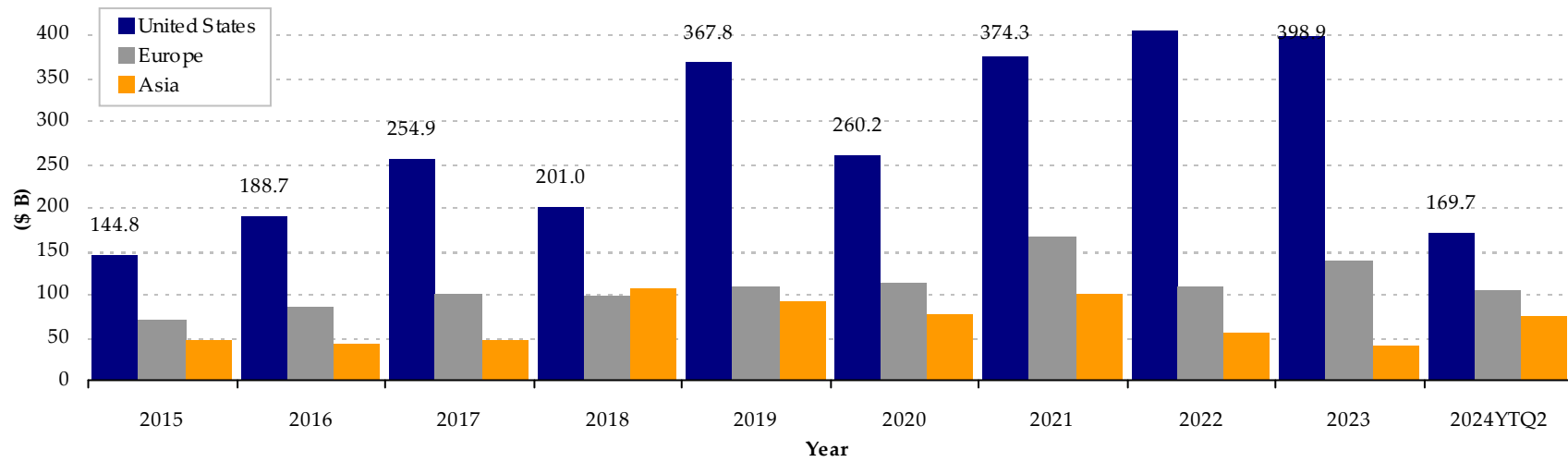


Percent Change in Value	-1.4%
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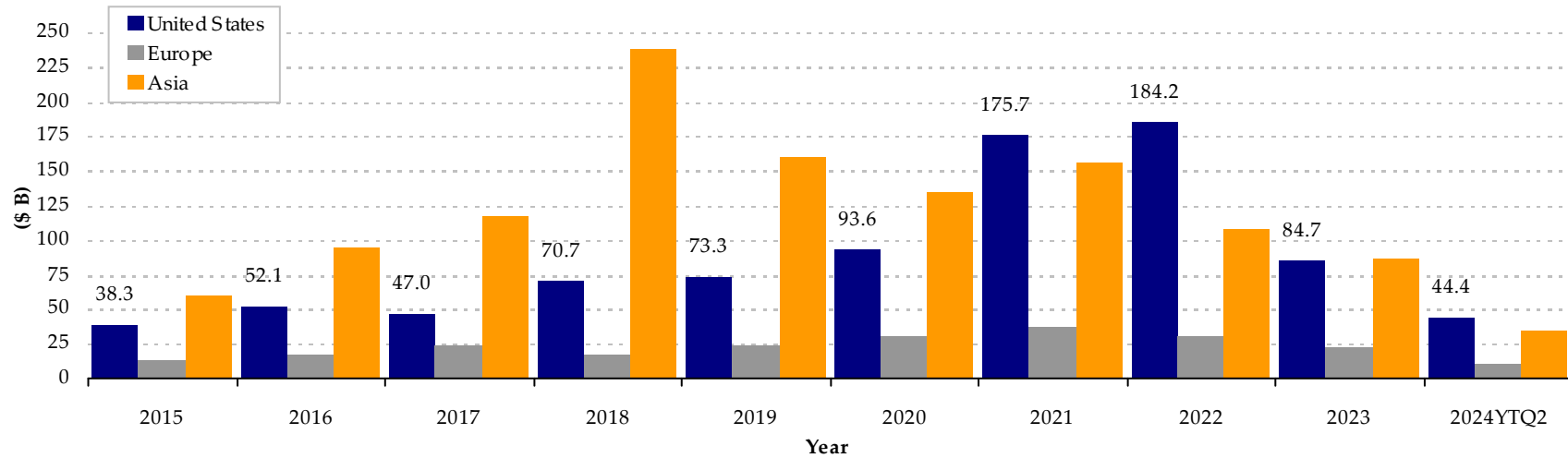
- Beginning Value represents the aggregate Remaining Value of the portfolio as of the prior quarter-end.
- Percent Change in Value is calculated by dividing Net Income / (Loss) by Beginning Value.

**Market Update**

Buyout Funds

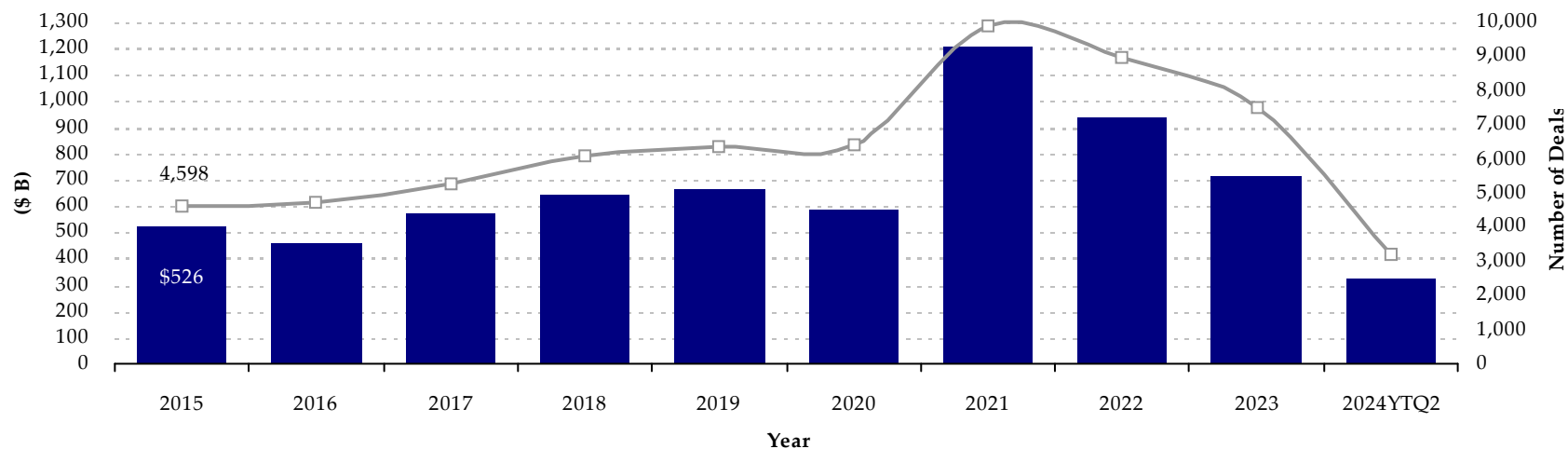


Venture Funds

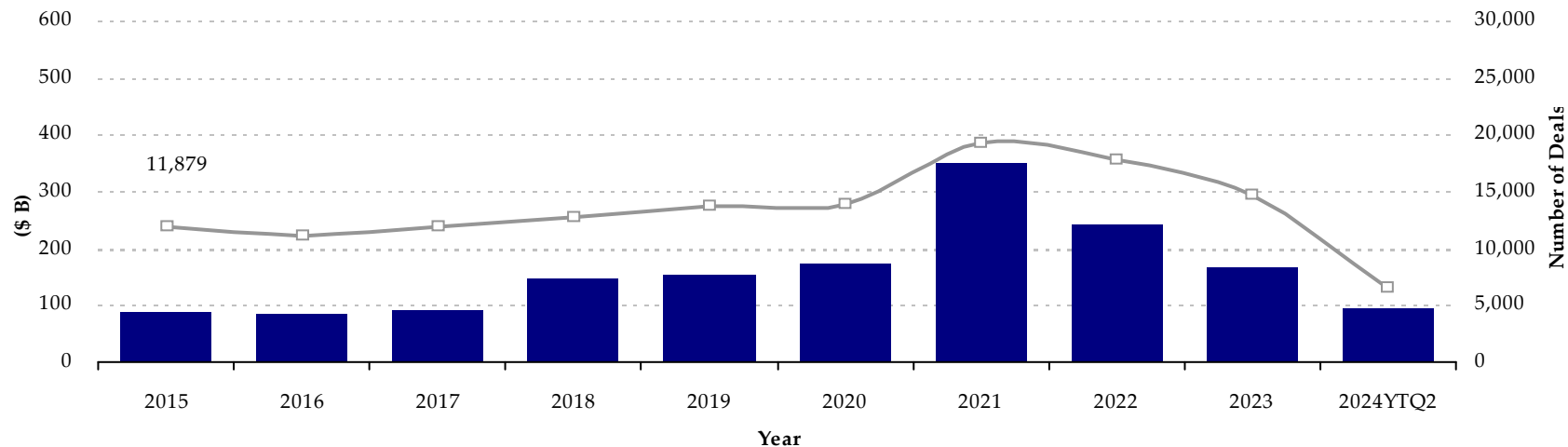


- Source: Pitchbook.
- Data compiled through Q2 2024.

U.S. Buyout



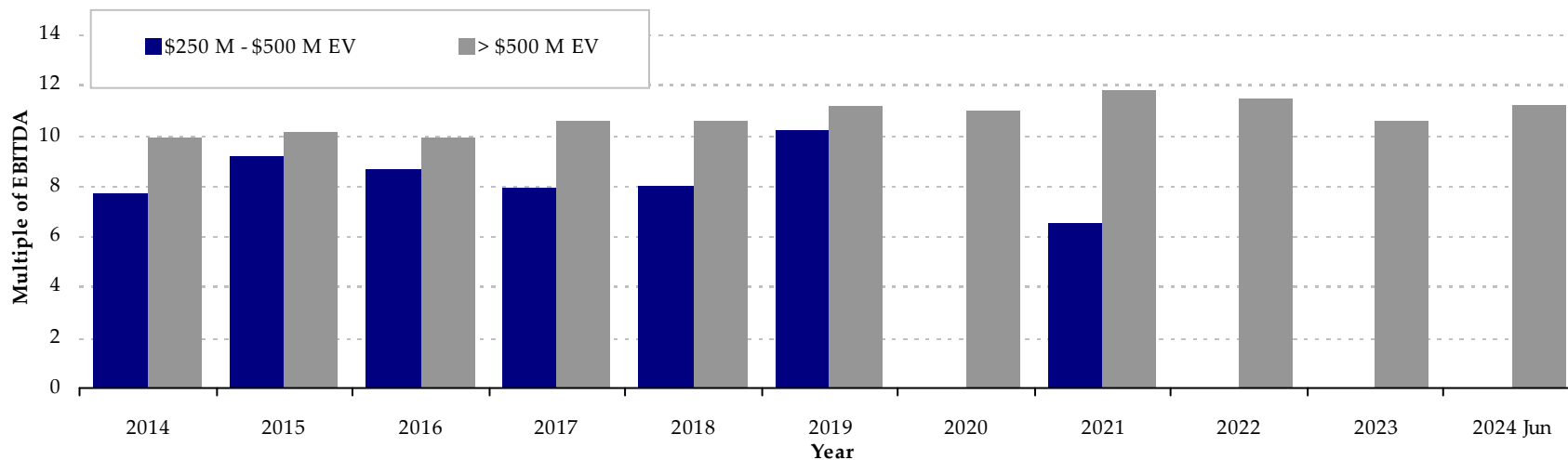
U.S. Venture



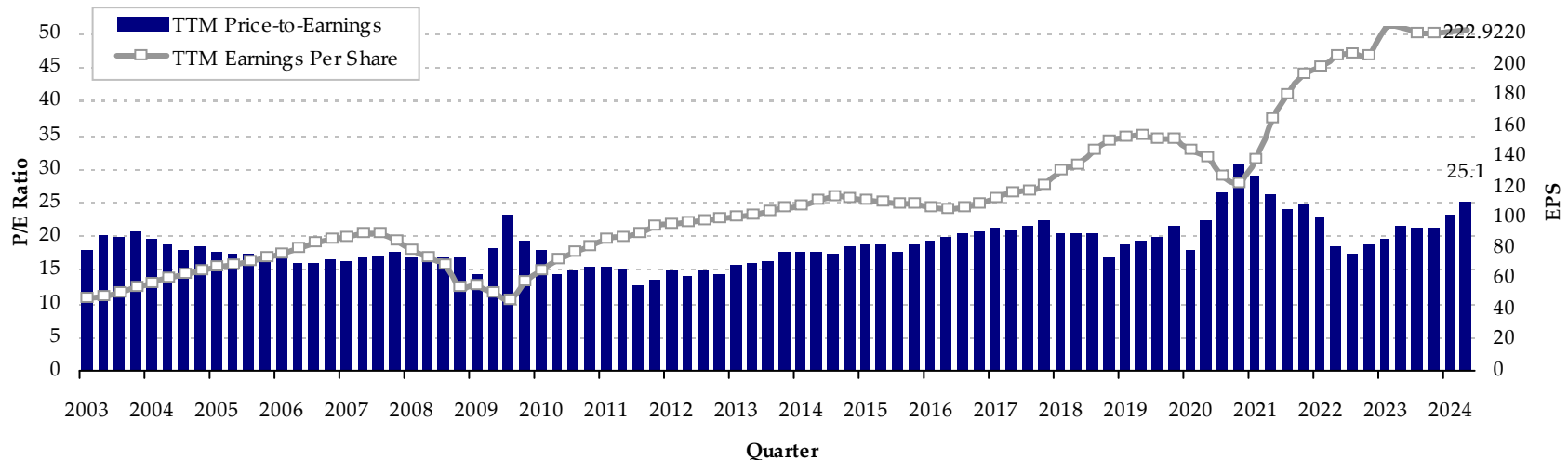
- Source: Pitchbook.
- Data compiled through Q2 2024.



U.S. LBO Pricing Multiples

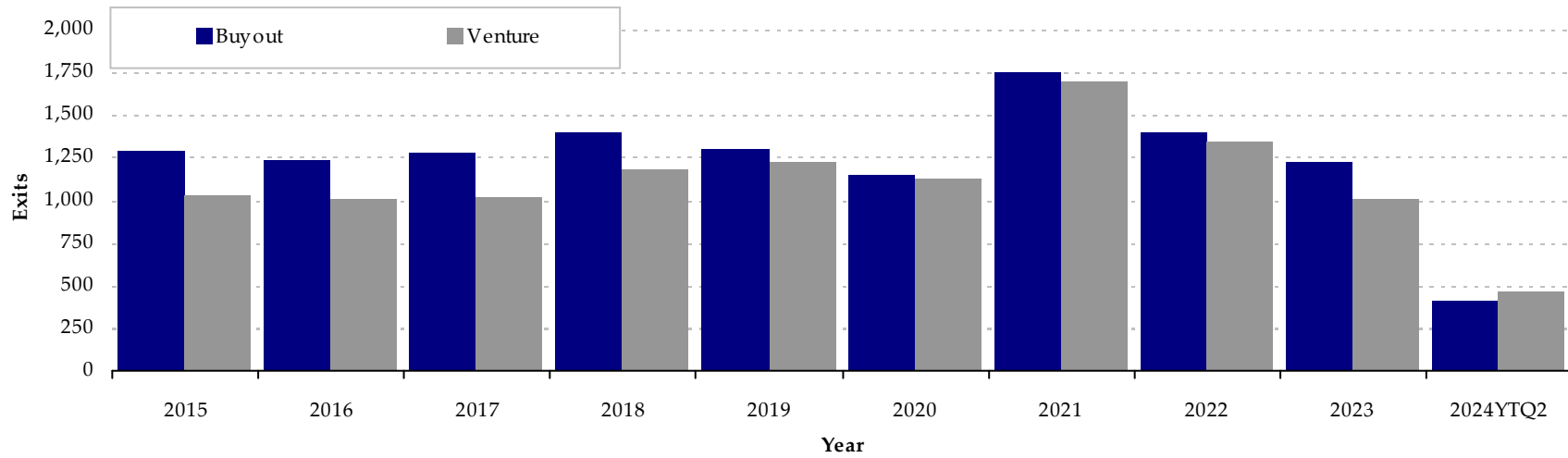


S&P 500 Valuation and Earnings

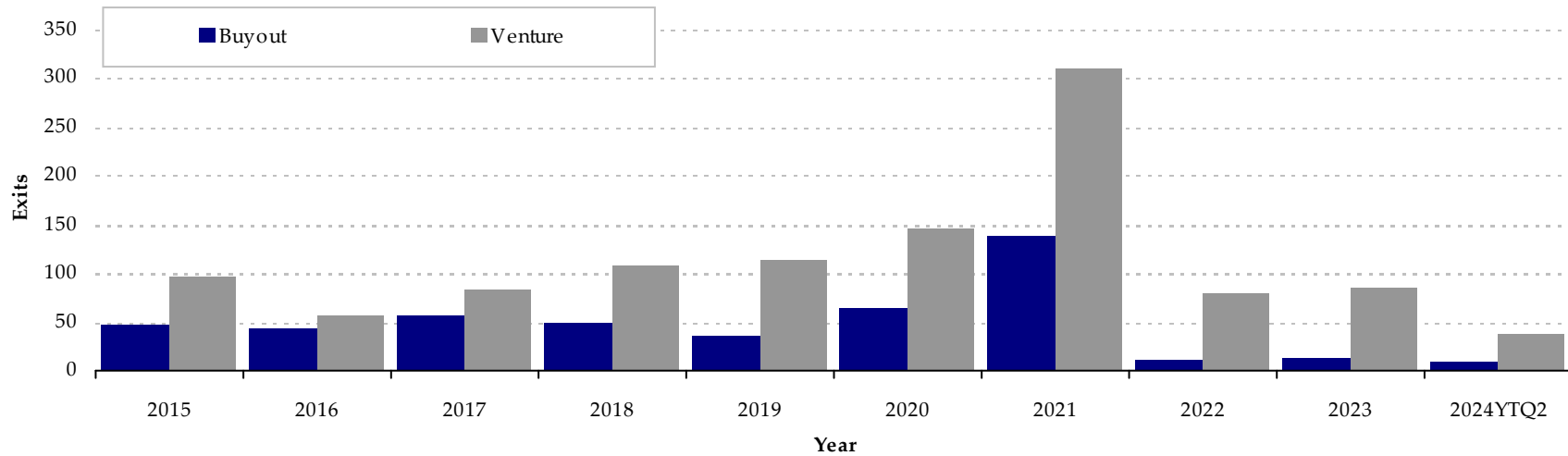


Source: Pitchbook's Leveraged Commentary; Bloomberg.

U.S. Mergers and Acquisitions



U.S. Initial Public Offerings



- Source: Pitchbook.
- Data compiled through Q2 2024.

## Vintage Returns

Group	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
U.S. ALL PD Median	7.3%	7.0%	8.2%	8.8%	9.2%	9.3%	11.7%	9.6%	10.4%	12.8%
U.S. ALL PD Top Quartile	9.7%	8.5%	11.8%	10.5%	13.4%	11.8%	15.9%	12.0%	12.8%	15.9%
U.S. All PE Median	13.2%	16.2%	15.6%	17.1%	18.2%	16.3%	14.4%	9.6%	2.6%	0.3%
U.S. All PE Top Quartile	18.9%	22.7%	21.3%	22.3%	24.8%	22.4%	20.9%	15.3%	11.4%	14.8%
U.S. Buyout Median	14.8%	19.0%	18.4%	20.4%	23.3%	18.3%	17.1%	14.3%	7.5%	0.7%
U.S. Buyout Top Quartile	23.3%	24.1%	25.6%	25.5%	29.0%	24.4%	22.7%	18.3%	13.7%	15.2%
U.S. Energy Median	6.5%	9.1%	8.3%	9.0%	14.5%	10.9%	17.0%	15.7%		16.2%
U.S. Energy Top Quartile	14.9%	11.7%	15.6%	9.4%	20.4%	20.4%	24.1%	30.1%		
U.S. Real Assets Median	9.5%	9.8%	9.9%	9.8%	10.6%	11.0%	10.4%	11.1%	4.5%	4.3%
U.S. Real Assets Top Quartile	16.6%	13.2%	14.4%	14.5%	18.1%	16.8%	16.4%	15.5%	8.7%	10.7%
U.S. Real Estate Median	10.6%	10.4%	10.0%	10.5%	9.4%	10.8%	9.5%	10.5%	4.5%	-5.2%
U.S. Real Estate Top Quartile	17.4%	14.0%	14.3%	14.6%	14.7%	16.8%	13.4%	14.2%	8.2%	8.6%
U.S. Venture Median	14.4%	16.2%	14.4%	16.8%	18.7%	15.9%	10.7%	6.5%	-1.8%	-4.5%
U.S. Venture Top Quartile	23.2%	25.8%	21.1%	21.1%	25.1%	22.1%	20.4%	12.9%	4.5%	7.1%

▫ Source: Cambridge Associates.

▫ Data compiled through March 31, 2024.

▫ Benchmark data is not available for 2021 and 2022 U.S. Energy

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## Glossary

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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

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<b>Term</b>	<b>Definition</b>
Vintage Year	The calendar year in which an investor first contributes capital to a fund



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## End Notes

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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.

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▫ 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.



**Executive Summary**  
**Riverside Value Fund II, L.P.**





### Executive Summary

**Fund** Riverside Value Fund II, L.P. (the “Fund”)

**General Partner** RVF I Associates, L.P. (the “General Partner” or “RVF”)

**Report Date** December 2024

**Fundraising** The General Partner is targeting \$550 million for the Fund. A first closing is planned for December 2024 or January 2025.

**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 350 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 four senior investment professionals (the “Principals”), whose backgrounds are summarized below.

Partner	Title	Yrs. GP	Yrs. PE	Background
Ron Sansom*	Managing Partner	5	18	Riverside Micro-Cap, GE
Sean Ozbolt	Managing Partner	5	24	Aurora Capital, HIG
Andy Fohrer	Partner	5	16	Aurora Capital, Oaktree
Craig Kahler	Partner	1	17	ORIX, Safanad, Blue Mountain

\* Joined Riverside in 2005.

### Track Record

The Fund represents the second vehicle being raised by the General Partner with the targeted strategy. The performance of Riverside Value Fund, L.P. (“Fund I”), formed in 2021, is summarized below (\$ in millions).

Fund (Vintage)	Deals			Remaining	ROI	TVPI	Net IRR
	Realized/ Total	Invested	Distributed				
Fund I (2021)	0/5	\$158.3	\$25.2	\$285.4	2.0x	1.7x	73.8%

<sup>1</sup> Gross of fees and carried interest expenses. The unrealized investments were valued by the General Partner.



In addition, the Principals have collectively been responsible for managing 21 investments at prior firms. These investments 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.
- 2. The senior investment professionals have significant private equity experience.** In particular, Messrs. Ozbolt, Fohrer and Kahler serve as the three deal leads for the Fund. The three Principals average 16 years of private equity experience. Prior to joining Riverside in 2019, Messrs. Ozbolt and Fohrer were 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. Kahler joined the General Partner in 2024. He previously worked with Mr. Ozbolt at a previous private equity firm.

**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 350-person organization, including 18 deal originators, 120 investors and 70 Operators.
- 4. While the General Partner's track record executing the Fund's strategy is limited, Fund I's performance to date has been solid.** To date, Fund I has invested \$158.3 million in five companies, which have generated a gross multiple of 2.0x cost as of June 30, 2024. Further, one of the companies is in the process of being sold for >3.5x cost.

**The Principals also have 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.



**Recommendation** Franklin Park recommends a commitment of up to \$35 million to the Fund, subject to completion of investment and operational due diligence, as well as 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. 2024-37**

**Approving Investment in Riverside Value  
Fund II, 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 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 II, L.P.**, a private equity turnaround fund that will invest in underperforming companies in the U.S.

**THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$35 million dollars (\$35,000,000.00)** in **Riverside Value Fund II, 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 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 2nd day of December 2024.**

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



**Recommendation Report  
Novacap International Technologies VII, L.P.**



## Executive Summary

<b>Fund</b>	Novacap International Technologies VII, L.P. (the “Fund”)
<b>General Partner</b>	Novacap Management Inc. (“Novacap” or the “General Partner”)
<b>Report Date</b>	December 2024
<b>Fundraising</b>	The General Partner is targeting limited partner capital commitments of \$2.75 billion. The General Partner is targeting a single closing in Q1 2025.
<b>Source</b>	Franklin Park sourced the offering directly from the General Partner.
<b>Investment Strategy</b>	<p>The Fund is being formed to make control buyout investments in middle market technology, media and telecommunications companies based in North America, primarily in Canada. The Fund will target companies with enterprise values between \$100 million and \$1 billion. The Fund’s sub-sector focuses will include software, communications infrastructure, industrial technology and tech-enabled services.</p> <p>The General Partner will primarily invest in platforms located in North America (70-80% in Canada historically) and then pursue expansion globally through add-on acquisitions.</p> <p>The General Partner will target platform companies meeting the following criteria:</p> <ul style="list-style-type: none"> <li>• Revenue of \$50-\$500 million or more</li> <li>• Control transactions in the form of partial or full shareholder buyout, spinoff, privatization, or mild restructuring/recapitalization</li> <li>• Leader or ability to become a leader in a fragmented, growing market with significant growth potential</li> <li>• Niche market and/or specific focus</li> <li>• Sector that allows an aggressive growth strategy organically or through M&amp;A</li> <li>• Broad and diversified customer base with visibility on revenue growth</li> </ul> <p>Post investment, the General Partner will assist companies in institutionalizing operations and pursuing growth through reinvigorating sales and marketing and identifying add-on acquisition opportunities.</p>
<b>Management Team</b>	<p>The General Partner is the TMT affiliate of Novacap, which was founded in 1981 by Marc Beauchamp. Novacap also sponsors buyout funds focused on the industrial, digital infrastructure and financial services sectors, with back office infrastructure and staff shared across the funds. The TMT team is led by eight Partners (the “Principals”) who are supported by three mid-level and 12 junior investment professionals.</p> <p>The Principals’ backgrounds are summarized in the table below.</p>

Principals	Office	Yrs. GP	Yrs. PE	Background
Pascal Tremblay	Montreal	21	27	Argo Global, Caisse de Depot, LaserPro
Stephane Tremblay	Montreal	18	18	Memotec, Espion/ESP Media, Kontron Canada
Eric Desrosiers	Montreal	5	5	GMP Securities, Tootelo Innovation
David Lewin	Montreal	13	13	PSP Investments, National Bank
Kristin Smith	Toronto	6	6	BMO Bank of Montreal, KPMG
David Armstrong	Toronto	1	15	Onex
David Brassard	Montreal	8	10	Persistence Capital Partners
Samuel Nasso	Montreal	12	12	---

## Track Record

The General Partner raised four prior TMT-focused funds (“Funds III-VI”) in 2007, 2014, 2017 and 2020, respectively. The following table summarizes the performance of Funds V and VI as of June 30, 2024 (\$ 000s).

Fund (Vintage)	Deals Realized/ Total	Invested	Distributed	Remaining	ROI	TVPI	Net IRR
Fund V (2017)	1 / 8	769,171	628,985	1,362,200	2.6x	2.0x	25.8%
Fund VI (2020)	1 / 5	874,510	576,400	705,321	1.5x	1.3x	17.8%

<sup>1</sup> Gross of fees and carried interest expenses. The unrealized investments were valued by the General Partner.

## Investment Evaluation

- The Fund will pursue a compelling investment strategy.** Competition in the Fund’s target markets in Canada, particularly Quebec, is relatively limited in comparison to the United States. The General Partner strives to have every TMT company in Canada in its database and proactively seeks to develop relationships years in advance of a potential transaction. The General Partner has been able to acquire companies relatively attractive prices for healthy technology companies in the current market. Post investment, the General Partner actively works with entrepreneurs to professionalize the business and expand geographically.
- The General Partner is well-positioned in the target market.** The General Partner has a competitive advantage in Quebec due to its presence there for more than 40 years, its brand in the region, the deep relationships of the Principals and the relatively lower level of competition. These factors have led to proprietary deals and below market purchase multiples. In competitive processes in Canada, often a tie will go to the General Partner as a local firm. These advantages have positioned the General Partner to be able to source a significant majority of the prior platforms and add-on acquisitions on a proprietary basis.
- The team is highly experienced and possesses complementary skills.** The Principals have diverse and complementary backgrounds in private equity, TMT operations, and investment banking. Several of the Principals have prior experience as founders and/or CEOs of technology companies. The Principals leverage their operating experience to source and diligence deals, establish comfort with target management teams and assist in operational improvements post-acquisition.
- The General Partner's prior track record is impressive.**
  - Fund V has produced a 2.0x TVPI and 37.6% net IRR as of June 30, 2024, ranking in the second quartile compared to 2017 U.S. buyout funds.
  - Fund VI is early in its life, but has generated a 1.3x TVPI and a 17.8% net IRR as of June 30, 2024, ranking in the first quartile for 2021 U.S. buyout funds.
- The Fund size represents a significant increase from the prior fund.** At a target of \$2.75 billion, the Fund would be over 60% larger than Fund VI. As a result, the General Partner may see more competition for transactions from larger private equity firms and other buyers. These concerns are partially mitigated by:
  - The General Partner has sufficient team depth to manage a larger pool of capital. In particular, the team is deep with 23 investment professionals, including eight Principals; while the General Partner only has 11 unrealized investments.
  - Fund V and Fund VI have completed several large platform acquisitions at reasonable prices. While early in their life, the performance of the larger Fund V investments are off to a strong start, including its first exit, which

generated a gross ROI of 2.7x invested capital. The investments in Fund VI are young and performance is too early to be meaningful.

- The General Partner does not plan to shift its strategy or investment criteria. The General Partner often starts with a smaller platform, which is built into a large business through add-ons. Competition for smaller platforms is more limited compared to larger transactions.

**Recommendation** Franklin Park recommends a commitment of up to \$35 million to the Fund, subject to completion of investment and operational due diligence, as well as satisfactory negotiation of final documentation, based on the following:

- The General Partner's strategy is compelling;
- The team is highly experienced and possesses complementary skills; and
- The General Partner's prior track record is impressive.

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

**RESOLUTION  
No. 2024-38**

**Approving Investment in NovaCap International  
Technologies VII, 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 private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **NovaCap International Technologies VII, L.P.**, a buyout fund that will invest in middle market technology, media and telecommunications platform companies in North America with add-on acquisitions made globally.

**THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$35 million dollars (\$35,000,000.00)** in **NovaCap International Technologies VII, 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 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 2nd day of December 2024.**

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



**Recommendation Report  
Revelstoke Capital Partners Fund IV, L.P.**

## Executive Summary

<b>Fund</b>	Revelstoke Capital Partners Fund IV, L.P. (the "Fund")																												
<b>General Partner</b>	Revelstoke Capital Partners (the "General Partner" or "Revelstoke")																												
<b>Report Date</b>	December 2024																												
<b>Fundraising</b>	The General Partner is targeting limited partner capital commitments of \$1.75 billion. The General Partner is targeting a first closing in 1Q25.																												
<b>Source</b>	Franklin Park sourced the offering directly from the General Partner.																												
<b>Investment Strategy</b>	<p>The Fund is being formed to make control and significant minority investments in small and lower middle market companies in the U.S with \$5-\$75 million of EBITDA. The Fund will primarily target companies operating in the healthcare and related business services sectors. The Fund will target healthcare companies that provide reduced cost, improved health and wellness outcomes and/or improved patient/customer experience. The Fund will predominantly target investments in companies for which it represents the first institutional capital and where the companies' founders are rolling a significant amount of capital.</p> <p>The General Partner has a proactive thematic approach to sourcing investment opportunities. After identifying a theme, the General Partner maps the industry to find actionable targets, attempts to become an expert on the sub-sector and directly approaches targets. The General Partner is currently pursuing themes in value-based care, home care, behavioral health and health and wellness, among others.</p>																												
<b>Management Team</b>	<p>Based in Denver, with offices in New York and Seattle, the General Partner was founded in 2013 by Mark King, Dale Meyer and Simon Bachleda, who previously worked together at KRG Capital Partners.</p> <p>Today, the General Partner is led by Mr. Bachleda and five other senior professionals (collectively, the "Principals") who are supported by 15 mid-level and junior investment professionals, 14 finance, IR and admin professionals and a 16-person Portfolio Transformation Group.</p> <p>The Principals' backgrounds are summarized in the table below.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="text-align: left;">Principals</th> <th style="text-align: center;">Yrs. GP</th> <th style="text-align: center;">Yrs. PE</th> <th style="text-align: left;">Background</th> </tr> </thead> <tbody> <tr> <td>Simon Bachleda</td> <td style="text-align: center;">11</td> <td style="text-align: center;">22</td> <td>Eos Capital, KRG Capital</td> </tr> <tr> <td>Russell Cassella</td> <td style="text-align: center;">7</td> <td style="text-align: center;">8</td> <td>GCM Grosvenor, Credit Suisse PE</td> </tr> <tr> <td>Eric Shuey</td> <td style="text-align: center;">7</td> <td style="text-align: center;">14</td> <td>Fresenius, Liberty Dialysis, Aurora, Deutsche Bank</td> </tr> <tr> <td>Andrew Welch</td> <td style="text-align: center;">10</td> <td style="text-align: center;">10</td> <td>Morgan Stanley</td> </tr> <tr> <td>Anthony Hayes</td> <td style="text-align: center;">7</td> <td style="text-align: center;">7</td> <td>Jefferies, Strand Associates</td> </tr> <tr> <td>Matthew Dubbioso</td> <td style="text-align: center;">&lt;1</td> <td style="text-align: center;">14</td> <td>New Mountain, Vestar, Bank of America</td> </tr> </tbody> </table>	Principals	Yrs. GP	Yrs. PE	Background	Simon Bachleda	11	22	Eos Capital, KRG Capital	Russell Cassella	7	8	GCM Grosvenor, Credit Suisse PE	Eric Shuey	7	14	Fresenius, Liberty Dialysis, Aurora, Deutsche Bank	Andrew Welch	10	10	Morgan Stanley	Anthony Hayes	7	7	Jefferies, Strand Associates	Matthew Dubbioso	<1	14	New Mountain, Vestar, Bank of America
Principals	Yrs. GP	Yrs. PE	Background																										
Simon Bachleda	11	22	Eos Capital, KRG Capital																										
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Andrew Welch	10	10	Morgan Stanley																										
Anthony Hayes	7	7	Jefferies, Strand Associates																										
Matthew Dubbioso	<1	14	New Mountain, Vestar, Bank of America																										
<b>Track Record</b>	The General Partner has raised three prior funds. The following chart summarizes the performance of the prior funds, as of June 30, 2024.																												

Fund (Vintage)	Deals			Remaining	ROI	TVPI	Net IRR
	Realized/Total	Invested	Distributed				
Fund I (2015)	8/10	\$266.0	\$596.7	\$309.2	3.4x	2.7x	20.5%
Fund II (2018)	3/11	604.6	330.3	\$908.4	2.0x	1.7x	17.8%
Fund III (2021)	0/6	730.7	16.5	828.9	1.2x	1.0x	0.7%

<sup>1</sup> Gross of fees and carried interest expenses. The unrealized investments were valued by the General Partner.

## Investment Evaluation

- The Fund's strategy is compelling.** The return potential for the Fund's strategy is high given the Fund's focus on small and lower middle market quality companies. Purchase prices for smaller companies are typically lower than larger companies, and smaller companies often have higher growth potential. Moreover, there are significant opportunities for value creation with smaller companies that an experienced private equity investment team can exploit.
- The General Partner is well positioned in its target market.** The General Partner's proactive research-driven approach to identifying healthcare sub-sectors, developing investment themes, and originating target companies should be advantageous in sourcing less competitive deals. The General Partner's experience and success in the healthcare sector differentiates it from generalist competitors.
- The Principals have complementary operating and investing experience.** Simon Bachleda has over 22 years of private equity investment experience. Eric Shuey has significant healthcare operating experience, having founded and led several healthcare companies including Liberty Dialysis, which was sold for \$2.3 billion. Russell Cassella, Andrew Welch and Anthony Hayes have each been with the General Partner for at least seven years.
- Fund I and II have generated solid aggregate performance.**
  - Fund I has invested \$266.0 million in 10 portfolio companies, which have generated a net TVPI of 2.7x, as of June 30, 2024. To date, eight investments have been realized for a gross multiple of 3.3x cost.
  - Fund II has invested \$604.6 million in 11 portfolio companies, which have generated a net TVPI of 1.7x, as of June 30, 2024. To date, three investments have been realized for a gross multiple of 2.3x cost.

**Fund III is young and has not had any exits to date.** Fund III started investing in 2021 and currently includes seven portfolio companies, all of which are unrealized. These companies have completed 22 add-on acquisitions and are projected to achieve average revenue and EBITDA CAGR from 2023A to 2025E of 14% and 21%, respectively.

**Recommendation** Franklin Park recommends a commitment of up to \$35 million to the Fund, subject to completion of investment and operational due diligence, as well as satisfactory negotiation of final documentation, based on the following:

- The General Partner's strategy is compelling;
- The Principals have complementary operating and investment experience; and
- The General Partner's track record is attractive.

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

**RESOLUTION  
No. 2024-39**

**Approving Investment in Revelstoke Capital Partners  
Fund IV, 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 private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **Revelstoke Capital Partners Fund IV, L.P.**, a buyout fund that will invest in small and lower middle market healthcare and related business services companies.

**THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$35 million dollars (\$35,000,000.00)** in **Revelstoke Capital Partners Fund IV, 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 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 2nd day of December 2024.**

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





**Executive Summary**  
**Peak Rock Capital IV, L.P.**





### Executive Summary

**Fund** Peak Rock Capital IV, L.P. (the “Fund”)

**General Partner** Peak Rock Capital (the “General Partner”)

**Report Date** December 2024

**Fundraising** The General Partner is targeting \$2.0 billion for the Fund with a cap of \$2.5 billion. The General Partner has closed on over \$2.0 billion and expects to hold a final close in Q1 2025

**Source** Park Hill Group is serving as placement agent for the Fund.

**Investment Strategy** The Fund will make control oriented investments in undermanaged or underperforming mid-sized companies. The Fund will target founder-owned businesses, carve-outs and special situations. Target companies will be recession resilient with revenues of \$50 million and \$500 million in the consumer, technology, healthcare and industrial sectors.

The Fund will focus on investments with the following characteristics:

- Founder-owned, carve-outs, special situations; avoid secondary transactions
- \$50-\$500 million in revenue (lower for software)
- Recession resilient business models, including long-term, recurring customer relationships and differentiated products or services
- Fundamentally sound businesses that have encountered underperformance or operational challenges
- Sellers with objectives other than maximizing value

**Management Team** Peak Rock was formed in 2012 by Anthony DiSimone, Steve Martinez, Peter Liebman, and Tiffany Kosch who formerly worked as part of Aurora Resurgence and H.I.G. Capital. Based in Austin, TX, with a satellite office in London, the firm currently manages funds focused on control equity, private credit and real estate strategies.

The private equity team is overseen by Messrs. DiSimone and Martinez and led by seven senior professionals (collectively, the “Principals”), supported by nine mid and 12 junior investment professionals, a business development team and an operating professional group. The Principals’ backgrounds are summarized below.

Partner	Yrs. GP	Yrs. PE	Background
Anthony DiSimone	12	23	Aurora Resurgence, HIG Bayside
Steve Martinez	12	27	Aurora Resurgence, Goldman Special Sit
Peter Leibman	12	18	Aurora Resurgence, Bain & Co.
Robert Strauss	11	22	Aurora Resurgence, Insight Equity
Jordan Campbell	11	11	McKinsey & Co., Houlihan Lokey
Alex Dabbous	7	19	Montagu, Booz Allen
Michael Graham	8	11	Capitala, ArCapita
Spencer Moore	11	13	Riverside, Arcapita
Preston Thomas	8	12	HIG, Sorenson Capital



**Track Record**

The General Partner raised three prior funds. Fund I formed in 2013 targeted a mix of private equity and credit investments before the strategies were separated into distinct funds in 2017. The table below summarizes the performance of the prior funds, as of June 30, 2024 (\$M).

Fund (Vintage)	Deals Realized/ Total	Invested	Distributed	Remaining	ROI	TVPI	Net IRR
Fund I (2013)	15/16	\$593.0	\$773.3	\$366.1	1.9x	1.6x	16.8%
Fund II (2017)	6/10	674.2	1,545.1	313.0	2.8x	2.1x	36.1%
Fund III (2021)	0/12	1,507.1	338.5	1,998.3	1.6x	1.5x	26.3%

<sup>1</sup> Gross of fees and carried interest expenses. The unrealized investments were valued by the General Partner.

**Investment Evaluation**

- The Fund's strategy is compelling.** The return potential for the Fund's strategy is high given the focus on mid-market undermanaged or underperforming companies. Undermanaged or underperforming businesses tend to attract relatively less competition from buyers, which should allow the General Partner to acquire companies at conservative valuations. Additionally, there is opportunity to generate excess returns through post-investment efforts to improve the businesses and accelerate growth.
- The General Partner's senior investment team is experienced and cohesive.** The nine senior professionals have been working together for an average of 10 years and have an average of 17 years of private equity investment experience. Additionally, the investment team is supported by dedicated business development and in house operating professionals.
- Funds II and III have generated attractive returns.**
  - Fund II has invested \$674.2 million in 10 portfolio companies which have generated a gross multiple of 2.8x cost, as of June 30, 2024. To date, 6 of these investments have been realized for a gross multiple of 4.1x cost.
  - Fund III has invested \$1.5 billion in 12 portfolio companies which have generated a gross multiple of 1.6x cost, as of June 30, 2024. While no exits have occurred to date, several investments have achieved partial realizations and the underlying portfolio's revenue and EBITDA have generated average CAGRs of 23% and 27%, respectively.

**However, Fund I has generated moderate performance.** Fund I has invested \$593.0 million in 16 portfolio companies, 15 of which have been realized for a gross multiple of 1.7x cost. Overall, Fund I has generated second quartile performance by IRR and third quartile performance by TVPI. Following Fund I, the General Partner (1) separated its credit strategy into another fund and (2) emphasized avoiding lower quality businesses, which were responsible for several of the losses in Fund I.

- The Fund size represents a significant increase from the prior fund.** While the Fund's cap represents a modest increase in size, Fund III was over twice the size of Fund II. However, the General Partner has grown its team commensurately with the growth in fund sizes and plans to continue to focus on acquisitions of mid-sized businesses.



**Recommendation** Franklin Park recommends a commitment of up to \$35 million to the Fund, subject to completion of investment and operational due diligence, as well as 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 is experienced and cohesive; and
- The General Partner's aggregate track record is solid.

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

**RESOLUTION  
No. 2024-40**

**Approving Investment in Peak Rock Capital  
Fund IV, 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 private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **Peak Rock Capital Fund IV, L.P.**, a turnaround fund that will invest in undermanaged or underperforming mid-sized companies in the consumer, technology, healthcare and industrial sectors.

**THEREFORE, BE IT RESOLVED**, that the ATRS Board approves an investment of up to **\$35 million dollars (\$35,000,000.00)** in **Peak Rock Capital Fund IV, 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 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 2nd day of December 2024.**

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



# Arkansas Teacher Retirement System 2025 Investment Plan

December 2024

## 2024 Actual Commitments vs. Plan

ATRS is expected to commit up to \$390 million in 2024 (vs. plan of \$385 million)

### ATRS Commitments

Investment	Strategy	Region	ATRS Commitment	Board Approval
Enlightenment V	Private Debt - Structured Capital	U.S.	\$35m	Apr 2024
Veritas IX	Buyout (mid/large market)	U.S.	\$35m	Sept 2024
Riverside Value II	Buyout (small market)	U.S.	\$35m	Dec 2024*
NovaCap VII	Buyout (mid market)	Canada/U.S.	\$35m	Dec 2024*
Revelstoke IV	Buyout (small/mid market)	U.S.	\$35m	Dec 2024*
Peak Rock IV	Buyout (mid market)	U.S.	\$35m	Dec 2024*
FP CF Access III	Buyout/Growth/Turnaround	U.S.	\$40m	Jun 2024
FP Venture Opps II	Mid/Late Stage VC	U.S./Non-U.S.	\$40m	Jun 2024
FP Venture XV	Early Stage VC	U.S./Non-U.S.	\$40m	Dec 2023
FP Co-Invest VI	Buyout/Growth/Turnaround	U.S./Non-U.S.	\$60m	Dec 2023
<b>Total</b>			<b>\$390m</b>	

\* Pending completion of Franklin Park due diligence and ATRS IC and board approval

### Due Diligence Activities

Activity	# of Funds (2Q23 LTM)	# of Funds (2Q24 LTM)	% of Funds Reviewed (2Q24 LTM)
Preliminary Reviews	1,055	902	100%
Manager Meetings	331	284	31%
Due Diligence Analyses	119	93	10%
ATRS Funds Closed*	6	5	<1%

\* Excludes FP Vehicles

## Policy

ATRS' Objective, Guidelines and Constraints are outlined below

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### Objectives

- Generate a long-term return of 200 bps over the Dow Jones U.S. Total Stock Market index (+320 bps as of 6/30/24)

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### Guidelines

- Achieve a target 12% allocation to private equity (13.2% as of 6/30/24)
- Target 80-100% of PE commitments to Corporate Finance strategies, including buyout, turnaround, growth capital and private debt funds (85.8% as of 6/30/24)
- Target 0-20% of PE commitments to Venture Capital strategies (14.2% as of 6/30/24)

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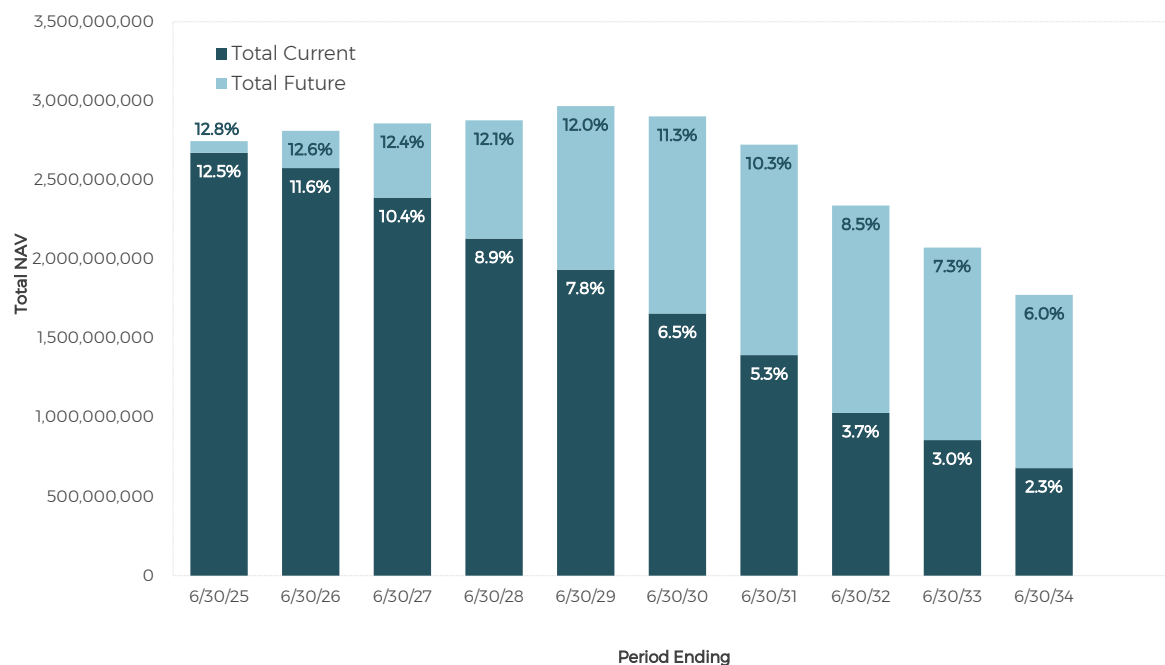
### Constraints

- 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 underlying fund manager
-



# Investment Pacing – Results

To maintain a 12% allocation to PE, \$400 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

- Total assets as of 6/30/24 (\$20.7B) 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 6/30/24
- Future commitments allocated 70% to corporate finance equity funds, 10% to private debt funds, and 20% to venture capital funds

The above commitment pacing plan is hypothetical based on the assumptions outlined above. No assurance can be given that the allocation targets will be achieved.

## Commitment Plan

It is recommended that ATRS allocate the planned 2025 commitments to approximately 10 funds/vehicles

Investment	Strategy	Region	ATRS Commitment	Board Approval
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$40m	TBD
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$40m	TBD
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$40m	TBD
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$40m	TBD
Direct Fund	Buyout/Growth/Turnaround	U.S.	\$40m	TBD
Direct Fund	Buyout/Growth/Turnaround/Debt	U.S.	\$40m	TBD
Direct Fund	Buyout/Growth/Turnaround/Debt	U.S.	\$40m	TBD
FP CF Access III	Buyout/Growth/Turnaround	U.S.	\$40m <sup>1</sup>	TBD
FP Venture XV	Early Stage VC	U.S./Non-U.S.	\$40m <sup>1</sup>	TBD
FP Venture Opps II	Late Stage VC	U.S./Non-U.S.	\$40m <sup>1</sup>	TBD
<b>Total</b>			<b>\$400m</b>	

<sup>1</sup> Proposed commitment to a Franklin Park- managed private fund.

## Recommendation

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**Maintain current policy targets and investment guidelines**

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**Seek to commit \$400 million in 2025**

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**Allocate the planned commitments to approximately 10 funds/vehicles**

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# ATRS Board Policy 4

## STATEMENT OF INVESTMENT POLICY

A.C.A. § 24-7-305

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### I. Board - Investment Policies and Procedures

#### A. Statement of Investment Policy

1. This Investment Policy has been prepared within the context of applicable Arkansas laws and is intended to allow for sufficient flexibility in the investment process to capture opportunities, yet ensure that both prudence and care are maintained in the execution of the investment program. While safety of principal is given primary consideration, the Arkansas Teacher Retirement System Board of Trustees (“Board”) may take appropriate levels of risk to earn higher levels of investment return.
2. The Board has arrived at this policy through careful study of the rates of return and risks associated with various investment strategies in relation to the current and projected liabilities of the Arkansas Teacher Retirement System (“the System”). This policy has been chosen as the most appropriate for achieving the financial objectives of the System. The policy will be reviewed periodically as circumstances dictate.
3. The Board has adopted a long-term investment horizon so that the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets. The assets of the System will be invested in a manner that provides the safeguards and diversity to which a prudent investor would adhere. All transactions undertaken on behalf of the System will be in the sole interest of the System’s plan beneficiaries.
4. To achieve the overall investment goal of the System, one or more investment consultants may be retained by the Board as investment advisors. The scope of duties, together with the terms and conditions of engagement, of any investment consultant will be set forth in a contract approved by the Board. Throughout this document, investment advisors are referred to as investment consultants.
5. The System shall manage those assets not specifically allocated to investment managers. No investment shall be made without an investment consultant's recommendation. The System shall not approve any material changes in any direct investment without first receiving written advice or a written recommendation from a third-party investment consultant and, if needed, outside legal counsel, and,

without thereafter receiving written approval by the Investment Committee and Board.

B. Divestment of Direct Holdings Held with Certain Financial Services Providers

1. The System shall divest from all direct holdings that it has with a financial services provider included on the list published on the Treasurer of State's website under § 25-1-1002. Divestment shall occur as soon as practicable, but no later than three hundred sixty-five (365) calendar days after the financial services provider's inclusion on the list published on the Treasurer of State's website.
2. However, in order to prevent financial harm to the System and to ensure that the System's fiduciary duty is met, the System shall not divest from an investment that it has with a financial services provider included on the list published on the Treasurer of State's website under § 25-1-1002 if the investment is locked into a maturity date and an early divestment would result in a financial penalty and cause a negative financial impact to the System.

C. Investments in Countries of Concern

1. In order to comply with Arkansas Code § 25-1-1201 et seq. and also to ensure that System funds are not invested in the development of technologies and products that may threaten the national security of the United States, the System shall not directly hold any equity interest or debt financing interest in any entity that is:
  - a. Owned in whole or with a majority ownership by the government of the People's Republic of China; or
  - b. Subject to any investment restrictions imposed by the United States Department of the Treasury because the entity is located in a country of concern and is engaged in activities that may contribute to a threat to the national security of the United States.
2. For any prohibited investment held by the System as of the adoption of this section, the Executive Director, in cooperation with the investment consultant and other necessary parties, shall divest the System of any excluded holdings as soon as divestment is practicable and would not result in a financial penalty or cause a material negative impact to the System.

#### D. Standard of Care

1. When investing and reinvesting trust assets and in acquiring, retaining, managing and disposing of investments of the trust assets, there shall be exercised the reasonable care, skill, and caution that a prudent investor would use after considering the purposes, terms, distribution requirements, and other circumstances of the trust. Investment and management decisions respecting individual assets shall be evaluated not in isolation, but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust. The investments of the trust shall be diversified unless the Board reasonably determines that, because of special circumstances, the purposes of the trust are better served without diversifying. The trust assets shall be invested and managed solely in the interest of the members and benefit recipients of the trust. The trust assets shall be invested in a manner to only incur costs that are appropriate and reasonable in relation to the assets and purposes of the investment. Compliance with the standard of care is determined in light of facts and circumstances at the time of action, not in hindsight.
2. Investment and management functions may be delegated to an investment agent that a prudent trustee of comparable skills could properly delegate under the circumstances. When making such delegation, the Board shall establish the scope and terms of the delegation, consistent with the purposes and terms of the trust, and shall monitor the investment agent performance and compliance with the terms of the delegation. In performing a delegated function, an investment agent owes a duty to the System and the trust to exercise reasonable care to comply with the terms of the delegation. The assets of the System allocated to the investment managers shall be diligently managed, which may include selling investments and realizing losses, if such action is considered advantageous to longer-term return maximization. In addition, the Executive Director may delegate certain duties to the System's investment staff without relieving the Executive Director from the ultimate responsibility.
3. Each party serving in a fiduciary capacity for the trust shall discharge his or her duties solely in the pecuniary interest of the participants and beneficiaries and in compliance with Arkansas Code § 24-2-801 et seq. A fiduciary's evaluation of an investment, or evaluation or exercise of any right appurtenant to an investment, shall take into account only pecuniary factors.
4. Each party serving in a fiduciary capacity for the trust shall apply the standard of care set forth herein.

## E. Asset Allocation

1. The Board is responsible for the prudent investment of funds and to maintain a proper allocation of the System's investment assets. The Board, in conjunction with its investment consultants, shall set and adjust the System's asset allocation ranges as necessary to provide an optimal allocation to obtain its target returns. The general investment consultant shall notify the Executive Director and the Board when an asset liability modeling study should be undertaken. It shall be the goal of the System to maintain the following asset allocation targets and ranges:

<b>Asset Category</b>	<b>Minimum*</b>	<b>Target</b>	<b>Maximum*</b>
Total Equity	43.0%	48.0%	53.0%**
Fixed Income	17.0%	20.0%	23.0%
Opportunistic/Alternatives	N/A	5.0%	N/A
Real Assets***	N/A	15.0%	N/A
Private Equity	N/A	12.0%	N/A
Cash Equivalentents	0.0%	0.0%	5.0%

\* Due to the illiquid nature of opportunistic/alternatives, real assets, and private equity, it is not prudent to set rebalancing ranges for these asset classes.

\*\*Additional allocations to total equity may be made beyond the maximum range to serve as a placeholder for unfunded and uncommitted opportunistic/alternatives, real assets, and private equity.

\*\*\*Real assets includes real estate, timber, agriculture, and infrastructure.

## F. Rebalancing

1. The asset allocation ranges established by the Board represent the Board's judgment of a portfolio mix that provides the greatest risk/return value. Allowing the portfolio to exceed the Board limits strays from the financial discipline, which the Board believes will - over time - provide the appropriate risk-adjusted return to the System.
2. The Executive Director is responsible for rebalancing the allowable asset classes and the individual portfolios if any of the asset classes falls outside of the designated range. The general investment consultant shall provide guidance and advice to the Executive Director to best achieve the rebalancing.
3. Rebalancing among individual investment manager portfolios within asset classes may also be necessary to ensure the appropriate level of diversification is achieved by investment style, market capitalization or

risk levels (see total asset class guidelines) and/or to take advantage of market conditions, fund manager expertise, opportunities, or other circumstances that could be beneficial to ATRS.

4. The Executive Director may rebalance across all equity managers, all equity holdings, all fixed income managers, and all fixed income holdings. A Board approved transition manager may be used for rebalancing. Rebalancing including the use of a Board approved transition manager, as needed, may be initiated by the Executive Director after recommendation from the appropriate investment consultant and positive notice to the Board Chair. The Executive Director and general investment consultant will monitor the asset values by classification for each asset manager on a monthly basis, based on month-end data provided by the custodial bank. The Executive Director and general investment consultant shall regularly inform the Board on the rebalancing pacing and strategy.
5. Whenever the minimum or maximum range of total equity or fixed income has been exceeded, a transfer of funds or other appropriate action will occur to bring the actual allocation within the prescribed range within a time frame determined to be prudent by the Executive Director in consultation with the general investment consultant.
6. Normal plan cash flows should be used to the extent possible to rebalance. Interest, dividends, and plan contributions should be used to the extent possible to fund asset classes that are below their target. Withdrawals should be made from asset classes that are above their target.

#### G. Investment Manager Selection

1. The System may hire and retain individual investment managers to implement the System's investment strategy.
2. Arkansas Code § 24-2-610 et seq. requires ATRS to always operate under the prudent investor rule. The prudent investor rule requires all investment decisions to be made based on the experience of management, rates of return, appropriate risk, reasonable cost, and all other relevant factors that should be used by prudent investors.
3. It is the policy of the Board to include, whenever appropriate, qualified minority-owned and women-owned business enterprises in the System's investment manager selection process and to objectively evaluate all qualified investment manager candidates regardless of race, gender or disability.
4. The Board will evaluate all qualified investment manager candidates with emphasis on demonstrated professional performance,



organizational depth, institutional investment management capability, and reasonableness of fee structure regardless of the amount of investment assets under management or the age of the investment management firm.

5. The Board shall only hire and retain professional consultants that do not use discriminatory practices in the creation and maintenance of their investment manager databases and will require the investment consultants to affirm their use of non-discriminatory practices when recommending investment manager candidates to the Board.
6. The Board shall only hire and retain investment managers and professional consultants that agree to provide services to the System in a manner that complies with Arkansas Code § 24-2-601 et seq., 24-2-801 et seq., 25-1-1001 et seq., and 25-1-1201 et seq.

#### H. Goals

1. Recognizing the purpose of the System is to remain actuarially sound and pay member benefits, the overall investment goal is to achieve, over a period of years, the greatest rate of return for the System with due consideration given to preserving capital and its purchasing power, and to maintain an appropriate level of risk consistent with the obligations of a prudent investor. The return of the System should exceed, net of fees, a policy benchmark comprised of the respective asset class benchmarks weighted by the asset class policy targets over a full market cycle (approximately five years). During periods of transition to and from nonmarketable and illiquid asset classes such as private equity and real assets, actual allocations may be used over extended periods to reflect these changes in the policy targets. Periodic performance reports will provide a detailed description of the policy benchmark composition over time.
2. The System's actuary sets an expected return based on the Board's policy decisions. Market cycles may result in the System earning a return materially above or below the actuarial rate of return for extended periods of time. Therefore, the actuarial rate of return will not be used for performance comparison purposes.

#### I. Total Equity

1. The total equity exposure of the portfolio shall be well diversified with broad exposures to small, mid, and large capitalization companies and growth and value style sectors across U.S. and non-U.S. markets.

2. The goal for total equity shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the aggregate global equity market as measured by the Morgan Stanley Capital International (MSCI) All Country World Index (ACWI) Investable Market Index (IMI) over a full market cycle (approximately five years). Because the total equity portfolio was previously segregated into domestic and global equity components, the total equity portfolio has a bias to domestic equity relative to the MSCI ACWI IMI. Therefore, to ensure appropriate performance measurement, the benchmark for total equity will be appropriately weighted between the Dow Jones U.S. Total Stock Market Index and the MSCI ACWI IMI Index to reflect the current domestic / global asset mix until the domestic allocation is in line with the global opportunity set as defined by the MSCI ACWI IMI. The manager structure of the total equity portfolio should resemble the weighted average of their respective benchmarks and avoid any material biases due to a concentration of managers or management styles. To achieve this goal, the Board may employ various actively managed and passive mandates. The structure of the equity component will be analyzed annually to ensure proper diversification is achieved.

J. Fixed Income

1. The manager structure of the aggregate fixed income portfolio's risk exposure should resemble the aggregate domestic fixed income market as measured by the Barclays U.S. Universal Bond Index. To help achieve this goal, the Board will employ investment managers that invest assets in a broad array of sectors (government, mortgage backed, credits, asset backed, and commercial mortgage backed bonds), maturities, and credit qualities so that the overall portfolio structure is not materially different from that of the domestic and global fixed income markets. To provide a broad base of low-cost diversification and readily available liquidity, the Board may allocate a portion of the fixed income assets to a passive investment portfolio that approximates the return of the broad fixed income market.
2. The goal for fixed income investments shall be to achieve a total rate of return that will exceed, net of all costs and fees, the return of the Barclays U.S. Universal Bond Index over a full market cycle (approximately five years).

K. Opportunistic/Alternative Investments

1. The Opportunistic/Alternatives asset class may include investments in direct hedge funds, hedge fund of funds, commodities, currency mandates, and other alternative strategies that are not closely correlated or related to the traditional asset classes (fixed income,

equities, private equity, and real assets). Unique investments that do not fit within the other asset class categories may also be included in the Opportunistic/Alternative category at the Board's discretion. Because this category may include illiquid investments made through closed end investment partnerships, it may take a period of time to reach and maintain the target allocation of 5%. Assets will be invested in the total equity asset class when the opportunity/alternative allocation is below its long-term target of 5%. The benchmark for the category will be a weighted average of the benchmarks of the underlying strategies.

2. The goal of the credit, global macro, and other liquid alternative investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the appropriate institutional quality hedge fund index over a full market cycle (approximately five years). Appropriate benchmarks will be determined as investments are added to the portfolio.

#### L. Real Assets

1. The Real Asset category may include real estate, timber, agriculture, and infrastructure. While no fixed targets are set, the following general parameters have been identified:

- ~~10~~8% Real Estate
- 2% Timber
- 1% Agriculture
- ~~2~~4% Infrastructure

The total target of the asset class will be 15%. Because this category may include illiquid investments made through closed end investment partnerships, it will take a period of time to reach these targets. Assets will be invested in the total equity asset class until the total target is attained.

The System may initiate investments in real estate as governed by the Real Asset Statement of Investment Policy. The System's goal for real estate is to not materially exceed the System's approved target asset allocation for total real estate investments as determined by the Board at the beginning of each fiscal year. Should the real estate target asset allocation be exceeded, the Executive Director, working with the Real Estate Consultant, shall develop a pacing and strategy plan to address the over allocation.

ATRS' Real Estate portfolio is benchmarked on a net of fee basis against the NCREIF Fund Index Open-end Diversified Core Equity

Index ("NFIODCE"). Once ATRS' Real Estate portfolio reaches its full target allocation for a five-year period, it is expected to meet or exceed the NFIODCE over rolling five-year periods.

The System may initiate direct ownership in timberland or indirect investments in fund of funds, partnerships, corporations, or real estate investment trusts ("REITs") investing in investment grade properties of like kind.

2. The goal of the timberland investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Timberland Property Index ("NTPI") over a five-year rolling period. The Consumer Price Index plus 300 basis points will be used as a secondary measurement to gauge the timber portfolio's performance compared to the opportunity cost of investing in timber.

The goal of the agriculture investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Farmland Index ("NFI") over a five-year rolling period. The Consumer Price Index plus 300 basis points will be used as a secondary measurement to gauge the agriculture portfolio's performance compared to the opportunity cost of investing in agriculture.

The goal of the infrastructure investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the Consumer Price Index (CPI) plus 5 percentage points over a full market cycle (approximately ten years). The Consumer Price Index plus 5 percentage points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure. Similar infrastructure programs of institutional investors will also be used as a secondary benchmark to the extent such data is made available.

The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark and Infrastructure benchmark. The net of fee return for ATRS' Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five year periods.

#### K. Private Equity

1. The System may initiate investments in private equity as governed by the Private Equity Statement of Investment Policy. Private equity investments may include domestic and foreign private equity partnerships, venture capital, and mezzanine financing partnerships that are intended to diversify the assets and reduce the likelihood of material losses in any individual investment classification. The

investment consultant responsible for private equity shall advise the Executive Director and Board on the Private Equity Statement of Investment Policy and the structure of private equity investments best suited for the System.

2. The System's goal for private equity investments is to achieve a total rate of return that will exceed, net of all costs and fees, the return of the public equity markets, as measured by the Dow Jones U.S. Total Stock Market Index, plus a liquidity premium of 2 percentage points per year over a full market cycle for private equity (approximately ten years).

#### L. Cash Equivalents

1. The System may hold direct ownership in short-term investments or may permit or require managers to hold cash or cash equivalents to meet liquidity needs of the investment manager or of the System.
2. The System's cash management goal shall be to preserve capital and maintain liquidity.

#### M. Arkansas-Related Investments

1. The System may initiate Arkansas-related mortgage loans, promissory notes, direct real estate investments, or purchase insured certificates of deposit or short-term securities of Arkansas financial institutions to meet the goals of the mandated requirements. Arkansas-related investments are categorized according to the appropriate asset class for each investment. In addition, Arkansas related investments include, but are not limited to, investments managed by an Arkansas related manager, Arkansas related investments held by other fund managers, Arkansas timberland, partnerships based in Arkansas, and partnerships holding Arkansas properties.

#### N. Commingled or Mutual Funds

1. If a commingled fund or mutual fund is utilized, the portfolio will be governed by the prospectus or similar document for the fund. In those cases, the System will utilize the prudent investor rule and advice of the investment consultant in selecting and evaluating funds initially and in monitoring them on an on-going basis.

#### O. Derivatives

1. Derivatives may be used to reduce the risk in a portfolio and provide desired market and security level positions as an alternative to purchasing cash securities. Excessive leverage shall not be created through the use of derivatives in a manner that substantially increases the System's portfolio risk. Each investment manager's derivative

usage shall be specified in the investment management agreement or specific guidelines.

2. The use of futures and options shall be matched by cash or cash equivalent securities, and all short futures positions shall be matched by equivalent long security positions, unless otherwise stated in the investment manager guidelines or authorizing fund documents.

#### P. Loaning of Securities

1. The lending agent will evaluate the credit-worthiness of potential borrowers of securities, and will loan securities only to financially sound borrowers. The lending agent will maintain a diversified list of such borrowers in order to mitigate the counterparty risk that is inherent in securities lending.
2. Collateral levels should be based on the nature of the loaned security and will generally be between 102% and 105% of the market value of the borrowed security. Marking to market will be performed every business day subject to de minimis rules of change in value, and borrowers will be required to deliver additional assets as necessary to maintain overcollateralization of securities loans.

#### Q. Securities Lending Reinvestment Guidelines

1. The cash collateral portfolio will be managed on an amortized cost basis (maintain a \$1 net asset value) and have investment guidelines that are 2a-7-like in nature (money market fund guidelines) to ensure that only a moderate amount of risk is taken on the reinvestment of the cash collateral. This will control the amount of credit and duration risk that can be taken by the short duration fixed income manager, which will help to mitigate losses due to insufficient collateral relative to the amount on loan. In addition, guidelines for the cash collateral portfolio will be created in conjunction with the lending strategy and with input from the securities lending agent.
2. The collateral pool should also maintain a reasonable level of overnight liquidity in order to allow for the smooth recall of securities over time.

#### R. Investment Manager Reporting

1. The System will require all investment managers, managing partners, and general partners to provide on at least a quarterly and an annual basis, reporting appropriate for the investment.

#### S. Roles

1. The Executive Director and investment consultant are jointly responsible for the initial selection of investment managers and any increase or decrease in an investment manager's funding. The

Executive Director and investment consultant are jointly responsible for monitoring existing investment managers on performance, stability, and compliance. The Executive Director and investment consultant may also recommend termination of an investment manager when circumstances justify termination. Reasons for termination include, but are not limited to, relative performance, relative stability, costs, strategic allocation of assets, or other relevant factors that a prudent investor would use.

#### T. Proxies

1. All shares held directly or indirectly by or on behalf of the System shall be voted on solely in the pecuniary interest of the System's plan beneficiaries, in compliance with Arkansas Code § 24-2-801 et seq.
2. Unless an economically practicable alternative is unavailable, the System shall not: (A) Follow the recommendations of a proxy advisory firm or other service provider unless the firm or service provider has a practice of and provides a written commitment to adhere to the practice of following proxy voting guidelines that are consistent with the System's obligation to act based only on pecuniary factors, or (B) Entrust the System's plan assets to a fiduciary unless the fiduciary has a practice of and provides a written commitment to adhere to the practice of following guideline when engaging with portfolio companies and voting shares or proxies that match the obligation of the System's obligation to act based only on pecuniary factors.
3. The System authorizes the investment manager to vote all proxies related to stocks in which it invests the System's assets. The System requires the investment manager to vote all proxies in a manner that complies with Arkansas Code § 24-2-801 et seq. The System requires the investment manager to cast votes solely in the best interest of plan beneficiaries.

#### U. Soft Dollars

1. Commissions paid by investment managers for the purchase of equity securities are System assets and must be used for the sole benefit of the System members. Whenever possible, investment managers should seek to execute trades at the lowest possible commission rate but not to the detriment of best execution, which can result in a higher cost to the System. So that the Board may fulfill its obligation to ensure that System assets are being used appropriately, relevant equity investment managers shall provide periodic reports to the general investment consultant on brokerage activity, commissions, services, and such other information as may be requested by the investment

consultant or Board. The investment consultant shall provide a periodic report to the Board summarizing such equity investment managers' reports and highlighting any questionable or problem areas.

## **HISTORY**

Amended: October 4, 2010

Amended: February 7, 2011

Amended: June 3, 2013

Amended: October 7, 2013

Amended: February 17, 2014

Amended: June 1, 2015

Amended: April 21, 2016

Amended: November 13, 2017

Amended: April 1, 2019

Amended: February 3, 2020 as Board Policy 4

Amended: December 7, 2020

Amended: June 7, 2021

Amended: September 25, 2023

Amended: February 5, 2024

Amended: December 2, 2024



# ATRS Board Policy 4

## STATEMENT OF INVESTMENT POLICY

A.C.A. § 24-7-305

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### I. Board - Investment Policies and Procedures

#### A. Statement of Investment Policy

1. This Investment Policy has been prepared within the context of applicable Arkansas laws and is intended to allow for sufficient flexibility in the investment process to capture opportunities, yet ensure that both prudence and care are maintained in the execution of the investment program. While safety of principal is given primary consideration, the Arkansas Teacher Retirement System Board of Trustees (“Board”) may take appropriate levels of risk to earn higher levels of investment return.
2. The Board has arrived at this policy through careful study of the rates of return and risks associated with various investment strategies in relation to the current and projected liabilities of the Arkansas Teacher Retirement System (“the System”). This policy has been chosen as the most appropriate for achieving the financial objectives of the System. The policy will be reviewed periodically as circumstances dictate.
3. The Board has adopted a long-term investment horizon so that the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets. The assets of the System will be invested in a manner that provides the safeguards and diversity to which a prudent investor would adhere. All transactions undertaken on behalf of the System will be in the sole interest of the System’s plan beneficiaries.
4. To achieve the overall investment goal of the System, one or more investment consultants may be retained by the Board as investment advisors. The scope of duties, together with the terms and conditions of engagement, of any investment consultant will be set forth in a contract approved by the Board. Throughout this document, investment advisors are referred to as investment consultants.
5. The System shall manage those assets not specifically allocated to investment managers. No investment shall be made without an investment consultant's recommendation. The System shall not approve any material changes in any direct investment without first receiving written advice or a written recommendation from a third-party investment consultant and, if needed, outside legal counsel, and,

without thereafter receiving written approval by the Investment Committee and Board.

B. Divestment of Direct Holdings Held with Certain Financial Services Providers

1. The System shall divest from all direct holdings that it has with a financial services provider included on the list published on the Treasurer of State's website under § 25-1-1002. Divestment shall occur as soon as practicable, but no later than three hundred sixty-five (365) calendar days after the financial services provider's inclusion on the list published on the Treasurer of State's website.
2. However, in order to prevent financial harm to the System and to ensure that the System's fiduciary duty is met, the System shall not divest from an investment that it has with a financial services provider included on the list published on the Treasurer of State's website under § 25-1-1002 if the investment is locked into a maturity date and an early divestment would result in a financial penalty and cause a negative financial impact to the System.

C. Investments in Countries of Concern

1. In order to comply with Arkansas Code § 25-1-1201 et seq. and also to ensure that System funds are not invested in the development of technologies and products that may threaten the national security of the United States, the System shall not directly hold any equity interest or debt financing interest in any entity that is:
  - a. Owned in whole or with a majority ownership by the government of the People's Republic of China; or
  - b. Subject to any investment restrictions imposed by the United States Department of the Treasury because the entity is located in a country of concern and is engaged in activities that may contribute to a threat to the national security of the United States.
2. For any prohibited investment held by the System as of the adoption of this section, the Executive Director, in cooperation with the investment consultant and other necessary parties, shall divest the System of any excluded holdings as soon as divestment is practicable and would not result in a financial penalty or cause a material negative impact to the System.

#### D. Standard of Care

1. When investing and reinvesting trust assets and in acquiring, retaining, managing and disposing of investments of the trust assets, there shall be exercised the reasonable care, skill, and caution that a prudent investor would use after considering the purposes, terms, distribution requirements, and other circumstances of the trust. Investment and management decisions respecting individual assets shall be evaluated not in isolation, but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust. The investments of the trust shall be diversified unless the Board reasonably determines that, because of special circumstances, the purposes of the trust are better served without diversifying. The trust assets shall be invested and managed solely in the interest of the members and benefit recipients of the trust. The trust assets shall be invested in a manner to only incur costs that are appropriate and reasonable in relation to the assets and purposes of the investment. Compliance with the standard of care is determined in light of facts and circumstances at the time of action, not in hindsight.
2. Investment and management functions may be delegated to an investment agent that a prudent trustee of comparable skills could properly delegate under the circumstances. When making such delegation, the Board shall establish the scope and terms of the delegation, consistent with the purposes and terms of the trust, and shall monitor the investment agent performance and compliance with the terms of the delegation. In performing a delegated function, an investment agent owes a duty to the System and the trust to exercise reasonable care to comply with the terms of the delegation. The assets of the System allocated to the investment managers shall be diligently managed, which may include selling investments and realizing losses, if such action is considered advantageous to longer-term return maximization. In addition, the Executive Director may delegate certain duties to the System's investment staff without relieving the Executive Director from the ultimate responsibility.
3. Each party serving in a fiduciary capacity for the trust shall discharge his or her duties solely in the pecuniary interest of the participants and beneficiaries and in compliance with Arkansas Code § 24-2-801 et seq. A fiduciary's evaluation of an investment, or evaluation or exercise of any right appurtenant to an investment, shall take into account only pecuniary factors.
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Private Equity	N/A	12.0%	N/A
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2. The Executive Director is responsible for rebalancing the allowable asset classes and the individual portfolios if any of the asset classes falls outside of the designated range. The general investment consultant shall provide guidance and advice to the Executive Director to best achieve the rebalancing.
3. Rebalancing among individual investment manager portfolios within asset classes may also be necessary to ensure the appropriate level of diversification is achieved by investment style, market capitalization or

risk levels (see total asset class guidelines) and/or to take advantage of market conditions, fund manager expertise, opportunities, or other circumstances that could be beneficial to ATRS.

4. The Executive Director may rebalance across all equity managers, all equity holdings, all fixed income managers, and all fixed income holdings. A Board approved transition manager may be used for rebalancing. Rebalancing including the use of a Board approved transition manager, as needed, may be initiated by the Executive Director after recommendation from the appropriate investment consultant and positive notice to the Board Chair. The Executive Director and general investment consultant will monitor the asset values by classification for each asset manager on a monthly basis, based on month-end data provided by the custodial bank. The Executive Director and general investment consultant shall regularly inform the Board on the rebalancing pacing and strategy.
5. Whenever the minimum or maximum range of total equity or fixed income has been exceeded, a transfer of funds or other appropriate action will occur to bring the actual allocation within the prescribed range within a time frame determined to be prudent by the Executive Director in consultation with the general investment consultant.
6. Normal plan cash flows should be used to the extent possible to rebalance. Interest, dividends, and plan contributions should be used to the extent possible to fund asset classes that are below their target. Withdrawals should be made from asset classes that are above their target.

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3. It is the policy of the Board to include, whenever appropriate, qualified minority-owned and women-owned business enterprises in the System's investment manager selection process and to objectively evaluate all qualified investment manager candidates regardless of race, gender or disability.
4. The Board will evaluate all qualified investment manager candidates with emphasis on demonstrated professional performance,

organizational depth, institutional investment management capability, and reasonableness of fee structure regardless of the amount of investment assets under management or the age of the investment management firm.

5. The Board shall only hire and retain professional consultants that do not use discriminatory practices in the creation and maintenance of their investment manager databases and will require the investment consultants to affirm their use of non-discriminatory practices when recommending investment manager candidates to the Board.
6. The Board shall only hire and retain investment managers and professional consultants that agree to provide services to the System in a manner that complies with Arkansas Code § 24-2-601 et seq., 24-2-801 et seq., 25-1-1001 et seq., and 25-1-1201 et seq.

#### H. Goals

1. Recognizing the purpose of the System is to remain actuarially sound and pay member benefits, the overall investment goal is to achieve, over a period of years, the greatest rate of return for the System with due consideration given to preserving capital and its purchasing power, and to maintain an appropriate level of risk consistent with the obligations of a prudent investor. The return of the System should exceed, net of fees, a policy benchmark comprised of the respective asset class benchmarks weighted by the asset class policy targets over a full market cycle (approximately five years). During periods of transition to and from nonmarketable and illiquid asset classes such as private equity and real assets, actual allocations may be used over extended periods to reflect these changes in the policy targets. Periodic performance reports will provide a detailed description of the policy benchmark composition over time.
2. The System's actuary sets an expected return based on the Board's policy decisions. Market cycles may result in the System earning a return materially above or below the actuarial rate of return for extended periods of time. Therefore, the actuarial rate of return will not be used for performance comparison purposes.

#### I. Total Equity

1. The total equity exposure of the portfolio shall be well diversified with broad exposures to small, mid, and large capitalization companies and growth and value style sectors across U.S. and non-U.S. markets.

2. The goal for total equity shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the aggregate global equity market as measured by the Morgan Stanley Capital International (MSCI) All Country World Index (ACWI) Investable Market Index (IMI) over a full market cycle (approximately five years). Because the total equity portfolio was previously segregated into domestic and global equity components, the total equity portfolio has a bias to domestic equity relative to the MSCI ACWI IMI. Therefore, to ensure appropriate performance measurement, the benchmark for total equity will be appropriately weighted between the Dow Jones U.S. Total Stock Market Index and the MSCI ACWI IMI Index to reflect the current domestic / global asset mix until the domestic allocation is in line with the global opportunity set as defined by the MSCI ACWI IMI. The manager structure of the total equity portfolio should resemble the weighted average of their respective benchmarks and avoid any material biases due to a concentration of managers or management styles. To achieve this goal, the Board may employ various actively managed and passive mandates. The structure of the equity component will be analyzed annually to ensure proper diversification is achieved.

J. Fixed Income

1. The manager structure of the aggregate fixed income portfolio's risk exposure should resemble the aggregate domestic fixed income market as measured by the Barclays U.S. Universal Bond Index. To help achieve this goal, the Board will employ investment managers that invest assets in a broad array of sectors (government, mortgage backed, credits, asset backed, and commercial mortgage backed bonds), maturities, and credit qualities so that the overall portfolio structure is not materially different from that of the domestic and global fixed income markets. To provide a broad base of low-cost diversification and readily available liquidity, the Board may allocate a portion of the fixed income assets to a passive investment portfolio that approximates the return of the broad fixed income market.
2. The goal for fixed income investments shall be to achieve a total rate of return that will exceed, net of all costs and fees, the return of the Barclays U.S. Universal Bond Index over a full market cycle (approximately five years).

K. Opportunistic/Alternative Investments

1. The Opportunistic/Alternatives asset class may include investments in direct hedge funds, hedge fund of funds, commodities, currency mandates, and other alternative strategies that are not closely correlated or related to the traditional asset classes (fixed income,

equities, private equity, and real assets). Unique investments that do not fit within the other asset class categories may also be included in the Opportunistic/Alternative category at the Board's discretion. Because this category may include illiquid investments made through closed end investment partnerships, it may take a period of time to reach and maintain the target allocation of 5%. Assets will be invested in the total equity asset class when the opportunity/alternative allocation is below its long-term target of 5%. The benchmark for the category will be a weighted average of the benchmarks of the underlying strategies.

2. The goal of the credit, global macro, and other liquid alternative investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the appropriate institutional quality hedge fund index over a full market cycle (approximately five years). Appropriate benchmarks will be determined as investments are added to the portfolio.

#### L. Real Assets

1. The Real Asset category may include real estate, timber, agriculture, and infrastructure. While no fixed targets are set, the following general parameters have been identified:
  - 8% Real Estate
  - 2% Timber
  - 1% Agriculture
  - 4% Infrastructure

The total target of the asset class will be 15%. Because this category may include illiquid investments made through closed end investment partnerships, it will take a period of time to reach these targets. Assets will be invested in the total equity asset class until the total target is attained.

The System may initiate investments in real estate as governed by the Real Asset Statement of Investment Policy. The System's goal for real estate is to not materially exceed the System's approved target asset allocation for total real estate investments as determined by the Board at the beginning of each fiscal year. Should the real estate target asset allocation be exceeded, the Executive Director, working with the Real Estate Consultant, shall develop a pacing and strategy plan to address the over allocation.

ATRS' Real Estate portfolio is benchmarked on a net of fee basis against the NCREIF Fund Index Open-end Diversified Core Equity



Index ("NFIODCE"). Once ATRS' Real Estate portfolio reaches its full target allocation for a five-year period, it is expected to meet or exceed the NFIODCE over rolling five-year periods.

The System may initiate direct ownership in timberland or indirect investments in fund of funds, partnerships, corporations, or real estate investment trusts ("REITs") investing in investment grade properties of like kind.

2. The goal of the timberland investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Timberland Property Index ("NTPI") over a five-year rolling period. The Consumer Price Index plus 300 basis points will be used as a secondary measurement to gauge the timber portfolio's performance compared to the opportunity cost of investing in timber.

The goal of the agriculture investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Farmland Index ("NFI") over a five-year rolling period. The Consumer Price Index plus 300 basis points will be used as a secondary measurement to gauge the agriculture portfolio's performance compared to the opportunity cost of investing in agriculture.

The goal of the infrastructure investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the Consumer Price Index (CPI) plus 5 percentage points over a full market cycle (approximately ten years). The Consumer Price Index plus 5 percentage points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure. Similar infrastructure programs of institutional investors will also be used as a secondary benchmark to the extent such data is made available.

The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark and Infrastructure benchmark. The net of fee return for ATRS' Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five year periods.

#### K. Private Equity

1. The System may initiate investments in private equity as governed by the Private Equity Statement of Investment Policy. Private equity investments may include domestic and foreign private equity partnerships, venture capital, and mezzanine financing partnerships that are intended to diversify the assets and reduce the likelihood of material losses in any individual investment classification. The

investment consultant responsible for private equity shall advise the Executive Director and Board on the Private Equity Statement of Investment Policy and the structure of private equity investments best suited for the System.

2. The System's goal for private equity investments is to achieve a total rate of return that will exceed, net of all costs and fees, the return of the public equity markets, as measured by the Dow Jones U.S. Total Stock Market Index, plus a liquidity premium of 2 percentage points per year over a full market cycle for private equity (approximately ten years).

#### L. Cash Equivalents

1. The System may hold direct ownership in short-term investments or may permit or require managers to hold cash or cash equivalents to meet liquidity needs of the investment manager or of the System.
2. The System's cash management goal shall be to preserve capital and maintain liquidity.

#### M. Arkansas-Related Investments

1. The System may initiate Arkansas-related mortgage loans, promissory notes, direct real estate investments, or purchase insured certificates of deposit or short-term securities of Arkansas financial institutions to meet the goals of the mandated requirements. Arkansas-related investments are categorized according to the appropriate asset class for each investment. In addition, Arkansas related investments include, but are not limited to, investments managed by an Arkansas related manager, Arkansas related investments held by other fund managers, Arkansas timberland, partnerships based in Arkansas, and partnerships holding Arkansas properties.

#### N. Commingled or Mutual Funds

1. If a commingled fund or mutual fund is utilized, the portfolio will be governed by the prospectus or similar document for the fund. In those cases, the System will utilize the prudent investor rule and advice of the investment consultant in selecting and evaluating funds initially and in monitoring them on an on-going basis.

#### O. Derivatives

1. Derivatives may be used to reduce the risk in a portfolio and provide desired market and security level positions as an alternative to purchasing cash securities. Excessive leverage shall not be created through the use of derivatives in a manner that substantially increases the System's portfolio risk. Each investment manager's derivative

usage shall be specified in the investment management agreement or specific guidelines.

2. The use of futures and options shall be matched by cash or cash equivalent securities, and all short futures positions shall be matched by equivalent long security positions, unless otherwise stated in the investment manager guidelines or authorizing fund documents.

#### P. Loaning of Securities

1. The lending agent will evaluate the credit-worthiness of potential borrowers of securities, and will loan securities only to financially sound borrowers. The lending agent will maintain a diversified list of such borrowers in order to mitigate the counterparty risk that is inherent in securities lending.
2. Collateral levels should be based on the nature of the loaned security and will generally be between 102% and 105% of the market value of the borrowed security. Marking to market will be performed every business day subject to de minimis rules of change in value, and borrowers will be required to deliver additional assets as necessary to maintain overcollateralization of securities loans.

#### Q. Securities Lending Reinvestment Guidelines

1. The cash collateral portfolio will be managed on an amortized cost basis (maintain a \$1 net asset value) and have investment guidelines that are 2a-7-like in nature (money market fund guidelines) to ensure that only a moderate amount of risk is taken on the reinvestment of the cash collateral. This will control the amount of credit and duration risk that can be taken by the short duration fixed income manager, which will help to mitigate losses due to insufficient collateral relative to the amount on loan. In addition, guidelines for the cash collateral portfolio will be created in conjunction with the lending strategy and with input from the securities lending agent.
2. The collateral pool should also maintain a reasonable level of overnight liquidity in order to allow for the smooth recall of securities over time.

#### R. Investment Manager Reporting

1. The System will require all investment managers, managing partners, and general partners to provide on at least a quarterly and an annual basis, reporting appropriate for the investment.

#### S. Roles

1. The Executive Director and investment consultant are jointly responsible for the initial selection of investment managers and any increase or decrease in an investment manager's funding. The

Executive Director and investment consultant are jointly responsible for monitoring existing investment managers on performance, stability, and compliance. The Executive Director and investment consultant may also recommend termination of an investment manager when circumstances justify termination. Reasons for termination include, but are not limited to, relative performance, relative stability, costs, strategic allocation of assets, or other relevant factors that a prudent investor would use.

#### T. Proxies

1. All shares held directly or indirectly by or on behalf of the System shall be voted on solely in the pecuniary interest of the System's plan beneficiaries, in compliance with Arkansas Code § 24-2-801 et seq.
2. Unless an economically practicable alternative is unavailable, the System shall not: (A) Follow the recommendations of a proxy advisory firm or other service provider unless the firm or service provider has a practice of and provides a written commitment to adhere to the practice of following proxy voting guidelines that are consistent with the System's obligation to act based only on pecuniary factors, or (B) Entrust the System's plan assets to a fiduciary unless the fiduciary has a practice of and provides a written commitment to adhere to the practice of following guideline when engaging with portfolio companies and voting shares or proxies that match the obligation of the System's obligation to act based only on pecuniary factors.
3. The System authorizes the investment manager to vote all proxies related to stocks in which it invests the System's assets. The System requires the investment manager to vote all proxies in a manner that complies with Arkansas Code § 24-2-801 et seq. The System requires the investment manager to cast votes solely in the best interest of plan beneficiaries.

#### U. Soft Dollars

1. Commissions paid by investment managers for the purchase of equity securities are System assets and must be used for the sole benefit of the System members. Whenever possible, investment managers should seek to execute trades at the lowest possible commission rate but not to the detriment of best execution, which can result in a higher cost to the System. So that the Board may fulfill its obligation to ensure that System assets are being used appropriately, relevant equity investment managers shall provide periodic reports to the general investment consultant on brokerage activity, commissions, services, and such other information as may be requested by the investment

consultant or Board. The investment consultant shall provide a periodic report to the Board summarizing such equity investment managers' reports and highlighting any questionable or problem areas.

## **HISTORY**

Amended: October 4, 2010

Amended: February 7, 2011

Amended: June 3, 2013

Amended: October 7, 2013

Amended: February 17, 2014

Amended: June 1, 2015

Amended: April 21, 2016

Amended: November 13, 2017

Amended: April 1, 2019

Amended: February 3, 2020 as Board Policy 4

Amended: December 7, 2020

Amended: June 7, 2021

Amended: September 25, 2023

Amended: February 5, 2024

Amended: December 2, 2024

# ATRS Board Policy 6

## REAL ASSETS INVESTMENT POLICIES

A.C.A. § 24-7-305

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### I. Board - Investment Policies and Procedures

#### A. Real Assets Investment Policies

##### 1. Scope

This policy applies to the Real Asset category ("Real Assets") of the Arkansas Teacher Retirement System's ("ATRS") investment portfolio. This policy governs the private market investments and not the public real asset securities exposure within the ~~Domestic Equity or Global Total~~ Equity asset classes.

##### 2. Purpose and Objectives

The purpose of this statement of investment policy is to formalize the ATRS' Board of Trustees' (the "Board") investment objectives, policies, and procedures, with respect to Real Assets, and to define the duties and responsibilities of the various entities involved in the Real Assets investment process. This statement is to be considered an extension of ATRS' general Statement of Investment Policy.

#### B. Investment Philosophy

1. ATRS allocates a portion of its total assets to Real Assets. ATRS defines Real Assets as investments relating to the ownership, financing, or operation of real estate, timber, agriculture, and infrastructure assets. ATRS allocates capital to Real Assets with the following goals:

- a. *Diversification with Other Asset Classes*

Real Asset returns have historically performed differently than the returns of other asset classes in which ATRS invests. ATRS believes that Real Asset returns will continue to perform differently than those of other asset classes, allowing ATRS to lower the risk of its overall portfolio through diversification by allocating to the asset class.

- b. *Potential Inflation Hedge*

Real Asset returns have historically shown the ability to provide a hedge against rising inflation. By allocating a portion of its investments to an asset class with these characteristics the overall risk of rising inflation to the ATRS portfolio is reduced.

## C. Allocation

1. ATRS controls allocation risk at the total fund level. The allocation establishes a 15% target for the Real Asset class. As provided in ATRS' general Statement of Investment Policy, a range of minimum and maximum relative to the target has not been set as it is not prudent to set rebalancing ranges for the real asset classes due to their illiquid nature. This target allocation is to be reached and maintained over a reasonable period of time using a pacing schedule established by the joint effort of the Executive Director and Real Asset Consultant. There will be no fixed targets for the Real Assets subasset classes but the following general parameters have been identified for the Real Asset subasset classes:

- ~~10~~8% Real Estate
- 2% Timber
- 1% Agriculture
- ~~2~~4% Infrastructure

## D. Performance Benchmark

1. ATRS' Real Asset portfolio is benchmarked on a net of fee basis against the following sub-asset class benchmarks over rolling five year periods.

- a. Real Estate Benchmark: The net return for ATRS' real estate investments is expected to meet or exceed the net NCREIF Fund Index Open-end Diversified Core Equity Index ("NFI-ODCE") over five year rolling period.
- b. Timber Benchmark: The net return for ATRS' timber investments is expected to meet or exceed the NCREIF Timberland Property Index ("NTPI") over a five year rolling period.
  - Given the highly concentrated nature of the NTPI, it is advised that an additional performance measurement tool be utilized in order to gauge the timber portfolio's performance compared to the opportunity cost of investing in timber. The Consumer Price Index plus 300 basis points will be used for measurement.
- c. Agriculture Benchmark: The net return for ATRS' agriculture investments is expected to meet or exceed the NCREIF Farmland Index ("NFI") over a five year rolling period.
  - Much like NTPI, NFI also has a concentrated nature and it is advised that an additional performance measurement tool be utilized in order to gauge the agriculture portfolio's performance

compared to the opportunity cost of investing in agriculture. The Consumer Price Index plus 300 basis points will be used for measurement.

d. Infrastructure Benchmark: Over the long term (10 years or longer), the infrastructure portfolio is expected to generate a minimum internal rate of return ("IRR") equal to the Consumer Price Index plus 500 basis points, net of all investment management fees and expenses. The Consumer Price Index plus 500 basis points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure.

2. The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark, and Infrastructure benchmark. The net of fee return for ATRS' Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five year periods.

#### E. Portfolio Composition

1. The majority of the Real Asset class investments should consist of equity ownership of privately-held institutional real estate, timber, agriculture, and infrastructure investments.
2. This policy authorizes the use of all types of investment structures including, but not limited to:
  - Separate Accounts
  - Co-investments
  - Joint ventures
  - Open and closed-end funds
  - Partnerships
  - Private and public Real Estate Investment Trusts ("REITs") and Real Estate Operating Companies ("REOCs")
  - Listed or publicly traded infrastructure

#### F. Risk Management

1. For ATRS' Real Asset investments, the following sections identify the most significant risks and the method of control. Compliance with the following risk parameters shall be based on the percentage of ATRS' Real Asset portfolio's Net Asset Value at Fair Value at the end of each quarter.



a. *Investment Manager Diversification*

Investment manager risk consists of two elements: the exposure to an investment manager and the number of investment managers in ATRS' Real Asset portfolio. To control investment manager exposure, the allocation to a single Real Asset manager is typically limited to 30% of ATRS' Real Asset target allocation.

b. *Individual Investment Diversification*

In order to mitigate the risk of large losses, ATRS will diversify its Real Asset investments across many different individual investments. Individual investments, measured by gross asset value, shall generally not exceed 10% of the overall Real Asset target allocation. For Real Estate, the 10% individual investment limitation will apply to Core properties, but Non-Core properties will be generally limited to 5%. Core properties are generally defined as industrial, apartment, retail, and office portfolios that are at least 80% leased, located in major metropolitan areas, and typically use no more than 50% leverage. Non-core is generally defined as the remainder of the Real Estate property opportunity set.

c. *Liquidity*

The majority of Real Assets are illiquid. As such, ATRS understands and recognizes that the Real Asset class will not be structured in a way to provide liquidity. Should market values for the Real Asset class change such that the asset class falls outside of these and the below risk management parameters, the Executive Director and Real Asset Consultant will determine the most effective solution and timeframe to bring the Real Asset exposure into compliance.

2. Additional risk parameters at the subasset class level are defined below and compliance shall be based on the percentage of each subasset class' Net Asset Value at Fair Value at the end of each quarter:

a. Real Estate:

*Property Diversification* - ATRS seeks to minimize the risk of its Real Estate portfolio by allocating its assets across the spectrum of property types, with the majority of its investments allocated to the primary sectors of the NFI-ODCE. No single traditional property type shall account for greater than 50% of the portfolio. In addition, the general range of property type allocations will be 0.5x - 1.5x the NFI-ODCE's weight in each property type. Other property types, as

defined by NFI-ODCE, are allowed but (on a combined basis) should not exceed 20% of the real estate portfolio.

*Geographic Diversification* - The Plan seeks to minimize the risk of its real estate portfolio by allocating its investments across the geographic spectrum. Within the United States, the general range of geographic allocations will be 0.5x - 1.5x the NFI-ODCE weight in each region. With respect to non-U.S. investing, no more than 40% of the portfolio may be invested outside of the U.S. ATRS may initiate Arkansas-related mortgage loans and direct Real Estate investments to meet the goal of investing in quality Arkansas related investments. The Executive Director and Real Estate Consultant will monitor the Arkansas-related Real Estate holdings to protect against excessive risk due to sector or geographic exposure. The goal of Arkansas-related investments shall be to achieve a total rate of return, net of all fees and costs that will exceed the real estate performance benchmark over time.

*Leverage* - ATRS allows some of its investment managers the ability to use modest amounts of leverage in their investment strategy as a means of enhancing the overall risk-adjusted returns available to ATRS. In keeping with its goal of risk mitigation, leverage at the total asset class level should be kept below a 50% loan-to-value ratio.

*Life Cycle* - ATRS will endeavor to invest the majority of its assets in fully established, income-producing Real Estate, commonly referred to as Core Real Estate. As defined above, the ATRS goal will be to have between 50% and 70% of its Real Estate asset class in Core investments. Non-Core opportunities, such as Value Added and Opportunistic real estate strategies, may provide better alpha generation but will be viewed tactically and have an operating allocation range of 30% to 50% of the real estate portfolio.

b. Timber:

*Geographic Diversification* - The Plan seeks to minimize the risk of its timber portfolio by allocating its investments across the geographic spectrum. Within the United States, the allowable range of geographic allocations will fall within the following target ranges as defined by the NCREIF timberland index.

<u>Region</u>	<u>Range</u>
<u>South</u>	<u>40% to 80%</u>
<u>Northwest</u>	<u>0% to 50%</u>
<u>Northeast</u>	<u>0% to 20%</u>

Lake States 0% to 20%

Other 0% to 20%

c. Agriculture:

*Crop Diversification* - The majority of the portfolio will be comprised of existing crop properties. With the exception of the portfolio creation stage, no crop shall comprise in excess of 40% of the agriculture portfolio.

*Geographic Diversification* - Investments will be primarily located within the continental United States. Properties located within the state of Arkansas are preferred within a prudent range of exposure for the total portfolio. It is desired that the investments will have attractive locations with good market access. No region, as defined by the NCREIF Farm Index regional definitions, will comprise more than 40% of the agriculture portfolio.

*Leverage* - In keeping with its goal of risk mitigation, leverage at the total asset class level should be kept below a 20% loan-to-value ratio.

d. Infrastructure: ATRS will use diversification of its infrastructure portfolio as a risk mitigation tactic. Relevant risk factors considered are strategy, manager, firm, vintage year, asset type, geographic and liquidity issues. However, initial allocations during early implementation may result in temporary variances.

*Strategy* - The portfolio should be appropriately diversified across infrastructure asset classes and vehicles due to various risk/return characteristics.

*Manager* - Manager risk consists of two elements, the exposure within an investment vehicle, and the number of managers (general partners) in a given infrastructure fund. The exposure to a specific manager within an investment vehicle is controlled by limiting its commitment size. The cohesion of the general partners and the vesting rights to interest carry are important elements of insuring a successfully performing general partnership as are the past success of the business model employed and the length of time the team has remained stable.

*Vintage* - Vintage reflects the year of first capital draw and vintage risk refers to the variability of infrastructure commitments over time. Commitments to partnership investments will be staged over time such that the infrastructure portfolio invests over business cycles and insulates the portfolio from event risk.

*Asset Type* - Typically, infrastructure partnerships are permitted to invest in assets in a wide variety of industries (Transportation, Energy/Utility and Other) with limited controls. Risk from investing in assets with different return characteristics is controlled primarily through appropriate diversification across business sectors and sub-sectors. No infrastructure asset class shall account for more than 70% of the portfolio.

*Geographic* - Over the long-term, the infrastructure portfolio should seek diversification with regard to major regional areas both domestically and internationally. The infrastructure portfolio will accept the currency risks consistent with the geographic constraints. Infrastructure partnerships generally do not hedge currency risk, though with increasing globalization, one can see this practice increasing. With respect to U.S. investing, the portfolio should generally target at least 40%.

#### G. Distinction of Responsibilities

1. The Board, as Trustees, is responsible for approving the Real Asset Statement of Investment Policy.
2. ATRS' Board of Trustees is responsible for selecting the investment managers used to implement the Real Asset Statement of Investment Policy.
3. ATRS' Investment Staff and the Real Asset Consultant are jointly responsible for recommending the Investment Managers to the Board, as well as managing the Real Asset class, as described by the Real Asset Statement of Investment Policy, on an on-going basis, including monitoring the investment managers.
4. The Real Asset Consultant will assist ATRS' Investment Staff in recommending investment managers to the Board, monitoring investment managers, presenting Real Asset class performance to the Board, and will assist Investment Staff in developing and recommending the Real Asset Statement of Investment Policy and any changes to this document.
5. Investment Managers are utilized by ATRS to implement the specific investment strategies selected by ATRS.

#### H. Reporting and Monitoring

1. The Investment Staff and the Real Asset Consultant will monitor performance on a quarterly basis, providing a quarterly report to the Board. The report will provide a comprehensive review of the Real Asset portfolio in a form approved by ATRS' Investment Staff and the Real Asset Consultant.

## **HISTORY**

Adopted October 7, 2013

Adopted October 5, 2015

Amended February 3, 2020

Amended December 7, 2020

Amended June 5, 2023

Amended December 2, 2024

# ATRS Board Policy 6

## REAL ASSETS INVESTMENT POLICIES

A.C.A. § 24-7-305

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### I. Board - Investment Policies and Procedures

#### A. Real Assets Investment Policies

##### 1. Scope

This policy applies to the Real Asset category ("Real Assets") of the Arkansas Teacher Retirement System's ("ATRS") investment portfolio. This policy governs the private market investments and not the public real asset securities exposure within the Total Equity asset class.

##### 2. Purpose and Objectives

The purpose of this statement of investment policy is to formalize the ATRS' Board of Trustees' (the "Board") investment objectives, policies, and procedures, with respect to Real Assets, and to define the duties and responsibilities of the various entities involved in the Real Assets investment process. This statement is to be considered an extension of ATRS' general Statement of Investment Policy.

#### B. Investment Philosophy

1. ATRS allocates a portion of its total assets to Real Assets. ATRS defines Real Assets as investments relating to the ownership, financing, or operation of real estate, timber, agriculture, and infrastructure assets. ATRS allocates capital to Real Assets with the following goals:

##### a. *Diversification with Other Asset Classes*

Real Asset returns have historically performed differently than the returns of other asset classes in which ATRS invests. ATRS believes that Real Asset returns will continue to perform differently than those of other asset classes, allowing ATRS to lower the risk of its overall portfolio through diversification by allocating to the asset class.

##### b. *Potential Inflation Hedge*

Real Asset returns have historically shown the ability to provide a hedge against rising inflation. By allocating a portion of its investments to an asset class with these characteristics the overall risk of rising inflation to the ATRS portfolio is reduced.

#### C. Allocation

1. ATRS controls allocation risk at the total fund level. The allocation establishes a 15% target for the Real Asset class. As provided in ATRS' general Statement of Investment Policy, a range of minimum and maximum relative to the target has not been set as it is not prudent to set rebalancing ranges for the real asset classes due to their illiquid nature. This target allocation is to be reached and maintained over a reasonable period of time using a pacing schedule established by the joint effort of the Executive Director and Real Asset Consultant. There will be no fixed targets for the Real Assets subasset classes but the following general parameters have been identified for the Real Asset subasset classes:

- 8% Real Estate
- 2% Timber
- 1% Agriculture
- 4% Infrastructure

#### D. Performance Benchmark

1. ATRS' Real Asset portfolio is benchmarked on a net of fee basis against the following sub-asset class benchmarks over rolling five year periods.

- a. Real Estate Benchmark: The net return for ATRS' real estate investments is expected to meet or exceed the net NCREIF Fund Index Open-end Diversified Core Equity Index ("NFI-ODCE") over five year rolling period.
- b. Timber Benchmark: The net return for ATRS' timber investments is expected to meet or exceed the NCREIF Timberland Property Index ("NTPI") over a five year rolling period.
  - Given the highly concentrated nature of the NTPI, it is advised that an additional performance measurement tool be utilized in order to gauge the timber portfolio's performance compared to the opportunity cost of investing in timber. The Consumer Price Index plus 300 basis points will be used for measurement.
- c. Agriculture Benchmark: The net return for ATRS' agriculture investments is expected to meet or exceed the NCREIF Farmland Index ("NFI") over a five year rolling period.
  - Much like NTPI, NFI also has a concentrated nature and it is advised that an additional performance measurement tool be utilized in order to gauge the agriculture portfolio's performance compared to the opportunity cost of investing in agriculture. The

Consumer Price Index plus 300 basis points will be used for measurement.

d. Infrastructure Benchmark: Over the long term (10 years or longer), the infrastructure portfolio is expected to generate a minimum internal rate of return ("IRR") equal to the Consumer Price Index plus 500 basis points, net of all investment management fees and expenses. The Consumer Price Index plus 500 basis points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure.

2. The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark, and Infrastructure benchmark. The net of fee return for ATRS' Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five year periods.

#### E. Portfolio Composition

1. The majority of the Real Asset class investments should consist of equity ownership of privately-held institutional real estate, timber, agriculture, and infrastructure investments.

2. This policy authorizes the use of all types of investment structures including, but not limited to:

- Separate Accounts
- Co-investments
- Joint ventures
- Open and closed-end funds
- Partnerships
- Private and public Real Estate Investment Trusts ("REITs") and Real Estate Operating Companies ("REOCs")
- Listed or publicly traded infrastructure

#### F. Risk Management

1. For ATRS' Real Asset investments, the following sections identify the most significant risks and the method of control. Compliance with the following risk parameters shall be based on the percentage of ATRS' Real Asset portfolio's Net Asset Value at Fair Value at the end of each quarter.



a. *Investment Manager Diversification*

Investment manager risk consists of two elements: the exposure to an investment manager and the number of investment managers in ATRS' Real Asset portfolio. To control investment manager exposure, the allocation to a single Real Asset manager is typically limited to 30% of ATRS' Real Asset target allocation.

b. *Individual Investment Diversification*

In order to mitigate the risk of large losses, ATRS will diversify its Real Asset investments across many different individual investments. Individual investments, measured by gross asset value, shall generally not exceed 10% of the overall Real Asset target allocation. For Real Estate, the 10% individual investment limitation will apply to Core properties, but Non-Core properties will be generally limited to 5%. Core properties are generally defined as industrial, apartment, retail, and office portfolios that are at least 80% leased, located in major metropolitan areas, and typically use no more than 50% leverage. Non-core is generally defined as the remainder of the Real Estate property opportunity set.

c. *Liquidity*

The majority of Real Assets are illiquid. As such, ATRS understands and recognizes that the Real Asset class will not be structured in a way to provide liquidity. Should market values for the Real Asset class change such that the asset class falls outside of these and the below risk management parameters, the Executive Director and Real Asset Consultant will determine the most effective solution and timeframe to bring the Real Asset exposure into compliance.

2. Additional risk parameters at the subasset class level are defined below and compliance shall be based on the percentage of each subasset class' Net Asset Value at Fair Value at the end of each quarter:

a. Real Estate:

*Property Diversification* - ATRS seeks to minimize the risk of its Real Estate portfolio by allocating its assets across the spectrum of property types, with the majority of its investments allocated to the primary sectors of the NFI-ODCE. No single traditional property type shall account for greater than 50% of the portfolio. In addition, the general range of property type allocations will be 0.5x - 1.5x the NFI-ODCE's weight in each property type. Other property types, as

defined by NFI-ODCE, are allowed but (on a combined basis) should not exceed 20% of the real estate portfolio.

*Geographic Diversification* - The Plan seeks to minimize the risk of its real estate portfolio by allocating its investments across the geographic spectrum. Within the United States, the general range of geographic allocations will be 0.5x - 1.5x the NFI-ODCE weight in each region. With respect to non-U.S. investing, no more than 40% of the portfolio may be invested outside of the U.S. ATRS may initiate Arkansas-related mortgage loans and direct Real Estate investments to meet the goal of investing in quality Arkansas related investments. The Executive Director and Real Estate Consultant will monitor the Arkansas-related Real Estate holdings to protect against excessive risk due to sector or geographic exposure. The goal of Arkansas-related investments shall be to achieve a total rate of return, net of all fees and costs that will exceed the real estate performance benchmark over time.

*Leverage* - ATRS allows some of its investment managers the ability to use modest amounts of leverage in their investment strategy as a means of enhancing the overall risk-adjusted returns available to ATRS. In keeping with its goal of risk mitigation, leverage at the total asset class level should be kept below a 50% loan-to-value ratio.

*Life Cycle* - ATRS will endeavor to invest the majority of its assets in fully established, income-producing Real Estate, commonly referred to as Core Real Estate. As defined above, the ATRS goal will be to have between 50% and 70% of its Real Estate asset class in Core investments. Non-Core opportunities, such as Value Added and Opportunistic real estate strategies, may provide better alpha generation but will be viewed tactically and have an operating allocation range of 30% to 50% of the real estate portfolio.

b. Timber:

*Geographic Diversification* - The Plan seeks to minimize the risk of its timber portfolio by allocating its investments across the geographic spectrum. Within the United States, the allowable range of geographic allocations will fall within the following target ranges as defined by the NCREIF timberland index.

<u>Region</u>	<u>Range</u>
<u>South</u>	<u>40% to 80%</u>
<u>Northwest</u>	<u>0% to 50%</u>
<u>Northeast</u>	<u>0% to 20%</u>

<u>Lake States</u>	<u>0% to 20%</u>
<u>Other</u>	<u>0% to 20%</u>

c. Agriculture:

*Crop Diversification* - The majority of the portfolio will be comprised of existing crop properties. With the exception of the portfolio creation stage, no crop shall comprise in excess of 40% of the agriculture portfolio.

*Geographic Diversification* - Investments will be primarily located within the continental United States. Properties located within the state of Arkansas are preferred within a prudent range of exposure for the total portfolio. It is desired that the investments will have attractive locations with good market access. No region, as defined by the NCREIF Farm Index regional definitions, will comprise more than 40% of the agriculture portfolio.

*Leverage* - In keeping with its goal of risk mitigation, leverage at the total asset class level should be kept below a 20% loan-to-value ratio.

d. Infrastructure: ATRS will use diversification of its infrastructure portfolio as a risk mitigation tactic. Relevant risk factors considered are strategy, manager, firm, vintage year, asset type, geographic and liquidity issues. However, initial allocations during early implementation may result in temporary variances.

*Strategy* - The portfolio should be appropriately diversified across infrastructure asset classes and vehicles due to various risk/return characteristics.

*Manager* - Manager risk consists of two elements, the exposure within an investment vehicle, and the number of managers (general partners) in a given infrastructure fund. The exposure to a specific manager within an investment vehicle is controlled by limiting its commitment size. The cohesion of the general partners and the vesting rights to interest carry are important elements of insuring a successfully performing general partnership as are the past success of the business model employed and the length of time the team has remained stable.

*Vintage* - Vintage reflects the year of first capital draw and vintage risk refers to the variability of infrastructure commitments over time. Commitments to partnership investments will be staged over time such that the infrastructure portfolio invests over business cycles and insulates the portfolio from event risk.

*Asset Type* - Typically, infrastructure partnerships are permitted to invest in assets in a wide variety of industries (Transportation, Energy/Utility and Other) with limited controls. Risk from investing in assets with different return characteristics is controlled primarily through appropriate diversification across business sectors and sub-sectors. No infrastructure asset class shall account for more than 70% of the portfolio.

*Geographic* - Over the long-term, the infrastructure portfolio should seek diversification with regard to major regional areas both domestically and internationally. The infrastructure portfolio will accept the currency risks consistent with the geographic constraints. Infrastructure partnerships generally do not hedge currency risk, though with increasing globalization, one can see this practice increasing. With respect to U.S. investing, the portfolio should generally target at least 40%.

#### G. Distinction of Responsibilities

1. The Board, as Trustees, is responsible for approving the Real Asset Statement of Investment Policy.
2. ATRS' Board of Trustees is responsible for selecting the investment managers used to implement the Real Asset Statement of Investment Policy.
3. ATRS' Investment Staff and the Real Asset Consultant are jointly responsible for recommending the Investment Managers to the Board, as well as managing the Real Asset class, as described by the Real Asset Statement of Investment Policy, on an on-going basis, including monitoring the investment managers.
4. The Real Asset Consultant will assist ATRS' Investment Staff in recommending investment managers to the Board, monitoring investment managers, presenting Real Asset class performance to the Board, and will assist Investment Staff in developing and recommending the Real Asset Statement of Investment Policy and any changes to this document.
5. Investment Managers are utilized by ATRS to implement the specific investment strategies selected by ATRS.

#### H. Reporting and Monitoring

1. The Investment Staff and the Real Asset Consultant will monitor performance on a quarterly basis, providing a quarterly report to the Board. The report will provide a comprehensive review of the Real Asset portfolio in a form approved by ATRS' Investment Staff and the Real Asset Consultant.

## **HISTORY**

Adopted October 7, 2013

Adopted October 5, 2015

Amended February 3, 2020

Amended December 7, 2020

Amended June 5, 2023

Amended December 2, 2024

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 2, 2024. Those members present were Dr. Eddie Phillips, Dr. Hoyte Pyle, and Dr. Jim Morse. Anne Marie Berardi & Logan Penter of the Teacher Retirement System was also in attendance.

A total of six disability applications were considered. Of the six applicants, three were approved: ATRS ID: 226439; 231233; 293882. One applicant had more information requested: ATRS ID: 380105. Two applicants were denied: ATRS ID: 259248; 374755.

Respectfully Submitted,



Eddie Phillips, M.D.  
Medical Committee Chairman

Respectfully Submitted,



Anne Marie 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 6, 2024. Those members present were Dr. Eddie Phillips, Dr. Hoyte Pyle, and Dr. Jim Morse. Anne Marie Berardi & Logan Penter of the Teacher Retirement System was also in attendance.

A total of ten disability applications were considered. Of the ten applicants, eight were approved: ATRS ID: 242224; 227594; 176877; 361734; 380105; 307683; 189530; 223123. One applicant had more information requested: ATRS ID: 266138. One applicant was denied: ATRS ID: 419726.

Respectfully Submitted,



Eddie Phillips, M.D.  
Medical Committee Chairman

Respectfully Submitted,



Anne Marie Berardi  
Retirement Benefits Counselor

ARKANSAS TEACHER RETIREMENT SYSTEM  
FINANCIAL COMPARISON

PLAN NET POSITION

	<u>June 30, 2024</u>	<u>June 30, 2023</u>	<u>Percentage Change</u>
<b>ASSETS</b>			
Cash and cash equivalents	382,291,377	349,165,471	
Accounts receivable	100,832,938	103,517,892	
Investments	22,013,821,419	20,267,561,427	
Invested securities lending	427,105,534	457,448,502	
Equipment (net of accumulated depreciation)	60,740	73,496	
Deferred Outflows Related to OPEB	262,602	493,831	
Other assets	<u>133,409</u>	<u>137,233</u>	
<b>TOTAL ASSETS</b>	<u>22,924,508,020</u>	<u>21,178,397,853</u>	8.24%
<b>LIABILITIES</b>			
Deferred Inflows Related to OPEB	1,475,538	1,659,915	
Securities lending collateral	427,105,534	457,448,502	
Investment principal payable	130,273,772	37,647,135	
Survivor benefits for minors	9,048	14,149	
Other payables	<u>6,412,743</u>	<u>6,576,235</u>	
<b>TOTAL LIABILITIES</b>	<u>565,276,635</u>	<u>503,345,935</u>	12.30%
<b>NET POSITION HELD IN TRUST FOR PENSION BENEFITS</b>	<u><u>22,359,231,384</u></u>	<u><u>20,675,051,918</u></u>	8.15%



CHANGES IN PLAN NET POSITION

	For the Year Ended		Percentage Change
	June 30, 2024	June 30, 2023	
<b>ADDITIONS</b>			
Contributions	<u>765,774,084</u>	<u>737,229,752</u>	3.87%
Investment income			
Interest and dividends	205,572,803	195,420,915	
Gain / (loss) on investments	2,273,170,605	1,550,226,802	
Real estate operating income	6,369,111	6,437,924	
Securities lending activity	2,501,792	3,789,883	
Other investment income	<u>3,368,926</u>	<u>1,244,319</u>	
Total investment income	2,490,983,236	1,757,119,841	
Less investment expense	<u>78,162,659</u>	<u>64,810,579</u>	
Net income from investing activities	<u>2,412,820,577</u>	<u>1,692,309,263</u>	
<b>TOTAL ADDITIONS</b>	<u>3,178,594,661</u>	<u>2,429,539,014</u>	30.83%
<b>DEDUCTIONS</b>			
Benefits	1,473,871,266	1,413,477,760	
Refunds	12,116,533	12,583,767	
Administrative expenses (1)	<u>8,427,396</u>	<u>7,892,822</u>	6.77%
<b>TOTAL DEDUCTIONS</b>	<u>1,494,415,195</u>	<u>1,433,954,348</u>	4.22%
<b>CHANGE IN NET PLAN POSITION</b>	1,684,179,466	995,584,666	
<b>NET POSITION - BEGINNING OF YEAR</b>	<u>20,675,051,918</u>	<u>19,679,467,252</u>	
<b>NET POSITION - END OF YEAR</b>	<u>22,359,231,384</u>	<u>20,675,051,918</u>	8.15%

(1) Includes an adjustment to account for OPEB related costs (see note below). Due to this entry, the amount shown for ATRS administrative expenses will vary more than "normal" from year to year. See below for admin expense presented without OPEB adjustment

Government Accounting Standards Board (GASB) Statement No 75, issued June 2015, requires ATRS to account for a proportionate share of the cost of Other Post Employment Benefits (OPEB) provided by the state (i.e. post employment insurance benefits). Each year the Arkansas Department of Finance and Administration provides ATRS the entry to be posted to the ATRS financial statements. A portion of the entry directly affects admin expenses as well as accounts for deferred inflows as an additional liability and deferred outflows as an additional asset.

FY2024	FY2023	
<u>8,600,409</u>	<u>8,638,439</u>	-0.44%

**Fiscal Year 2024 Board and Staff Travel Report**

ATRS staff is presenting travel expenditure reports in two categories (Board and Staff). More detail is available upon request.

	<b>FY2024</b>	<b>FY2023</b>	<b>Difference</b>
Board	\$10,410	\$9,410	\$1,000
Staff	\$38,336	\$20,987	\$17,349
<b>Total</b>	<b>\$48,746</b>	<b>\$30,397</b>	<b>\$18,349</b>

TO: ATRS Board of Trustees  
Mark White, Executive Director

FROM: Stephanie Lilly-Palmer, Human Resources Manager

Date: December 2, 2024

RE: Personnel Report

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ATRS currently has a total of 87 appropriated positions with 73 positions filled, and 14 vacant (5 of these vacated within the previous year).

Breakdown of current vacancies as of November 23, 2024:

- 2 due to Internal Promotion
- 1 due to Voluntary Resignation
- 2 being filled in December 2024

Position Activity from November 23, 2023, to November 22, 2024:

- 19 Positions advertised
- 426 Applications received
- 74 Applicants interviewed
- 14 Positions filled
- 2 Pending

The ATRS Human Resources Manager will be available to answer any questions regarding this report.

**ARKANSAS TEACHER RETIREMENT SYSTEM  
SECURITIES MONITORING AND ASSET RECOVERY  
LITIGATION POLICY**

**I. DELEGATION OF AUTHORITY TO IDENTIFY POTENTIAL CLAIMS.**

The Board of Trustees (the “Board”) delegates to the ATRS staff the authority to identify potential claims caused by a breach of duty by a third party to recover lost assets or value from securities bought or sold by ATRS. ATRS staff will provide a recommendation for potential claims litigation, including the recommended securities monitoring firm or firms to be retained for each potential claim, to the Board for consideration prior to initiating any claims litigation, opting out of any class action, or seeking designation as a lead or co-lead plaintiff.

**II. EVALUATION OF POTENTIAL CLAIMS**

ATRS staff may utilize the services of ATRS’s custodial bank, as well as the services of any expert in the area of securities monitoring and asset recovery to evaluate any potential claims, file claims as necessary, and collect any settlements that results from the claims.

- A. In the event ATRS is identified as a member of a class of potential claimants, ATRS may choose to participate in the claim as a member of the class, to seek designation as a lead plaintiff, or opt out of the class action.
- B. ATRS shall consider and weigh the merit of each claim based upon the following criteria:
  - 1. The level of loss or size of the claim for the investment activity
  - 2. The projected use of ATRS staff time and resources
  - 3. The justification for the claim by a securities monitoring firm; and
  - 4. The likelihood of recovery.
- C. In the event of an inconsistency with this Board policy and any previous Board policy, this policy shall control.

**III. APPROVAL OF SECURITIES MONITORING & ASSET RECOVERY LAW FIRMS.**

- A. ATRS staff will interview and select, through a request for qualifications (“RFQ”) process, no more than ~~six (6)~~nine (9) qualified securities monitoring and litigation firms to evaluate any potential claims, file claims as necessary, and collect any settlements that results from the claims. A firm selected under this RFQ provides services to ATRS on a contingency fee basis.
- B. In cases where the initiation of litigation is a formality designed to provide support for another institutional investor, ATRS staff may recommend that the most sensible and cost-effective source of legal representation will be the ATRS legal counsel or the legal counsel representing the institutional investor that ATRS supports in the litigation.

**DATE:** November 20, 2024  
**TO:** ATRS Board of Trustees  
**FROM:** Mark White, Executive Director  
**RE:** Request for Qualifications, Securities Litigation and Class Action Monitoring

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In its September 30, 2024, meeting, the Board of Trustees of the Arkansas Teacher Retirement System authorized ATRS staff to issue a Request for Qualifications for Securities Litigation and Class Action Monitoring. Staff published the RFQ on October 23, 2024, and received responses from 20 applicants by the November 15 deadline. A staff committee reviewed and scored the responses.

The following firms, listed in alphabetical order, are the 9 top-scoring firms. Based on the committee's scores, I recommend that the Board approve the following as Securities Litigation and Class Action Monitoring Counsel for ATRS:

- Barrack, Rodos & Bacine (Philadelphia, PA)
- Berger Montague PC (Philadelphia, PA)
- Bernstein Litowitz Berger & Grossmann LLP \* (New York, NY)
- Bleichmar Fonti & Auld LLP \* (New York, NY)
- Cohen Milstein Sellers & Toll PLLC \* (Washington, DC)
- Kaplan Fox & Kilsheimer LLP \* (New York, NY)
- Labaton Keller Sucharow LLP \* (New York, NY)
- Motley Rice LLC (Mt. Pleasant, SC)
- The Rosen Law Firm, P.A. (New York, NY)

*(\*) denotes firms that are currently ATRS counsel for securities litigation and monitoring.*

These 9 firms include more than 688 attorneys practicing in 51 offices in 15 states, D.C., and 2 foreign countries. The firms range in size from 24 attorneys to 147 attorneys. All of them have significant experience representing public pension funds like ATRS in securities litigation.

Please remember that any securities litigation will be taken on contingency, so that there is no cost or financial risk to ATRS. Any litigation will be subject to prior approval by the ATRS Board.