ARKANSAS TEACHER RETIREMENT SYSTEM

February 6, 2023

1400 West Third Street
BOARD ROOM
Little Rock, AR 72201

Board of Trustees Meeting
10:45 a.m.

AGENDA
ARKANSAS TEACHER RETIREMENT SYSTEM
BOARD OF TRUSTEES

February 6, 2023
10:45 a.m.
1400 West Third Street
Little Rock, AR 72201

I. ***Call to Order/Roll Call.** page 1.

II. ***Motion to Excuse Absent Board Members.**

III. ***Adoption of Agenda.** page 2.

IV. Executive Summary. (Attachment No. 1) page 7.

V. ***Approval of December 5, 2022, Minutes.** (Attachment No. 2) page 17.

VI. Correcting a Scrivener's error in Resolution No. 2022-42, Authorization to pay Post 10-Year T-DROP Interest for Fiscal Year 2023.
   - A. ***Resolution 2023-01.** (Attachment No. 3) page 28.

VII. ***Staff Empowerment.**
   - A. ***Authority to Transact Business.**
     - 1. ***Resolution 2023-02.** (Attachment No. 4) page 29.
   - B. ***Specific Powers of Executive Director.**
     - 1. ***Resolution 2023-03.** (Attachment No. 5) page 30.
   - C. ***Appointment of ATRS as Manager of LLCs.**
     - 1. ***Resolution 2023-04.** (Attachment No. 6) page 31.

VIII. ***Authority to Reimburse Trustee Expenses for 2023.**
   - A. ***Resolution 2023-05.** (Attachment No. 7) page 32.

IX. ***Authorization for Board Travel and Expense Reimbursement for 2023.**

* Action Item

2023-02-02 17:16:58.196584

A. ***Resolution 2023-06.** (Attachment No. 8) page 33.

X. ***2023-2024 Employer Contribution Rate.**

A. ***Resolution 2023-07.** (Attachment No. 9) page 38.

XI. ***2023-2024 Member Contribution Rate.**

A. ***Resolution 2023-08.** (Attachment No. 10) page 39.

XII. ***Surcharge Rate for Outsourced Positions.**

A. ***Resoution 2023-09.** (Attachment No. 11) page 40.

XIII. ***Actuarial Valuations, June 30, 2022.**

A. ***Active & Inactive Members.** (Attachment No. 12) page 41.

B. ***Retirees & Beneficiaries.** (Attachment No. 13) page 117.

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

XV. Report of Employer Penalties and Interest Waived Under A.C.A. Sec. 24-7-411. (Attachment No. 14) page 160.

XVI. Member's Eligibility to Retire Using Purchased Future Service Credit. *Clint Rhoden, Executive Director*

XVII. Investments Committee Report.

A. Arkansas Related and Investment Update.

1. List of Fund Closings.

a. Alpine Investors IX, LP, a fund specializing in software and service companies, the Board authorized commitment of up to $30 million dollars on December 5, 2022 was accepted and closed on December 20, 2023.

b. Franklin Park Corporate Finance Access Fund II, LP, a fund focused on smaller buyout, growth equity and turnaround funds, the Board authorized additional commitment of up to $30 million dollars on December 5, 2022 with Imminent Need was accepted and closed on December 6, 2022.

2. Board Policies Report. (Attachment No. 15) page 162.

B. General Investment Consultant.

* Action Item

1. Preliminary Performance Report for the Quarter Ending December 31, 2022. (Attachment No. 16) page 165.

C. Real Assets Consultant Report.

1. Performance Report for the Quarter Ending September 30, 2022. (Attachment No. 17) page 314.

D. Private Equity Consultant Report.

1. Private Equity Portfolio Review for the Quarter Ending September 30, 2022. (Attachment No. 18) page 367.

2. ***Recommendation to approve for Board adoption Resolution 2023-10, authorizing an investment of up to $30 million dollars in LLR Equity Partners VII, L.P. with Imminent Need.** (Attachment No. 19) page 422.

   a. ***Resolution 2023-10.** (Attachment No. 20) page 426.

3. ***Recommendation to approve for Board adoption Resolution 2023-11, authorizing an investment of up to $30 million dollars in GCG Investors VI, L.P. with Imminent Need.** (Attachment No. 21) page 428.

   a. ***Resolution 2023-11.** (Attachment No. 22) page 432.

4. ***Recommendation to approve for Board adoption Resolution 2023-12, authorizing an investment of up to $65 million dollars in Franklin Park Co- Investment Fund VI, L.P. with Imminent Need.** (Attachment No. 23) page 434.

   a. ***Resolution 2023-12.** (Attachment No. 24) page 447.

XVIII. Operations Committee Report.

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

1. Open Forum.

B. ATRS 2023 Legislative Package Update.

1. SB115 To Amend and Update the Law Concerning Survivor Annuity Benefits. Sponsor: Senator Kim Hammer Co-Sponsor: Representative Les Warren. (Attachment No. 25) page 449.

2. SB116 To Allow the Purchase of Permissive Service Credit. Sponsor: Senator Kim Hammer Co-Sponsor: Representative Les Warren This bill permits ATRS members to purchase permissive service credit from ATRS. (Attachment No. 26) page 457.

* Action Item

3. SB117 To Amend and Update the Law Concerning the Termination Separation Period.
   Sponsor: Senator Kim Hammer
   Co-Sponsor: Representative Les Warren. (Attachment No. 27) page 460.
4. HB1183 To Amend and Update Provisions for Outsourcing Sponsor: Representative John Maddox Co-Sponsor: Senator Kim Hammer. (Attachment No. 28) page 462.
5. HB1184 To Amend the Law Concerning the Membership Status of Certain Members Sponsor: Representative John Maddox Co-Sponsor: Senator Kim Hammer. (Attachment No. 29) page 468.
6. HB1186 To Amend and Update the Law Concerning Annuity Options. Sponsor: Representative Andrew Collins Co-Sponsor: Senator Kim Hammer. (Attachment No. 30) page 470.
7. HB1187 To Amend and Update the Law Concerning the Lump-Sum Death Benefit. Sponsor: Representative Andrew Collins Co-Sponsor: Senator Kim Hammer. (Attachment No. 31) page 475.
8. HB1188 To Amend and Update the Law Concerning the Final Average Salary. Sponsor: Representative Andrew Collins Co-Sponsor: Senator Kim Hammer. (Attachment No. 32) page 480.
9. HB1199 To Permit a Refund of Unused Purchased Service Credit. Sponsor: Representative Mark Perry Co-Sponsor: Senator Kim Hammer. (Attachment No. 33) page 483.
10. HB1200 Concerning an Inactive Member's Eligibility for Free Military Service Credit and Ability to Purchase Military, Contributory, and Federal Service Credit. Sponsor: Representative Mark Perry Co-Sponsor: Senator Kim Hammer. (Attachment No. 34) page 489.
11. HB1201 To Enact the Arkansas Teacher Retirement System's General Omnibus. Sponsor: Representative Les Warren Co-Sponsor: Senator Kim Hammer. (Attachment No. 35) page 492.
12. HB1202 Concerning the Multiplier Used to Calculate a Life Annuity. Sponsor: Representative Les Warren Co-Sponsor: Senator Kim Hammer. (Attachment No. 36) page 521.

XIX. ***Board of Trustees Disability Review.**

A. ***In Re: ATRS ID# 378469.** (Attachment No. 37) page 524.

B. ***In Re: ATRS ID# 259038.** (Attachment No. 38) page 528.

XX. Staff Reports.

* Action Item

A. ***Medical Committee Report. 10 Applications were approved.**
(Attachment No. 39) page 531.

XXI. Other Business.

XXII. ***Adjourn.**

* Action Item

EXECUTIVE SUMMARY

TO: Board of Trustees

FROM: ATRS Staff

RE: Executive Summary

DATE: February 6, 2023

VI. Correcting a Scrivener's error in Resolution No. 2022-42, Authorization to pay Post 10-Year T-DROP Interest for Fiscal Year 2023.

A scrivener's error was discovered in Resolution No. 2022-42 in which the fiscal year was incorrectly stated as fiscal year 2022. To avoid confusion, it is necessary to correct the error by adopting Resolution No. 2023-01.

A. *Resolution 2023-01. page 28.

VII. *Staff Empowerment.

Each year the ATRS Board authorizes ATRS staff to transact certain business to set the specific powers of the executive director and to appoint the executive director to manage and delegate operational duties to the limited liability companies that ATRS uses to manage its investments and Arkansas related property. The three resolutions regarding such actions are attached to this agenda as action items. The resolutions are worded the same as last year.

A. *Authority to Transact Business.

This is the standard Board resolution to authorize staff to take all actions necessary and limit authority of staff with the same authority and restrictions as in previous years. Other than to change the year, this is unchanged from last year

1. *Resolution 2023-02. page 29.

B. *Specific Powers of Executive Director.

This is the standard Board resolution to authorize specific powers of the Executive Director and to also limit those powers as in previous years. Other than to change the year, this is unchanged from last year.

1. *Resolution 2023-03. page 30.

C. *Appointment of ATRS as Manager of LLCs.

This is the standard Board resolution to authorize staff to transact business as manager of LLCs. Other than to change the year, this is unchanged from last year.

1. *Resolution 2023-04. page 31.

* Action Item

VIII. *Authority to Reimburse Trustee Expenses for 2023.

This is an action item for the Board to adopt a resolution authorizing reimbursement to Trustees for their expenses and costs for serving as Trustees. The resolution is the same as last year. Other than to change the year, this is unchanged from last year.

A. *Resolution 2023-05. page 32.

IX. *Authorization for Board Travel and Expense Reimbursement for 2023.

This is a standard Resolution for Board reimbursement. Other than to change the year, this is unchanged from last year. You should note that all travel reimbursement requests for both in-state and out-of-state travel can be found on the Federal General Services Administration website at:

http://www.gsa.gov/portal/category/100120

GSA rates are set by fiscal year, effective October 1 each year. For cities not identified or located on the website, the standard lodging rate is $98 per day and $59 per day for meals.

A. *Resolution 2023-06. page 33.

X. *2023-2024 Employer Contribution Rate.

This is a standard resolution that has been adopted over the years to establish the employer contribution rate for the upcoming fiscal year. The ATRS Board, on November 13, 2017, adopted an employer contribution rate schedule that established the employee contribution rate after FY2023 should be 15.00%. This resolution sets the employer contribution rate at 15.00%.

A. *Resolution 2023-07. page 38.

XI. *2023-2024 Member Contribution Rate.

This is a standard resolution that has been adopted over the years to establish the member contribution rate for the upcoming fiscal year. The ATRS Board, on November 13, 2017, adopted a member contribution rate schedule that established the member contribution rate after FY2023 should be 7.00%. This resolution sets the member contribution rate at 7.00%.

A. *Resolution 2023-08. page 39.

XII. *Surcharge Rate for Outsourced Positions.

From the 2017 Legislative session, a surcharge rate applies to outsourced salaries that are embedded positions as defined by that law. The law provides a "phased in" rate over several years. After the full phased in period, the Board has the authority to adjust the rate to a maximum rate 4%. This resolution sets the outsourcing

* Action Item

surcharge rate at 4.00%.

A. ***Resoution 2023-09.** page 40.

XIII. ***Actuarial Valuations, June 30, 2022.**

These are the annual reports prepared by the actuaries concerning the valuation of liabilities to active and inactive members along with the valuation of liabilities for annuities being paid to current retirees and current beneficiaries. These reports reflect the future liabilities of ATRS to these two groups. The two groups are: (1) Active and Inactive Members; and (2) Members and Beneficiaries of Members currently receiving a monthly annuity. The ATRS Board has already had a presentation by the actuaries on these reports that are now in final form.

A. ***Active & Inactive Members.** page 41.

This report reflects the liabilities owed by ATRS to active and inactive members. Active members include all those who are currently employed with an ATRS employer and continue to accrue service credit. Inactive members include those who are vested but no longer active and would be entitled to a benefit at a point in the future when they reach an appropriate age.

B. ***Retirees & Beneficiaries.** page 117.

This explanation is set forth above. These liabilities reflect the liabilities to ATRS retirees, beneficiaries, survivors, and incapacitated children.

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

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

XV. **Report of Employer Penalties and Interest Waived Under A.C.A. Sec. 24-7-411.** page 160.

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. Sixteen (16) employer penalties and interest amounts were waived for this reporting period in the amount of $4,322.19. This is a standard report for information and is not an action item.

XVI. **Member's Eligibility to Retire Using Purchased Future Service Credit.** *Clint Rhoden, Executive Director*

ATRS member # 476265 ("Member") entered into a contract buyout settlement agreement. As part of the settlement agreement, two (2) years of service credit for fiscal years 2023-2024 and 2024-2025 will be purchased for the Member. Including the two (2) years of service credit being purchased, the Member will have twenty-seven (27) years of service credit on July 1, 2023, and will be eligible for early voluntary retirement. The Member has asked whether he may retire on July 1, 2023, or if he must wait until July 1, 2025.

XVII. Investments Committee Report.

A. Arkansas Related and Investment Update.

1. List of Fund Closings.

a. Alpine Investors IX, LP, a fund specializing in software and service companies, the Board authorized commitment of up to $30 million dollars on December 5, 2022 was accepted and closed on December 20, 2023.

The ATRS full commitment of $30 million dollars was negotiated, accepted, and closed on December 20, 2023.

b. Franklin Park Corporate Finance Access Fund II, LP, a fund focused on smaller buyout, growth equity and turnaround funds, the Board authorized additional commitment of up to $30 million dollars on December 5, 2022 with Imminent Need was accepted and closed on December 6, 2022.

The ATRS full additional commitment of $30 million dollars was negotiated, accepted, and closed on December 6, 2022.

2. Board Policies Report. page 162.

B. General Investment Consultant.

1. Preliminary Performance Report for the Quarter Ending December 31, 2022. page 165.

PJ Kelly and Katie Comstock of Aon Hewitt Investment Consulting will provide the Board with a preliminary portfolio update for the quarter ending December 31, 2022.

C. Real Assets Consultant Report.

1. Performance Report for the Quarter Ending September 30, 2022. page 314.

Chae Hong of Aon Hewitt Investment Consulting will provide the Board with a portfolio update for the quarter ending September 30, 2022.

D. Private Equity Consultant Report.

1. Private Equity Portfolio Review for the Quarter Ending September 30, 2022. page 367.

Michael Bacine of Franklin Park will provide the Board with a portfolio update for the quarter ending September 30, 2022.

2. ***Recommendation to approve for Board adoption Resolution 2023-10, authorizing an investment of up to $30 million dollars in LLR Equity Partners VII, L.P. with Imminent Need.** page 422.

Based in Philadelphia, LLR was founded in 1999 by Ira Lubert, Seth Lehr and Howard Ross. Today the general partner is led today by Messrs. Lehr and Ross as well as ten other principals. The principals average more than seventeen years with the general partner. In its six previous funds, the firm has generated an average aggregate gross IRR of 25.9%. ATRS invested in the third fund in 2008 which generated a net IRR of 15.4% and in the sixth fund in 2020 which is on track to perform well.

Even though the firm has been successful in the past, it has refined its strategy in recent years to focus on the technology and healthcare sectors exclusively. The fund will make primarily growth equity investments but will include some buyout investments in the portfolio as well. The general partner's approach is to acquire companies with enterprise values of under $200 million and grow them to the $250-$500 million range where there is a larger set of buyers willing to pay higher entry multiples. The investment team plans for about two-thirds of the fund to be comprised of profitable, small and middle market companies with double-digit revenue growth and meaningful recurring revenue. About one-third of the fund will be companies that are not profitable but which can be made profitable within a two-year time frame. LLR has a high level of sector and sub-sector expertise that will that will enhance value creation for its portfolio companies. It also has competitive deal sourcing capabilities and is often able to acquire companies outside the auction process for attractive purchase prices. Due to the fact that there is no scheduled meeting of the Arkansas Legislative Council before the anticipated closing date, Imminent Need is requested. Franklin Park recommends an investment of up to $30 million dollars in LLR Equity Partners VII, L.P. with Imminent Need, and ATRS staff concurs.

a. ***Resolution 2023-10.** page 426.

3. ***Recommendation to approve for Board adoption Resolution 2023-11, authorizing an investment of up to $30 million dollars in GCG Investors VI, L.P. with Imminent Need.** page 428.

The General Partner, Greyrock Capital Group (GCG), was founded in 2001 by professionals who previously worked together in the corporate finance division of Bank of America Commercial Finance. Currently, GCG operates out of offices in Walnut Creek, California; Wilton, Connecticut; and Chicago, Illinois. The firm is led by three principals, Steve Dempsey, Sam Snyder and Daniel Kapnick. The principals lead the deal sourcing effort and have regional focuses based on their office location. They average over fourteen years each with the general partner and its predecessor. The firm has developed relationships and repeatedly partners with experts in certain industries such as specialty chemicals, software, food and electronics.

The general partner will focus on lower middle market opportunities which tend to be more consistent across market conditions and are often sourced outside the auction process. Individual investments will usually consist of 70-75% mezzanine debt and 25-30% equity securities. These investments are generally considered to be lower risk because of their debt component. The debt portion of the investments will target returns in the 14-18% range while the target for equity investments will be 20-30%. GCG has generated an average gross IRR of approximately 26.6% in its previous five funds with very few credit losses in the past four funds. Due to the fact that there is no scheduled meeting of the Arkansas Legislative Council before the anticipated closing date, Imminent Need is requested. Franklin Park recommends an investment of up to $30 million dollars in GCG Investors VI, L.P. with Imminent Need, and ATRS staff concurs.

a. ***Resolution 2023-11.** page 432.

4. ***Recommendation to approve for Board adoption Resolution 2023-12, authorizing an investment of up to $65 million dollars in Franklin Park Co- Investment Fund VI, L.P. with Imminent Need.** page 434.

A co-investment occurs when ATRS invests directly in a private company alongside a private equity manager or "sponsor". The benefit of private equity co-investments for ATRS is that the fund manager does not charge management fees or incentive fees such as carried interest. Therefore, the potential for return on co-investments is much greater since no fees are netted from the individual investment. For the last ten years, Franklin Park has done an excellent job of sourcing co-investment deals for ATRS as well as for their other clients, returning a net IRR of 21.8% on all co-investment transactions since inception, as of June 30, 2022. Franklin Park makes co-investments in corporate finance private equity transactions alongside private fund sponsors that will include buyout, growth equity, structured equity, financial restructuring and operational turnaround strategies.

Since 2012, ATRS has made co-investments through the ATRS/Franklin Park Private Equity Fund. In December 2020, the board authorized an investment of $125 million in Franklin Park Co-

Investment Fund V, L.P. (a multi-year fund) to be made through the ATRS/Franklin Park vehicle. Fund V is now almost fully invested and Franklin Park has created Franklin Park Co-Investment Fund VI. Through the years, the ATRS/Franklin Park vehicle has also housed other niche types of private equity investments and has become large and complicated. To simplify the administration and accounting for the vehicle, a new commitment is being recommended to be made directly in Franklin Park Co-Investment Fund VI, L.P. This investment is part of the private equity pacing for 2023 that was presented in December. Since Fund VI will also be a multi-year fund, an additional commitment is anticipated for next year for a total of $125 million over two years. The management fee for the fund will be 100 basis points for non-clients and 50 basis points for clients, as well as 10% carried interest for both.

Due to the fact that there is no scheduled meeting of the Arkansas Legislative Council before the anticipated closing date, Imminent Need is requested. Franklin Park recommends an investment of up to $65 million dollars in Franklin Park Co-Investment Fund VI, L.P. with Imminent Need. ATRS staff concurs with the recommendation and the fee structure.

a. ***Resolution 2023-12.** page 447.

XVIII. Operations Committee Report.

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

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 2023 Legislative Package Update.

1. SB115 To Amend and Update the Law Concerning Survivor Annuity Benefits. Sponsor: Senator Kim Hammer Co-Sponsor: Representative Les Warren. page 449.

This bill changes the deadline for filing an application for survivor benefits with ATRS from three (3) months to six (6) full calendar months. The bill clarifies that when a member does not have a residue balance, the member's designated beneficiary is not required to waive his or her right to the residue in order for the member's surviving spouse to be eligible for spousal survivor benefits. Additionally, the bill clarifies the age requirement concerning dependent child eligibility. The bill adds vocational-technical school to the list of institutions in which a dependent child must stay continuously enrolled as a full-time student in order to receive a dependent child annuity. The bill also permits dependent child annuity payments to be temporarily suspended and later reinstated in order to accommodate a dependent child who is called to active military duty or active military training. The bill allows an eligible child of a retiree who returns to work to receive a dependent child annuity after the death of the retiree. Finally, the bill clarifies that the law in effect at the time of a member's death is used to determine the member's effective date of retirement and when survivor benefits are payable.

2. **SB116 To Allow the Purchase of Permissive Service Credit. Sponsor: Senator Kim Hammer Co-Sponsor: Representative Les Warren This bill permits ATRS members to purchase permissive service credit from ATRS.** page 457.

   This bill permits ATRS members to purchase permissive service credit from ATRS.

3. **SB117 To Amend and Update the Law Concerning the Termination Separation Period. Sponsor: Senator Kim Hammer Co-Sponsor: Representative Les Warren.** page 460.

   This bill reduces the termination separation period from six (6) calendar months to three (3) full calendar months.

4. **HB1183 To Amend and Update Provisions for Outsourcing Sponsor: Representative John Maddox Co-Sponsor: Senator Kim Hammer.** page 462.

   This bill repeals the provisions of the outsourcing statute, Ark. Code Ann. 24-7-506, that permit a covered employer to elect to become a participating employer for embedded employees.

5. **HB1184 To Amend the Law Concerning the Membership Status of Certain Members Sponsor: Representative John Maddox Co-Sponsor: Senator Kim Hammer.** page 468.

   This bill permits ATRS to prorate the number of a member's contracted days if the member contracted with a covered employer after the start of the fiscal year. The proration will be performed for the purpose of determining whether the member should be classified as a contributory or noncontributory member who may make an irrevocable election to become a contributory member of ATRS.

6. **HB1186 To Amend and Update the Law Concerning Annuity Options. Sponsor: Representative Andrew Collins Co-Sponsor: Senator Kim Hammer.** page 470.

   This bill permits a retiree to designate both his or her qualifying surviving spouse and qualifying dependent child as his or her beneficiary. The bill also allows a retiree's child to qualify as a dependent child if the child has a Social Security Administration determination letter finding the child disabled. The bill clarifies when a retiree's surviving spouse may elect to receive a lump-sum distribution of the retiree's residue in lieu of a spousal annuity. Additionally, the bill clarifies when a disability retiree's surviving spouse who elects an Option A 100% Survivor Annuity is entitled to begin receiving spousal annuity payments. Finally, the bill clarifies that the law in effect at the time of a retiree's death shall be used to determine the retiree's effective retirement date and when survivor benefits are payable.

7. **HB1187 To Amend and Update the Law Concerning the Lump-Sum Death Benefit. Sponsor: Representative Andrew Collins Co-Sponsor: Senator Kim Hammer.** page 475.

   This bill clarifies that an active member, a T-DROP participant, and a retiree with five (5) years of actual service are eligible for the lump-sum death benefit. The bill also repeals certain provisions that the Board of Trustees of the Arkansas Teacher Retirement System may address by rules or resolutions pursuant to the authority given to them under the statute.

8. **HB1188 To Amend and Update the Law Concerning the Final Average Salary. Sponsor: Representative Andrew Collins Co-Sponsor: Senator Kim Hammer.** page 480.

   This bill clarifies that rules promulgated by the board will be used to calculate the final average salary for both full and partial service years. The bill also clarifies that anti-spiking provisions do not apply to a partial service year or a fiscal year immediately following a partial service year. Finally, the bill revises anti-spiking terminology for clarity.

9. **HB1199 To Permit a Refund of Unused Purchased Service Credit. Sponsor: Representative Mark Perry Co-Sponsor: Senator Kim Hammer.** page 483.

   This bill permits members to receive a refund of unused service credit purchased from ATRS.

10. **HB1200 Concerning an Inactive Member's Eligibility for Free Military Service Credit and Ability to Purchase Military, Contributory, and Federal Service Credit. Sponsor: Representative Mark Perry Co-Sponsor: Senator Kim Hammer.** page 489.

    This bill permits inactive members to receive free military service credit. The bill also permits inactive members to purchase military, contributory, and federal service credit.

11. **HB1201 To Enact the Arkansas Teacher Retirement System's General Omnibus. Sponsor: Representative Les Warren Co-Sponsor: Senator Kim Hammer.** page 492.

    This bill clarifies and corrects several minor issues, so that the Arkansas Teacher Retirement System Act, 24-7-201 et seq., appropriately reflects the current policies, resolutions, and procedures of the system.

12. **HB1202 Concerning the Multiplier Used to Calculate a Life Annuity. Sponsor: Representative Les Warren Co-Sponsor: Senator Kim Hammer.** page 521.

    The bill clarifies the law to provide that the multiplier rate for contributory service used for the first ten (10) years of service shall be between 1.75% and 2.15%. Finally, the bill amends the law to provide that the multiplier rate for noncontributory service used for the first ten (10) years of service shall be between 0.50% and 1.25%.

XIX. *Board of Trustees Disability Review.

Under the Disability Review procedure described in A.C.A.24-7-704(b)(3)(D) the Board shall approve the recommendations of the Medical Committee.

A. ***In Re: ATRS ID# 378469.** page 524.

B. ***In Re: ATRS ID# 259038.** page 528.

XX. Staff Reports.

A. ***Medical Committee Report. 10 Applications were approved.** page 531.

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, 10 were approved, 4 were denied, and 2 needed more information. This is not an action item.

XXI. Other Business.

MINUTES
ARKANSAS TEACHER RETIREMENT SYSTEM
BOARD OF TRUSTEES

Monday, December 5, 2022
10:30 a.m.
1400 West Third Street
Little Rock, AR 72201

ATTENDEES

Board Members Present
Danny Knight, Chair
Kelly Davis
Susan Ford
Dr. Mike Hernandez
Shawn Higginbotham
Michael Johnson
Bobby Lester
Chip Martin
Jeff Stubblefield
Hon. Andrea Lea, State Auditor
Jason Brady, designee for Dennis Milligan
Johnny Key, Secretary, Dept of Ed.*

Board Members Absent
Anita Bell
Kathy Clayton
Susannah Marshall, Bank Commissioner

Reporters Present
Mike Wickline, AR Dem Gaz.

ATRS Staff Present
Clint Rhoden, Executive Director
Rod Graves, Deputy Director
Tammy Porter, Board Secretary
Curtis Carter, Chief Financial Officer
Dena Dixson, Internal Audit/Risk Management*
Braeden Duke, Software Specialist Analyst
Vicky Fowler, Manager, Human Resources*
Willie Kincade, Director of Operations
Mike Lauro, Information Technology*
Jennifer Liwo, Staff Attorney*
Martha Miller, General Counsel*
Whitney Sommers, Administrative Analysis
Brenda West, Internal Audit/Risk Mgmt.
Misty Yant, Manager, Accounting/Reporting*

Guest Present
Katie Comstock, Aon Hewitt (AHIC)*
PJ Kelly, Aon Hewitt (AHIC)
Michael Bacine, Franklin Park*
Donna Morey, ARTA
Gar Chung, FIN-News*
Amy Fecher*
Joe Ebisa – WithIntellegence*
Lloyd Black*

via ZOOM

I. **Call to Order/Roll Call.** Mr. Danny Knight, Chair, called the Board of Trustees meeting to order at 11:30 a.m. Roll call was taken. Ms. Bell, Ms. Clayton and Ms. Marshall were absent.

II. **Adoption of Agenda.**

> **Mr. Brady *moved* for *adoption* of the Agenda. Mr. Martin s*econded* the *motion,* and the Board *unanimously approved the motion.***

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

IV. Approval of September 26, 2022, Minutes

> **Mr. Johnson *moved* for *approval* of the Minutes of the Board of Trustees meeting of September 26, 2022, with corrections made as presented to the Board. Mr. Lester *seconded* the *motion*, and the Board *unanimously approved the motion.***

V. Preliminary Active Actuarial Valuation. Judy Kermans, Brian Murphy, and Heidi Berry from Gabriel, Roeder, Smith and Company presented the Board with the Preliminary Actuarial Valuation.

VI. Statement of Financial Interest. Director Rhoden gave the Board a report on when Statement of Financial Interest are due.

VII. Proposed 2023 Board of Trustees Schedule.

> **Mr. Lester *moved* to *approve* the Proposed 2023 Board of Trustees Schedule. Mr. Martin *seconded* the *motion*, and the Board *unanimously approved the Motion.***

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

IX. Report of Employer Interest and Penalties Waived Under A. C. A. Sec. 24-7-411. Mr. Rhoden presented the employer interest and penalties waived report. ATRS may also waive employer interest and penalties when reports or payments are late or have issues due to a new bookkeeper, inclement weather, sickness and other situations that justify a waiver. Four (4) employer penalties and interest amounts were waived for this reporting period in the amount of $1,090.70.

X. **Manifest Injustice Report.** Director Rhoden provided the Board with the second report of 2022. This report was for information purposes only and was not an action item.

XI. **Arkansas Retired Teacher Association (ARTA) blind mailing project presentation.** Donna Morey, ARTA Executive Director, gave a presentation to the Board seeking help from ATRS to reach retired educators through a blind mailing project.

> **Mr. Stubblefield *moved* to *approve* the request of ARTA granting ARTA permission to do a blind mailing at ARTA's expense to retired educators. Mr. Lester *seconded* the *motion*, and the Board *unanimously approved the Motion.***

XII. **Review of ATRS permissible Employer.** Jennifer Liwo gave the Board a report on the Arkansas School Boards Association's continued approval as a covered employer under ATRD in order to enable its employees to become members of ATRS.

Executive staff recommends the Board adopt Resolution 2022-49, to continue approval of the Arkansas School Boards Association as a covered employer.

> **Mr. Lester *moved* to *approve* adoption of Resolution 2022-49, authorizing continued approval of the Arkansas School Boards Association as a covered employer of ATRS. Mr. Johnson *seconded the* Motion and the Board *unanimously approved the motion.***

XIII. **Waiver of Interest and Penalties on Contributions.** Director Rhoden presented with Board with a request for waiver of Interest and Penalties on Contributions.

Executive staff recommends the Board adopt Resolution 2022-59, to waive the enforcement of the new deadline retroactively from July 1, 2022, through June 30, 2023. Enforcement of the deadline of the 10th will resume beginning July 1, 2023.

> **Mr. Stubblefield *moved* to *approve* adoption of Resolution 2022-59, waiving the enforcement of the new deadline retroactively**

from July 1, 2022, through June 30, 2023, and enforcement of the deadline of the 10th will resume beginning July 1, 2023. Dr. Hernandez *seconded the* Motion and the Board *unanimously approved the motion.*

XIV. Investment Committee Report. ***Mr. Chip Martin.***

A. Arkansas Related and Investment Update.

1. **List of Fund Closings.** Rod Graves, Deputy Director, gave an update on recent investment activity.

2. **Board Policies Report.** Rod Graves, Deputy Director, gave an update on the ATRS current asset allocations.

B. General Investment Consultant Report

1. **Performance Report for the quarter ending September 30, 2022.** Katie Comstock of Aon Hewitt Investment Consulting provided the Committee with a Performance Report for the quarter ending September 30, 2022.

2. **Preliminary Performance Report for the Month Ending October 31, 2022.** Katie Comstock of Aon Hewitt Investment Consulting provided the Committee with a preliminary performance report for the month ending October 31, 2022.

3. **Public Equity and Fixed Income Structure review**. PJ Kelly of Aon Hewitt Investment Consulting provided the Committee with a review of the Public Equity and Fixed Income Structure.

   a. **Recommendation to approve for Board adoption Resolution 2022-50 authorizing the full redemption of the ATRS interest in Grantham, Mayo, Van Otterloo & Co. L.L.C. (GMO) Global All Country Equity Allocation.**

   Director Rhoden stated that staff concurs with the recommendation.

   Mr. Martin *moved to adopt* Resolution 2022-50 authorizing the full redemption of the ATRS interest in Grantham, Mayo, Van Otterloo & Co.

L.L.C. (GMO) Global All Country Equity Allocation, and the Board *unanimously approved the motion.*

b. Recommendation to approve for Board adoption of Resolution 2022-51, authorizing the full redemption of the ATRS interest in D.E. Shaw World Alpha Extension Fund, L.L.C.

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin *moved to adopt* Resolution 2022-51, authorizing the full redemption of the ATRS interest in D.E. Shaw World Alpha Extension Fund, L.L.C. and the Board *unanimously approved the motion.*

c. Recommendation to approve for Board adoption of Resolution 2022-52 authorizing an investment of up to $800 million dollars in Arrowstreet Global Equity ACWI Alpha Extension 130/30/20 LP.

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin *moved to adopt* Resolution 2022-52, authorizing an investment of up to $800 million dollars in Arrowstreet Global Equity ACWI Alpha Extension 130/30/20 LP. and the Board *unanimously approved the motion.*

d Recommendation to approve for Board adoption of Resolution 2022-53 authorizing the full redemption of the ATRS interest in Putnam Absolute Return Fixed Income Fund.

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin *moved to adopt* Resolution 2022-53 authorizing the full redemption of the ATRS interest in Putnam Absolute Return Fixed

Income Fund, and the Board *unanimously approved the motion.*

C. Real Assets Consultant Report

1. Performance Report for the Quarter Ending June 30, 2022. Chae Hong of Aon Hewitt Investment Consulting provided the Committee with a performance report for the quarter ending June 30, 2022.

2. Recommendation to approve for Board adoption Resolution 2022-54, authorizing an investment of up to €50 million euros (approximately the equivalent of $50 million dollars based on recent exchange rates) in DIF Ifrastructure VII Cooperatief U.A. and DIF Infrastructure VII SCSp (collectively DIF VII).

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin *moved to adopt* Resolution 2022-54, authorizing an investment of up to €50 million euros (approximately the equivalent of $50 million dollars based on recent exchange rates) in DIF Ifrastructure VII Cooperatief U.A. and DIF Infrastructure VII SCSp (collectively DIF VII), and the Board *unanimously approved the motion.*

3. 2023 Real Assets Commitment Pacing (Total Pacing $475 Million Dollars).

a. Core real estate $200 million dollars.

b. Value added and opportunistic real estate $200 million dollars.

c. Infrastructure $75 million dollars.

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin *moved* to *approve* the 2023 Real Asset Commitment Pacing (Total Pacing $475 Million

Dollars), and the Board *unanimously approved the motion.*

D. Private Equity Consultant Report.

1. **Preliminary Private Equity Portfolio Review for the Quarter Ended June 30, 2022.** Michael Bacine of Franklin Park provided the Committee with the private equity portfolio review for the quarter ended June 30, 2022.

2. **Recommendation to approve for Board adoption a motion to authorize the use of $30 million dollars of recallable distributions for the ATRS/FP Private Equity Fund, L. P.**

   Director Rhoden stated that staff concurs with the recommendation.

   Mr. Martin *moved* to *approve* the motion to authorize the use of $30 million dollars of recallable distributions for the ATRS/FP Private Equity Fund, L. P., and the Board *unanimously approved the motion.*

3. **Recommendation to approve for Board adoption Resolution 2022-55, authorizing an investment of up to $30 million dollars in Alpine Investors IX, L.P.**

   Director Rhoden stated that staff concurs with the recommendation.

   Mr. Martin, *moved* to *adopt Resolution* 2022-55, authorizing an investment of up to $30 million dollars in Alpine Investors IX, L.P., and the Board *unanimously approved the motion*

4. **2023 Private Equity Pacing Schedule (Total Pacing $350 Million Dollars).**

   1. **Six small or mid buyout/growth/turnaround $25-30 million dollars each in the U.S. (total $170 million dollars).**

2. **One debt/distressed assets $25 million dollars.**

3. **Franklin Park Venture Fund XIV no new commitment.**

4. **Franklin Park Venture Capital Opportunity Fund $30 million dollars.**

5. **Franklin Park International Fund XI $30 million dollars.**

6. **Franklin Park Corporate Finance Access Fund II $30 million dollars.**

7. **ATRS/FP Private Equity Fund (Co-Investment Fund VI) $65 million dollars.**

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin *moved* to *approve* the 2023 Private Equity Pacing Schedule (Total Pacing $350 Million Dollars), and the Board *unanimously approved the motion.*

5. **Recommendation to approve for Board adoption of Resolution 2022-56, authorizing an additional investment of up to $30 million dollars in Franklin Park Venture Capital Opportunity Fund, L.P.**

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin, *moved* to *adopt* Resolution 2022-56, authorizing an additional investment of up to $30 million dollars in Franklin Park Venture Capital Opportunity Fund, L.P., and the Board *unanimously approved the motion.*

6. **Recommendation to approve for Board adoption of Resolution 2022-57, authorizing an additional investment of up to $30 million dollars in Franklin Park International Fund IX., L.P.**

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin, *moved* to *adopt* Resolution 2022-57, authorizing an additional investment of up to $30 million dollars in Franklin Park International Fund IX., L.P. and the Board *unanimously approved the motion.*

7. Recommendation to approve for Board adoption Resolution 2022-58, authorizing an additional investment of up to $30 million dollars in Franklin Park Corporate Finance Access Fund II, L. P., with Imminent Need.

Director Rhoden stated that staff concurs with the recommendation.

Mr. Martin *moved* to *adopt* Resolution 2022-58, authorizing an additional investment of up to $30 million dollars in Franklin Park Corporate Finance Access Fund II, L. P., with imminent Need, and the Board *unanimously approved the motion.*

XV. Operations Committee Report. ***Mr. Bobby Lester***

A. Open Forum for Potential Rule or Law Changes y Committee Members and Board Members in attendance.

1. Open Forum. None

B. Revision to Current Board Policy No. 3 – Executive Director

Director Rhoden stated that staff concurs with the recommendation.

Mr. Lester *moved to approve* changes as presented to Board Policy No. 3, and the Board *unanimously approved the motion*

C. Discussion concerning Ark. Code Ann. 24-7-506 (Outsourcing Surcharge). Curtis Carter presented the Committee with a report on -outsourcing surcharge and repealing of Ark. Code Ann. §24-7-508. No action was taken on this matter.

D. **ATRS 2023 Legislative Package.** Director Rhoden presented the Committee with the ATRS 2023 Legislative Package.

> **Mr. Lester *moved* to *approve* the ATRS 2023 Legislative Package as presented to the Board, with corrections as discussed. The Board voted 10 to1 in favor of the Motion. Auditor Lea voted "NO" on the Motion.**

XVI. Staff Reports

A. **Medical Committee Report. Mr. Kincade reported that a total of Twenty-Two (22) Disability Retirement Applications were approved.**

> **Mr. Lester *moved to approve* the Medical Committee Report. Mr. Martin *seconded* the *motion* and the Board *unanimously approved* the *Motion*.**

B. **Financial Reports.** Mr. Curtis Carter, CFO, provided the Board with the Financial Statement Report and Travel Reports. No action was taken.

C. **Contracts.** Rod Graves presented the Board with the Contracts for renewal.

> **Dr. Hernandez *moved to approve* the Contracts as presented by Mr. Graves. Ms. Davis *seconded* the *motion* and the Board *unanimously approved* the *Motion*.**

D. **Personnel Report**. Ms. Vicky Fowler, Human resources manager presented the Board with the Personnel Report. No action was taken on this matter.

XVII. Other Business:

Martha Miller, General Counsel, told the Board that ATRS has been contact by several of our security monitoring firms about a Class action lawsuit in California against a hair care product. ATRS has an interest in the company. ATRS asks that the Board authorize staff to pursue as lead plaintiff in this class action case as recommended by securities monitoring firms.

Director Rhoden stated that staff concurs with this recommendation.

> **Mr. Higginbotham *moved to approve* ATRS to join as lead counsel in the California Class Action lawsuit. Dr. Hernandez *seconded the motion* and the Board *unanimously approved the motion.***

XVIII. Adjourn. With no other business, Mr. Danny Knight, Chair adjourned the meeting.

Meeting adjourned at 1:04 p.m.

Clint Rhoden, Executive Director	Mr. Danny Knight, Chair Board of Trustees
Tammy Porter, Recorder	Date Approved

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

R E S O L U T I O N
No. 2023-01

CORRECTING A SCRIVENER'S ERROR IN RESOLUTION NO. 2022-42 AUTHORIZATION TO PAY POST 10-YEAR T-DROP INTEREST FOR FISCAL YEAR 2023

WHEREAS, Resolution No. 2022-42, concerning the AUTHORIZATION TO PAY POST 10-YEAR T-DROP INTEREST FOR FISCAL YEAR 2023 was approved by the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) on September 26, 2022; and

WHEREAS, a scrivener's error was recently discovered in the penultimate paragraph of Resolution No. 2022-42 in which the fiscal year was incorrectly stated as fiscal year 2022; and

WHEREAS, in order to avoid confusion, it is necessary to correct said resolution.

NOW, THEREFORE, BE IT RESOLVED, *a* scrivener's error in Resolution No. 2022-42 concerning the AUTHORIZATION TO PAY POST 10-YEAR T-DROP INTEREST FOR FISCAL YEAR 2023 shall be corrected and the resolution shall read as follows.

"***NOW, THEREFORE, BE IT RESOLVED,*** that the ATRS Board sets the Post 10-Year T-DROP standard interest rate to 4% for fiscal year 2023.

FURTHER BE IT RESOLVED, that the ATRS Board awards a Post 10-Year T-DROP incentive interest rate to 0% for fiscal year 2023."

Adopted this 6th day of February, 2023.

____

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

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

<u>R E S O L U T I O N</u>
No. 2023-02

Authority to Transact Business

BE IT RESOLVED, That effective this 6th day of February, 2023, **CLINT RHODEN,** Executive Director, **ROD GRAVES**, Deputy Director, and **WILLIE KINCADE,** Associate Director of Operations, each are authorized to execute, acknowledge and deliver such agreements, documents, and instruments as might be necessary or appropriate in connection with the purchase, sale, pledge, transfer, or other transaction of any kind whatsoever involving any investment approved by the Arkansas Teacher Retirement System Board of Trustees or approved by the Investment Committee of said Board; and

WHEREAS*,* This authority shall continue until after the first regular scheduled Board meeting in 2024; and

FURTHER RESOLVED, That the execution, acknowledgment and/or delivery of such agreement, document, or instrument by any one of the three (3) named persons shall constitute the valid, binding and enforceable act of the Arkansas Teacher Retirement System by its Board of Trustees.

Adopted this 6th day of February 2023.

____

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. 2023-03

Specific Powers of Executive Director

WHEREAS, The Board of Trustees has determined the policy concerning the specific powers of the Executive Director is not explicitly set forth in policy, and

WHEREAS, The Executive Director should be authorized and empowered to perform the usual and customary acts of the Executive Director of the Arkansas Teacher Retirement System as the Executive Director’s usual and customary authority has been developed through a course of performance of Executive Directors over the years. However, the Executive Director should notify the Board Chair about any material decision that has usually and customarily been performed by the Executive Director to ensure the Board of Trustees is involved in all material decisions;

IT IS THEREFORE RESOLVED, The Executive Director shall be and hereby is authorized and empowered to perform the usual and customary acts of the Executive Director of the Arkansas Teacher Retirement System as the Executive Director’s usual and customary authority has been developed through a course of performance of Executive Directors over the years. Provided however, the Executive Director shall notify the Board Chair about any material decision that has usually and customarily been performed by the Executive Director to ensure the Board of Trustees is involved in all material decisions before a final decision is made.

Adopted this 6th day of February 2023.

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

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

RESOLUTION
No. 2023-04

Appointment of ATRS as Manager of LLC's

WHEREAS, The Arkansas Teacher Retirement System ("ATRS") is the sole member and manager of several LLC's, including: Pinnacle Mountain Holding Company, LLC, Pinnacle Mountain Holding Company II, LLC, Pinnacle Mountain Holding Company III, LLC, Pinnacle Mountain Holding Company IV, LLC, Pinnacle Mountain Holding Company V, LLC, Pinnacle Mountain Holding Company VI, LLC, all Arkansas limited liability companies; and American Timberland, LLC, a Delaware company (collectively, the "Companies"); and

WHEREAS, The ATRS Board of Trustees, acting as a prudent investor for the benefit of all ATRS members, and in recognizing ATRS as sole member and manager of the Companies, adopts the following actions and resolution for, and on behalf of the Companies;

NOW, THEREFORE, BE IT RESOLVED, That

1. As managing member of the Companies and pursuant to its authority in A.C.A § 24-2-619, ATRS hereby delegates the authority to the ATRS Executive Director to perform all duties related to the respective Companies consistent with the amended Articles of Organization, Operating Agreements, and other applicable laws and policies of ATRS and further the Executive Director may delegate authority to a Deputy Director or to an investment staff member, when proper, to perform needed actions and executions in his absence.

2. That the Executive Director or his delegate will provide regular reports to the ATRS Board on the Companies.

Adopted this 6th day of February 2023.

____

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

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

<u>R E S O L U T I O N</u>
No. 2023-05

Authority to Reimburse Trustee Expenses for 2023

WHEREAS, The Board of Trustees may reimburse expenses of the Trustees for performing official Board duties under A.C.A. § 24-7-303 (b) and other laws and policies of the State of Arkansas that may apply; and

WHEREAS, The Board must pre-approve any expenses incurred for the calendar year at its first meeting under ATRS Board Policy 1 section VII.A.

THEREFORE, BE IT RESOLVED, That the ATRS Board of Trustees hereby authorizes ATRS to reimburse Trustees for losses in salary resulting from attendance of a Board meeting that would otherwise be paid by the employer, including but not limited to, a Trustee’s out of pocket cost associated with employing substitute personnel or losses in salary or compensation and any costs of communication, including long distance, postage, internet access, and other communication charges consistent with ATRS Board Policy 1 section VII.A. upon presentation of a written request by a Trustee, with adequate documentation enclosed.

Adopted this 6th day of February 2023.

____

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. 2023-06

Authorization for Board Travel and Expenses for 2023

WHEREAS, Act 1211 of 1995 (A.C.A.§ 25-16-901 *et seq*.) provides that every state board may, by a majority vote of the total membership of the board cast during its first regularly scheduled meeting of each calendar year, authorize expense reimbursement for each board member for performing official board duties. Such reimbursement cannot exceed the rate established for state employees by state travel regulations; and

WHEREAS, Act 975 of 2011 provides for expense reimbursement for members of the Board of Trustees of the Arkansas Teacher Retirement System; and

NOW, THEREFORE, ***BE IT RESOLVED,*** That the Board of Trustees of the Arkansas Teacher Retirement System, by a majority vote of its total membership, authorizes expense reimbursement for each Board member for performing official Board duties during the calendar year 2023; and

FURTHER RESOLVED, That the expense reimbursement shall not exceed the rate established for state employees by state travel regulations and shall be in compliance with the attached Addendum A to this Resolution, adopted by this Board to reflect changes in state travel regulations; and

FURTHER RESOLVED, That Board members who live in the Little Rock area (excluding ex officio trustees) may be reimbursed for mileage and meal expenses incurred while performing official board duties in Little Rock at a rate not exceeding the rate established for state employees; and

FURTHER RESOLVED, That the adoption of this resolution authorizes reimbursement for any such expenses including those incurred in 2023 prior to the adoption of this resolution; and

FURTHER RESOLVED, That in years in which a Board retreat is held, each Board member shall be reimbursed for up to two (2) out-of-state conferences for the purpose of education; and

FURTHER RESOLVED, That in years in which the Board does not have a retreat each Board member shall be reimbursed for up to two (2) out-of-state conferences for the purpose of education, with one (1) additional out-of-state conference with the approval of the Board Chair.

Adopted this 6th day of February 2023.

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

Addendum A
Resolution 2023-06

The following regulations have been adopted to provide guidance to board members and employees of the Arkansas Teacher Retirement System (ATRS).

For purposes of these rules, the following definitions shall apply:

1. "Official Station" shall be:
   (a) For board members, the city or town in which a board member has a permanent address.
   (b) For employees, the city or town of the employee's actual location of work.

2. Travel expenses will be reimbursed when board members or employees are required to travel away from their official station on ATRS business. Minimization of expenses while traveling should be the same, as a prudent person would exercise if traveling on personal business.

3. A Travel Reimbursement Form (TR-1) must be verified and signed by the traveler, accompanied by the proper receipts, and duly signed by the Executive Director, or designee, before reimbursement may be processed.

4. All travel reimbursement requests, whether for in-state or out-of-state travel, must adhere to the reimbursement rates listed in the Federal Travel Directory unless a waiver is granted. Current rates as of the filing of this Resolution for cities not identified or located in listed cities have a Standard rate of $98 per day for lodging and $59 per day for meals. All current rates can be found on the Federal General Services Administration Website:

   http://www.gsa.gov/portal/category/100120

5. Reimbursement may be claimed for actual expenses only, and must not exceed the Federal Directory maximums. In-state meals will not be reimbursed without overnight lodging. There are no exceptions to the maximum meal rates. The tip reimbursement amount shall not exceed fifteen percent (15%) of the meal amount expended. The total reimbursement for meals and tips shall not exceed the maximum rates prescribed by the Financial Management Guide published by the Office of Accounting of the Department of Finance and Administration.

6. Exceptions to lodging maximums may be allowed only with good justification, i.e., when conference hotel rates exceed area maximums, and staying elsewhere would incur transportation charges. The Executive Director, or designee, must approve all requests for exceptions prior to incurring the expense.

Addendum A
<u>Resolution 2023-06</u>

7. Private vehicle mileage is reimbursable at the current rate per mile authorized by the Arkansas Department of Finance and Administration, currently 52 cents per mile. If a traveler’s personal vehicle is used for transportation to and from the airport, a mileage reimbursement may be requested.

8. Reimbursable travel expenses are limited to those expenses authorized and essential to conducting official ATRS business. Telephone, Internet access, and facsimile expenses shall be allowed only when necessary for the completion of official business. Incidental amounts not directly related to travel (such as postage, small emergency supplies, etc.) may be allowed, when necessary, if incurred during the performance of official business while traveling. These necessary incidental expenses shall be itemized on the TR-1 form with receipts attached.

9. If one-way travel exceeds 400 miles from the traveler’s official station, reimbursement may be requested for no more than one day prior to, and/or after, the official start/end of an approved conference/convention.

10. Travelers shall not be reimbursed for the purchase of alcoholic beverages, entertainment, flowers, valet service, laundry, cleaning, printing items, or other discretionary purchases.

11. Travel expenses shall not be billed to ATRS by a third-party except for lodging, meals, registration fees, and air transportation, duly approved in advance by the Executive Director.

12. Travel may be achieved by plane, train, bus, private or system-owned vehicle, rented vehicle, or taxi, whichever method serves the requirements of ATRS most economically and advantageously. The maximum allowable mileage will be computed by the shortest major highway route. Flights resulting in the lowest available airfare for ATRS should be used for all business trips, unless there are extenuating circumstances, such as unreasonable arrival/departure times or unusually long layovers.

13. When common carriers (airplane, train, or bus) are needed to transport persons on ATRS business, ATRS will make the travel arrangements, if possible, in order for the system to be billed direct. If this is not possible, the traveler may make and pay for arrangements and request reimbursement. Items that are properly purchased by, and invoiced directly to ATRS, are not reimbursable to the traveler.

Addendum A
Resolution 2023-06

14. For out-of-state travel, reimbursement shall be the lesser of coach class air, or the current rate per mile authorized by the Arkansas Department of Finance and Administration.

15. If more than one traveler is transported in the same vehicle, only the owner can claim a mileage reimbursement.

16. When attending out-of-state conferences, travelers should choose the most economical mode of transportation between airports and hotels, i.e., rental car, shuttle, or taxi. Consideration must be given to mileage, fuel, and parking fees when selecting a rental. Vehicle rentals are no longer under a mandatory state contract. Employees requiring a vehicle rental must contact the ATRS fiscal department for assistance. If a rental car is obtained, and two (2) or more board members or employees travel to the same location, rentals should be shared, if possible.

17. Board members and employees of ATRS shall be reimbursed for their own travel expenses only. Board members and employees shall not be reimbursed for expenses incurred by their spouse or guest.

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

R E S O L U T I O N
No. 2023-07

2023-2024 Employer Contribution Rate

WHEREAS, A.C.A. § 24-7-401(c) authorize the Board of Trustees of the Teacher Retirement System to establish the employer contribution rate paid into the System prospectively for each year; and

WHEREAS, A.C.A. § 24-7-401(c) dictates that the rate shall be set by the Board following consultation with its actuary based on the annual actuarial valuation and that the rate shall be based on the actuary's determination of the rate required to fund the plan in accordance with the financial objectives set forth in A.C.A. § 24-7-401(a); and

WHEREAS, Arkansas Teacher Retirement System is 82% funded, with an amortization period to pay off unfunded liabilities of 26 years, which shows that ATRS is in a strong financial position as of the last actuarial valuation at the end of the last fiscal year; and

WHEREAS, The ATRS Board, on November 13, 2017, adopted an employer contribution rate schedule that established the employee contribution rate for FY2023 should be 15.00%.

NOW, THEREFORE, BE IT RESOLVED, That the Board of Trustees in accordance with the legislative restrictions hereby sets the employer contribution rate shall remain at Fifteen percent (15%) after fiscal year 2023 until changed.

Adopted this 6th day of February 2023.

____

Mr. Danny Knight, Chair
Arkansas Teacher Retirement System Board

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

R E S O L U T I O N
No. 2022-08

2023-2024 Member Contribution Rate

WHEREAS, A.C.A. § 24-7-406, authorizes the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) to establish and modify the member contribution rate paid into ATRS by contributory members; and

WHEREAS, A.C.A. § 24-7-406 dictates that the member contribution rate shall be set by the Board following consultation with its actuary based on the annual actuarial valuation and that the rate shall be set to maintain actuarial soundness;

WHEREAS, Arkansas Teacher Retirement System is 82% funded, with an amortization period to pay off unfunded liabilities of 26 years, which shows that ATRS is in a strong financial position as of the last actuarial valuation at the end of the last fiscal year; and

WHEREAS, The ATRS Board, on November 13, 2017, adopted a member contribution rate schedule that established the member contribution rate shall remain at Seven percent (7%) after fiscal year 2023 until changed.

NOW, THEREFORE, BE IT RESOLVED, That the Board of Trustees in accordance with the legislative restrictions hereby sets the member contribution rate for the fiscal year beginning July 1, 2022, at seven percent (7.00%).

Adopted this 6th day of February, 2023.

____
Mr. Danny Knight, Chair
Arkansas Teacher Retirement System Board

ARKANSAS TEACHER RETIREMENT SYSTEM
1400 WEST THIRD STREET
LITTLE ROCK, ARKANSAS 72201

R E S O L U T I O N
No. 2023-09

Adoption of Surcharge Rate for Outsourced Positions

WHEREAS, A.C.A. § 24-7-506, authorizes the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) to collect a surcharge on salary paid to certain embedded positions that are outsourced at certain ATRS employers; and

WHEREAS, The surcharge rate for outsourced positions is set by law with the option for the ATRS Board to increase the rate after an implementation period; and

WHEREAS, The authorized surcharge rate by law for fiscal year 2024 is four percent (4%); and

WHEREAS, ATRS should set the surcharge rate for outsourced salary as a part of its regular function.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Trustees of the Arkansas Teacher Retirement System hereby declares that the surcharge rate for applicable outsourced salaries for fiscal year 2024 is four percent (4%) in accordance with Arkansas law.

Adopted this 6th day of February, 2023.

____
Mr. Danny Knight, Chair
Arkansas Teacher Retirement System Board

Arkansas Teacher Retirement System

Annual Actuarial Valuation of Active and Inactive Members June 30, 2022

Report of the June 30, 2022 Actuarial Valuation

Outline of Contents

800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

December 9, 2022

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, 2022.*** The June 30th 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.

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. 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.

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723

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. Brian B. Murphy, Judith A. Kermans and Heidi G. Barry 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 individuals submitting this report are independent of the plan sponsor.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

Brian B. Murphy, FSA, EA, FCA, MAAA, PhD

Judith A. Kermans, EA, FCA, MAAA

Heidi G. Barry, ASA, FCA, MAAA

BBM/JAK/HGB:bd

SECTION A

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, 2022 actuarial valuations, ***ATRS is satisfying the financial objective of level-contribution-percent financing.***

This report contains the results of the June 30, 2022 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	68,127	$43,758	Pay
Active in T-DROP	3,251	66,887	Pay
Deferred Vested	13,986	5,758	Annual Projected Benefit
Retired	52,748	24,527	Annual Current Benefit
Total Members	**138,112**		

Included in the 2022 valuation were 3,643 reemployed retirees (included in the Retired data file) with total earnings of $121.8 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: There were no assumption changes in the June 30, 2022 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. However, the assumed rate of return is reviewed every year and it is possible that the 7.25% assumption may not satisfy actuarial standards for purposes of the June 30, 2023 valuation.

Benefit Changes: There were no benefit provision changes reflected in the June 30, 2022 valuation.

Contribution Rate Changes

Employer and employee contributions were scheduled to increase in steps of 0.25% from the 14%/6% rates in effect in Fiscal 2019 to an ultimate level of 15%/7% in Fiscal 2023. That schedule is now complete. The ultimate rates are reflected in this valuation as shown below.

	Contribution Rate	
Fiscal Year	**Member**	**Employer**
2023 and Later	7.00%	15.00%

Results of the Valuation

The amortization period this year is 26 years, a decrease from last year's period of 32 years. On a market value basis, the amortization period is 35 years. The System netted $507.4 million from the settlement of a lawsuit, which helped improve the funded status and lower the amortization period by 6.8 years. While an amortization period of 26 years meets statutory requirements, the ATRS has targeted 18 years in recent legislation. The contribution rate based upon the target amortization period (18 years) would be approximately 17.3% of payroll.

The Arkansas Teacher Retirement System remains stable with an 82.3% funded position as of June 30, 2022. If experience is reasonably in line with expectations in Fiscal Year 2023, the amortization period is likely to increase in the next valuation due to the scheduled phase-in of net investment losses.

The rate of investment return on a market value basis was (7.47)%[#] this year. As of June 30, 2022, the actuarial value of assets exceeded the market value of assets by approximately $649 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 6.12%, compared to an assumed 7.25% return for Fiscal Year 2022.

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 unfunded actuarial accrued liabilities will be fully amortized after 26 years;
2) The funded status of the plan will increase gradually towards a 100% funded ratio; and
3) The unfunded accrued liability will increase for several years before beginning to decline.

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:

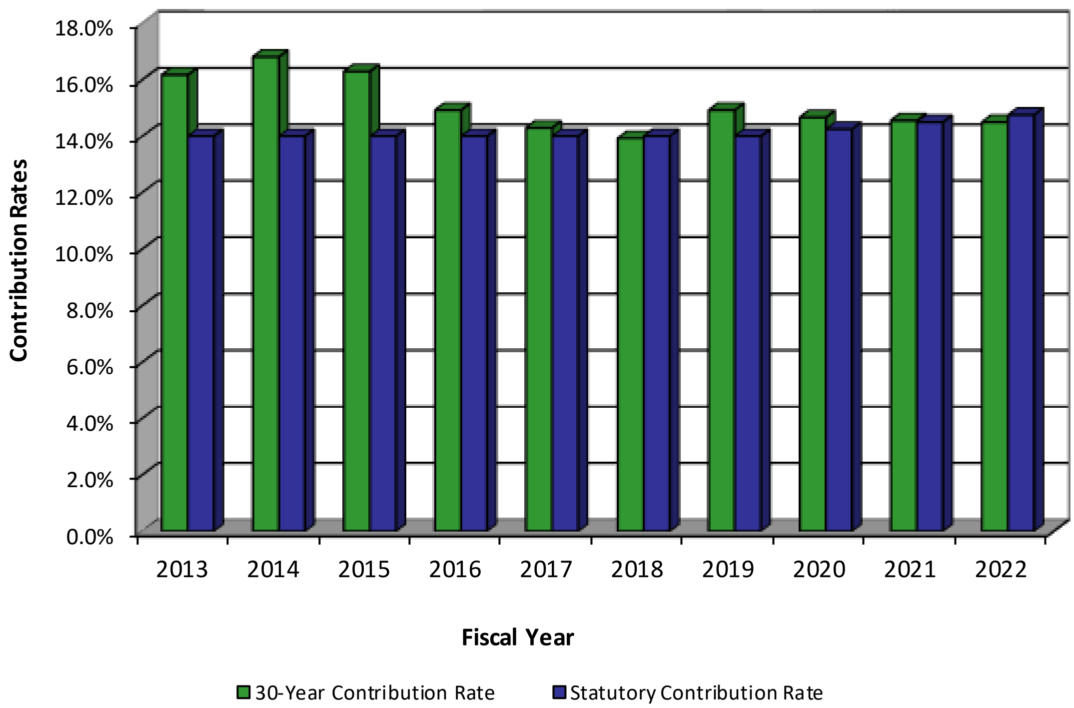
1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction;
2) The measurement is 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.

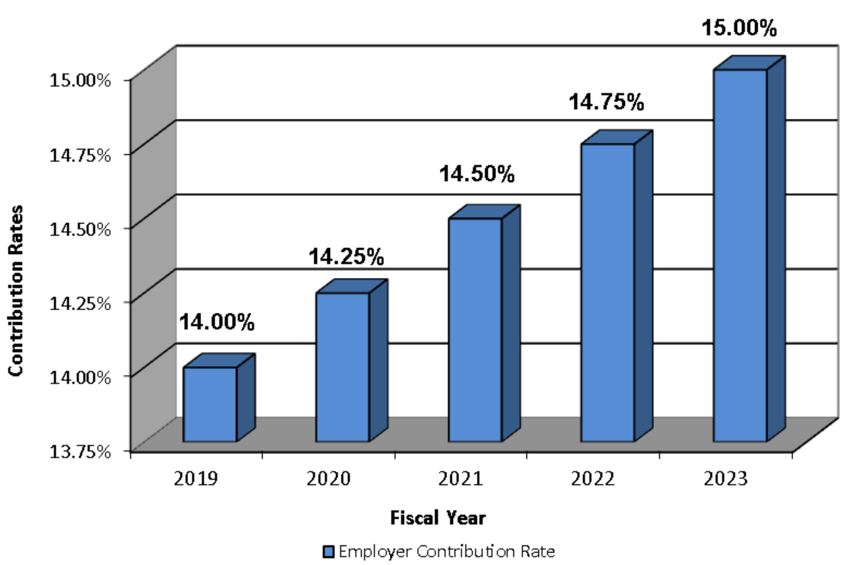
Executive Summary (Concluded)

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 target of 18 years.



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

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



SECTION B

VALUATION RESULTS

Determination of Amortization Period
Computed as of June 30, 2022 and June 30, 2021

	Percents of Active Member Payroll			
	June 30, 2022			June 30, 2021
Computed Contributions for	Teachers	Support	Combined	Combined
Normal Cost				
Age & Service Annuities	11.23%	7.50%	**10.20%**	10.17%
Deferred Annuities	1.50%	2.32%	**1.73%**	1.73%
Survivor Benefits	0.27%	0.19%	**0.25%**	0.25%
Disability Benefits	0.41%	0.39%	**0.40%**	0.41%
Refunds of Member Contributions	0.48%	1.21%	**0.68%**	0.68%
Total	13.89%	11.61%	**13.26%**	13.24%
Average Member Contributions	6.62%	5.14%	**6.21%**	6.17%
Net Employer Normal Cost	7.27%	6.47%	**7.05%**	7.07%
Unfunded Actuarial Accrued Liabilities			**7.95%**	7.93%
Employer Contribution Rate (FY 2023 and later)			**15.00%**	15.00%
Amortization Years			**26**	32

The calculated amortization period of 26 years is based on anticipated increases in the employer and member contribution rates. The FY 2022 employer and member contribution rates were 14.75% and 6.75%, respectively. The employer and member rates are scheduled to increase to 15% and 7%, respectively, in Fiscal 2023 which is reflected in the above schedule.

The amortization period is the number of years it will take to pay off the unfunded liability of $4.4 billion, assuming contributions remain at the Fiscal 2023 level. Since 2000, the period has varied from a low of 19 years to a high of over 100 years. If experience in FY 2023 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)	Amount	% Change	% Change	Computed Financing Period (Years)	Total Employer Rate
2013#	74,925	$ 2,727	$ 36,400	1.4 %	1.8 %	70	14.00 %
2014	74,352	2,758	37,092	1.9 %	2.1 %	39	14.00 %
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 %

* *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.*

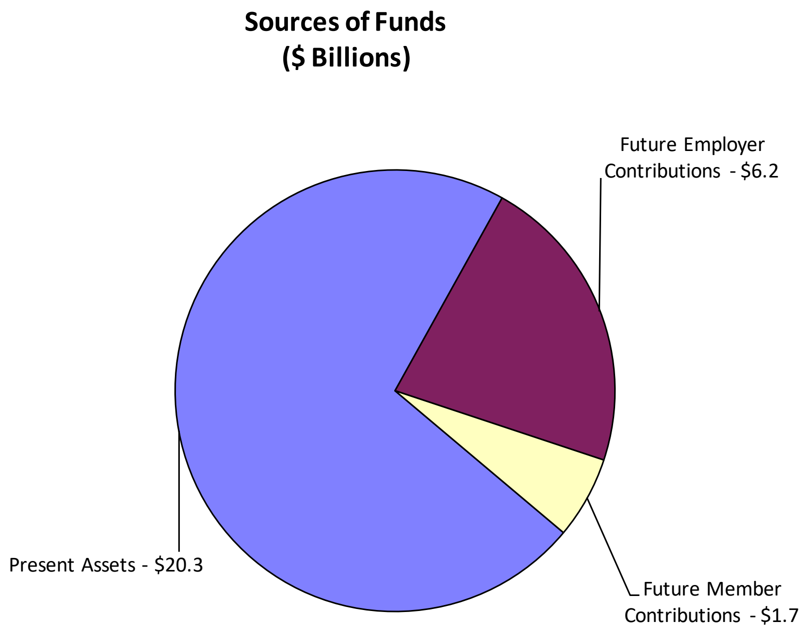
Computed Actuarial Liabilities as of June 30, 2022

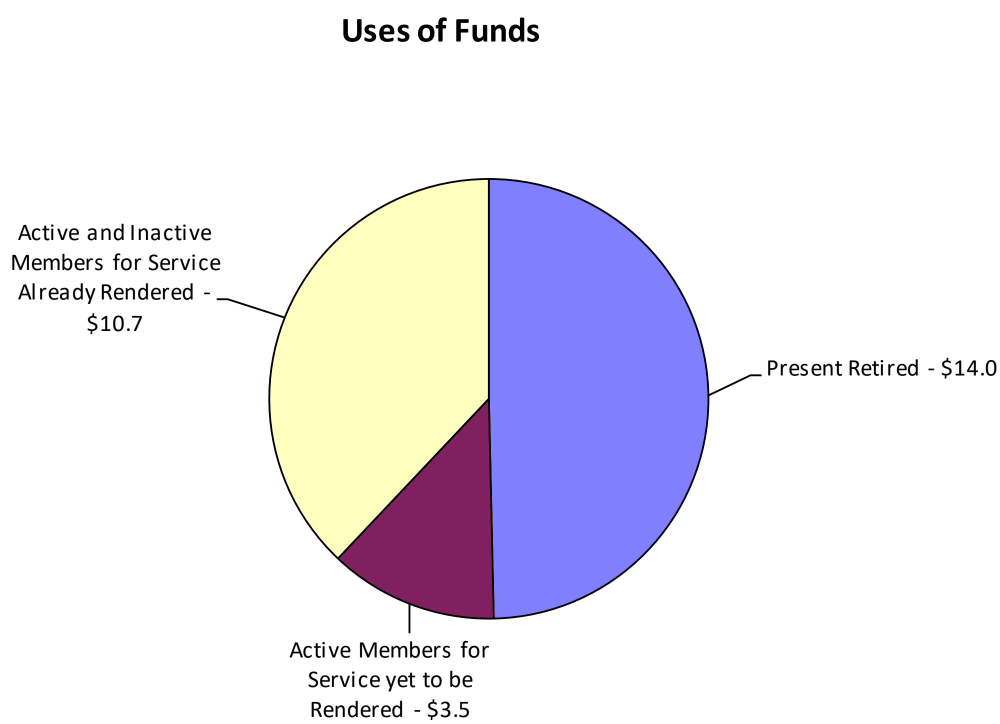
Actuarial Present Value of	(1) Total Present Value	Entry Age Actuarial Cost Method (2) Portion Covered by Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1)-(2)
Age and service retirement allowances based on total service likely to be rendered by present active members.	$ 10,375,248,142	$ 2,685,258,911	$ 7,689,989,231
Age and service retirement allowances based on total service likely to be rendered by present T-DROP members.	1,933,785,032	37,580,359	1,896,204,673
Vested deferred benefits likely to be paid present active and inactive members.	1,456,546,022	457,916,167	998,629,855
Survivor benefits expected to be paid on behalf of present active members.	178,518,684	67,840,303	110,678,381
Disability benefits expected to be paid on behalf of present active members.	210,177,310	104,078,605	106,098,705
Refunds of Member contributions expected to be paid on behalf of present active members.	23,835,919	171,800,004	(147,964,085)
Benefits payable to present retirees and beneficiaries.	14,043,822,116	0	14,043,822,116
Total	$28,221,933,225	$ 3,524,474,349	$24,697,458,876
Funding Value of Assets	20,328,281,484	0	20,328,281,484
Liabilities to be Covered by Future Contributions	$ 7,893,651,741	$ 3,524,474,349	$ 4,369,177,392

Liabilities for Retirees July 1, 2022
Tabulated by Type of Benefit Being Paid

Type of Annuity	Liabilities July 1, 2022		
	Men	Women	Totals
RETIREMENT RESERVE ACCOUNT			
Age & Service Annuities			
Option 1 (Straight Life)	$ 1,637,705,241	$ 7,981,045,530	$ 9,618,750,771
Option A (100% Joint & Survivor)	875,791,144	989,195,008	1,864,986,152
Option B (50% Joint & Survivor)	422,178,320	695,380,303	1,117,558,623
Option C (10 Years Certain & Life)	38,195,176	162,895,015	201,090,191
Beneficiaries	77,843,637	200,841,586	278,685,223
Total Age & Service	3,051,713,518	10,029,357,442	13,081,070,960
Disability Annuities			
Option 1	50,747,633	288,782,704	339,530,337
Option A	27,059,408	47,071,512	74,130,920
Option B	7,018,017	12,490,008	19,508,025
Option C	-	-	-
Beneficiaries	21,246,640	24,885,925	46,132,565
Total Disability	106,071,698	373,230,149	479,301,847
Act 793	7,736,987	4,948,415	12,685,402
Retirement Reserve Account	3,165,522,203	10,407,536,006	13,573,058,209
Act 808 Retirement Reserve Account	5,641,760	1,760,832	7,402,592
Total Retirement Reserve Account	3,171,163,963	10,409,296,838	13,580,460,801
SURVIVORS' BENEFIT ACCOUNT			
Beneficiaries of Deceased Members	$ 54,465,951	$ 61,495,176	$ 115,961,127
RETIREMENT SYSTEM TOTALS			
Total Annuity Liabilities	$ 3,225,629,914	$ 10,470,792,014	$ 13,696,421,928
Cash Benefit Account Liabilities			207,565,576
Liabilities for Lump Sum Death Benefits			139,834,612
Total	$ 3,225,629,914	$ 10,470,792,014	$ 14,043,822,116

Financing $28.2 Billion of Benefit Promises for Present Active and Retired Members June 30, 2022





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.

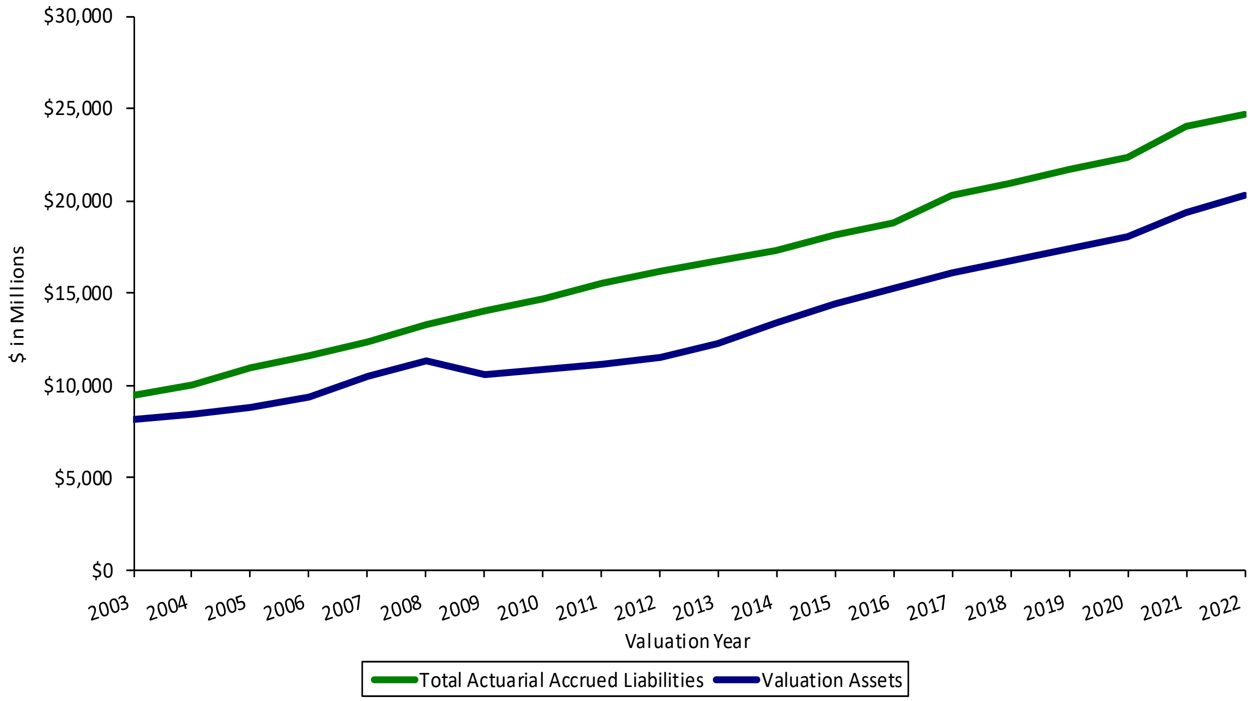
A short condition test is one means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with: 1) Member contributions on deposit; 2) The liabilities for future benefits to present retired lives; and 3) The 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.

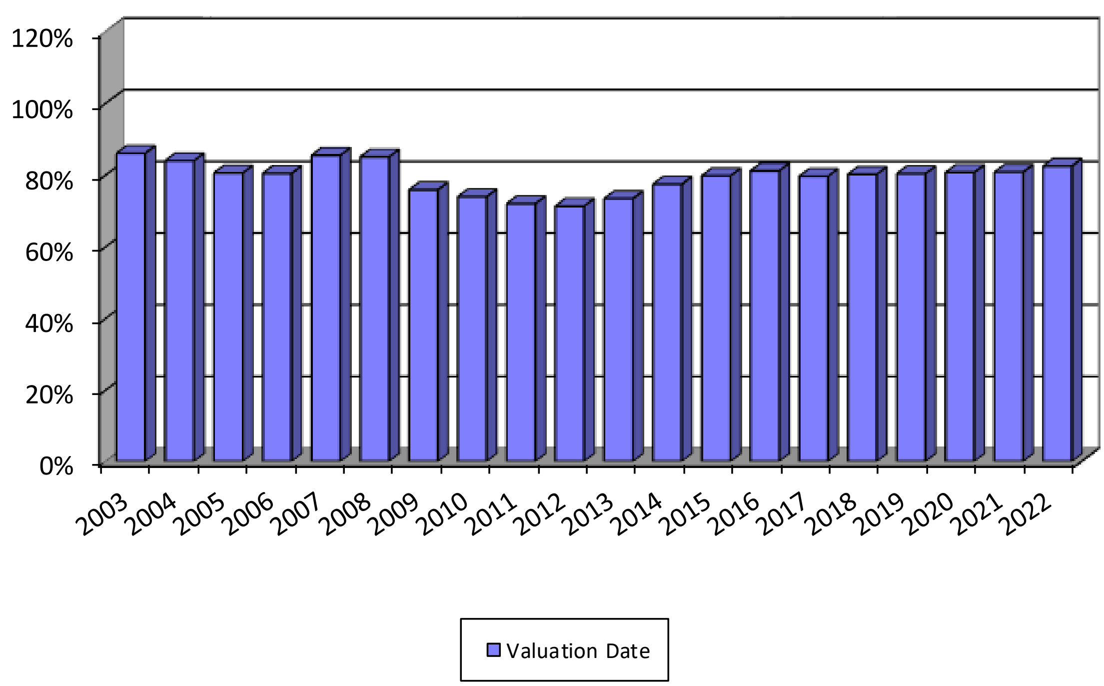
Val. Date June 30	(1) Member Contrb.	(2) Retirees and Benef.	(3) Active and Inactive Members (Employer Financed Portion)	Present Valuation Assets	Portion of Present Values Covered by Present Assets			
					(1)	(2)	(3)	Total
	------------------------$ Millions------------------------							
2012	$ 981	$ 7,649	$ 7,509	$ 11,484	100%	100%	38%	71%
2013#	1,027	8,181	7,510	12,247	100%	100%	40%	73%
2014	1,077	8,777	7,456	13,375	100%	100%	47%	77%
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%

* *Revised actuarial assumptions or methods.*
\# *Legislated benefit or contribution rate changes.*

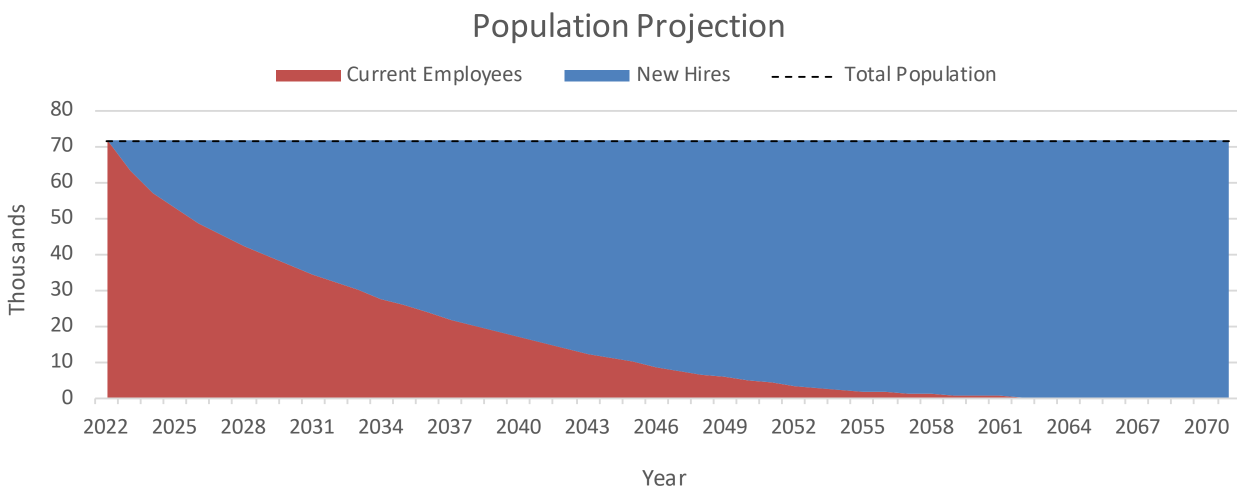
Actuarial Accrued Liabilities and Valuation Assets

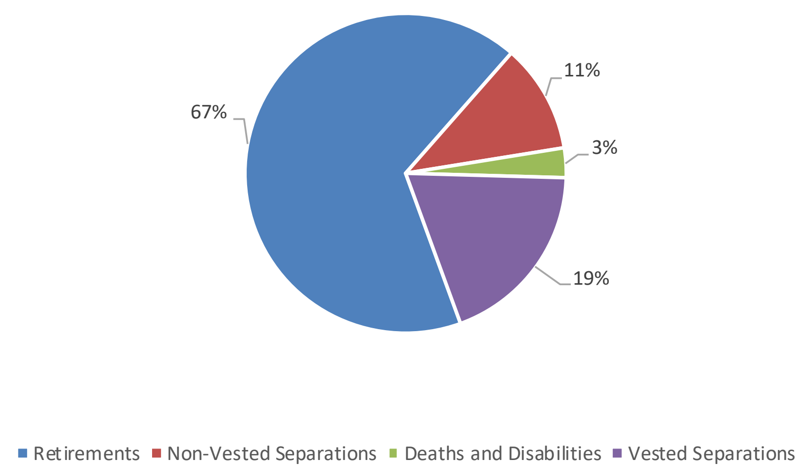


Valuation Assets as a Percent of Accrued Liabilities (Funded Ratio)



Expected Development of Present Population
June 30, 2022 (Excludes Rehired Retirees)





The charts show the expected future development of the present population in simplified terms. The Retirement System presently covers 71,378 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

SUMMARY OF BENEFITS

Summary of Provisions
June 30, 2022

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 in a position under a covered employer that is 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

4. **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.

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,

T-DROP – A.C.A. §§ 24-7-1301–1316 (Cont.) 2017. 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 2022, the Board set the Regular T-DROP fixed interest rate at 3% and the incentive interest rate at 3%, resulting in a total interest rate of 6%, by Resolution 2021-33 on September 27, 2021.

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 2022, the Board set the Post 10-year T-DROP variable interest rate at 6% and the incentive interest rate at 1.5%, resulting in a combined interest rate of 7.5%, by Resolution 2021-35 on September 27, 2021.

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

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 at 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, our university.

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.** 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 pended for the next fiscal year as

11. **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.** 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.

    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 will receive 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 will receive 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 RP-2014/MP2017 tables (static projection to 2022) 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. The system will allow 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.

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/documented 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

Look-back Period – A.C.A. §§ 24-7-202, 24-7-205 (Cont.) 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 2022, the Board granted CBA participants an incentive rate of 1.0%, by Resolution 2021-36 on September 27, 2021.

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 is 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.

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 cost, up to 15 years. Noncertified private school service could be purchased at actuarial cost, up to 5 years.

Summary of Provisions
June 30, 2022

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 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

Outsourcing – A.C.A. § 24-7-506 (Cont.) 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. Effective September 1, 2021, the ATRS "normal retirement age" is defined to be age 65 with 5 years of actual service OR at least age 60 with 38 total years of actual service, T-DROP service and reciprocal service. A member that has attained the normal retirement age is able to draw full retirement benefits and remain employed without separating from employment.

Sample Benefit Computations for a Member Retiring June 30, 2022

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:

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

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

Year Ended June 30	Annual Amount
2023	$18,475
2024	19,011
2025	19,547
2026	20,083
2027	20,619

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

Sample T-DROP Benefit Computations for a Member Entering T-DROP June 30, 2022

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:

			Annual Amount
E.	Non-Contributory Base:	1.39% x A x B	$13,622
F.	Extra for Contributory:	0.76% x A x C	7,448
G.	Reduction for T-DROP Plan: (1% for each year of service) 0.28 x (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 x (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
2023	$13,350
2024	13,751
2025	14,151
2026	14,552
2027	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

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.

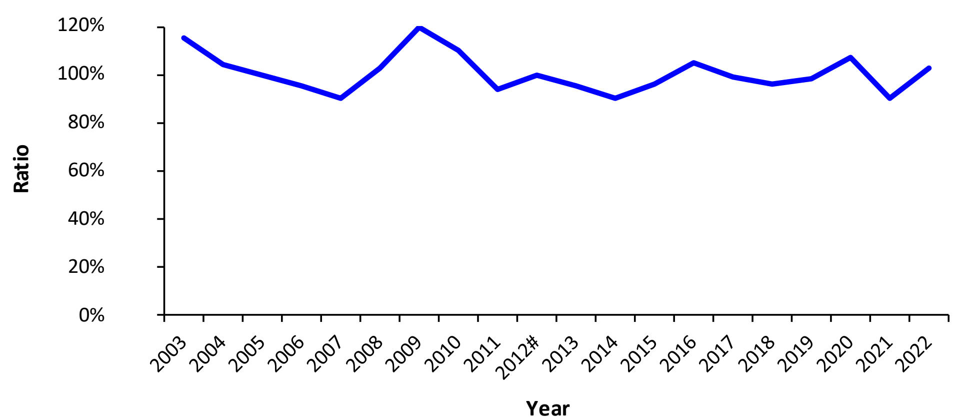
A multi-year comparison of market value to funding (actuarial) value is on the following page.

Asset Valuation Method

Valuation Date June 30	Market Value of Assets (1)	Actuarial Value of Assets (2)	Ratio of AV to MV (2) / (1)
2003	$ 7,050	$ 8,113	115%
2004	8,122	8,424	104%
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%

 # Funding Value set equal to Market Value.

Ratio of Funding Value to Market Value



This year the market value of assets is less than 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:	2019	2020	2021	2022	2023	2024	2025
A. Funding Value Beginning of Year	$ 16,756,062,928	$ 17,412,534,651	$ 18,007,255,143	$ 19,342,870,512			
B. Market Value End of Year	17,741,621,773	16,902,076,224	21,468,772,872	19,679,467,252			
C. Market Value Beginning of Year	17,492,627,740	17,741,621,773	16,902,076,224	21,468,772,872			
D. Non-Investment Net Cash Flow	(642,256,050)	(665,324,622)	(676,930,006)	(192,363,759)			
E. Investment Return							
E1. Market Total: B - C - D	891,250,083	(174,220,927)	5,243,626,654	(1,596,941,861)			
E2. Assumed Rate	7.50%	7.50%	7.50%	7.25%	7.25%	7.25%	7.25%
E3. Amount for Immediate Recognition	1,232,620,118	1,280,990,426	1,325,159,261	1,395,384,926			
E4. Amount for Phased-In Recognition: E1-E3	(341,370,035)	(1,455,211,353)	3,918,467,393	(2,992,326,787)			
F. Phased-In Recognition of Investment Return							
F1. Current Year: 0.25 x E4	(85,342,509)	(363,802,838)	979,616,848	(748,081,697)	Unknown	Unknown	Unknown
F2. First Prior Year	156,914,612	(85,342,509)	(363,802,838)	979,616,848	$ (748,081,697)	Unknown	Unknown
F3. Second Prior Year	271,285,424	156,914,612	(85,342,509)	(363,802,838)	979,616,848	$ (748,081,697)	Unknown
F4. Third Prior Year	(276,749,872)	271,285,423	156,914,613	(85,342,508)	(363,802,839)	979,616,849	$ (748,081,696)
F5. Total Recognized Investment Gain	**66,107,655**	**(20,945,312)**	**687,386,114**	**(217,610,195)**	(132,267,688)	231,535,152	(748,081,696)
G. Funding Value End of Year:							
G1. Preliminary Funding Value End of Year: A+D+E3+F5	**17,412,534,651**	**18,007,255,143**	**19,342,870,512**	**20,328,281,484**			
G2. Upper Corridor Limit: 120% x B	**21,289,946,128**	**20,282,491,469**	**25,762,527,446**	**23,615,360,702**			
G3. Lower Corridor Limit: 80% x B	**14,193,297,418**	**13,521,660,979**	**17,175,018,297**	**15,743,573,802**			
G4. Funding Value End of Year	**17,412,534,651**	**18,007,255,143**	**19,342,870,512**	**20,328,281,484**			
H. Actual/Projected Difference between Market and Funding Value	329,087,122	(1,105,178,919)	2,125,902,360	(648,814,232)	(516,546,544)	(748,081,696)	-
I. Market Rate of Return	5.19 %	(1.00)%	31.66 %	(7.47)%			
J. Funding Rate of Return	7.90 %	7.38 %	11.39 %	6.12 %			
K. Ratio of Funding Value to Market Value	98.15 %	106.54 %	90.10 %	103.30 %			

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, 2022, were reported to your actuary to be $19,679,467,252. This amount, increased by a funding value adjustment of $648,814,232 this year, is used to finance the Retirement System liability.

Accounts	Assets as of June 30	
	2022	**2021**
Regular Accounts		
Members' Deposit Accounts		
Contributions	$ 1,619,234,265	$ 1,517,838,030
Interest	10,879,135,880	12,934,857,979
Total	12,498,370,145	14,452,696,009
T-DROP Member Deposit Accounts		
Contributions	28,418,105	25,976,011
Interest	19,012,373	21,070,652
Total	47,430,478	47,046,663
Cash Balance Account	207,565,576	183,336,816
Employer's Accumulation Account	(7,008,787,923)	(6,500,901,628)
Retirement Reserve Account	13,468,111,609	12,792,323,810
Act 808 Retirement Reserve Account	6,840,591	8,234,533
T-Lump Payable	339,803,043	369,188,176
Survivors Benefit Account	110,412,603	107,149,458
Total Regular Accounts	19,669,746,122	21,459,073,837
Other Accounts		
Income Expense Account	9,721,130	9,699,035
Other Special Reserves	-	-
Miscellaneous	-	-
Total Other Accounts	9,721,130	9,699,035
Total Accounting Value of Assets	19,679,467,252	21,468,772,872
Funding Value Adjustment	648,814,232	(2,125,902,360)
Funding Value of Assets	$ 20,328,281,484	$ 19,342,870,512

Market Value of Assets

The net market value of assets at year-end was $19,679,467,252 and was invested as shown below:

	Market Value at June 30	
	2022	**2021**
Cash	$ 367,097,595	$ 333,682,820
Receivables		
Unsettled Trades and Accrued Return	50,990,481	50,866,535
Member Contributions	10,473,412	11,588,169
Employer Contributions	32,672,388	36,495,741
Other	668,209	581,924
Total Receivables	94,804,490	99,532,369
Investments		
Public Equity	3,653,122,876	*Investments by class were reported differently in 2021*
Fixed Income	1,385,176,472	
Real Estate	203,361,821	
Pooled	5,411,394,612	
State recycling tax credits	144,000,000	
Derivative	10,632	
Alternative	8,472,390,498	
Other	(580,788)	
Total Investments	19,268,876,123	21,092,661,353
Invested Securities Lending	770,276,668	479,988,268
Net Equipment	191,687	200,341
Deferred Outflows Related to OPEB	685,899	1,034,149
Total Assets	20,501,932,462	22,007,099,300
Liabilities		
Survivor Benefits for Minors	14,149	80,911
Other Payables	6,838,994	10,345,476
Securities Related Payables	43,265,338	47,771,989
Securities Lending Collateral	770,276,667	479,988,268
Deferred Inflows Related to OPEB	2,070,062	139,784
Total Liabilities	822,465,210	538,326,428
Net Market Value	$ 19,679,467,252	$ 21,468,772,872
Change from Prior Year	(1,789,305,620)	4,566,696,648

Market Value Reconciliation

Assets developed during the year as follows:

	Year Ended June 30	
	2022	2021
Net Market Value July 1	$ 21,468,772,872	$ 16,902,076,224
Additions		
Employer Contributions	501,522,604	472,567,147
Employee Contributions	183,315,252	168,129,972
Other (Including Settlement)	507,446,092	-
Appreciation	(1,729,497,003)	5,166,017,302
Interest	30,361,656	26,342,410
Dividends	151,306,900	95,919,865
Real Estate	6,387,875	6,321,144
Other	1,308,741	1,769,200
Securities Lending Activity	3,527,825	2,678,677
Total Additions	(344,320,058)	5,939,745,717
Deductions		
Age & Service Benefits	1,135,131,535	1,092,814,070
Disability Benefits	40,631,115	40,710,587
Option Benefits	36,681,111	34,124,252
Survivor Benefits	12,527,408	12,129,985
Reciprocal Service	64,615,316	61,382,530
Act 808	1,953,045	2,013,072
Refunds	10,426,792	9,463,375
Active Member Death	681,421	487,669
T-DROP Benefits	64,370,804	48,309,780
CBA Benefits	15,630,112	13,978,659
CASH Benefit Program	1,999,048	2,213,146
Investment Expense	53,687,251	48,095,147
Administrative Expense	6,650,604	7,326,801
Total Deductions	1,444,985,562	1,373,049,073
Miscellaneous	-	4
Net Market Value June 30	$ 19,679,467,252	$ 21,468,772,872

Schedule of Funding Progress
(Dollar Amounts in Millions)

Valuation Date June 30	(1) Actuarial 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)
2002*	$ 8,328	$ 9,062	$ 734	91.9%	$ 1,628	45.1%	511.5%	556.6%
2003+	8,113	9,445	1,332	85.9%	1,683	79.1%	482.1%	561.2%
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%

+ *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.

	2022	2021	2020	2019	2018
Ratio of the Market Value of Assets to Total Payroll	5.9	6.7	5.7	6.1	6.1
Ratio of Actuarial Accrued Liability to Payroll	7.4	7.5	7.6	7.5	7.3
Ratio of Actives to Retirees and Beneficiaries	1.4	1.4	1.4	1.5	1.5
Ratio of Net Cash Flow to Market Value of Assets	-1.0%	-3.2%	-3.9%	-3.6%	-3.5%
Duration of the Present Value of Future Benefits	14.03	14.02	13.83	13.82	13.86

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 5.9 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 five years based on 2022 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 7.4% of payroll and would affect the amortization period by three years based on the 2022 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 14.0 (which is based on a 7.25% discount rate) indicates that the present value of future benefits would increase approximately 14.0% if the assumed rate of return were lowered 1%. Such a change could affect the amortization period by 20 years or more.

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	(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. 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	$ 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%

(*) 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 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.

SECTION E

COVERED MEMBER DATA

Active Members in Valuation June 30, 2022
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	696							696	$ 2,036,955
20-24	2,334	15						2,349	56,340,350
25-29	4,749	1,344	4					6,097	239,385,665
30-34	3,159	3,613	791	9				7,572	319,642,463
35-39	2,797	2,363	2,559	793	8			8,520	379,348,700
40-44	2,358	2,131	1,714	2,579	598	2		9,382	446,570,440
45-49	1,806	1,679	1,529	1,782	2,215	552	2	9,565	486,087,104
50-54	1,502	1,419	1,358	1,717	1,581	1,758	58	9,393	471,436,420
55-59	1,210	1,084	912	1,345	1,311	1,109	86	7,057	310,594,779
60	255	215	162	268	276	179	14	1,369	58,180,882
61	231	191	155	196	210	155	20	1,158	47,163,711
62	201	169	125	169	162	137	20	983	38,846,267
63	179	136	115	132	133	119	11	825	32,097,530
64	144	119	106	128	96	88	16	697	26,675,267
65	133	124	80	76	67	69	22	571	20,568,784
66	120	98	59	34	41	33	7	392	13,288,960
67	119	53	41	23	18	10	6	270	6,950,346
68	91	51	22	18	8	4	5	199	4,845,422
69	92	46	15	13	4	3	7	180	4,709,416
70 & Up	447	262	90	26	13	9	5	852	16,321,734
Totals	**22,623**	**15,112**	**9,837**	**9,308**	**6,741**	**4,227**	**279**	**68,127**	**$2,981,091,195**

Group Averages:

Age: 44.1 years

Service: 10.2 years

FEMALE Active Members in Valuation June 30, 2022
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	271							271	$ 993,242
20-24	1,753	8						1,761	43,530,601
25-29	3,566	1,051						4,617	177,042,580
30-34	2,486	2,759	600	7				5,852	236,404,122
35-39	2,304	1,874	1,945	640	1			6,764	285,975,523
40-44	1,893	1,754	1,334	2,010	478	1		7,470	340,247,726
45-49	1,434	1,369	1,233	1,437	1,706	424	1	7,604	367,067,599
50-54	1,106	1,096	1,092	1,446	1,294	1,382	41	7,457	359,735,176
55-59	850	779	701	1,113	1,110	905	60	5,518	234,863,623
60	172	156	109	212	247	147	9	1,052	44,460,151
61	160	130	114	155	177	124	13	873	33,721,424
62	142	108	87	126	133	119	14	729	27,257,651
63	100	98	83	107	109	104	9	610	23,467,016
64	79	75	71	98	73	77	15	488	18,631,005
65	83	72	57	57	53	61	17	400	14,133,258
66	64	57	47	28	32	25	7	260	8,700,408
67	69	29	25	20	17	8	5	173	4,497,383
68	61	26	15	13	5	4	3	127	3,132,813
69	53	26	8	9	4	3	4	107	3,013,836
70 & Up	243	112	42	19	7	6	4	433	8,012,682
Totals	**16,889**	**11,579**	**7,563**	**7,497**	**5,446**	**3,390**	**202**	**52,566**	**$ 2,234,887,819**

Group Averages:

Age: 44.0 years

Service: 10.6 years

MALE Active Members in Valuation June 30, 2022
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	425							425	$ 1,043,713
20-24	581	7						588	12,809,749
25-29	1,183	293	4					1,480	62,343,085
30-34	673	854	191	2				1,720	83,238,341
35-39	493	489	614	153	7			1,756	93,373,177
40-44	465	377	380	569	120	1		1,912	106,322,714
45-49	372	310	296	345	509	128	1	1,961	119,019,505
50-54	396	323	266	271	287	376	17	1,936	111,701,244
55-59	360	305	211	232	201	204	26	1,539	75,731,156
60	83	59	53	56	29	32	5	317	13,720,731
61	71	61	41	41	33	31	7	285	13,442,287
62	59	61	38	43	29	18	6	254	11,588,616
63	79	38	32	25	24	15	2	215	8,630,514
64	65	44	35	30	23	11	1	209	8,044,262
65	50	52	23	19	14	8	5	171	6,435,526
66	56	41	12	6	9	8		132	4,588,552
67	50	24	16	3	1	2	1	97	2,452,963
68	30	25	7	5	3		2	72	1,712,609
69	39	20	7	4			3	73	1,695,580
70 & Up	204	150	48	7	6	3	1	419	8,309,052
Totals	**5,734**	**3,533**	**2,274**	**1,811**	**1,295**	**837**	**77**	**15,561**	**$ 746,203,376**

Group Averages:

Age: 44.2 years

Service: 9.5 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	28,856	$ 1,585,376,795	23,710	$ 649,511,024	52,566	$ 2,234,887,819
Male	8,254	512,407,399	7,307	233,795,977	15,561	746,203,376
All	37,110	$ 2,097,784,194	31,017	$ 883,307,001	68,127	$ 2,981,091,195

	Educational	Support	Total
Members Contributing Now	35,280	18,328	53,608
Members Not Contributing	1,830	12,689	14,519
All	37,110	31,017	68,127

		Group Averages			Active Member Payroll
June 30	Number	Age	Service	Annual Earnings	($ Millions)
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

Deferred Vested Members at June 30, 2022
by Attained Age

Age	Number	Estimated Annual Benefits	Contribution Balance
Below 40	2,021	$ 11,220,315	$ 27,739,211
40	315	2,155,831	5,198,462
41	315	2,329,818	5,583,891
42	366	2,573,541	6,160,893
43	328	2,218,144	5,296,136
44	353	2,461,437	5,817,324
45	331	2,344,620	5,592,136
46	392	2,847,971	6,419,241
47	385	2,805,644	6,498,716
48	446	3,050,793	6,501,143
49	405	2,848,637	6,226,004
50	454	2,907,272	5,828,991
51	523	3,384,381	6,413,364
52	466	3,146,225	6,309,593
53	475	3,088,381	6,179,204
54	539	3,311,169	6,073,403
55	535	3,130,950	5,767,606
56	534	3,500,889	6,610,495
57	636	3,843,874	6,870,815
58	674	3,854,439	7,112,128
59	646	4,190,868	7,637,309
60 & Up	2,799	9,029,988	14,941,001
Future Beneficiaries #	48	287,741	0
Totals	**13,986**	**$ 80,532,928**	**$ 166,777,066**

 # 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, 2022
by Attained Age

Age	Number	Current T-DROP Contribution	Original T-DROP Contribution	T-DROP Account Balance	Pay
48	1	$ 10,426	$ 10,123	$ 10,452	$ 34,725
49	4	56,606	54,958	56,744	165,942
50	13	274,860	264,681	353,529	858,372
51	67	1,463,512	1,409,754	1,894,082	4,530,769
52	116	2,579,697	2,455,657	4,338,020	8,032,962
53	182	4,208,289	3,963,718	9,202,706	12,819,667
54	246	5,861,321	5,443,192	15,775,253	17,458,114
55	245	5,508,373	5,020,562	18,176,085	16,705,254
56	249	5,852,734	5,278,736	23,046,857	17,623,790
57	301	7,000,246	6,232,926	30,559,725	20,677,144
58	308	6,922,656	6,101,499	36,114,147	20,645,376
59	307	6,703,554	6,089,407	38,516,498	20,661,483
60	278	5,821,116	5,373,861	39,809,883	18,183,010
61	255	4,815,661	4,886,943	37,576,485	16,861,780
62	233	4,258,367	4,288,028	33,548,510	15,122,895
63	155	2,540,403	2,741,865	20,640,395	9,633,478
64	141	2,314,934	2,392,513	17,023,707	8,383,835
65	78	1,214,163	1,270,923	9,130,332	4,620,495
66	34	649,670	617,758	4,814,304	2,215,672
67	12	84,180	162,743	1,445,215	508,910
68	8	125,965	188,851	2,041,228	596,069
69	4	30,160	48,009	508,932	216,604
70	6	88,133	89,278	837,972	370,534
71	4	41,267	66,665	758,377	242,931
73	1	17,588	14,536	129,092	31,907
75	3	57,809	66,322	834,195	248,580
Totals	**3,251**	**$ 68,501,690**	**$ 64,533,508**	**$ 347,142,725**	**$ 217,450,298**

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, 2022
by Years in T-DROP

Years in T-DROP	Number	Current T-DROP Contribution	Original T-DROP Contribution	T-DROP Account Balance	Pay
1	524	$ 10,993,489	$ 10,686,639	$ 11,034,017	$ 34,143,646
2	468	9,538,826	9,025,724	19,272,914	30,043,148
3	469	9,687,408	8,912,518	29,469,392	30,759,018
4	437	9,995,496	8,959,371	40,881,440	29,859,497
5	321	7,357,915	6,413,961	38,010,634	21,501,271
6	294	6,921,325	5,876,040	43,244,276	20,198,124
7	244	5,711,082	4,727,678	41,977,486	16,546,466
8	185	4,401,432	3,580,162	37,653,446	12,907,214
9	154	3,894,717	3,090,364	37,923,528	10,827,017
10	103	-	2,264,597	32,020,979	7,394,811
11	22	-	401,017	6,007,660	1,275,861
12	15	-	291,760	4,616,457	1,022,961
13	5	-	123,249	2,061,257	369,678
14	5	-	87,837	1,552,069	297,984
15	4	-	79,404	1,128,795	255,260
17	1	-	13,187	288,375	48,342
Totals	**3,251**	**$ 68,501,690**	**$ 64,533,508**	**$ 347,142,725**	**$ 217,450,298**

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, 2022

June 30	Number				Total Payroll $ Millions
	Active	T-DROP	RTW	Total	
2013	70,660	4,265	4,025	78,950	$ 2,819
2014	70,225	4,127	3,845	78,197	2,851
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

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.

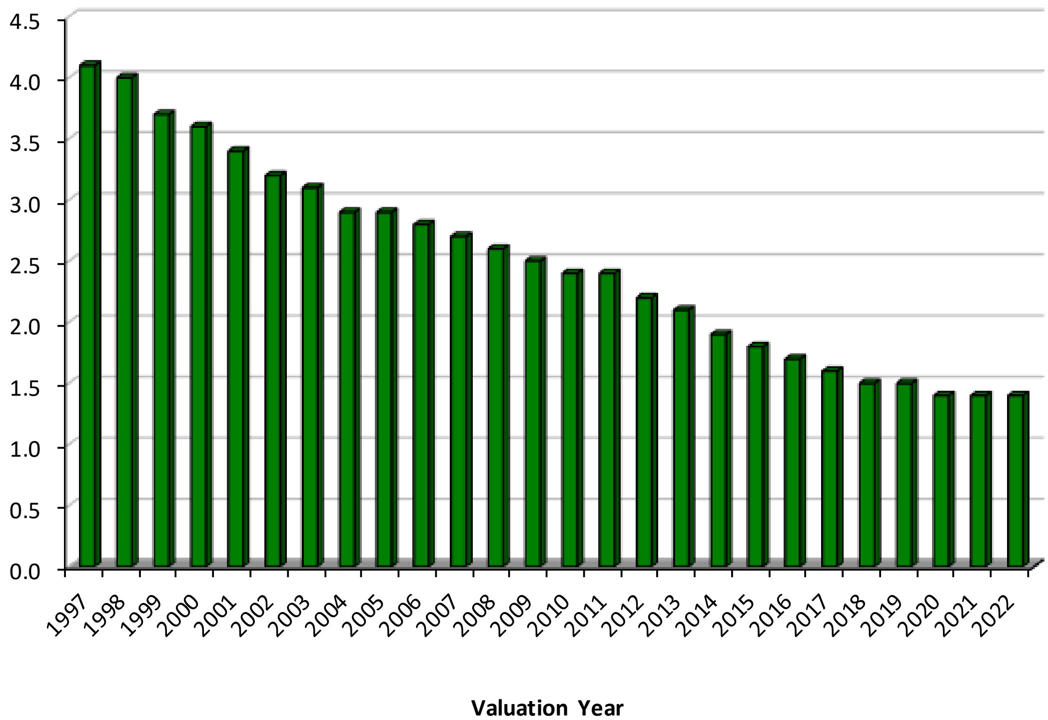
Annuities Being Paid Retirees and Beneficiaries July 1, 2022
by Type of Annuity Being Paid

Type of Annuity	No.	Annual Amounts: Original Annuities	Annual Amounts: Base Annuities	Annual Amounts: Current Annuities
RETIREMENT RESERVE ACCOUNT				
Age & Service				
Option 1 (Basic single life)	38,468	$ 617,098,978	$ 702,879,935	$ 939,937,432
Option A (Joint & 100% Survivor)	5,508	94,907,492	107,427,937	144,844,545
Option B (Joint & 50% Survivor)	2,724	61,998,751	72,481,207	97,809,004
Option C (10-year certain)	710	12,294,866	12,421,694	15,421,702
Beneficiaries	1,430	26,739,759	23,985,625	33,524,304
Totals	48,840	813,039,846	919,196,398	1,231,536,987
Disability				
Option 1	2,222	23,706,475	25,436,063	34,359,351
Option A	358	3,982,125	4,004,215	5,327,844
Option B	79	1,205,552	1,277,898	1,695,832
Option C	0	-	-	-
Beneficiaries	274	3,339,543	3,313,728	4,709,027
Totals	2,933	32,233,695	34,031,904	46,092,054
Act 793	139	800,638	1,689,168	1,689,168
Retirement Reserve Account	51,912	846,074,179	954,917,470	1,279,318,209
Act 808 Retirement Reserve Account	32	596,879	1,838,712	1,838,712
Total Retirement Reserve Account	51,944	846,671,058	956,756,182	1,281,156,921
SURVIVOR'S BENEFIT ACCOUNT				
Beneficiaries of Deceased Members				
Age 0 - 17	128	1,138,253	1,136,742	1,252,522
Age 18 - 23	78	778,150	773,463	876,265
Other	598	6,981,465	7,795,494	10,467,599
Totals	804	8,897,868	9,705,699	12,596,386
RETIREMENT SYSTEM TOTALS				
Total Annuities Being Paid	52,748	$ 855,568,926	$ 966,461,881	$ 1,293,753,307

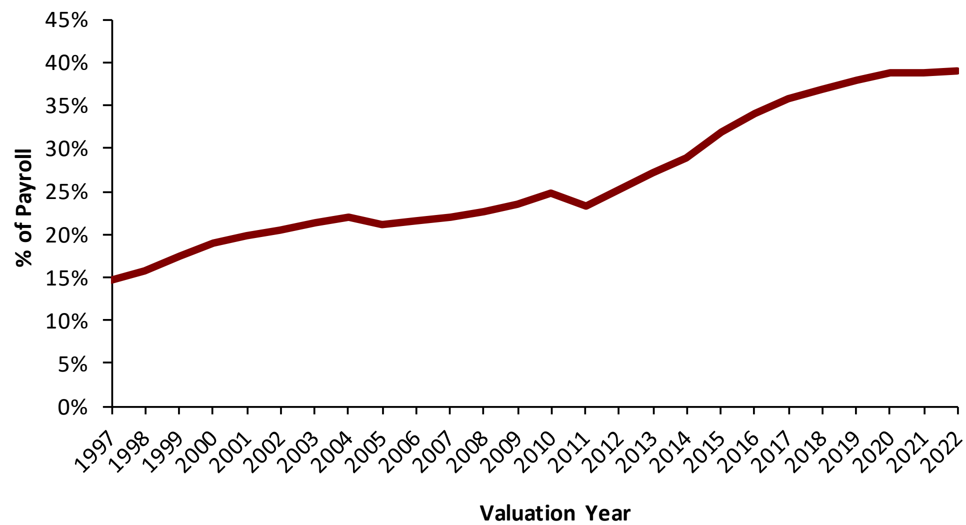
The Original Annuity is the annuity at the date of retirement.
The Base Annuity is the amount from which the 3.0% COLA is calculated.
The Current Annuity is the annuity payable at July 1, 2022 (Includes July 1 COLA).

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			
2024					

* *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).*

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			
2024					

* *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).*

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			
2024					

* *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).*

SECTION F

FINANCIAL PRINCIPLES

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?

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.

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

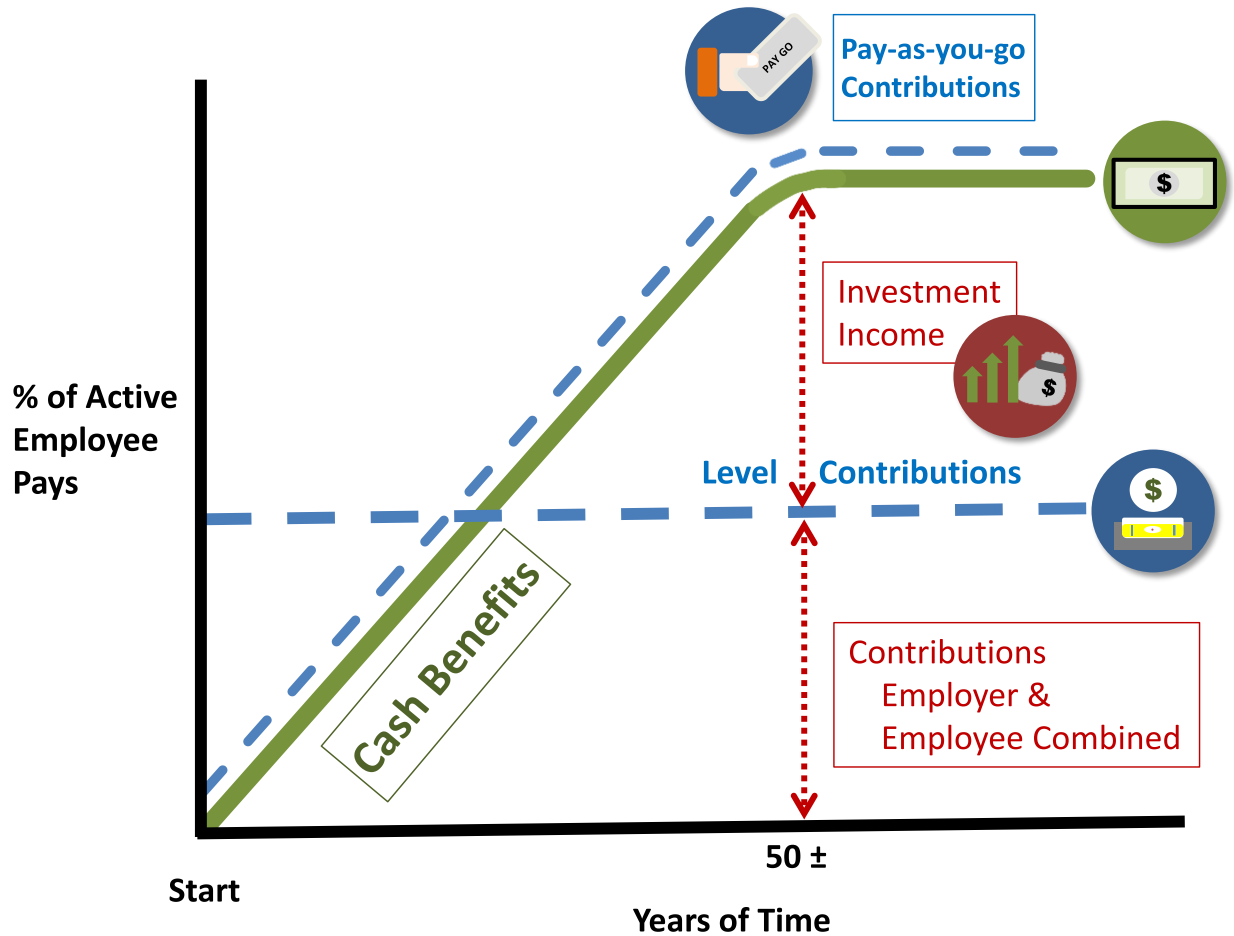
C. + **Benefit provisions** that establish eligibility and amounts of payments to members

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

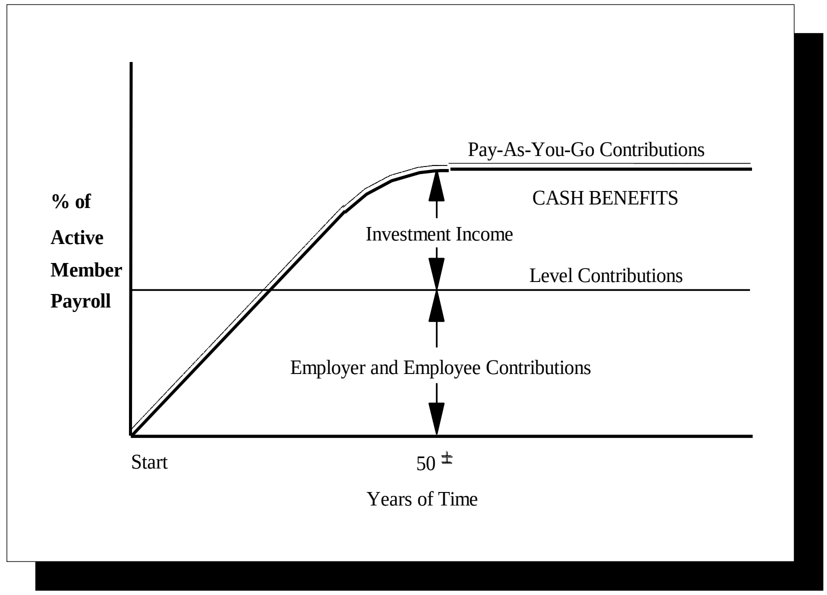
SECTION G

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% although no specific Price Inflation is needed for this valuation. 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:

	Scaling Factor
Healthy Male Retirees	**105%**
Healthy Female Retirees	**105%**
Disabled Male Retirees	**104%**
Disabled Female Retirees	**104%**
Male Active Members	**100%**
Female Active Members	**100%**

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. TDROP 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 2022 employer and member contribution rates were 14.75% and 6.75%, respectively. The employer and member rates are scheduled to increase to an ultimate level of 15% and 7%, respectively in Fiscal Year 2023.

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 2022	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	
	Male	Female	Male	Female	Male	Female	Male	Female
40	$159.89	$162.44	$213.33	$218.19	45.27	48.29	0.09 %	0.05 %
45	155.49	158.74	204.88	210.83	40.03	43.00	0.12 %	0.07 %
50	149.75	153.88	194.42	201.63	34.93	37.83	0.29 %	0.22 %
55	142.77	148.03	182.14	190.85	30.06	32.88	0.44 %	0.31 %
60	133.94	140.35	167.43	177.49	25.36	28.04	0.67 %	0.43 %
65	123.01	130.34	150.20	161.15	20.90	23.34	0.97 %	0.62 %
70	109.50	117.58	130.24	141.69	16.68	18.84	1.49 %	0.99 %
75	93.52	102.01	108.12	119.49	12.80	14.64	2.52 %	1.77 %
80	75.88	84.29	85.20	95.85	9.39	10.88	4.54 %	3.27 %
85	58.49	65.92	63.89	72.80	6.62	7.72	8.35 %	6.20 %
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	
		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 members will participate in the T-DROP to the extent that participating in the T-DROP would provide the highest value of benefits.

Teachers
Separations from Active Employment
Before Age and Service Retirement

Sample Ages in 2022	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		0.10%	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%	0.13%	0.61%	0.63%	1.60%	1.70%
60		0.33%	0.20%	0.82%	0.89%	1.50%	1.60%
65		0.47%	0.28%	0.82%	0.89%	1.20%	1.30%
Ref:		2723 x 1.00	2724 x 1.00	1217 x 1	1218 x 1	1364 1574	1365 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 2022	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		0.10%	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%	0.13%	0.88%	0.61%	3.50%	3.70%
60		0.33%	0.20%	1.36%	0.79%	3.40%	3.20%
65		0.47%	0.28%	1.36%	0.79%	2.70%	2.50%
Ref:		2723 x 1.00	2724 x 1.00	1219 x 1	1220 x 1	1366 1576	1367 1577

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

Individual Pay Increases

Education			
	Pay Increase Assumptions for an Individual Member		
Service	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			
	Pay Increase Assumptions for an Individual Member		
Service	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, 2022

Marriage Assumption:	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.
Pay Increase Timing:	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.
Decrement Timing:	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.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and the service nearest whole year on the date of the valuation.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability does not operate during the first 5 years of service. Disability and turnover do not operate during retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is the straight life form.
Incidence of Contributions:	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.
Liability Adjustments:	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.
Data Adjustments:	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

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.

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.

December 9, 2022

Mr. Clint Rhoden
Executive Director
Arkansas Teacher Retirement System
1400 West Third
Little Rock, Arkansas 72201

Re: Report of June 30, 2022 Actuarial Valuation of Active and Inactive Members

Dear Mr. Rhoden:

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

Sincerely,
Gabriel, Roeder, Smith & Company

Judith A. Kermans

Judith A. Kermans, EA, FCA, MAAA

JAK:bd
Enclosures

Arkansas Teacher Retirement System

Annual Actuarial Valuation of Annuities Being Paid to Retirees and Beneficiaries

June 30, 2022

OUTLINE OF CONTENTS
Report of Actuarial Valuation of ATRS Retirees and Beneficiaries

800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

December 9, 2022

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 date of the valuation was June 30, 2022 (using amounts payable as of July 1, 2022).

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.

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723

This is one of multiple documents comprising the actuarial results. The other documents include the active and inactive valuation dated December 9, 2022, and the presentation dated December 5, 2022.

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. Brian B. Murphy, Judith A. Kermans and Heidi G. Barry 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

Brian B Murphy

Brian B. Murphy, FSA, EA, FCA, MAAA, PhD

Judith A. Kermans

Judith A. Kermans, EA, FCA, MAAA

Heidi G Barry

Heidi G. Barry, ASA, FCA, MAAA

BBM/JAK/HGB:ah

Comments

As expected, during the year ended June 30, 2022 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	% of Active Payroll
		(Millions)	
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%
1998	14,802	220.38	16.1%
1999	15,887	248.75	17.4%
2000	16,657	280.14	18.9%
2001	17,778	309.03	19.8%
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%

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.

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 unfunded actuarial accrued liabilities will be fully amortized after 26 years;
2) The funded status of the plan will increase gradually towards a 100% funded ratio; and
3) The unfunded accrued liability will increase for several years before beginning to decline.

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

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?

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.)

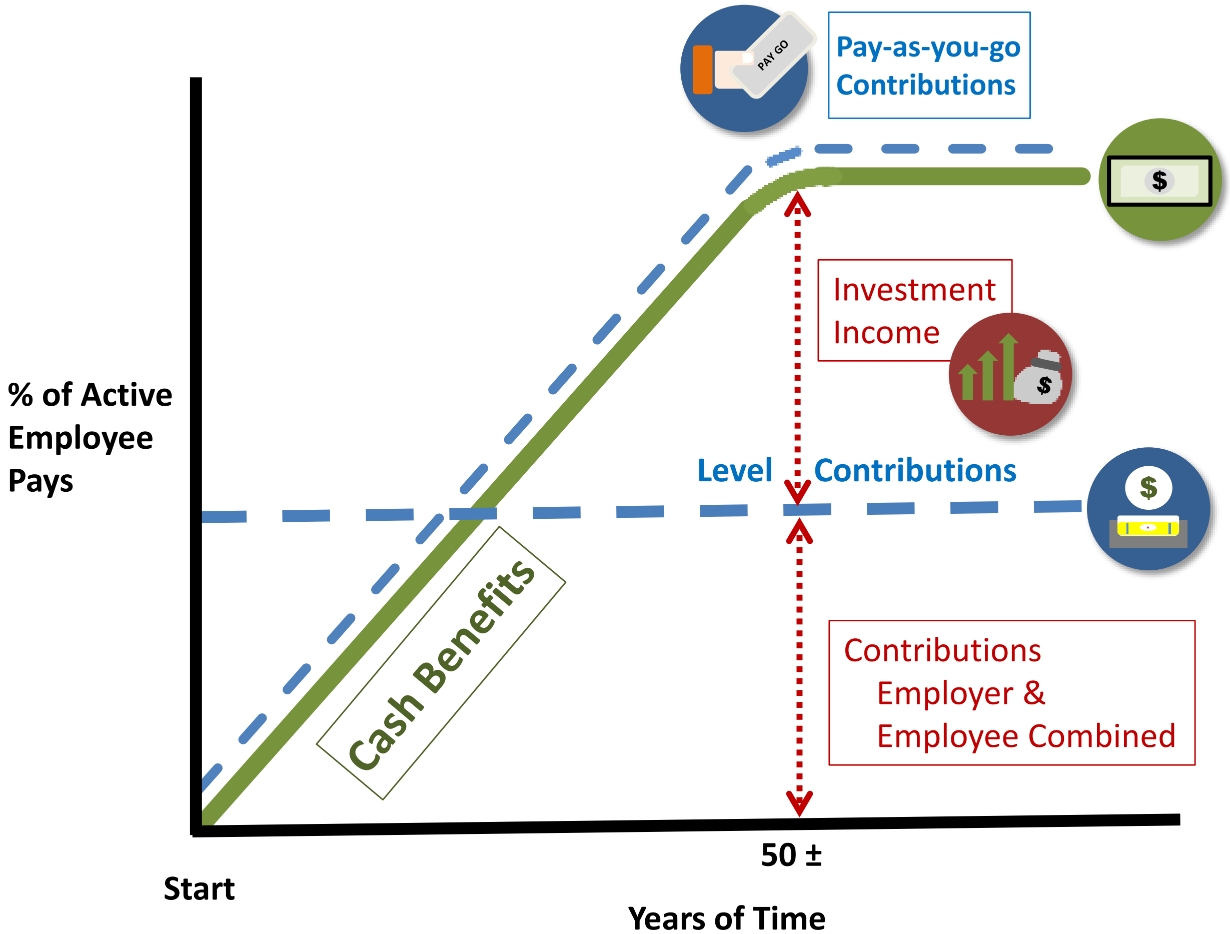
An inevitable byproduct of the level-cost design is the accumulation of reserve assets for decades and the income produced when the assets are invested. ***Investment income*** becomes the ***third and largest contributor*** for benefits to employees, and is interlocked with the contribution amounts 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 future can be predicted with considerable but not complete precision. ATRS 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.

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.

	2022	2021	2020	2019	2018
Ratio of the Market Value of Assets to Total Payroll	5.9	6.7	5.7	6.1	6.1
Ratio of Actuarial Accrued Liability to Payroll	7.4	7.5	7.6	7.5	7.3
Ratio of Actives to Retirees and Beneficiaries	1.4	1.4	1.4	1.5	1.5
Ratio of Net Cash Flow to Market Value of Assets	-1.0%	-3.2%	-3.9%	-3.6%	-3.5%
Duration of the Present Value of Future Benefits	14.03	14.02	13.83	13.82	13.86

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 5.9 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 five years based on 2022 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 7.4% of payroll and would affect the amortization period by three years based on the 2022 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 14.0 (which is based on a 7.25% discount rate) indicates that the present value of future benefits would increase approximately 14.0% if the assumed rate of return were lowered 1%. Such a change could affect the amortization period by 20 years or more.

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	(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. 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	$ 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%

(*) 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.

(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.

BENEFIT PROVISIONS

Summary of Benefit Provisions
June 30, 2022

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, 2022

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 2022, the Board granted CBA participants an incentive rate of 1.0%, by Resolution 2021-36 on September 27, 2021.

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 will receive 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 will receive 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, 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 RP-2014/MP2017 tables (static projection to 2022) adjusted with a 50% unisex mix.

Sample Benefit Computations for a Member Retiring July 1, 2022 with a Simple 3% COLA

Data for an example member is shown below.

Annual retirement benefit as of July 1, 2022 (excluding stipend): $30,000

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

	Annual Amount		
Year Ended June 30	**Base**	**Current**	**$ Increase**
2023	$30,000	$30,000	$ 0
2024	30,000	30,900	900
2025	30,000	31,800	900
2026	30,000	32,700	900
2027	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

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			
2024					

* *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 $	Purchasing Power at Year End % 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			
2024					

* *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			
2024					

* *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

Summary of
Annuities Being Paid Retirees and Beneficiaries July 1, 2022
by Disbursing Account and Gender

Disbursing Account	Men No.	Men Annual Annuities	Women No.	Women Annual Annuities	Totals No.	Totals Annual Annuities
RETIREMENT RESERVE ACCOUNT						
Age & Service Annuities						
Retirees	10,383	$285,877,105	37,027	$912,135,578	47,410	$1,198,012,683
Beneficiaries	444	9,810,606	986	23,713,698	1,430	33,524,304
Totals	10,827	295,687,711	38,013	935,849,276	48,840	1,231,536,987
Disability						
Retirees	513	8,050,146	2,146	33,332,881	2,659	41,383,027
Beneficiaries	138	2,216,353	136	2,492,674	274	4,709,027
Totals	651	10,266,499	2,282	35,825,555	2,933	46,092,054
Act 793	72	1,122,756	67	566,412	139	1,689,168
Retirement Reserve Account	11,550	307,076,966	40,362	972,241,243	51,912	1,279,318,209
Act 808 Retirement Reserve Account	20	1,335,084	12	503,628	32	1,838,712
Total Retirement Reserve Account	11,570	308,412,050	40,374	972,744,871	51,944	1,281,156,921
SURVIVOR'S BENEFIT ACCOUNT						
Beneficiaries of Deceased Members	406	6,015,919	398	6,580,467	804	12,596,386
RETIREMENT SYSTEM TOTALS						
Total Annuities Being Paid	**11,976**	$314,427,969	**40,772**	$979,325,338	**52,748**	$1,293,753,307
Prior Year Totals	11,779	$305,396,793	39,626	$937,304,571	51,405	$1,242,701,364

	Men	Women	Totals
Average Age	**72.0**	**71.8**	**71.8**

Summary of
Annuities Being Paid Retirees and Beneficiaries July 1, 2022
by Disbursing Account and Source of Financing

Disbursing Account	Annual Annuities: Employee Financed	Annual Annuities: Employer Financed	Total: No.	Total: Annual Annuities
RETIREMENT RESERVE ACCOUNT				
Age & Service Annuities				
Retirees	$ 68,002,225	$ 1,130,010,458	47,410	$ 1,198,012,683
Beneficiaries	347,883	33,176,421	1,430	33,524,304
Totals	68,350,108	1,163,186,879	48,840	1,231,536,987
Disability				
Retirees	1,393,946	39,989,081	2,659	41,383,027
Beneficiaries	138,996	4,570,031	274	4,709,027
Totals	1,532,942	44,559,112	2,933	46,092,054
Act 793	112,021	1,577,147	139	1,689,168
Retirement Reserve Account	69,995,071	1,209,323,138	51,912	1,279,318,209
Act 808 Retirement Reserve Account	74,770	1,763,942	32	1,838,712
Total Retirement Reserve Account	70,069,841	1,211,087,080	51,944	1,281,156,921
SURVIVOR'S BENEFIT ACCOUNT				
Beneficiaries of Deceased Members	396,938	12,199,448	804	12,596,386
RETIREMENT SYSTEM TOTALS				
Total Annuities Being Paid	**$ 70,466,779**	**$ 1,223,286,528**	**52,748**	**$ 1,293,753,307**
Prior Year Totals	$ 72,241,409	$ 1,170,459,955	51,405	$ 1,242,701,364

Annuities Being Paid Retirees and Beneficiaries July 1, 2022
by Type of Annuity Being Paid

Type of Annuity	No.	Annual Amounts: Original Annuities	Base Annuities	Current Annuities
RETIREMENT RESERVE ACCOUNT				
Age & Service				
Option 1 (Basic single life)	38,468	$ 617,098,978	$ 702,879,935	$ 939,937,432
Option A (Joint & 100% Survivor)	5,508	94,907,492	107,427,937	144,844,545
Option B (Joint & 50% Survivor)	2,724	61,998,751	72,481,207	97,809,004
Option C (10-year certain)	710	12,294,866	12,421,694	15,421,702
Beneficiaries	1,430	26,739,759	23,985,625	33,524,304
Totals	48,840	813,039,846	919,196,398	1,231,536,987
Disability				
Option 1	2,222	23,706,475	25,436,063	34,359,351
Option A	358	3,982,125	4,004,215	5,327,844
Option B	79	1,205,552	1,277,898	1,695,832
Option C	0	-	-	-
Beneficiaries	274	3,339,543	3,313,728	4,709,027
Totals	2,933	32,233,695	34,031,904	46,092,054
Act 793	139	800,638	1,689,168	1,689,168
Retirement Reserve Account	51,912	846,074,179	954,917,470	1,279,318,209
Act 808 Retirement Reserve Account	32	596,879	1,838,712	1,838,712
Total Retirement Reserve Account	51,944	846,671,058	956,756,182	1,281,156,921
SURVIVOR'S BENEFIT ACCOUNT				
Beneficiaries of Deceased Members				
Age 0-17	128	1,138,253	1,136,742	1,252,522
Age 18-23	78	778,150	773,463	876,265
Other	598	6,981,465	7,795,494	10,467,599
Totals	804	8,897,868	9,705,699	12,596,386
RETIREMENT SYSTEM TOTALS				
Total Annuities Being Paid	52,748	$ 855,568,926	$ 966,461,881	$ 1,293,753,307

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, 2022 including the COLA granted on July 1.

Annuities Being Paid July 1, 2022
from the Retirement Reserve Account to
AGE AND SERVICE Retirees and Beneficiaries
by Attained Ages

Attained Age	No.	Annual Amounts Original Annuities	Base Annuities	Current Annuities
Under 40	9	$ 168,402	$ 145,983	$ 195,449
40-44	7	107,659	98,437	119,753
45-49	16	206,141	197,573	211,384
50-54	339	9,249,784	9,032,408	9,906,034
55-59	1,307	35,508,697	35,338,824	41,917,671
60-64	6,534	125,668,288	127,210,287	156,237,318
65-69	11,733	207,598,865	218,862,618	282,218,960
70-74	12,479	207,664,237	232,037,790	318,134,255
75-79	8,515	128,392,820	155,220,654	220,282,904
80-84	4,651	61,774,715	81,777,093	117,276,127
85-89	2,167	25,696,158	38,428,947	55,169,625
90-94	869	9,140,424	16,526,531	23,689,820
95 & Up	214	1,863,656	4,319,253	6,177,687
Totals	**48,840**	**$813,039,846**	**$919,196,398**	**$1,231,536,987**
Avg. Age	**71.8**			

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, 2022
from the Retirement Reserve Account to
DISABILITY Retirees and Beneficiaries by Attained Ages

Attained Age	No.	Annual Amounts: Original Annuities	Base Annuities	Current Annuities
Under 40	9	$ 75,117	$ 69,804	$ 84,074
40-44	24	249,895	240,295	264,061
45-49	94	1,155,293	1,093,855	1,293,912
50-54	215	2,885,457	2,742,979	3,258,057
55-59	373	4,411,808	4,187,300	5,161,284
60-64	593	6,693,734	6,379,913	8,351,755
65-69	576	6,243,819	6,189,478	8,653,493
70-74	511	5,174,473	5,679,728	8,249,249
75-79	328	3,455,739	4,327,950	6,267,205
80-84	137	1,407,250	2,082,644	3,007,412
85-89	49	357,999	693,078	1,002,583
90-94	18	99,563	265,512	383,750
95 & Up	6	23,548	79,368	115,219
Totals	**2,933**	**$32,233,695**	**$34,031,904**	**$46,092,054**
Avg. Age	**65.9**			

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, 2022
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	11	24,187	41,965
70-74	28	103,641	187,160
75-79	42	241,400	486,021
80-84	34	241,228	496,842
85-89	17	127,341	308,240
90-94	7	62,841	168,940
95 & Up	-	-	-
Totals	**139**	**$800,638**	**$1,689,168**
Avg. Age	**78.3**		

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

Annuities Being Paid July 1, 2022
from the Retirement Reserve Account to
SURVIVOR BENEFICIARIES by Attained Ages

Attained Age	Annual Amounts			
	No.	Original Annuities	Base Annuities	Current Annuities
Under 40	215	$1,962,805	$1,954,055	$ 2,188,817
40-44	4	29,032	29,482	37,945
45-49	4	45,760	47,039	55,158
50-54	23	310,117	301,973	366,749
55-59	40	556,005	531,467	650,534
60-64	99	1,226,223	1,199,013	1,482,352
65-69	135	1,728,469	1,739,278	2,308,834
70-74	112	1,277,110	1,383,931	1,913,397
75-79	90	1,100,297	1,372,710	1,938,456
80-84	47	372,120	562,352	814,748
85-89	24	215,322	391,627	562,397
90-94	9	72,808	184,834	264,267
95 & Up	2	1,800	7,938	12,732
Totals	**804**	**$8,897,868**	**$9,705,699**	**$12,596,386**
Avg. Age	**55.3**			

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, 2022 from the ACT 808 Retirement Reserve Account to ACT 808 Retirees and Beneficiaries by Attained Ages

Attained Age	No.	Annual Amounts Original Annuities	Current Annuities
Under 40	-	$ -	$ -
40-44	-	-	-
45-49	-	-	-
50-54	-	-	-
55-59	-	-	-
60-64	-	-	-
65-69	-	-	-
70-74	-	-	-
75-79	-	-	-
80-84	3	41,788	138,330
85-89	11	235,966	766,642
90-94	11	205,250	598,738
95 & Up	7	113,875	335,002
Totals	**32**	**$596,879**	**$1,838,712**
Avg. Age	**90.6**		

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

Retiree and Beneficiary Data
as of June 30

Year	Estimated Number Added	Estimated Number Removed	Total Retirees*	Annual Allowances (Millions)	% Increase in Annual Allowances@	Average Annual Allowances
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

* *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

Reported Assets

The assets of the Retirement System, as of June 30, 2022, were reported to your actuary to be $19,679,467,252. This amount, increased by a funding value adjustment of $648,814,232 this year, is used to finance the Retirement System liability.

Accounts	Assets as of June 30	
	2022	2021
Regular Accounts		
Members' Deposit Accounts		
Contributions	$ 1,619,234,265	$ 1,517,838,030
Interest	10,879,135,880	12,934,857,979
Total	12,498,370,145	14,452,696,009
T-DROP Member Deposit Accounts		
Contributions	28,418,105	25,976,011
Interest	19,012,373	21,070,652
Total	47,430,478	47,046,663
Cash Balance Account	207,565,576	183,336,816
Employer's Accumulation Account	(7,008,787,923)	(6,500,901,628)
Retirement Reserve Account	13,468,111,609	12,792,323,810
Act 808 Retirement Reserve Account	6,840,591	8,234,533
T-Lump Payable	339,803,043	369,188,176
Survivors Benefit Account	110,412,603	107,149,458
Total Regular Accounts	19,669,746,122	21,459,073,837
Other Accounts		
Income Expense Account	9,721,130	9,699,035
Other Special Reserves	-	-
Miscellaneous	-	-
Total Other Accounts	9,721,130	9,699,035
Total Accounting Value of Assets	19,679,467,252	21,468,772,872
Funding Value Adjustment	648,814,232	(2,125,902,360)
Funding Value of Assets	$ 20,328,281,484	$ 19,342,870,512

VALUATION RESULTS

Liabilities for Annuities Being Paid July 1, 2022
Tabulated by Type of Annuity Being Paid

Type of Annuity	Liabilities July 1, 2022		
	Men	Women	Totals
RETIREMENT RESERVE ACCOUNT			
Age & Service Annuities			
Option 1 (Straight Life)	$ 1,637,705,241	$ 7,981,045,530	$ 9,618,750,771
Option A (100% Joint & Survivor)	875,791,144	989,195,008	1,864,986,152
Option B (50% Joint & Survivor)	422,178,320	695,380,303	1,117,558,623
Option C (10 Years Certain & Life)	38,195,176	162,895,015	201,090,191
Beneficiaries	77,843,637	200,841,586	278,685,223
Total Age & Service	3,051,713,518	10,029,357,442	13,081,070,960
Disability Annuities			
Option 1	50,747,633	288,782,704	339,530,337
Option A	27,059,408	47,071,512	74,130,920
Option B	7,018,017	12,490,008	19,508,025
Option C	-	-	-
Beneficiaries	21,246,640	24,885,925	46,132,565
Total Disability	106,071,698	373,230,149	479,301,847
Act 793	7,736,987	4,948,415	12,685,402
Retirement Reserve Account	3,165,522,203	10,407,536,006	13,573,058,209
Act 808 Retirement Reserve Account	5,641,760	1,760,832	7,402,592
Total Retirement Reserve Account	3,171,163,963	10,409,296,838	13,580,460,801
SURVIVORS' BENEFIT ACCOUNT			
Beneficiaries of Deceased Members	54,465,951	61,495,176	115,961,127
RETIREMENT SYSTEM TOTALS			
Total Annuity Liabilities	3,225,629,914	10,470,792,014	13,696,421,928
Cash Benefit Account Liabilities			207,565,576
Liabilities for Lump Sum Death Benefits			139,834,612
Total	$ 3,225,629,914	$ 10,470,792,014	$ 14,043,822,116

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, 2022 Balance Reported	Transfer Amount	June 30, 2022 Balance After Transfer
Retiree Accounts			
RRA	$ 13,468,111,609	$ 104,946,600	$ 13,573,058,209
808 RRA	6,840,591	562,001	7,402,592
SBA	110,412,603	5,548,524	115,961,127
Total Retiree Accounts	13,585,364,803	111,057,125	13,696,421,928
EAA	(7,008,787,923)	(111,057,125)	(7,119,845,048)
Total	**$ 6,576,576,880**	**$ -**	**$ 6,576,576,880**

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 $139.8 million. The Cash Balance Account includes an additional $207.6 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 No.	Amount	% Incr.	Average	Computed Liabilities	Applicable Assets	Unfunded Retired Life Liabilities	Ratio of Assets to Liabilities
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%

* *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%

* *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, 2022

Calendar Year of Retirement	No.	Annual Amount Being Paid Original	Total Increase	Current	Average
2022*	606	$ 7,627,366	$ 391,994	$ 8,019,360	$13,233
2021	2,694	47,734,414	6,685,722	54,420,136	20,200
2020	2,711	46,059,215	7,641,449	53,700,664	19,808
2019	2,743	44,415,794	9,076,319	53,492,113	19,501
2018	2,728	45,424,711	10,378,965	55,803,676	20,456
2017	2,738	45,221,846	12,900,020	58,121,866	21,228
2016	2,807	46,055,508	14,729,591	60,785,099	21,655
2015	2,988	49,040,747	17,474,383	66,515,130	22,261
2014	2,935	49,565,393	19,206,774	68,772,167	23,432
2013	2,681	45,508,071	19,655,670	65,163,741	24,306
2012	2,614	42,738,075	20,149,154	62,887,229	24,058
2011	2,341	38,702,736	19,314,437	58,017,173	24,783
2010	1,988	32,720,292	18,399,513	51,119,805	25,714
2009	2,040	34,207,550	20,471,212	54,678,762	26,803
2008	1,969	31,404,062	18,647,293	50,051,355	25,420
2007	1,823	28,875,996	17,496,893	46,372,889	25,438
2006	1,592	25,840,930	17,206,224	43,047,154	27,040
2005	1,563	25,580,687	19,175,442	44,756,129	28,635
2004	1,379	21,556,263	15,672,031	37,228,294	26,997
2003	1,224	18,913,514	14,577,713	33,491,227	27,362
2002	1,176	18,794,252	14,658,789	33,453,041	28,446
2001	1,128	16,634,240	13,342,956	29,977,196	26,576
2000	998	16,249,288	13,977,446	30,226,734	30,287
1999	829	12,635,468	12,209,124	24,844,592	29,969
1998	788	11,253,448	11,413,659	22,667,107	28,765
1997	596	9,554,459	10,599,439	20,153,898	33,815
1996	455	7,690,143	8,662,380	16,352,523	35,940
1995	493	7,949,379	9,381,513	17,330,892	35,154
1994	483	7,883,069	10,094,920	17,977,989	37,222
1993	343	5,724,666	7,886,506	13,611,172	39,683
1992	208	2,782,815	4,152,462	6,935,277	33,343
1991	156	1,888,448	2,921,331	4,809,779	30,832
1990	171	1,787,538	3,335,950	5,123,488	29,962
1989	171	1,956,347	3,648,721	5,605,068	32,778
1988	141	1,566,995	3,185,452	4,752,447	33,705
Before 1987	448	4,025,201	9,462,934	13,488,135	30,107
TOTAL	**52,748**	**$855,568,926**	**$438,184,381**	**$1,293,753,307**	**$24,527**

** Reporting for calendar year 2022 is not yet complete. The July 1st retirees are not included in the schedule.*

APPENDIX

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 2022*	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	$159.89	$162.44	$213.33	$218.19	45.27	48.29	0.09 %	0.05 %
45	155.49	158.74	204.88	210.83	40.03	43.00	0.12 %	0.07 %
50	149.75	153.88	194.42	201.63	34.93	37.83	0.29 %	0.22 %
55	142.77	148.03	182.14	190.85	30.06	32.88	0.44 %	0.31 %
60	133.94	140.35	167.43	177.49	25.36	28.04	0.67 %	0.43 %
65	123.01	130.34	150.20	161.15	20.90	23.34	0.97 %	0.62 %
70	109.50	117.58	130.24	141.69	16.68	18.84	1.49 %	0.99 %
75	93.52	102.01	108.12	119.49	12.80	14.64	2.52 %	1.77 %
80	75.88	84.29	85.20	95.85	9.39	10.88	4.54 %	3.27 %
85	58.49	65.92	63.89	72.80	6.62	7.72	8.35 %	6.20 %
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 illlustration for a member who retires at age 60 in 2022.

Waiver of Employer Report Penalties 2023
February 6, 2023 Board Meeting
A.C.A. Sec. 24-7-411

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

Employer Penalties Waived

Charleston Public Schools Charleston, AR	$450.00
DeQueen Mena School District Gilliham, AR	$150.00
Elkins School District Elkins AR	$150.00
Hampton School District Hampton, AR	$450.00
Hope Academy of NW Arkansas Bentonville, AR	$150.00
Marion School District Marion, AR	$150.00
Pocohontas School District Pocohontas, AR	$150.00
South Central Service Coop Camden, AR	$450.00
Southside School District Batesville, AR	$450.00
Westside School District Jonesboro, AR	$450.00
White Hall School District White Hall, AR	$600.00
Yellville-Summitt Public Schools Yellville, AR	$450.00
TOTAL	**$4,050.00**

Employer Interest Waived

Drew Central School District **Monticello, AR**	**$35.87**
Elkins School District **Elkins, AR**	**$0.73**
Hope Academy of NW Arkansas **Bentonville, AR**	**$3.47**
White Hall School District **White Hall , AR**	$232.12
TOTAL INTEREST WAIVED	**$272.19**
TOTAL PENALTIES AND INTEREST WAIVED	**$4,322.19**

ATRS Private Equity Investment Guidelines - 3Q22

2023 Commitments

Investment	Strategy	Region	ATRS Board Approval	ATRS Commitment
FP Venture Opportunity	Late Stage Venture	U.S./Non-U.S.	Dec-22	$30,000,000
FP International XI	Small/Mid Market Corporate Finance	Non-U.S.	Dec-22	30,000,000
FP CF Access II	Small/Mid Market Corporate Finance	U.S.	Dec-22	30,000,000
2023 commitments previously approved by ATRS' board				**$90,000,000**
LLR VII	Mid Market Buyouts (tech/healthcare)	U.S.	Feb-23 (pending)	30,000,000
GCG VI	Sponsored Mezzanine	U.S.	Feb-23 (pending)	30,000,000
FP Co-Invest VI	Small/Mid Market Corporate Finance	U.S.	Feb-23 (pending)	65,000,000
2023 commitments being considered during current board meeting				**$125,000,000**
TBD	Buyout/Growth/Turnaround	U.S.	TBD	30,000,000
TBD	Buyout/Growth/Turnaround	U.S.	TBD	30,000,000
TBD	Buyout/Growth/Turnaround	U.S.	TBD	25,000,000
TBD	Buyout/Growth/Turnaround	U.S.	TBD	25,000,000
TBD	Buyout/Growth/Turnaround	U.S.	TBD	25,000,000
2023 commitments expected for the remainder of the year				**$135,000,000**
Total targeted 2023 Commitments (approved by the board in December 2022)				**$350,000,000**

Private Equity Allocation	Target	9/30/2022
Private Equity Value		$2,951,954,316
Total Assets		$18,956,997,283
Private Equity Value as a % of Total Assets	**12.0%**	**15.6%**

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)

Strategy	Target %	Post-2006 Portfolio Commitments (as of 9/30/22)	% of Total
Corporate Finance (buyout, growth and debt strategies)	80-100%	3,233,323,718	88%
Venture Capital	0-20%	455,000,000	12%
Total (Post-2006 Portfolio)		**3,688,323,718**	**100%**

Region	Target %	Post-2006 Portfolio Commitments (as of 9/30/22)	% of Total
U.S. and Western Europe	80-100%	3,403,058,509	92%
Other[1]	0-20%	285,265,209	8%
Total (Post-2006 Portfolio)		**3,688,323,718**	**100%**

[1] *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.

Manager	Aggregate Commitment	% of 2023 Commitments to Single Investment Sponsor	Notes
LLR	$30,000,000	9%	
Greyrock	30,000,000	9%	
FP Venture Opportunity	30,000,000	< 2.5%	Expected to include 5-8 investment sponsors
FP International XI	30,000,000	< 2.5%	Expected to include 4-5 investment sponsors
FP CF Access II	30,000,000	< 2.5%	Expected to include 4-6 investment sponsors
FP Co-Invest VI	65,000,000	19%	
Not Yet Identified	135,000,000		
Total	$350,000,000		

Note: % of 2023 Commitments for FP vehicles represents ATRS' % of the estimated commitments to underlying investment sponsors within each portfolio.

As of September 30, 2022	ATRS' Portfolio $ in Millions
Number of Investments	81
Total Commitments	4,349.6
Unfunded Commitments	760.0
Total Paid-In Capital	3,832.4
Total Distributions	3,482.6
Net Asset Value	2,531.4
Gross Asset Value	3,515.2
DPI	0.9x
TVPI	1.6x
Since Inception IRR	7.5%
**Active and Liquidated*	

PORTFOLIO COMPOSITION TO TARGETS (As of 9/30/2022)		
	Target	**Actual Funded**
Target Real Asset Allocation	15%	13.4%
Portfolio Style Composition		
Real Estate	10%	8.2%
Core*	50%-70%	64.3%
Non-Core	30%-50%	35.7%
Value-Added**	*N/A*	*23.4%*
Opportunistic**	*N/A*	*12.2%*
Agriculture	1%	1.3%
Timber	2%	1.8%
Infrastructure	2%	2.0%
Leverage	50%	28.0%

RISK MANAGEMENT						
Property Type - Real Estate	**NFI-ODCE**	**Target/Constraint**	**Minimum**	**Maximum**	**Actual**	**Compliant?**
Office	22.50	NFI-ODCE +/- 50%	11.25	33.75	24.38	Yes
Retail	9.60	NFI-ODCE +/- 50%	4.80	14.40	7.73	Yes
Industrial	31.40	NFI-ODCE +/- 50%	15.70	47.10	25.11	Yes
Apartment	31.20	NFI-ODCE +/- 50%	15.60	46.80	29.76	Yes
Other	5.30	n/a	0.00	20.00	13.03	Yes
Geography - Real Estate	**NFI-ODCE**	**Target/Constraint**	**Minimum**	**Maximum**	**Actual**	**Compliant?**
West	44.30	NFI-ODCE +/- 50%	22.15	66.45	48.59	Yes
East	27.50	NFI-ODCE +/- 50%	13.75	41.25	25.68	Yes
Midwest	6.60	NFI-ODCE +/- 50%	3.30	9.90	6.51	Yes
South	21.50	NFI-ODCE +/- 50%	10.75	32.25	10.95	Yes
Other2,3	0.00	n/a	n/a	n/a	3.53	Yes
Non-U.S.	0.00	n/a	0.00	40.00	4.74	Yes
Geography - Timber	**NCREIF Timberland**	**Target/Constraint**	**Minimum**	**Maximum**	**Actual**	**Compliant?**
Lake States	4.08	NCREIF Timberland +/- 15%	0.61	4.69	0.29	No
Northeast	5.76	NCREIF Timberland +/- 15%	0.86	6.62	0.94	Yes
Northwest	24.45	NCREIF Timberland +/- 15%	3.67	28.12	15.25	Yes
South	65.71	NCREIF Timberland +/- 15%	9.86	75.57	72.85	Yes
Other	0.00	NCREIF Timberland +/- 15%	0.00	0.00	10.67	No
Geography - Agriculture	**NCREIF Farmland**	**Target/Constraint**	**Minimum**	**Maximum**	**Actual**	**Compliant?**
Appalachian	0.69		0.00	50.00	0.00	Yes
Corn Belt	12.35		0.00	50.00	9.71	Yes
Delta States	18.93		0.00	50.00	27.60	Yes
Lake States	4.05		0.00	50.00	16.67	Yes
Mountain	7.80		0.00	50.00	20.97	Yes
Northeast	0.24		0.00	50.00	0.00	Yes
Northern Plains	2.53		0.00	50.00	3.63	Yes
Pacific Northwest	6.65		0.00	50.00	3.36	Yes
Pacific West	39.32		0.00	50.00	7.13	Yes
Southeast	5.46		0.00	50.00	8.76	Yes
Southern Plains	1.98		0.00	50.00	2.15	Yes
Other	0.00		0.00	50.00	0.00	Yes
Non-U.S.	0.00		0.00	50.00	0.00	Yes
Geography - Infrastructure	**Target/Constraint**		**Minimum**	**Maximum**	**Actual**	**Compliant?**
U.S.			n/a	n/a	50.48	Yes
Non-U.S.			0.00	50.00	49.52	Yes
Asset Type - Infrastructure	**Target/Constraint**		**Minimum**	**Maximum**	**Actual**	**Compliant?**
Energy/Utilities			0.00	70.00	51.00	Yes
Transportation			0.00	70.00	34.75	Yes
Social			0.00	70.00	4.36	Yes
Communications			0.00	70.00	8.10	Yes
Other			0.00	70.00	1.79	Yes
Manager	**Target/Constraint**		**Minimum**	**Maximum**	**Max**	**Compliant?**
			0.00	30.00	13.81	Yes
Style - Real Estate	**Target/Constraint**		**Minimum**	**Maximum**	**Actual**	**Compliant?**
Core			50.00	70.00	64.30	Yes
Non-Core			30.00	50.00	35.67	Yes

Preliminary As of 12/31/2022 (9/30/22 for Illiquid Asset Classes)

	Preliminary Actual	Interim Target**	Difference (Actual vs. Interim)	Long-Term Target	Difference* (Actual vs. Long-Term)	Range***
Total Equity	53.0%	54.7%	-1.7%	53.0%	0.0%	48 - 58%
Fixed Income	14.2%	15.0%	-0.8%	15.0%	-0.8%	13 - 17%
Opportunistic/Alternatives	4.6%	4.9%	-0.3%	5.0%	-0.4%	NA
Real Assets	12.8%	13.4%	-0.6%	15.0%	-2.2%	NA
Real Estate	*8.0%*	*8.9%*	*-0.9%*	*10.0%*	*-2.0%*	*NA*
Core RE	*5.1%*	*5.4%*	*-0.2%*	*6.0%*	*-0.9%*	*5 - 7%*
Non-Core	*2.9%*	*3.6%*	*-0.7%*	*4.0%*	*-1.1%*	*3 - 5%*
Agriculture	*1.2%*	*1.8%*	*-0.6%*	*1.0%*	*0.2%*	*NA*
Timber	*1.7%*	*0.9%*	*0.8%*	*2.0%*	*-0.3%*	*NA*
Infrastructure	*2.0%*	*1.8%*	*0.2%*	*2.0%*	*0.0%*	*NA*
Private Equity	14.7%	12.0%	2.7%	12.0%	2.7%	NA
Cash	0.6%	0.0%	0.6%	0.0%	0.6%	0 - 5%
	99.9%	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	%	2023 Pacing Commitment ($M)	Commitment Progress ($M) As of 12/31/2022
Real Estate	10%	66.7%	$400	--
Core	*5-7%*	*50-70%*	*$200*	--
Non-Core	*3-5%*	*30-50%*	*$200*	--
Ag	2%	13.3%	$0	--
Timber	1%	6.7%	$0	--
Infrastructure	2%	13.3%	$75	--
Total Real Assets	15%	100.0%	$ 475	--

AON

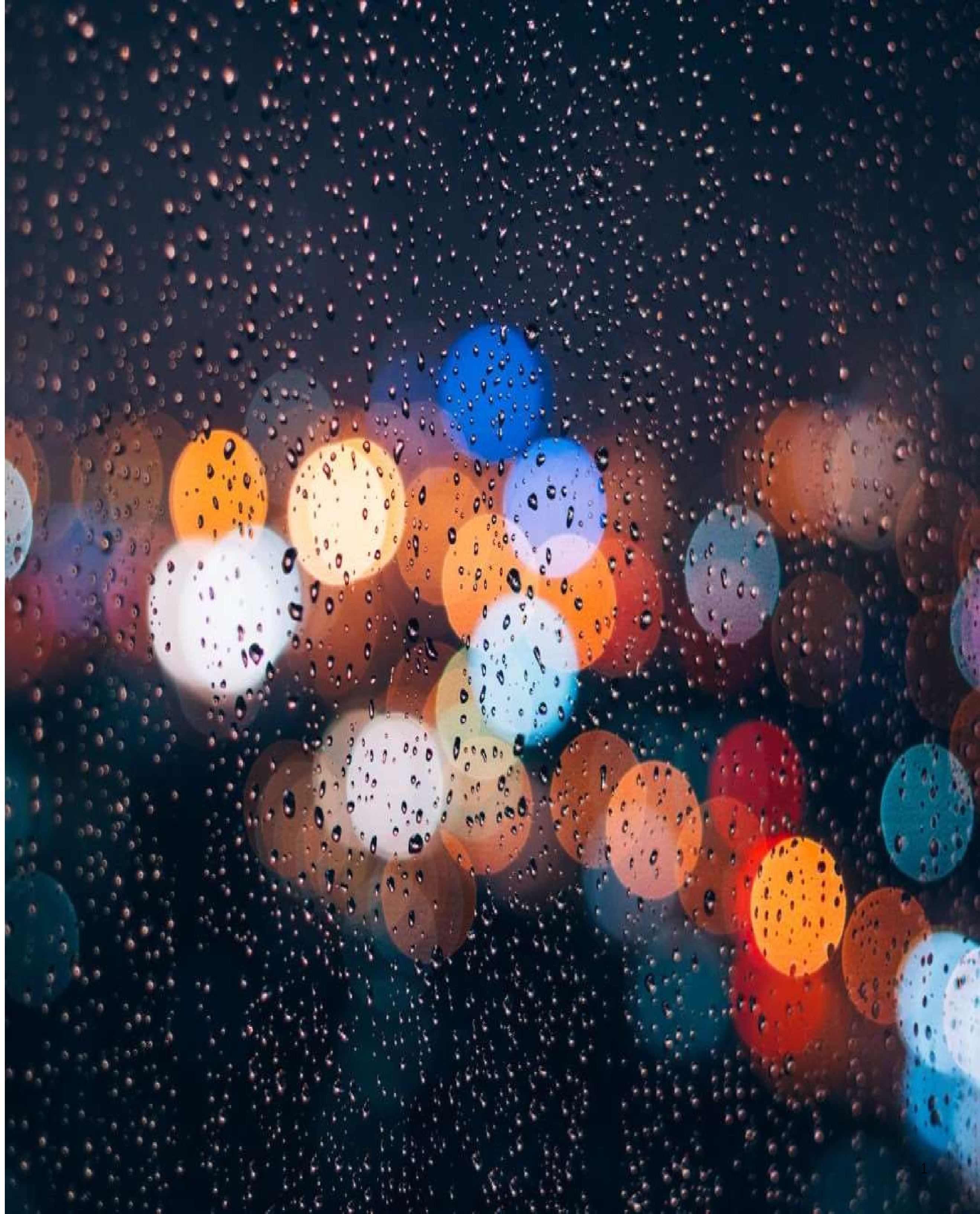
Preliminary Quarterly Investment Review

Arkansas Teacher Retirement System | Fourth

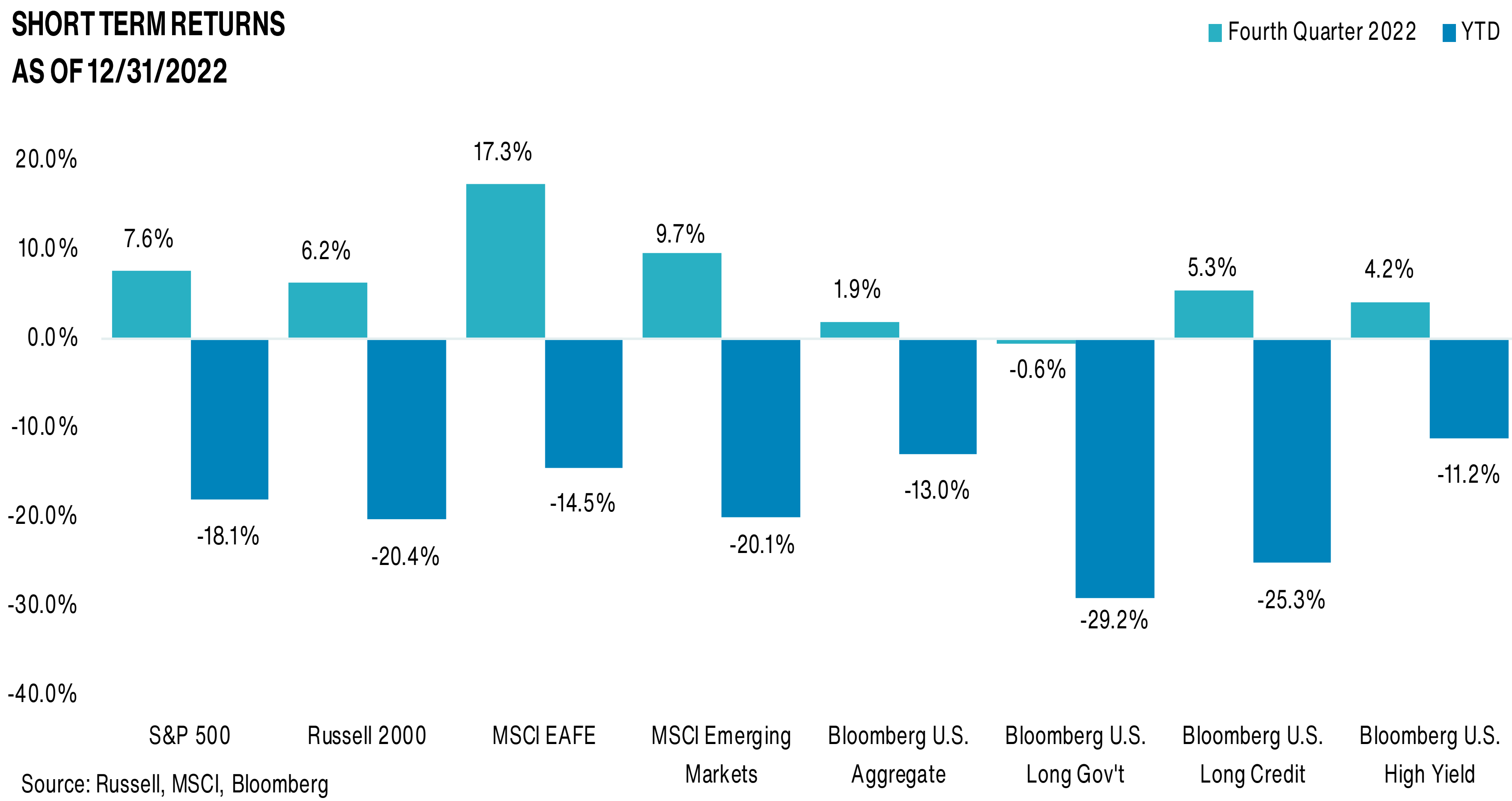
Quarter 2022

Table Of Contents

Executive Summary



Market Highlights



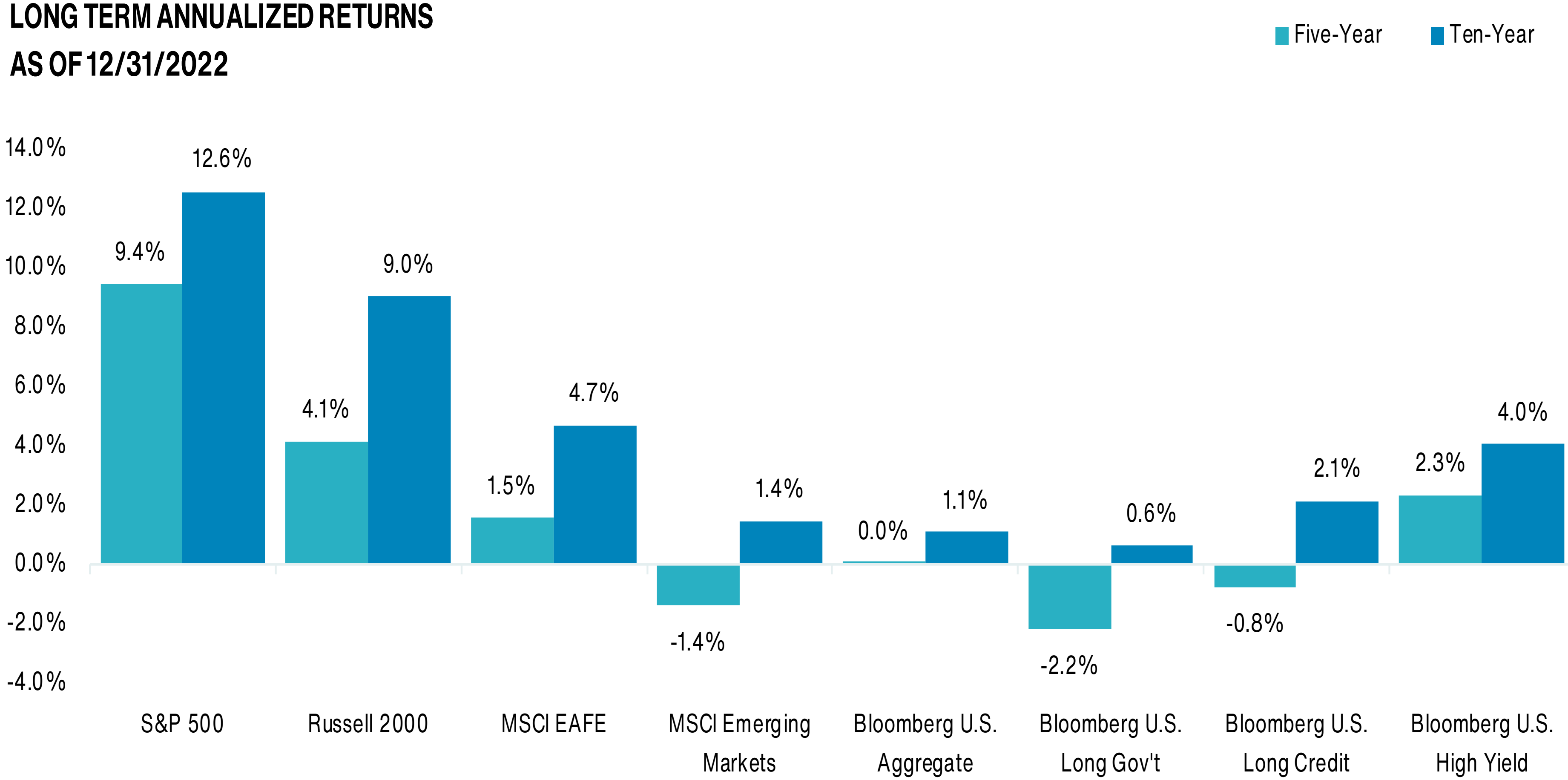
Source: Russell, MSCI, Bloomberg

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 12/31/2022



Source: Russell, MSCI, Bloomberg

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

Returns of the Major Capital Markets

Period Ending 12/31/2022

	Fourth Quarter	YTD	1-Year	3-Year[1]	5-Year[1]	10-Year[1]
Equity						
MSCI All Country World IMI	9.84%	-18.40%	-18.40%	3.89%	4.96%	7.94%
MSCI All Country World	9.76%	-18.36%	-18.36%	4.00%	5.23%	7.98%
Dow Jones U.S. Total Stock Market	7.18%	-19.53%	-19.53%	6.89%	8.65%	12.03%
Russell 3000	7.18%	-19.21%	-19.21%	7.07%	8.79%	12.13%
S&P 500	7.56%	-18.11%	-18.11%	7.66%	9.42%	12.56%
Russell 2000	6.23%	-20.44%	-20.44%	3.10%	4.13%	9.01%
MSCI All Country World ex-U.S. IMI	14.15%	-16.58%	-16.58%	0.20%	0.85%	3.98%
MSCI All Country World ex-U.S.	14.28%	-16.00%	-16.00%	0.07%	0.88%	3.80%
MSCI EAFE	17.34%	-14.45%	-14.45%	0.87%	1.54%	4.67%
MSCI EAFE (Local Currency)	8.72%	-7.00%	-7.00%	3.64%	3.81%	7.56%
MSCI Emerging Markets	9.70%	-20.09%	-20.09%	-2.69%	-1.40%	1.44%
Equity Factors						
MSCI World Minimum Volatility (USD)	10.09%	-9.28%	-9.28%	2.46%	5.62%	9.05%
MSCI World High Dividend Yield	14.60%	-3.93%	-3.93%	4.25%	5.62%	7.91%
MSCI World Quality	10.26%	-21.90%	-21.90%	6.52%	9.42%	11.73%
MSCI World Momentum	13.14%	-17.34%	-17.34%	6.94%	8.89%	11.98%
MSCI World Enhanced Value	16.36%	-9.21%	-9.21%	1.95%	1.92%	7.10%
MSCI World Equal Weighted	12.95%	-16.38%	-16.38%	2.05%	3.14%	7.43%
MSCI World Index Growth	4.77%	-29.05%	-29.05%	4.94%	7.73%	10.44%
MSCI USA Minimum Volatility (USD)	9.80%	-9.19%	-9.19%	5.14%	8.59%	11.88%
MSCI USA High Dividend Yield	14.19%	-3.75%	-3.75%	6.07%	7.38%	11.46%
MSCI USA Quality	9.28%	-22.67%	-22.67%	6.65%	10.44%	13.57%
MSCI USA Momentum	12.16%	-17.39%	-17.39%	6.52%	8.78%	14.07%
MSCI USA Enhanced Value	12.40%	-13.99%	-13.99%	3.50%	4.71%	10.90%
MSCI USA Equal Weighted	9.71%	-16.99%	-16.99%	6.35%	7.54%	11.41%
MSCI USA Growth	0.59%	-31.97%	-31.97%	7.10%	10.63%	13.69%

Returns of the Major Capital Markets

Period Ending 12/31/2022

	Fourth Quarter	YTD	1-Year	3-Year[1]	5-Year[1]	10-Year[1]
Fixed Income						
Bloomberg Global Aggregate	4.55%	-16.25%	-16.25%	-4.48%	-1.66%	-0.44%
Bloomberg U.S. Aggregate	1.87%	-13.01%	-13.01%	-2.71%	0.02%	1.06%
Bloomberg U.S. Long Gov't	-0.59%	-29.19%	-29.19%	-7.39%	-2.19%	0.61%
Bloomberg U.S. Long Credit	5.30%	-25.29%	-25.29%	-5.78%	-0.77%	2.13%
Bloomberg U.S. Long Gov't/Credit	2.61%	-27.09%	-27.09%	-6.20%	-1.21%	1.57%
Bloomberg U.S. TIPS	2.04%	-11.85%	-11.85%	1.21%	2.11%	1.12%
Bloomberg U.S. High Yield	4.17%	-11.19%	-11.19%	0.05%	2.31%	4.03%
Bloomberg Global Treasury ex U.S.	6.85%	-19.55%	-19.55%	-6.81%	-3.37%	-1.90%
JP Morgan EMBI Global (Emerging Market	7.44%	-16.45%	-16.45%	-4.49%	-1.00%	1.35%
Commodities						
Bloomberg Commodity Index	2.22%	16.09%	16.09%	12.65%	6.44%	-1.28%
Goldman Sachs Commodity Index	3.44%	25.99%	25.99%	10.49%	6.46%	-3.30%
Hedge Funds						
HFRI Fund-Weighted Composite[2]	2.26%	-4.20%	-4.20%	5.68%	4.42%	4.68%
HFRI Fund of Funds[2]	1.79%	-5.25%	-5.25%	3.71%	3.02%	3.51%
Real Estate						
NAREIT U.S. Equity REITS	5.24%	-24.37%	-24.37%	-0.11%	3.68%	6.53%
NCREIF NFI - ODCE	-4.96%	7.47%	7.47%	9.93%	8.68%	10.10%
FTSE Global Core Infrastructure Index	8.66%	-5.79%	-5.79%	3.32%	6.65%	8.54%
Private Equity						
Burgiss Private iQ Global Private Equity[3]			6.18%	21.00%	18.52%	15.82%

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

[1] Periods are annualized.

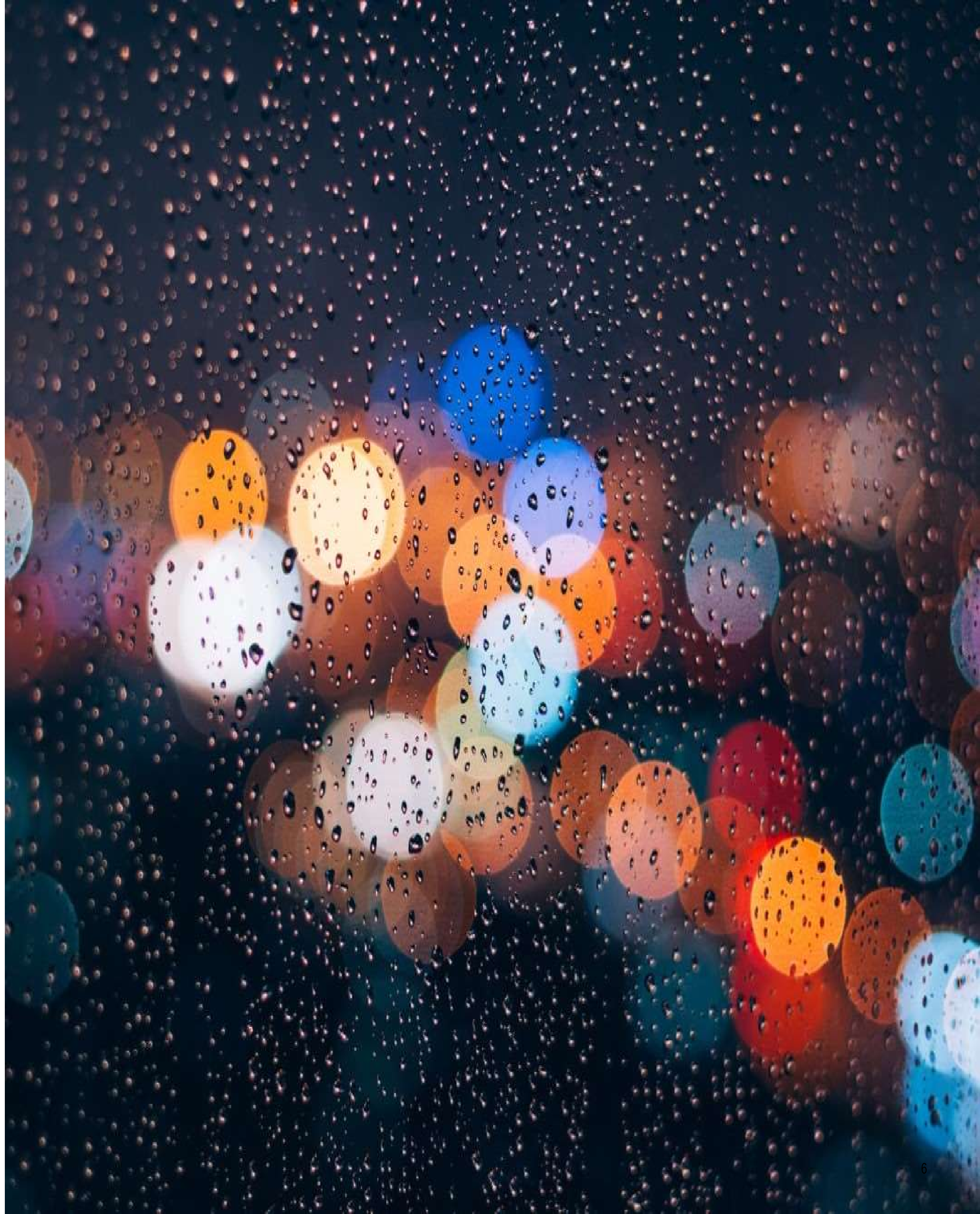
[2] Latest 5 months of HFR data are estimated by HFR and may change in the future.

[3] Burgiss Private iQ Global Private Equity data is as at June 30, 2022

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.

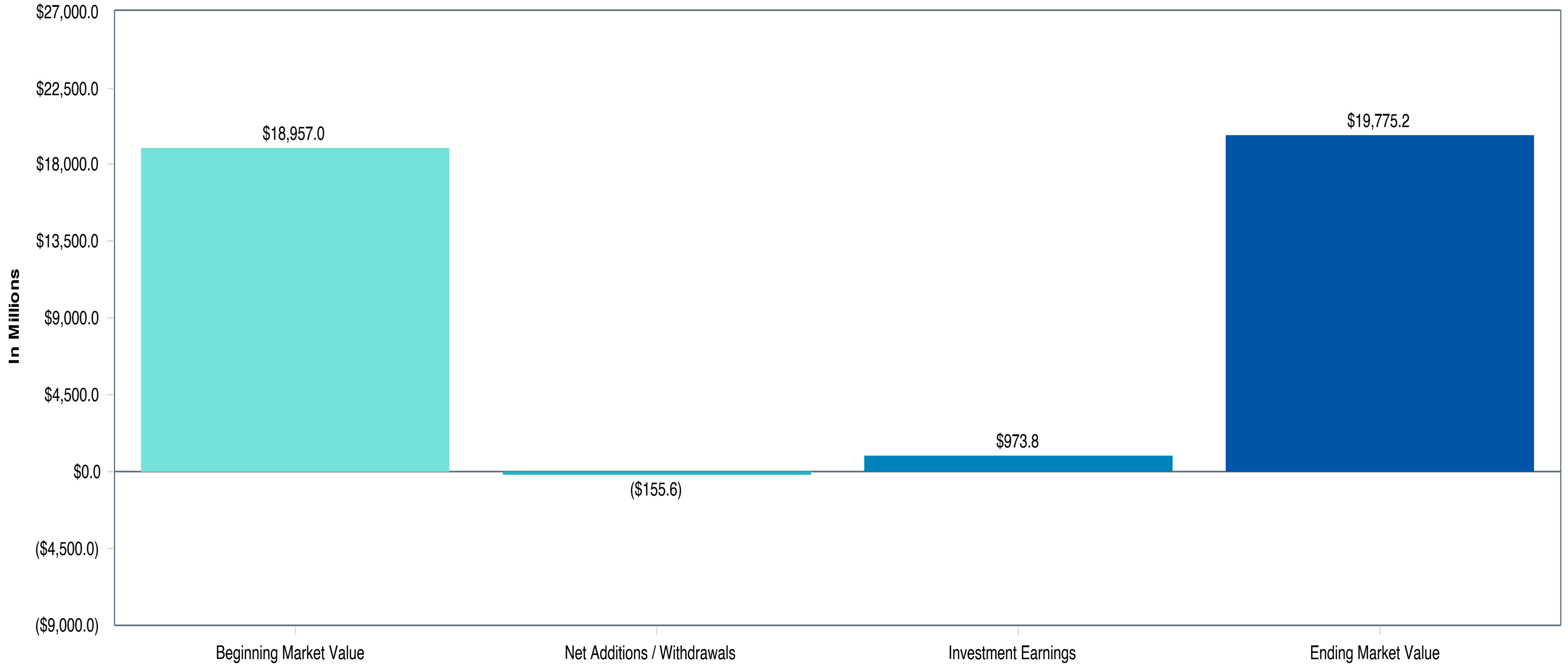
This Page Left Blank Intentionally

Total Fund



Total Plan Asset Summary

As of December 31, 2022

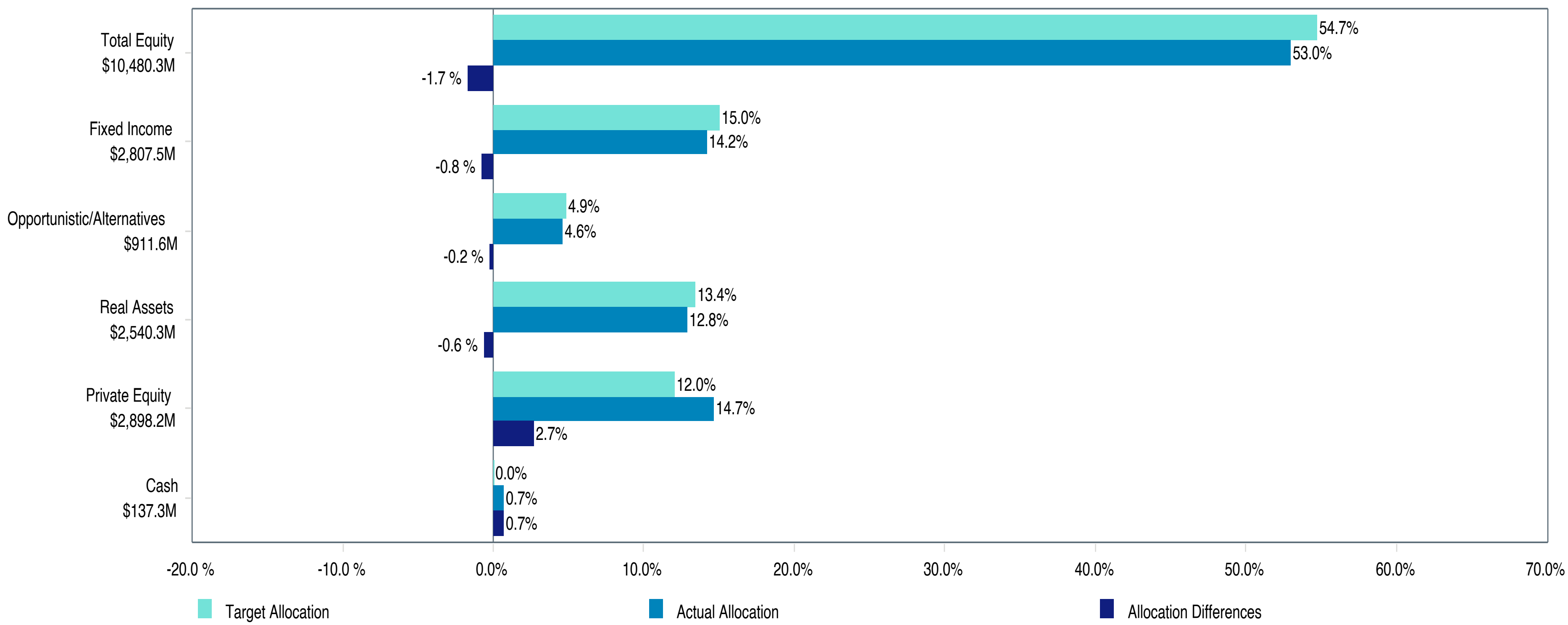


Summary of Cash Flows			
	1 Quarter	FYTD	1 Year
Beginning Market Value	18,956,997,283	19,740,562,415	21,766,843,724
+ Additions / Withdrawals	-155,559,878	-422,821,655	-596,695,582
+ Investment Earnings	973,779,283	457,475,927	-1,394,931,454
= Ending Market Value	**19,775,216,687**	**19,775,216,687**	**19,775,216,687**

Asset Allocation Compliance

As of December 31, 2022

	Market Value $M	Current Allocation %	Target Allocation %	Minimum Allocation %	Maximum Allocation %
Total Fund	**19,775.2**	**100.00**	**100.00**	**-**	**-**
Total Equity	10,480.3	53.00	54.70	48.00	58.00
Fixed Income	2,807.5	14.20	15.00	13.00	17.00
Opportunistic/Alternatives	911.6	4.61	4.86	0.00	100.00
Real Assets	2,540.3	12.85	13.44	0.00	100.00
Private Equity	2,898.2	14.66	12.00	0.00	100.00
Cash	137.3	0.69	0.00	0.00	5.00



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

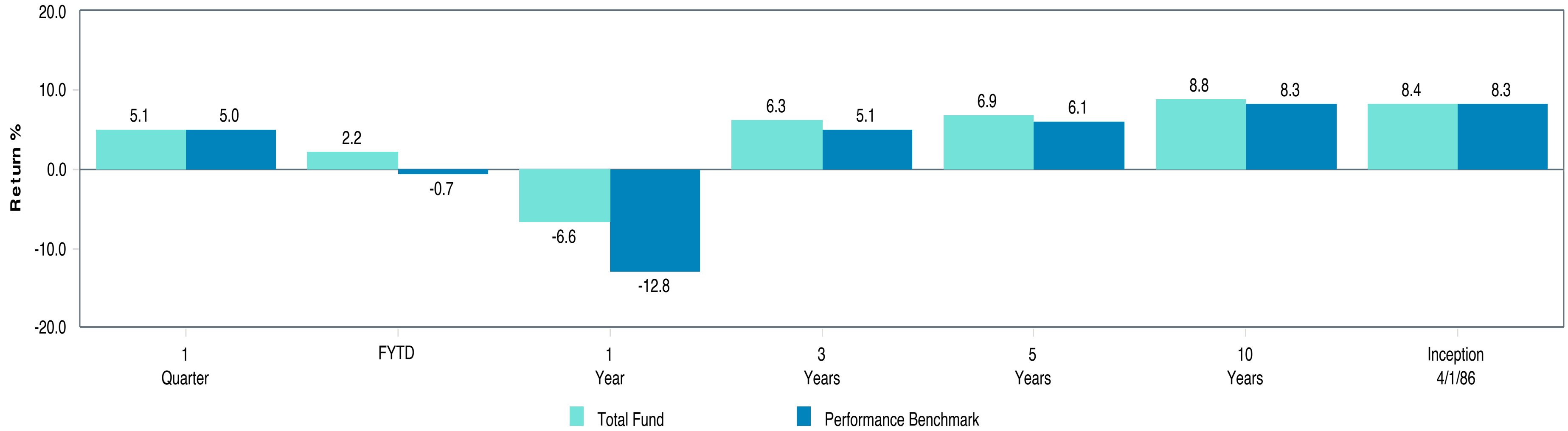
174

AON

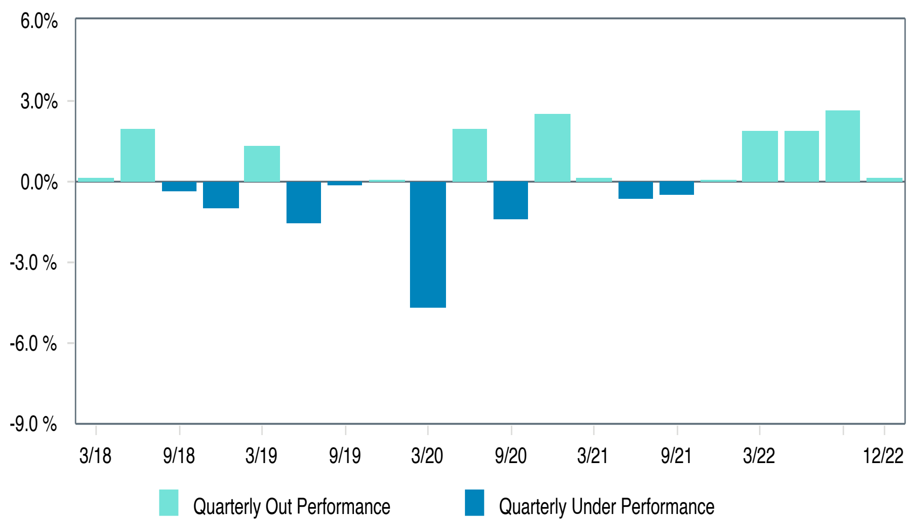
Total Plan Performance Summary

As of December 31, 2022

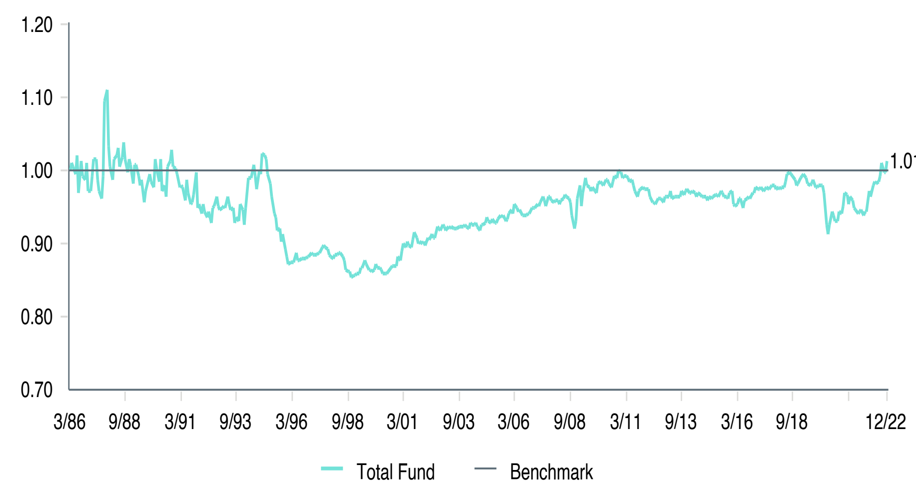
Return Summary



Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception



175

AON

Asset Allocation & Performance

As of December 31, 2022

	Allocation			Performance %							
	Market Value $ ($)	%	Policy %	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Total Fund	19,775,216,687	100.0	100.0	5.1	2.2	-6.6	6.3	6.9	8.8	8.4	04/01/1986
Performance Benchmark				*5.0*	*-0.7*	*-12.8*	*5.1*	*6.1*	*8.3*	*8.3*	
Total Equity	10,480,320,933	53.0	54.7	9.3	3.5	-14.4	4.3	5.6		7.3	07/01/2015
Total Equity Performance Benchmark				*8.9*	*2.5*	*-18.7*	*4.8*	*6.1*		*7.8*	
Fixed Income	2,807,482,345	14.2	15.0	2.1	-0.6	-7.6	-0.4	1.4	2.3	4.8	07/01/1992
Performance Benchmark				*2.2*	*-2.3*	*-13.0*	*-2.5*	*0.2*	*1.3*	*4.8*	
Opportunistic/Alternatives	911,552,065	4.6	4.9	0.9	2.8	5.6	2.0	1.6	3.5	3.2	05/01/2011
Custom Alternatives Benchmark				*1.1*	*1.3*	*0.1*	*2.6*	*2.4*	*2.5*	*2.0*	
Real Assets	2,540,310,761	12.8	13.4	0.3	2.9	13.0	8.1	7.4		8.4	07/01/2013
Total Real Assets Benchmark				*0.8*	*4.6*	*17.0*	*9.6*	*8.0*		*8.7*	
Real Estate	1,574,750,449	8.0		-0.4	2.4	13.7	8.2	7.2	9.1	8.8	12/01/1998
NFI-ODCE (Net)				*0.3*	*4.9*	*21.0*	*11.4*	*9.3*	*10.0*	*9.3*	
Timber	341,727,932	1.7		2.8	5.5	12.7	8.3	7.2	5.9	7.3	06/01/1998
Timberland Property Benchmark				*2.4*	*4.3*	*12.5*	*6.2*	*4.4*	*5.3*		
Agriculture	235,166,865	1.2		-0.6	3.0	12.4	7.2	5.6	6.8	6.1	09/01/2011
Agriculture Benchmark				*2.0*	*3.5*	*10.2*	*6.3*	*5.6*	*7.4*		
Infrastructure	388,665,514	2.0		1.3	3.5	11.4	14.4			13.9	07/01/2018
CPI + 5%				*1.2*	*2.6*	*11.7*	*10.1*			*8.9*	
Private Equity	2,898,225,306	14.7	12.0	0.0	0.2	5.8	15.2	16.6	15.2	12.8	03/01/1997
Private Equity Policy				*-4.1*	*-19.8*	*-16.4*	*9.7*	*10.6*	*13.5*	*10.4*	
Cash	137,325,279	0.7	0.0								

*The Real Assets and Private Equity market values, returns and their benchmark returns are shown on a one-quarter lag. Market values have been adjusted for current quarter cash flows.
*The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 151 of this report.
*The inception date above for infrastructure reflects the inception date for the calculation and reporting of time-weighted returns. The Infrastructure program began in July 2014 and the full history of Infrastructure returns are included in Total Real Assets and Total Fund performance.
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 December 31, 2022

	Allocation		Performance %							
	Market Value $	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Total Fund	**19,775,216,687**	**100.0**	**5.1**	**2.2**	**-6.6**	**6.3**	**6.9**	**8.8**	**8.4**	**04/01/1986**
Performance Benchmark			*5.0*	*-0.7*	*-12.8*	*5.1*	*6.1*	*8.3*	*8.3*	
Total Equity	**10,480,320,933**	**53.0**	**9.3 (67)**	**3.5 (43)**	**-14.4 (40)**	**4.3 (43)**	**5.6 (41)**		**7.3 (34)**	**07/01/2015**
Total Equity Performance Benchmark			*8.9 (70)*	*2.5 (55)*	*-18.7 (56)*	*4.8 (32)*	*6.1 (34)*		*7.8 (24)*	
Jacobs Levy 130/30	**1,101,839,471**	**5.6**	**8.9 (48)**	**5.3 (37)**	**-0.5 (5)**	**17.3 (1)**	**14.9 (1)**	**17.8 (1)**	**11.9 (2)**	**01/01/2008**
Russell 3000 Index			*7.2 (66)*	*2.4 (67)*	*-19.2 (61)*	*7.1 (38)*	*8.8 (28)*	*12.1 (21)*	*8.7 (39)*	
Kennedy Capital Management	**707,480,203**	**3.6**	**7.3 (91)**	**2.8 (83)**	**-17.6 (88)**	**6.5 (50)**	**4.2 (69)**	**9.9 (38)**	**11.6 (14)**	**01/01/1994**
Russell 2000 Value Index			*8.4 (81)*	*3.4 (74)*	*-14.5 (74)*	*4.7 (76)*	*4.1 (70)*	*8.5 (75)*	*9.1 (100)*	
Stephens	**502,649,283**	**2.5**	**3.4 (60)**	**1.7 (66)**	**-27.6 (42)**	**4.5 (54)**	**7.8 (52)**	**9.9 (92)**	**8.8 (68)**	**08/01/2006**
Russell 2000 Growth Index			*4.1 (52)*	*4.4 (35)*	*-26.4 (32)*	*0.6 (96)*	*3.5 (93)*	*9.2 (95)*	*7.8 (89)*	
Voya Absolute Return	**674,021,494**	**3.4**	**9.1 (69)**	**0.1 (78)**	**-19.5 (59)**	**3.8 (51)**	**4.6 (59)**	**10.2 (13)**	**9.2 (23)**	**10/01/2008**
Performance Benchmark			*9.8 (62)*	*2.3 (57)*	*-18.4 (55)*	*4.0 (49)*	*5.2 (49)*	*10.1 (13)*	*9.3 (22)*	
Voya U.S. Convertibles	**878,665,225**	**4.4**	**2.6 (89)**	**2.9 (61)**	**-17.7 (53)**	**10.7 (7)**	**12.3 (4)**	**11.3 (38)**	**10.1 (24)**	**12/01/1998**
Performance Benchmark			*1.6 (93)*	*1.9 (73)*	*-18.7 (58)*	*8.1 (24)*	*9.3 (22)*	*10.0 (68)*	*7.9 (67)*	
Pershing Square Holdings	**247,082,251**	**1.2**	**15.3 (4)**	**17.2 (1)**	**-15.1 (44)**	**23.2 (1)**	**21.8 (1)**	**7.9 (94)**	**7.9 (94)**	**01/01/2013**
Dow Jones U.S. Total Stock Market Index			*7.2 (66)*	*2.3 (68)*	*-19.5 (62)*	*6.9 (40)*	*8.7 (30)*	*12.0 (24)*	*12.0 (24)*	
Trian Partners	**78,195,458**	**0.4**	**19.4**	**10.7**	**-10.9**	**2.4**	**5.6**		**6.4**	**11/01/2015**
S&P 500 Index			*7.6*	*2.3*	*-18.1*	*7.7*	*9.4*		*11.0*	
Trian Co-Investments	**77,824,218**	**0.4**	**15.8**	**12.2**	**-5.1**	**3.6**	**7.2**		**5.7**	**01/01/2017**
S&P 500 Index			*7.6*	*2.3*	*-18.1*	*7.7*	*9.4*		*11.4*	
SSgA Global Index	**918,450,561**	**4.6**	**9.9 (60)**	**2.7 (53)**	**-18.1 (54)**	**4.2 (44)**	**5.3 (47)**	**8.3 (47)**	**6.1 (53)**	**04/01/2008**
MSCI AC World IMI (Net)			*9.8 (61)*	*2.6 (54)*	*-18.4 (55)*	*3.9 (51)*	*5.0 (54)*	*7.9 (55)*	*5.8 (67)*	

Asset Allocation & Performance

As of December 31, 2022

	Allocation		Performance %							
	Market Value $	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
BlackRock MSCI ACWI IMI Fund	831,397,828	4.2	9.9 (59)	2.7 (53)	-18.1 (54)	4.2 (45)	5.3 (47)	8.3 (48)	7.4 (51)	07/01/2011
MSCI AC World IMI (Net)			*9.8 (61)*	*2.6 (54)*	*-18.4 (55)*	*3.9 (51)*	*5.0 (54)*	*7.9 (55)*	*7.1 (61)*	
Wellington Global Perspectives	680,582,924	3.4	11.0 (43)	6.6 (14)	-15.0 (42)	5.3 (26)	4.1 (66)	9.8 (16)	11.9 (12)	07/01/2009
Performance Benchmark			*10.4 (50)*	*4.6 (26)*	*-18.7 (55)*	*3.2 (60)*	*3.2 (82)*	*7.7 (62)*	*9.6 (55)*	
T. Rowe Price Global Equity	1,234,819,441	6.2	8.1 (77)	2.2 (59)	-27.5 (83)	6.9 (16)	9.7 (4)	13.3 (1)	11.9 (4)	09/01/2009
MSCI AC World Index (Net)			*9.8 (62)*	*2.3 (57)*	*-18.4 (55)*	*4.0 (49)*	*5.2 (49)*	*8.0 (55)*	*8.2 (71)*	
MSCI AC World Index Growth (net)			*5.3 (94)*	*-1.0 (87)*	*-28.6 (85)*	*3.8 (52)*	*6.4 (31)*	*9.2 (29)*	*9.5 (35)*	
Lazard	650,868,017	3.3	14.1 (23)	2.3 (57)	-23.8 (76)	1.8 (79)	2.5 (89)	7.0 (78)	7.7 (80)	09/01/2009
MSCI AC World Index (Net)			*9.8 (62)*	*2.3 (57)*	*-18.4 (55)*	*4.0 (49)*	*5.2 (49)*	*8.0 (55)*	*8.2 (71)*	
D.E. Shaw	866,185,684	4.4	9.5 (65)	4.7 (26)	-14.3 (40)	5.0 (29)	5.6 (42)	9.7 (17)	9.9 (27)	09/01/2009
MSCI World Index (Net)			*9.8 (62)*	*3.0 (50)*	*-18.1 (54)*	*4.9 (30)*	*6.1 (33)*	*8.9 (34)*	*8.8 (52)*	
GMO Global All Country Equity	472,954,096	2.4	13.6 (28)	3.4 (44)	-17.0 (50)	1.5 (83)	2.7 (87)		3.7 (86)	07/01/2014
MSCI AC World Index (Net)			*9.8 (62)*	*2.3 (57)*	*-18.4 (55)*	*4.0 (49)*	*5.2 (49)*		*6.1 (48)*	
MSCI AC World Index Value (Net)			*14.2 (23)*	*5.5 (18)*	*-7.5 (19)*	*3.3 (59)*	*3.5 (78)*		*4.2 (83)*	
Harris Global Equity	557,236,318	2.8	14.4 (21)	2.5 (55)	-15.7 (44)	3.9 (50)	2.9 (86)		5.4 (68)	06/01/2014
MSCI World Index (Net)			*9.8 (62)*	*3.0 (50)*	*-18.1 (54)*	*4.9 (30)*	*6.1 (33)*		*6.9 (32)*	
MSCI World Value (Net)			*14.7 (20)*	*6.4 (14)*	*-6.5 (15)*	*4.1 (49)*	*4.1 (66)*		*4.9 (75)*	
Fixed Income	2,807,482,345	14.2	2.1	-0.6	-7.6	-0.4	1.4	2.3	4.8	07/01/1992
Performance Benchmark			*2.2*	*-2.3*	*-13.0*	*-2.5*	*0.2*	*1.3*	*4.8*	
BlackRock	243,929,221	1.2	2.0 (47)	-2.9 (79)	-13.5 (80)	-2.5 (78)	0.2 (80)	1.3 (60)	3.5 (41)	10/01/2003
Performance Benchmark			*2.2 (40)*	*-2.3 (69)*	*-13.0 (73)*	*-2.5 (80)*	*0.2 (81)*	*1.3 (61)*	*3.3 (48)*	
Loomis Sayles	442,115,018	2.2	2.9 (27)	0.4 (36)	-12.3 (65)	0.2 (29)	1.8 (25)	3.5 (13)	6.4 (6)	09/01/2008
Performance Benchmark			*2.6 (32)*	*-0.6 (46)*	*-12.7 (70)*	*-1.6 (63)*	*1.0 (48)*	*2.2 (29)*	*4.2 (28)*	
Putnam	372,167,575	1.9	2.4 (53)	1.3 (48)	-1.0 (21)	-1.1 (79)	1.2 (71)	1.6 (83)	2.3	08/01/2008
LIBOR			*0.9 (72)*	*1.2 (50)*	*1.2 (13)*	*0.8 (61)*	*1.4 (64)*	*1.0 (91)*	*0.9*	
SSgA Aggregate Bond Index	679,216,829	3.4	1.7 (61)	-3.2 (84)	-13.2 (77)	-2.8 (85)	0.0 (86)	1.0 (79)	2.0 (70)	06/01/2010
Barclays Aggregate Index			*1.9 (52)*	*-3.0 (80)*	*-13.0 (73)*	*-2.7 (84)*	*0.0 (85)*	*1.1 (77)*	*2.0 (69)*	
Wellington Global Total Return	382,471,484	1.9	2.7 (51)	3.5 (22)	8.4 (5)	3.4 (27)	4.0 (25)		2.6 (40)	05/01/2014
BofA Merrill Lynch 3 Month US T-Bill			*0.8 (72)*	*1.3 (46)*	*1.5 (13)*	*0.7 (62)*	*1.3 (70)*		*0.9 (76)*	

Asset Allocation & Performance

As of December 31, 2022

	Allocation		Performance %							
	Market Value $	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Reams Core Plus Bond Fund	**352,430,844**	**1.8**	**3.4 (20)**	**-0.9 (49)**	**-11.7 (61)**	**0.6 (24)**	**2.2 (16)**		**2.3 (28)**	**05/01/2014**
Barclays Aggregate Index			*1.9 (52)*	*-3.0 (80)*	*-13.0 (73)*	*-2.7 (84)*	*0.0 (85)*		*1.1 (78)*	
BRS Recycling Tax Credit	**176,000,000**	**0.9**								
BRS Recycling Tax Credit Phase 2	**77,031,608**	**0.4**								
BRS Recycling Tax Credit Phase 3	**82,119,766**	**0.4**								

Asset Allocation & Performance

As of December 31, 2022

	Allocation		Performance %							
	Market Value $	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Opportunistic/Alternatives	911,552,065	4.6	0.9	2.8	5.6	2.0	1.6	3.5	3.2	05/01/2011
Custom Alternatives Benchmark			*1.1*	*1.3*	*0.1*	*2.6*	*2.4*	*2.5*	*2.0*	
Anchorage	37,965,328	0.2	-0.2	4.5	5.2	8.4	4.8	6.2	5.7	05/01/2011
Credit Suisse Event Driven			*1.7*	*1.0*	*-6.8*	*4.0*	*3.2*	*3.5*	*2.6*	
York	9,359,503	0.0	-11.0	3.5	26.8	-13.9	-12.0	-3.6	-2.5	05/01/2011
Credit Suisse Event Driven			*1.7*	*1.0*	*-6.8*	*4.0*	*3.2*	*3.5*	*2.6*	
Capula	91,384,834	0.5	2.9	6.7	12.9	7.1	6.9	6.9	6.4	05/01/2011
HFRI Macro (Total) Index			*-1.3*	*0.4*	*9.0*	*7.3*	*4.8*	*3.1*	*2.1*	
Graham	93,598,017	0.5	-2.3	4.2	31.7	14.1	9.7	8.0	5.4	05/01/2011
HFRI Macro (Total) Index			*-1.3*	*0.4*	*9.0*	*7.3*	*4.8*	*3.1*	*2.1*	
Circumference Group Core Value	36,197,503	0.2	7.5	4.0	-6.8	7.4	7.4		7.9	08/01/2015
Russell 2000 Index			*6.2*	*3.9*	*-20.4*	*3.1*	*4.1*		*6.3*	
Aeolus Keystone Fund	33,217,140	0.2	-1.3	2.9	9.2	-2.0	-1.5		-1.7	12/01/2015
FTSE 3 Month T-Bill			*0.9*	*1.3*	*1.5*	*0.7*	*1.2*		*1.0*	
Eurekahedge ILS Advisers Index			*2.8*	*-3.3*	*-3.0*	*0.5*	*-0.3*		*-0.3*	
Nephila Rubik Holdings	8,403,400	0.0	0.6	-0.7	-7.4	-8.0	-6.1		-5.5	06/01/2016
FTSE 3 Month T-Bill			*0.9*	*1.3*	*1.5*	*0.7*	*1.2*		*1.1*	
Eurekahedge ILS Advisers Index			*2.8*	*-3.3*	*-3.0*	*0.5*	*-0.3*		*-0.6*	
Parametric Global Defensive Equity Fund	188,298,336	1.0	7.0	2.4	-7.5	2.5	3.3		4.1	05/01/2017
Performance Benchmark			*5.4*	*2.1*	*-8.5*	*2.9*	*3.6*		*4.3*	
MSCI AC World Index			*9.9*	*2.5*	*-18.0*	*4.5*	*5.8*		*7.6*	
Man Alternative Risk Premia	111,777,801	0.6	0.0	6.5	12.0	4.3			2.6	06/01/2018
SG Multi Alternative Risk Premia Index			*1.5*	*2.5*	*4.8*	*-1.3*			*-0.7*	
CFM Systematic Global Macro Fund	103,803,886	0.5	-7.6	0.9	16.6				15.8	12/01/2021
HFRI Macro: Systematic Diversified Index			*-5.7*	*-2.7*	*12.2*				*11.4*	
Pillar Opportunity	87,938,128	0.4	-1.7	-9.6	-7.4				-6.9	12/01/2021
FTSE 3 Month T-Bill			*0.9*	*1.3*	*1.5*				*1.4*	
Eurekahedge ILS Advisers Index			*2.8*	*-3.3*	*-3.0*				*-2.6*	
Chatham	60,272,140	0.3	8.8	12.3	21.0				17.6	11/01/2021
HFRI Event-Driven (Total) Index			*3.3*	*2.9*	*-4.6*				*-4.2*	
Silver Point Capital Fund	49,336,050	0.2	-0.1	3.7					-0.4	04/01/2022
HFRI ED: Distressed/Restructuring Index			*2.0*	*0.6*					*-4.3*	

Asset Allocation & Performance

As of December 31, 2022

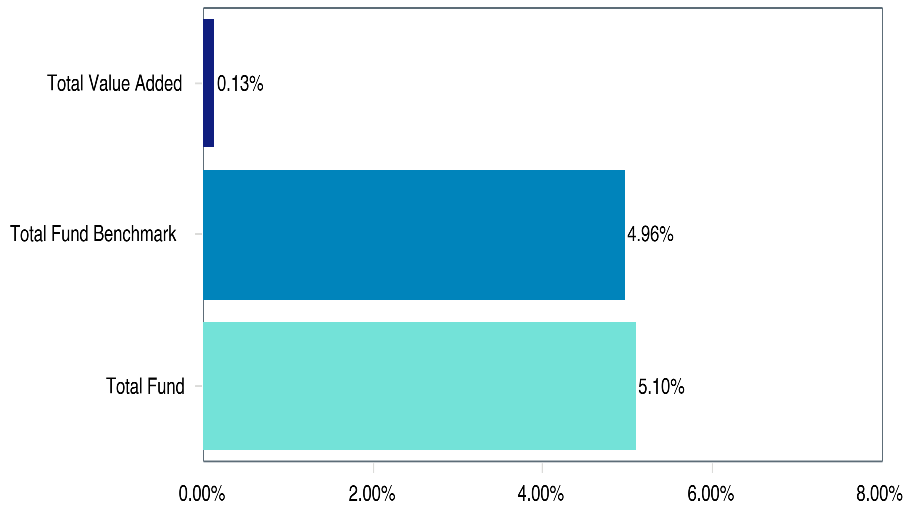
	Allocation		Performance %							
	Market Value $	%	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Real Assets	2,540,310,761	12.8	0.3	2.9	13.0	8.1	7.4		8.4	07/01/2013
Total Real Assets Benchmark			*0.8*	*4.6*	*17.0*	*9.6*	*8.0*		*8.7*	
Real Estate	1,574,750,449	8.0	-0.4	2.4	13.7	8.2	7.2	9.1	8.8	12/01/1998
NFI-ODCE (Net)			*0.3*	*4.9*	*21.0*	*11.4*	*9.3*	*10.0*	*9.3*	
Timber	341,727,932	1.7	2.8	5.5	12.7	8.3	7.2	5.9	7.3	06/01/1998
Timberland Property Benchmark			*2.4*	*4.3*	*12.5*	*6.2*	*4.4*	*5.3*		
BTG Timber Separate Account	111,762,598	0.6								
BTG U.S. Timberland Fund, L.P.	229,965,334	1.2								
Agriculture	235,166,865	1.2	-0.6	3.0	12.4	7.2	5.6	6.8	6.1	09/01/2011
Agriculture Benchmark			*2.0*	*3.5*	*10.2*	*6.3*	*5.6*	*7.4*		
HFMS Farmland	184,061,763	0.9	-1.1	3.0	13.2	7.7	5.9	7.0	6.2	09/01/2011
HFMS custom NCREIF Farmland Index			*2.0*	*3.5*	*10.2*	*6.8*	*5.6*	*7.3*		
UBS Agrivest Core Farmland Fund	51,105,102	0.3	1.0	2.9	10.1	5.7	5.0		5.1	07/01/2015
UBS Agrivest custom NCREIF Farmland Index			*2.0*	*3.5*	*10.2*	*6.7*	*6.3*		*6.3*	
Infrastructure	388,665,514	2.0	1.3	3.5	11.4	14.4			13.9	07/01/2018
CPI + 5%			*1.2*	*2.6*	*11.7*	*10.1*			*8.9*	
Private Equity	2,898,225,306	14.7	0.0	0.2	5.8	15.2	16.6	15.2	12.8	04/01/1997
Private Equity Policy			*-4.1*	*-19.8*	*-16.4*	*9.7*	*10.6*	*13.5*	*10.5*	
Cash	137,325,279	0.7								

*The Real Assets and Private Equity market values, returns and their benchmark returns are shown on a one-quarter lag. Market values have been adjusted for current quarter cash flows.
*The inception of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and Global Equity asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 151 of this report.
*The inception date above for infrastructure reflects the inception date for the calculation and reporting of time-weighted returns. The Infrastructure program began in July 2014 and the full history of Infrastructure returns are included in Total Real Assets and Total Fund performance.
*The BRS Recycling Tax Credit represents an annual income stream of $16 million dollars over the next 14 years, which ATRS purchased for approximately $162 million. This represents an approximate 9.9% yield for the 2017 fiscal year. The value shown above represents the year-end market value in accordance with GASB Statement 72, representing the 14 years of annual income, and has been incorporated into Total Fixed Income and Total Fund performance.
*ATRS made a total commitment of $100 million to the Trian Co-Investments Fund. As of 3/31/2021, there was an unfunded commitment value equal to $18,287,776.

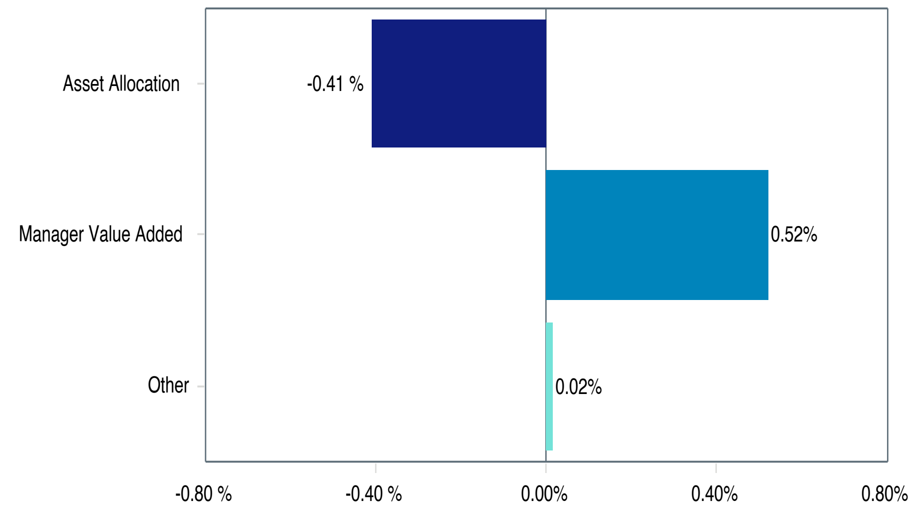
Total Fund Attribution

1 Quarter Ending December 31, 2022

Total Fund Performance

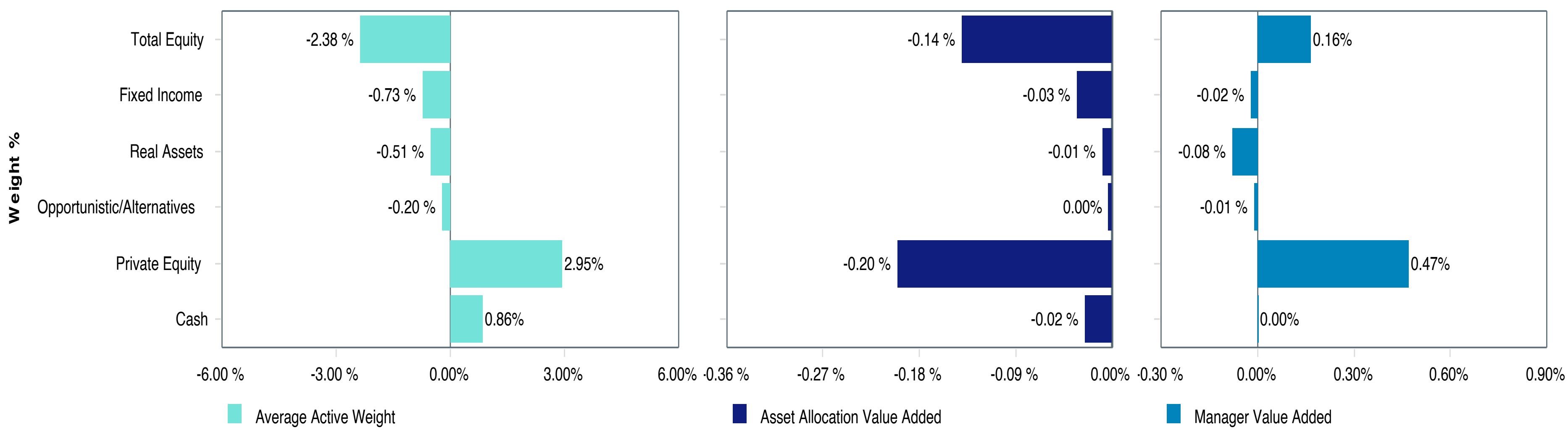


Total Value Added: 0.13%



Total Asset Allocation: -0.41 %

Total Manager Value Added: 0.52%

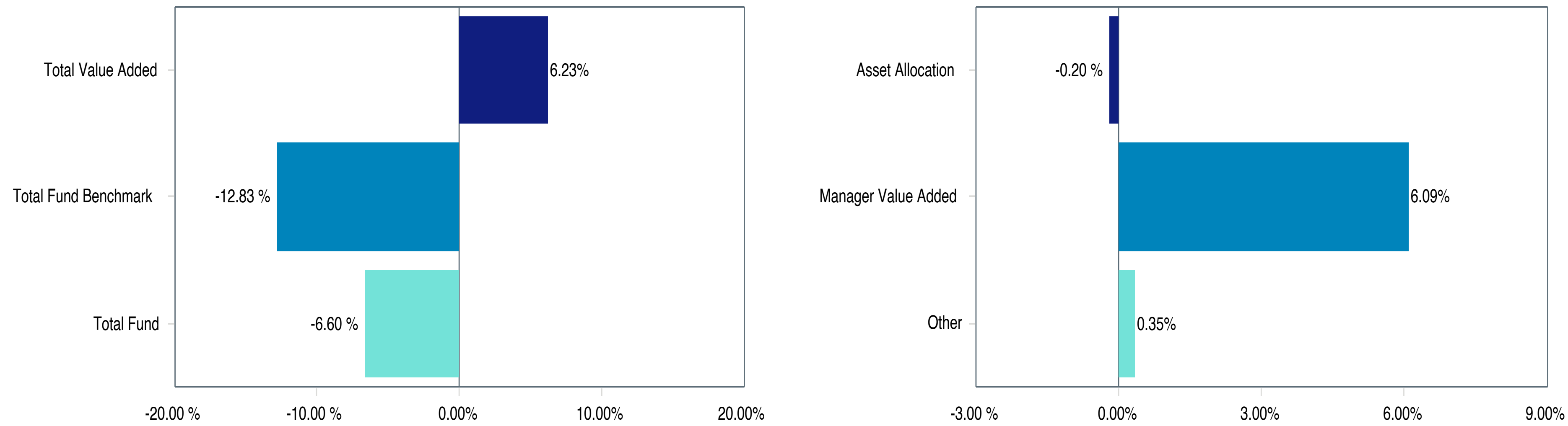


Total Fund Attribution

1 Year Ending December 31, 2022

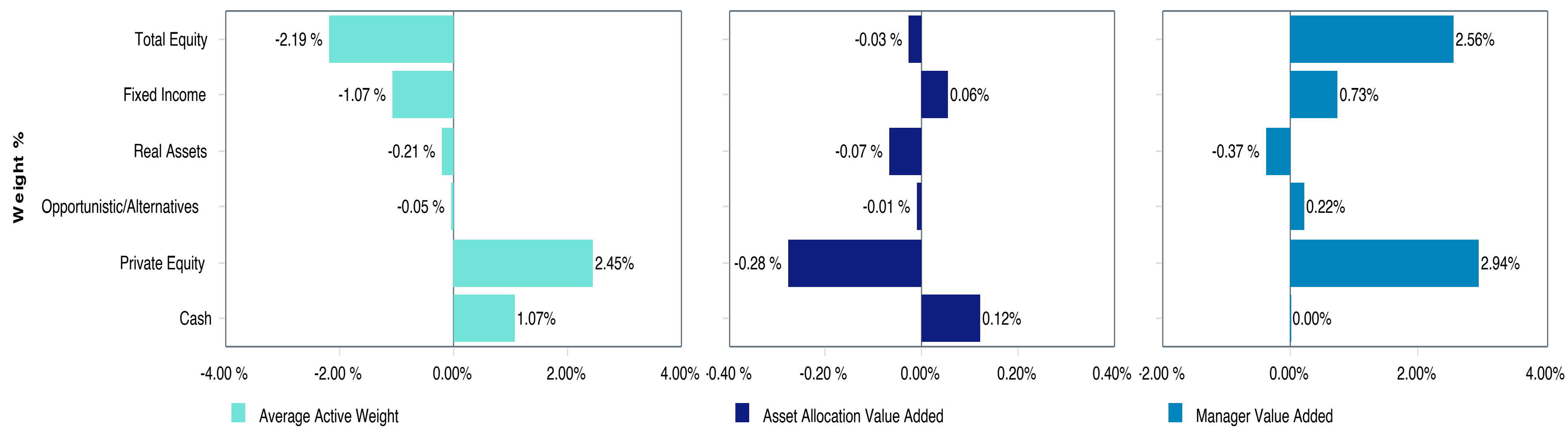
Total Fund Performance

Total Value Added: 6.23%



Total Asset Allocation: -0.20 %

Total Manager Value Added: 6.09%



183

Asset Allocation & Performance

Calendar Year Performance

	Performance %										
	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Total Fund	**-3.9 (23)**	**31.9 (11)**	**-1.4 (92)**	**5.3 (63)**	**11.7 (2)**	**16.1 (1)**	**-0.5 (67)**	**5.2 (7)**	**19.0 (5)**	**14.3 (10)**	**-1.0 (94)**
Performance Benchmark	*-7.3 (51)*	*31.2 (15)*	*2.3 (35)*	*7.0 (12)*	*9.2 (24)*	*13.2 (32)*	*1.8 (8)*	*5.2 (7)*	*18.3 (17)*	*13.5 (24)*	*2.1 (16)*
Total Equity	**-13.4 (36)**	**47.4 (24)**	**-6.4 (77)**	**4.1 (59)**	**13.4 (30)**	**22.1 (28)**	**-4.8 (56)**				
Total Equity Performance Benchmark	*-15.8 (48)*	*42.0 (42)*	*2.7 (45)*	*5.9 (48)*	*12.2 (35)*	*19.0 (46)*	*-1.5 (38)*				
Jacobs Levy 130/30	**12.1 (1)**	**50.3 (42)**	**0.2 (47)**	**5.5 (51)**	**19.9 (23)**	**24.6 (18)**	**8.3 (4)**	**14.2 (7)**	**24.3 (54)**	**22.4 (49)**	**1.4 (41)**
Russell 3000 Index	*-13.9 (52)*	*44.2 (57)*	*6.5 (32)*	*9.0 (32)*	*14.8 (45)*	*18.5 (56)*	*2.1 (23)*	*7.3 (44)*	*25.2 (44)*	*21.5 (56)*	*3.8 (25)*
Kennedy Capital Management	**-11.9 (55)**	**72.4 (30)**	**-16.2 (51)**	**-7.8 (67)**	**12.2 (50)**	**24.2 (37)**	**-4.9 (65)**	**2.7 (53)**	**29.4 (10)**	**34.4 (7)**	**-4.2 (68)**
Russell 2000 Value Index	*-16.3 (83)*	*73.3 (29)*	*-17.5 (59)*	*-6.2 (58)*	*13.1 (42)*	*24.9 (31)*	*-2.6 (42)*	*0.8 (66)*	*22.5 (75)*	*24.8 (61)*	*-1.4 (35)*
Stephens	**-25.8 (32)**	**40.2 (87)**	**7.8 (52)**	**8.4 (38)**	**29.5 (25)**	**18.3 (82)**	**-7.8 (43)**	**5.1 (88)**	**18.4 (78)**	**18.7 (86)**	**3.0 (11)**
Russell 2000 Growth Index	*-33.4 (64)*	*51.4 (59)*	*3.5 (62)*	*-0.5 (80)*	*21.9 (64)*	*24.4 (43)*	*-10.8 (61)*	*12.3 (39)*	*24.7 (37)*	*23.7 (56)*	*-2.7 (42)*
Voya Absolute Return	**-14.1 (40)**	**41.9 (42)**	**0.1 (55)**	**4.0 (59)**	**9.9 (53)**	**20.3 (37)**	**1.9 (21)**	**7.8 (10)**	**26.9 (25)**	**19.7 (37)**	**6.0 (8)**
Performance Benchmark	*-15.8 (47)*	*39.3 (54)*	*2.1 (47)*	*5.7 (50)*	*10.7 (48)*	*18.8 (48)*	*1.1 (23)*	*7.4 (10)*	*24.6 (40)*	*20.6 (30)*	*5.4 (8)*
Voya U.S. Convertibles	**-19.8 (69)**	**47.3 (49)**	**20.1 (10)**	**12.5 (15)**	**16.4 (36)**	**15.9 (74)**	**-7.1 (79)**	**4.4 (68)**	**23.1 (65)**	**19.4 (71)**	**-2.4 (66)**
Performance Benchmark	*-20.6 (71)*	*45.7 (52)*	*15.3 (16)*	*7.8 (39)*	*12.0 (64)*	*16.8 (69)*	*-4.7 (66)*	*3.5 (74)*	*24.4 (53)*	*18.6 (76)*	*-3.2 (72)*
Pershing Square Holdings	**-17.9 (66)**	**57.0 (26)**	**36.5 (2)**	**21.7 (2)**	**-2.7 (100)**	**8.3 (95)**	**-49.1 (100)**	**15.2 (4)**	**30.4 (10)**		
Dow Jones U.S. Total Stock Market Index	*-14.2 (54)*	*44.3 (56)*	*6.4 (32)*	*8.9 (33)*	*14.8 (45)*	*18.5 (56)*	*2.0 (23)*	*7.2 (45)*	*25.0 (47)*		
Trian Partners	**-19.0**	**33.4**	**-2.3**	**13.1**	**2.8**	**9.5**					
S&P 500 Index	*-10.6*	*40.8*	*7.5*	*10.4*	*14.4*	*17.9*					
SSgA Global Index	**-16.2 (50)**	**41.3 (45)**	**1.6 (49)**	**4.8 (54)**	**11.4 (42)**	**19.4 (42)**	**-3.4 (48)**	**1.2 (54)**	**23.8 (48)**	**17.5 (53)**	**-6.6 (59)**
MSCI AC World IMI (Net)	*-16.5 (51)*	*40.9 (46)*	*1.2 (51)*	*4.6 (56)*	*11.1 (44)*	*19.0 (46)*	*-3.9 (50)*	*0.8 (57)*	*23.4 (52)*	*17.1 (58)*	*-6.9 (60)*

Asset Allocation & Performance

Calendar Year Performance

	Performance %										
	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
BlackRock MSCI ACWI IMI Fund	-16.2 (50)	41.4 (45)	1.5 (50)	4.5 (56)	11.4 (42)	19.1 (45)	-3.4 (48)	1.2 (54)	23.9 (48)	17.7 (52)	-6.6 (59)
MSCI AC World IMI (Net)	-16.5 (51)	40.9 (46)	1.2 (51)	4.6 (56)	11.1 (44)	19.0 (46)	-3.9 (50)	0.8 (57)	23.4 (52)	17.1 (58)	-6.9 (60)
Wellington Global Perspectives	-17.1 (54)	60.0 (9)	-11.7 (90)	-3.8 (89)	15.7 (19)	24.8 (15)	-4.2 (52)	-1.4 (70)	33.1 (5)	30.7 (4)	-9.1 (73)
Performance Benchmark	-21.8 (75)	54.1 (14)	-5.5 (75)	-3.0 (87)	13.8 (27)	20.5 (36)	-4.7 (56)	1.5 (52)	26.0 (30)	20.6 (29)	-9.9 (77)
T. Rowe Price Global Equity	-28.7 (90)	52.0 (15)	22.8 (6)	8.0 (34)	21.3 (7)	28.8 (8)	-0.6 (33)	7.5 (10)	32.0 (6)	18.2 (48)	-7.7 (62)
MSCI AC World Index (Net)	-15.8 (47)	39.3 (54)	2.1 (47)	5.7 (50)	10.7 (48)	18.8 (48)	-3.7 (49)	0.7 (58)	22.9 (54)	16.6 (62)	-6.5 (59)
MSCI AC World Index Growth (net)	-23.5 (79)	39.7 (52)	16.6 (10)	7.2 (41)	16.1 (19)	18.6 (49)	-2.7 (43)	4.9 (25)	23.1 (53)	15.4 (68)	-5.3 (51)
Lazard	-25.6 (83)	47.5 (24)	1.6 (49)	2.7 (68)	9.8 (54)	26.2 (13)	-10.7 (88)	7.3 (10)	23.3 (52)	15.8 (66)	-11.4 (83)
MSCI AC World Index (Net)	-15.8 (47)	39.3 (54)	2.1 (47)	5.7 (50)	10.7 (48)	18.8 (48)	-3.7 (49)	0.7 (58)	22.9 (54)	16.6 (62)	-6.5 (59)
D.E. Shaw	-13.2 (36)	38.0 (59)	0.1 (55)	2.6 (69)	15.8 (19)	19.2 (45)	0.0 (28)	3.9 (32)	25.6 (33)	19.3 (41)	-1.9 (28)
MSCI World Index (Net)	-14.3 (42)	39.0 (55)	2.8 (45)	6.3 (45)	11.1 (45)	18.2 (51)	-2.8 (44)	1.4 (53)	24.0 (47)	18.6 (46)	-5.0 (48)
GMO Global All Country Equity	-19.1	40.6	-2.3	3.5	6.8	20.0	-6.5	-4.5			
MSCI AC World Index (Net)	-15.8	39.3	2.1	5.7	10.7	18.8	-3.7	0.7			
MSCI AC World Index Value (Net)	-8.1	38.4	-11.8	4.3	5.4	19.0	-4.8	-3.4			
Harris Global Equity	-17.0	56.6	-6.6	-2.0	5.0	38.9	-12.8	0.7			
MSCI World Index (Net)	-14.3	39.0	2.8	6.3	11.1	18.2	-2.8	1.4			
MSCI World Value (Net)	-6.6	37.9	-11.3	4.2	5.6	18.7	-3.7	-2.9			
Fixed Income	-7.5	3.1	6.4	6.4	1.3	5.2	3.5	1.0	6.1	3.8	5.2
Performance Benchmark	-10.9	1.1	7.9	8.1	-0.3	0.9	5.8	1.6	5.2	0.2	7.4
BlackRock	-10.9 (69)	0.9 (73)	9.0 (18)	8.0 (26)	-0.3 (76)	0.3 (69)	6.0 (23)	2.4 (15)	5.2 (50)	0.3 (63)	8.0 (29)
Performance Benchmark	-10.9 (69)	1.1 (69)	7.9 (28)	8.1 (24)	-0.3 (74)	0.9 (56)	5.8 (25)	1.6 (37)	5.2 (50)	0.2 (66)	7.4 (38)
Loomis Sayles	-12.5 (82)	9.3 (21)	7.6 (31)	7.4 (37)	1.8 (26)	8.1 (16)	1.9 (69)	1.1 (56)	12.0 (9)	10.7 (7)	4.4 (71)
Performance Benchmark	-11.5 (75)	4.9 (34)	6.6 (39)	8.2 (21)	0.5 (48)	4.0 (27)	5.0 (35)	1.0 (61)	6.8 (35)	2.8 (31)	8.4 (24)
Putnam	-5.1 (41)	4.0 (84)	0.1 (63)	3.7 (42)	4.1 (54)	7.9 (30)	-3.6 (78)	-0.7 (60)	3.7 (85)	5.5 (54)	-1.8
LIBOR	0.0 (18)	0.2 (90)	2.1 (43)	2.6 (54)	1.5 (77)	0.8 (86)	0.4 (46)	0.2 (40)	0.3 (94)	0.4 (100)	0.4
SSgA Aggregate Bond Index	-10.4 (62)	-0.3 (93)	8.7 (21)	7.9 (28)	-0.4 (77)	-0.3 (83)	6.0 (23)	1.9 (27)	4.3 (61)	-0.6 (84)	7.4 (37)
Barclays Aggregate Index	-10.3 (61)	-0.3 (93)	8.7 (20)	7.9 (28)	-0.4 (77)	-0.3 (84)	6.0 (23)	1.9 (28)	4.4 (61)	-0.7 (86)	7.5 (36)
Wellington Global Total Return	3.8 (6)	1.7 (88)	2.1 (43)	5.3 (28)	5.1 (46)	-0.7 (88)	1.3 (41)	0.5 (32)			
BofA Merrill Lynch 3 Month US T-Bill	0.2 (15)	0.1 (90)	1.6 (47)	2.3 (58)	1.4 (78)	0.5 (86)	0.2 (46)	0.0 (42)			
Reams Core Plus Bond Fund	-10.7	2.1	15.3	8.6	0.0	0.0	6.1	1.5			

Asset Allocation & Performance

Calendar Year Performance

	Performance %										
	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Barclays Aggregate Index	*-10.3*	*-0.3*	*8.7*	*7.9*	*-0.4*	*-0.3*	*6.0*	*1.9*			
BRS Recycling Tax Credit											
BRS Recycling Tax Credit Phase 2											
BRS Recycling Tax Credit Phase 3											

Asset Allocation & Performance

Calendar Year Performance

	Performance %										
	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Opportunistic/Alternatives	**0.2**	**10.4**	**-5.3**	**-0.2**	**0.6**	**6.8**	**-1.7**	**5.8**	**10.2**	**12.9**	**-1.0**
Custom Alternatives Benchmark	*-0.2*	*11.7*	*-2.5*	*2.1*	*3.4*	*2.8*	*-3.7*	*1.7*	*6.3*	*7.1*	*-3.9*
Anchorage	**0.1**	**23.9**	**-5.4**	**1.4**	**6.2**	**5.9**	**-3.9**	**3.8**	**18.9**	**19.4**	**-1.0**
Credit Suisse Event Driven	*-5.4*	*27.5*	*-6.9*	*1.9*	*3.8*	*9.3*	*-10.4*	*-2.0*	*14.1*	*14.5*	*-7.2*
York	**-9.1**	**5.3**	**-45.2**	**-5.9**	**12.2**	**14.3**	**-12.9**	**-7.2**	**22.4**	**19.4**	**-0.8**
Credit Suisse Event Driven	*-5.4*	*27.5*	*-6.9*	*1.9*	*3.8*	*9.3*	*-10.4*	*-2.0*	*14.1*	*14.5*	*-7.2*
Capula	**6.6**	**2.5**	**9.8**	**6.3**	**3.8**	**7.8**	**6.1**	**8.9**	**7.9**	**4.0**	**3.4**
HFRI Macro (Total) Index	*7.9*	*15.0*	*0.8*	*2.4*	*1.1*	*-2.4*	*1.8*	*4.2*	*1.5*	*-0.1*	*-2.8*
Graham	**23.6**	**27.4**	**-5.6**	**2.1**	**6.5**	**-3.2**	**-1.0**	**23.9**	**2.7**	**5.9**	**-8.3**
HFRI Macro (Total) Index	*7.9*	*15.0*	*0.8*	*2.4*	*1.1*	*-2.4*	*1.8*	*4.2*	*1.5*	*-0.1*	*-2.8*
Circumference Group Core Value	**-10.1**	**27.9**	**5.0**	**2.7**	**15.9**	**14.0**					
Russell 2000 Index	*-25.2*	*62.0*	*-6.6*	*-3.3*	*17.6*	*24.6*					
Aeolus Keystone Fund	**-8.2**	**-0.2**	**5.1**	**-5.8**	**-17.9**	**11.2**					
FTSE 3 Month T-Bill	*0.2*	*0.1*	*1.6*	*2.3*	*1.3*	*0.5*					
Eurekahedge ILS Advisers Index	*0.4*	*3.6*	*2.9*	*-5.5*	*-6.6*	*5.0*					
Nephila Rubik Holdings	**-15.1**	**-9.6**	**3.1**	**-6.9**	**-7.7**	**2.2**					
FTSE 3 Month T-Bill	*0.2*	*0.1*	*1.6*	*2.3*	*1.3*	*0.5*					
Eurekahedge ILS Advisers Index	*0.4*	*3.6*	*2.9*	*-5.5*	*-6.6*	*5.0*					
Parametric Global Defensive Equity Fund	**-5.5**	**22.6**	**-4.2**	**3.9**	**5.8**						
Performance Benchmark	*-7.8*	*18.5*	*2.4*	*4.4*	*6.0*						
MSCI AC World Index	*-15.4*	*39.9*	*2.6*	*6.3*	*11.3*						
Man Alternative Risk Premia	**12.1**	**2.8**	**-7.9**	**1.8**							
SG Multi Alternative Risk Premia Index	*4.0*	*3.1*	*-11.6*	*0.4*							
CFM Systematic Global Macro Fund											
HFRI Macro: Systematic Diversified Index											
Pillar Opportunity											
FTSE 3 Month T-Bill											
Eurekahedge ILS Advisers Index											
Chatham											
HFRI Event-Driven (Total) Index											
Silver Point Capital Fund											
HFRI ED: Distressed/Restructuring Index											

Asset Allocation & Performance

Calendar Year Performance

	Performance %										
	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Fiscal Year 2015	Fiscal Year 2014	Fiscal Year 2013	Fiscal Year 2012
Real Assets	16.0	4.7	3.9	5.6	9.4	7.5	9.5	11.7	9.0		
Total Real Assets Benchmark	*20.6*	*2.4*	*4.1*	*5.7*	*6.2*	*6.6*	*10.0*	*11.5*	*11.4*		
Real Estate	21.7	0.8	2.0	5.7	11.1	6.9	12.0	13.4	12.1	7.9	9.8
NFI-ODCE (Net)	*27.3*	*1.5*	*3.9*	*6.5*	*7.1*	*7.4*	*12.6*	*12.4*	*12.7*	*10.5*	*13.4*
Timber	13.2	4.9	12.2	-0.3	1.2	8.0	0.4	9.4	-1.1	6.8	-5.3
Timberland Property Benchmark	*11.8*	*1.6*	*3.1*	*0.1*	*2.6*	*3.7*	*2.5*	*10.5*	*7.7*	*6.9*	*-2.9*
BTG Timber Separate Account											
BTG U.S. Timberland Fund, L.P.											
Agriculture	12.8	6.0	1.8	3.5	3.3	4.3	9.8	2.5	11.0	11.5	
Agriculture Benchmark	*9.7*	*4.1*	*3.3*	*5.4*	*3.5*	*4.5*	*5.6*	*6.5*	*12.8*	*20.9*	
HFMS Farmland	14.1	7.0	1.4	3.4	2.9	3.9	10.7	2.5	11.0	11.5	
HFMS custom NCREIF Farmland Index	*9.7*	*4.4*	*4.6*	*4.9*	*2.0*	*4.0*	*4.8*	*6.5*	*12.8*	*20.9*	
UBS Agrivest Core Farmland Fund	9.4	3.5	3.1	4.0	4.5	5.0	6.2				
UBS Agrivest custom NCREIF Farmland Index	*9.7*	*4.2*	*4.7*	*6.2*	*5.0*	*5.5*	*8.4*				
Infrastructure	16.3	21.2	7.2	14.6							
CPI + 5%	*14.5*	*10.6*	*5.7*	*6.7*							
Private Equity	16.6	33.3	4.9	12.8	22.3	16.7	7.7	11.9	20.6	12.5	12.5
Private Equity Policy	*13.9*	*65.9*	*-7.5*	*10.8*	*16.1*	*20.4*	*1.6*	*14.5*	*25.0*	*16.8*	*9.4*
Cash	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 151 of this report.

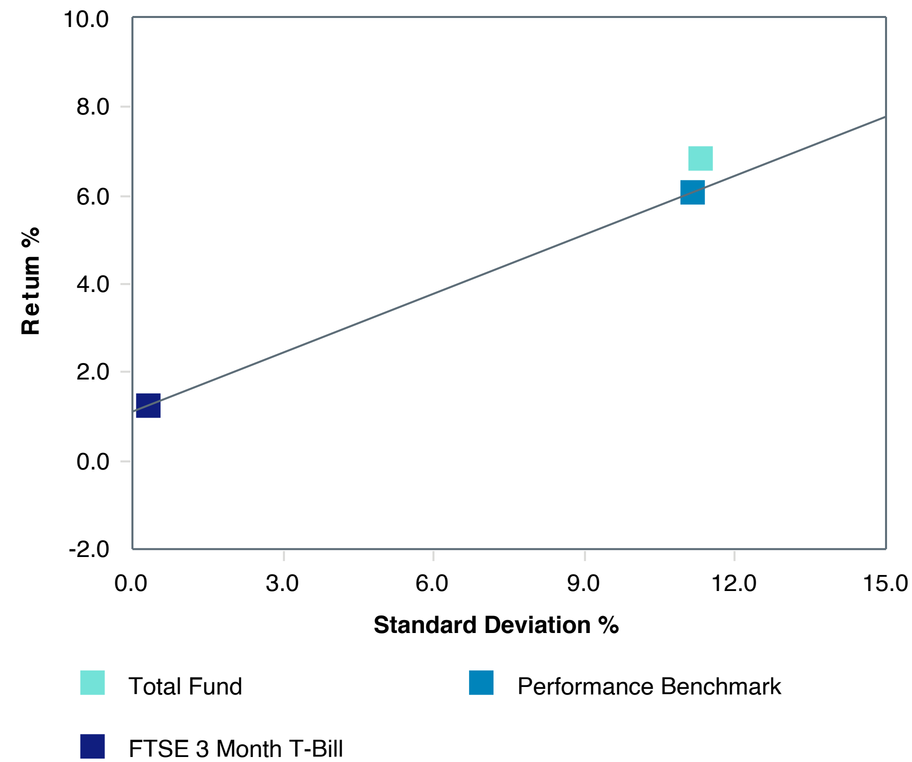
*The inception date above for infrastructure reflects the inception date for the calculation and reporting of time-weighted returns. The Infrastructure program began in July 2014 and the full history of Infrastructure returns are included in Total Real Assets and Total Fund performance.

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

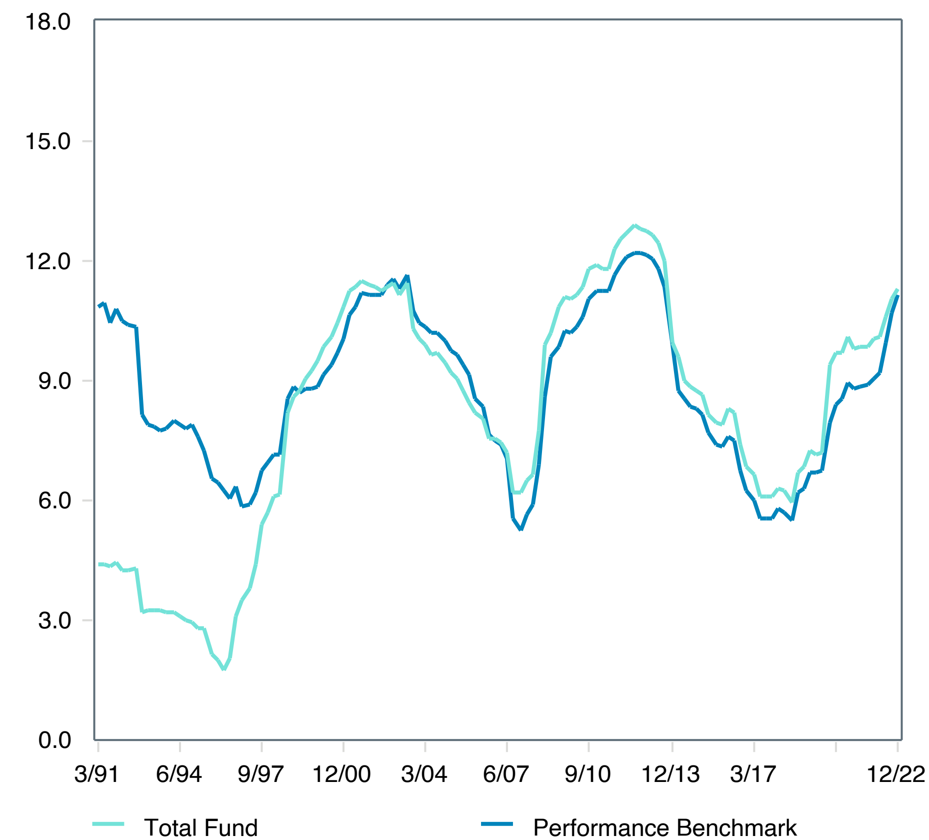
Total Fund Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation



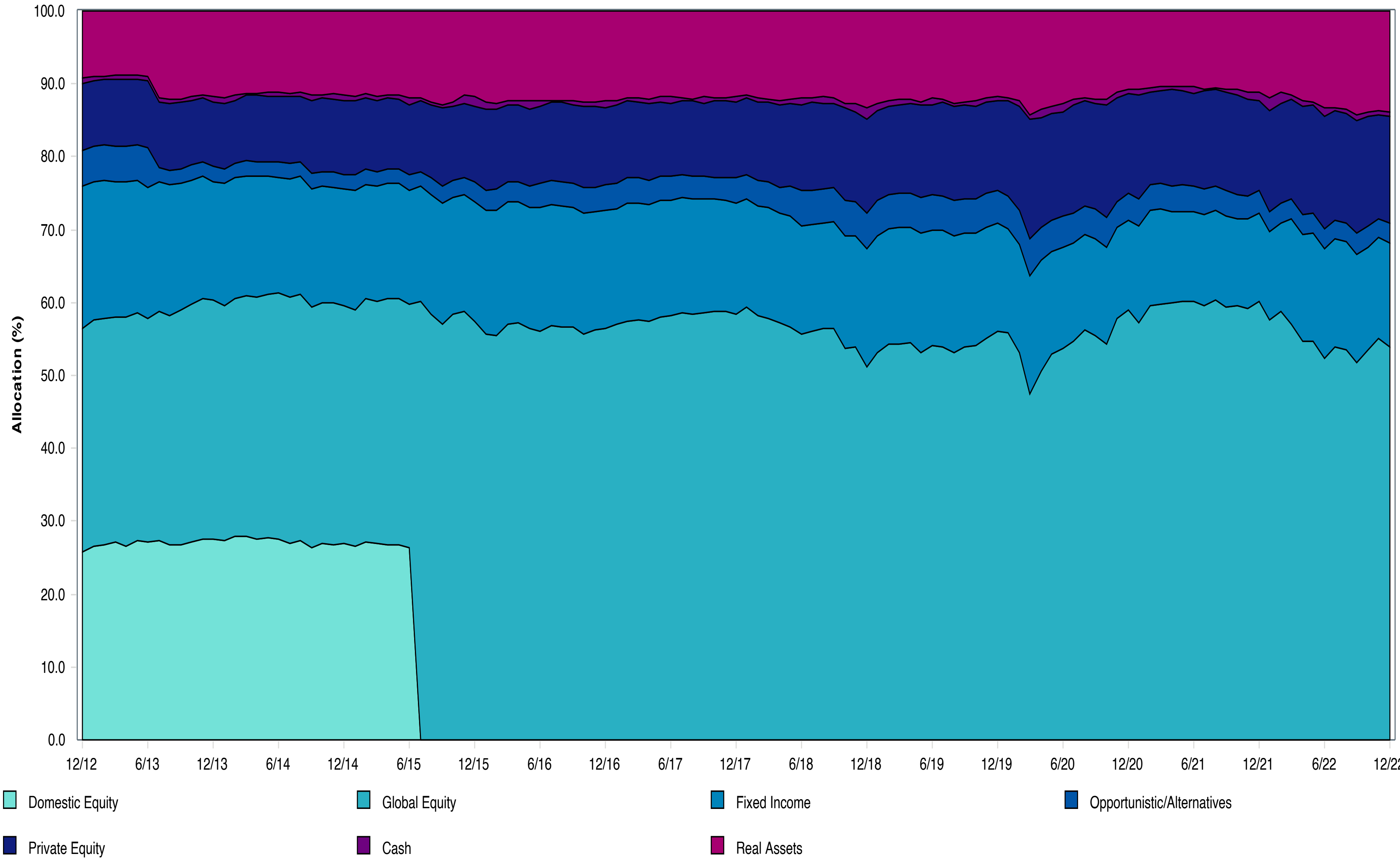
5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Total Fund	0.77	3.61	0.21	0.90	0.53	1.02	0.96	6.86	11.30	0.95
Performance Benchmark	0.00	0.00	-	1.00	0.47	0.00	1.00	6.07	11.14	1.00
FTSE 3 Month T-Bill	-5.28	11.18	-0.47	0.02	-	1.27	0.00	1.25	0.31	-0.13

Historical Asset Allocation by Segment

10 Years Ending December 31, 2022



190

AON

Asset Allocation as of 12/31/2022									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	$1,101,839.5	--	--	--	--	$1,101,839.5	5.57%		
Kennedy Capital Management	$707,480.2	--	--	--	--	$707,480.2	3.58%		
Stephens	$502,649.3	--	--	--	--	$502,649.3	2.54%		
Voya Absolute Return	$674,021.5	--	--	--	--	$674,021.5	3.41%		
Voya U.S. Convertibles	$878,665.2	--	--	--	--	$878,665.2	4.44%		
Pershing Square Holdings	$247,082.3	--	--	--	--	$247,082.3	1.25%		
SSgA Global Index	$918,450.6	--	--	--	--	$918,450.6	4.64%		
BlackRock MSCI ACWI IMI Fund	$831,397.8	--	--	--	--	$831,397.8	4.20%		
Wellington Global Perspectives	$680,582.9	--	--	--	--	$680,582.9	3.44%		
T. Rowe Price Global Equity	$1,234,819.4	--	--	--	--	$1,234,819.4	6.24%		
Lazard	$650,868.0	--	--	--	--	$650,868.0	3.29%		
D.E. Shaw	$866,185.7	--	--	--	--	$866,185.7	4.38%		
GMO Global All Country Equity	$472,954.1	--	--	--	--	$472,954.1	2.39%		
Harris Global Equity	$557,236.3	--	--	--	--	$557,236.3	2.82%		
Trian Partners	$78,195.5	--	--	--	--	$78,195.5	0.40%		
Trian Partners Co-Investments	$77,824.2	--	--	--	--	$77,824.2	0.39%		
Capital Guardian & Knight Vinke	$68.5	--	--	--	--	$68.5	0.00%		
Total Equity						$10,480,320.9	53.00%	58.08%	53.00%
BlackRock	--	$243,929.2	--	--	--	$243,929.2	1.23%		
Loomis Sayles	--	$442,115.0	--	--	--	$442,115.0	2.24%		
Putnam	--	$372,167.6	--	--	--	$372,167.6	1.88%		
SSgA Aggregate Bond Index	--	$679,216.8	--	--	--	$679,216.8	3.43%		
Wellington Global Total Return	--	$382,471.5	--	--	--	$382,471.5	1.93%		
Reams Core Plus Bond Fund	--	$352,430.8	--	--	--	$352,430.8	1.78%		
BRS Recycling Tax Credit	--	$176,000.0	--	--	--	$176,000.0	0.89%		
BRS Recycling Tax Credit Phase 2	--	$77,031.6	--	--	--	$77,031.6	0.39%		
BRS Recycling Tax Credit Phase 3	--	$82,119.8	--	--	--	$82,119.8	0.42%		
Total Fixed Income						$2,807,482.3	14.20%	15.00%	15.00%
Anchorage	--	--	--	$37,965.3	--	$37,965.3	0.19%		
Capula	--	--	--	$91,384.8	--	$91,384.8	0.46%		
Graham	--	--	--	$93,598.0	--	$93,598.0	0.47%		
York	--	--	--	$9,359.5	--	$9,359.5	0.05%		
Circumference Group Core Value	--	--	--	$36,197.5	--	$36,197.5	0.18%		
Aeolus Keystone Fund	--	--	--	$33,217.1	--	$33,217.1	0.17%		
Nephila Rubik Holdings	--	--	--	$9,071.8	--	$9,071.8	0.05%		
Parametric Global Defensive Equity	--	--	--	$188,298.3	--	$188,298.3	0.95%		
Man Alternative Risk Premia	--	--	--	$111,777.8	--	$111,777.8	0.57%		
CFM Systematic Global Macro	--	--	--	$103,803.9	--	$103,803.9	0.52%		
Juniperus	--	--	--	$87,938.1	--	$87,938.1	0.44%		
Chatham	--	--	--	$60,272.1	--	$60,272.1	0.30%		
Silver Point Capital	--	--	--	$49,336.1	--	$49,336.1	0.25%		
Total Opportunistic/Alternatives						$912,220.4	4.61%	4.46%	5.00%
Real Estate			$1,574,750.4			$1,574,750.4	7.96%		
Timber			$341,727.9			$341,727.9	1.73%		
Agriculture			$235,166.9			$235,166.9	1.19%		
Infrastructure			$388,665.5			$388,665.5	1.97%		
Total Real Assets						$2,540,310.8	12.85%	10.46%	15.00%
Total Private Equity				$2,898,225.3		$2,898,225.3	14.66%	12.00%	12.00%
Total Cash					$137,325.3	$137,325.3	0.69%	0.00%	0.00%
Total Fund	**$10,480,320.9**	**$2,807,482.3**	**$2,540,310.8**	**$3,810,445.7**	**$137,325.3**	**$19,775,885.0**	**100.00%**	**100.00%**	**100.00%**

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

Asset Allocation as of 12/31/2022 **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	$79.7	0.01%	0.00%	LaSalle Income & Growth Fund VI	$3,951.9	0.25%	0.02%
Almanac Realty Securities Fund VI	$4,004.1	0.25%	0.02%	LaSalle Income & Growth Fund VII	$14,213.6	0.90%	0.07%
Almanac Realty Securities Fund VII	$17,393.0	1.10%	0.09%	LaSalle Income & Growth Fund VIII	$23,154.7	1.47%	0.12%
Almanac Realty Securities Fund VIII	$16,648.7	1.06%	0.08%	LBA Logistics Value Fund	$14,208.3	0.90%	0.07%
Almanac Realty Securities Fund IX	$4,666.7	0.30%	0.02%	Lone Star Real Estate Fund IV	$6,773.1	0.43%	0.03%
American Center	$28,100.1	1.78%	0.14%	Long Wharf Real Estate Partners V	$18,569.4	1.18%	0.09%
AR Insurance	$2,237.5	0.14%	0.01%	Long Wharf Real Estate Partners VI	$29,522.7	1.87%	0.15%
AR Teachers Retirement Building	$5,688.8	0.36%	0.03%	Mesa West Income Fund V	$11,896.0	0.76%	0.06%
Blackstone Real Estate Partners VII	$11,006.7	0.70%	0.06%	Metropolitan RE Co-Investments	$9,846.3	0.63%	0.05%
Blackstone RE Europe VI	$20,220.2	1.28%	0.10%	Met Life Commercial Mtg Inc Fund	$47,531.9	3.02%	0.24%
Carlyle Realty Partners VII	$7,336.0	0.47%	0.04%	Morgan Stanley Prime Property Fund	$68,938.2	4.38%	0.35%
Carlyle Realty VIII	$15,837.7	1.01%	0.08%	New Boston Fund VII	$10,616.1	0.67%	0.05%
Carlyle Realty IX	$1,856.3	0.12%	0.01%	O'Connor NAPP II	$4,571.9	0.29%	0.02%
CBREI SP U.S. Opportunity V	$387.1	0.02%	0.00%	PRISA	$347,321.0	22.06%	1.76%
CBREI SP VIII	$22,975.5	1.46%	0.12%	Recoveries Land	$70.0	0.00%	0.00%
CBREI SP IX	$21,928.3	1.39%	0.11%	Rockwood Capital RE Partners IX	$5,278.5	0.34%	0.03%
Cerberus Institutional RE Partners III	$9,677.0	0.61%	0.05%	Rockwood Capital RE XI	$31,557.0	2.00%	0.16%
Calmwater	$13,601.6	0.86%	0.07%	Rose Law Firm	$4,373.2	0.28%	0.02%
Fletcher Properties	$1,135.6	0.07%	0.01%	RREEF Core Plus Industrial Fund	$48,877.5	3.10%	0.25%
FPA Core Plus IV	$35,230.3	2.24%	0.18%	Texarkana DHS	$0.0	0.00%	0.00%
GCP GLP IV	$34,225.6	2.17%	0.17%	Torchlight Debt Opportunity Fund IV	$2,811.8	0.18%	0.01%
Harbert European Real Estate	$8,292.1	0.53%	0.04%	Torchlight Debt Opportunity Fund V	$2,559.0	0.16%	0.01%
Heitman European Property IV	$382.5	0.02%	0.00%	Torchlight Debt Opportunity Fund VI	$18,058.2	1.15%	0.09%
JP Morgan Strategic Property Fund	$199,404.7	12.66%	1.01%	Torchlight Debt Opportunity Fund VII	$26,459.0	1.68%	0.13%
Kayne Anderson V	$19,368.6	1.23%	0.10%	UBS Trumbull Property Fund	$160,855.0	10.21%	0.81%
Kayne Anderson VI	$12,755.2	0.81%	0.06%	UBS Trumbull Property Income Fund	$59,860.2	3.80%	0.30%
Landmark Fund VI	$130.1	0.01%	0.00%	Victory	$33,344.9	2.12%	0.17%
Landmark Real Estate VIII	$13,347.2	0.85%	0.07%	Walton Street Real Estate Debt II	$11,519.1	0.73%	0.06%
LaSalle Asia Opportunity Fund IV	$1,725.6	0.11%	0.01%	West Mphs. DHS	$0.0	0.00%	0.00%
LaSalle Asia Opportunity Fund V	$11,491.5	0.73%	0.06%	Westbrook IX	$8,324.2	0.53%	0.04%
LaSalle Asia Opportunity Fund IV	-$831.2	-0.05%	0.00%	Westbrook Real Estate Fund X	$9,385.1	0.60%	0.05%
				Total Real Estate	**$1,574,750.4**	**100.00%**	**7.96%**

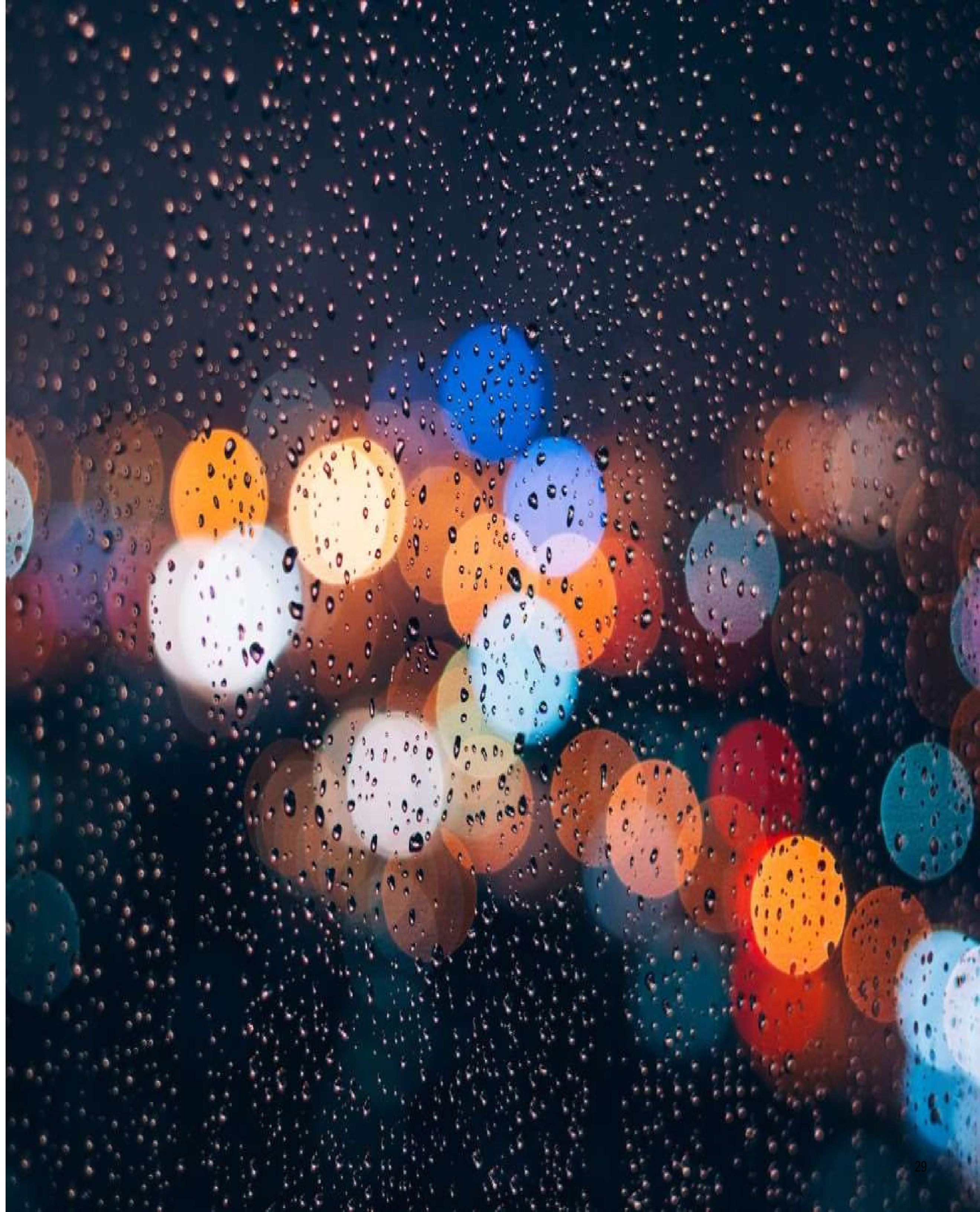
*Note: The market values for the real estate investments shown above are lagged one quarter and adjusted for the current quarter's cash flows.
Market values and allocation percentages may not add to the sum total due to rounding.

Asset Allocation as of 12/31/2022							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 VIII	$13,186.3	0.45%	0.07%	JF Lehman IV	$8,619.4	0.30%	0.04%
Arlington Capital IV	$29,487.3	1.02%	0.15%	JF Lehman V	$25,958.3	0.90%	0.13%
Arlington Capital V	$30,825.1	1.06%	0.16%	KPS III	$76.4	0.00%	0.00%
Advent GPE VI	$3,419.0	0.12%	0.02%	KPS IV	$21,635.4	0.75%	0.11%
Altus Capital II	$10,575.8	0.36%	0.05%	KPS X	$21,865.8	0.75%	0.11%
American Industrial Partners VI	$33,958.2	1.17%	0.17%	KPS Mid-Cap	$13,603.1	0.47%	0.07%
American Industrial Partners VII	$28,578.9	0.99%	0.14%	Levine Leichtman V	$9,419.9	0.33%	0.05%
Altaris Constellation Partners	$19,085.4	0.66%	0.10%	Lime Rock III	$24,574.5	0.85%	0.12%
Altaris Health Partners IV	$18,154.8	0.63%	0.09%	LLR III	$1,600.3	0.06%	0.01%
Atlas Capital II	$14,895.7	0.51%	0.08%	LLR VI	$19,519.4	0.67%	0.10%
Audax Mezzanine III	$1,415.8	0.05%	0.01%	Mason Wells III	$29.4	0.00%	0.00%
Big River - Equity	$1,677.9	0.06%	0.01%	NGP IX	$172.7	0.01%	0.00%
Big River - Holdings Note 2023	$0.0	0.00%	0.00%	NGP X	$4,966.3	0.17%	0.03%
Big River - Holdings Note 3/16/23	$0.0	0.00%	0.00%	NGP XI	$24,289.5	0.84%	0.12%
Bison V	$27,006.6	0.93%	0.14%	NGP XII	$24,508.8	0.85%	0.12%
Bison VI	-$198.0	-0.01%	0.00%	One Rock Capital Partners II	$48,677.2	1.68%	0.25%
Boston Ventures VII	$1,488.1	0.05%	0.01%	PineBridge	$8,958.6	0.31%	0.05%
Boston Ventures IX	$31,306.1	1.08%	0.16%	Revelstoke	$12,478.4	0.43%	0.06%
Boston Ventures X	$19,362.9	0.67%	0.10%	Riverside Value Fund I	$17,467.4	0.60%	0.09%
BV VIII	$22,122.0	0.76%	0.11%	Riverside IV	-$8.7	0.00%	0.00%
Castlelake II	$11,036.1	0.38%	0.06%	Riverside V	$25,488.5	0.88%	0.13%
Castlelake III	$12,879.9	0.44%	0.07%	Riverside VI	$25,304.8	0.87%	0.13%
Clearlake V	$37,812.2	1.30%	0.19%	Siris III	$20,291.0	0.70%	0.10%
Clearlake VI	$42,188.0	1.46%	0.21%	Siris IV	$34,447.7	1.19%	0.17%
Clearlake VII	$12,135.1	0.42%	0.06%	SK Capital V	$29,376.4	1.01%	0.15%
Court Square III	$29,492.5	1.02%	0.15%	Sycamore Partners II	$12,197.5	0.42%	0.06%
CSFB-ATRS 2005-1 Series	$24,224.1	0.84%	0.12%	Sycamore Partners III	$19,838.0	0.68%	0.10%
CSFB-ATRS 2006-1 Series	$34,787.2	1.20%	0.18%	TA XI	$12,344.7	0.43%	0.06%
Diamond State Ventures II	$431.9	0.01%	0.00%	Tennenbaum VI	$827.5	0.03%	0.00%
DW Healthcare III	$5,334.5	0.18%	0.03%	Thoma Bravo Discover	$5,622.2	0.19%	0.03%
DW Healthcare IV	$29,379.5	1.01%	0.15%	Thoma Bravo Discover II	$21,947.0	0.76%	0.11%
DW Healthcare V	$21,217.6	0.73%	0.11%	Thoma Bravo Discover III	$19,452.5	0.67%	0.10%
EnCap IX	$10,101.2	0.35%	0.05%	Thomas Bravo Discover IV	$2,100.4	0.07%	0.01%
EnCap VIII	$19,869.8	0.69%	0.10%	Thoma Bravo Explore I	$18,746.0	0.65%	0.09%
EnCap X	$28,529.5	0.98%	0.14%	Thoma Bravo XI	$22,525.0	0.78%	0.11%
EnCap XI	$36,572.2	1.26%	0.18%	Thoma Bravo XII	$29,723.3	1.03%	0.15%
Franklin Park Series	$1,124,489.8	38.80%	5.69%	Thoma Bravo XIII	$41,980.2	1.45%	0.21%
Greenbriar V	$24,153.1	0.83%	0.12%	Thoma Bravo XIV	$17,358.6	0.60%	0.09%
GCG IV	$12,839.4	0.44%	0.06%	Thoma Bravo XV	$7,988.4	0.28%	0.04%
GCG V	$25,338.4	0.87%	0.13%	Vista Equity III	$3,693.2	0.13%	0.02%
GTLA Holdings	$70,000.0	2.42%	0.35%	Vista Foundation II	$7,206.7	0.25%	0.04%
Highland	$210,491.1	7.26%	1.06%	Vista Foundation III	$33,209.8	1.15%	0.17%
Insight Equity II	$8,953.5	0.31%	0.05%	Wellspring V	$12,157.9	0.42%	0.06%
Insight Mezzanine I	$1,829.3	0.06%	0.01%	Wicks IV	$8,011.3	0.28%	0.04%
JF Lehman III	$20,806.1	0.72%	0.11%	WNG II	$16,734.6	0.58%	0.08%
				Total Private Equity	**$2,898,225.3**	**100.00%**	**14.66%**

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

This Page Left Blank Intentionally

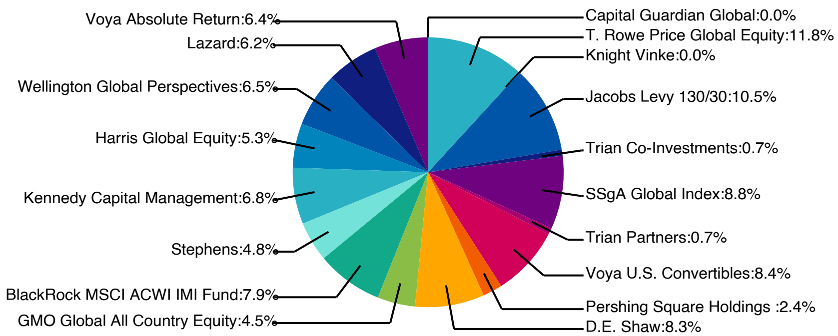
Total Equity



Total Equity Portfolio Overview

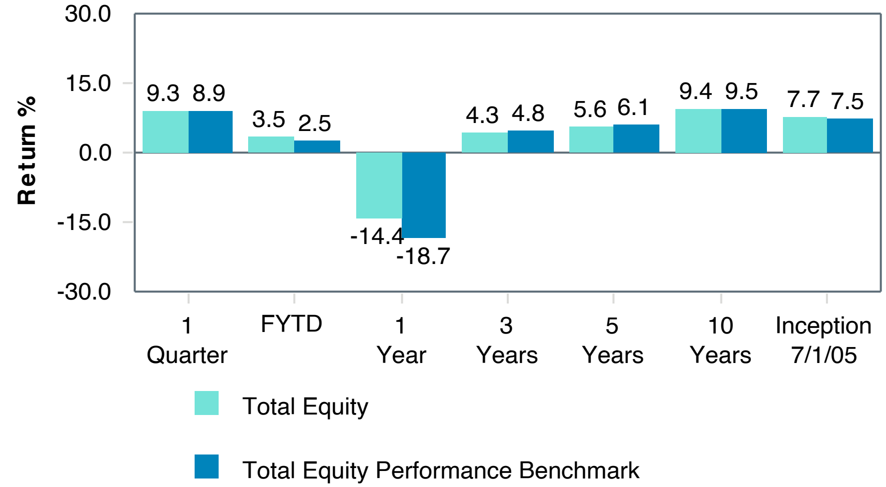
Current Allocation

December 31, 2022 : $10,480M



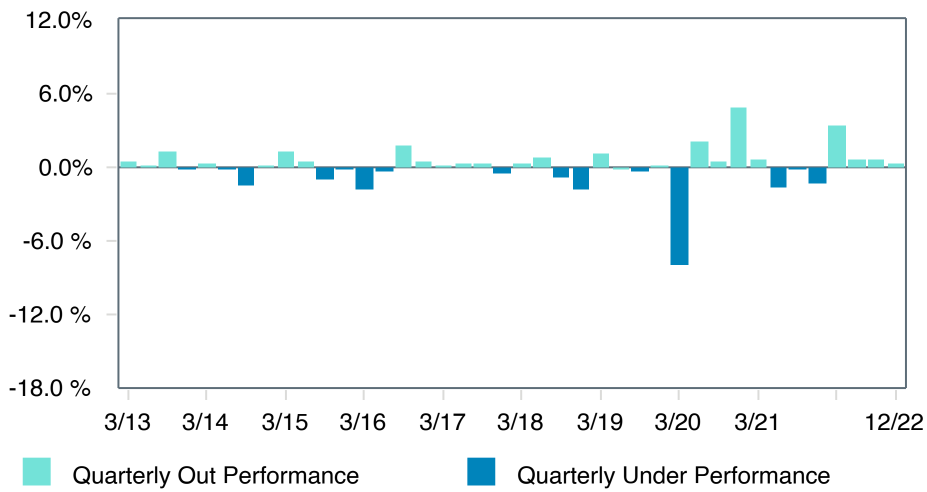
Return Summary

Return Summary



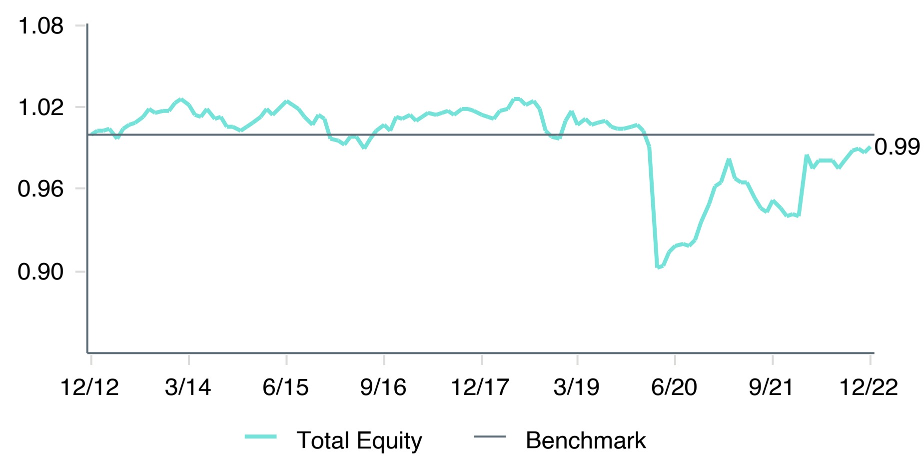
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - 10 Years

Ratio of Cumulative Wealth - 10 Years

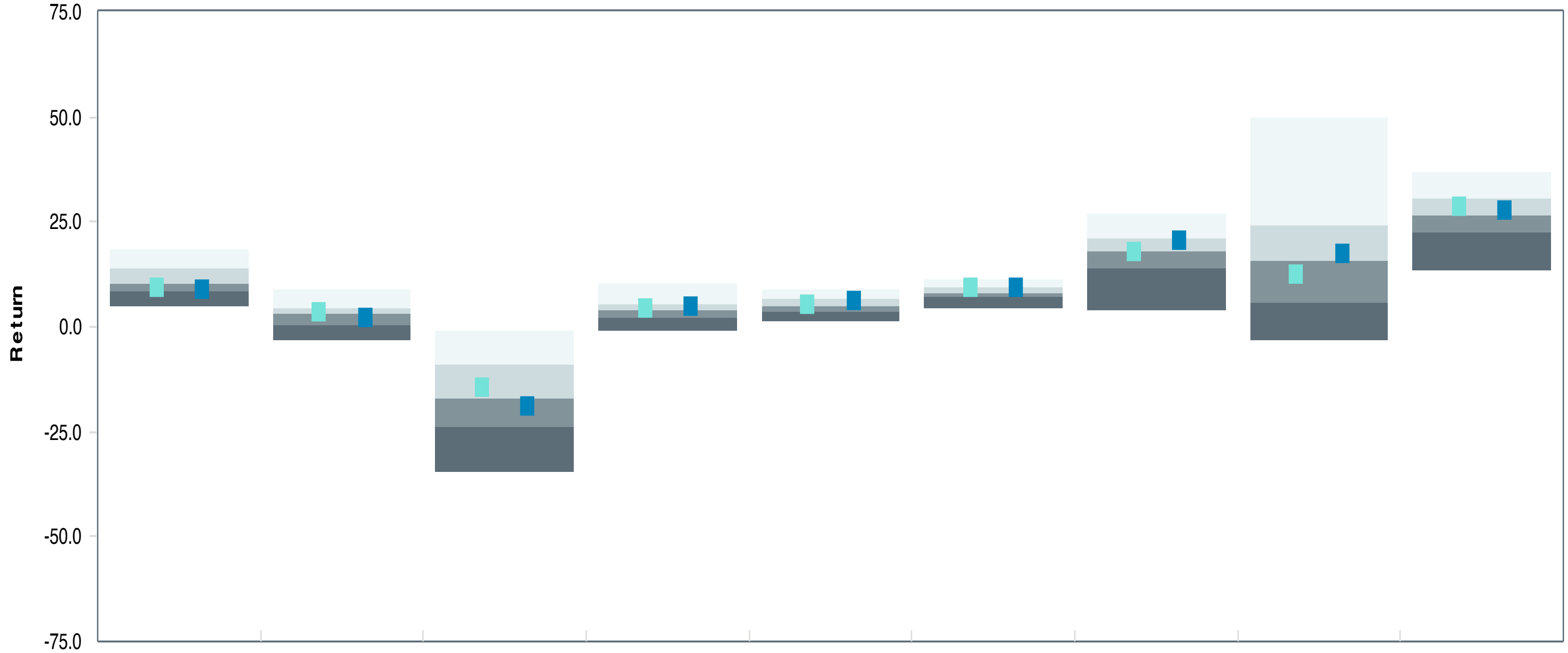


ɔn of the Total Equity asset class was July 1, 2015. Performance prior to July 2015 represents the weighted average of the U.S. Equity and
y asset class monthly returns. For historical performance of the U.S. Equity and Global Equity asset classes please see page 151 of this

Peer Group Analysis

As of December 31, 2022

IM Global Equity (SA+CF)



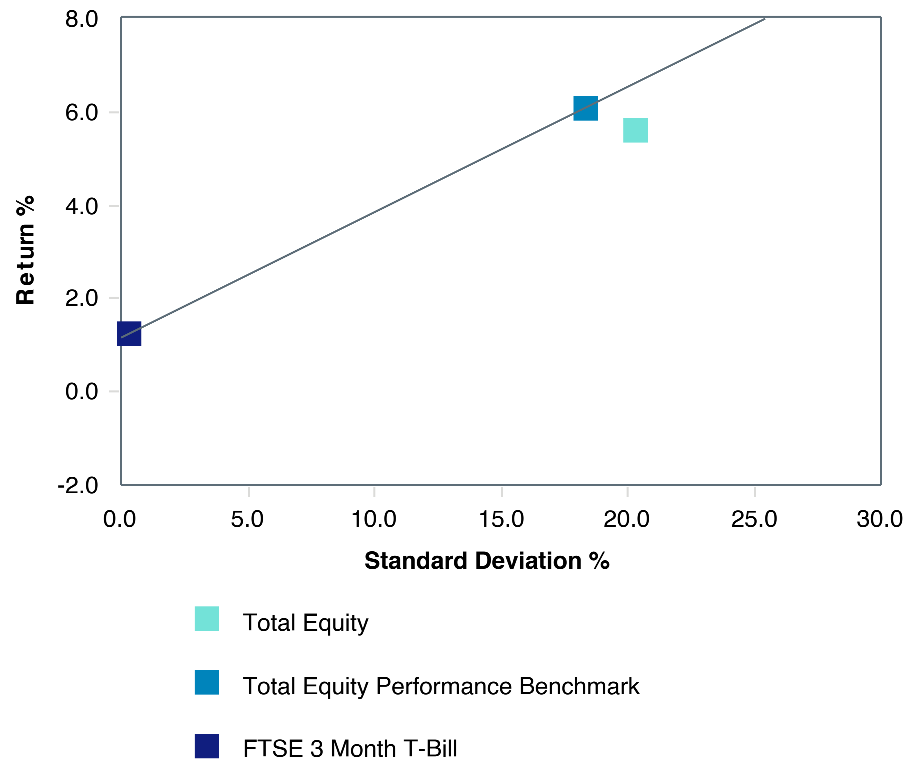
	1 Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Total Equity	**9.3 (67)**	**3.5 (43)**	**-14.4 (40)**	**4.3 (43)**	**5.6 (41)**	**9.4 (23)**	**17.9 (50)**	**12.4 (59)**	**29.0 (37)**
Total Equity Performance Benchmark	8.9 (70)	2.5 (55)	-18.7 (56)	4.8 (32)	6.1 (34)	9.5 (22)	20.5 (28)	17.6 (42)	27.8 (44)
5th Percentile	18.6	9.2	-1.1	10.4	9.1	11.2	26.9	49.7	36.9
1st Quartile	13.8	4.7	-9.1	5.4	6.7	9.3	21.0	24.1	30.6
Median	10.4	2.9	-17.1	3.9	5.1	8.1	17.9	15.5	26.7
3rd Quartile	8.4	0.5	-23.7	2.2	3.6	7.1	14.0	5.8	22.2
95th Percentile	4.7	-3.2	-34.7	-1.0	1.5	4.7	4.0	-3.2	13.6
Population	344	342	338	317	295	215	434	454	468

Parentheses contain percentile rankings.

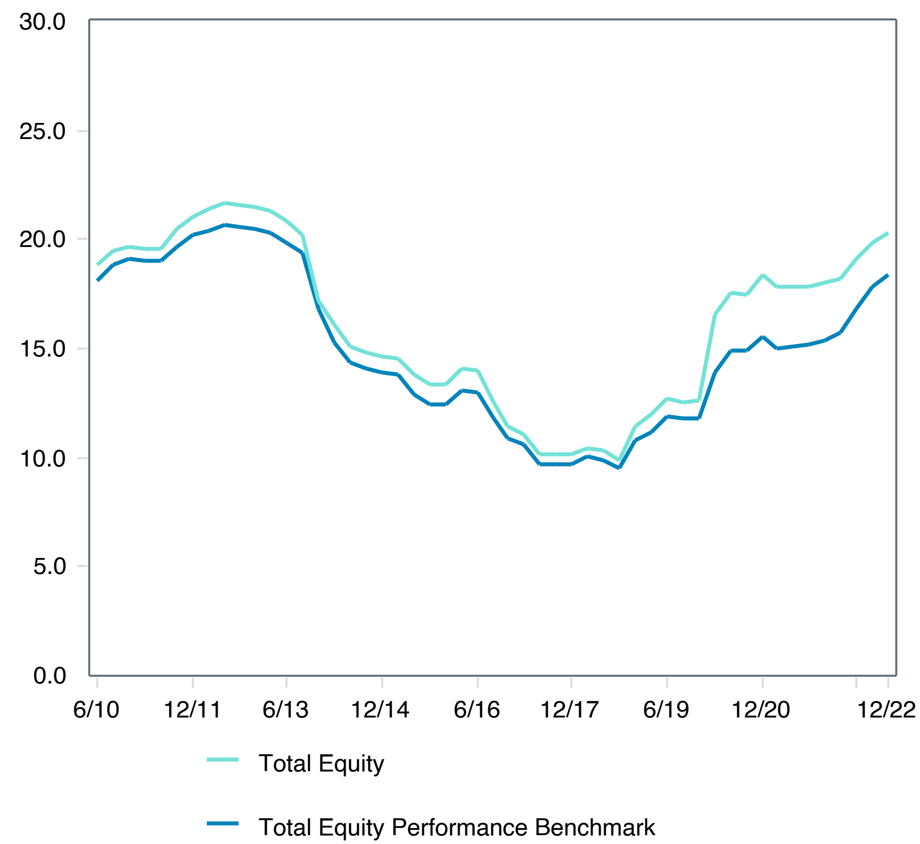
Total Equity Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

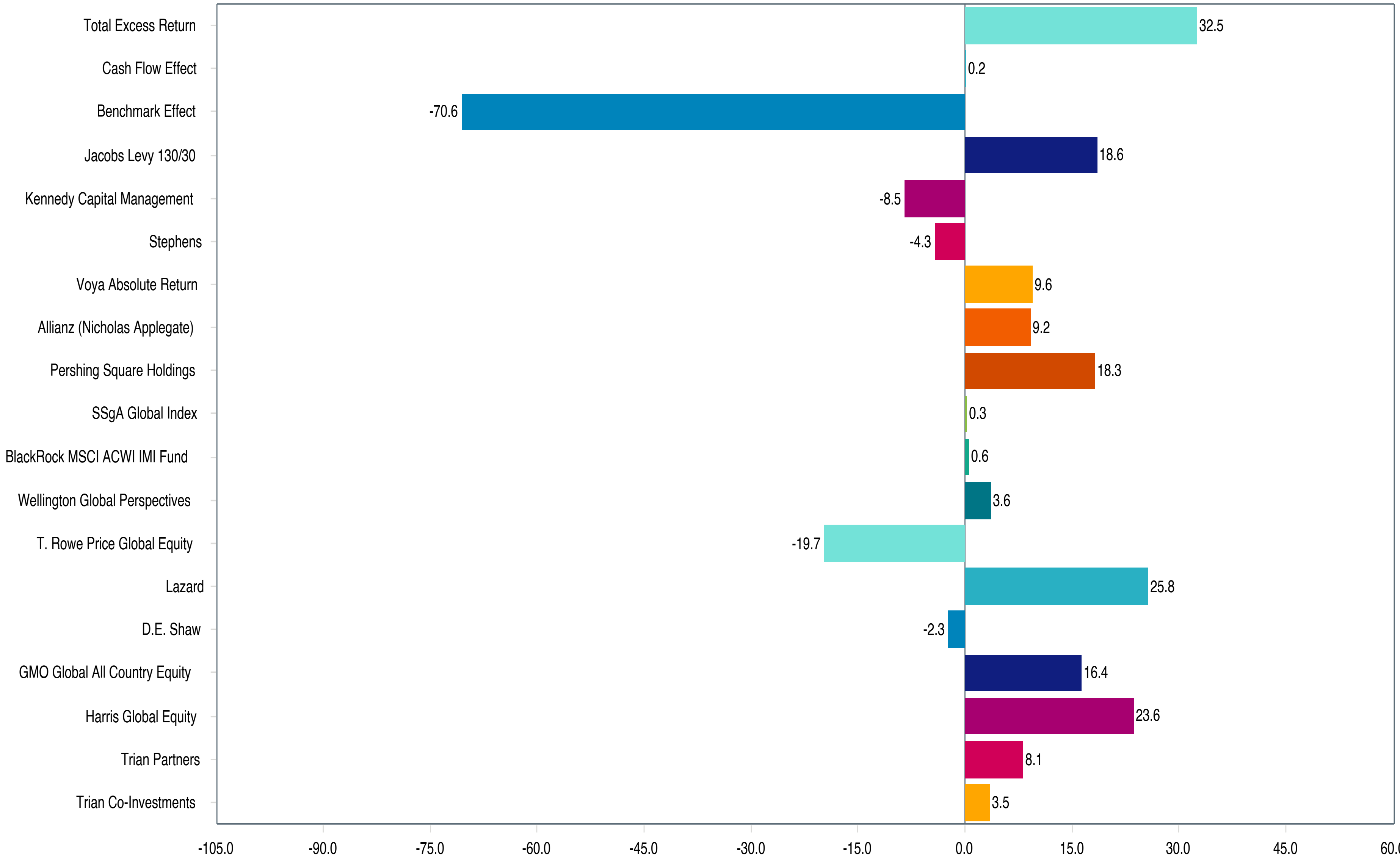
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Total Equity	**-0.03**	**4.72**	**-0.01**	**0.95**	**0.31**	**-0.63**	**1.08**	**5.61**	**20.29**	**0.98**
Total Equity Performance Benchmark	0.00	0.00	-	1.00	0.35	0.00	1.00	6.09	18.35	1.00
FTSE 3 Month T-Bill	-6.37	18.38	-0.35	0.01	-	1.26	0.00	1.25	0.31	-0.10

198

Asset Class Attribution

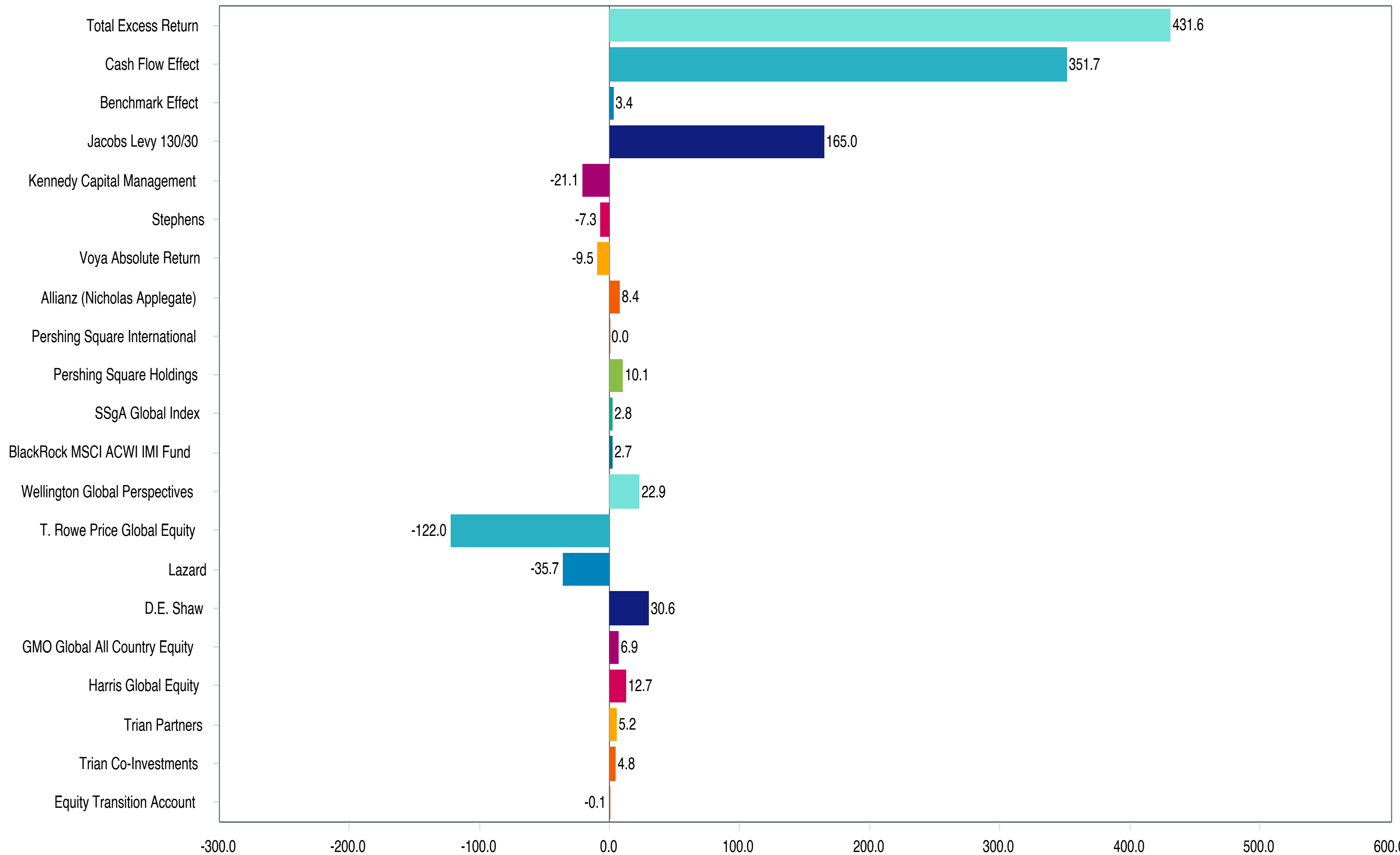
1 Quarter Ending December 31, 2022



*Large Cash Flow Effect due to the Allianz Secutiry Litigation Income received on 2/28/2022.

Asset Class Attribution

1 Year Ending December 31, 2022



*Large Cash Flow Effect due to the Allianz Secutiry Litigation Income received on 2/28/2022.

Jacobs Levy 130/30 Performance Summary

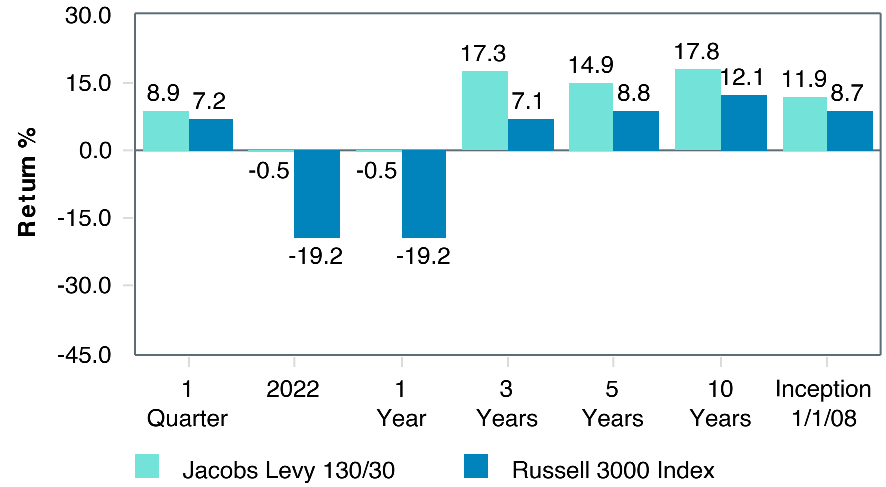
Account Information

Account Information

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

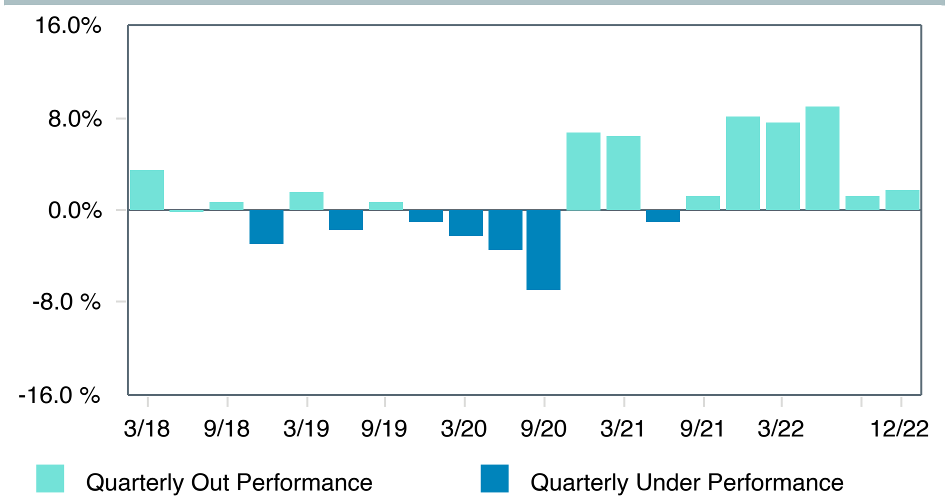
Return Summary

Return Summary



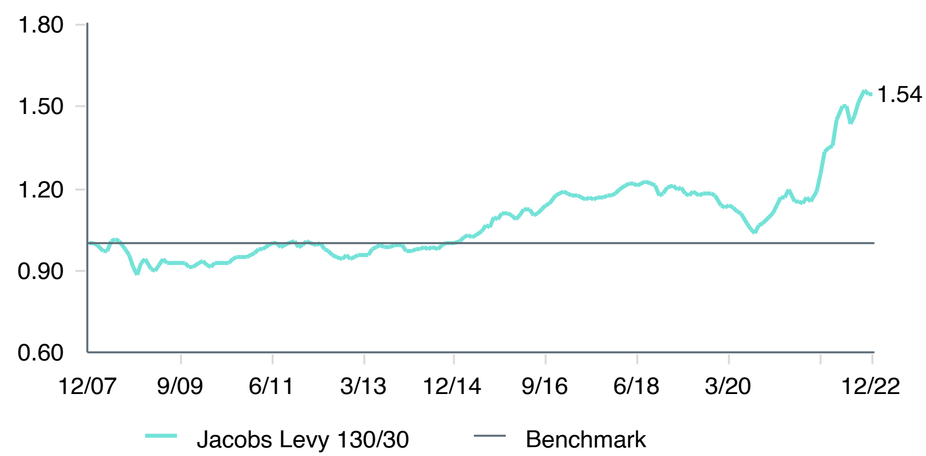
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

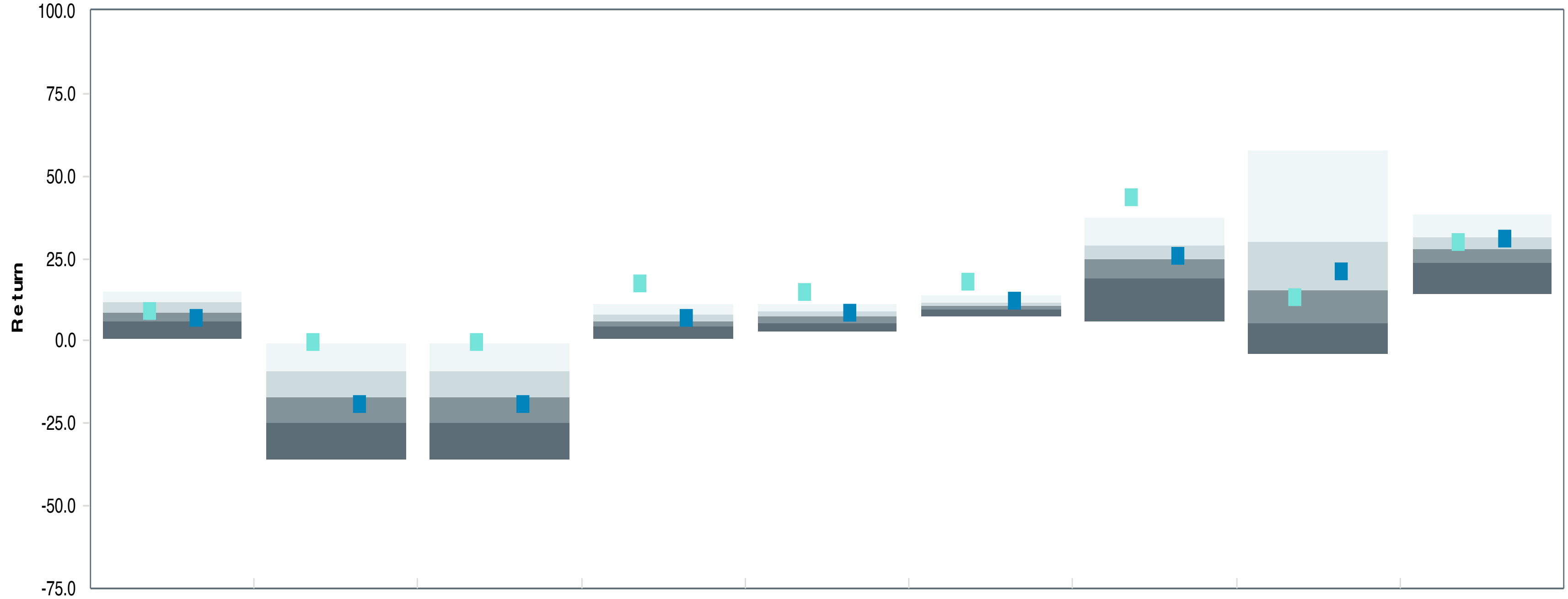
Ratio of Cumulative Wealth - Since Inception



Jacobs Levy 130/30

As of December 31, 2022

IM U.S. Equity (SA+CF)



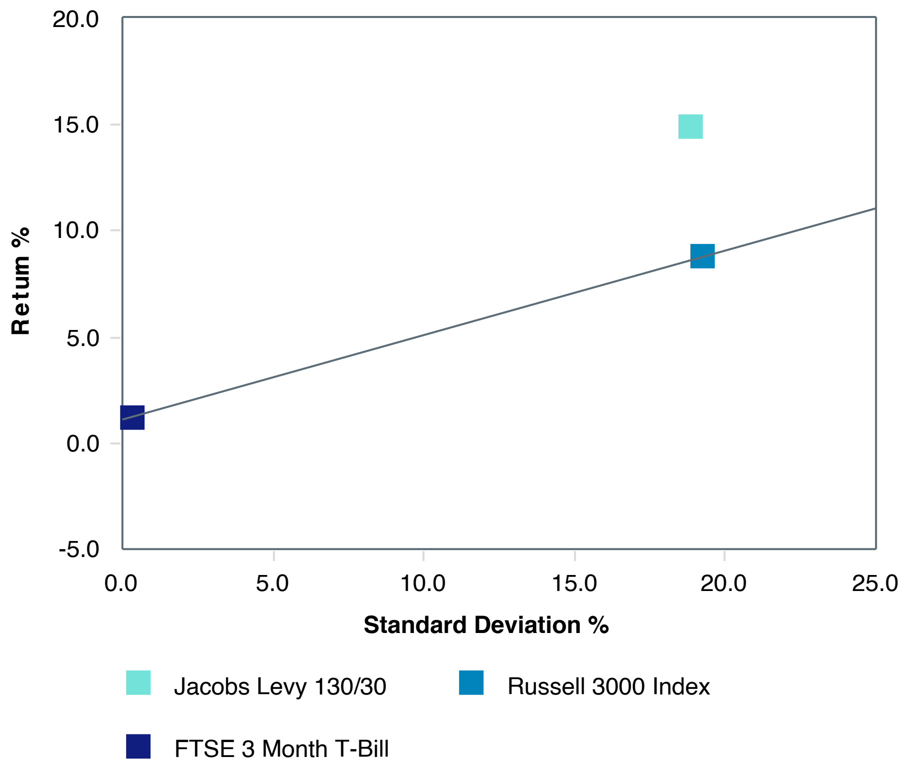
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Jacobs Levy 130/30	8.9 (48)	-0.5 (5)	-0.5 (5)	17.3 (1)	14.9 (1)	17.8 (1)	43.5 (2)	13.2 (56)	30.2 (36)
Russell 3000 Index	7.2 (66)	-19.2 (61)	-19.2 (61)	7.1 (38)	8.8 (28)	12.1 (21)	25.7 (46)	20.9 (37)	31.0 (31)
5th Percentile	14.7	-0.9	-0.9	11.4	11.5	13.6	37.3	57.9	38.5
1st Quartile	11.7	-9.2	-9.2	8.0	9.0	12.0	28.9	29.8	31.8
Median	8.5	-17.2	-17.2	6.1	7.4	10.8	25.0	15.5	28.0
3rd Quartile	5.8	-24.8	-24.8	4.4	5.5	9.5	19.1	5.2	23.6
95th Percentile	0.6	-36.1	-36.1	1.0	2.9	7.5	6.0	-3.9	14.6
Population	1,475	1,459	1,459	1,400	1,323	1,060	1,926	2,043	2,142

Parentheses contain percentile rankings.

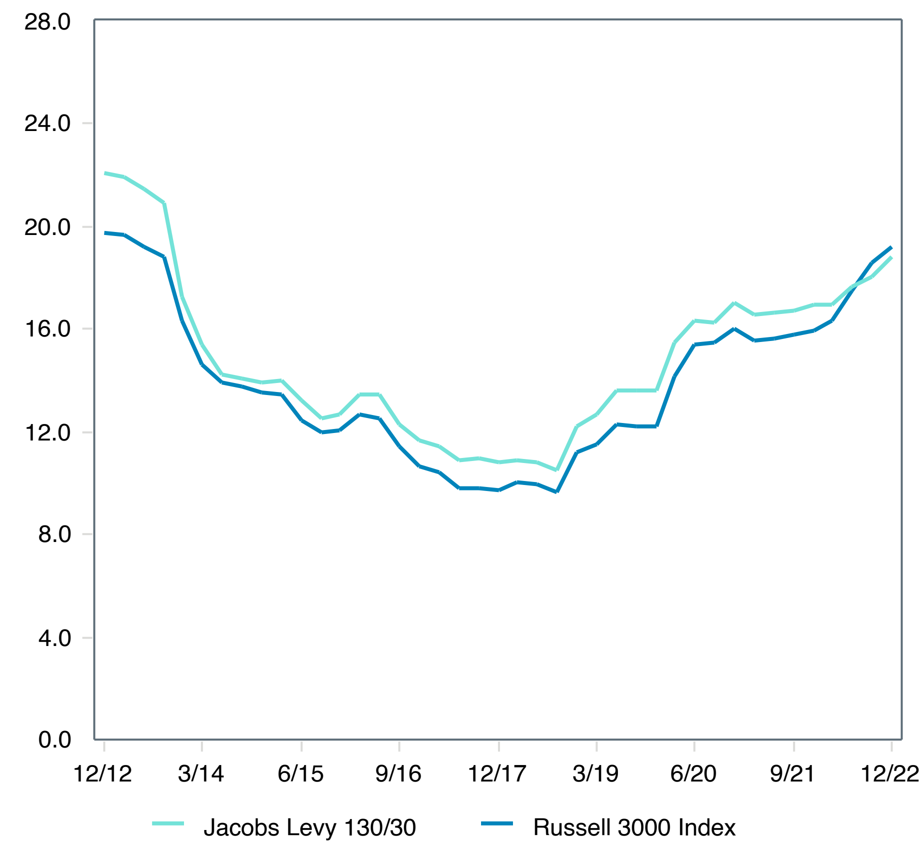
Jacobs Levy 130/30 Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

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	5.45	7.47	0.73	0.85	0.77	6.62	0.90	14.92	18.83	0.92
Russell 3000 Index	0.00	0.00	-	1.00	0.47	0.00	1.00	8.79	19.22	1.00
FTSE 3 Month T-Bill	-9.04	19.25	-0.47	0.01	-	1.26	0.00	1.25	0.31	-0.11

Kennedy Capital Management Performance Summary

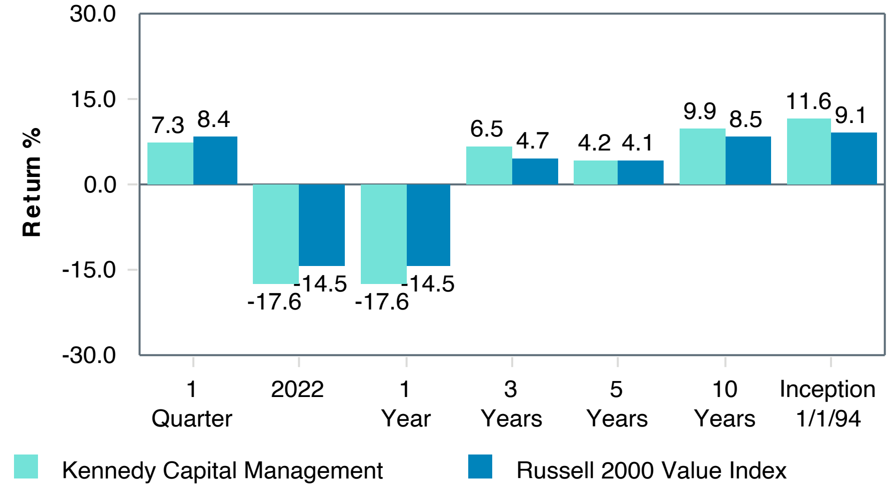
Account Information

Account Information

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

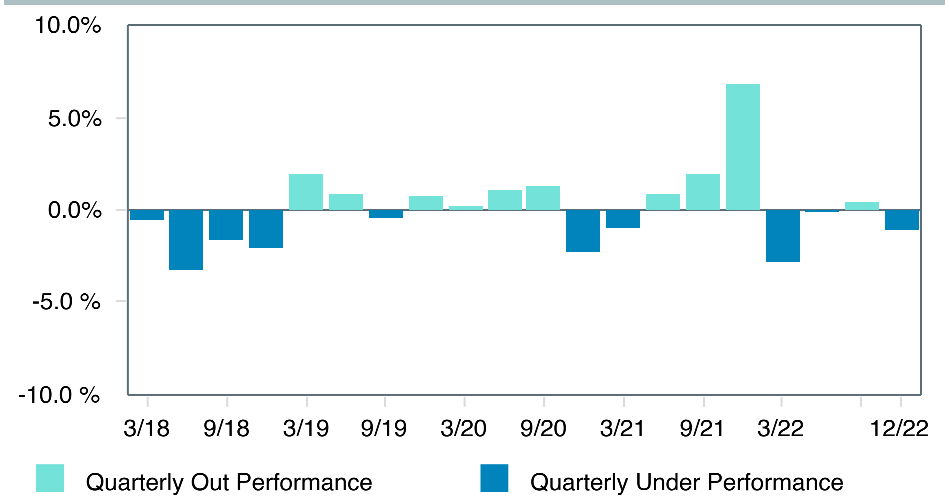
Return Summary

Return Summary



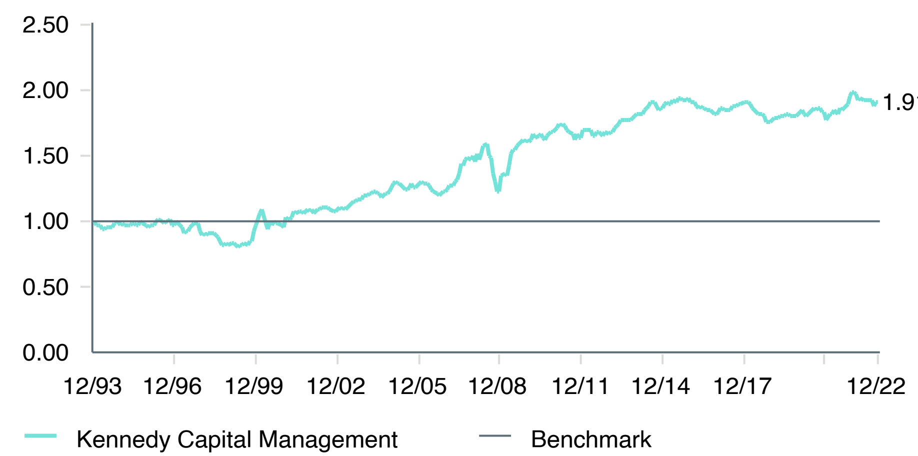
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

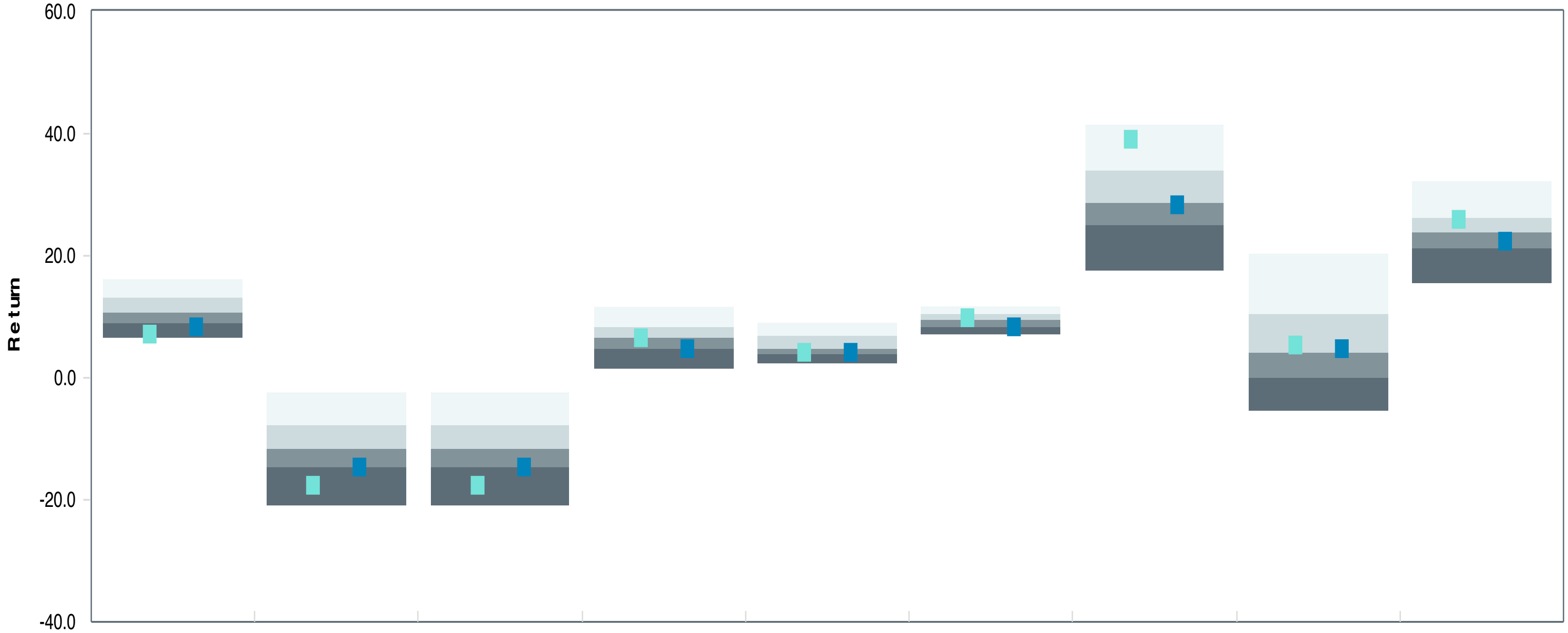
Ratio of Cumulative Wealth - Since Inception



Kennedy Capital Management

As of December 31, 2022

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



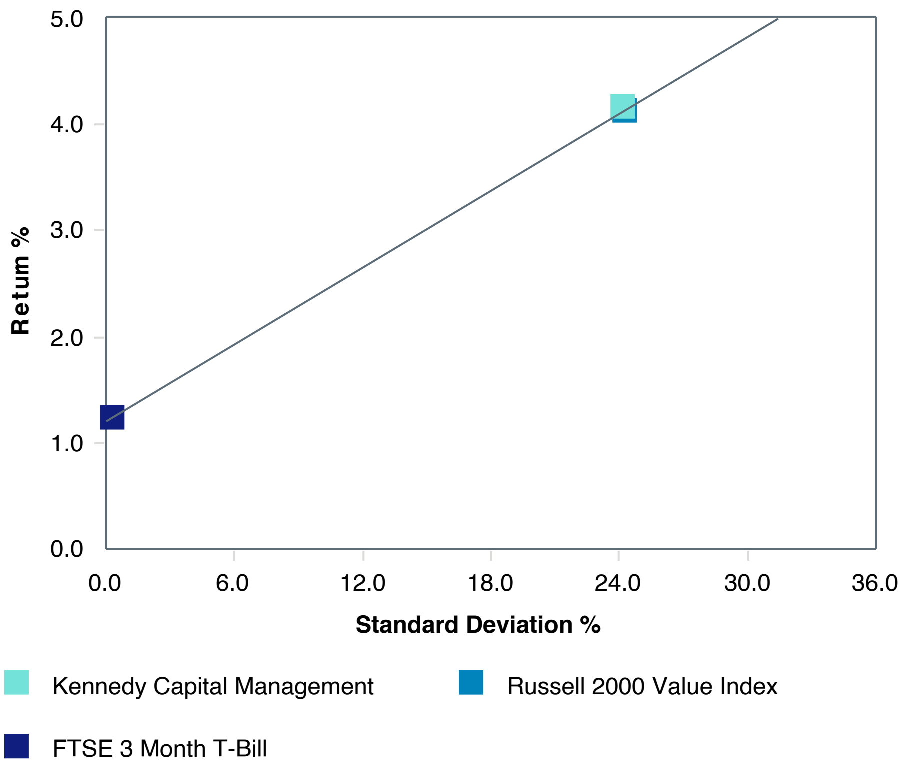
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Kennedy Capital Management	7.3 (91)	-17.6 (88)	-17.6 (88)	6.5 (50)	4.2 (69)	9.9 (38)	39.2 (11)	5.4 (44)	25.9 (30)
Russell 2000 Value Index	8.4 (81)	-14.5 (74)	-14.5 (74)	4.7 (76)	4.1 (70)	8.5 (75)	28.3 (53)	4.6 (49)	22.4 (65)
5th Percentile	16.0	-2.4	-2.4	11.7	8.9	11.5	41.4	20.4	32.3
1st Quartile	13.0	-7.7	-7.7	8.4	6.7	10.4	34.0	10.5	26.3
Median	10.9	-11.7	-11.7	6.4	4.7	9.4	28.6	4.1	23.9
3rd Quartile	9.1	-14.6	-14.6	4.7	3.9	8.5	24.9	0.0	21.1
95th Percentile	6.7	-20.9	-20.9	1.4	2.5	7.1	17.7	-5.3	15.6
Population	139	139	139	132	130	107	173	181	187

Parentheses contain percentile rankings.

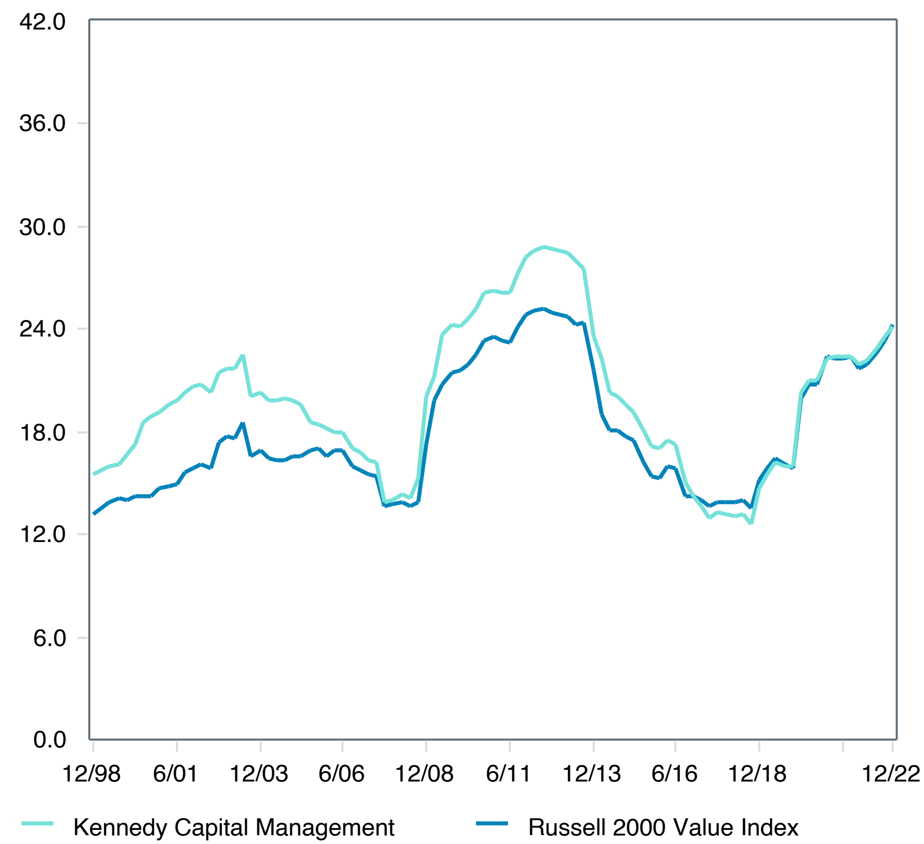
Kennedy Capital Management Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Kennedy Capital Management	0.06	3.96	0.01	0.97	0.24	0.17	0.98	4.17	24.15	0.99
Russell 2000 Value Index	0.00	0.00	-	1.00	0.24	0.00	1.00	4.13	24.22	1.00
FTSE 3 Month T-Bill	-5.79	24.27	-0.24	0.03	-	1.26	0.00	1.25	0.31	-0.17

AON

Stephens Performance Summary

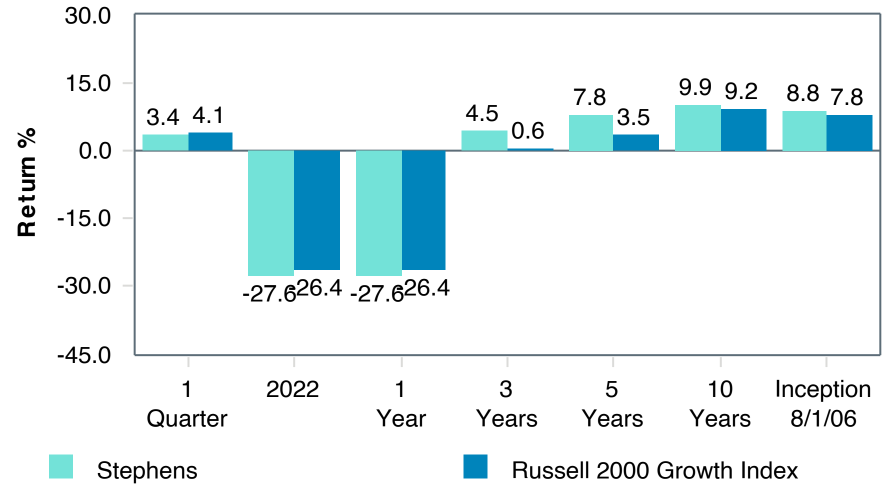
Account Information

Account Information

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

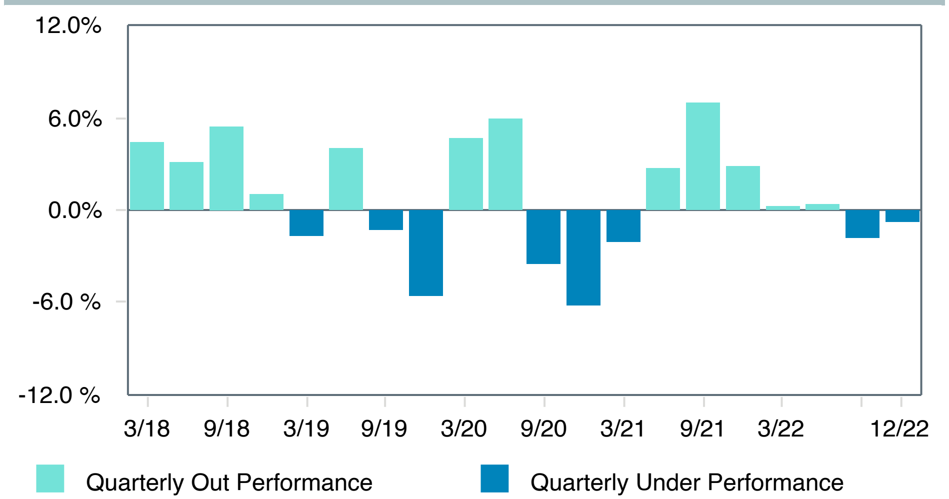
Return Summary

Return Summary



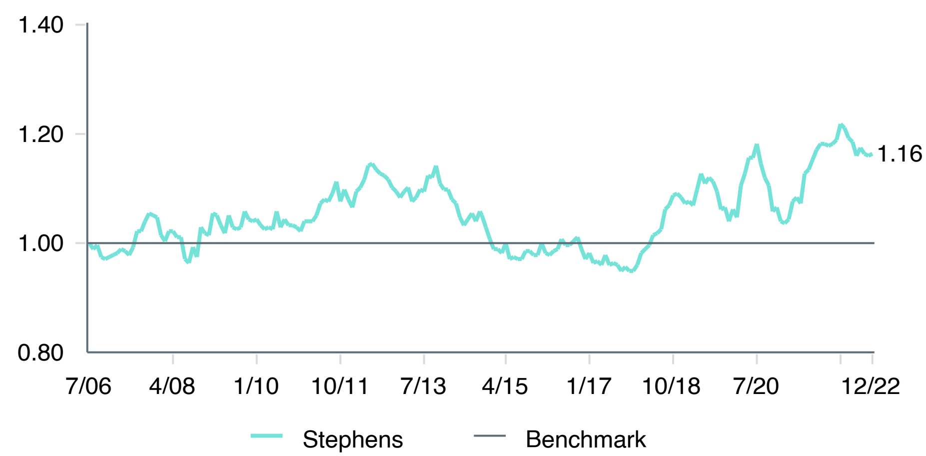
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

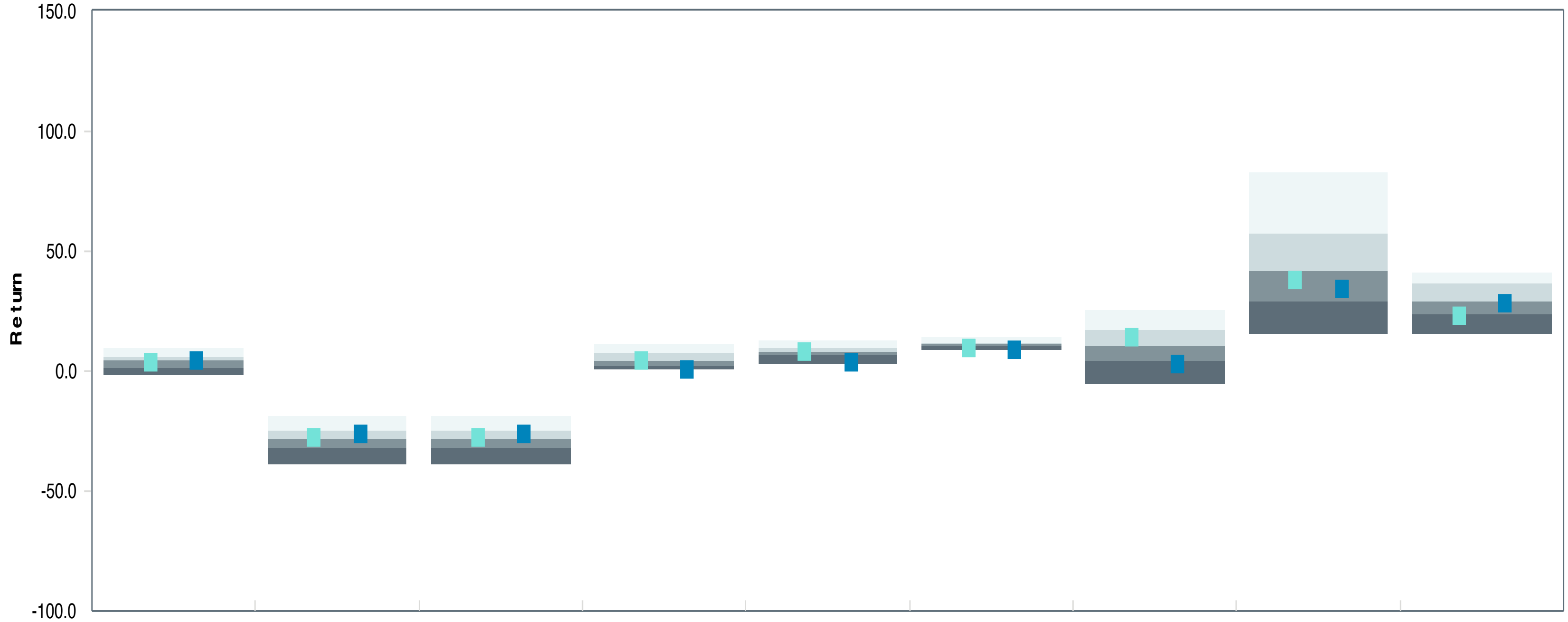


207

Stephens

As of December 31, 2022

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



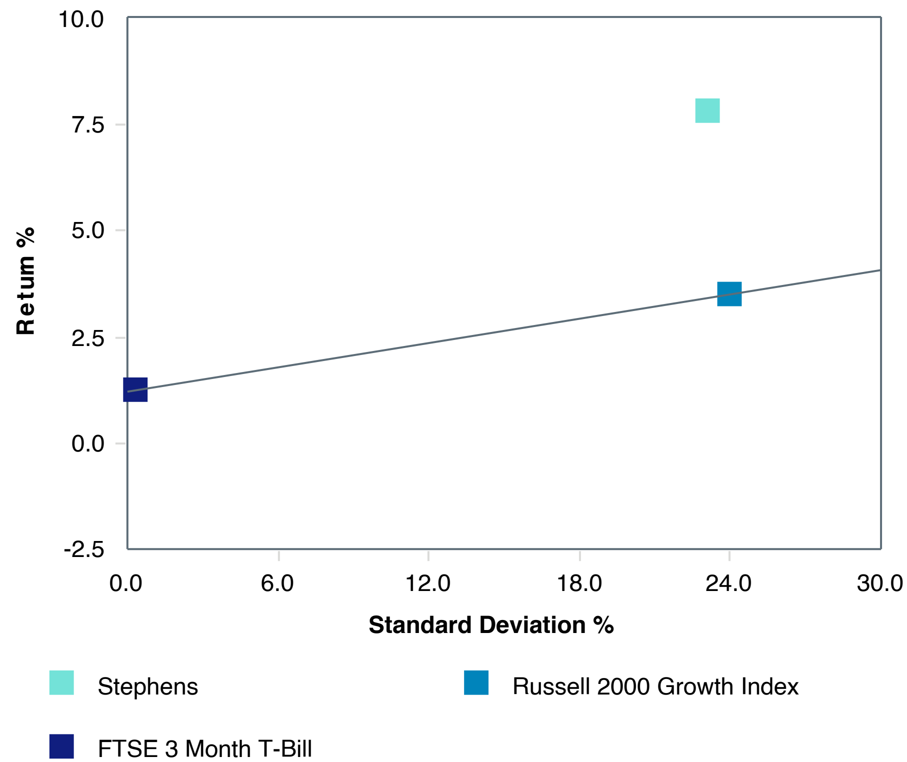
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Stephens	3.4 (60)	-27.6 (42)	-27.6 (42)	4.5 (54)	7.8 (52)	9.9 (92)	14.3 (43)	37.8 (61)	23.2 (80)
Russell 2000 Growth Index	4.1 (52)	-26.4 (32)	-26.4 (32)	0.6 (96)	3.5 (93)	9.2 (95)	2.8 (83)	34.6 (65)	28.5 (51)
5th Percentile	10.0	-18.4	-18.4	11.5	12.7	14.1	25.4	83.0	41.2
1st Quartile	6.2	-24.6	-24.6	7.1	9.7	12.1	17.4	57.6	36.2
Median	4.3	-28.6	-28.6	4.7	7.9	11.5	10.8	41.9	28.9
3rd Quartile	1.7	-31.8	-31.8	2.6	6.6	10.6	4.7	29.4	24.1
95th Percentile	-1.5	-38.9	-38.9	0.7	3.1	8.9	-5.5	16.0	15.7
Population	97	96	96	92	89	74	127	133	140

Parentheses contain percentile rankings.

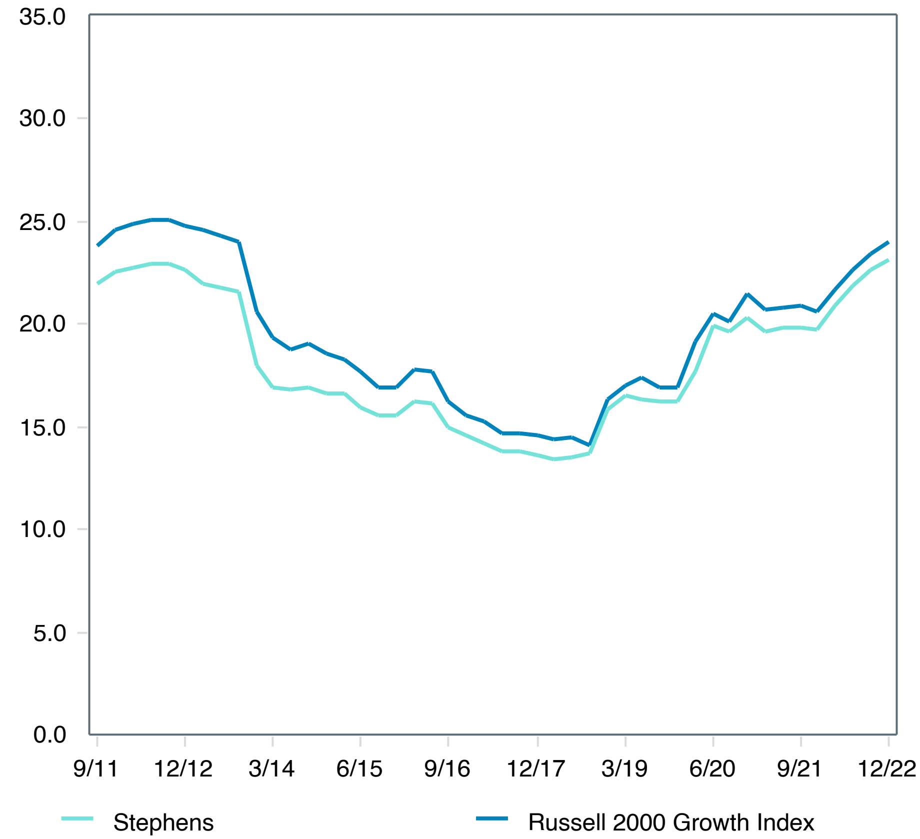
Stephens Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation 5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Stephens	3.89	6.63	0.59	0.92	0.39	4.44	0.93	7.84	23.11	0.96
Russell 2000 Growth Index	0.00	0.00	-	1.00	0.21	0.00	1.00	3.51	23.98	1.00
FTSE 3 Month T-Bill	-5.08	24.01	-0.21	0.01	-	1.25	0.00	1.25	0.31	-0.08

Voya Absolute Return Performance Summary

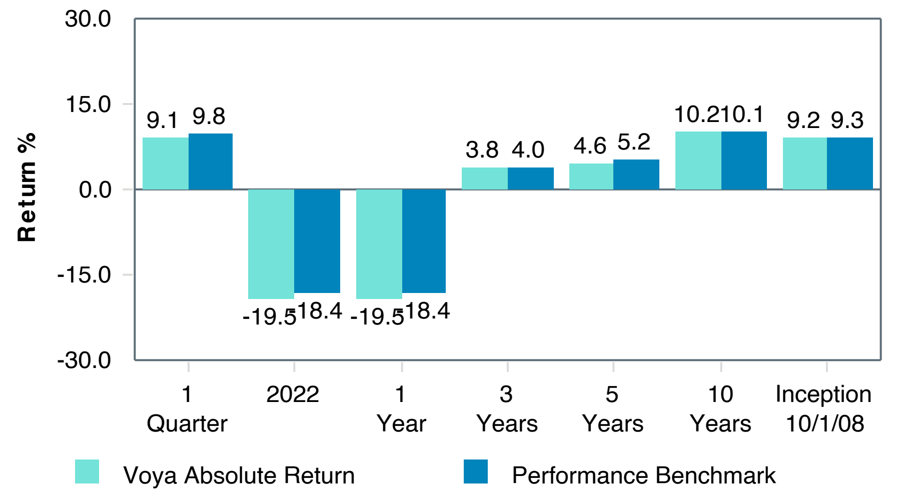
Account Information

Account Information

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

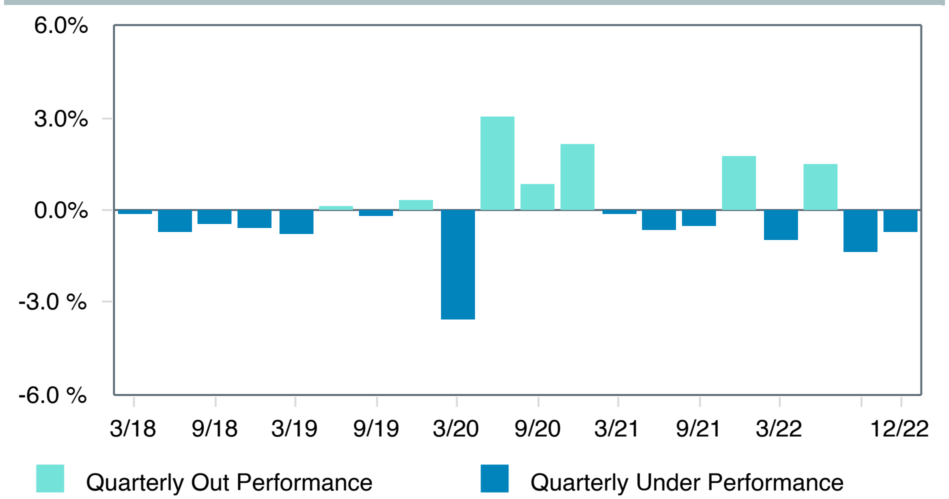
Return Summary

Return Summary



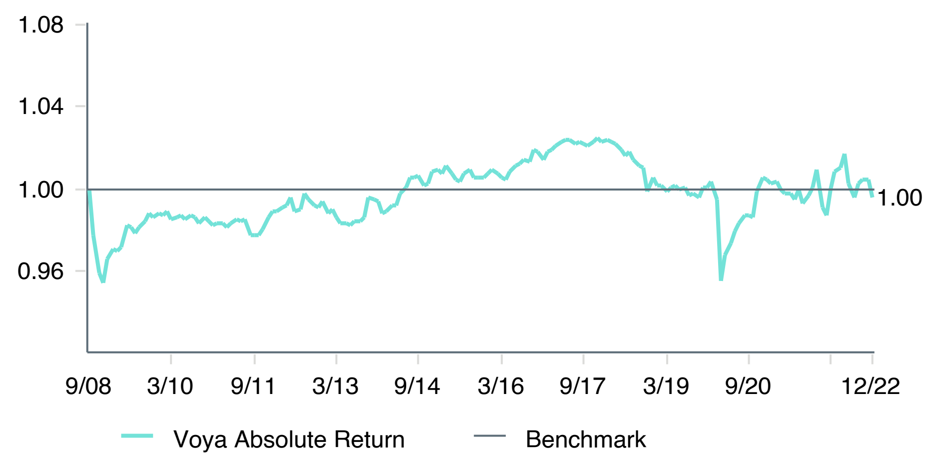
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

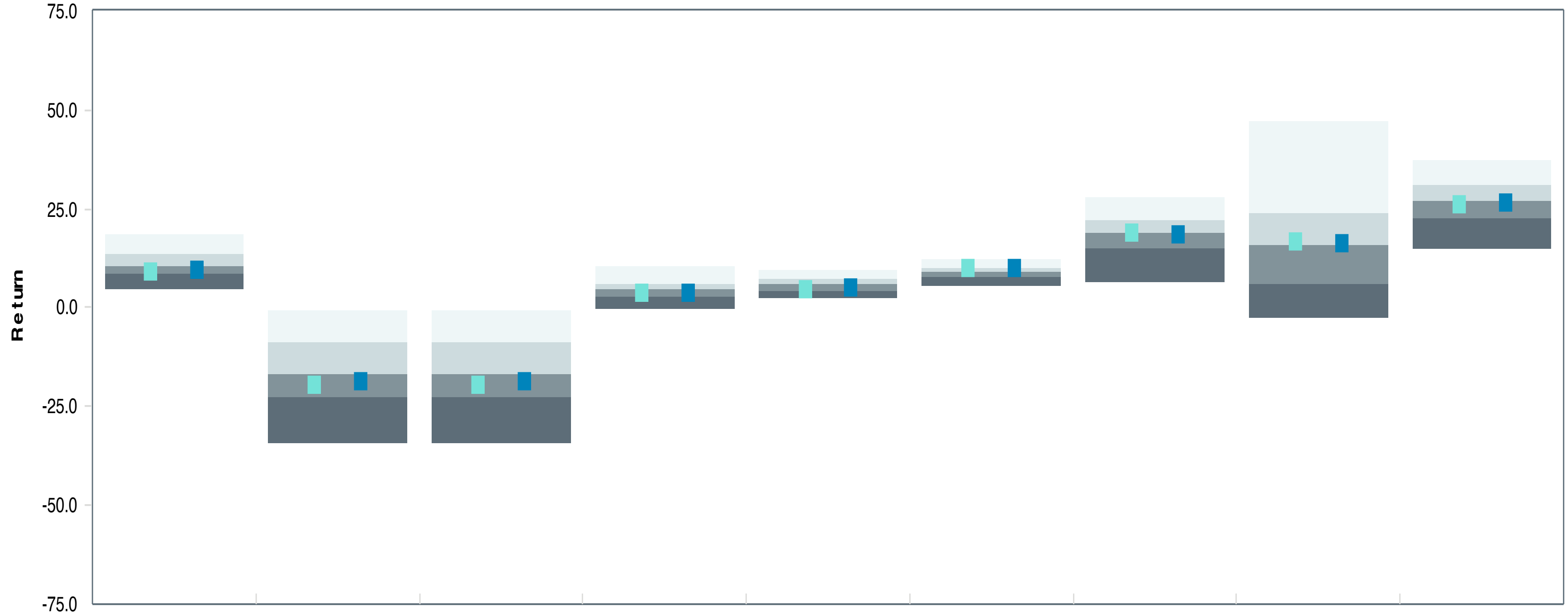
Ratio of Cumulative Wealth - Since Inception



Voya Absolute Return

As of December 31, 2022

IM Global Equity (SA+CF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Voya Absolute Return	9.1 (72)	-19.5 (64)	-19.5 (64)	3.8 (64)	4.6 (71)	10.2 (22)	19.0 (51)	16.8 (46)	26.0 (59)
Performance Benchmark	9.8 (65)	-18.4 (58)	-18.4 (58)	4.0 (63)	5.2 (62)	10.1 (22)	18.5 (55)	16.3 (48)	26.6 (54)
5th Percentile	18.5	-0.8	-0.8	10.6	9.9	12.2	27.8	47.5	37.5
1st Quartile	13.9	-8.7	-8.7	6.1	7.4	9.9	22.3	24.1	31.0
Median	10.6	-16.7	-16.7	4.8	5.9	9.0	19.1	15.7	27.0
3rd Quartile	8.6	-22.6	-22.6	3.1	4.4	7.9	15.1	5.9	22.7
95th Percentile	4.9	-34.1	-34.1	-0.1	2.4	5.5	6.4	-2.5	14.8
Population	376	372	372	352	328	246	493	538	565

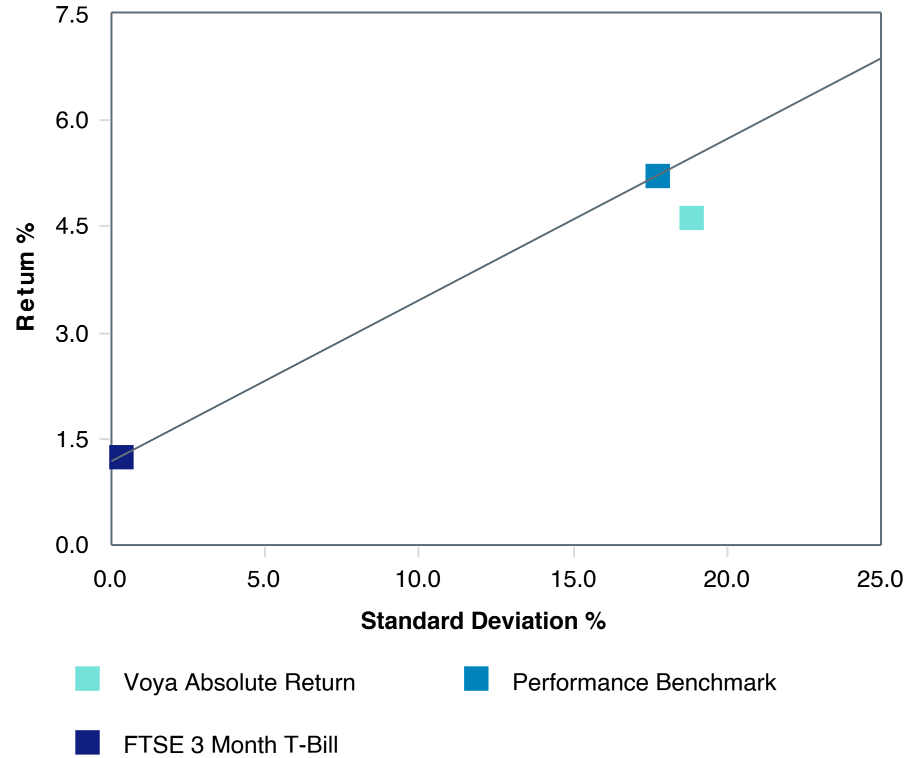
Parentheses contain percentile rankings.

AON

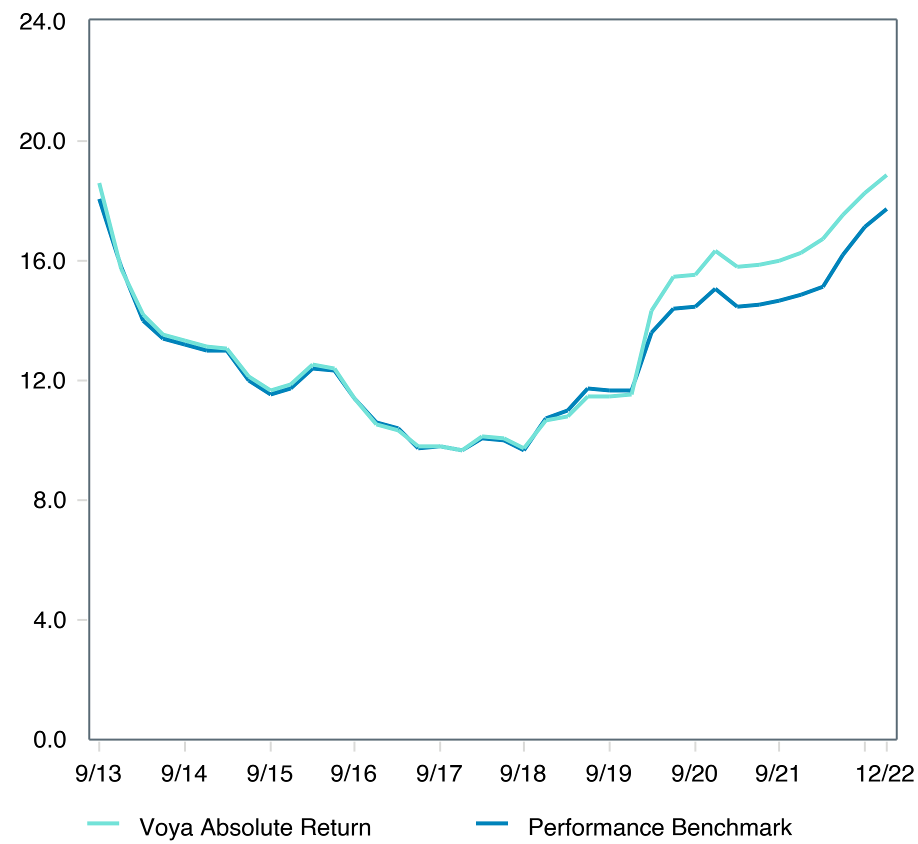
Voya Absolute Return Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Voya Absolute Return	-0.35	2.62	-0.13	0.98	0.27	-0.72	1.06	4.63	18.87	0.99
Performance Benchmark	0.00	0.00	-	1.00	0.31	0.00	1.00	5.23	17.72	1.00
FTSE 3 Month T-Bill	-5.43	17.75	-0.31	0.01	-	1.26	0.00	1.25	0.31	-0.09

Voya U.S. Convertibles Performance Summary

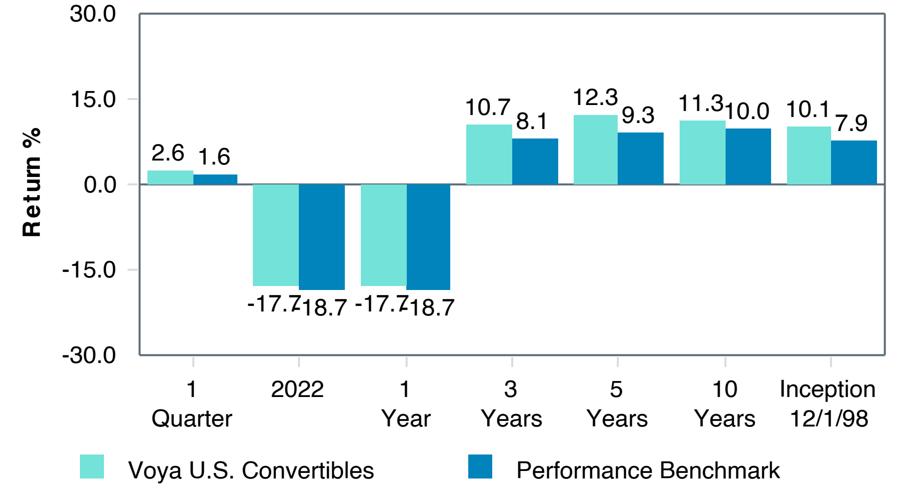
Account Information

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)

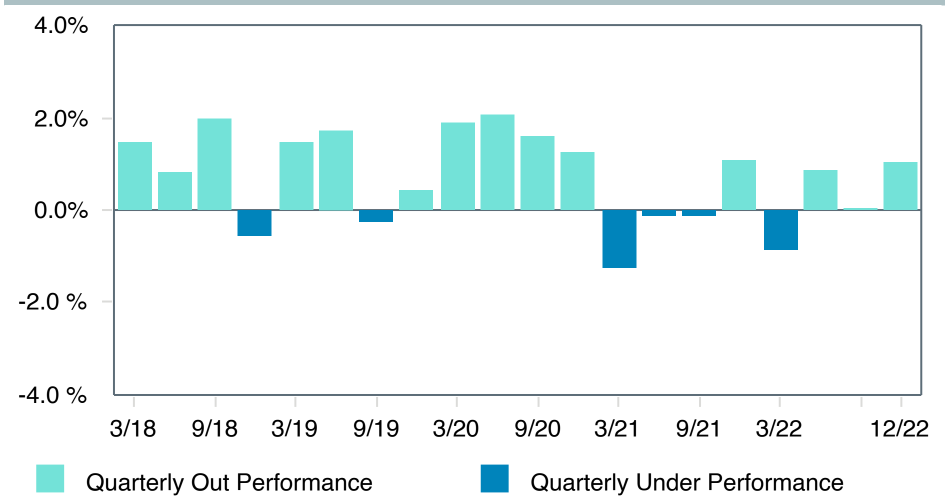
Return Summary

Return Summary



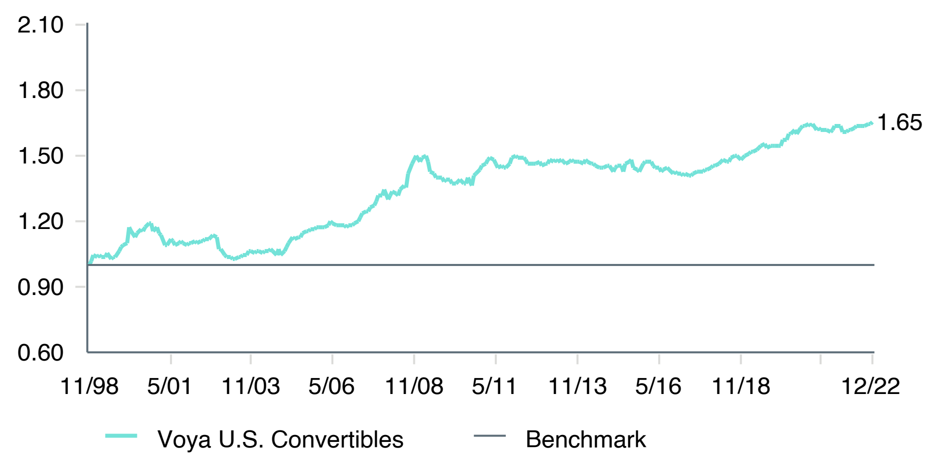
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

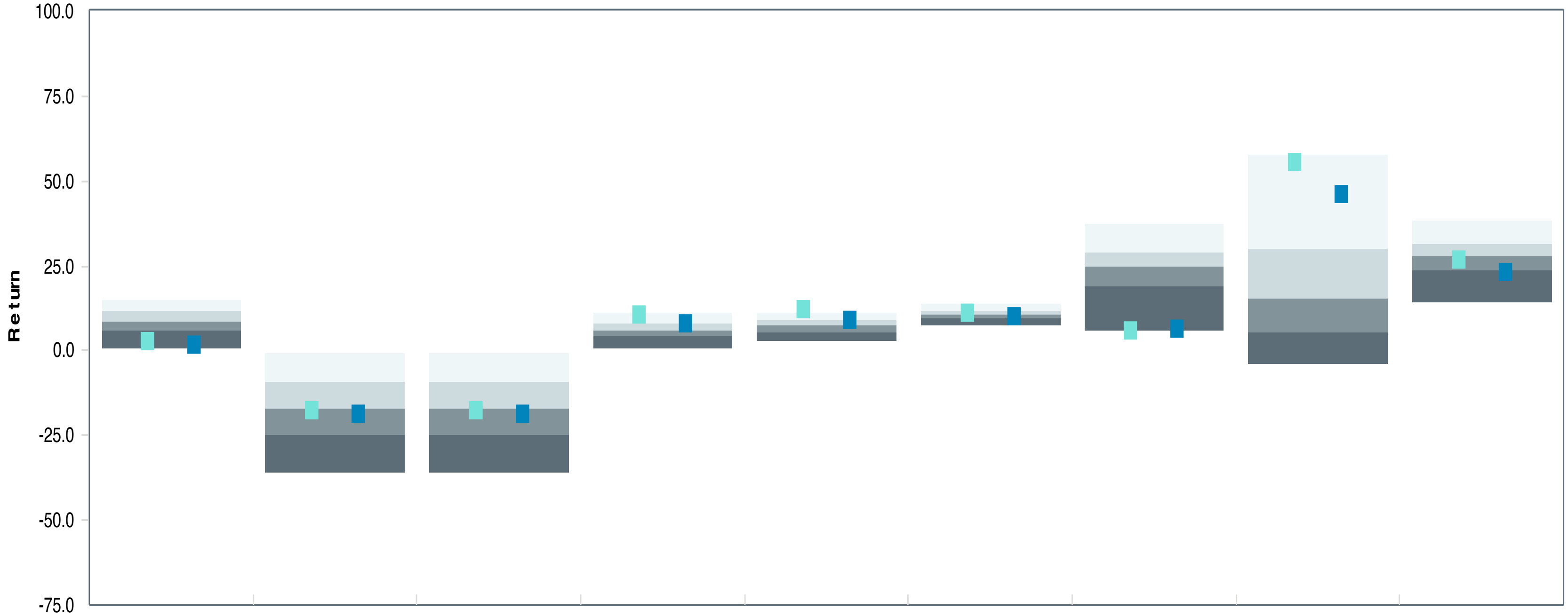
Ratio of Cumulative Wealth - Since Inception



Voya U.S. Convertibles

As of December 31, 2022

IM U.S. Equity (SA+CF)



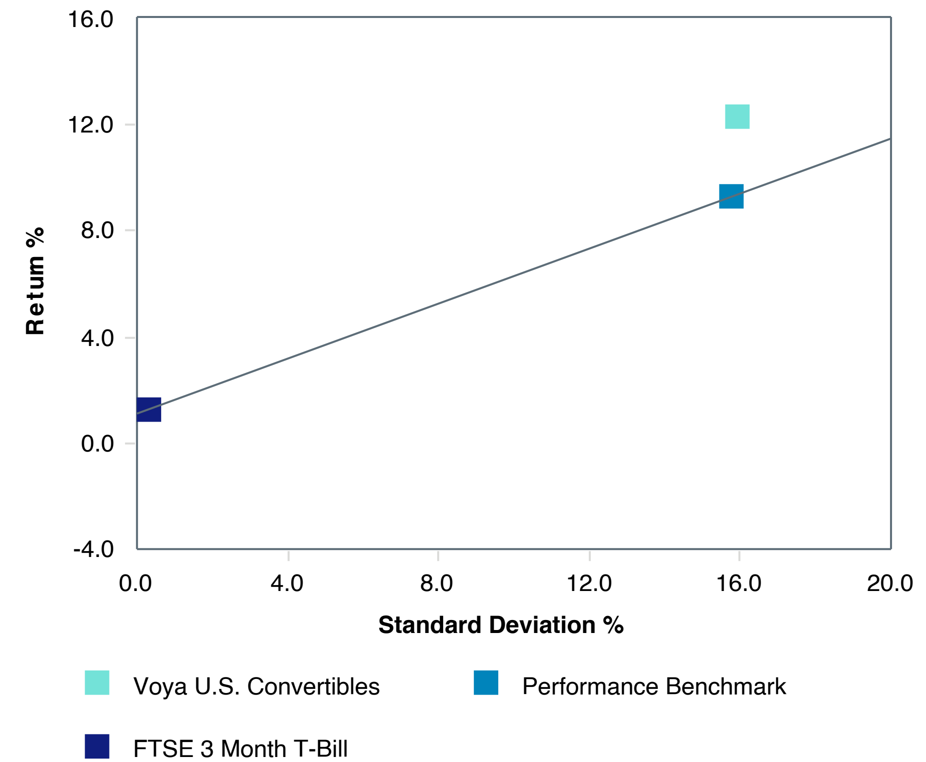
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Voya U.S. Convertibles	2.6 (89)	-17.7 (53)	-17.7 (53)	10.7 (7)	12.3 (4)	11.3 (38)	5.9 (96)	55.7 (6)	27.0 (57)
Performance Benchmark	1.6 (93)	-18.7 (58)	-18.7 (58)	8.1 (24)	9.3 (22)	10.0 (68)	6.3 (95)	46.2 (10)	23.1 (78)
5th Percentile	14.7	-0.9	-0.9	11.4	11.5	13.6	37.3	57.9	38.5
1st Quartile	11.7	-9.2	-9.2	8.0	9.0	12.0	28.9	29.8	31.8
Median	8.5	-17.2	-17.2	6.1	7.4	10.8	25.0	15.5	28.0
3rd Quartile	5.8	-24.8	-24.8	4.4	5.5	9.5	19.1	5.2	23.6
95th Percentile	0.6	-36.1	-36.1	1.0	2.9	7.5	6.0	-3.9	14.6
Population	1,475	1,459	1,459	1,400	1,323	1,060	1,926	2,043	2,142

Parentheses contain percentile rankings.

Voya U.S. Convertibles Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation

5 Years Historical Statistics

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	2.78	2.23	1.25	0.98	0.73	2.80	1.00	12.31	15.94	0.99
Performance Benchmark	0.00	0.00	-	1.00	0.56	0.00	1.00	9.28	15.76	1.00
FTSE 3 Month T-Bill	-8.89	15.80	-0.56	0.01	-	1.27	0.00	1.25	0.31	-0.12

Pershing Square Holdings Performance Summary

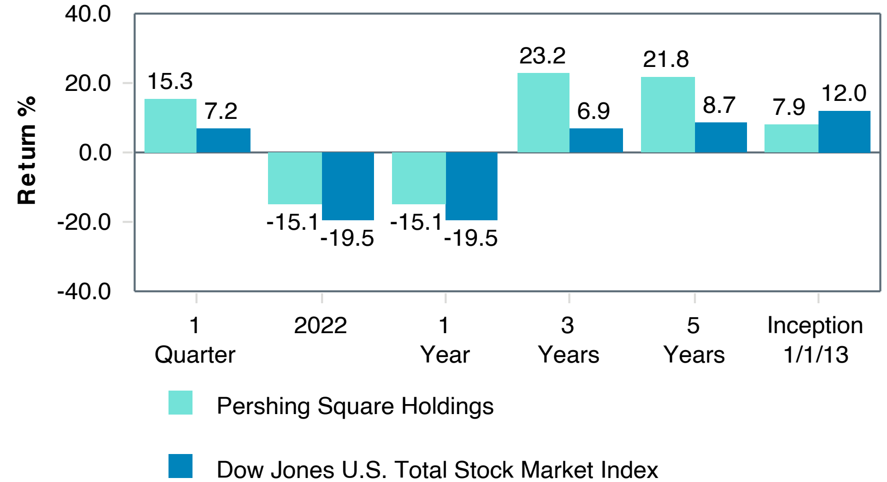
Account Information

Account Information

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

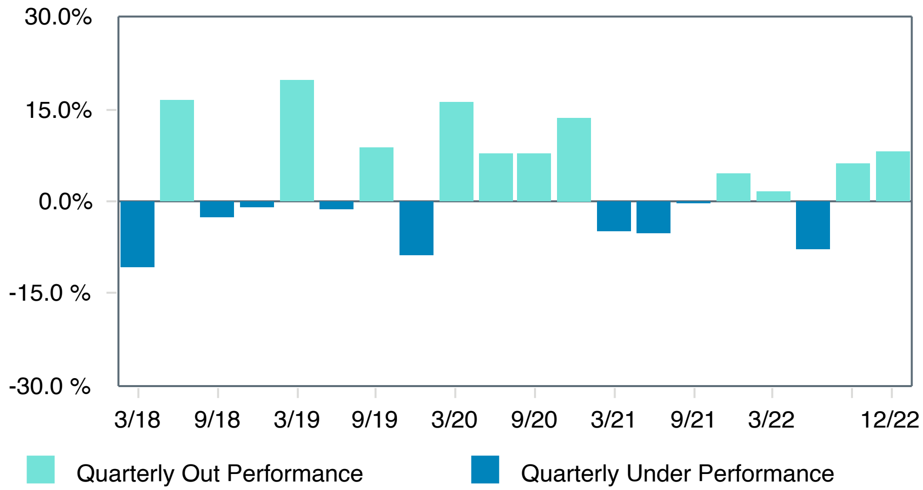
Return Summary

Return Summary



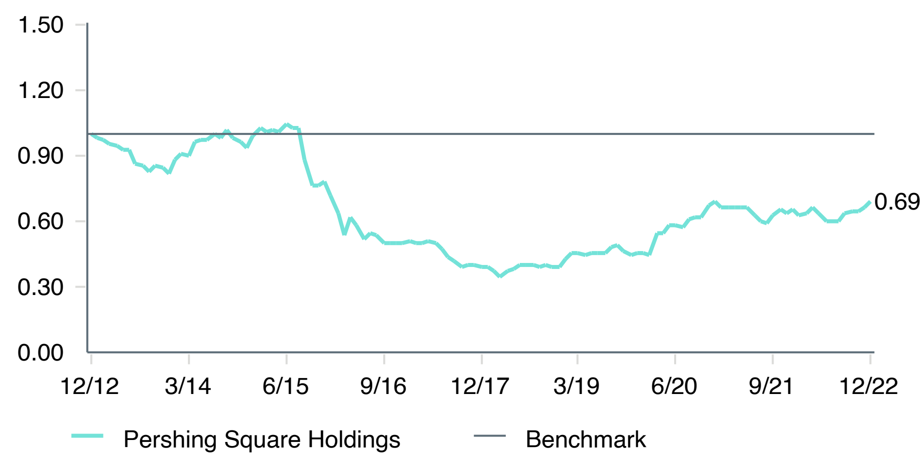
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

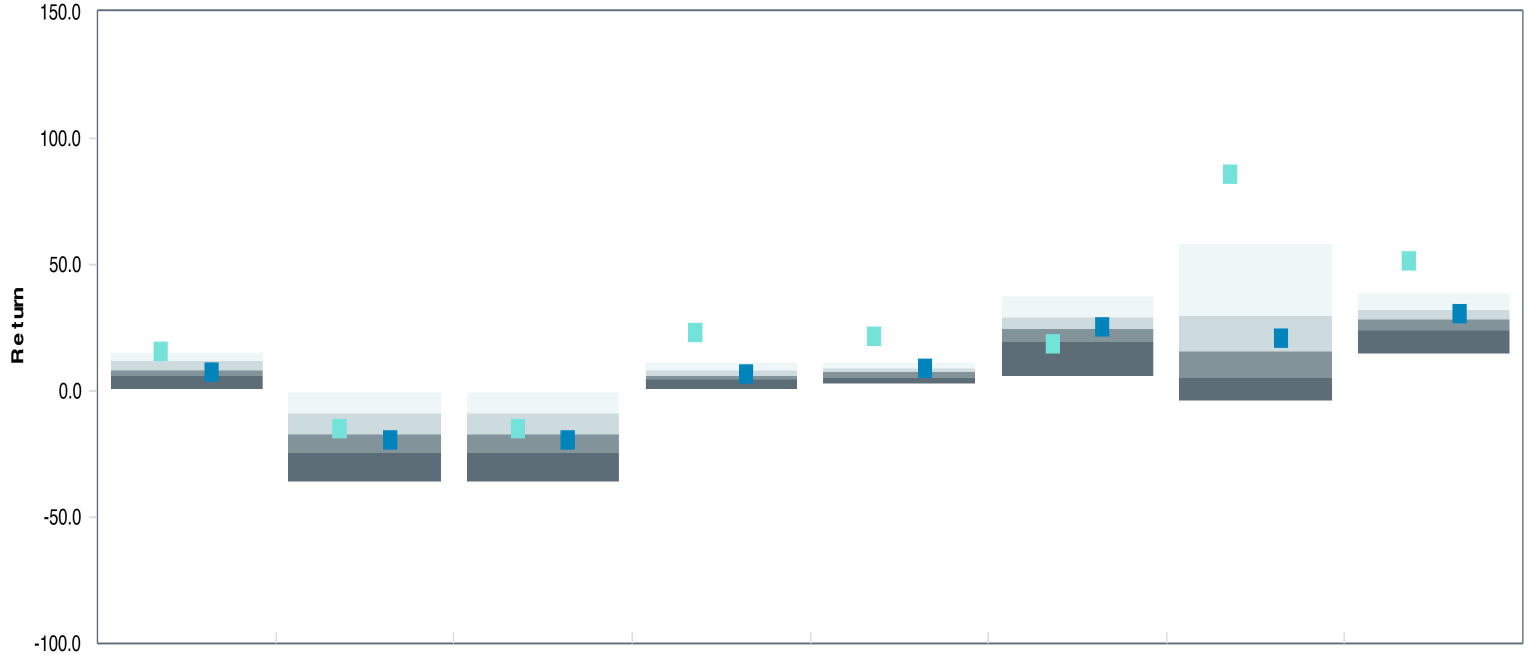


216

Pershing Square Holdings

As of December 31, 2022

IM U.S. Equity (SA+CF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	2021	2020	2019
Pershing Square Holdings	15.3 (4)	-15.1 (44)	-15.1 (44)	23.2 (1)	21.8 (1)	18.7 (77)	85.7 (2)	51.3 (1)
Dow Jones U.S. Total Stock Market Index	7.2 (66)	-19.5 (62)	-19.5 (62)	6.9 (40)	8.7 (30)	25.7 (46)	20.8 (38)	30.9 (32)
5th Percentile	14.7	-0.9	-0.9	11.4	11.5	37.3	57.9	38.5
1st Quartile	11.7	-9.2	-9.2	8.0	9.0	28.9	29.8	31.8
Median	8.5	-17.2	-17.2	6.1	7.4	25.0	15.5	28.0
3rd Quartile	5.8	-24.8	-24.8	4.4	5.5	19.1	5.2	23.6
95th Percentile	0.6	-36.1	-36.1	1.0	2.9	6.0	-3.9	14.6
Population	1,475	1,459	1,459	1,400	1,323	1,926	2,043	2,142

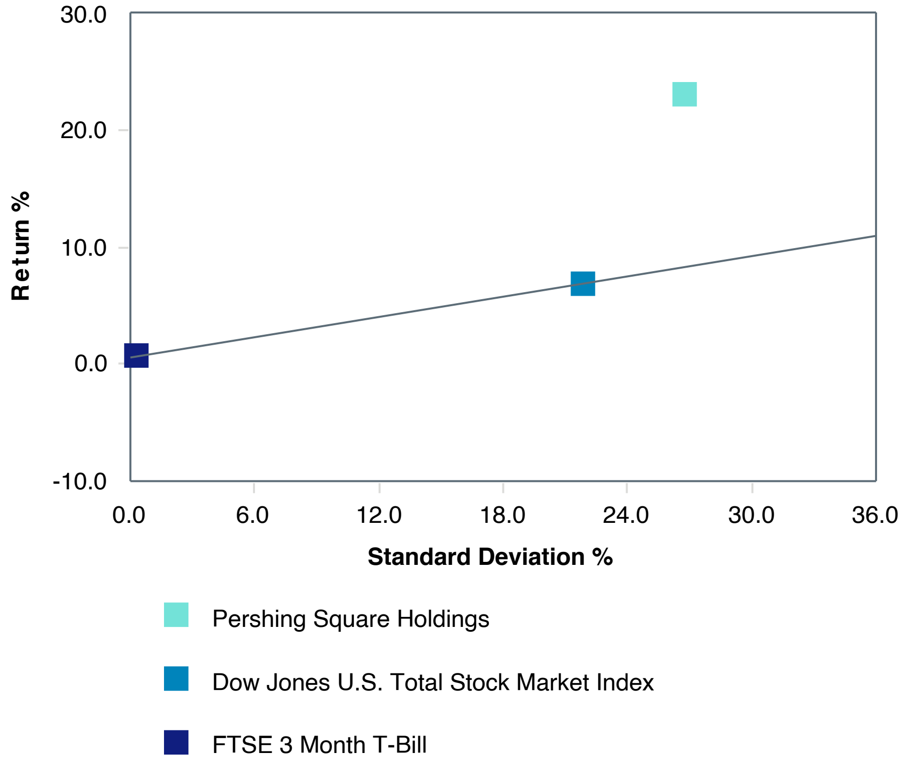
Parentheses contain percentile rankings.

AON

Pershing Square Holdings Risk Profile

Annualized Return vs. Annualized Standard Deviation 3 Years

Annualized Return vs. Annualized Standard Deviation
3 Years



Rolling 2 Years Standard Deviation

3 Years Historical Statistics

3 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Pershing Square Holdings	15.44	16.19	0.95	0.64	0.89	16.82	0.98	23.23	26.78	0.80
Dow Jones U.S. Total Stock Market Index	0.00	0.00	-	1.00	0.38	0.00	1.00	6.89	21.83	1.00
FTSE 3 Month T-Bill	-8.31	21.89	-0.38	0.03	-	0.73	0.00	0.71	0.31	-0.18

AON

Trian Partners Performance Summary

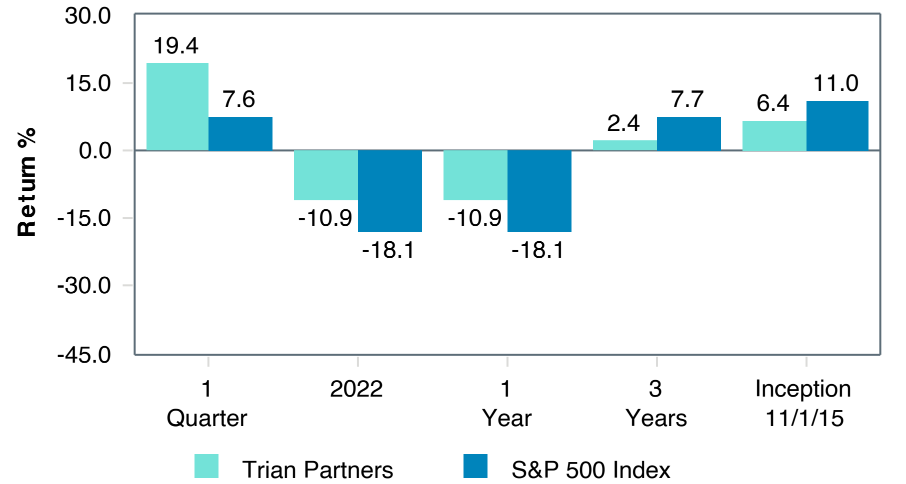
Account Information

Account Information

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

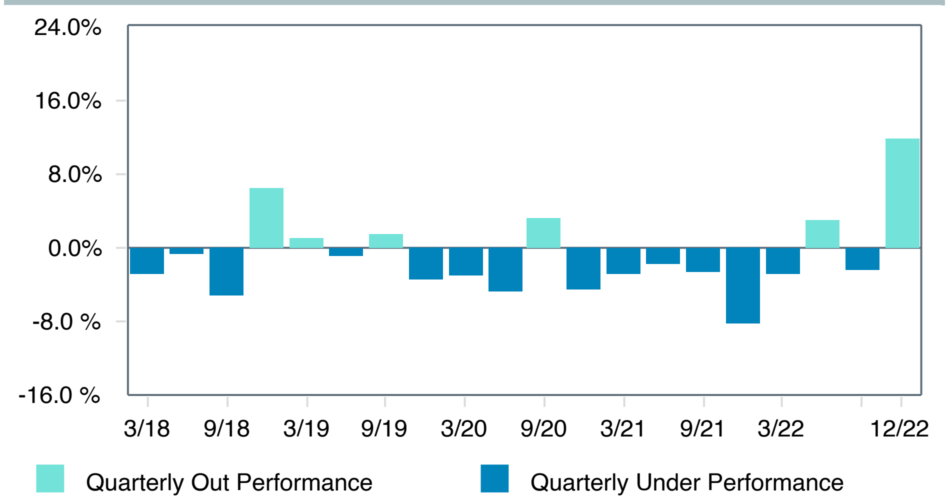
Return Summary

Return Summary



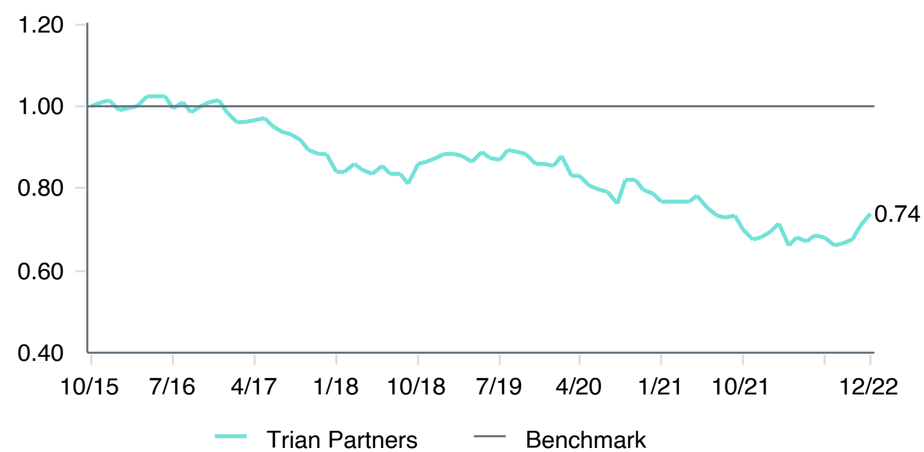
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



Trian Co-Investments Performance Summary

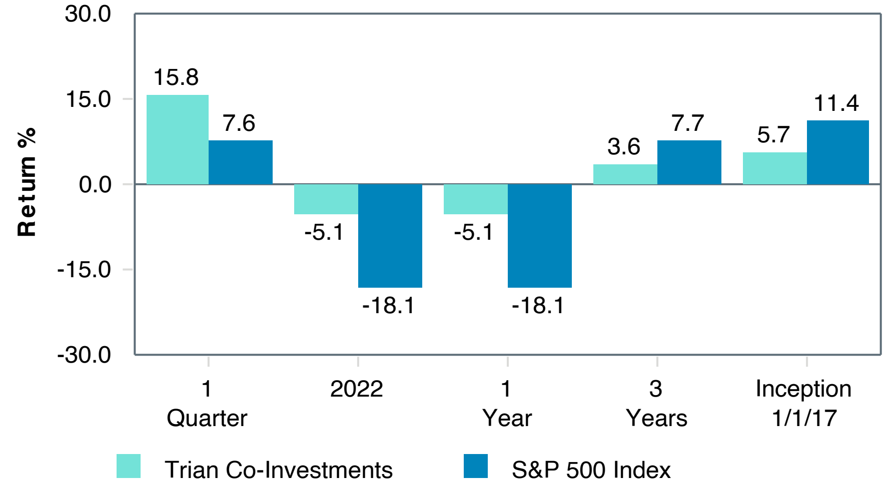
Account Information

Account Information

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

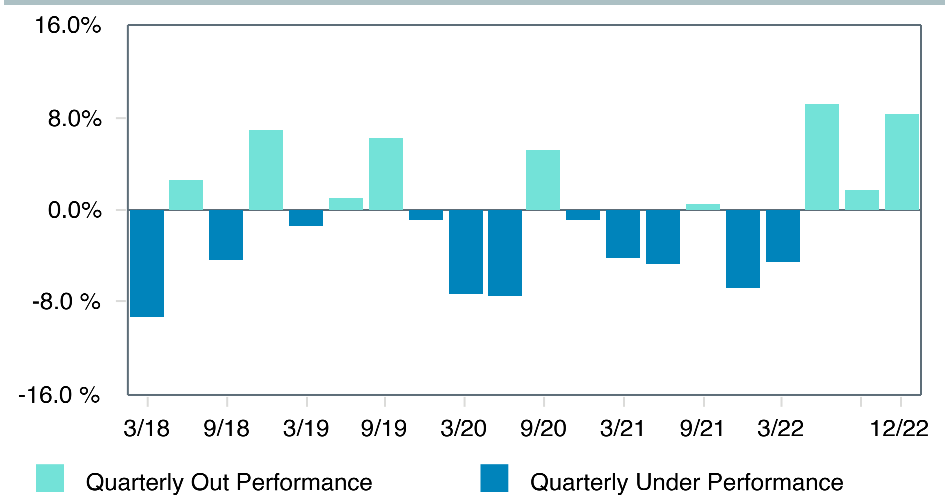
Return Summary

Return Summary



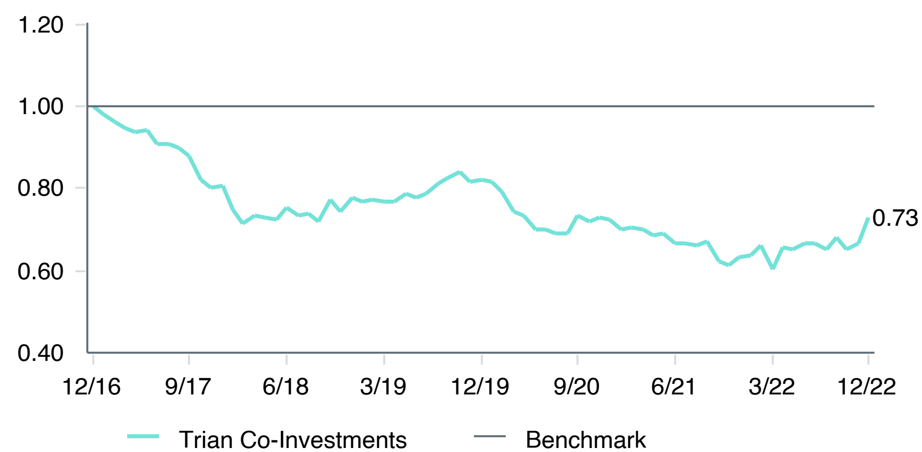
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



SSgA Global Index Performance Summary

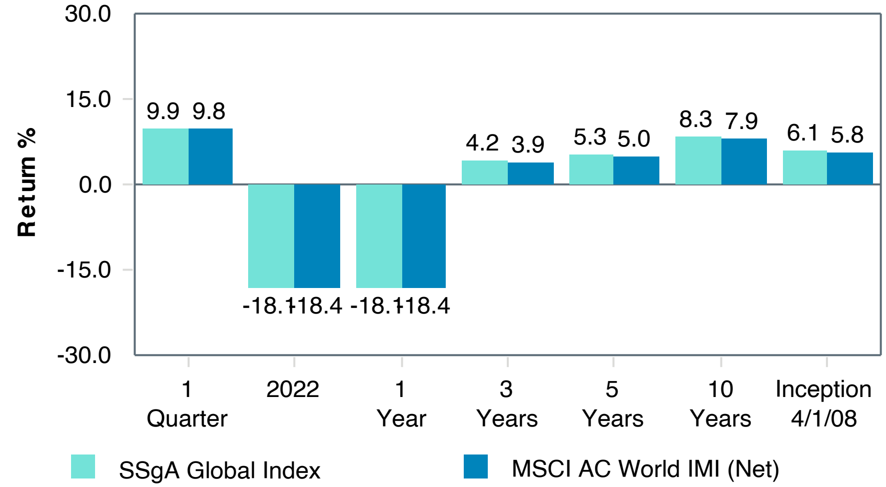
Account Information

Account Information

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

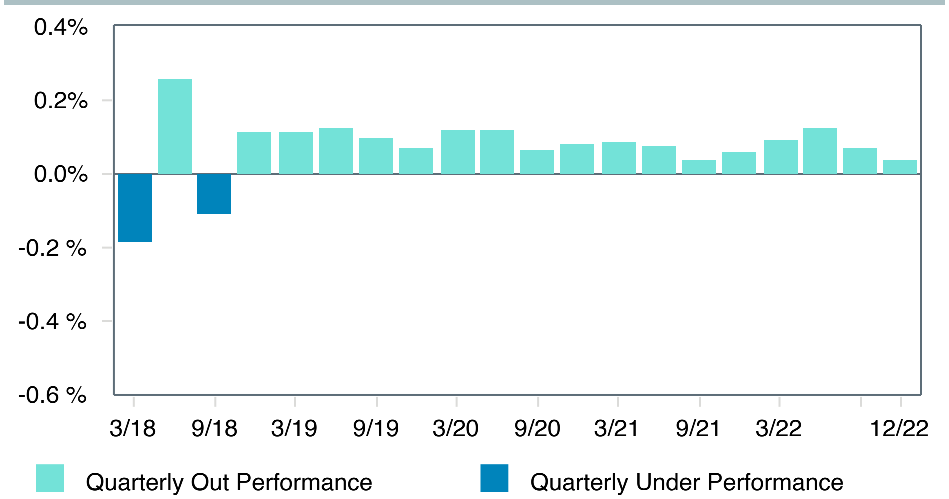
Return Summary

Return Summary



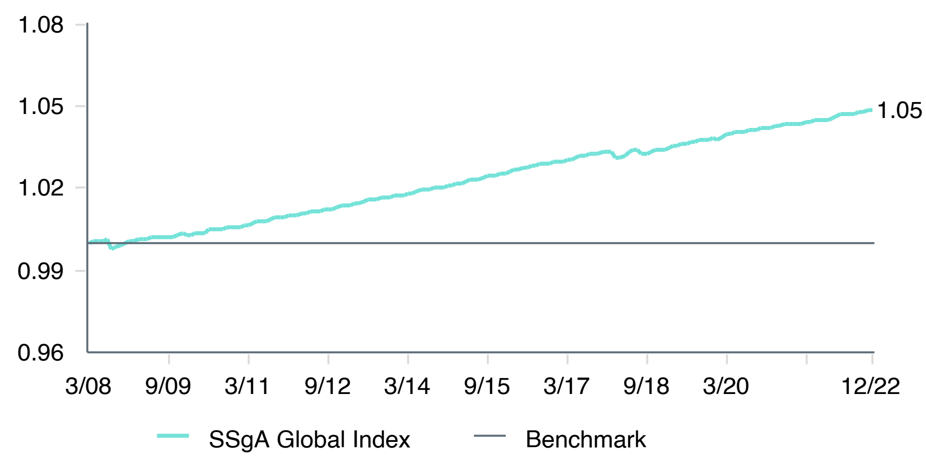
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

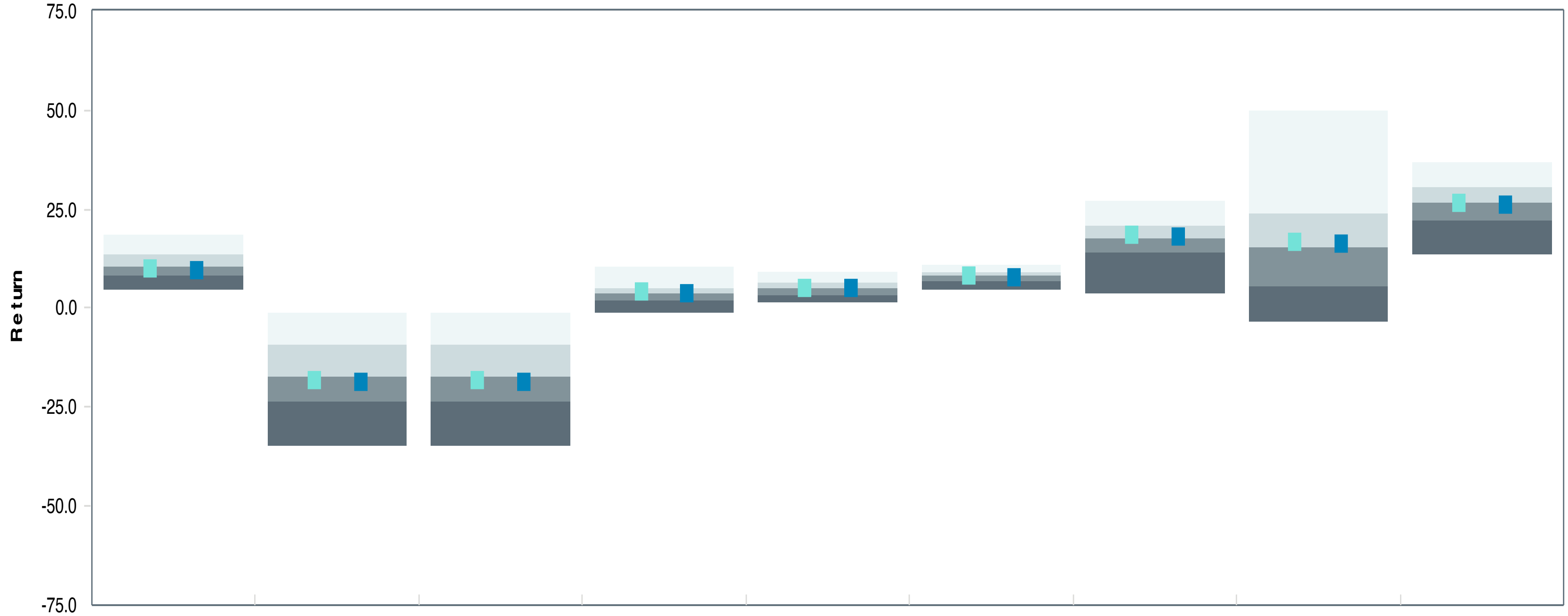
Ratio of Cumulative Wealth - Since Inception



SSgA Global Index

As of December 31, 2022

IM Global Equity (SA+CF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
SSgA Global Index	9.9 (60)	-18.1 (54)	-18.1 (54)	4.2 (44)	5.3 (47)	8.3 (47)	18.5 (46)	16.7 (46)	26.8 (50)
MSCI AC World IMI (Net)	9.8 (61)	-18.4 (55)	-18.4 (55)	3.9 (51)	5.0 (54)	7.9 (55)	18.2 (48)	16.3 (48)	26.4 (53)
5th Percentile	18.6	-1.1	-1.1	10.4	9.1	11.2	26.9	49.7	36.9
1st Quartile	13.8	-9.1	-9.1	5.4	6.7	9.3	21.0	24.1	30.6
Median	10.4	-17.1	-17.1	3.9	5.1	8.1	17.9	15.5	26.7
3rd Quartile	8.4	-23.7	-23.7	2.2	3.6	7.1	14.0	5.8	22.2
95th Percentile	4.7	-34.7	-34.7	-1.0	1.5	4.7	4.0	-3.2	13.6
Population	344	338	338	317	295	215	434	454	468

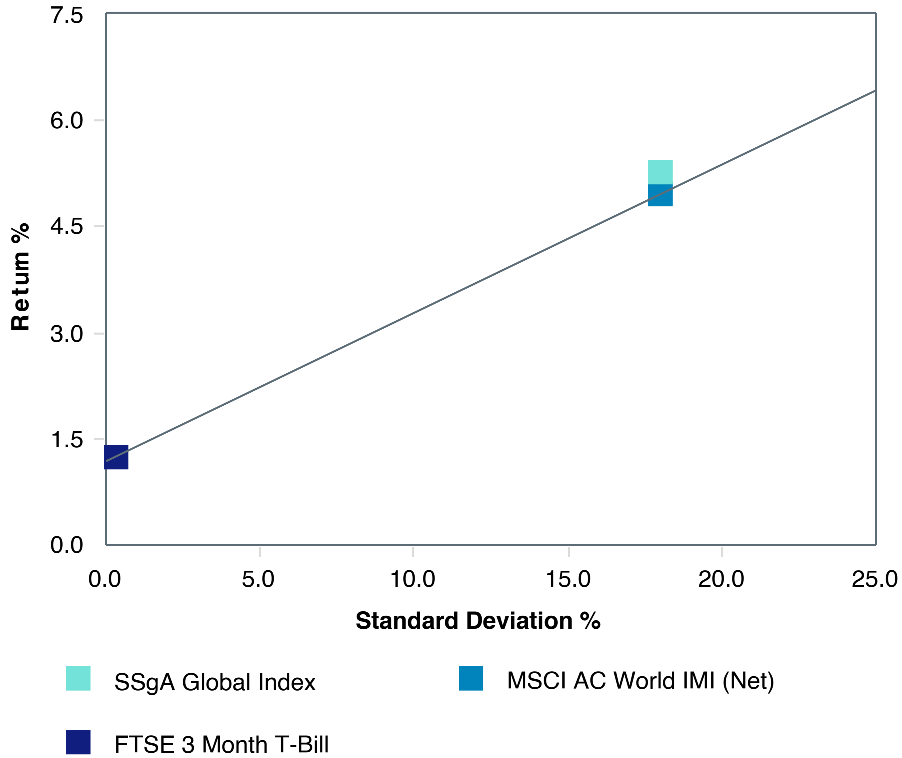
Parentheses contain percentile rankings.

AON

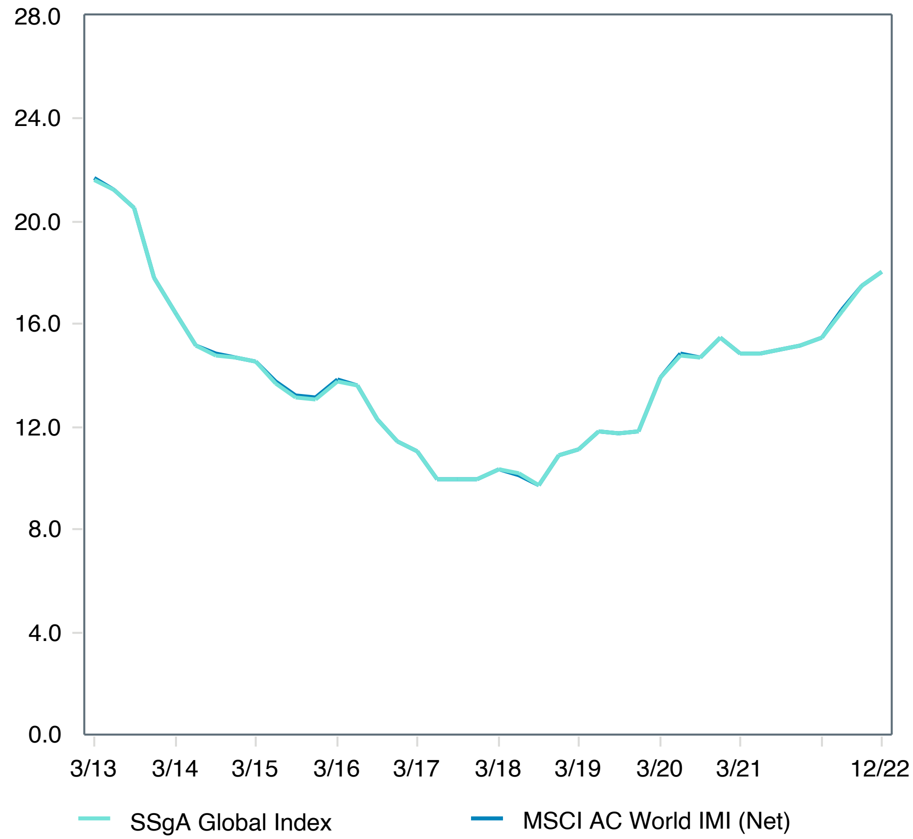
SSgA Global Index Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
SSgA Global Index	0.29	0.18	1.62	1.00	0.31	0.30	1.00	5.27	18.01	1.00
MSCI AC World IMI (Net)	0.00	0.00	-	1.00	0.29	0.00	1.00	4.96	18.02	1.00
FTSE 3 Month T-Bill	-5.23	18.05	-0.29	0.01	-	1.26	0.00	1.25	0.31	-0.10

BlackRock MSCI ACWI IMI Fund Performance Summary

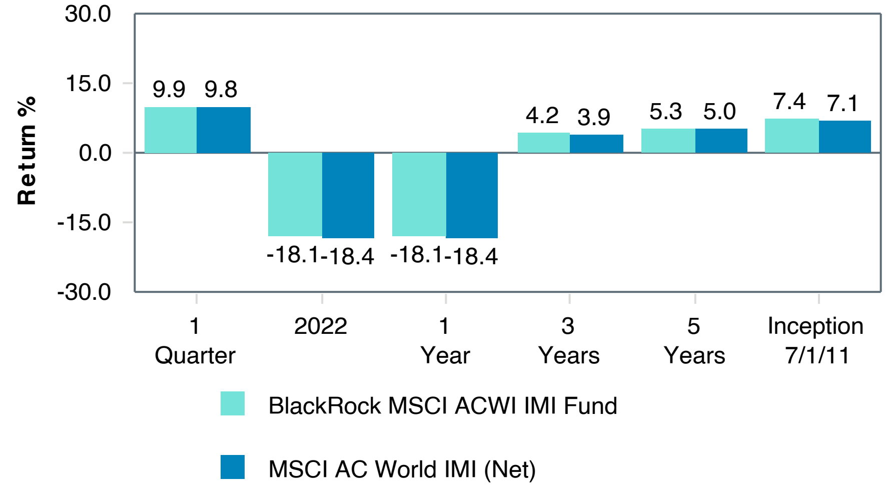
Account Information

Account Information

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

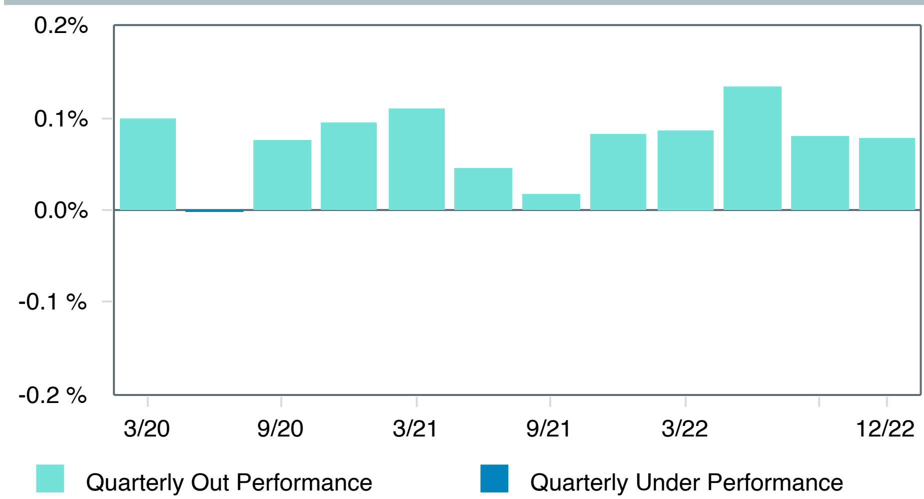
Return Summary

Return Summary



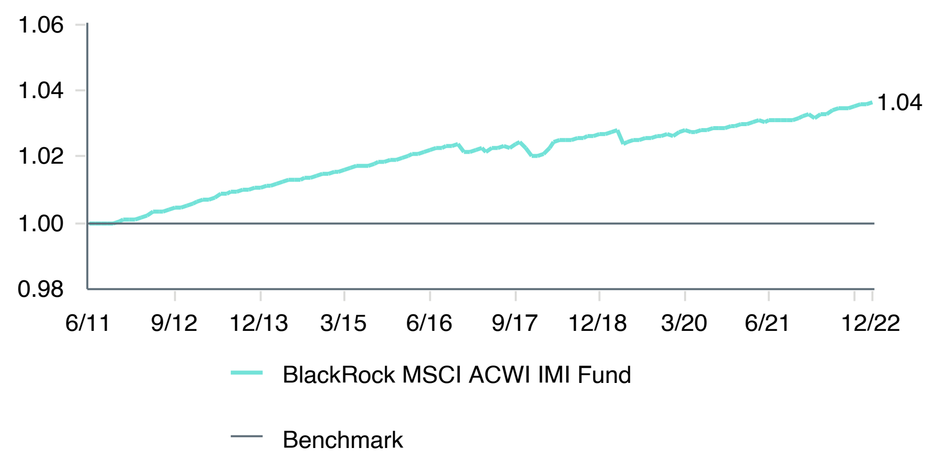
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

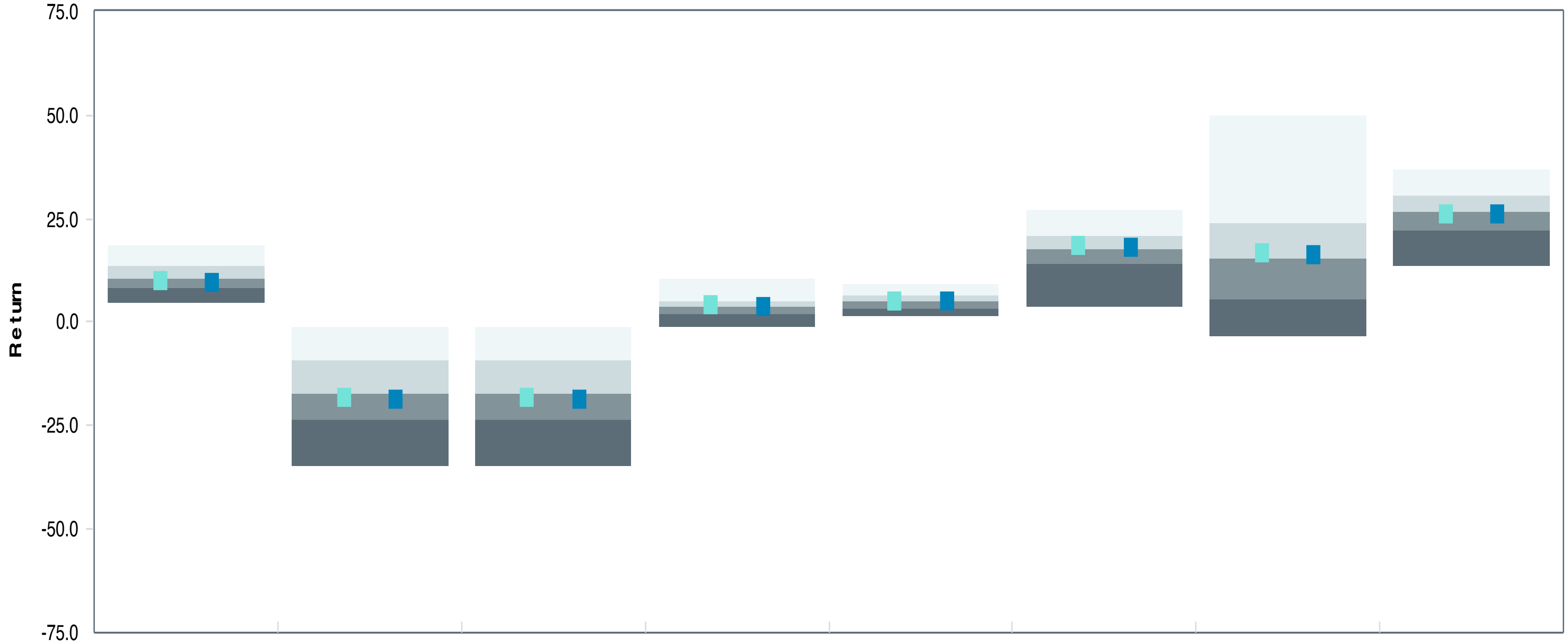
Ratio of Cumulative Wealth - Since Inception



BlackRock MSCI ACWI IMI Fund

As of December 31, 2022

IM Global Equity (SA+CF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	2021	2020	2019
BlackRock MSCI ACWI IMI Fund	9.9 (59)	-18.1 (54)	-18.1 (54)	4.2 (45)	5.3 (47)	18.5 (46)	16.6 (46)	26.3 (53)
MSCI AC World IMI (Net)	9.8 (61)	-18.4 (55)	-18.4 (55)	3.9 (51)	5.0 (54)	18.2 (48)	16.3 (48)	26.4 (53)
5th Percentile	18.6	-1.1	-1.1	10.4	9.1	26.9	49.7	36.9
1st Quartile	13.8	-9.1	-9.1	5.4	6.7	21.0	24.1	30.6
Median	10.4	-17.1	-17.1	3.9	5.1	17.9	15.5	26.7
3rd Quartile	8.4	-23.7	-23.7	2.2	3.6	14.0	5.8	22.2
95th Percentile	4.7	-34.7	-34.7	-1.0	1.5	4.0	-3.2	13.6
Population	344	338	338	317	295	434	454	468

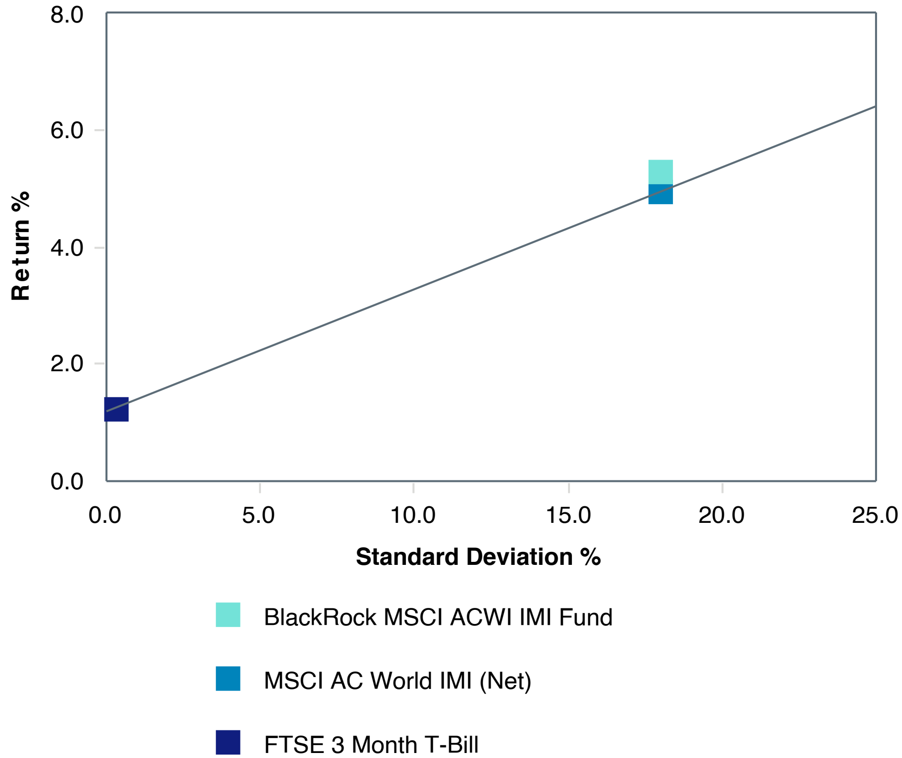
Parentheses contain percentile rankings.

AON

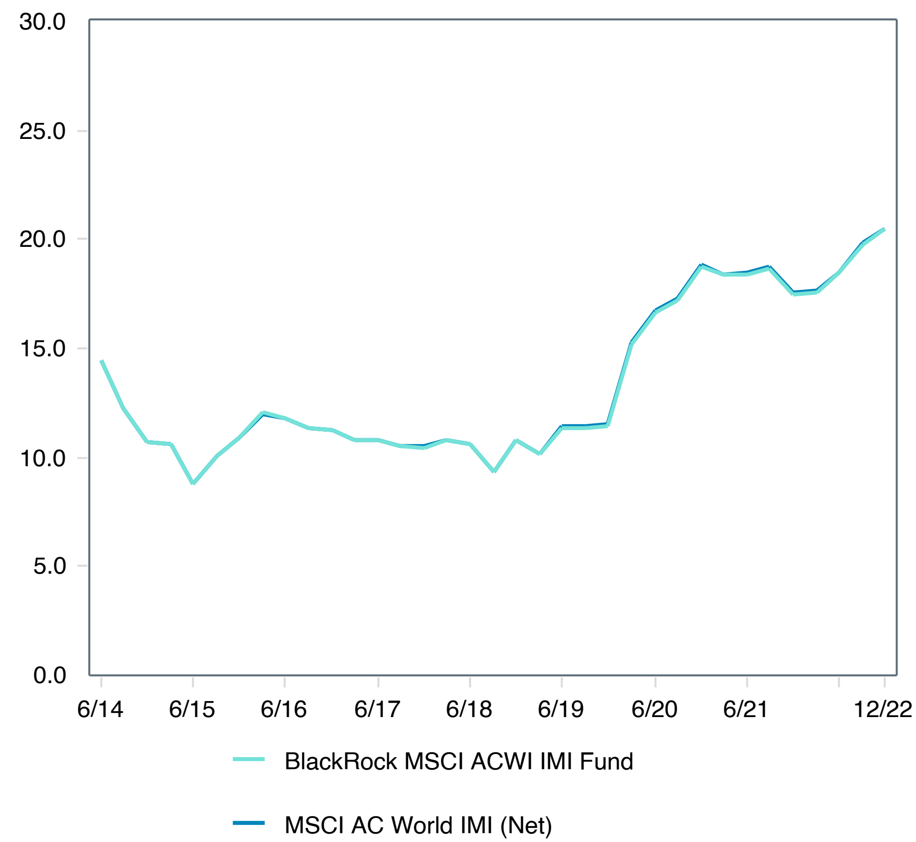
BlackRock MSCI ACWI IMI Fund Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation



5 Years Historical Statistics

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	0.30	0.26	1.15	1.00	0.31	0.32	1.00	5.29	17.98	1.00
MSCI AC World IMI (Net)	0.00	0.00	-	1.00	0.29	0.00	1.00	4.96	18.02	1.00
FTSE 3 Month T-Bill	-5.23	18.05	-0.29	0.01	-	1.26	0.00	1.25	0.31	-0.10

Wellington Global Perspectives Performance Summary

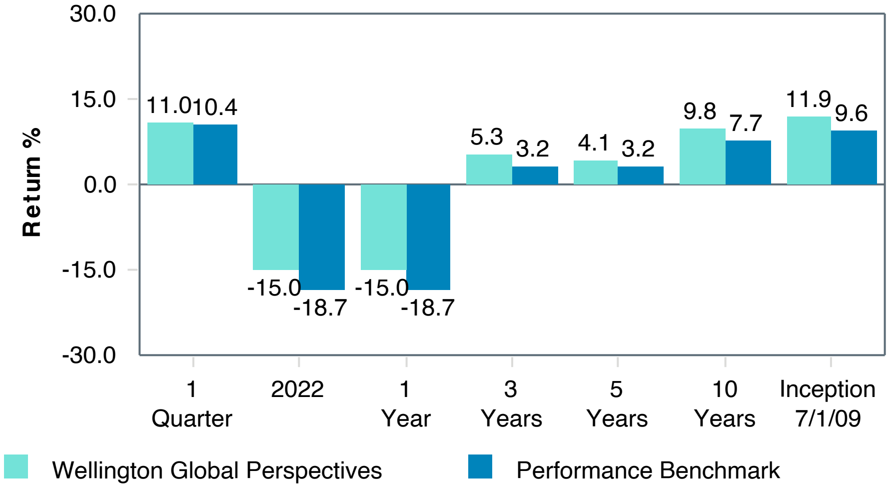
Account Information

Account Information

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

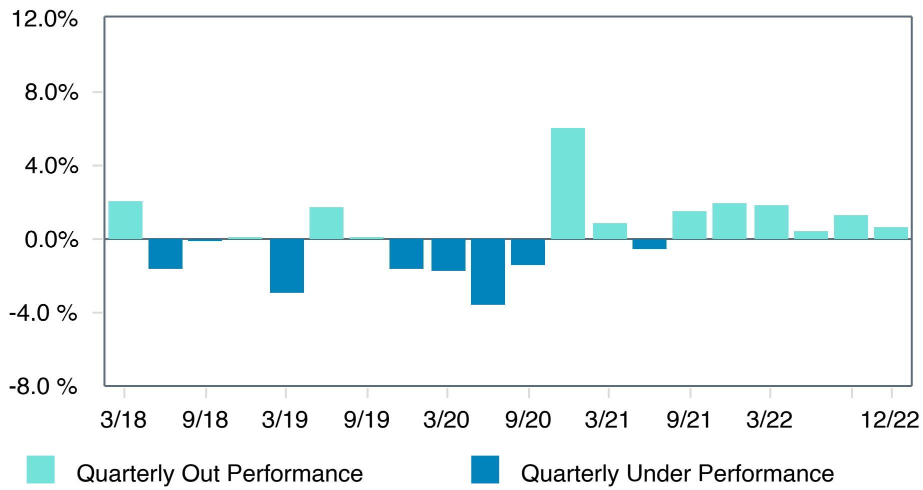
Return Summary

Return Summary



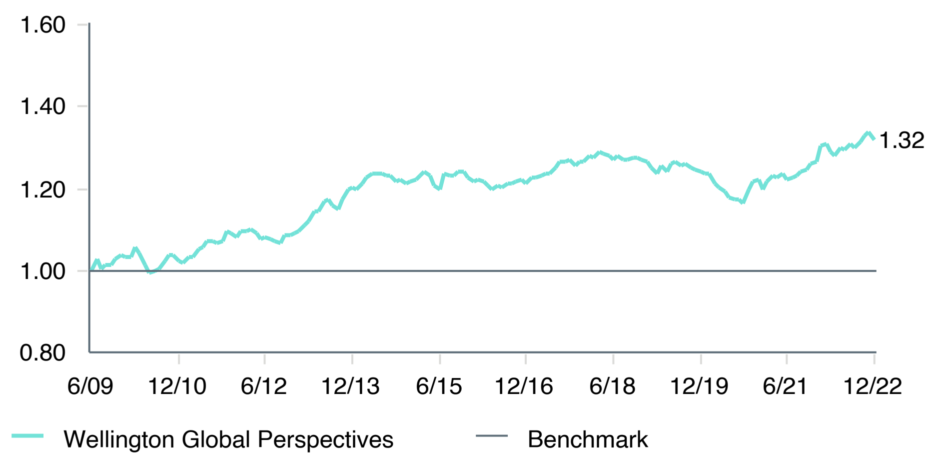
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

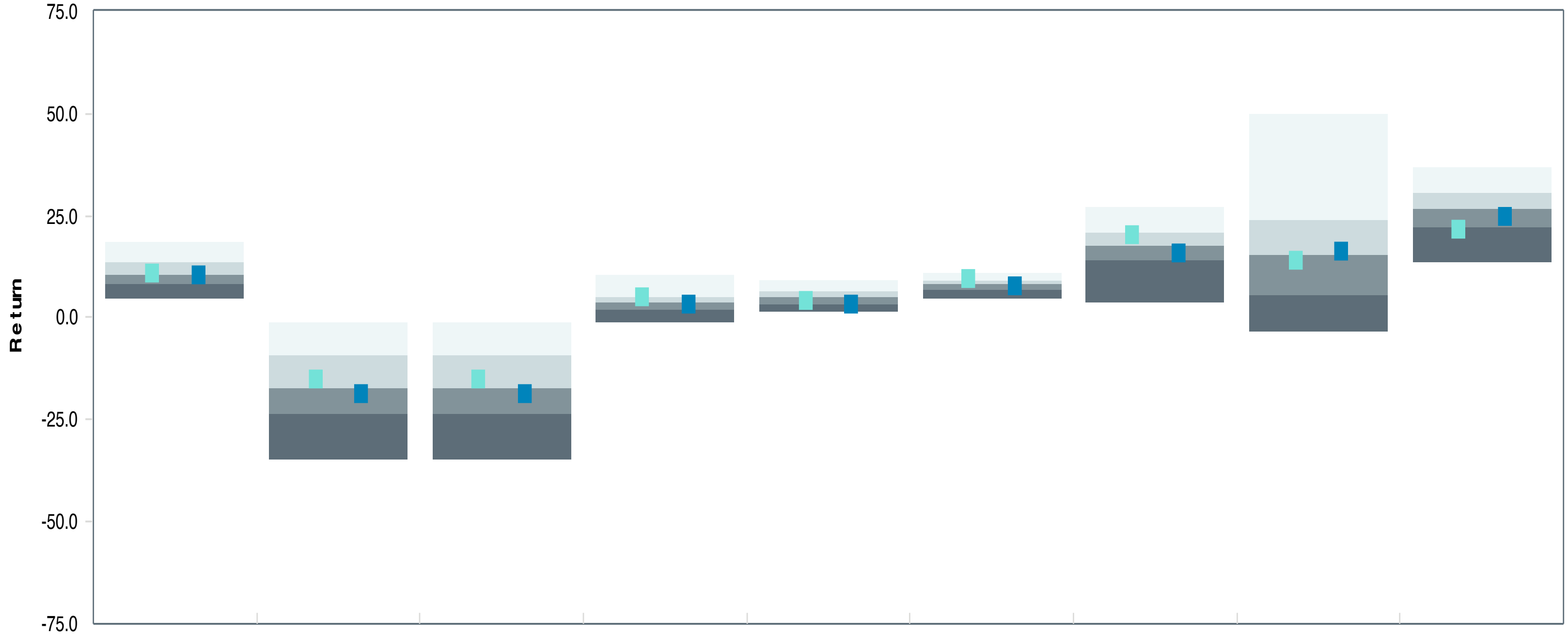
Ratio of Cumulative Wealth - Since Inception



Wellington Global Perspectives

As of December 31, 2022

IM Global Equity (SA+CF)



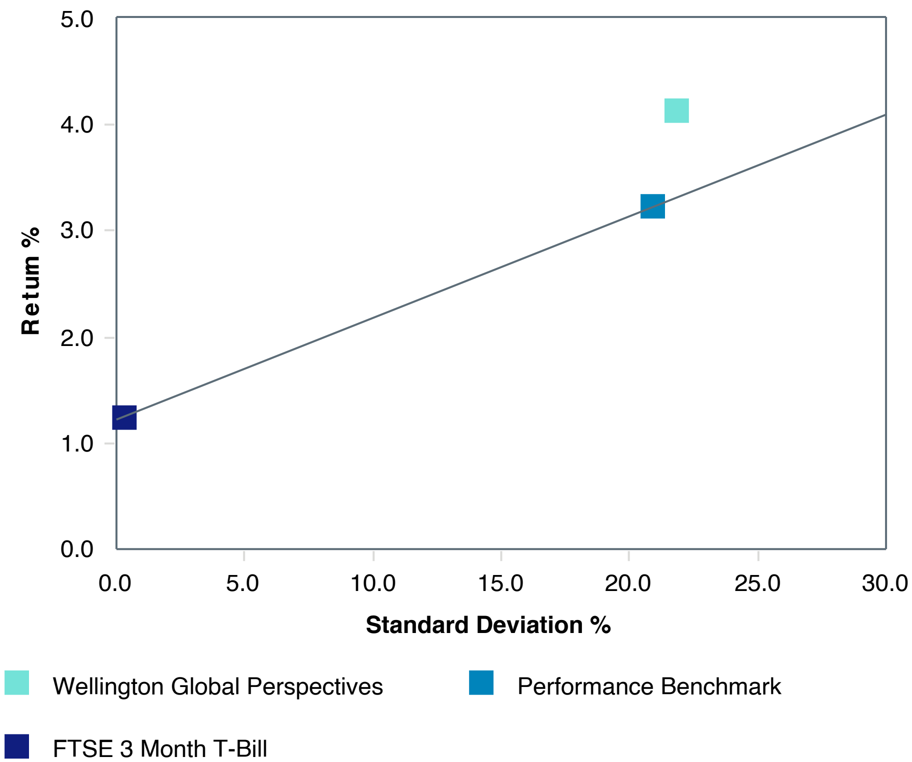
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Wellington Global Perspectives	11.0 (43)	-15.0 (42)	-15.0 (42)	5.3 (26)	4.1 (66)	9.8 (16)	20.4 (29)	14.1 (55)	21.9 (77)
Performance Benchmark	10.4 (50)	-18.7 (55)	-18.7 (55)	3.2 (60)	3.2 (82)	7.7 (62)	16.1 (61)	16.3 (48)	24.7 (66)
5th Percentile	18.6	-1.1	-1.1	10.4	9.1	11.2	26.9	49.7	36.9
1st Quartile	13.8	-9.1	-9.1	5.4	6.7	9.3	21.0	24.1	30.6
Median	10.4	-17.1	-17.1	3.9	5.1	8.1	17.9	15.5	26.7
3rd Quartile	8.4	-23.7	-23.7	2.2	3.6	7.1	14.0	5.8	22.2
95th Percentile	4.7	-34.7	-34.7	-1.0	1.5	4.7	4.0	-3.2	13.6
Population	344	338	338	317	295	215	434	454	468

Parentheses contain percentile rankings.

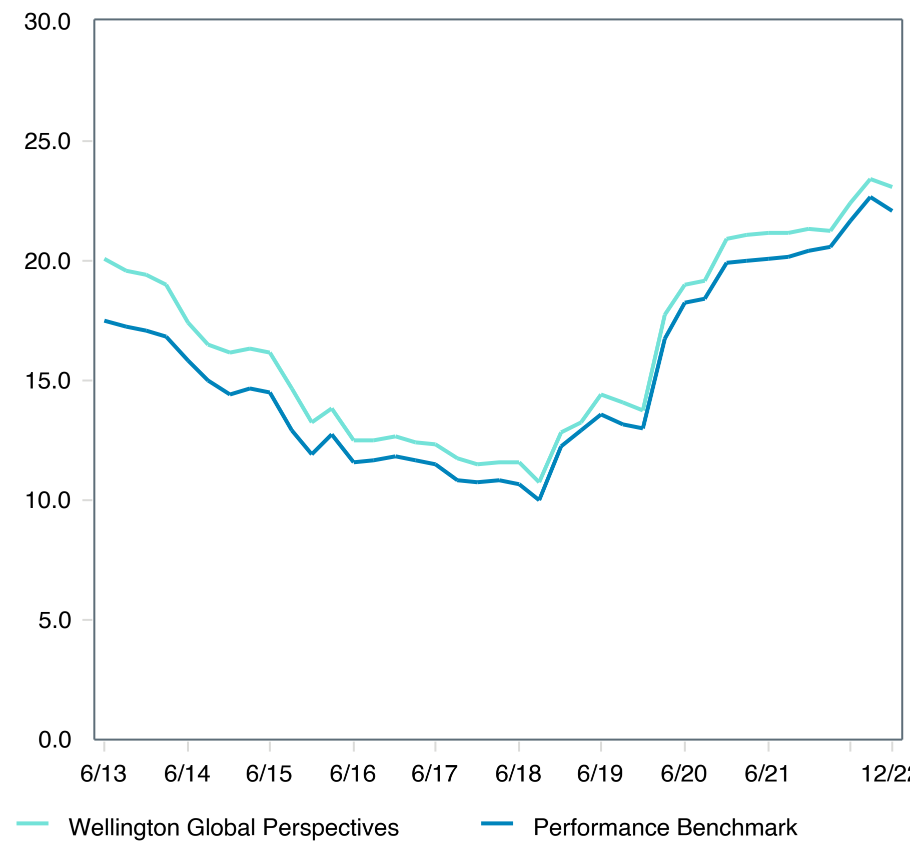
Wellington Global Perspectives Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation 5 Years



Rolling 4 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Wellington Global Perspectives	1.07	3.75	0.28	0.97	0.24	0.93	1.03	4.13	21.82	0.99
Performance Benchmark	0.00	0.00	-	1.00	0.20	0.00	1.00	3.23	20.93	1.00
FTSE 3 Month T-Bill	-4.16	20.97	-0.20	0.01	-	1.26	0.00	1.25	0.31	-0.12

229

T. Rowe Price Global Equity Performance Summary

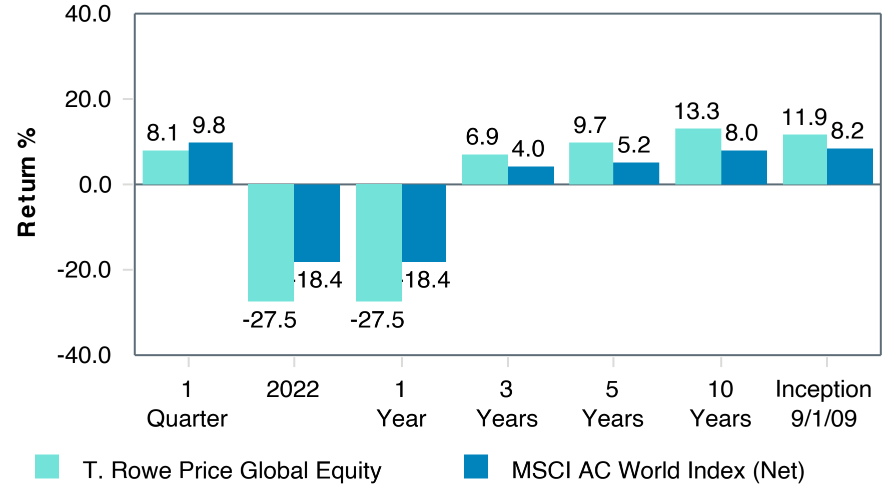
Account Information

Account Information

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

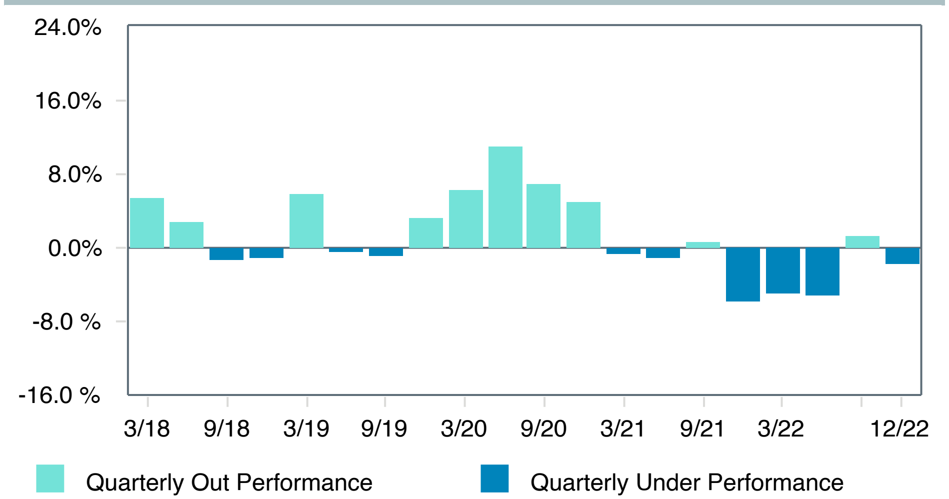
Return Summary

Return Summary



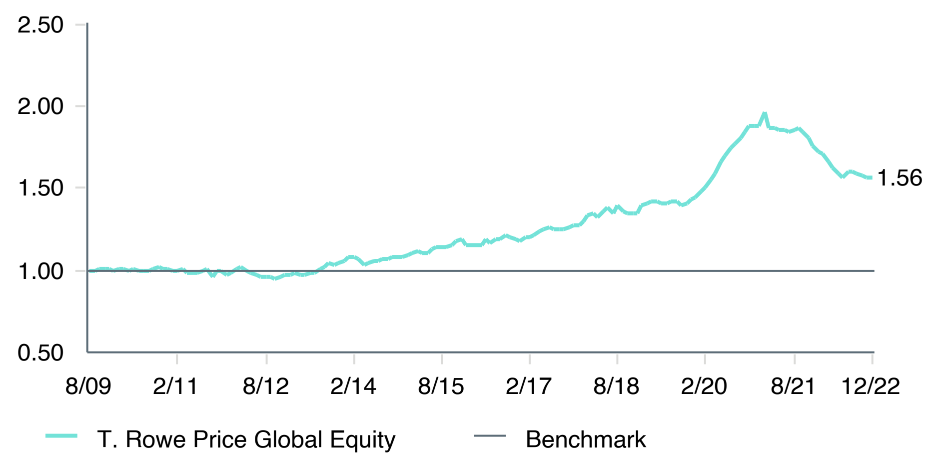
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

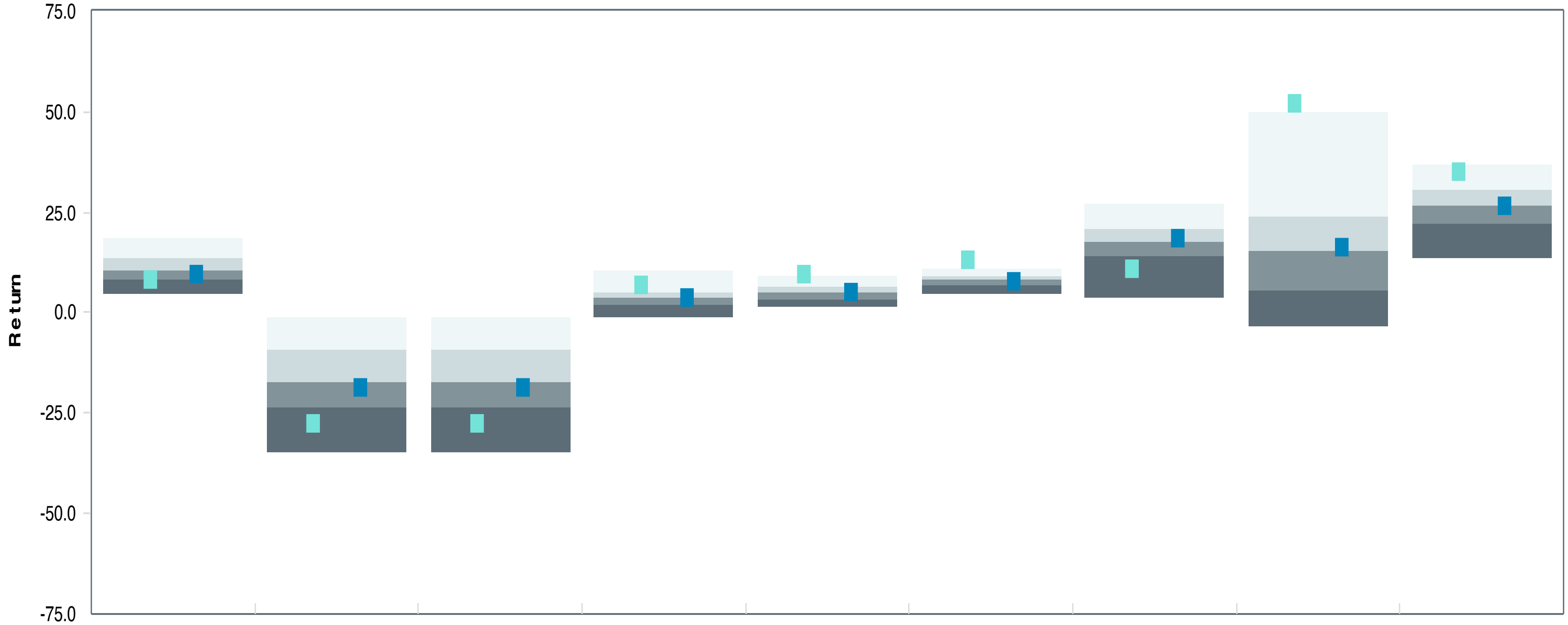
Ratio of Cumulative Wealth - Since Inception



T. Rowe Price Global Equity

As of December 31, 2022

IM Global Equity (SA+CF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
T. Rowe Price Global Equity	8.1 (77)	-27.5 (83)	-27.5 (83)	6.9 (16)	9.7 (4)	13.3 (1)	10.8 (87)	52.2 (5)	35.2 (10)
MSCI AC World Index (Net)	9.8 (62)	-18.4 (55)	-18.4 (55)	4.0 (49)	5.2 (49)	8.0 (55)	18.5 (45)	16.3 (48)	26.6 (51)
5th Percentile	18.6	-1.1	-1.1	10.4	9.1	11.2	26.9	49.7	36.9
1st Quartile	13.8	-9.1	-9.1	5.4	6.7	9.3	21.0	24.1	30.6
Median	10.4	-17.1	-17.1	3.9	5.1	8.1	17.9	15.5	26.7
3rd Quartile	8.4	-23.7	-23.7	2.2	3.6	7.1	14.0	5.8	22.2
95th Percentile	4.7	-34.7	-34.7	-1.0	1.5	4.7	4.0	-3.2	13.6
Population	344	338	338	317	295	215	434	454	468

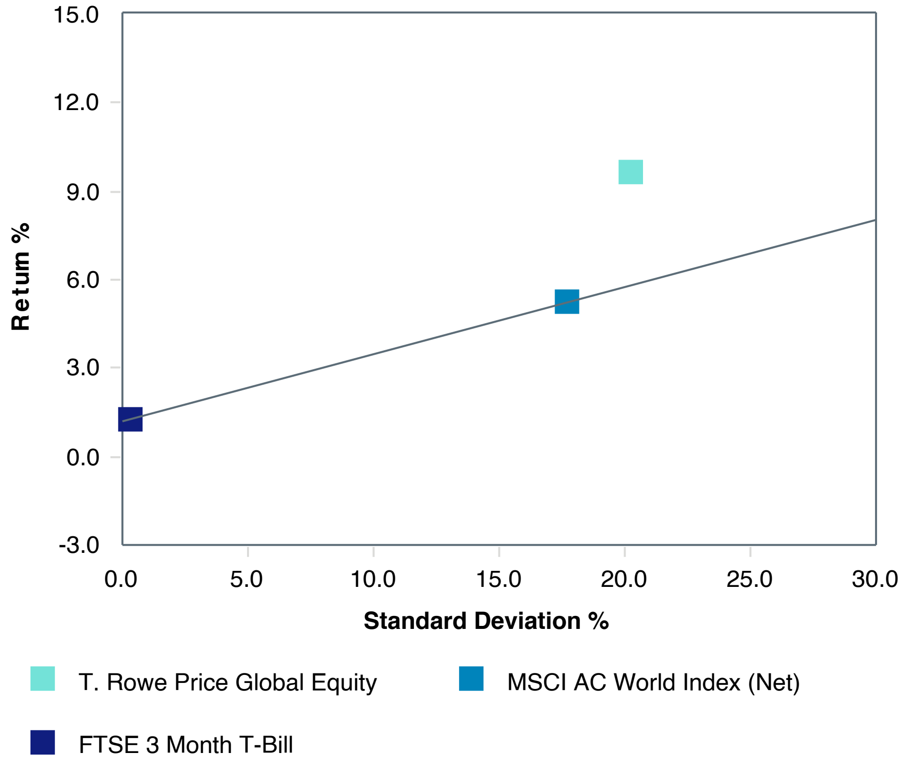
Parentheses contain percentile rankings.

AON

T. Rowe Price Global Equity Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation

5 Years Historical Statistics

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	4.61	7.01	0.66	0.88	0.50	4.20	1.07	9.68	20.24	0.94
MSCI AC World Index (Net)	0.00	0.00	-	1.00	0.31	0.00	1.00	5.23	17.72	1.00
FTSE 3 Month T-Bill	-5.43	17.75	-0.31	0.01	-	1.26	0.00	1.25	0.31	-0.09

Lazard Performance Summary

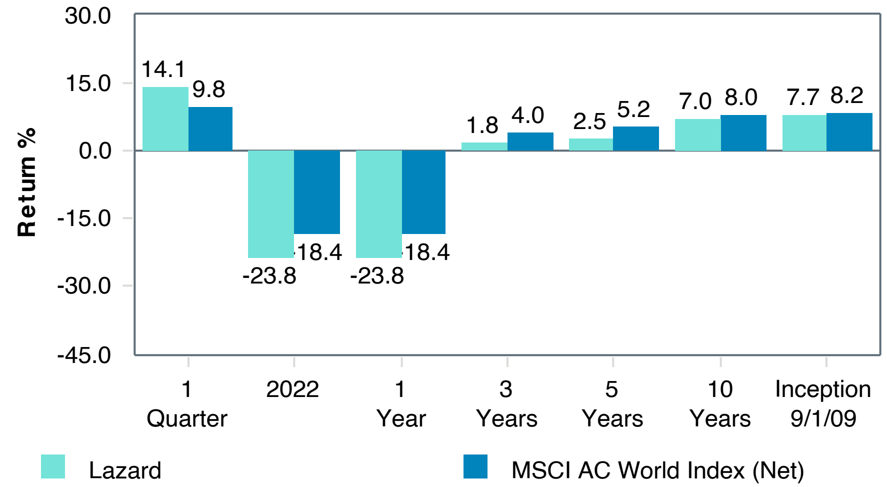
Account Information

Account Information

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

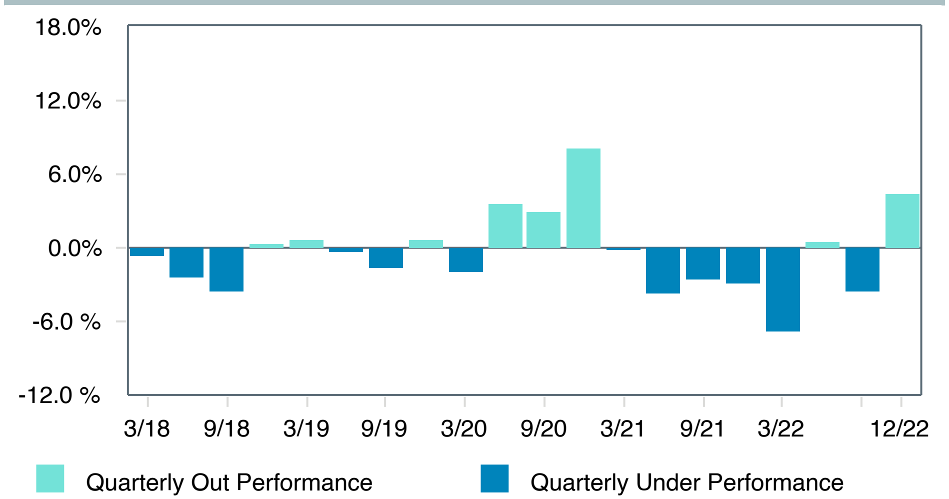
Return Summary

Return Summary



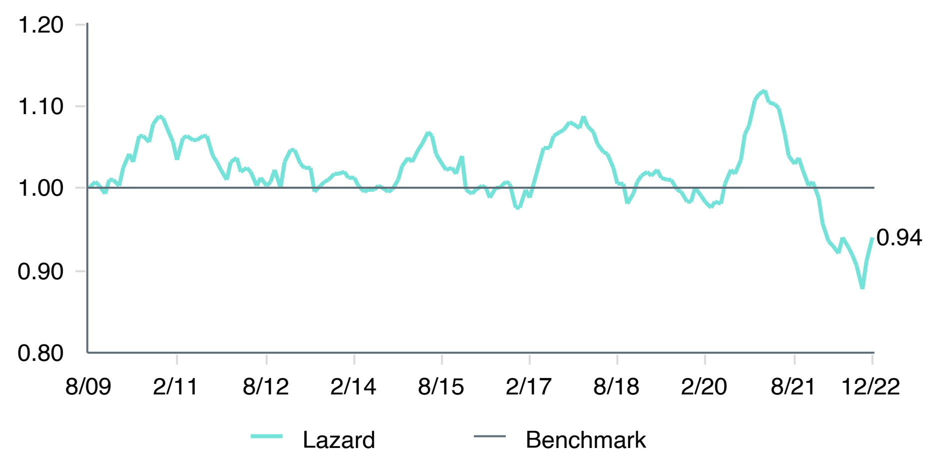
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

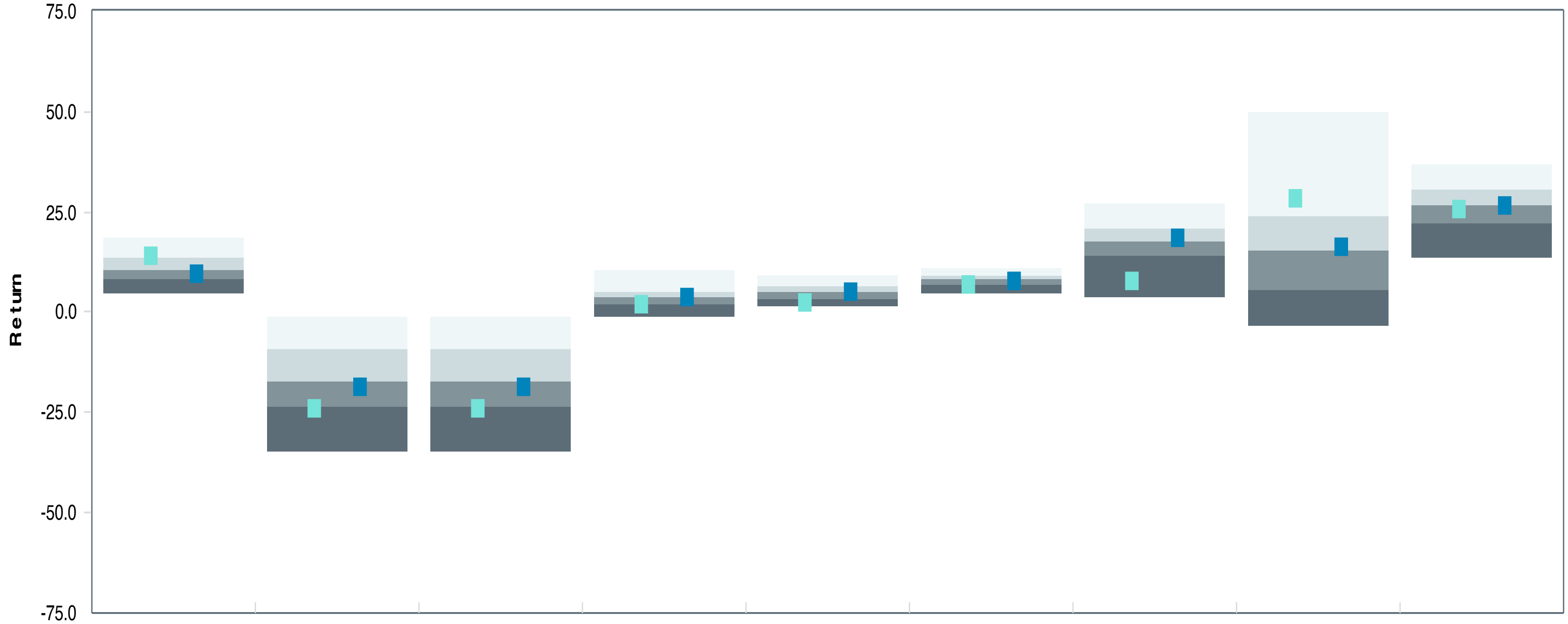
Ratio of Cumulative Wealth - Since Inception



Lazard

As of December 31, 2022

IM Global Equity (SA+CF)



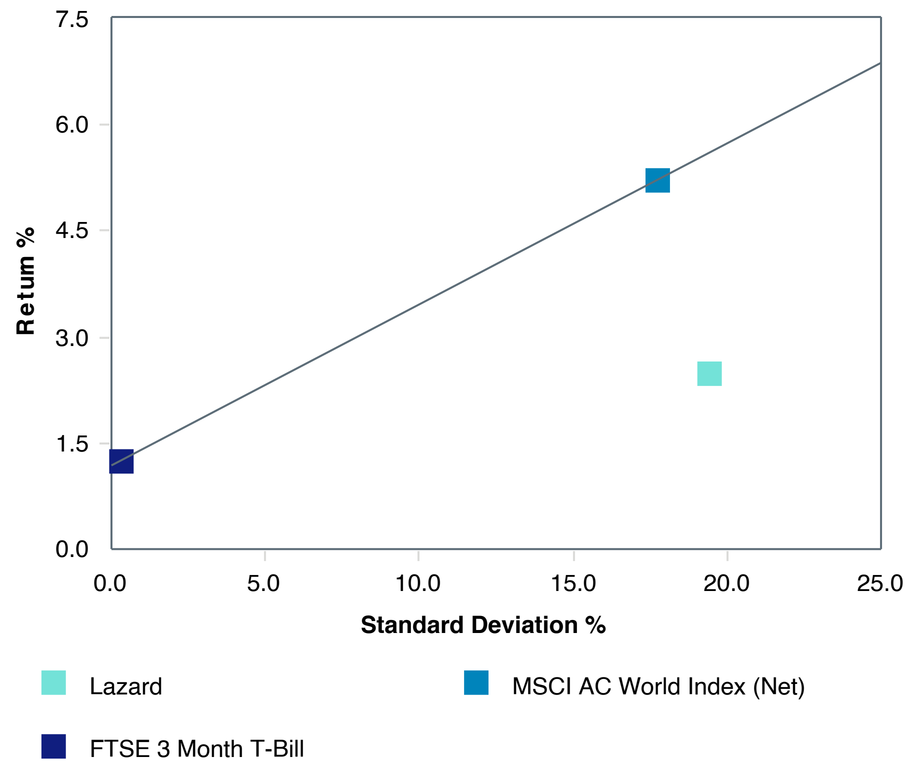
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Lazard	14.1 (23)	-23.8 (76)	-23.8 (76)	1.8 (79)	2.5 (89)	7.0 (78)	8.0 (92)	28.4 (22)	25.7 (57)
MSCI AC World Index (Net)	9.8 (62)	-18.4 (55)	-18.4 (55)	4.0 (49)	5.2 (49)	8.0 (55)	18.5 (45)	16.3 (48)	26.6 (51)
5th Percentile	18.6	-1.1	-1.1	10.4	9.1	11.2	26.9	49.7	36.9
1st Quartile	13.8	-9.1	-9.1	5.4	6.7	9.3	21.0	24.1	30.6
Median	10.4	-17.1	-17.1	3.9	5.1	8.1	17.9	15.5	26.7
3rd Quartile	8.4	-23.7	-23.7	2.2	3.6	7.1	14.0	5.8	22.2
95th Percentile	4.7	-34.7	-34.7	-1.0	1.5	4.7	4.0	-3.2	13.6
Population	344	338	338	317	295	215	434	454	468

Parentheses contain percentile rankings.

Lazard Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation

5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Lazard	-2.35	5.60	-0.42	0.92	0.16	-2.67	1.05	2.47	19.45	0.96
MSCI AC World Index (Net)	0.00	0.00	-	1.00	0.31	0.00	1.00	5.23	17.72	1.00
FTSE 3 Month T-Bill	-5.43	17.75	-0.31	0.01	-	1.26	0.00	1.25	0.31	-0.09

D.E. Shaw Performance Summary

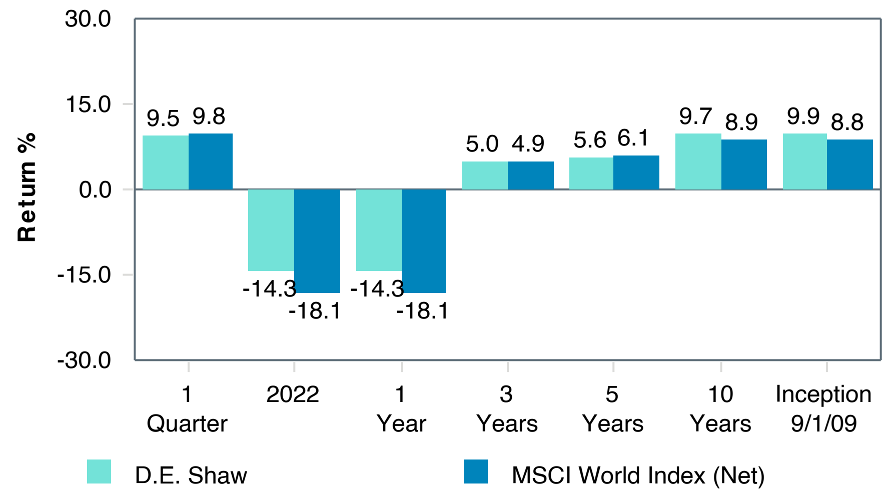
Account Information

Account Information

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

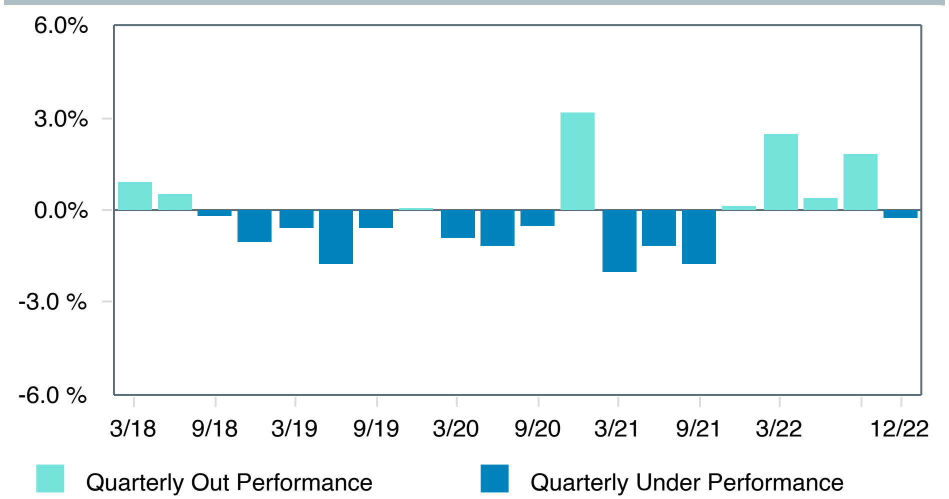
Return Summary

Return Summary



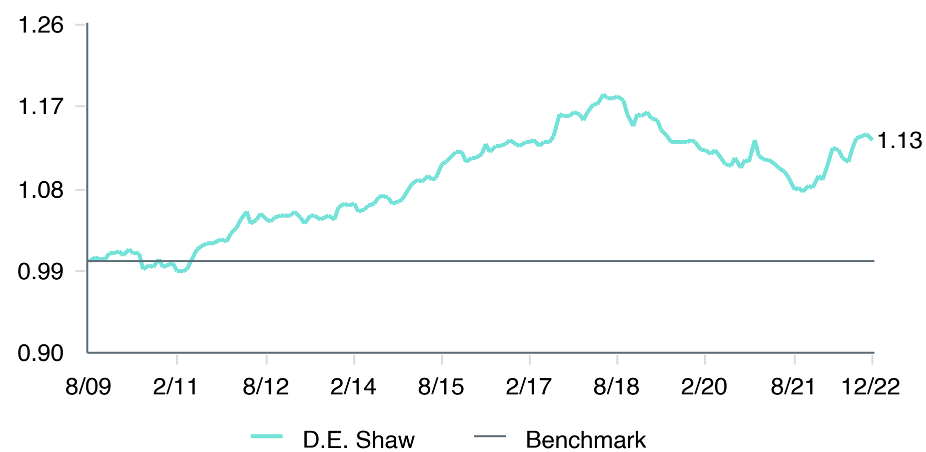
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

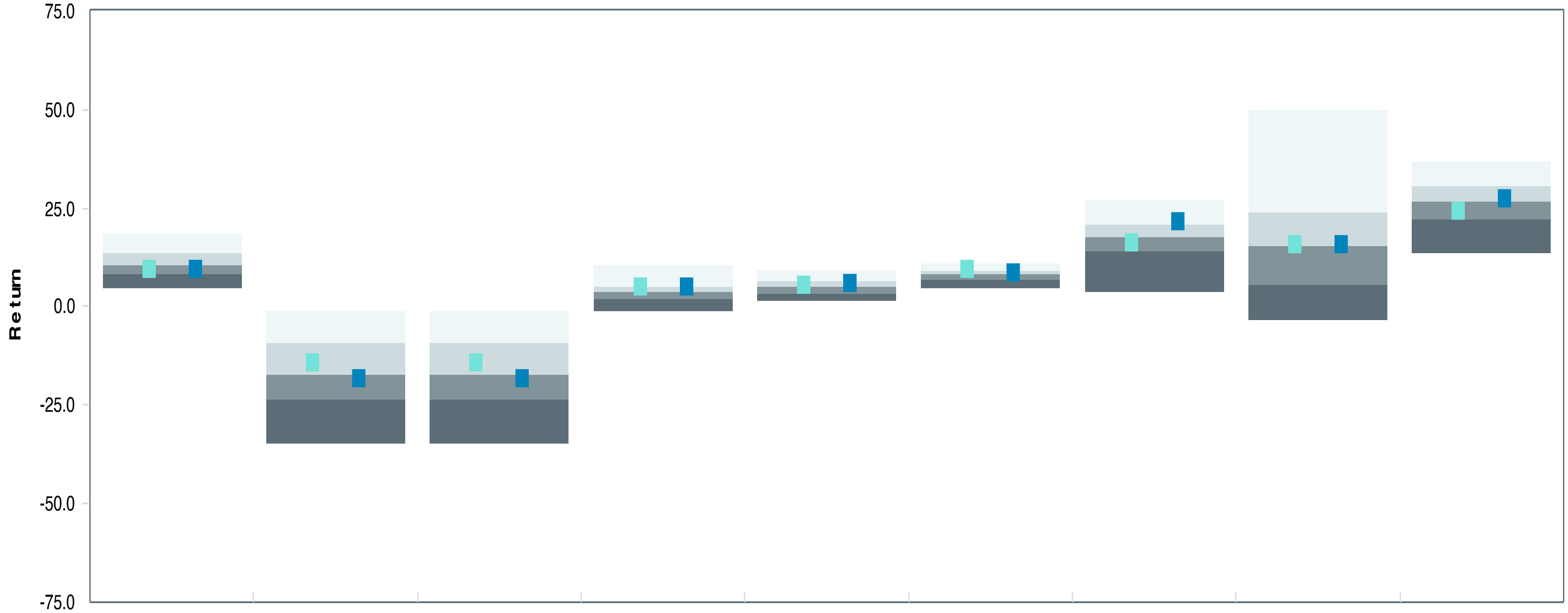
Ratio of Cumulative Wealth - Since Inception



D.E. Shaw

As of December 31, 2022

IM Global Equity (SA+CF)



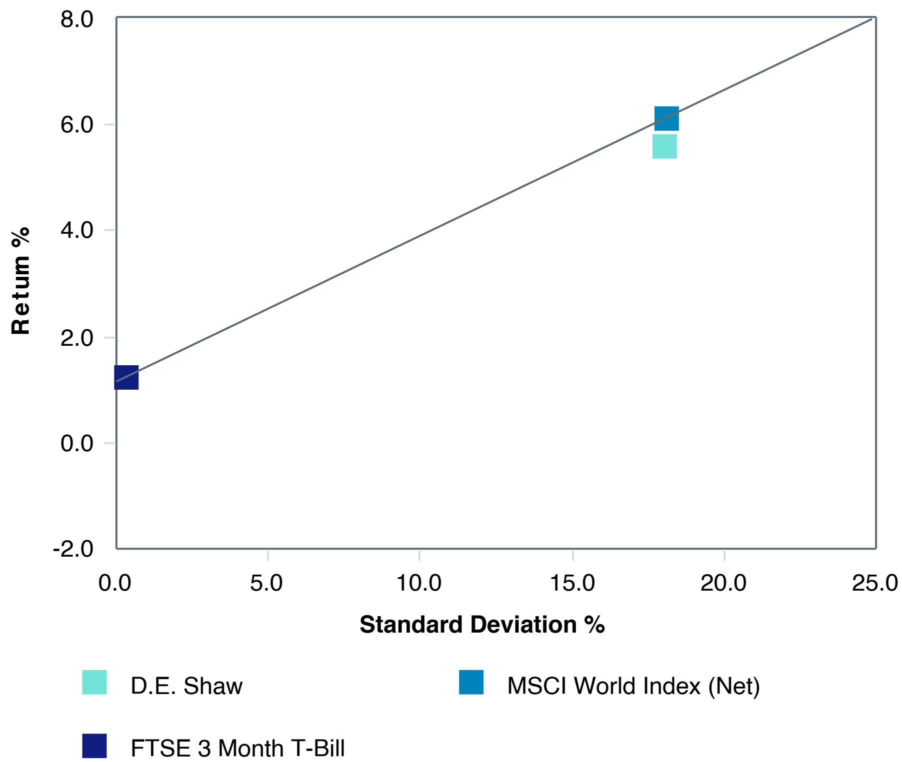
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
D.E. Shaw	9.5 (65)	-14.3 (40)	-14.3 (40)	5.0 (29)	5.6 (42)	9.7 (17)	16.3 (61)	16.1 (49)	24.2 (68)
MSCI World Index (Net)	9.8 (62)	-18.1 (54)	-18.1 (54)	4.9 (30)	6.1 (33)	8.9 (34)	21.8 (22)	15.9 (50)	27.7 (45)
5th Percentile	18.6	-1.1	-1.1	10.4	9.1	11.2	26.9	49.7	36.9
1st Quartile	13.8	-9.1	-9.1	5.4	6.7	9.3	21.0	24.1	30.6
Median	10.4	-17.1	-17.1	3.9	5.1	8.1	17.9	15.5	26.7
3rd Quartile	8.4	-23.7	-23.7	2.2	3.6	7.1	14.0	5.8	22.2
95th Percentile	4.7	-34.7	-34.7	-1.0	1.5	4.7	4.0	-3.2	13.6
Population	344	338	338	317	295	215	434	454	468

Parentheses contain percentile rankings.

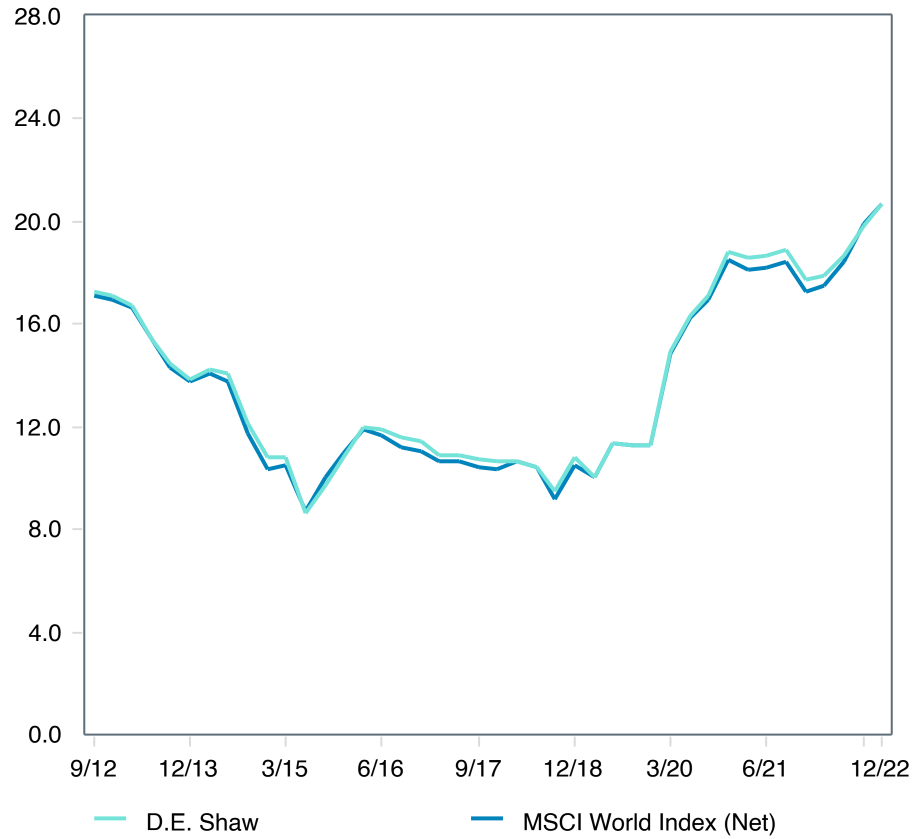
D.E. Shaw Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
D.E. Shaw	-0.53	2.62	-0.20	0.98	0.32	-0.42	0.99	5.59	18.02	0.99
MSCI World Index (Net)	0.00	0.00	-	1.00	0.35	0.00	1.00	6.14	18.09	1.00
FTSE 3 Month T-Bill	-6.36	18.12	-0.35	0.01	-	1.26	0.00	1.25	0.31	-0.09

238

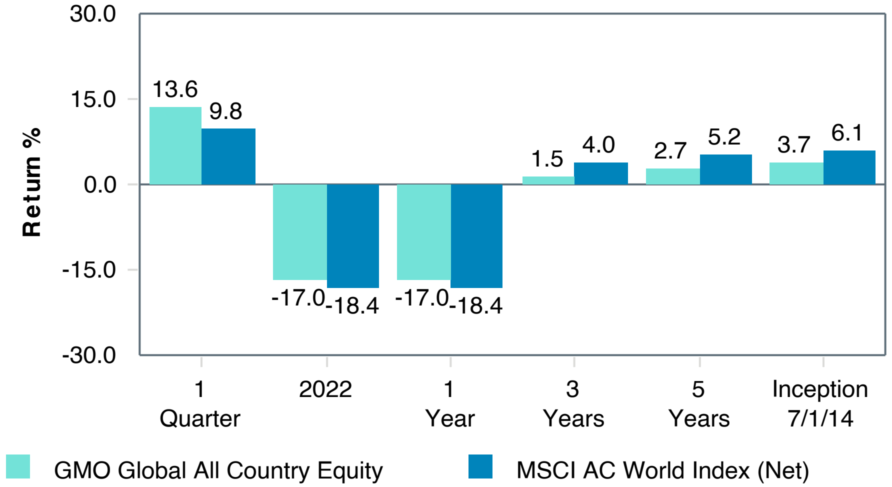
GMO Global All Country Equity Performance Summary

Account Information as of 12/31/22

Product Name :	GMO:Global Eq All;III (GMGEX)
Fund Family :	GMO
Ticker :	GMGEX
Peer Group :	IM Global Multi-Cap Core Equity (MF)
Benchmark :	MSCI AC World Index (Net)
Fund Inception :	11/26/1996
Portfolio Manager :	Team Managed
Total Assets :	$1,354.80 Million
Total Assets Date :	11/30/2022
Gross Expense :	0.60%
Net Expense :	0.59%
Turnover :	20%

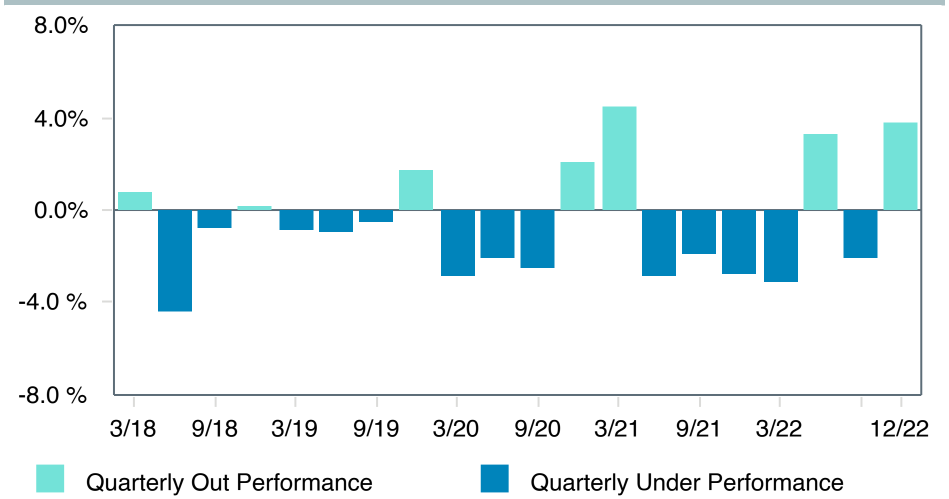
Return Summary

Return Summary



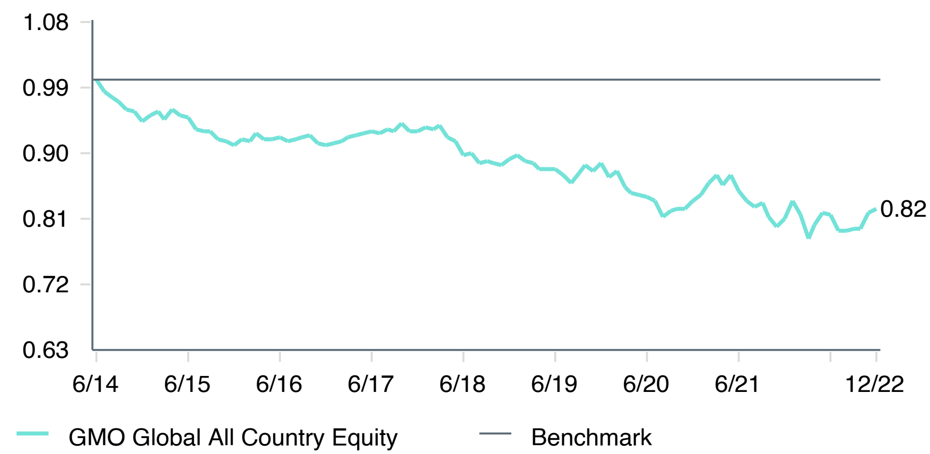
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

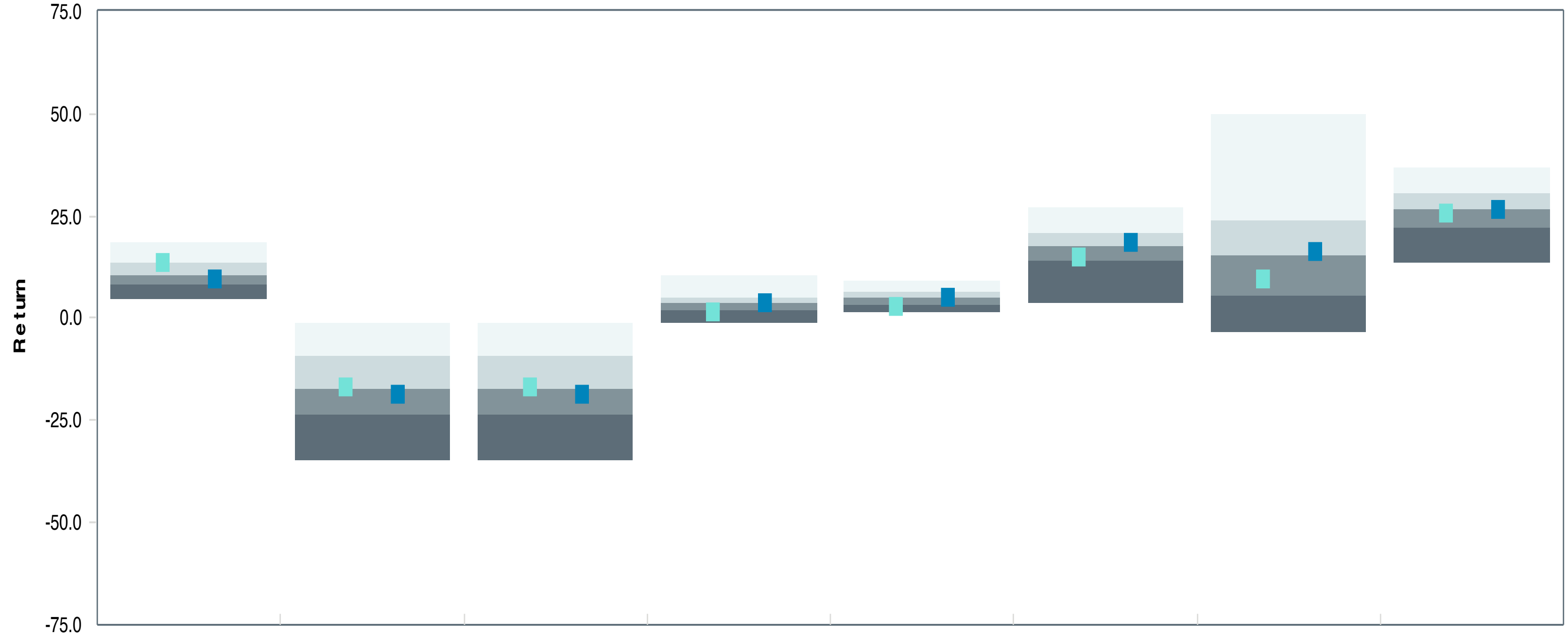


AON

GMO Global All Country Equity

As of December 31, 2022

IM Global Equity (SA+CF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	2021	2020	2019
GMO Global All Country Equity	13.6 (28)	-17.0 (50)	-17.0 (50)	1.5 (83)	2.7 (87)	15.0 (70)	9.5 (65)	25.8 (57)
MSCI AC World Index (Net)	9.8 (62)	-18.4 (55)	-18.4 (55)	4.0 (49)	5.2 (49)	18.5 (45)	16.3 (48)	26.6 (51)
5th Percentile	18.6	-1.1	-1.1	10.4	9.1	26.9	49.7	36.9
1st Quartile	13.8	-9.1	-9.1	5.4	6.7	21.0	24.1	30.6
Median	10.4	-17.1	-17.1	3.9	5.1	17.9	15.5	26.7
3rd Quartile	8.4	-23.7	-23.7	2.2	3.6	14.0	5.8	22.2
95th Percentile	4.7	-34.7	-34.7	-1.0	1.5	4.0	-3.2	13.6
Population	344	338	338	317	295	434	454	468

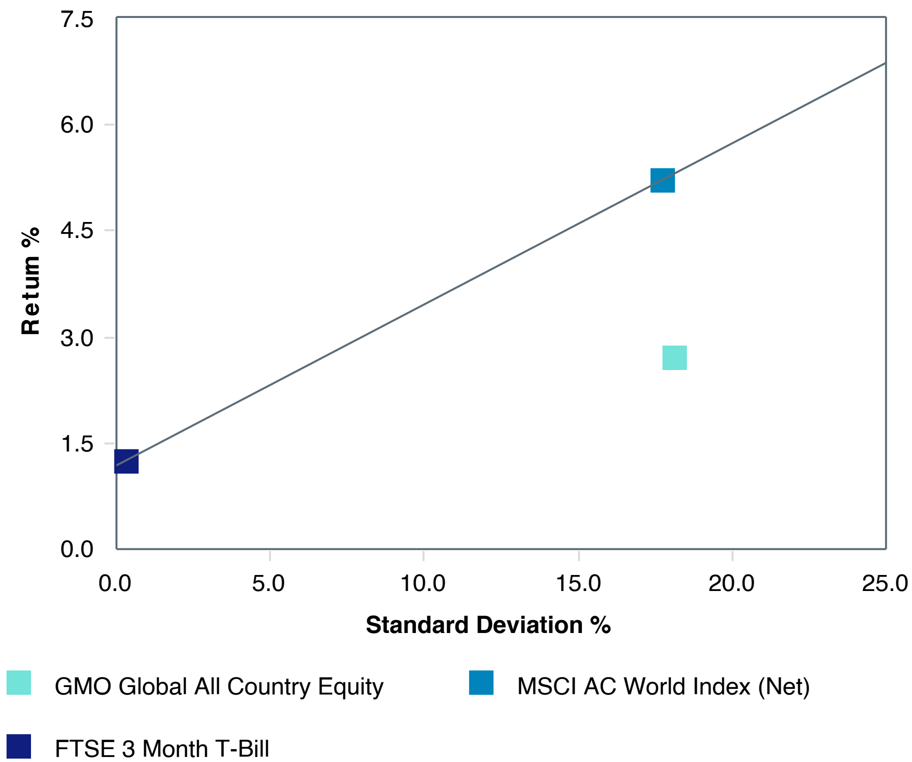
Parentheses contain percentile rankings.

AON

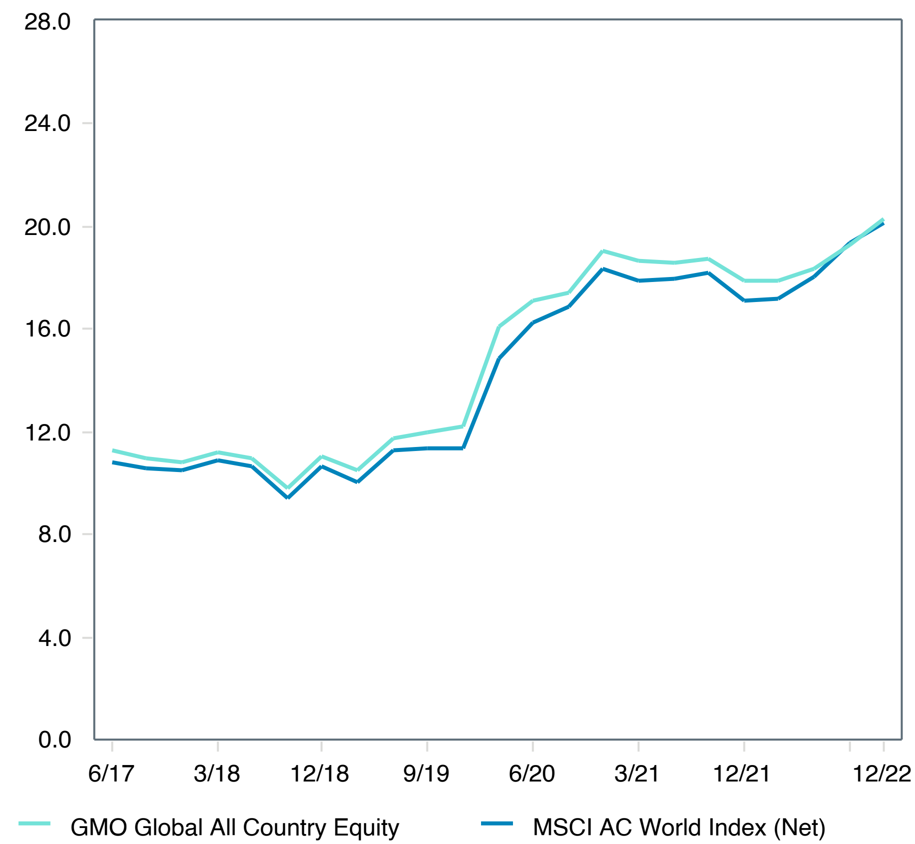
GMO Global All Country Equity Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
GMO Global All Country Equity	-2.37	5.18	-0.46	0.92	0.17	-2.21	0.98	2.70	18.11	0.96
MSCI AC World Index (Net)	0.00	0.00	-	1.00	0.31	0.00	1.00	5.23	17.72	1.00
FTSE 3 Month T-Bill	-5.43	17.75	-0.31	0.01	-	1.26	0.00	1.25	0.31	-0.09

Harris Global Equity Performance Summary

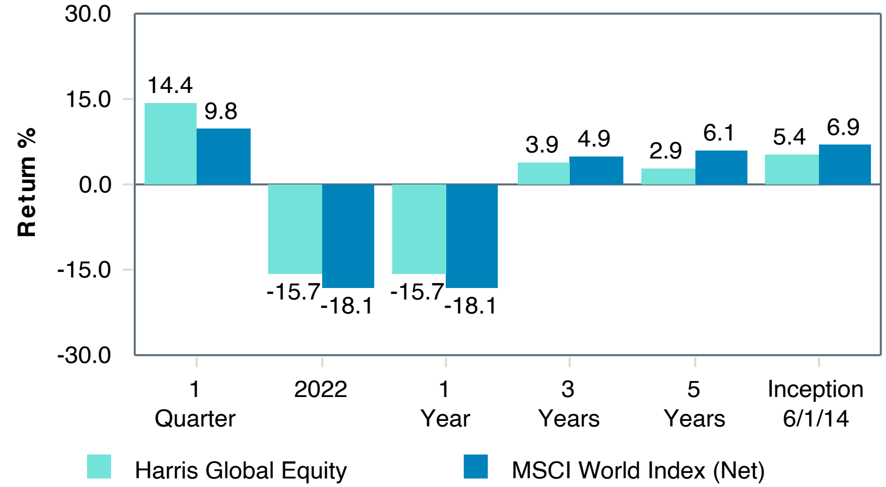
Account Information

Account Information

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

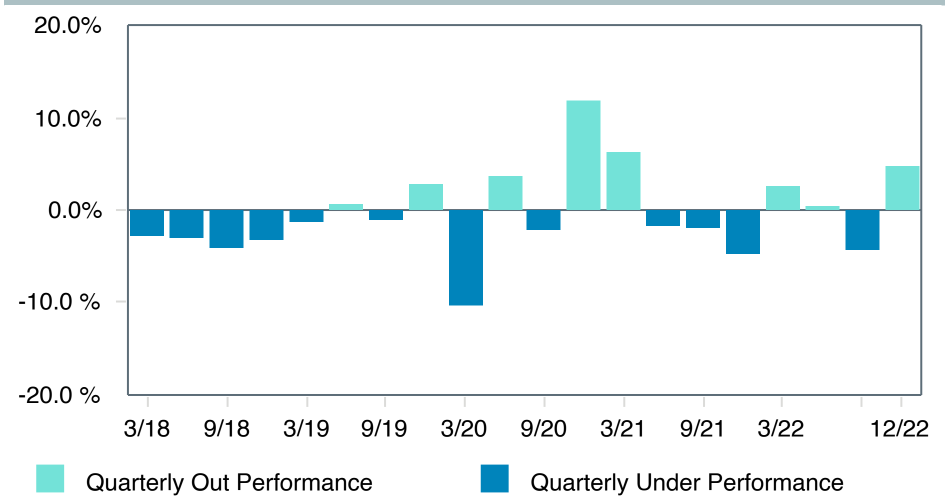
Return Summary

Return Summary



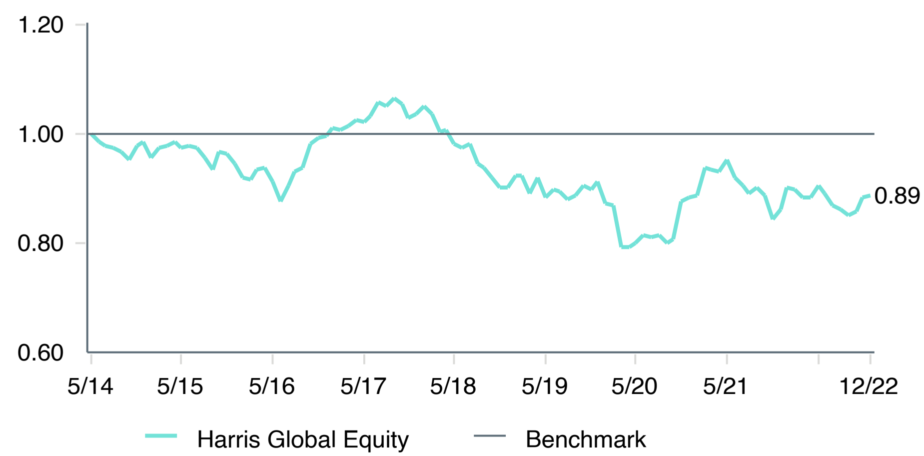
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

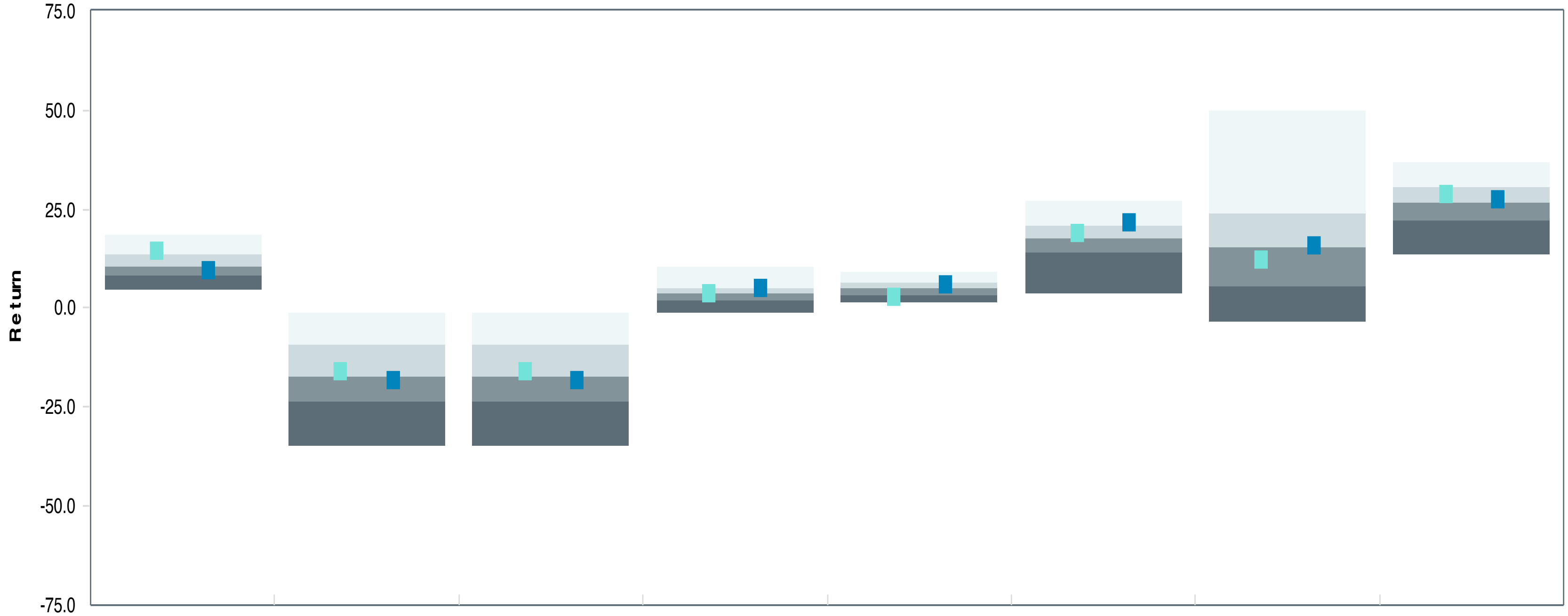


242

Harris Global Equity

As of December 31, 2022

IM Global Equity (SA+CF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	2021	2020	2019
Harris Global Equity	14.4 (21)	-15.7 (44)	-15.7 (44)	3.9 (50)	2.9 (86)	18.8 (42)	12.1 (59)	28.9 (37)
MSCI World Index (Net)	9.8 (62)	-18.1 (54)	-18.1 (54)	4.9 (30)	6.1 (33)	21.8 (22)	15.9 (50)	27.7 (45)
5th Percentile	18.6	-1.1	-1.1	10.4	9.1	26.9	49.7	36.9
1st Quartile	13.8	-9.1	-9.1	5.4	6.7	21.0	24.1	30.6
Median	10.4	-17.1	-17.1	3.9	5.1	17.9	15.5	26.7
3rd Quartile	8.4	-23.7	-23.7	2.2	3.6	14.0	5.8	22.2
95th Percentile	4.7	-34.7	-34.7	-1.0	1.5	4.0	-3.2	13.6
Population	344	338	338	317	295	434	454	468

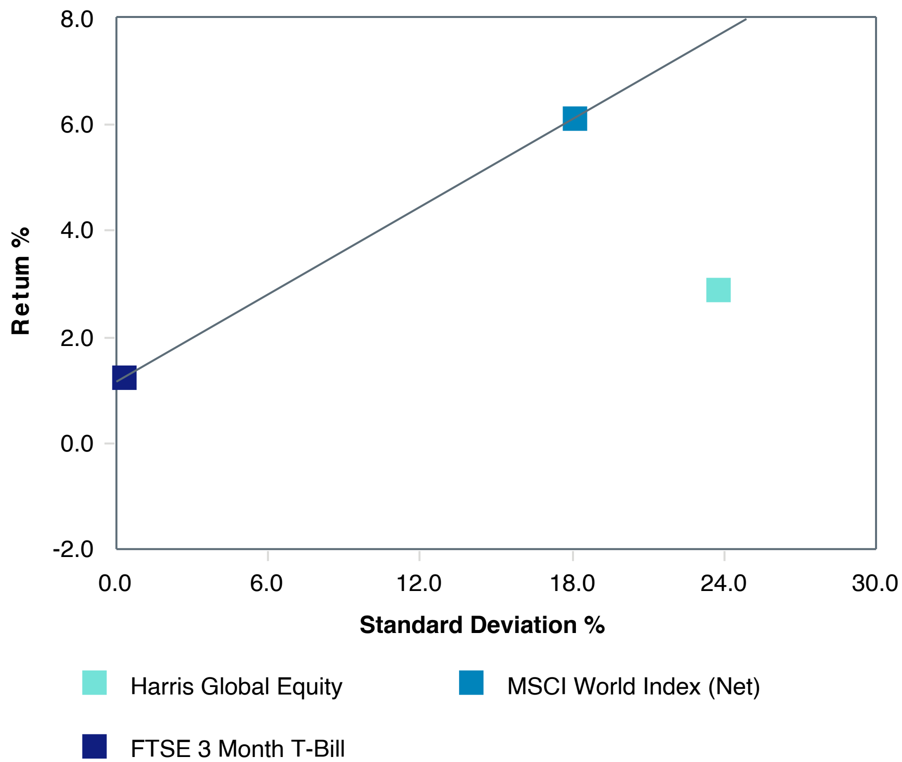
Parentheses contain percentile rankings.

AON

Harris Global Equity Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation

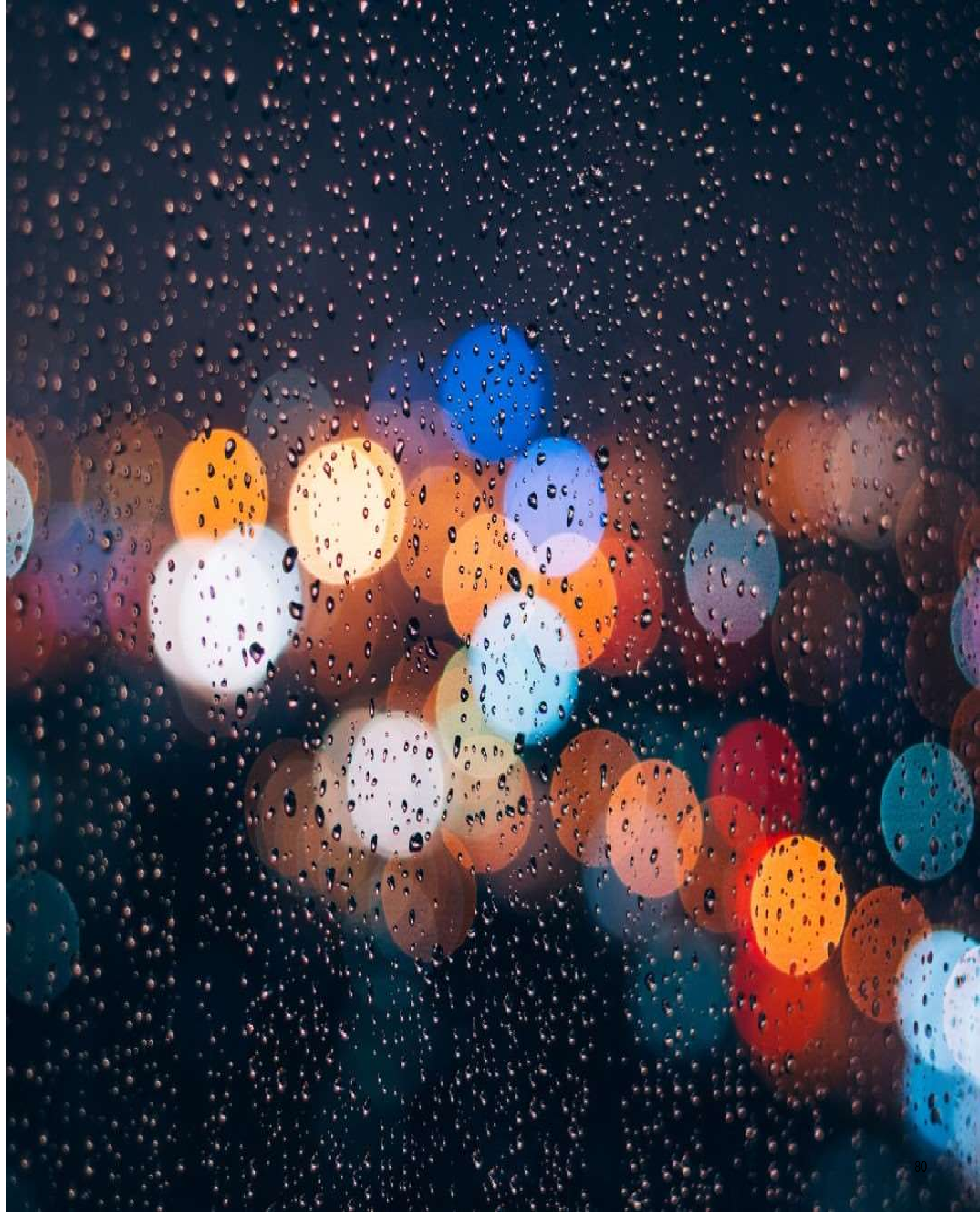
5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Harris Global Equity	-1.95	9.25	-0.21	0.88	0.19	-3.66	1.23	2.88	23.78	0.94
MSCI World Index (Net)	0.00	0.00	-	1.00	0.35	0.00	1.00	6.14	18.09	1.00
FTSE 3 Month T-Bill	-6.36	18.12	-0.35	0.01	-	1.26	0.00	1.25	0.31	-0.09

This Page Left Blank Intentionally

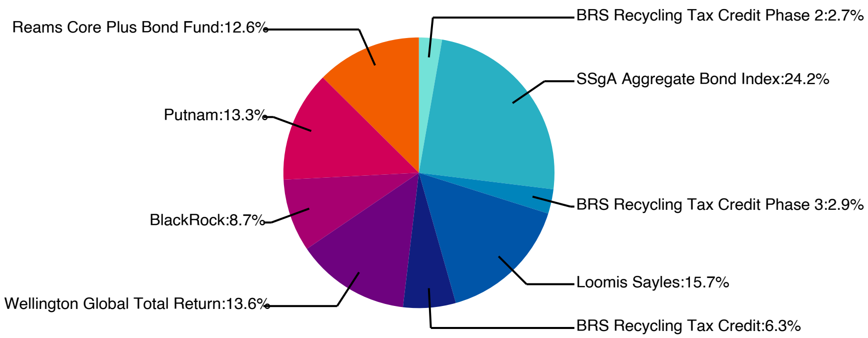
Fixed Income



Fixed Income Portfolio Overview

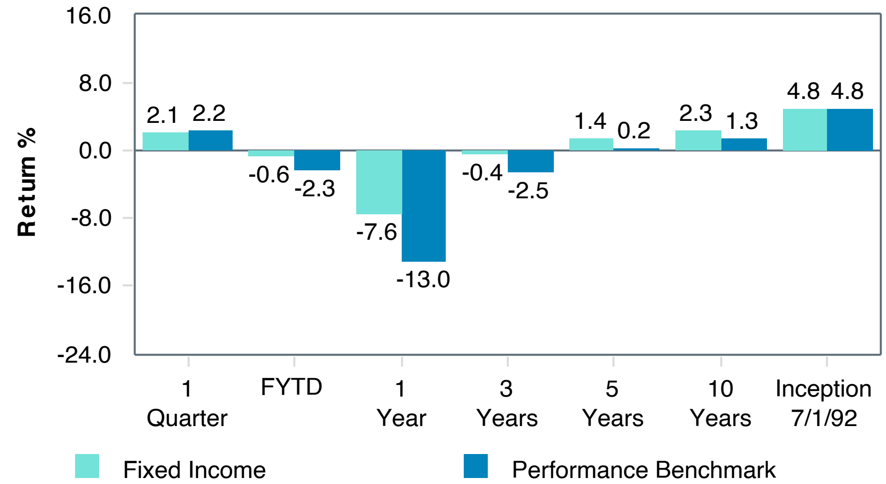
Current Allocation

December 31, 2022 : $2,807M



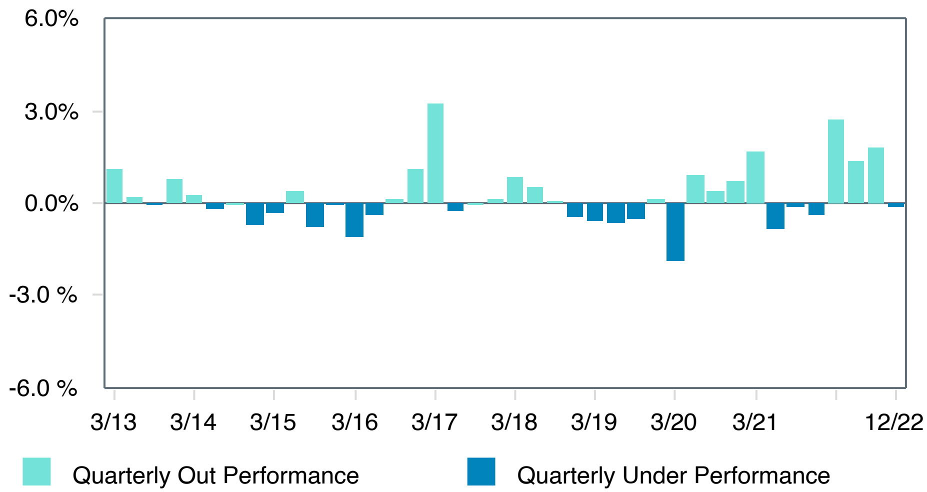
Return Summary

Return Summary



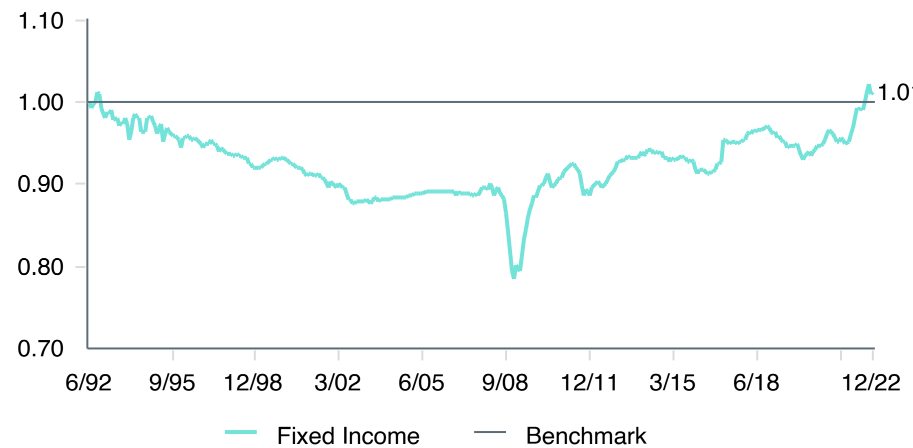
Quarterly Excess Performance

Quarterly Excess Performance



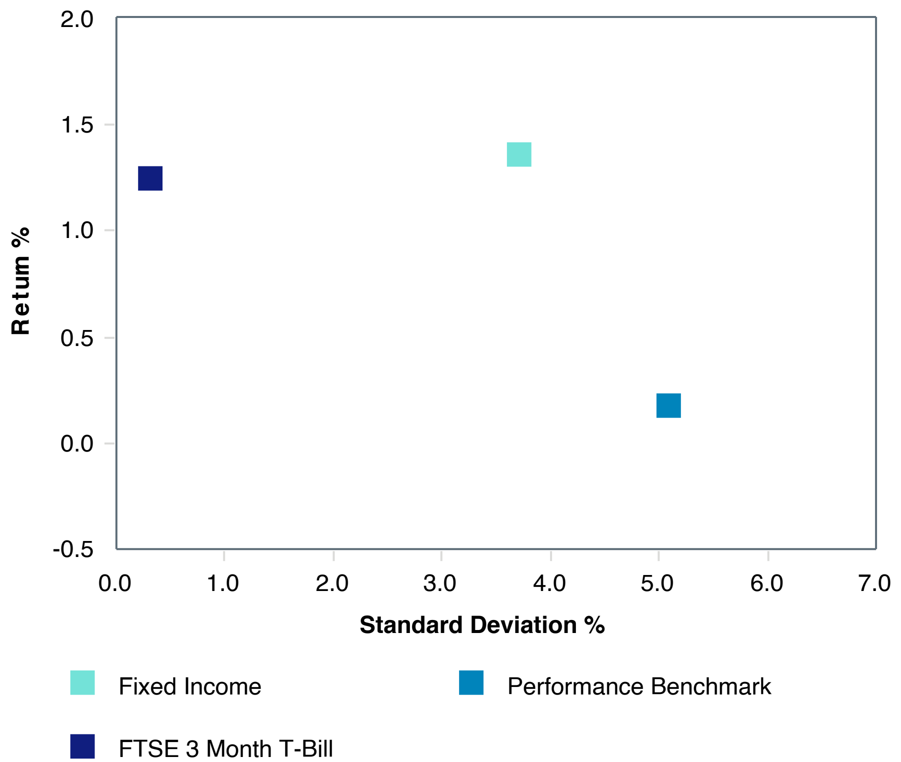
Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

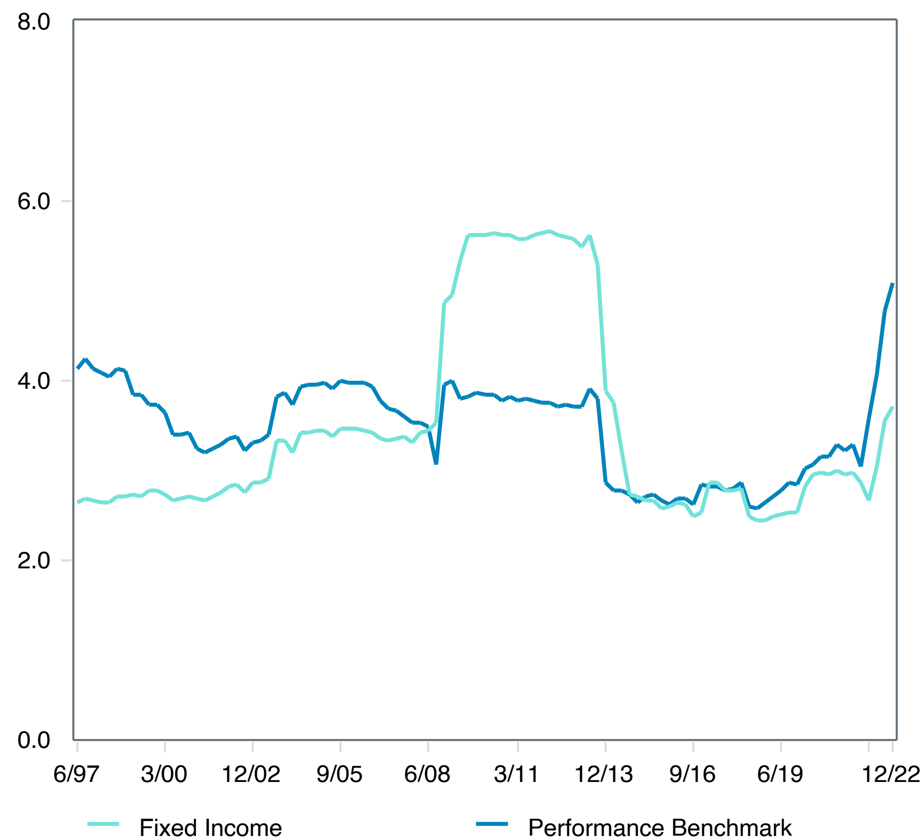


Fixed Income Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



Rolling 5 Years Standard Deviation



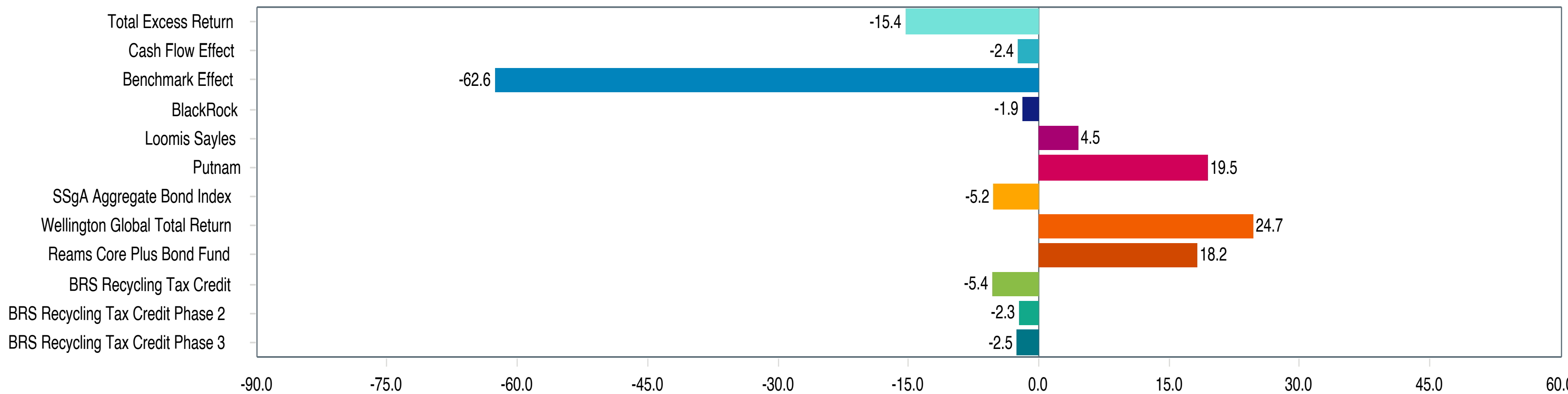
5 Years Historical Statistics

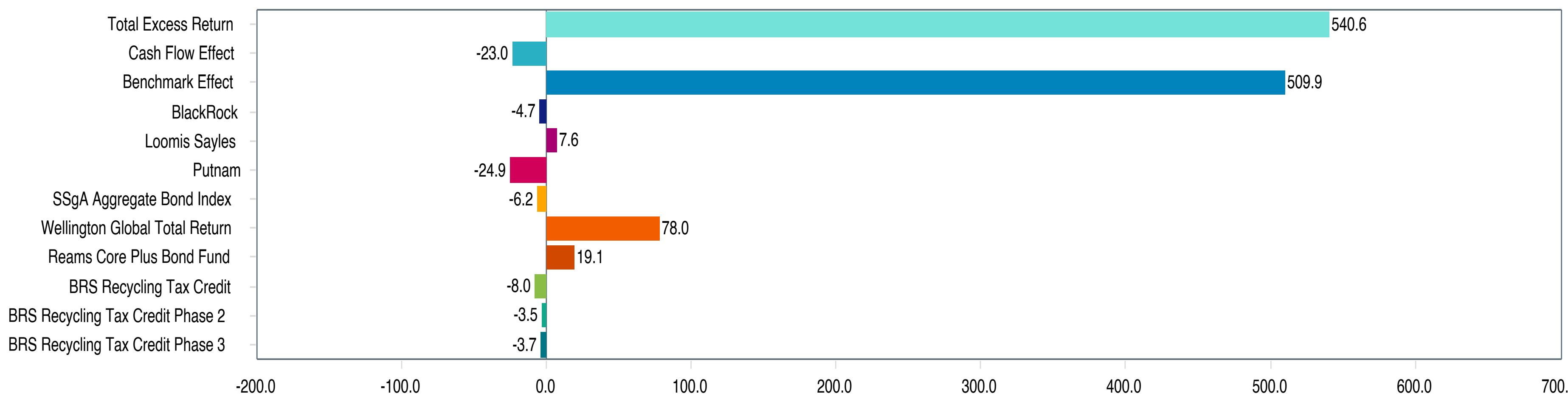
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Fixed Income	**1.11**	**1.82**	**0.61**	**0.93**	**0.05**	**1.21**	**0.70**	**1.36**	**3.72**	**0.96**
Performance Benchmark	0.00	0.00	-	1.00	-0.18	0.00	1.00	0.18	5.09	1.00
FTSE 3 Month T-Bill	0.93	5.04	0.18	0.04	-	1.24	0.01	1.25	0.31	0.21

Asset Class Attribution

As of December 31, 2022





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

BlackRock Performance Summary

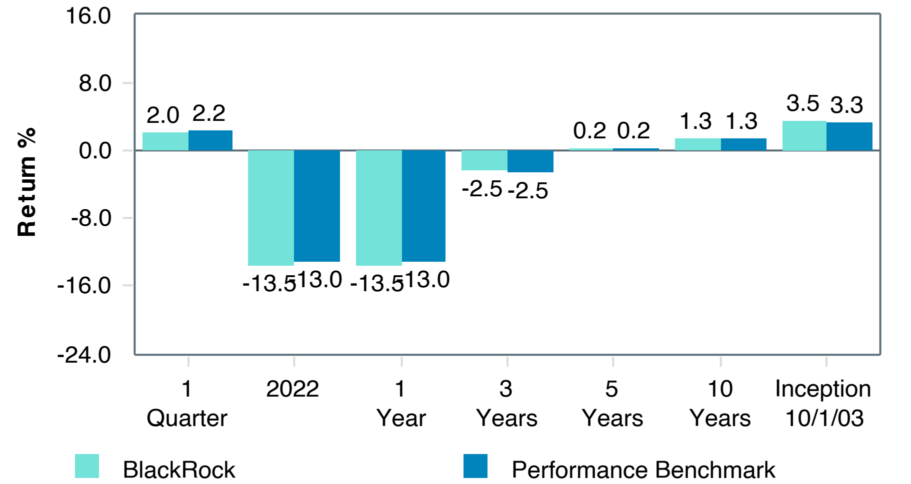
Account Information

Account Information

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

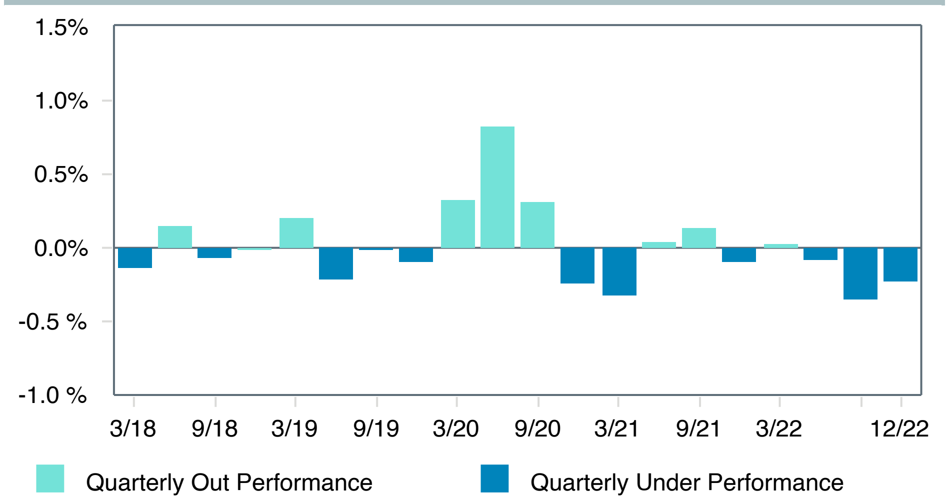
Return Summary

Return Summary



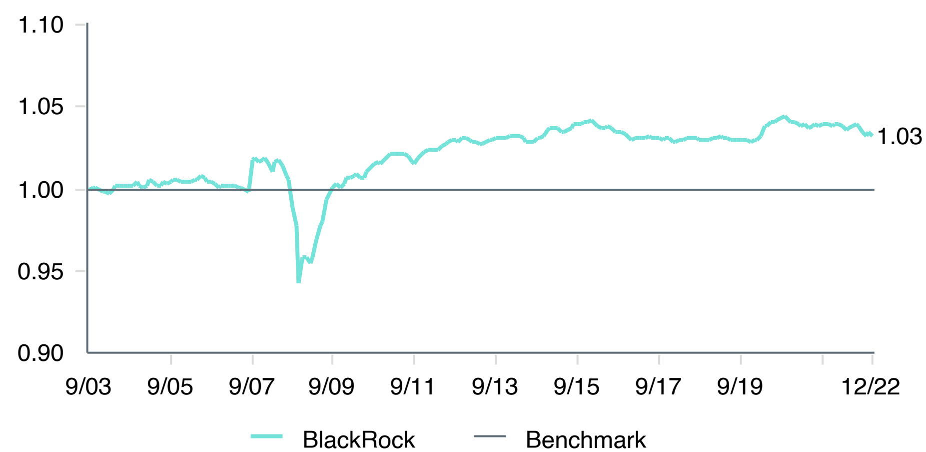
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

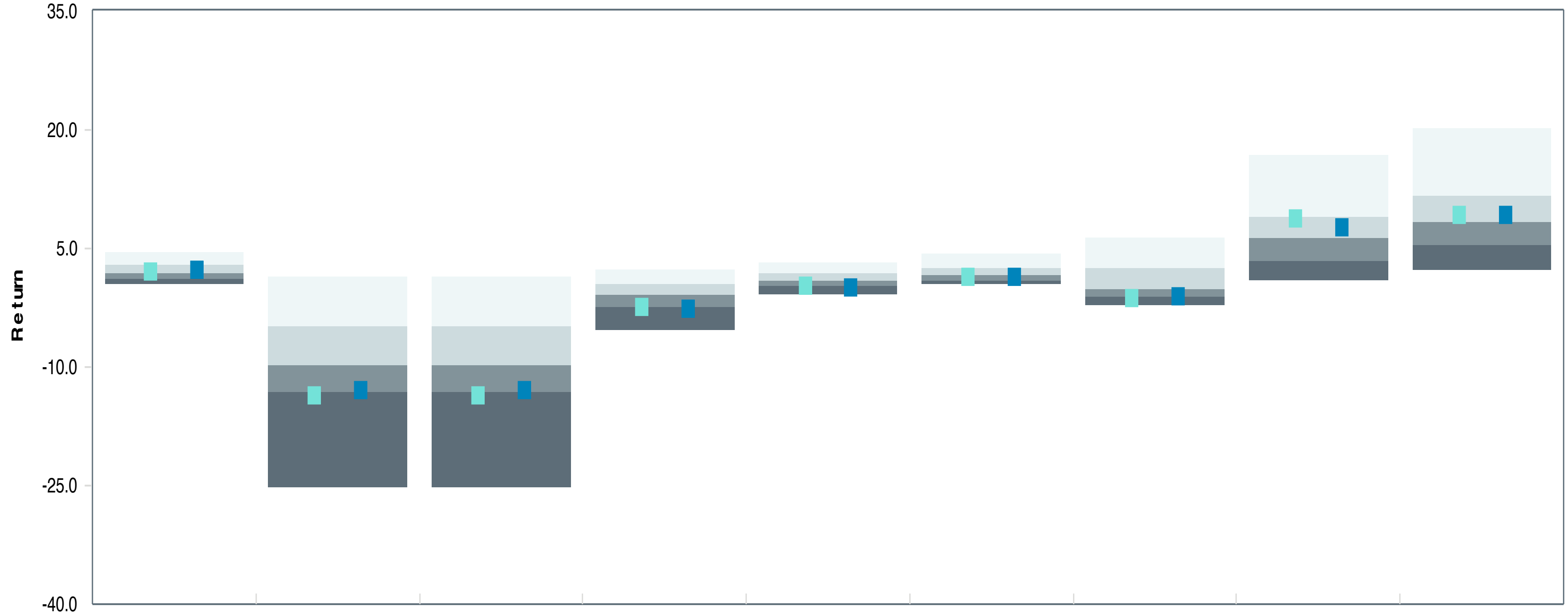
Ratio of Cumulative Wealth - Since Inception



BlackRock

As of December 31, 2022

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



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
BlackRock	2.0 (47)	-13.5 (80)	-13.5 (80)	-2.5 (78)	0.2 (80)	1.3 (60)	-1.4 (82)	8.8 (27)	9.2 (40)
Performance Benchmark	2.2 (40)	-13.0 (73)	-13.0 (73)	-2.5 (80)	0.2 (81)	1.3 (61)	-1.1 (74)	7.6 (38)	9.3 (39)
5th Percentile	4.5	1.4	1.4	2.3	3.2	4.2	6.4	16.8	20.3
1st Quartile	3.0	-4.9	-4.9	0.5	1.8	2.5	2.6	8.9	11.7
Median	1.9	-9.8	-9.8	-0.9	0.9	1.6	-0.1	6.4	8.4
3rd Quartile	1.2	-13.2	-13.2	-2.3	0.3	1.1	-1.1	3.5	5.4
95th Percentile	0.5	-25.2	-25.2	-5.2	-0.8	0.6	-2.1	0.9	2.4
Population	836	815	815	791	754	629	1,214	1,275	1,299

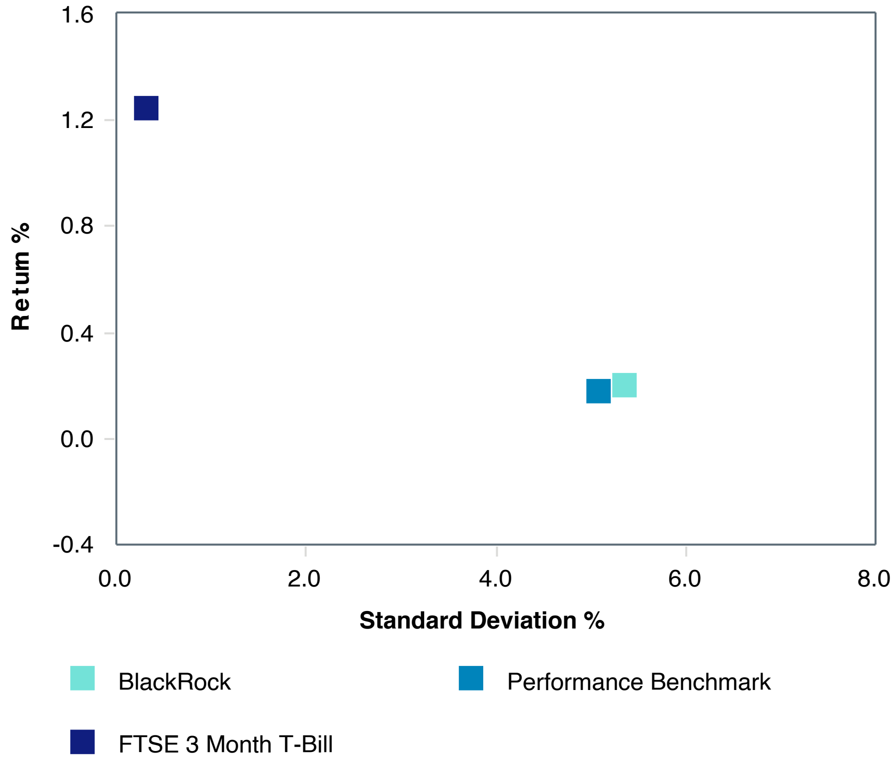
Parentheses contain percentile rankings.

AON

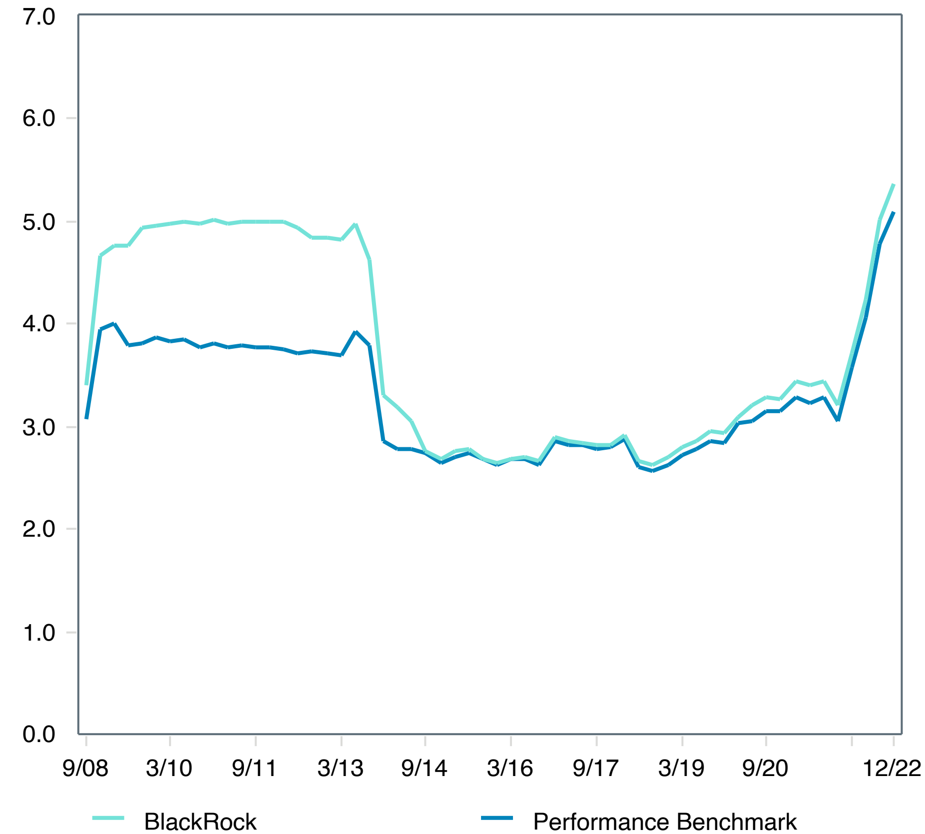
BlackRock Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation 5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
BlackRock	0.04	0.50	0.07	0.99	-0.17	0.02	1.05	0.20	5.36	1.00
Performance Benchmark	0.00	0.00	-	1.00	-0.18	0.00	1.00	0.18	5.09	1.00
FTSE 3 Month T-Bill	0.93	5.04	0.18	0.04	-	1.24	0.01	1.25	0.31	0.21

Loomis Sayles Performance Summary

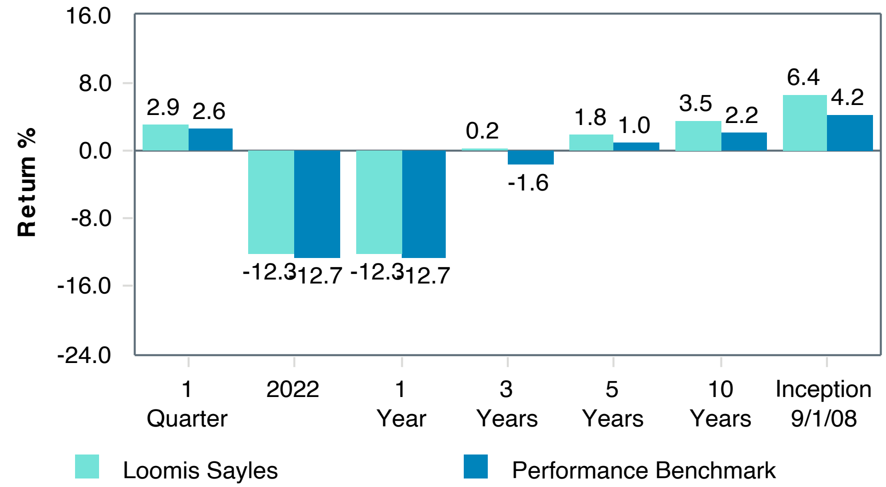
Account Information

Account Information

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

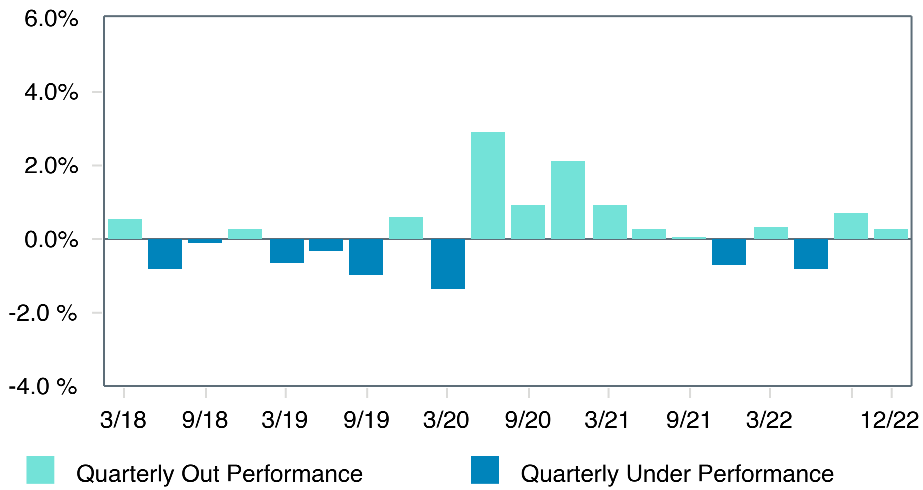
Return Summary

Return Summary



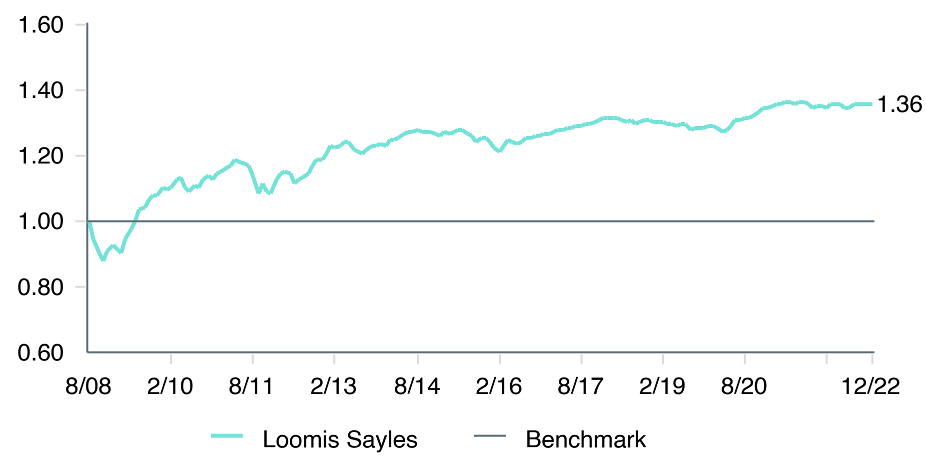
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

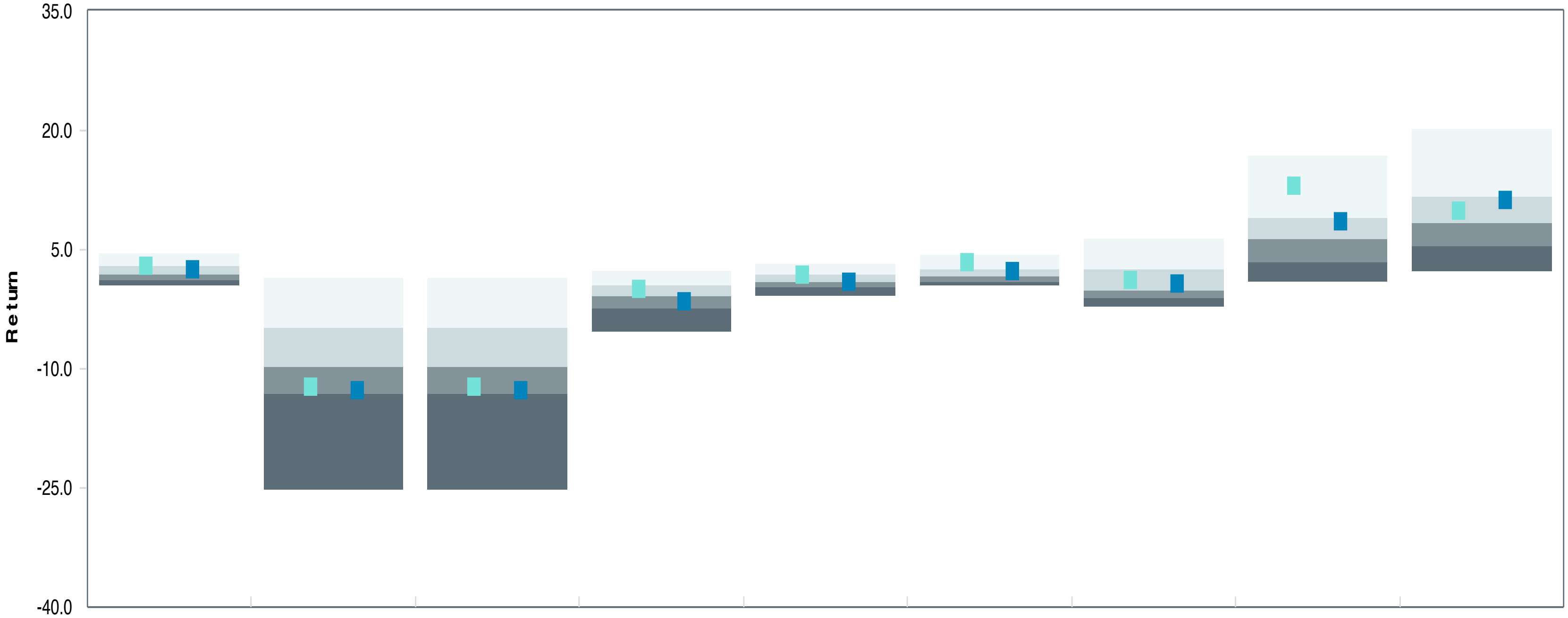
Ratio of Cumulative Wealth - Since Inception



Loomis Sayles

As of December 31, 2022

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



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Loomis Sayles	2.9 (27)	-12.3 (65)	-12.3 (65)	0.2 (29)	1.8 (25)	3.5 (13)	1.2 (33)	13.1 (10)	10.0 (32)
Performance Benchmark	2.6 (32)	-12.7 (70)	-12.7 (70)	-1.6 (63)	1.0 (48)	2.2 (29)	0.7 (37)	8.5 (29)	11.4 (26)
5th Percentile	4.5	1.4	1.4	2.3	3.2	4.2	6.4	16.8	20.3
1st Quartile	3.0	-4.9	-4.9	0.5	1.8	2.5	2.6	8.9	11.7
Median	1.9	-9.8	-9.8	-0.9	0.9	1.6	-0.1	6.4	8.4
3rd Quartile	1.2	-13.2	-13.2	-2.3	0.3	1.1	-1.1	3.5	5.4
95th Percentile	0.5	-25.2	-25.2	-5.2	-0.8	0.6	-2.1	0.9	2.4
Population	836	815	815	791	754	629	1,214	1,275	1,299

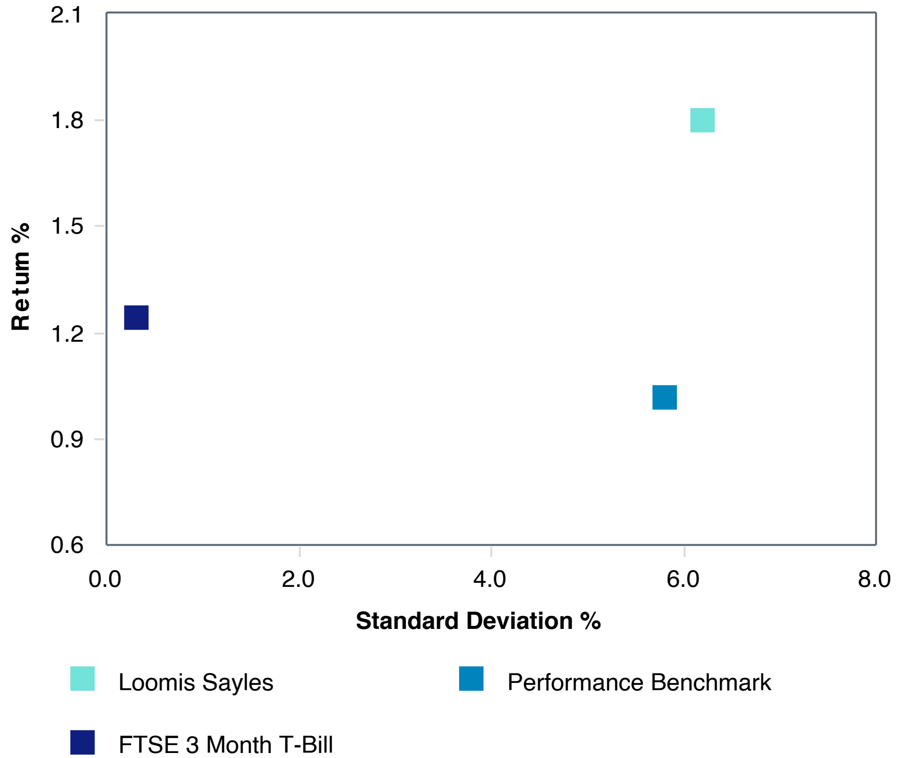
Parentheses contain percentile rankings.

AON

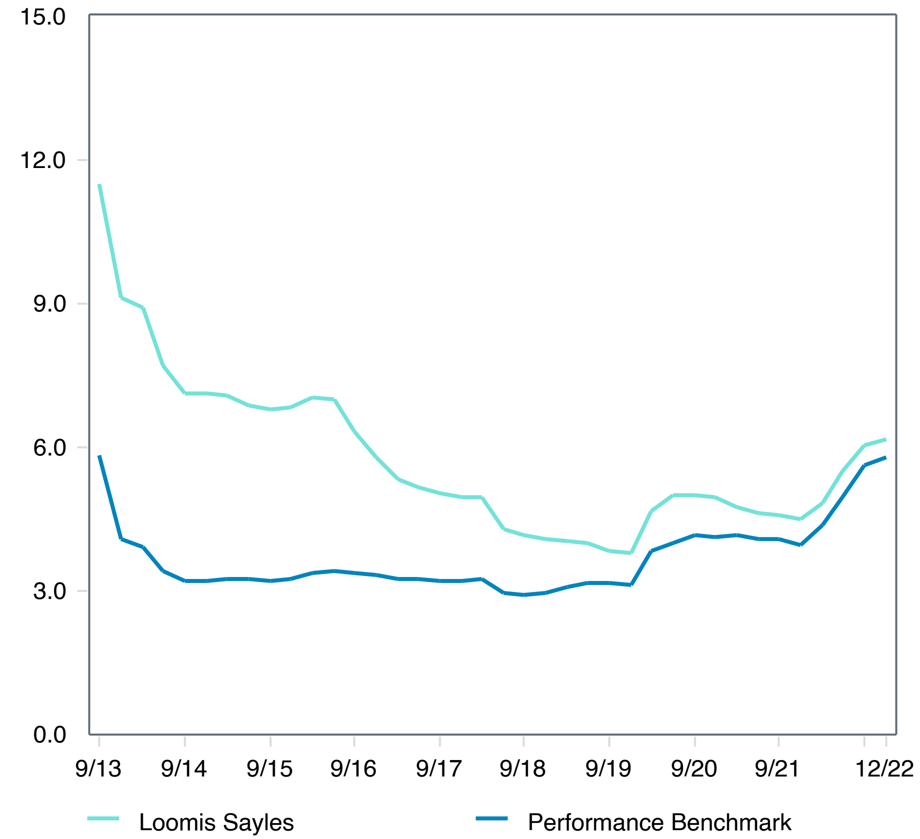
Loomis Sayles Risk Profile

Annualized Return vs. Annualized Standard Deviation
5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Loomis Sayles	0.80	1.70	0.47	0.93	0.12	0.77	1.03	1.80	6.19	0.96
Performance Benchmark	0.00	0.00	-	1.00	-0.01	0.00	1.00	1.02	5.80	1.00
FTSE 3 Month T-Bill	0.06	5.77	0.01	0.02	-	1.24	0.01	1.25	0.31	0.13

Putnam Performance Summary

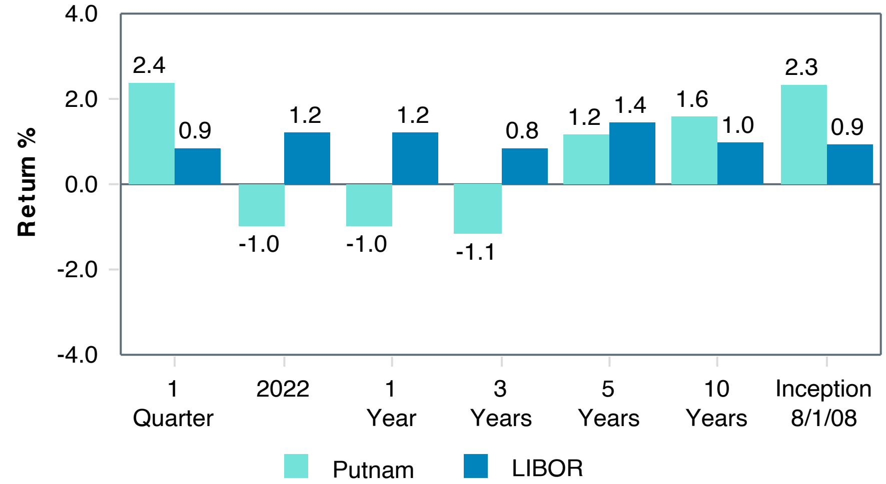
Account Information

Account Information

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

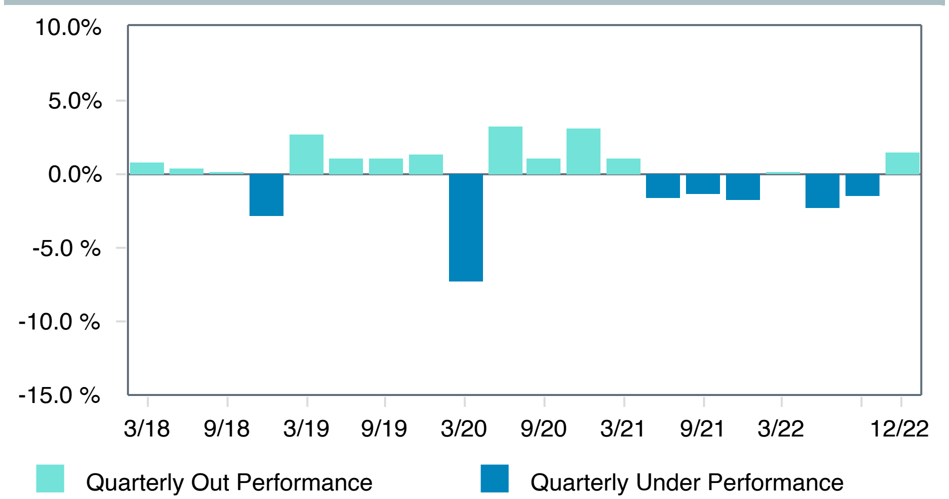
Return Summary

Return Summary



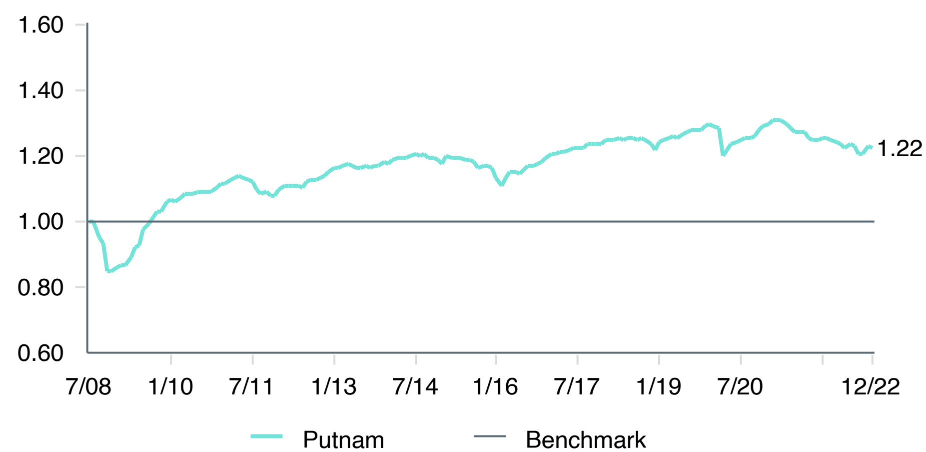
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

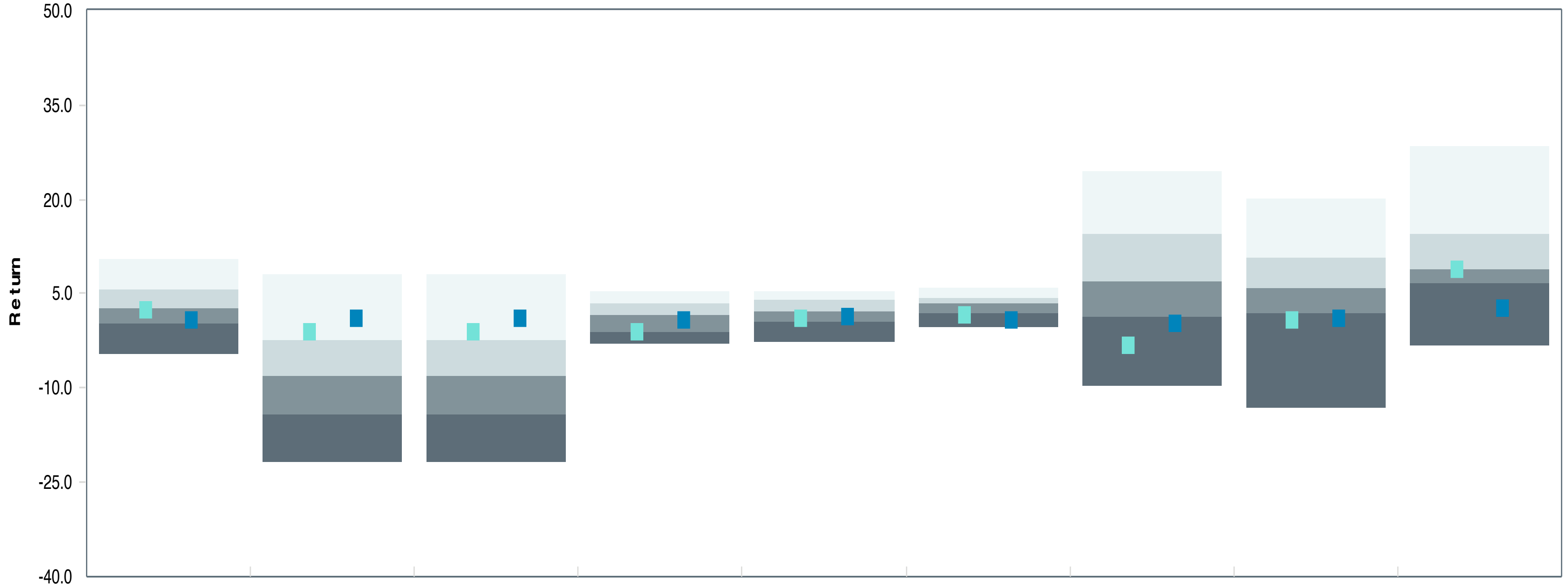
Ratio of Cumulative Wealth - Since Inception



Putnam

As of December 31, 2022

IM Absolute Return (MF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
Putnam	2.4 (53)	-1.0 (21)	-1.0 (21)	-1.1 (79)	1.2 (71)	1.6 (83)	-3.3 (89)	0.9 (78)	9.0 (50)
LIBOR	0.9 (72)	1.2 (13)	1.2 (13)	0.8 (61)	1.4 (64)	1.0 (91)	0.2 (82)	1.1 (78)	2.6 (90)
5th Percentile	10.5	8.2	8.2	5.5	5.5	5.9	24.4	20.2	28.6
1st Quartile	5.7	-2.5	-2.5	3.5	4.0	4.5	14.6	10.7	14.5
Median	2.8	-7.9	-7.9	1.5	2.2	3.4	7.1	6.0	8.9
3rd Quartile	0.2	-14.3	-14.3	-1.0	0.4	1.8	1.5	1.9	6.7
95th Percentile	-4.5	-21.8	-21.8	-3.0	-2.6	-0.2	-9.7	-13.1	-3.3
Population	45	45	45	42	38	12	48	46	45

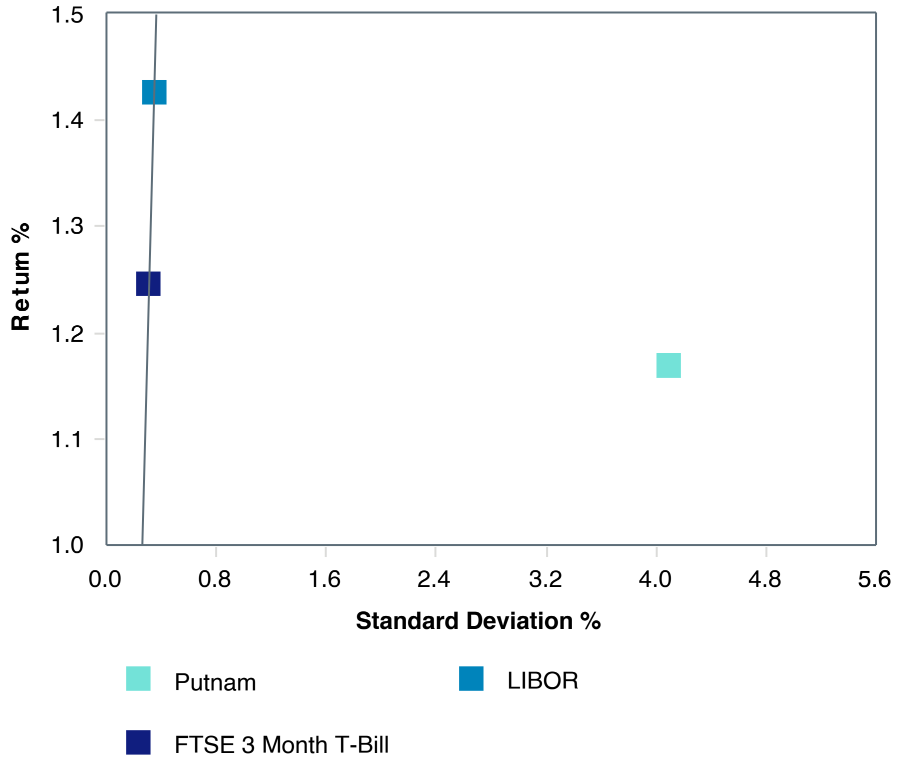
Parentheses contain percentile rankings.

257

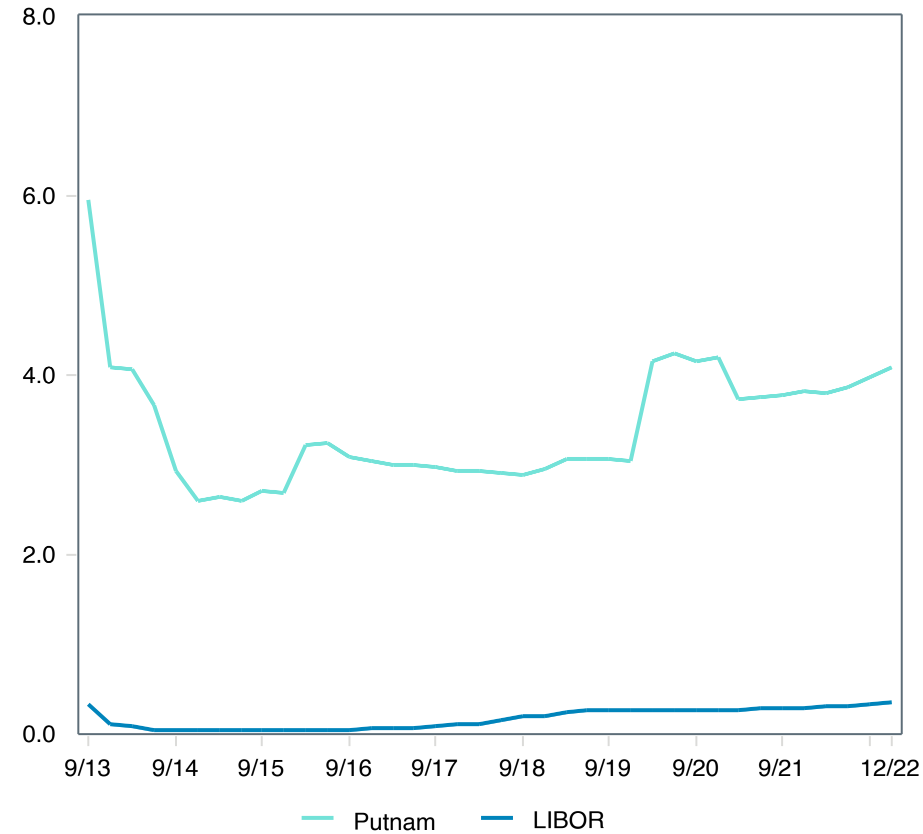
AON

Putnam Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years



Rolling 5 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Putnam	-0.17	4.02	-0.04	0.05	0.00	-2.41	2.60	1.17	4.09	0.22
LIBOR	0.00	0.00	-	1.00	1.26	0.00	1.00	1.43	0.35	1.00
FTSE 3 Month T-Bill	-0.18	0.14	-1.26	0.84	-	0.09	0.81	1.25	0.31	0.91

SSgA Aggregate Bond Index Performance Summary

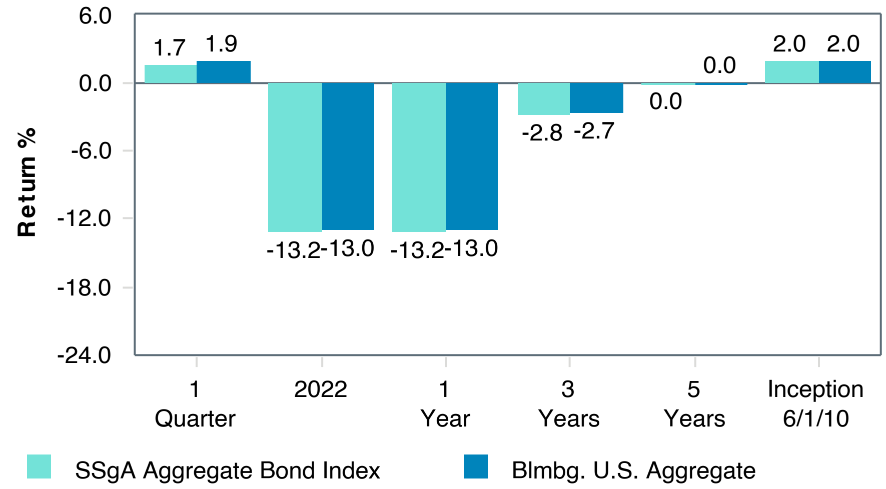
Account Information

Account Information

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

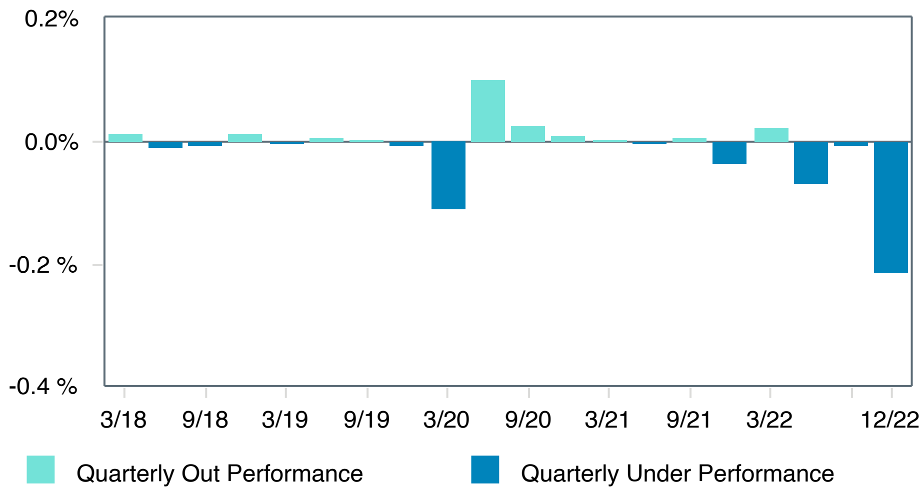
Return Summary

Return Summary



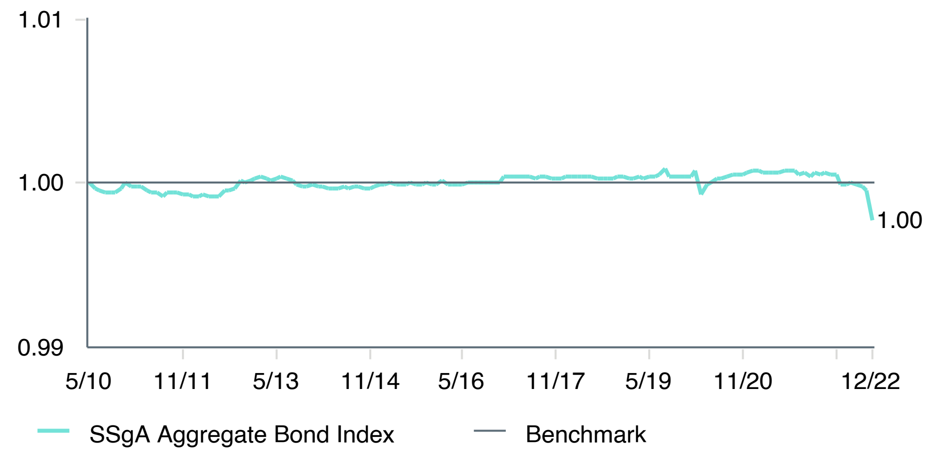
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

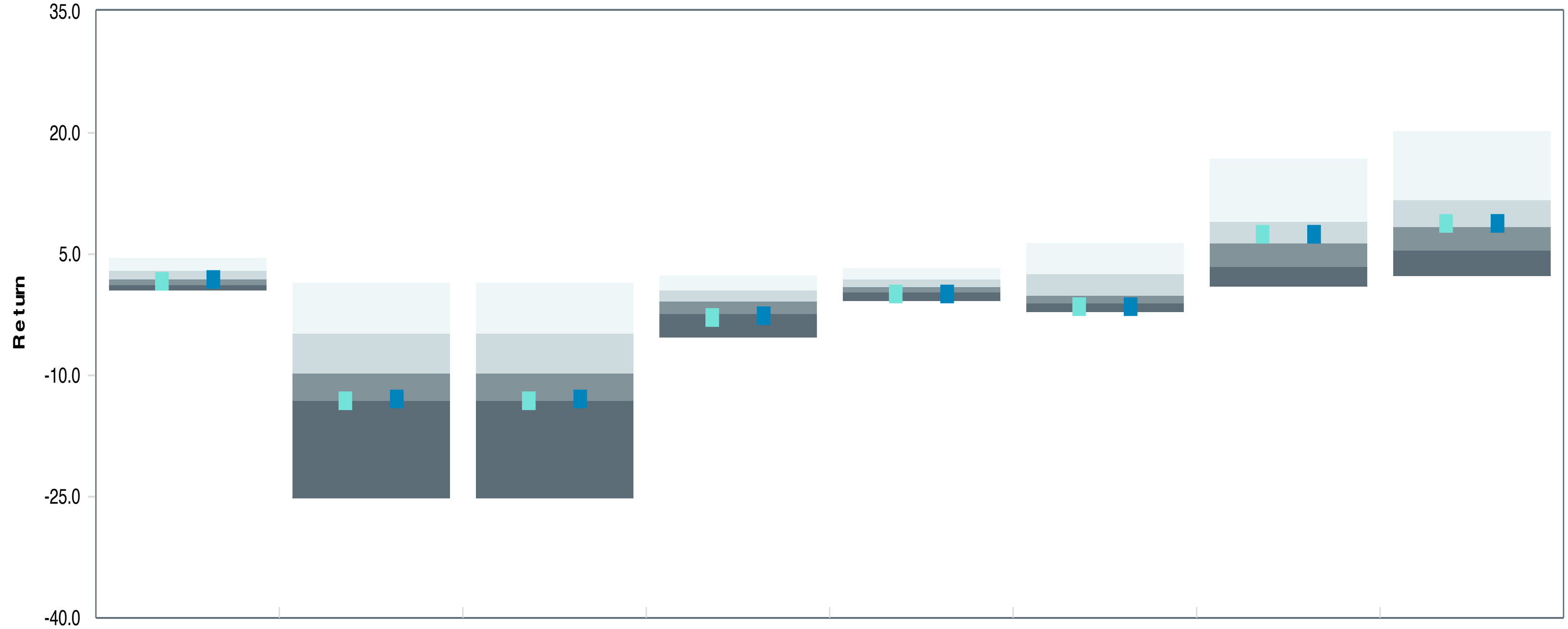
Ratio of Cumulative Wealth - Since Inception



SSgA Aggregate Bond Index

As of December 31, 2022

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



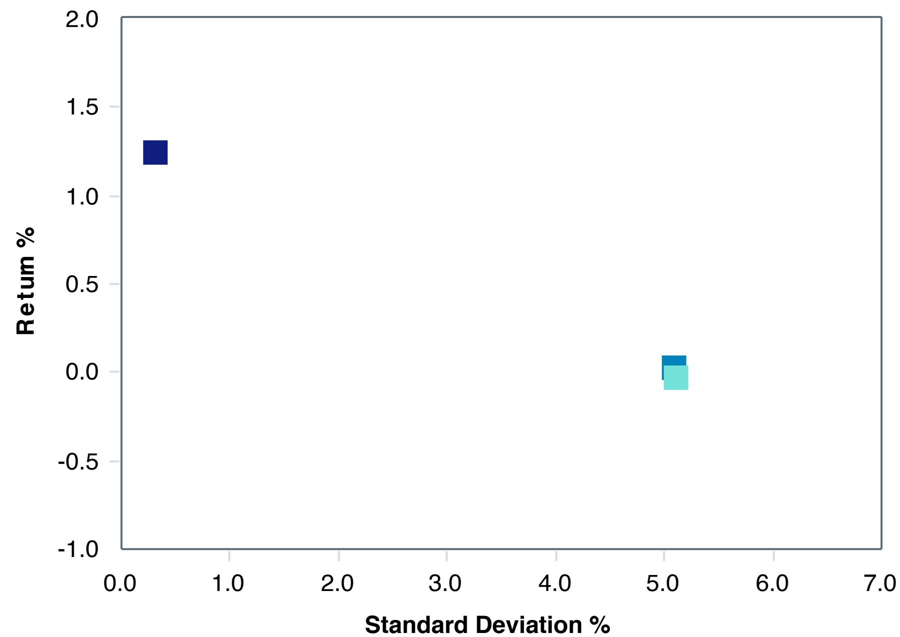
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	2021	2020	2019
SSgA Aggregate Bond Index	1.7 (61)	-13.2 (77)	-13.2 (77)	-2.8 (85)	0.0 (86)	-1.6 (87)	7.5 (39)	8.7 (46)
Blmbg. U.S. Aggregate	1.9 (52)	-13.0 (73)	-13.0 (73)	-2.7 (84)	0.0 (85)	-1.5 (86)	7.5 (39)	8.7 (46)
5th Percentile	4.5	1.4	1.4	2.3	3.2	6.4	16.8	20.3
1st Quartile	3.0	-4.9	-4.9	0.5	1.8	2.6	8.9	11.7
Median	1.9	-9.8	-9.8	-0.9	0.9	-0.1	6.4	8.4
3rd Quartile	1.2	-13.2	-13.2	-2.3	0.3	-1.1	3.5	5.4
95th Percentile	0.5	-25.2	-25.2	-5.2	-0.8	-2.1	0.9	2.4
Population	836	815	815	791	754	1,214	1,275	1,299

Parentheses contain percentile rankings.

SSgA Aggregate Bond Index Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

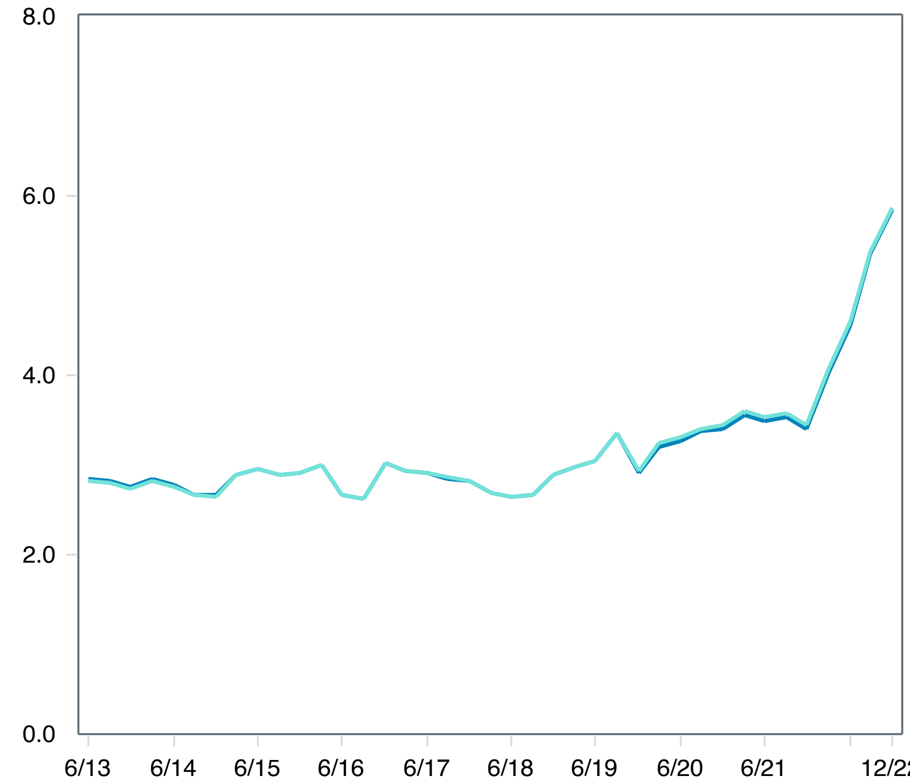
Annualized Return vs. Annualized Standard Deviation
5 Years



SSgA Aggregate Bond Index Blmbg. U.S. Aggregate

FTSE 3 Month T-Bill

Rolling 3 Years Standard Deviation



SSgA Aggregate Bond Index Blmbg. U.S. Aggregate

5 Years Historical Statistics

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	-0.05	0.12	-0.43	1.00	-0.23	-0.05	1.00	-0.03	5.11	1.00
Blmbg. U.S. Aggregate	0.00	0.00	-	1.00	-0.22	0.00	1.00	0.02	5.09	1.00
FTSE 3 Month T-Bill	1.09	5.03	0.22	0.05	-	1.24	0.01	1.25	0.31	0.22

261

Wellington Global Total Return Performance Summary

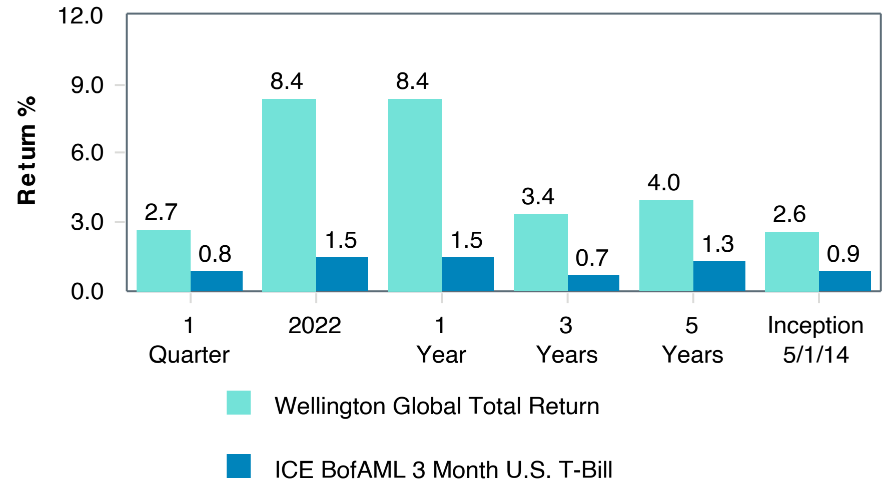
Account Information

Account Information

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

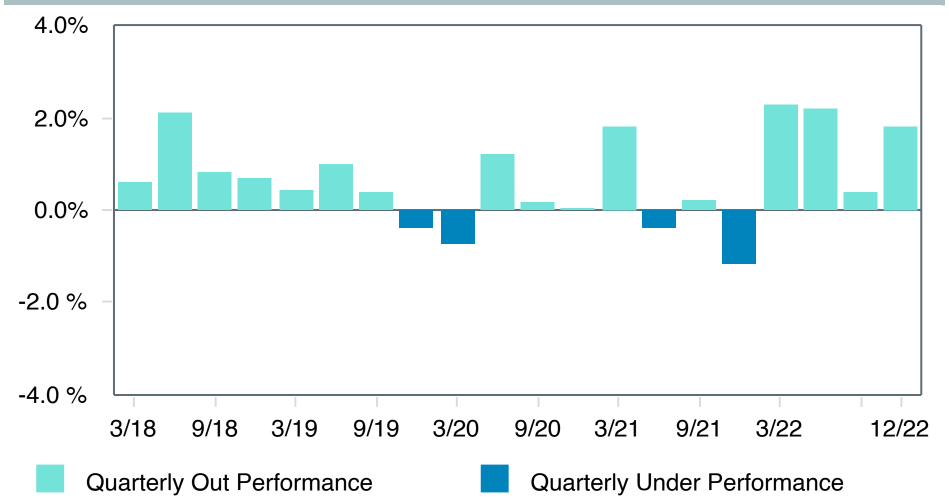
Return Summary

Return Summary



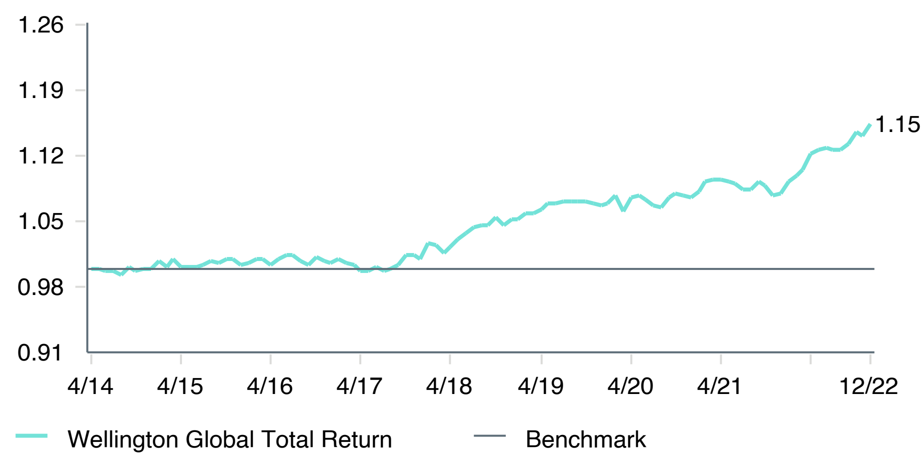
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

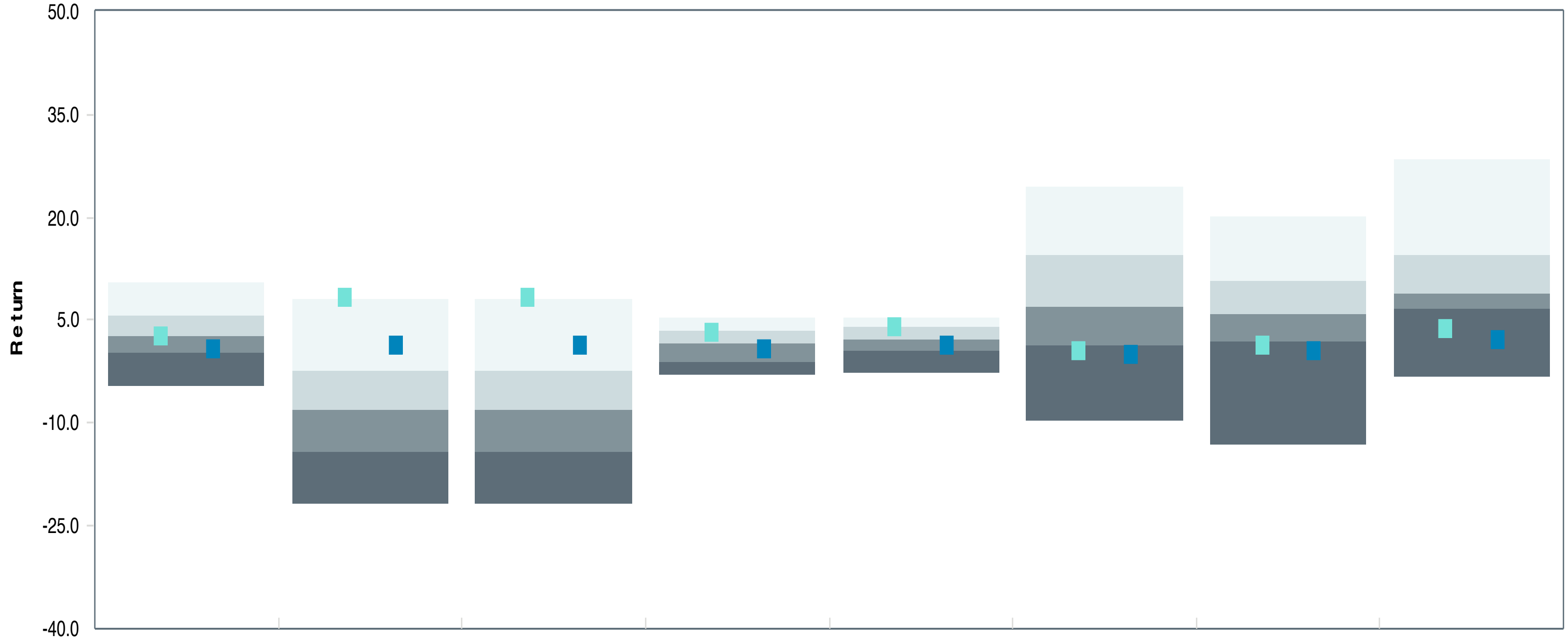
Ratio of Cumulative Wealth - Since Inception



Wellington Global Total Return

As of December 31, 2022

IM Absolute Return (MF)



	1 Quarter	Year to Date	1 Year	3 Years	5 Years	2021	2020	2019
Wellington Global Total Return	2.7 (51)	8.4 (5)	8.4 (5)	3.4 (27)	4.0 (25)	0.5 (82)	1.4 (77)	3.7 (89)
ICE BofAML 3 Month U.S. T-Bill	0.8 (72)	1.5 (13)	1.5 (13)	0.7 (62)	1.3 (70)	0.0 (82)	0.7 (81)	2.3 (90)
5th Percentile	10.5	8.2	8.2	5.5	5.5	24.4	20.2	28.6
1st Quartile	5.7	-2.5	-2.5	3.5	4.0	14.6	10.7	14.5
Median	2.8	-7.9	-7.9	1.5	2.2	7.1	6.0	8.9
3rd Quartile	0.2	-14.3	-14.3	-1.0	0.4	1.5	1.9	6.7
95th Percentile	-4.5	-21.8	-21.8	-3.0	-2.6	-9.7	-13.1	-3.3
Population	45	45	45	42	38	48	46	45

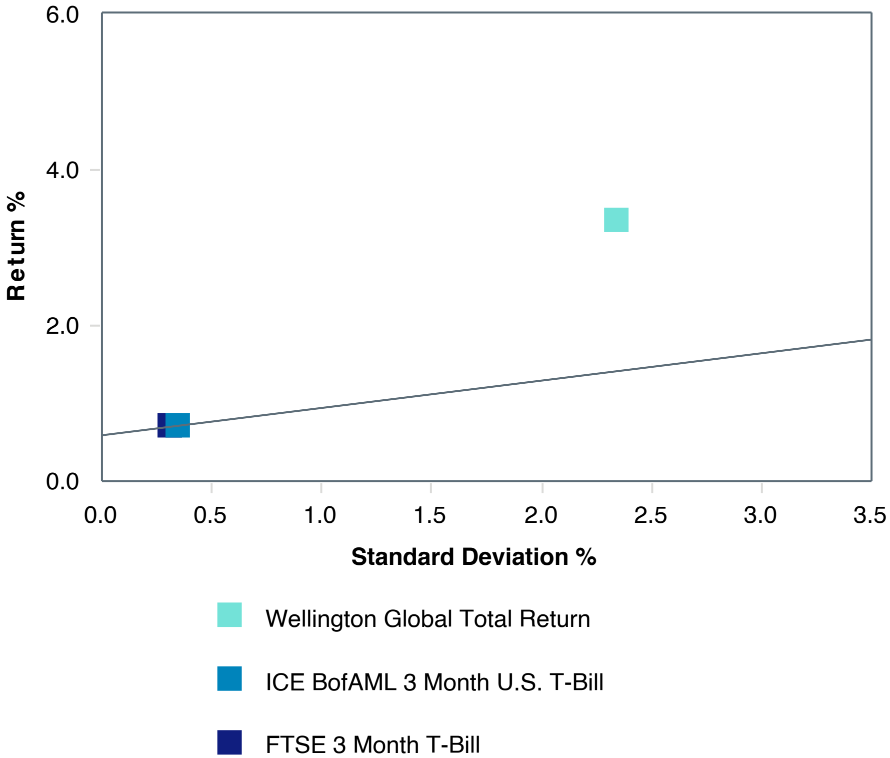
Parentheses contain percentile rankings.

AON

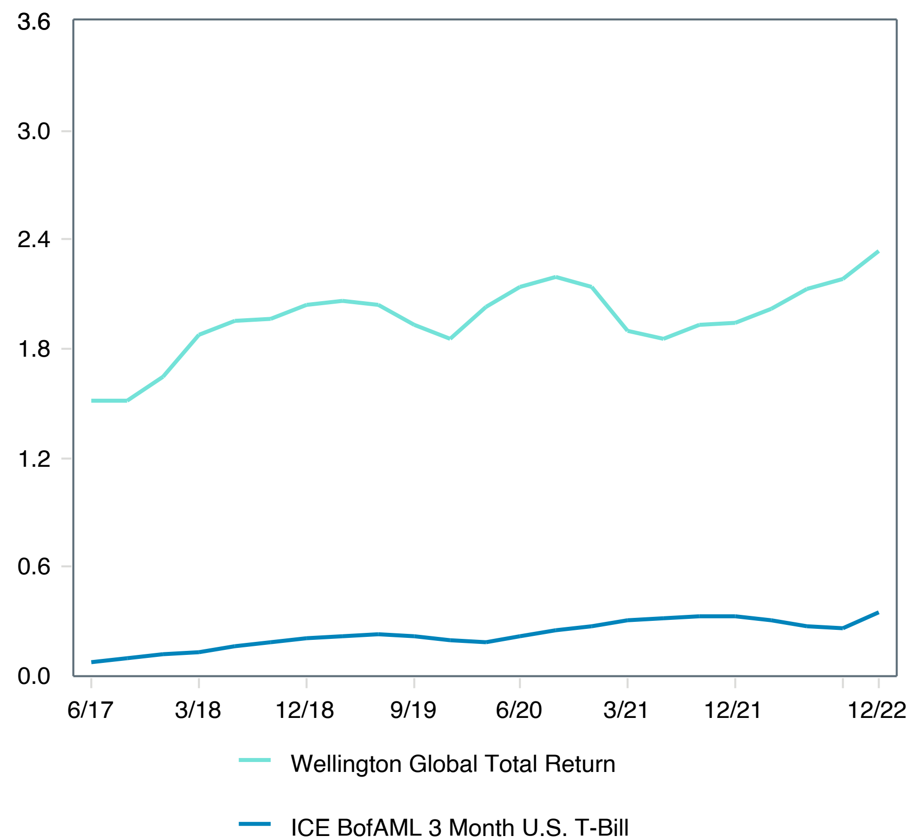
Wellington Global Total Return Risk Profile

Annualized Return vs. Annualized Standard Deviation 3 Years

Annualized Return vs. Annualized Standard Deviation
3 Years



Rolling 3 Years Standard Deviation



3 Years Historical Statistics

3 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Wellington Global Total Return	2.61	2.33	1.12	0.01	1.16	2.86	0.70	3.36	2.34	0.10
ICE BofAML 3 Month U.S. T-Bill	0.00	0.00	-	1.00	0.11	0.00	1.00	0.72	0.35	1.00
FTSE 3 Month T-Bill	-0.01	0.14	-0.11	0.85	-	0.12	0.81	0.71	0.31	0.92

Reams Core Plus Bond Fund Performance Summary

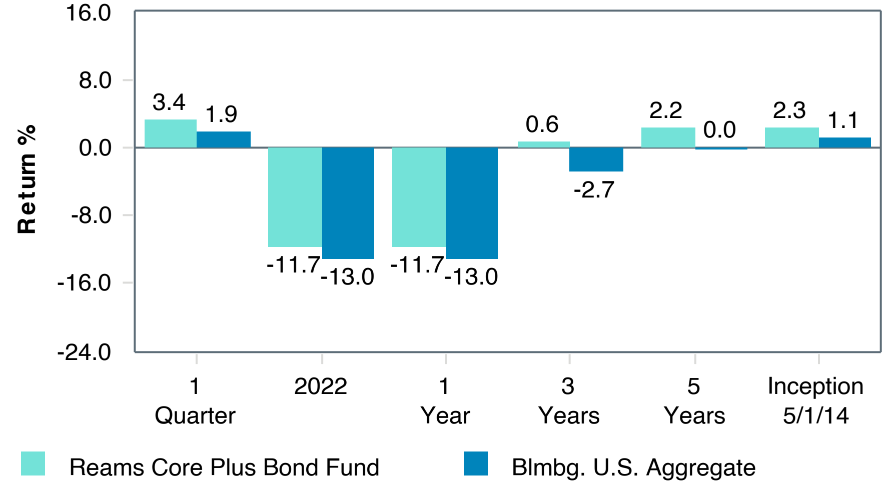
Account Information

Account Information

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

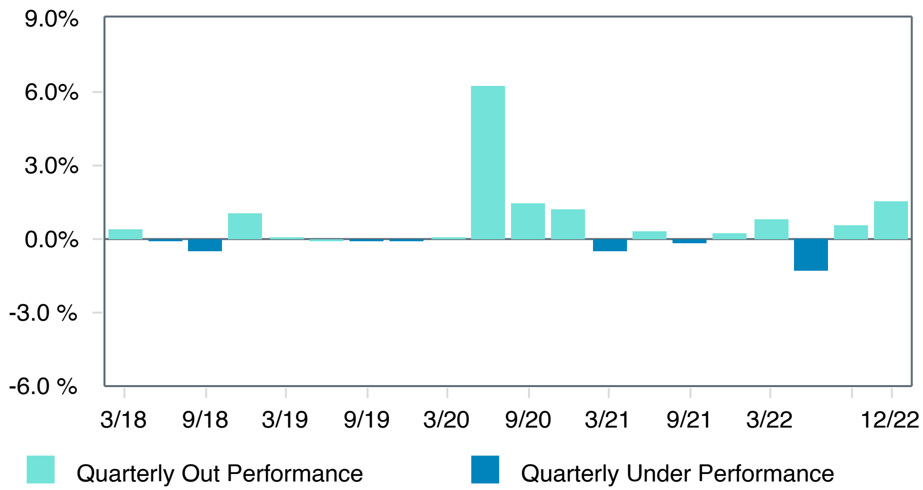
Return Summary

Return Summary



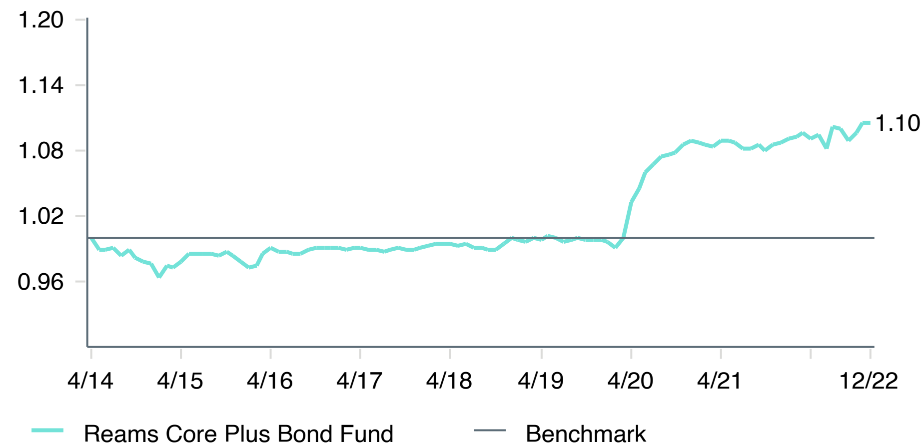
Quaterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

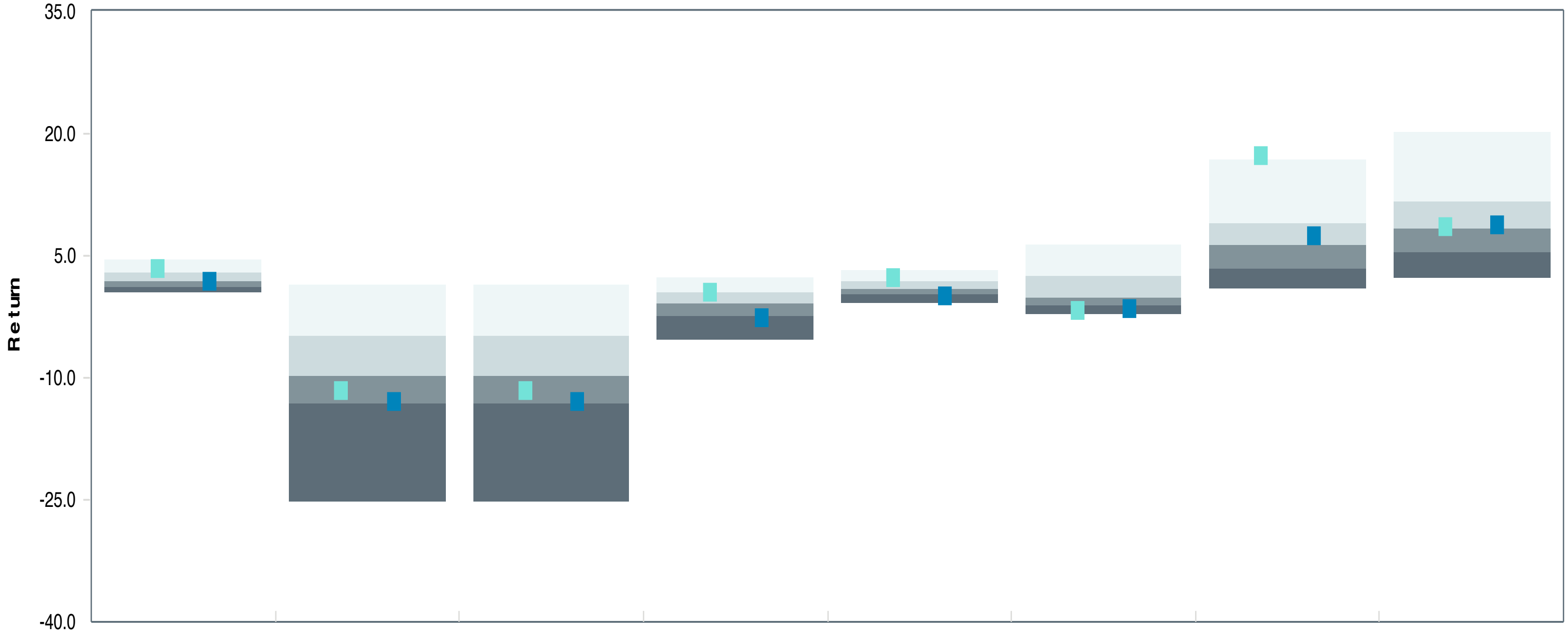


265

Reams Core Plus Bond Fund

As of December 31, 2022

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



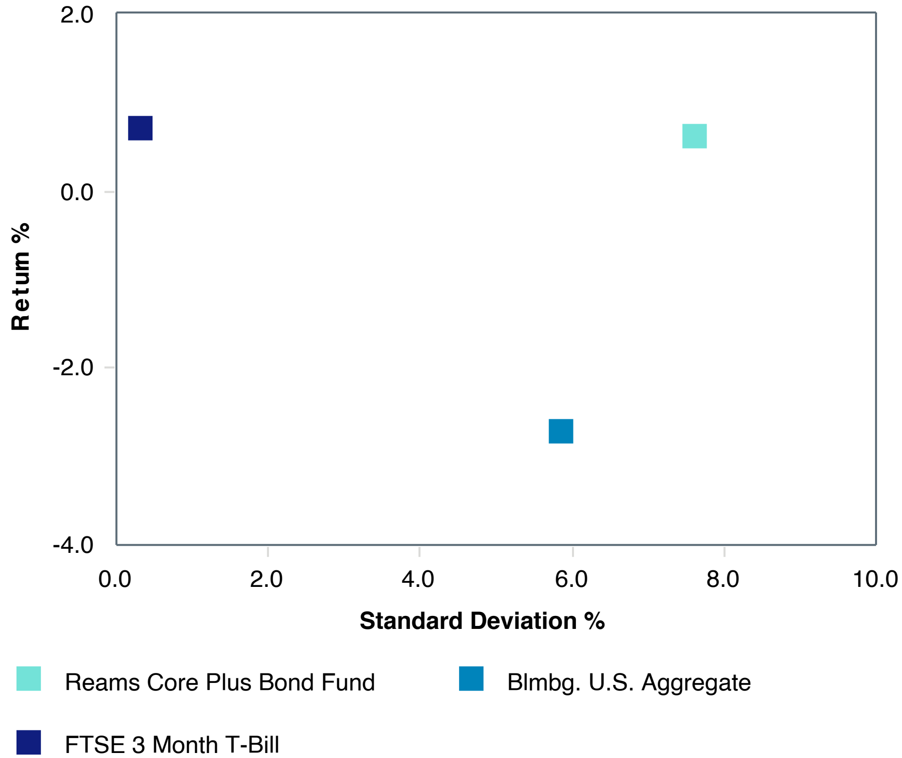
	1 Quarter	Year to Date	1 Year	3 Years	5 Years	2021	2020	2019
Reams Core Plus Bond Fund	3.4 (20)	-11.7 (61)	-11.7 (61)	0.6 (24)	2.2 (16)	-1.6 (89)	17.2 (5)	8.6 (48)
Blmbg. U.S. Aggregate	1.9 (52)	-13.0 (73)	-13.0 (73)	-2.7 (84)	0.0 (85)	-1.5 (86)	7.5 (39)	8.7 (46)
5th Percentile	4.5	1.4	1.4	2.3	3.2	6.4	16.8	20.3
1st Quartile	3.0	-4.9	-4.9	0.5	1.8	2.6	8.9	11.7
Median	1.9	-9.8	-9.8	-0.9	0.9	-0.1	6.4	8.4
3rd Quartile	1.2	-13.2	-13.2	-2.3	0.3	-1.1	3.5	5.4
95th Percentile	0.5	-25.2	-25.2	-5.2	-0.8	-2.1	0.9	2.4
Population	836	815	815	791	754	1,214	1,275	1,299

Parentheses contain percentile rankings.

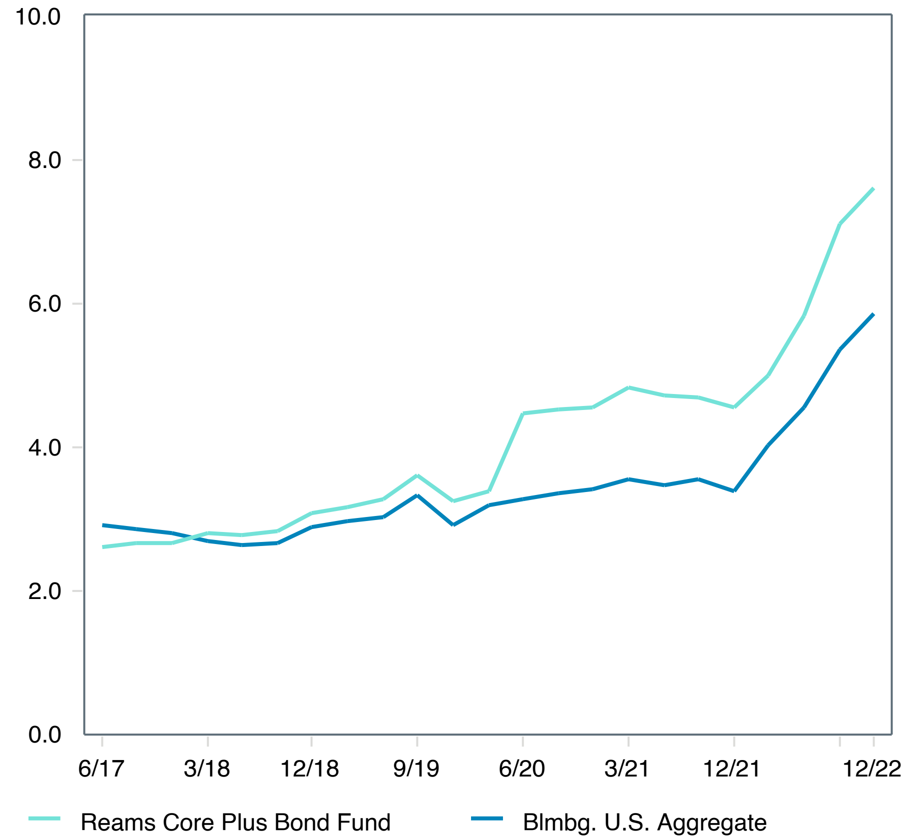
Reams Core Plus Bond Fund Risk Profile

Annualized Return vs. Annualized Standard Deviation 3 Years

Annualized Return vs. Annualized Standard Deviation
3 Years



Rolling 3 Years Standard Deviation



3 Years Historical Statistics

3 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Reams Core Plus Bond Fund	3.49	2.83	1.23	0.89	0.03	4.16	1.23	0.62	7.62	0.95
Blmbg. U.S. Aggregate	0.00	0.00	-	1.00	-0.56	0.00	1.00	-2.71	5.85	1.00
FTSE 3 Month T-Bill	3.29	5.84	0.56	0.00	-	0.72	0.00	0.71	0.31	0.07

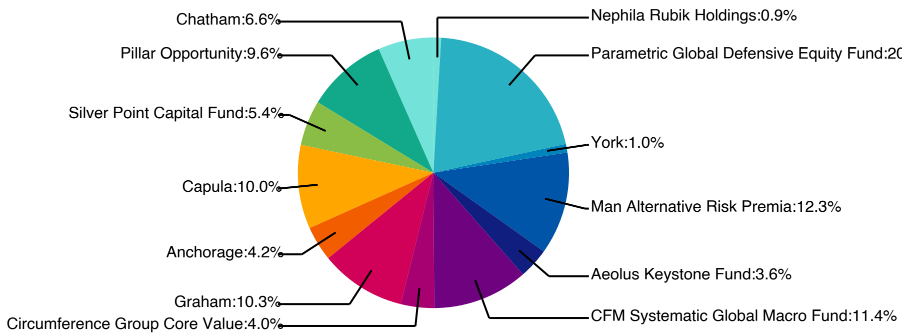
AON

Opportunistic/Alternatives

Opportunistic/Alternatives Portfolio Overview

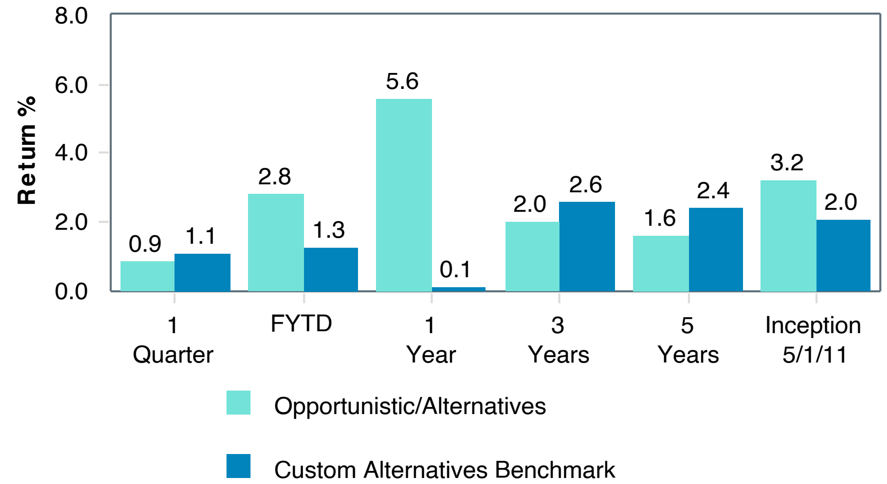
Current Allocation

December 31, 2022 : $912M



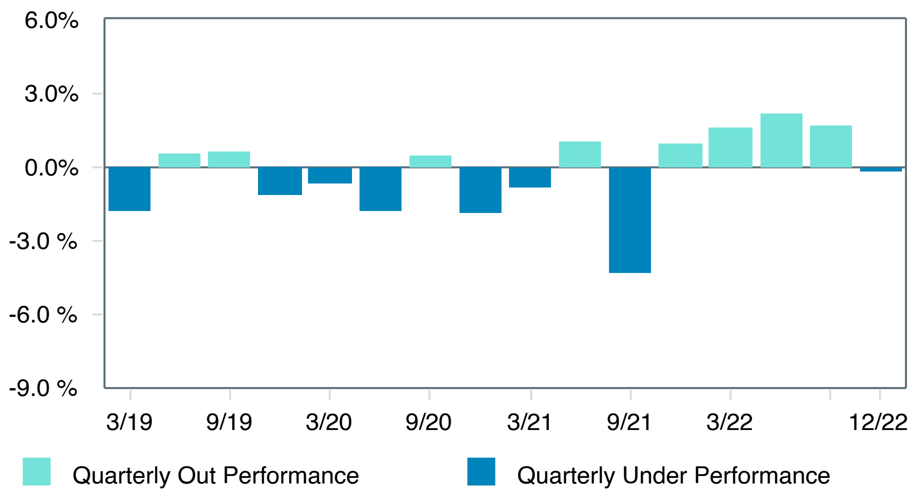
Return Summary

Return Summary



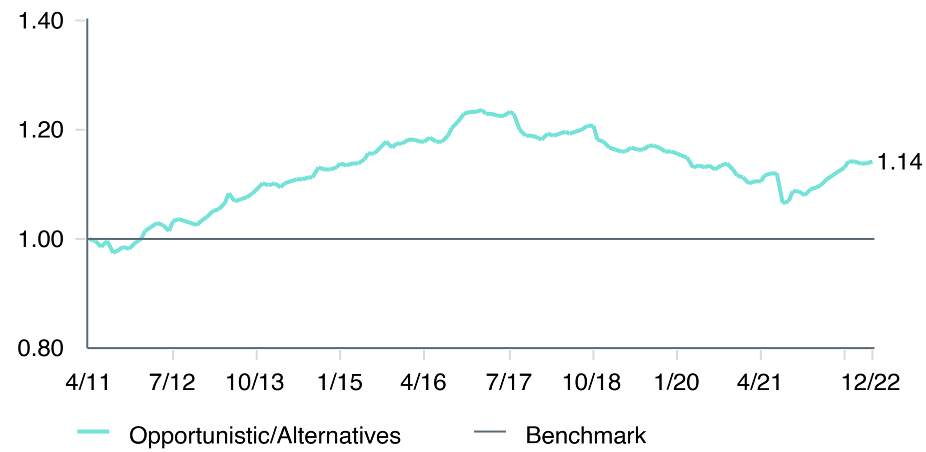
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

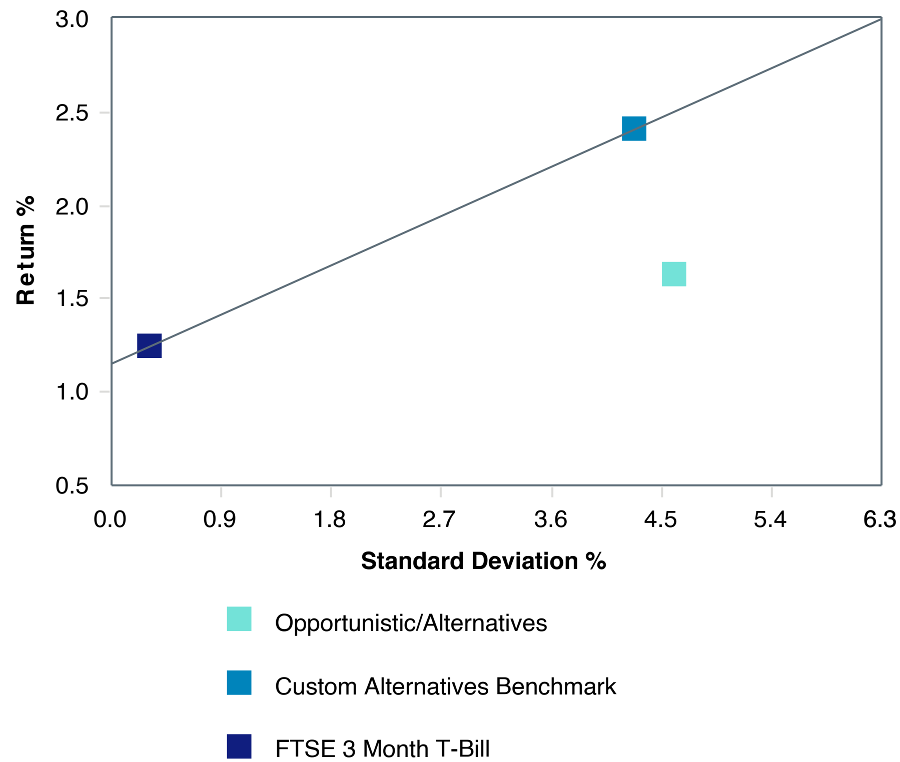


AON

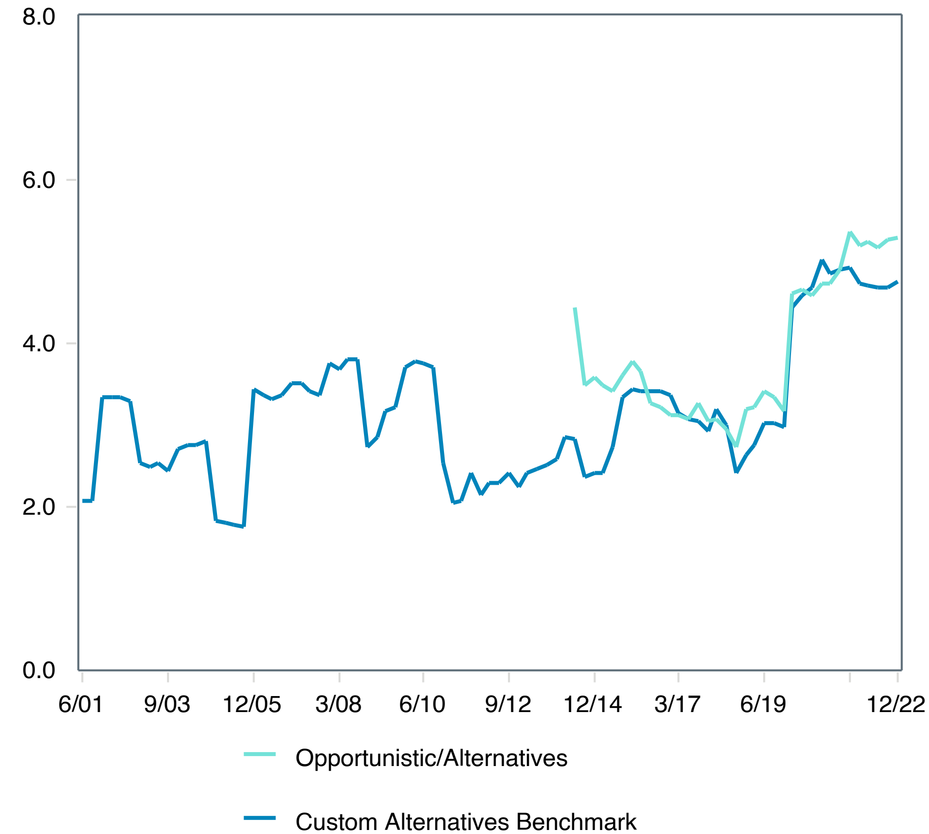
Opportunistic/Alternatives Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation



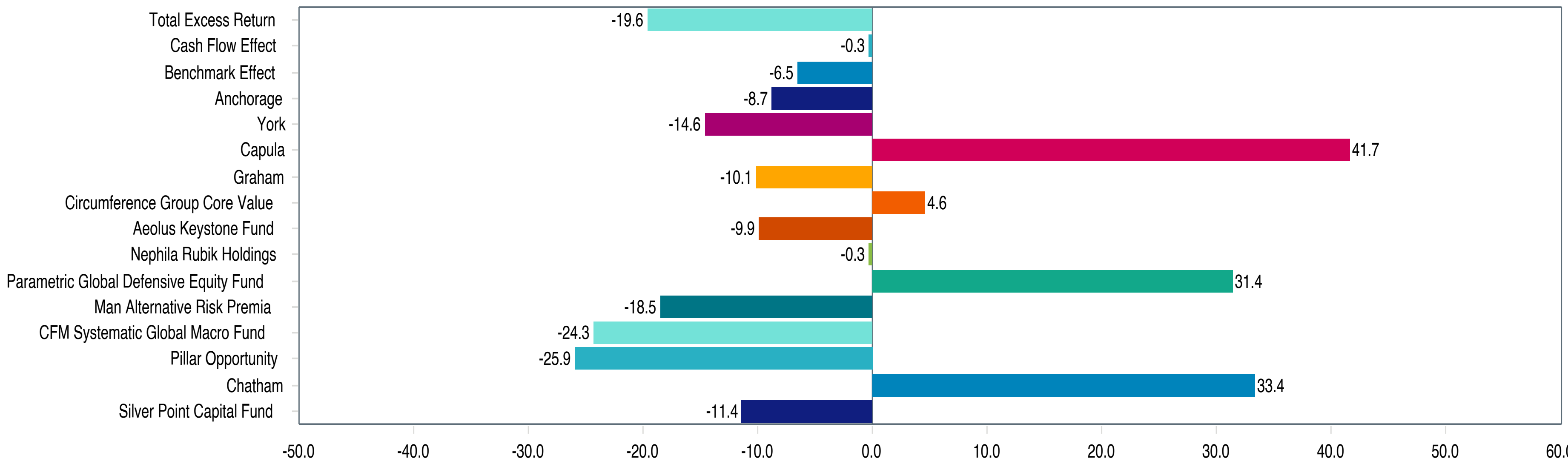
5 Years Historical Statistics

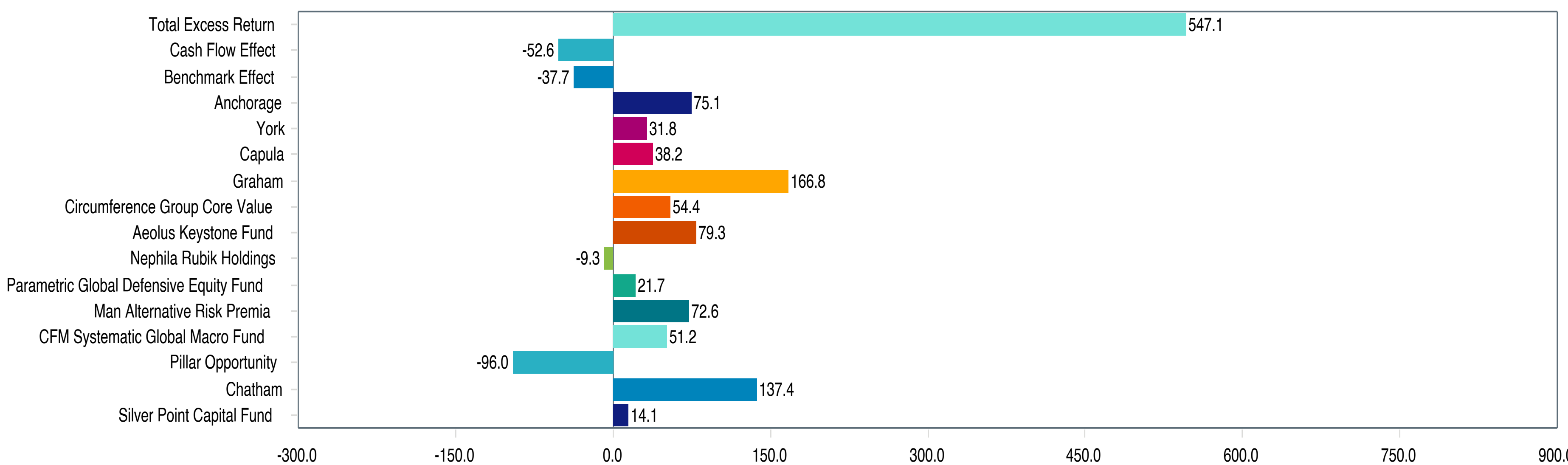
5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Opportunistic/Alternatives	**-0.74**	**3.09**	**-0.24**	**0.58**	**0.11**	**-0.29**	**0.82**	**1.63**	**4.60**	**0.76**
Custom Alternatives Benchmark	0.00	0.00	-	1.00	0.28	0.00	1.00	2.41	4.28	1.00
FTSE 3 Month T-Bill	-1.23	4.34	-0.28	0.03	-	1.27	-0.01	1.25	0.31	-0.16

Asset Class Attribution

As of December 31, 2022





271

AON

Anchorage Performance Summary

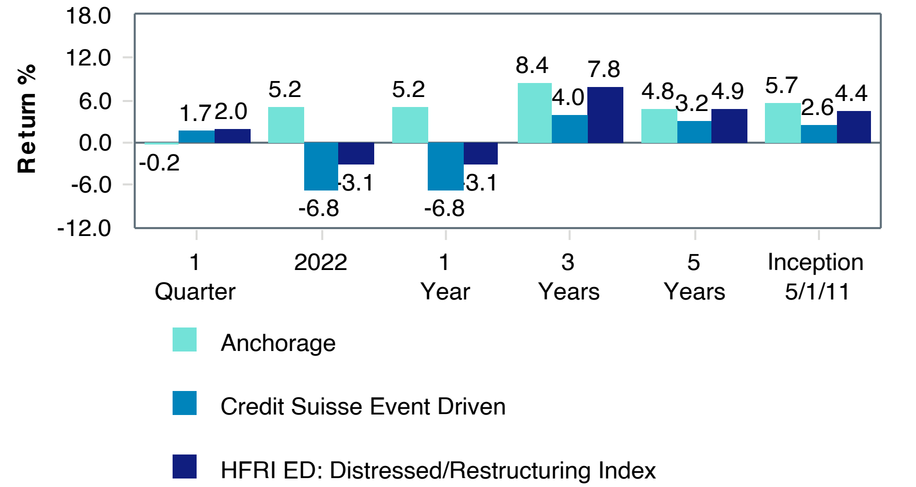
Account Information

Account Information

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

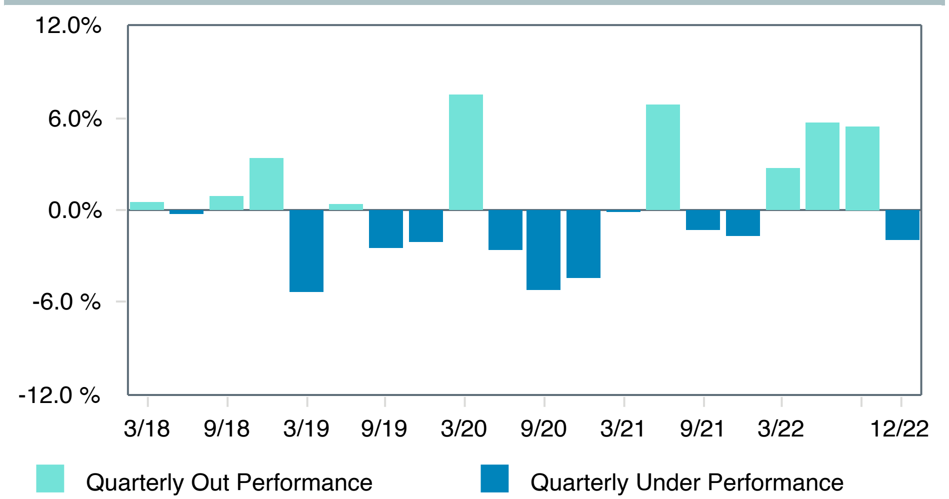
Return Summary

Return Summary



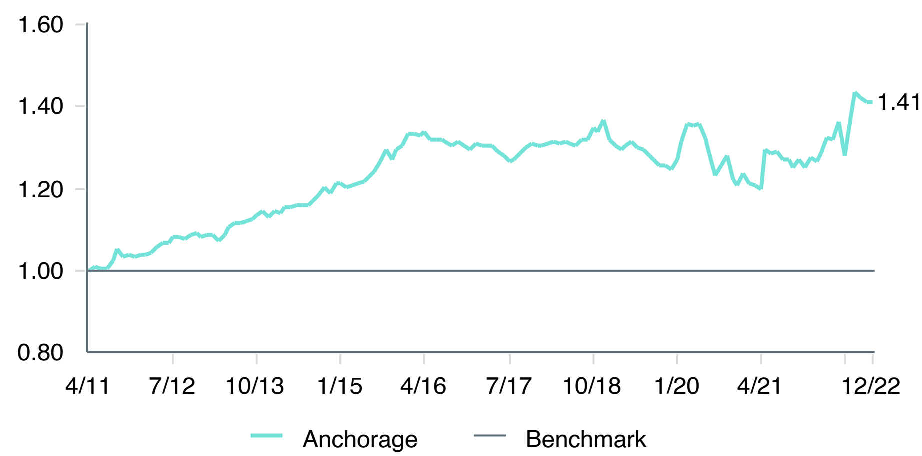
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

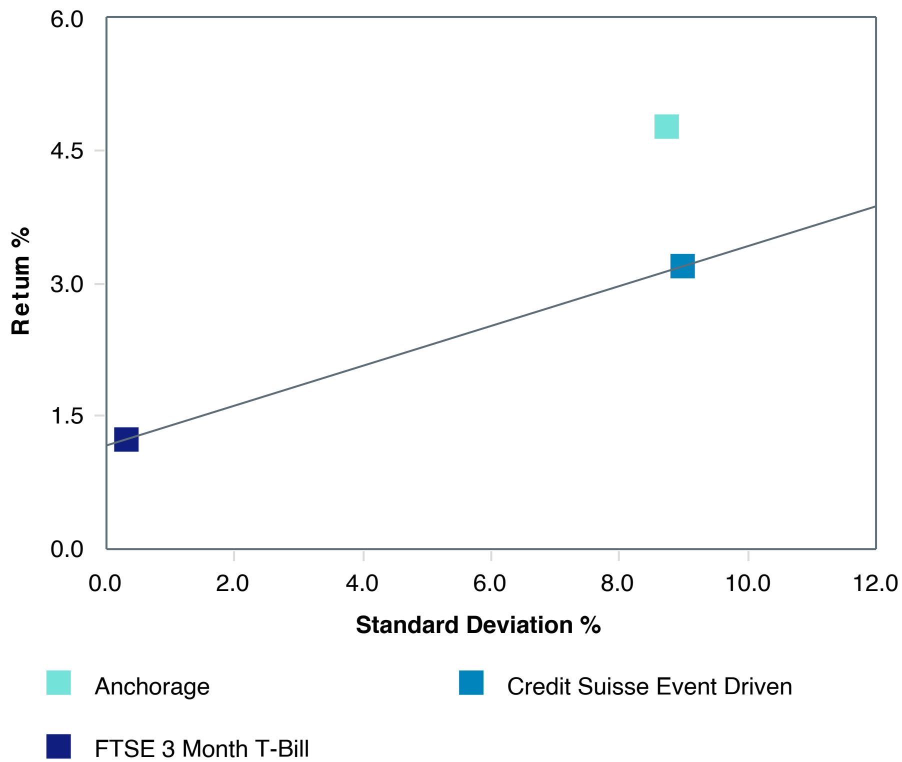
Ratio of Cumulative Wealth - Since Inception



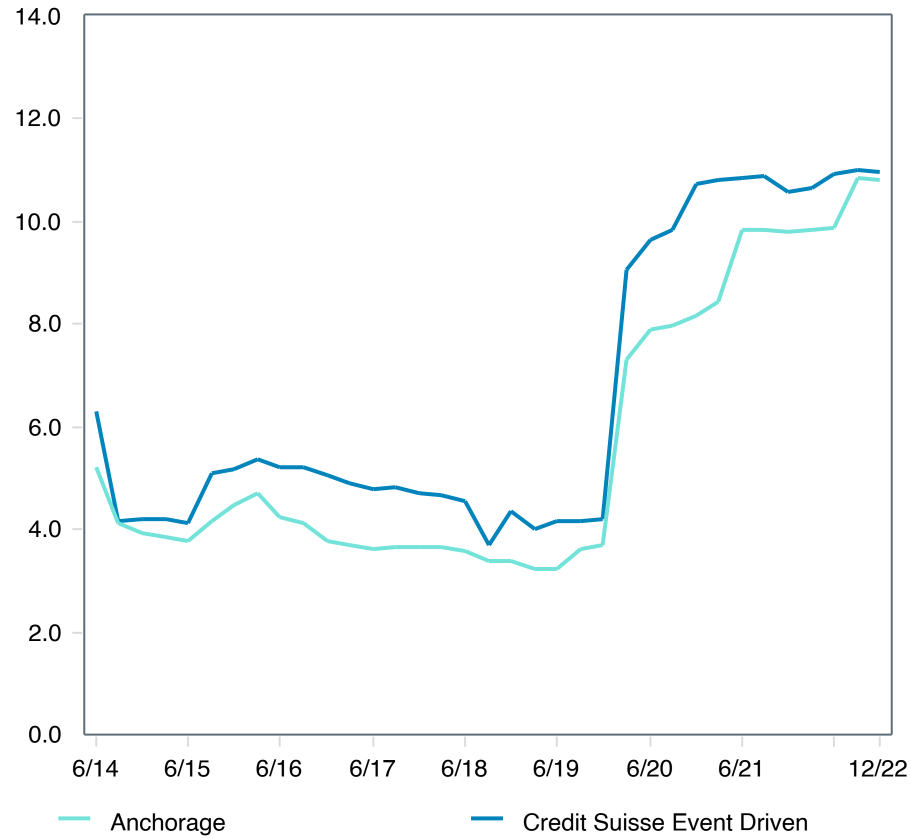
Anchorage Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation 5 Years



Rolling 3 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Anchorage	1.51	8.31	0.18	0.31	0.44	3.17	0.55	4.79	8.74	0.56
Credit Suisse Event Driven	0.00	0.00	-	1.00	0.26	0.00	1.00	3.19	8.98	1.00
FTSE 3 Month T-Bill	-2.32	9.05	-0.26	0.04	-	1.27	-0.01	1.25	0.31	-0.20

AON

York Performance Summary

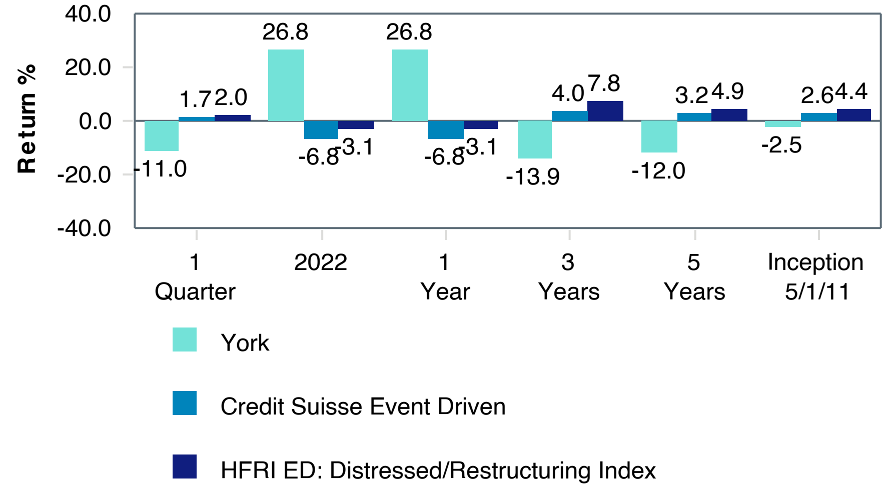
Account Information

Account Information

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

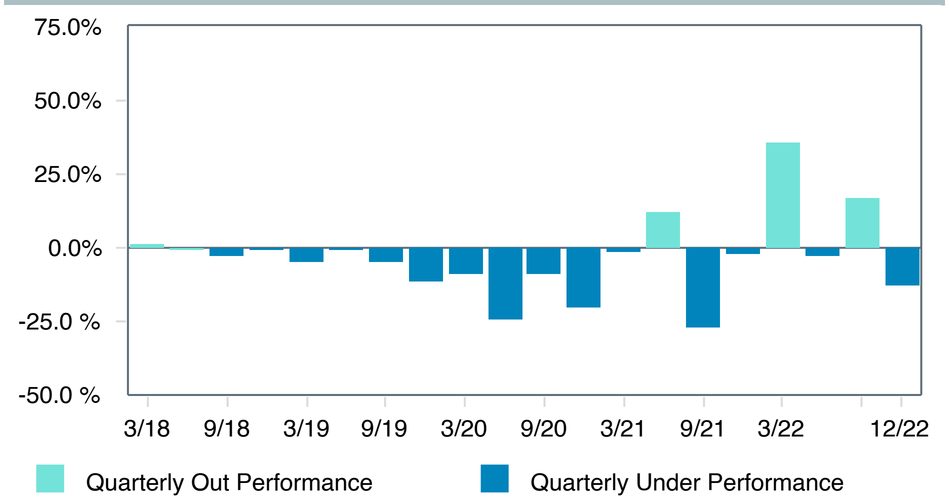
Return Summary

Return Summary



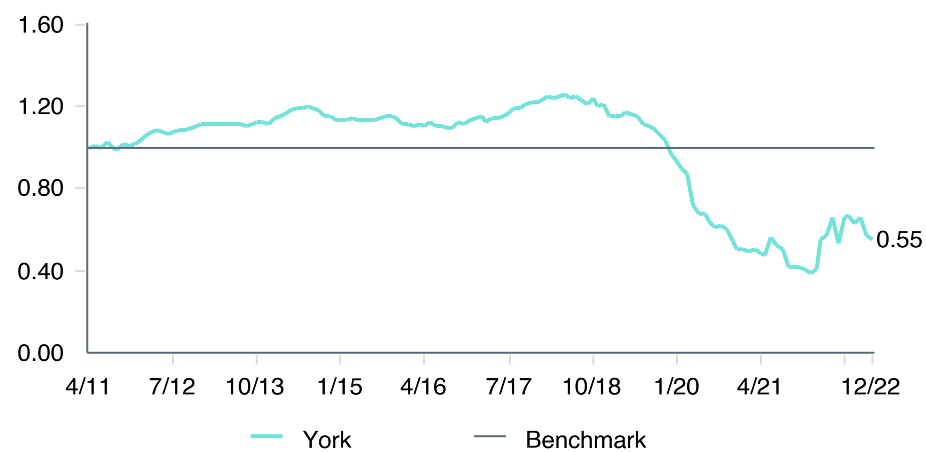
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

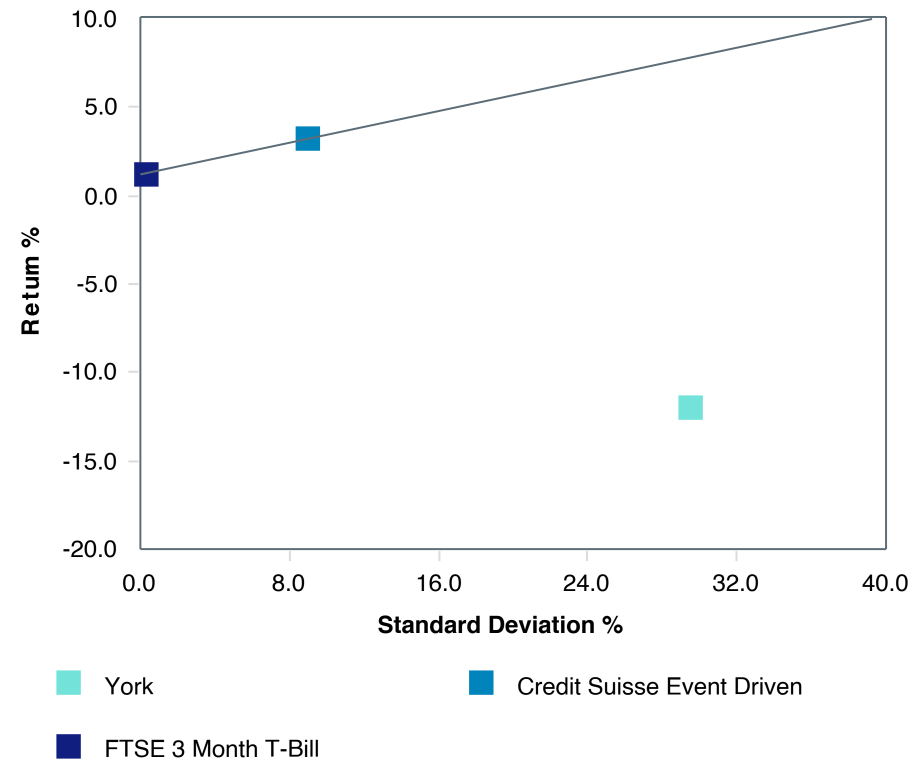


274

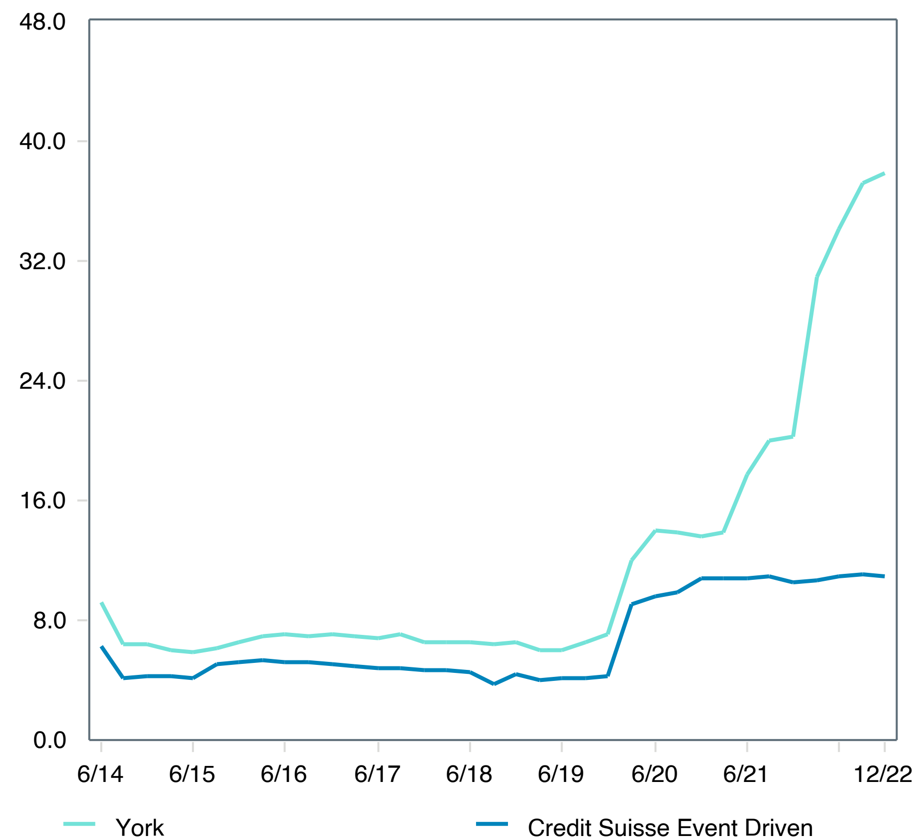
York Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation 5 Years



Rolling 3 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
York	-12.25	28.91	-0.42	0.05	-0.34	-10.68	0.72	-12.01	29.51	0.22
Credit Suisse Event Driven	0.00	0.00	-	1.00	0.26	0.00	1.00	3.19	8.98	1.00
FTSE 3 Month T-Bill	-2.32	9.05	-0.26	0.04	-	1.27	-0.01	1.25	0.31	-0.20

275

Capula Performance Summary

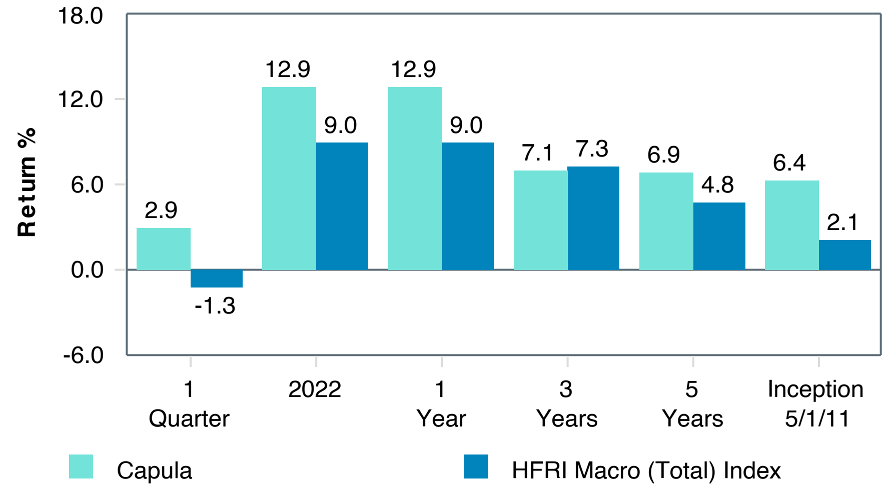
Account Information

Account Information

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

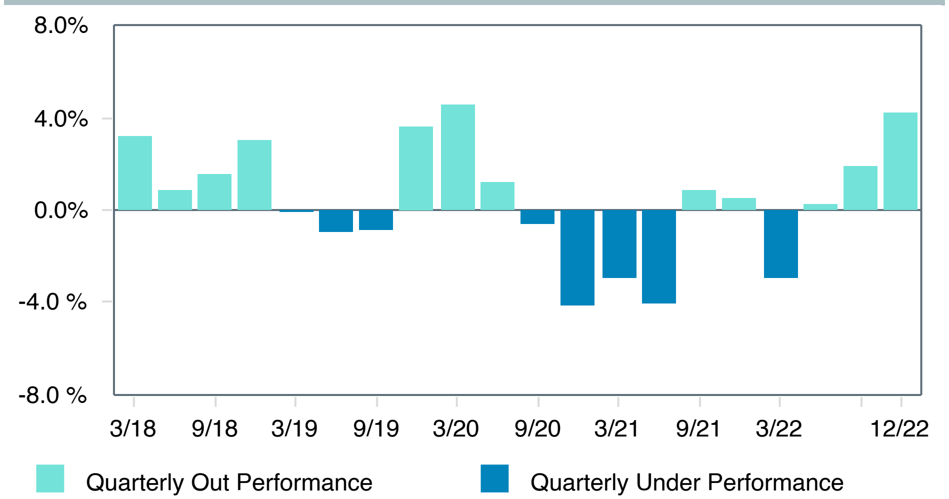
Return Summary

Return Summary



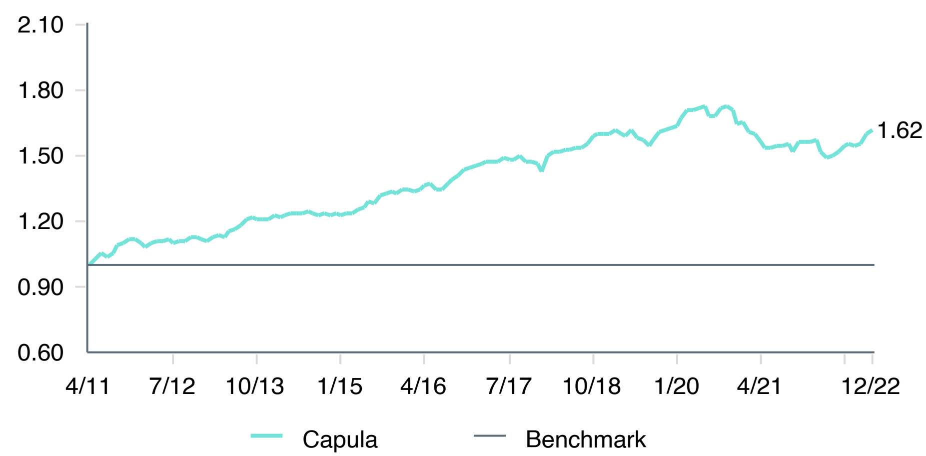
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

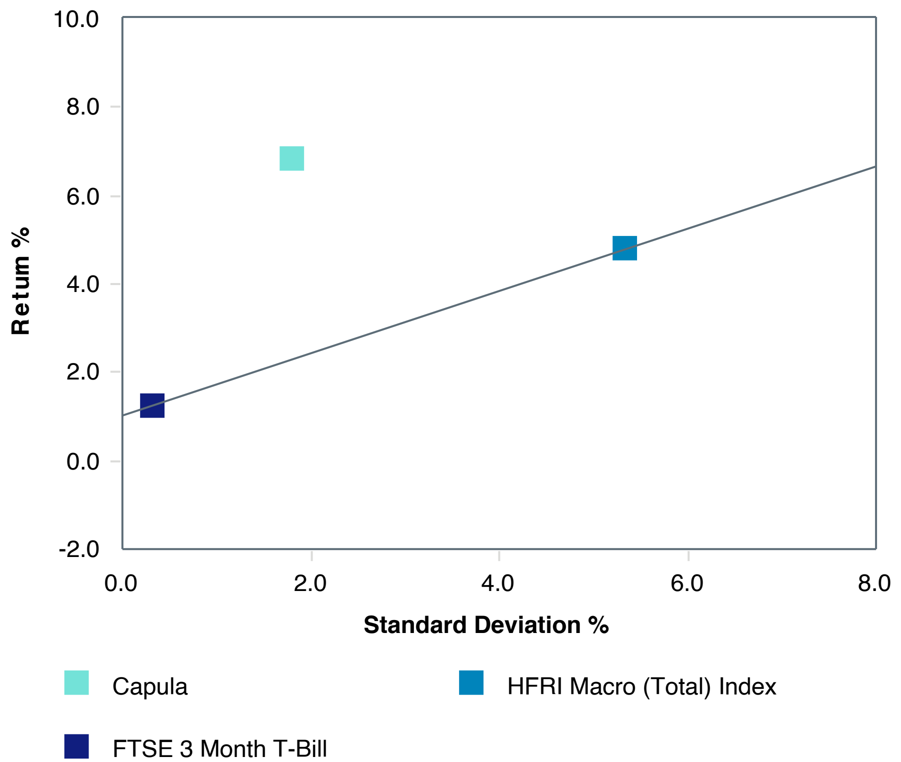
Ratio of Cumulative Wealth - Since Inception



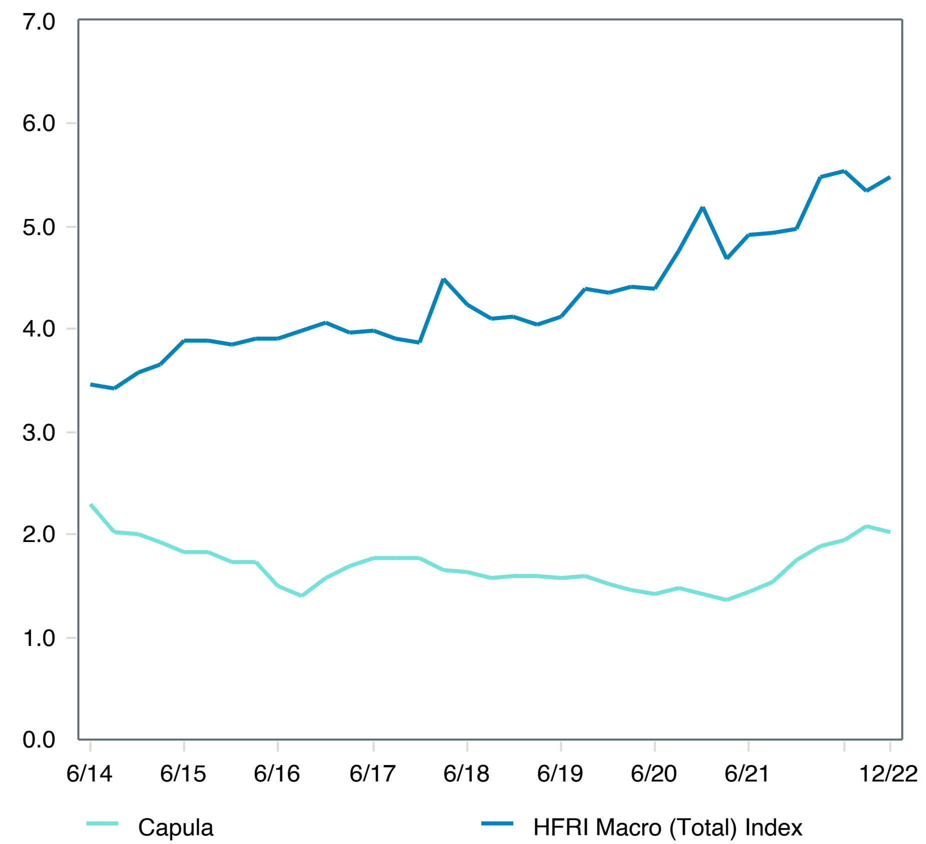
Capula Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Capula	1.83	5.70	0.32	0.00	3.11	6.96	-0.02	6.85	1.80	-0.05
HFRI Macro (Total) Index	0.00	0.00	-	1.00	0.66	0.00	1.00	4.79	5.32	1.00
FTSE 3 Month T-Bill	-3.59	5.40	-0.66	0.05	-	1.31	-0.01	1.25	0.31	-0.22

Graham Performance Summary

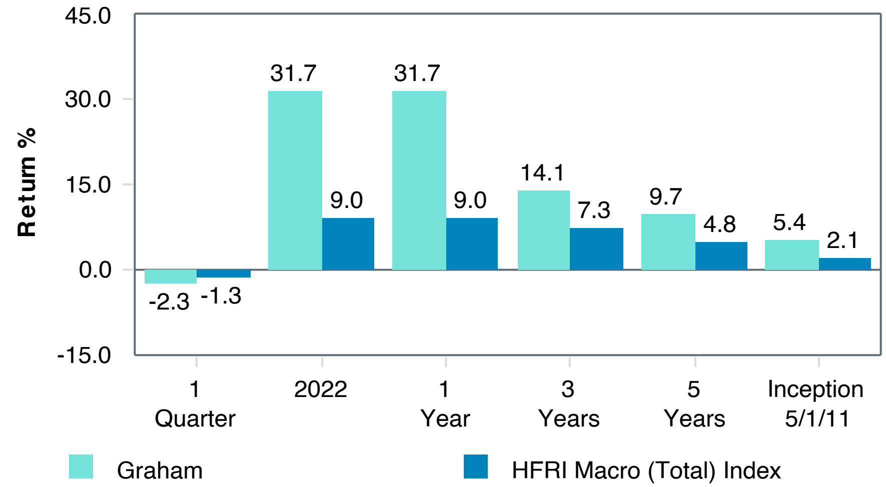
Account Information

Account Information

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

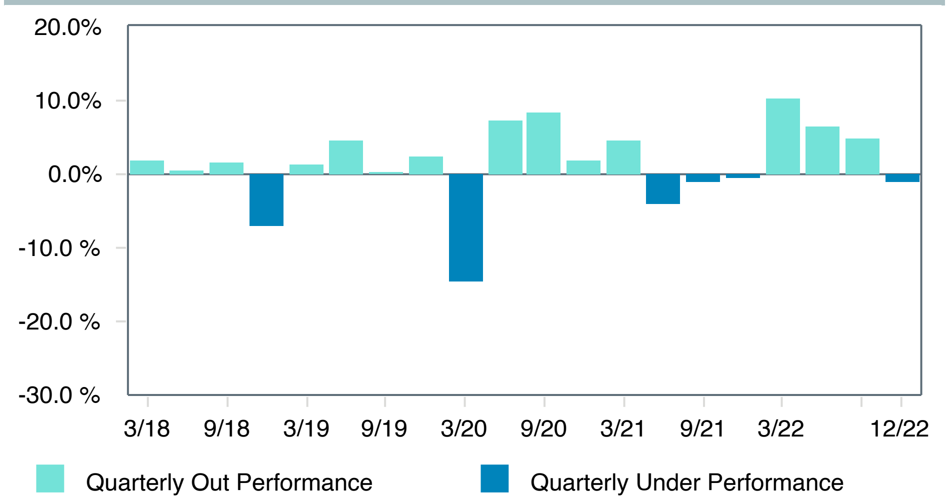
Return Summary

Return Summary



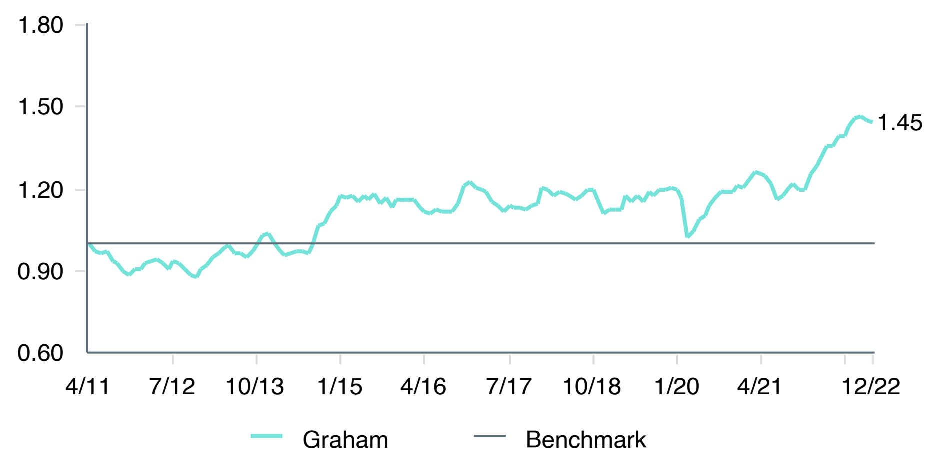
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception

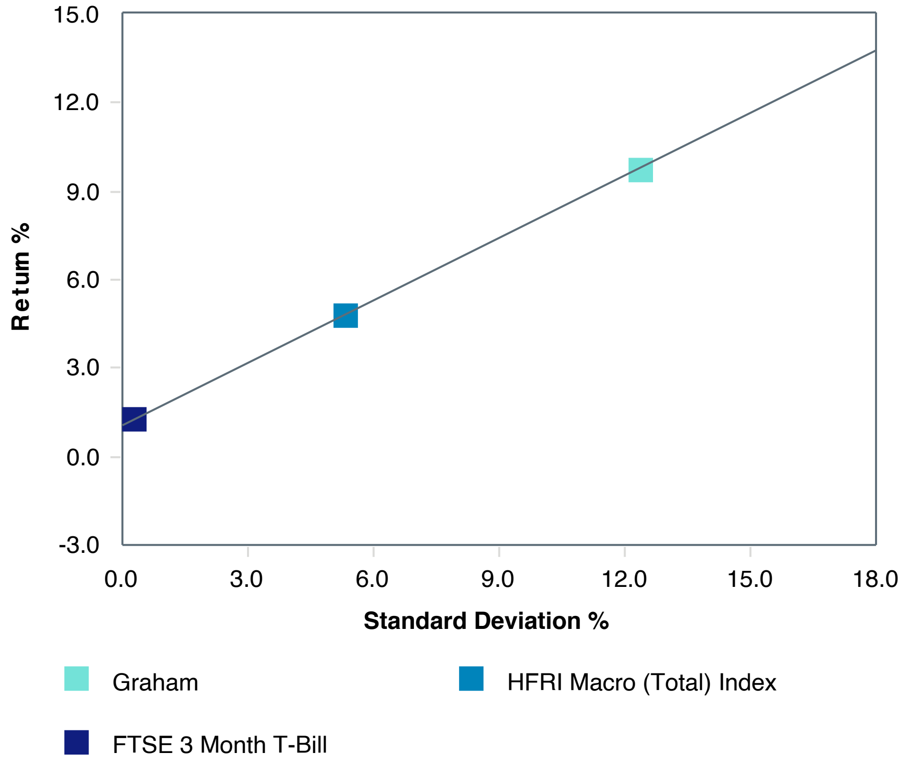


278

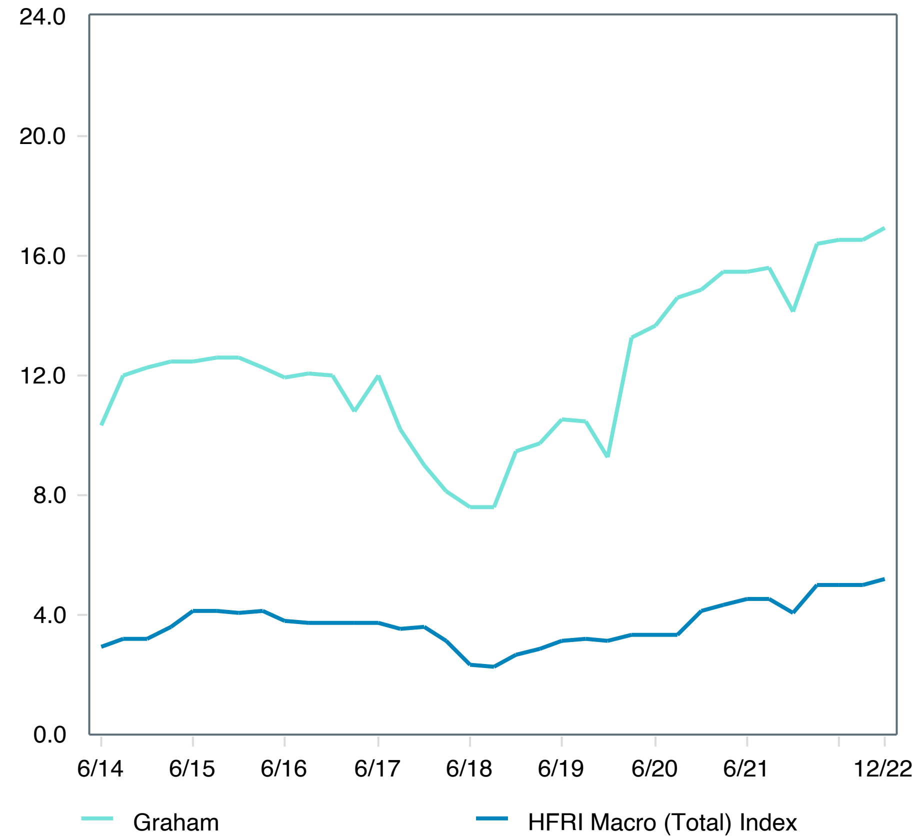
Graham Risk Profile

Annualized Return vs. Annualized Standard Deviation 5 Years

Annualized Return vs. Annualized Standard Deviation
5 Years



Rolling 3 Years Standard Deviation



5 Years Historical Statistics

5 Years Historical Statistics

	Active Return	Tracking Error	Information Ratio	R-Squared	Sharpe Ratio	Alpha	Beta	Return	Standard Deviation	Actual Correlation
Graham	5.27	9.18	0.57	0.54	0.71	1.83	1.71	9.75	12.38	0.74
HFRI Macro (Total) Index	0.00	0.00	-	1.00	0.66	0.00	1.00	4.79	5.32	1.00
FTSE 3 Month T-Bill	-3.59	5.40	-0.66	0.05	-	1.31	-0.01	1.25	0.31	-0.22

Circumference Group Core Value Performance Summary

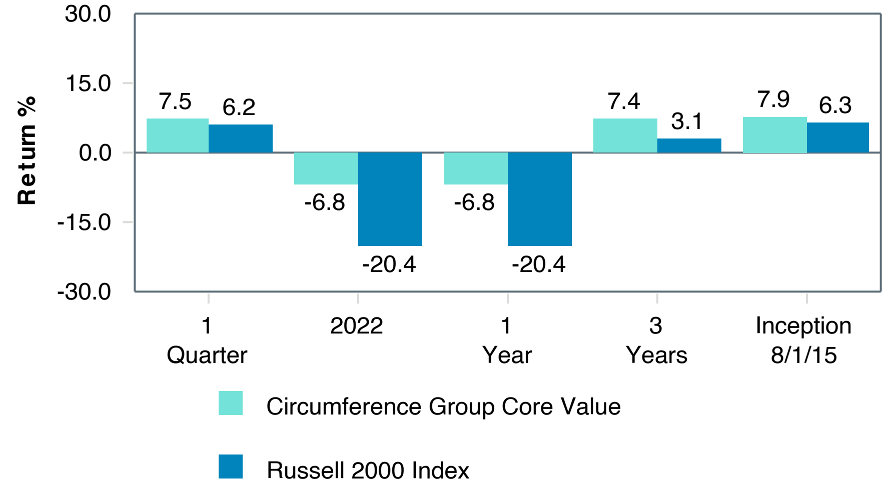
Account Information

Account Information

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

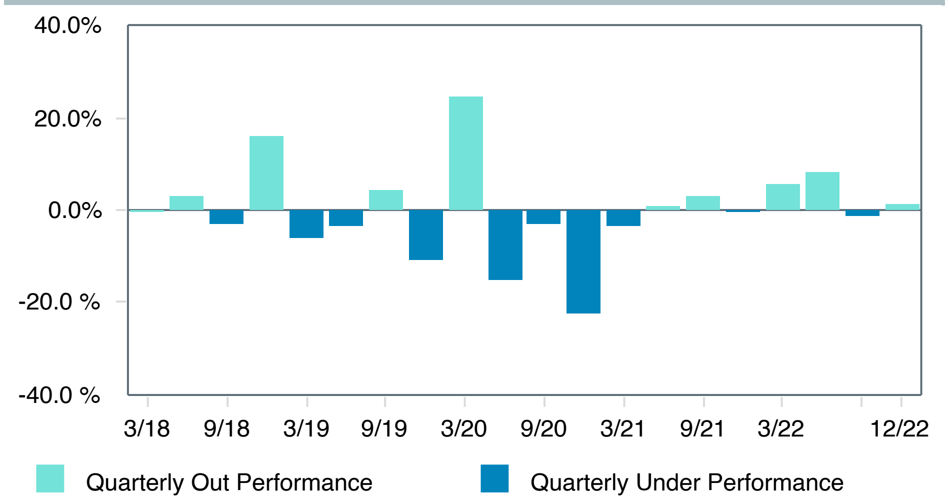
Return Summary

Return Summary



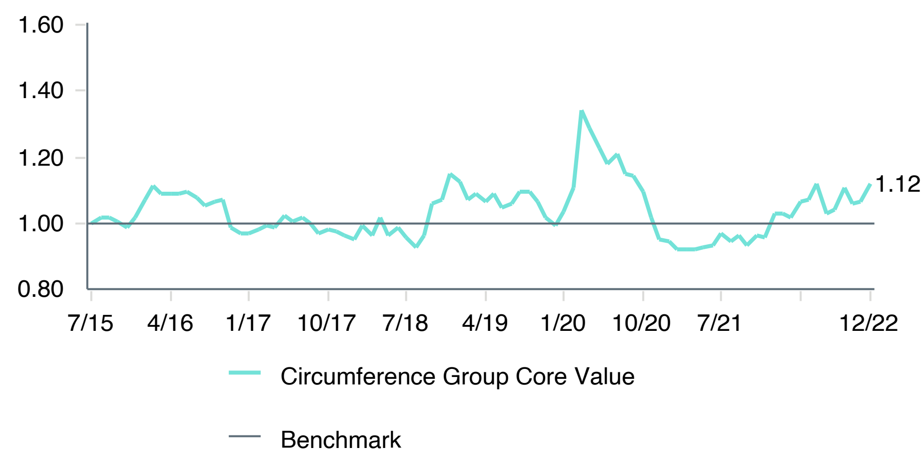
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



Aeolus Keystone Fund Performance Summary

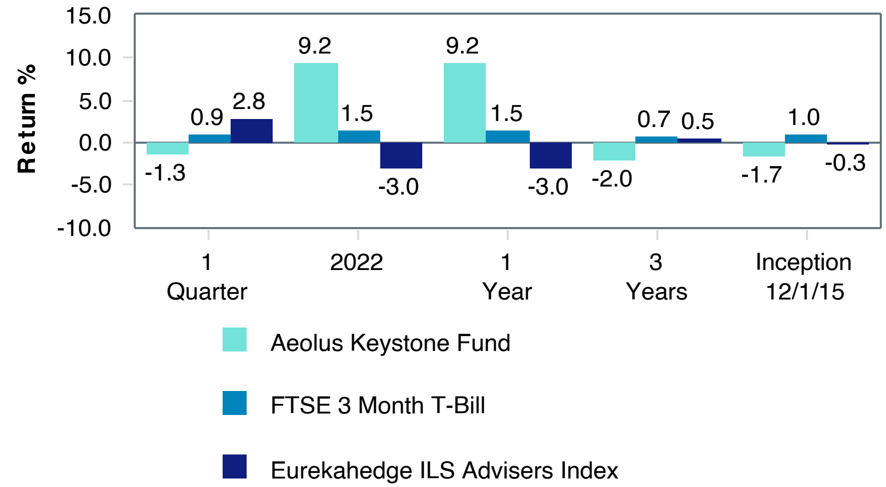
Account Information

Account Information

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

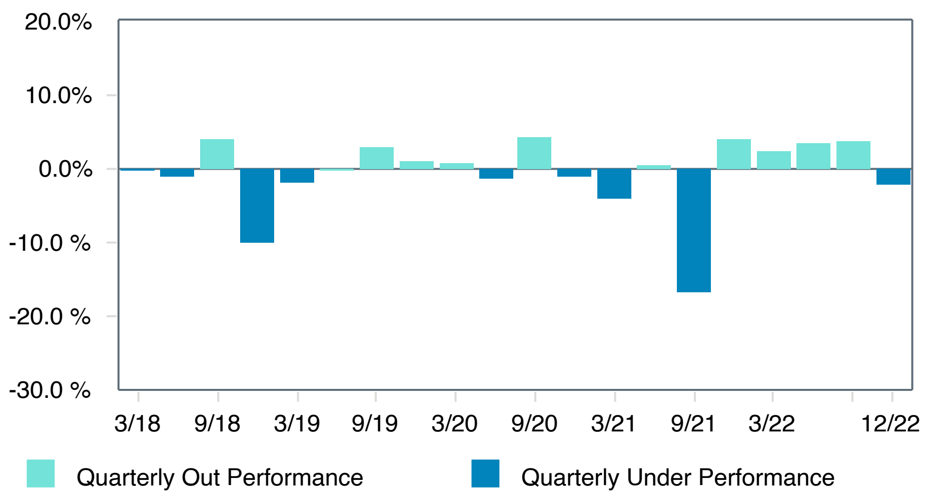
Return Summary

Return Summary



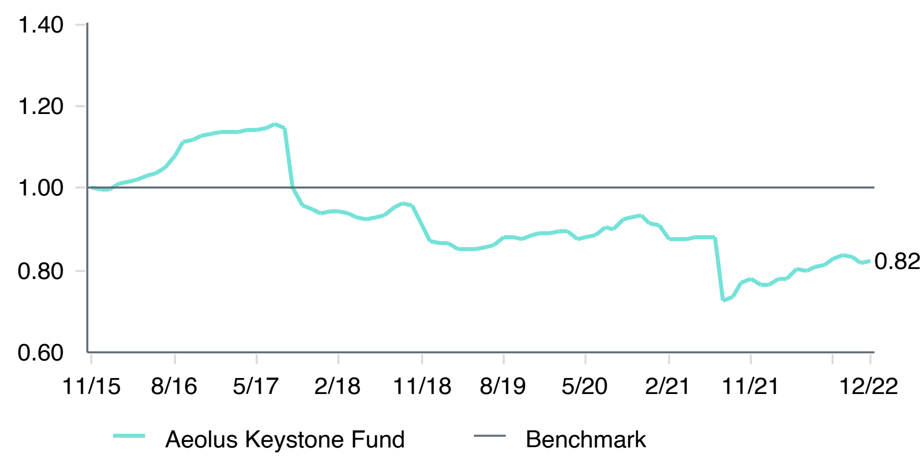
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



Nephila Rubik Holdings Performance Summary

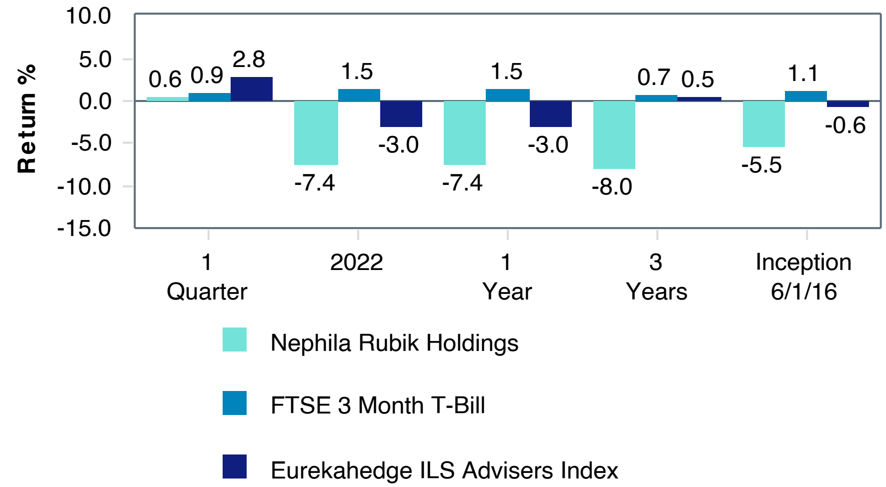
Account Information

Account Information

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

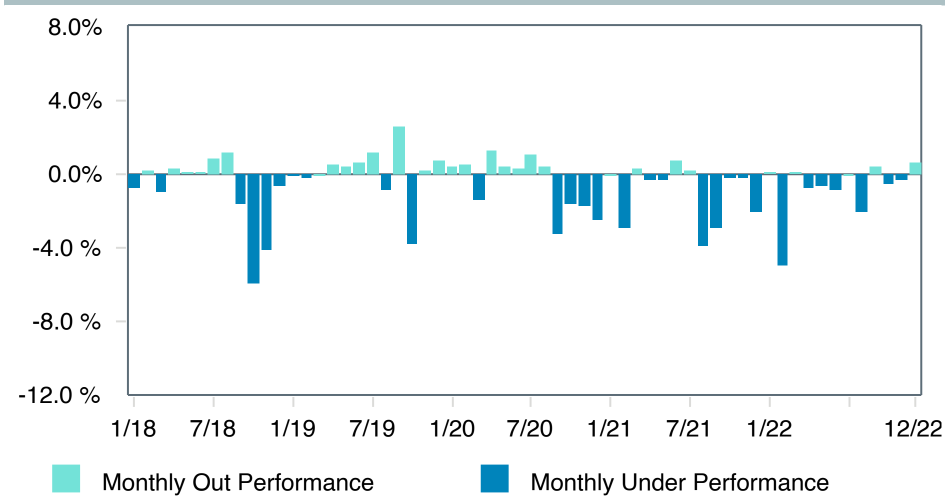
Return Summary

Return Summary



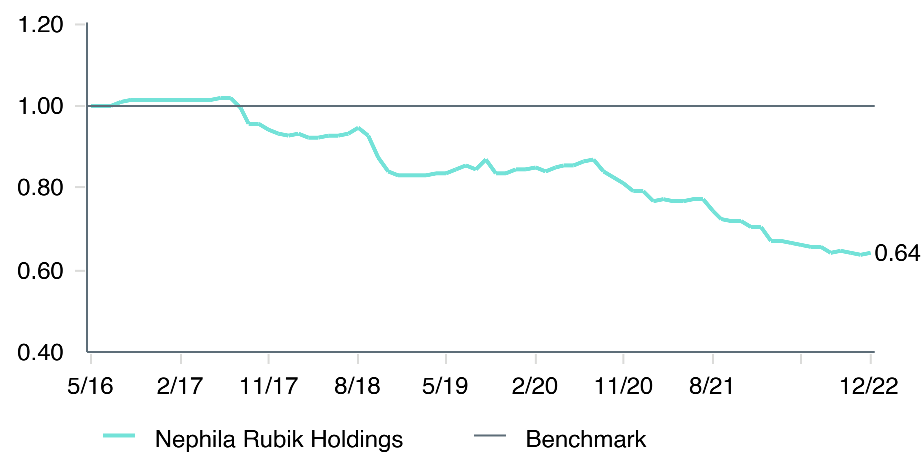
Monthly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



Parametric Global Defensive Equity Fund Performance Summary

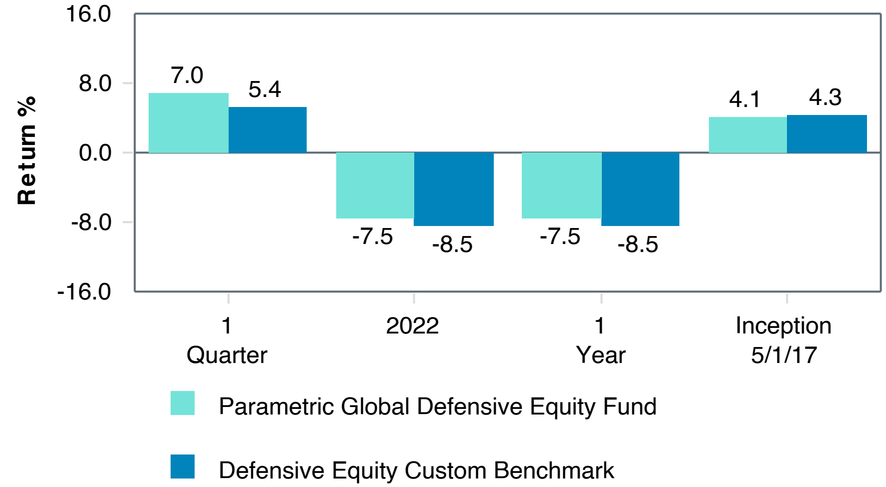
Account Information

Account Information

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

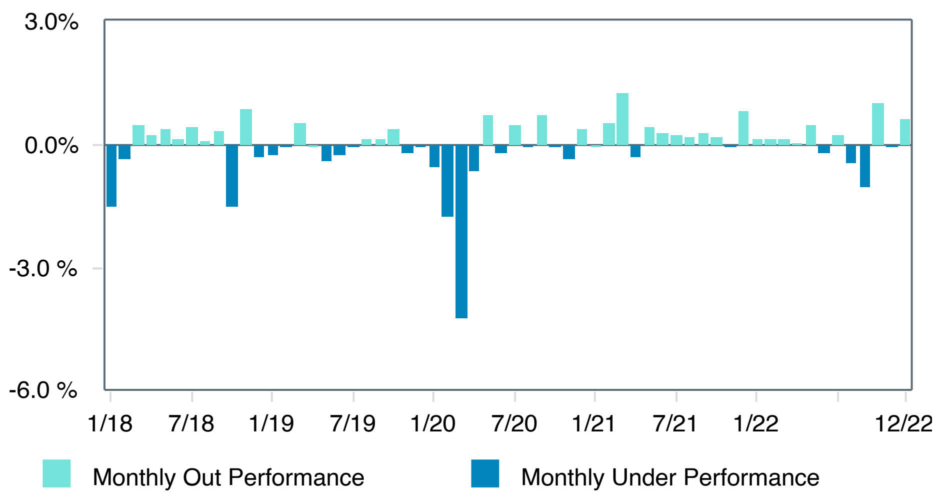
Return Summary

Return Summary



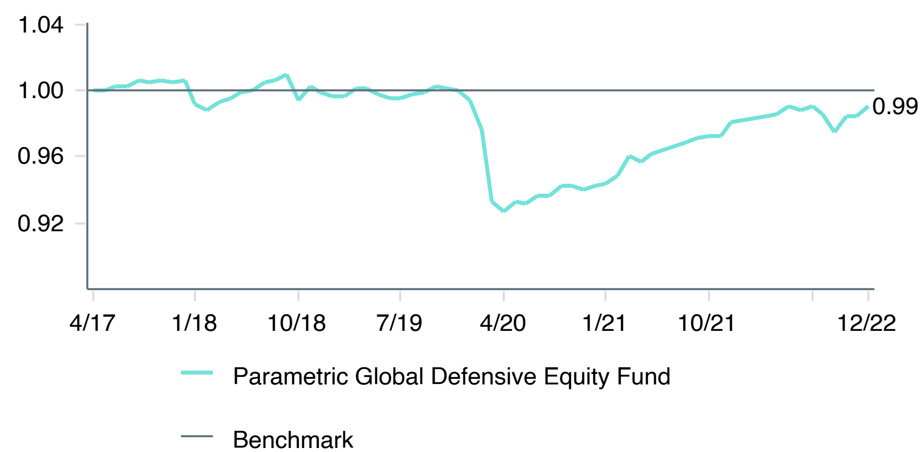
Monthly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



Man Alternative Risk Premia Performance Summary

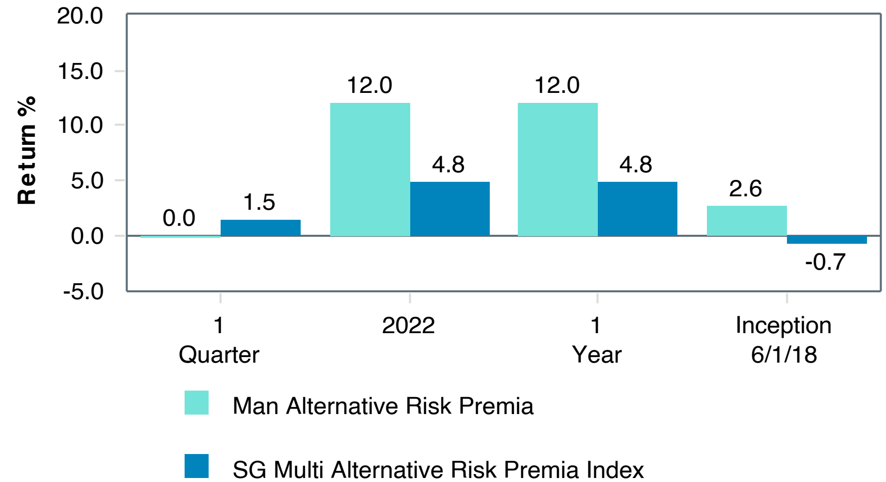
Account Information

Account Information

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

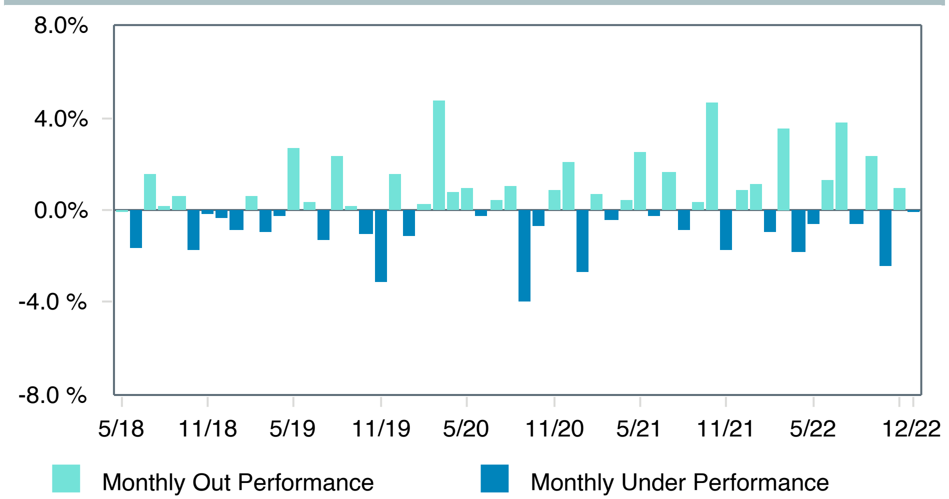
Return Summary

Return Summary



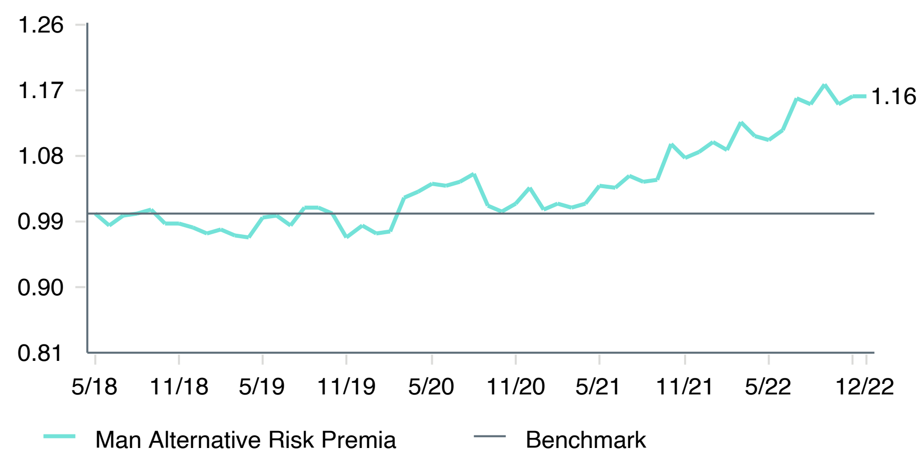
Monthly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



CFM Systematic Global Macro Fund Performance Summary

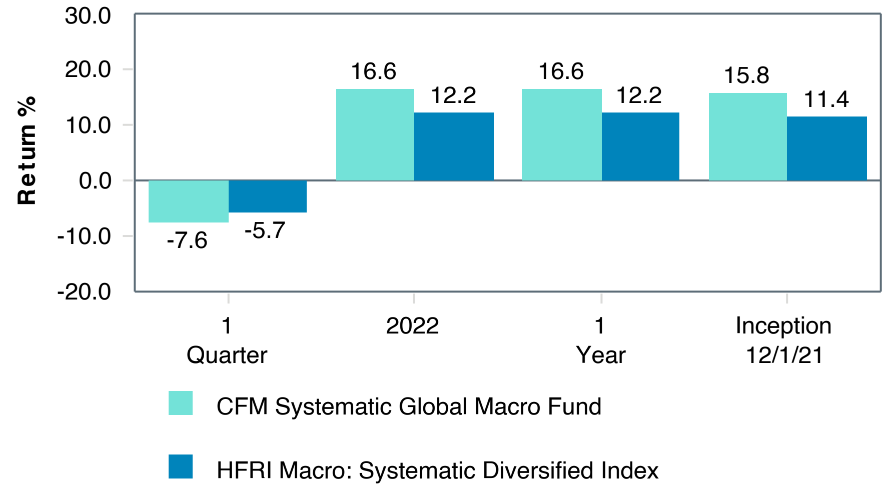
Account Information

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:	

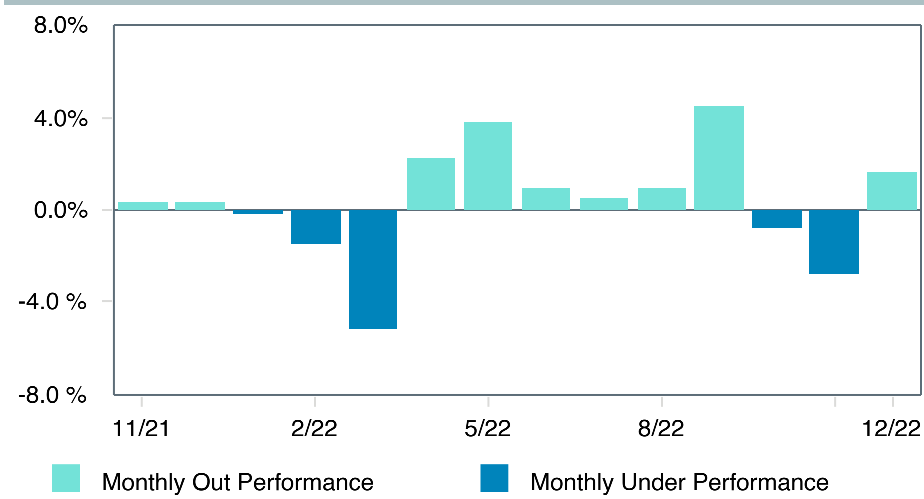
Return Summary

Return Summary



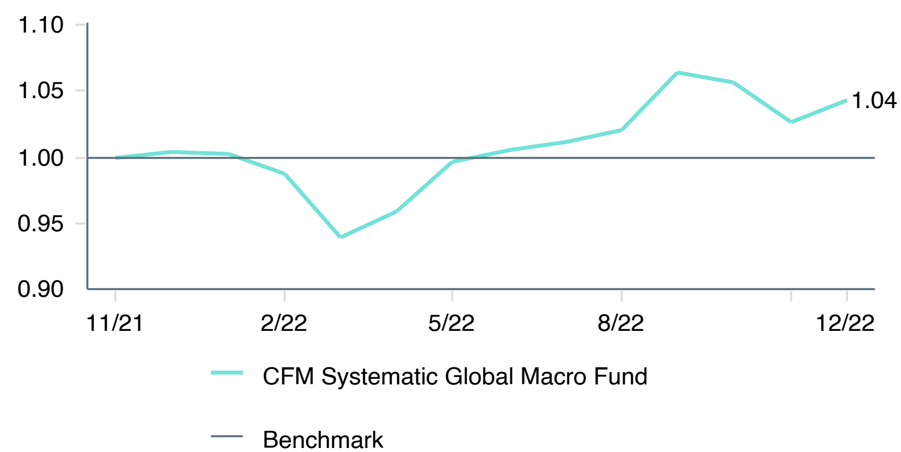
Monthly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



Pillar Opportunity Performance Summary

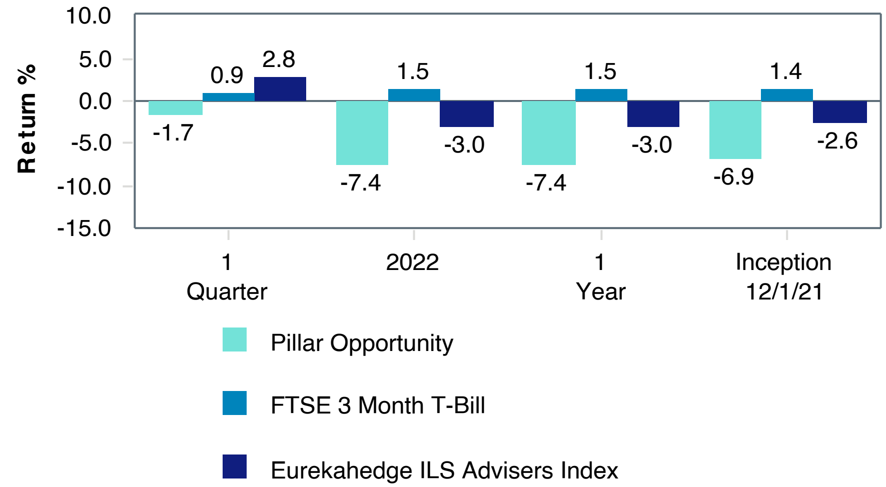
Account Information

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:	

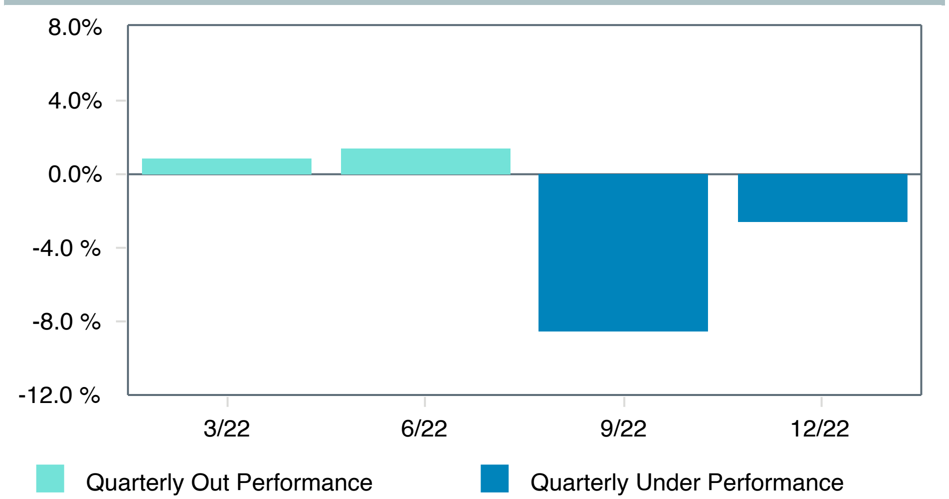
Return Summary

Return Summary



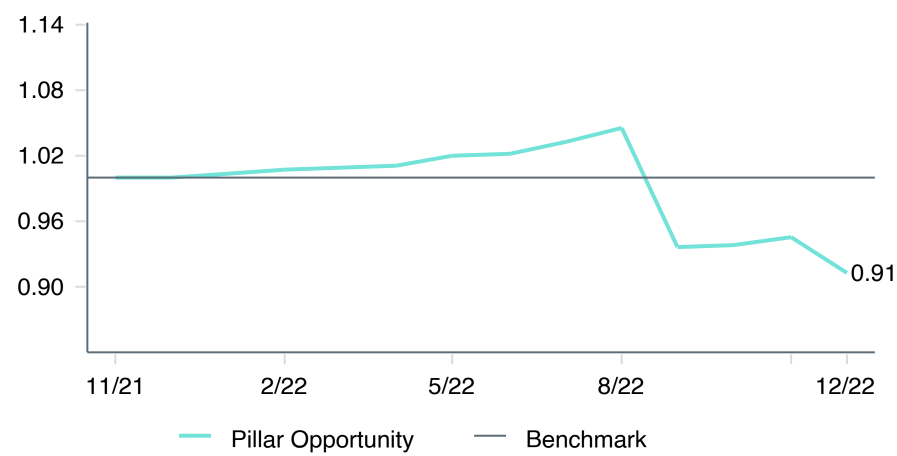
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



286

Chatham Performance Summary

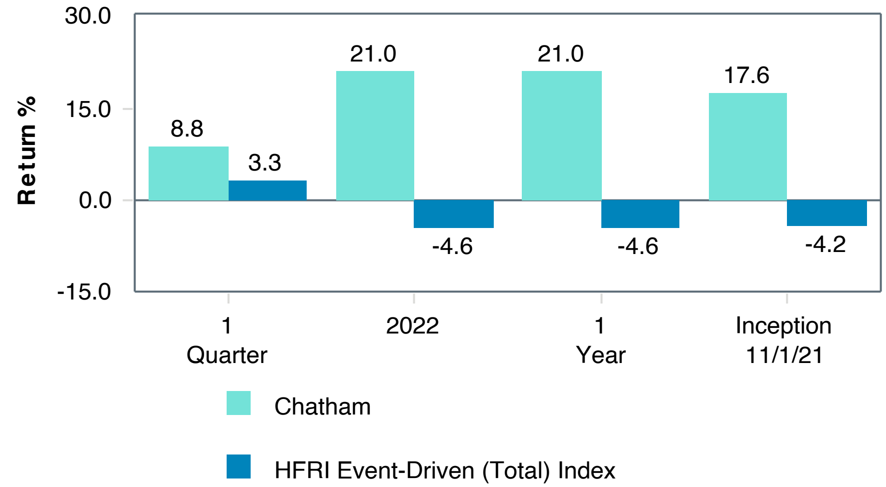
Account Information

Account Information

Account Name:	Chatham
Inception Date:	11/01/2021
Account Structure:	
Asset Class:	Hedge Fund
Benchmark:	HFRI Event-Driven (Total) Index
Peer Group:	

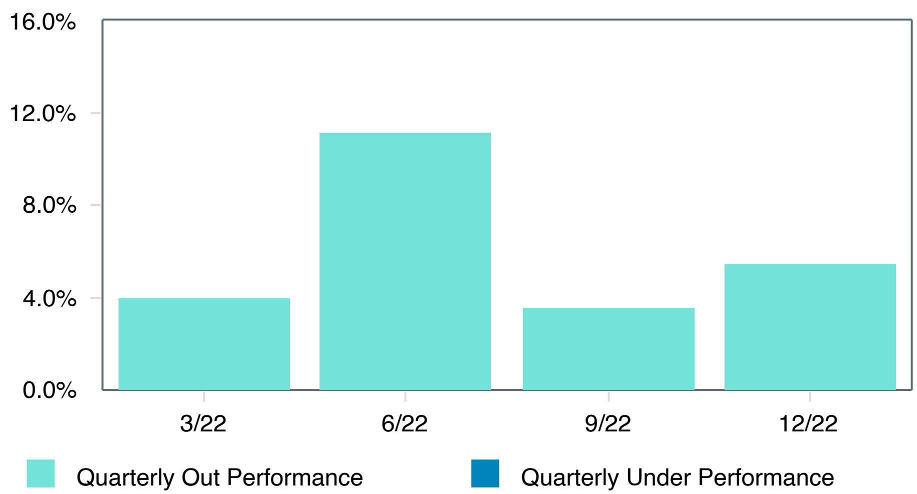
Return Summary

Return Summary



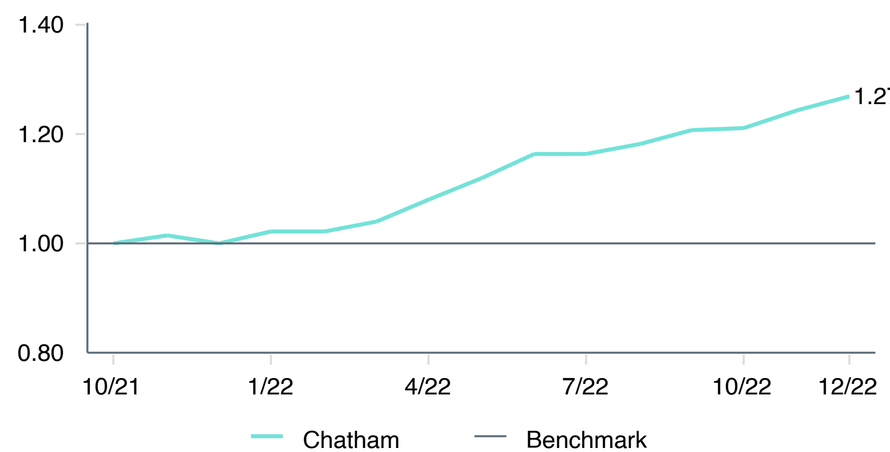
Quarterly Excess Performance

Quarterly Excess Performance



Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



Silver Point Capital Fund Performance Summary

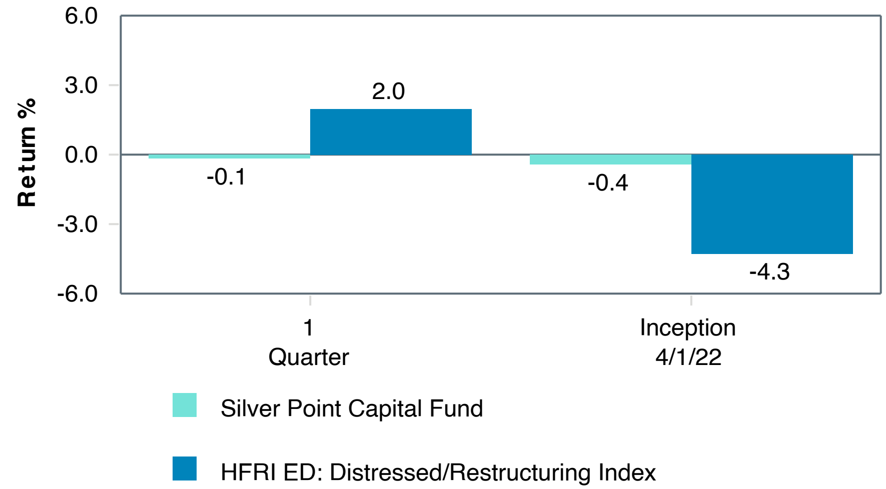
Account Information

Account Information

Account Name:	Silver Point Capital Fund
Inception Date:	03/01/2022
Account Structure:	
Asset Class:	Hedge Fund
Benchmark:	HFRI ED: Distressed/Restructuring Index
Peer Group:	

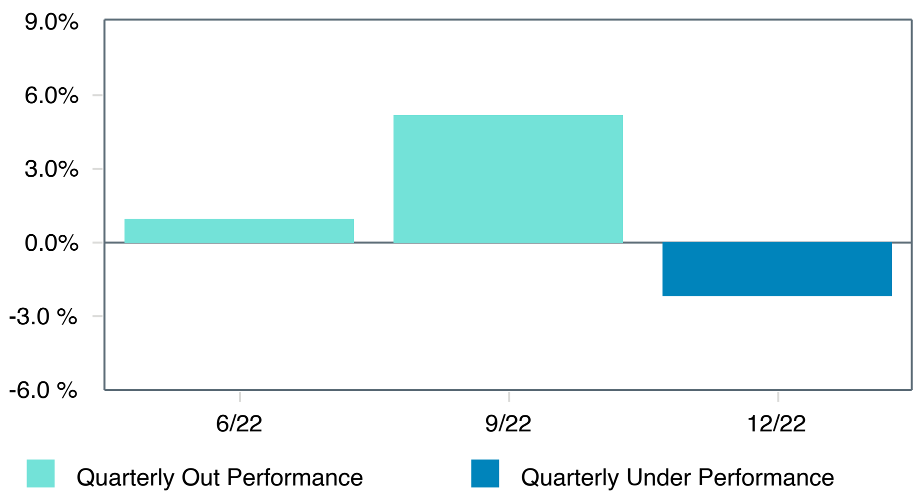
Return Summary

Return Summary



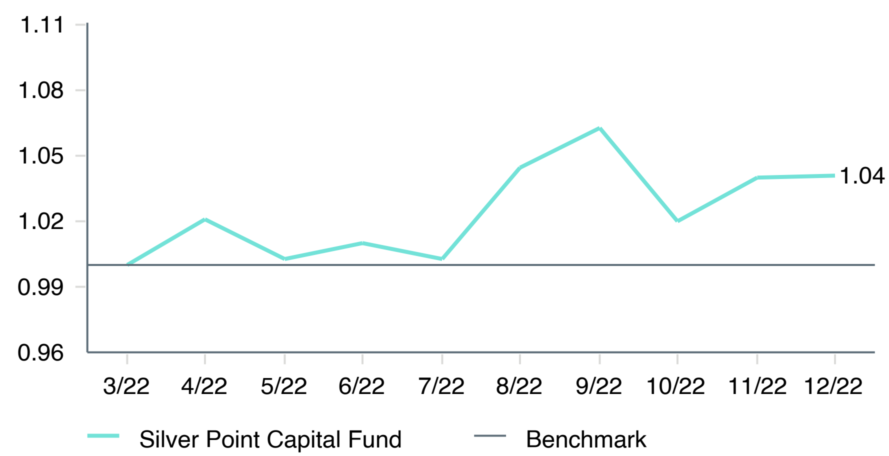
Quarterly Excess Performance

Quarterly Excess Performance

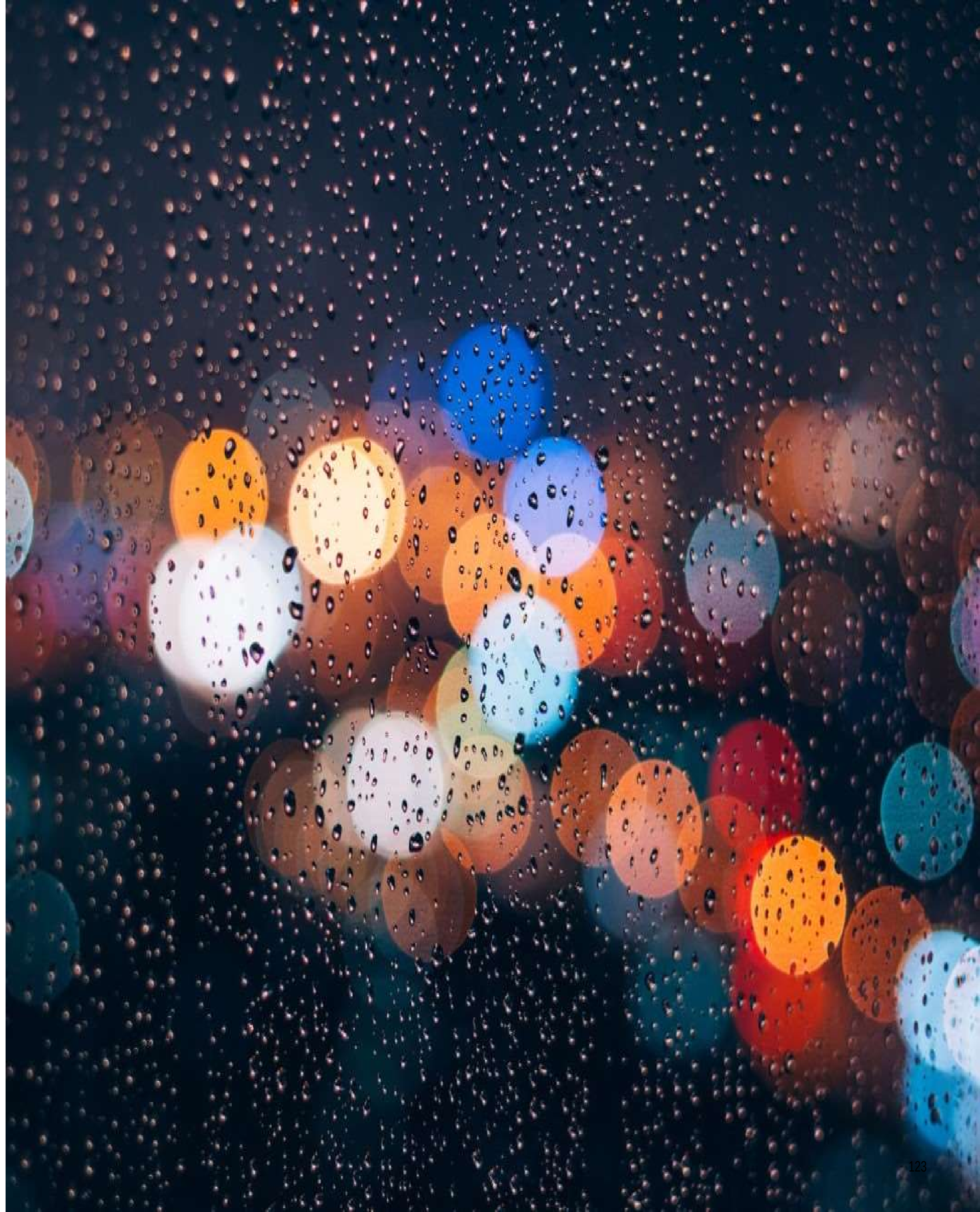


Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



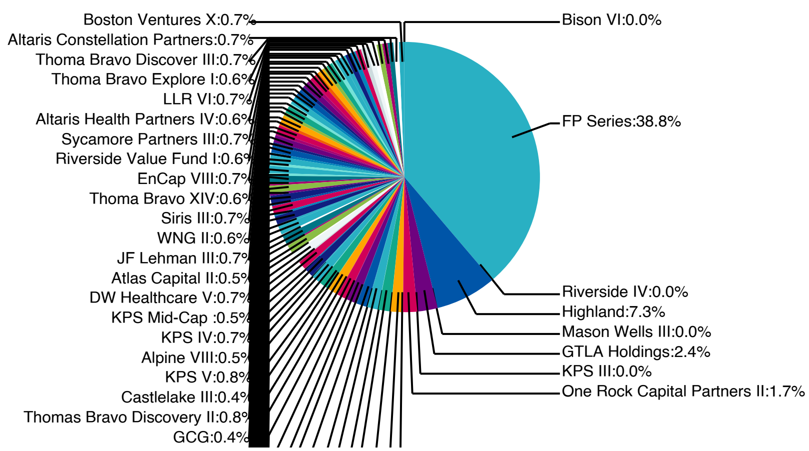
Private Equity



Private Equity Portfolio Overview

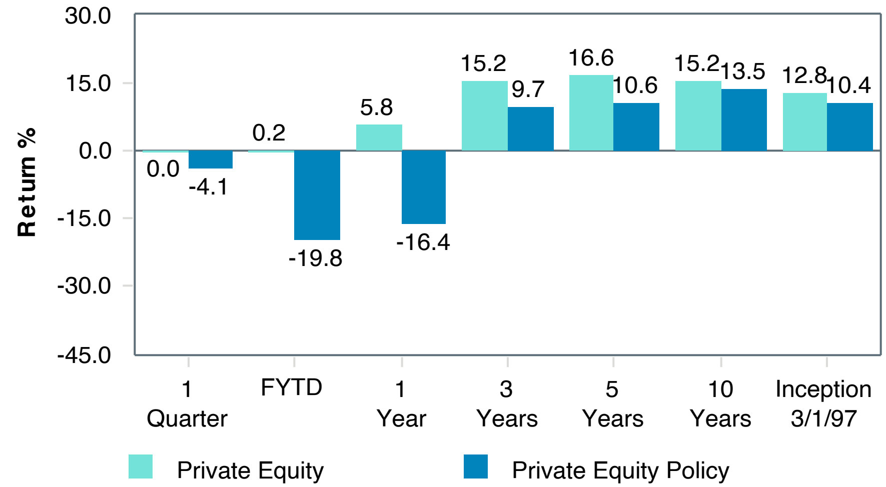
Current Allocation

December 31, 2022 : $2,898M



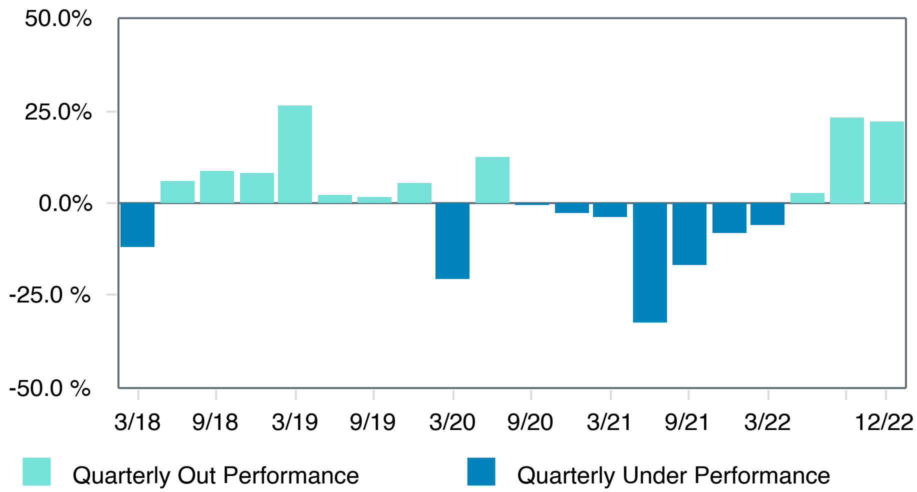
Return Summary

Return Summary



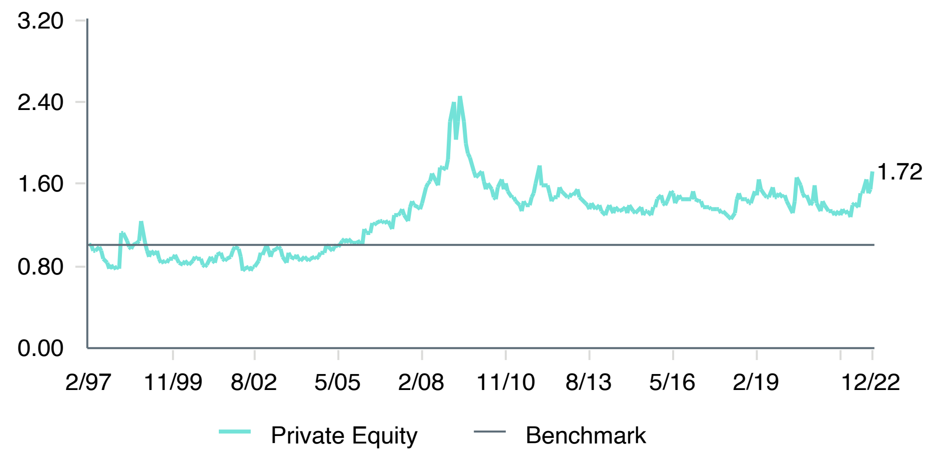
Quarterly Excess Performance

Quarterly Excess Performance

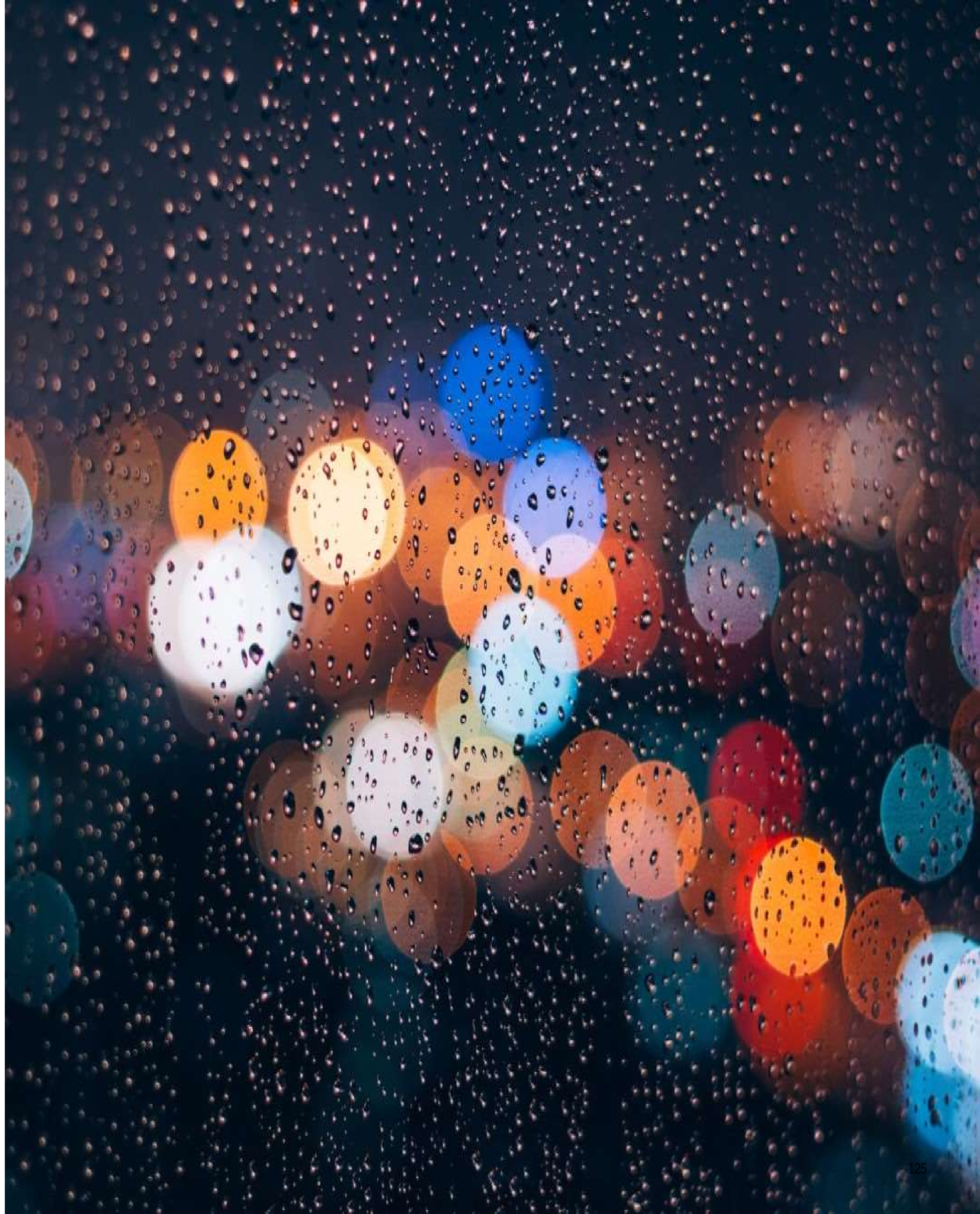


Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



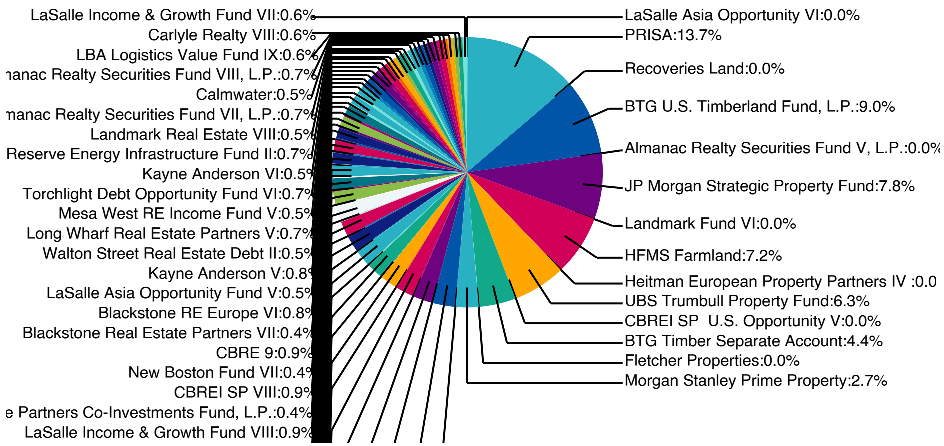
Real Assets



Real Assets Portfolio Overview

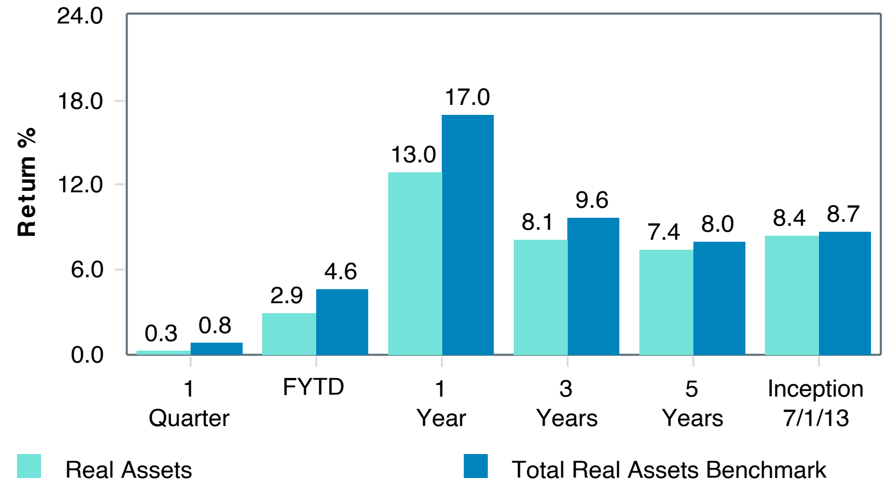
Current Allocation

December 31, 2022 : $2,540M



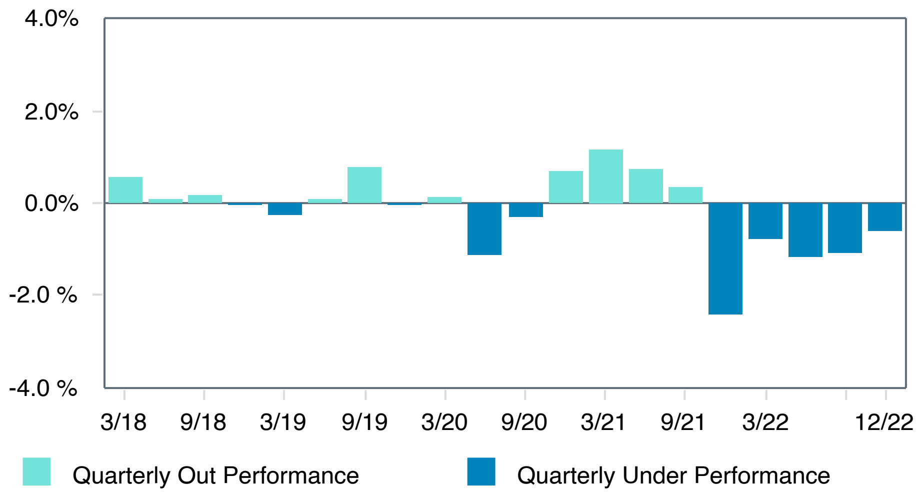
Return Summary

Return Summary



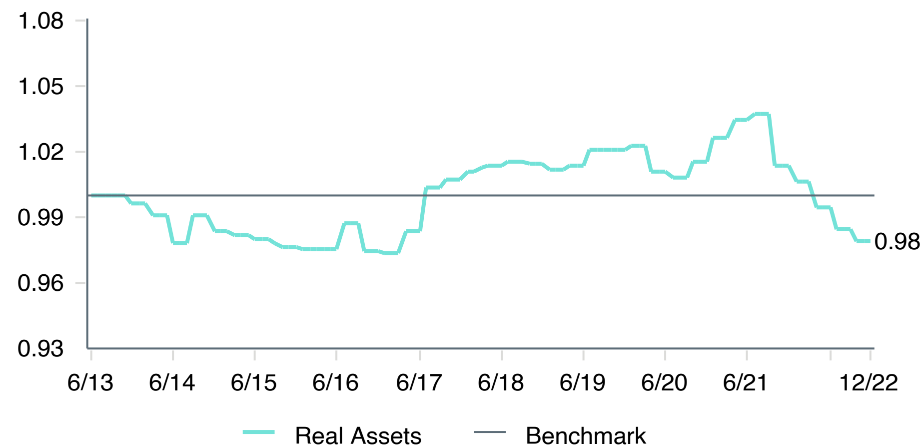
Quarterly Excess Performance

Quarterly Excess Performance

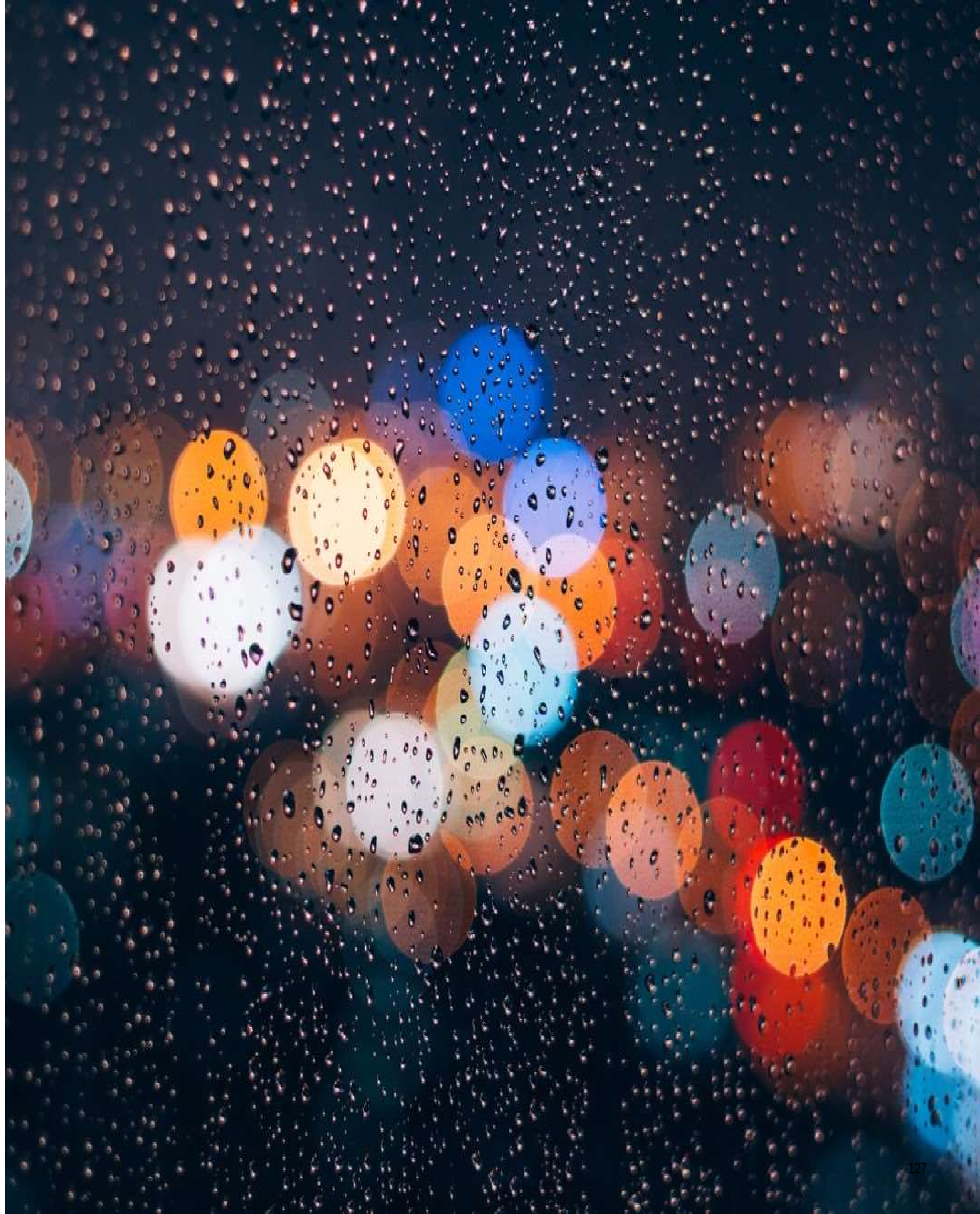


Ratio of Cumulative Wealth - Since Inception

Ratio of Cumulative Wealth - Since Inception



Fee Schedule



293

Fee Schedule

As of December 31, 2022

	Fee Schedule	Market Value $000	Estimated Annual Fee $000	Estimated Annual Fee %
Total Equity		**10,480,321**	**49,699**	**0.47**
Jacobs Levy 130/30	0.60 % of First $200 M 0.35 % of Next $300 M 0.30 % Thereafter	1,101,839	4,056	0.37
Kennedy Capital Management	0.60 % of First $100 M 0.50 % Thereafter	707,480	3,637	0.51
Stephens	0.75 % of First $150 M 0.70 % of Next $50 M 0.65 % Thereafter	502,649	3,442	0.68
Voya Absolute Return	0.60 % of First $250 M 0.40 % Thereafter	674,021	3,196	0.47
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	878,665	2,107	0.24
Pershing Square International	1.50 % of Assets	-	-	1.50
Pershing Square Holdings	1.50 % of Assets	247,082	3,706	1.50
Trian Partners	1.50 % of Assets	78,195	1,173	1.50
Trian Co-Investments	0.50 % of Assets	77,824	389	0.50
SSgA Global Index	0.04 % of First $1000 M 0.03 % Thereafter	918,451	367	0.04
BlackRock MSCI ACWI IMI Fund	0.05 % of First $250 M 0.04 % Thereafter	831,398	358	0.04
Wellington Global Perspectives	0.80 % of Assets	680,583	5,445	0.80
T. Rowe Price Global Equity	0.43 % of First $500 M 0.40 % Thereafter	1,234,819	5,064	0.41
Lazard	0.68 % of First $300 M 0.65 % Thereafter	650,868	4,321	0.66
D.E. Shaw	0.84 % of First $100 M 0.80 % of Next $100 M 0.76 % Thereafter	866,186	6,703	0.77
GMO Global All Country Equity	0.64 % of Assets	472,954	3,027	0.64
Harris Global Equity	0.60 % of First $100 M 0.50 % of Next $100 M 0.45 % Thereafter	557,236	2,708	0.49

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

Fee Schedule

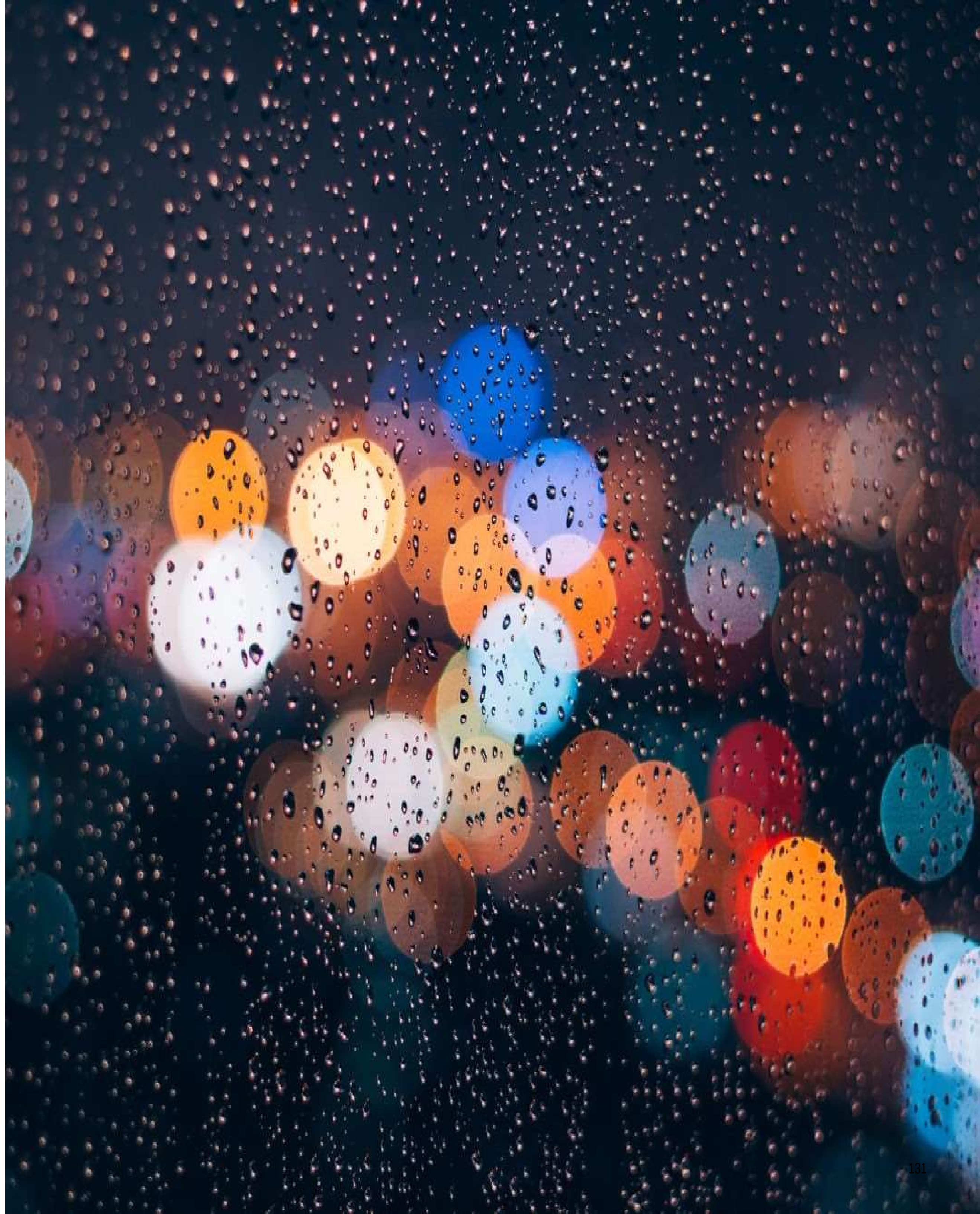
As of December 31, 2022

	Fee Schedule	Market Value $000	Estimated Annual Fee $000	Estimated Annual Fee %
Fixed Income		**2,807,482**	**5,157**	**0.18**
BlackRock	0.20 % of First $200 M 0.15 % of Next $200 M 0.10 % of Next $400 M 0.08 % Thereafter	243,929	466	0.19
Loomis Sayles	0.50 % of First $20 M 0.40 % of Next $30 M 0.30 % Thereafter	442,115	1,396	0.32
Putnam	0.40 % of First $100 M 0.35 % of Next $150 M 0.30 % of Next $250 M 0.25 % Thereafter	372,168	1,292	0.35
SSgA Aggregate Bond Index	0.04 % of First $100 M 0.02 % Thereafter	679,217	151	0.02
Wellington Global Total Return	0.30 % of Assets	382,471	1,147	0.30
Reams Core Plus Bond Fund	0.20 % of Assets	352,431	705	0.20
BRS Recycling Tax Credit		176,000	-	-
BRS Recycling Tax Credit Phase 2		77,032	-	-
BRS Recycling Tax Credit Phase 3		82,120	-	-
Opportunistic/Alternatives		**911,552**	**9,333**	**1.02**
Anchorage	2.00 % of Assets	37,965	759	2.00
York	1.50 % of Assets	9,360	140	1.50
Capula	2.00 % of Assets	91,385	1,828	2.00
Graham	2.00 % of Assets	93,598	1,872	2.00
Circumference Group Core Value	1.50 % of Assets	36,198	543	1.50
Aeolus Keystone Fund	2.00 % of Assets	33,217	664	2.00
Nephila Rubik Holdings	1.50 % of Assets	8,403	126	1.50
Parametric Global Defensive Equity Fund	0.40 % of First $150 M 0.35 % Thereafter	188,298	734	0.39
Man Alternative Risk Premia	0.85 % of Assets	111,778	950	0.85
CFM Systematic Global Macro Fund	0.36 % of Assets	103,804	374	0.36
Pillar Opportunity	1.30 % of Assets	87,938	1,143	1.30
Chatham	0.33 % of Assets	60,272	199	0.33

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

(This Page Left Blank Intentionally)

Disclaimers and Notes



Description of Benchmarks

Total Fund - The Performance Benchmark for the Total Fund reflects a weighted average of the underlying asset class benchmarks, weighted as follows: Opportunistic/Alternatives and Real Assets at the weight of the previous month's ending market values, Fixed Income at its long-term Policy Target of 15%, and Total Equity at its long-term Policy Target of 55% plus the balance of the unfunded or uncommitted assets of the Opportunistic/Alternatives and Real Assets categories. These targets can be found on page 21 of 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 December 1, 2022, the Total Equity Performance Benchmark was comprised of 34.1% DJ U.S. Total Stock Market Index and 65.9% MSCI ACWI IMI.

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

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

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

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

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

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

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

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

Cash Equivalents - The Citigroup 90 day T-bill.

Benchmark Descriptions

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 Indicies. 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 - And index that measure the performance of those Russell 1000 companies with 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.

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.

Index Definitions

Name	Description
Bloomberg U.S. Corporate High Yield Bond Index	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.
Bloomberg Emerging Markets Index	An unmanaged index that tracks total returns for external-currency-denominated debt instruments of the emerging markets.
Bloomberg Global Aggregate	Provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment grade 144A securities.
Bloomberg Global Treasury Ex-US	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.
Bloomberg Universal Index	A market value-weighted index which is the union of the U.S. Aggregate Index, U.S. High Yield Corporate Index, Eurodollar Index, U.S. Emerging Markets Index and the CMBS High Yield Index. The Index is appropriate for core plus fixed income mandates.
Bloomberg U.S. Government Index	A market value weighted index of U.S. government and government agency securities (other than mortgage securities) with maturities of one year or more.
Bloomberg U.S. Government/Credit Index	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.
Bloomberg U.S. High Yield Index	An index composed of non-investment grade corporate debt denominated in U.S. dollars. The issues have to have an outstanding par value of $150 million or greater and at least one year of maturity remaining.
Bloomberg U.S. Inflation Index	Measures the performance of the U.S. Treasury Inflation Protected Securities ("TIPS") market.
Bloomberg U.S. Intermediate Aggregate Bond Index	A market value-weighted index consisting of U.S. Treasury securities, corporate bonds and mortgage-related and asset-backed securities with one to ten years to maturity and an outstanding par value of $250 million or greater

Index Definitions

Name	Description
Bloomberg U.S. Intermediate Government/Credit Index	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.
Bloomberg U.S. Intermediate Government Bond Index	An unmanaged index considered representative of intermediate- term fixed-income obligations issued by the U.S. treasury, government agencies and quasi-federal corporations.
Bloomberg U.S. Intermediate Treasury	An unmanaged index considered representative of intermediate-term fixed- income obligations issued by the U.S. treasury.
Bloomberg U.S. Aggregate Bond Index	A market value-weighted index consisting of government bonds, SEC-registered corporate bonds and mortgage-related and asset-backed securities with at least one year to maturity and an outstanding par value of $250 million or greater. This index is a broad measure of the performance of the investment grade U.S. fixed income market.
Bloomberg U.S. Long Credit Bond Index	An unmanaged index considered representative of long-term fixed-income obligations issued by U.S. corporate, specified foreign debentures, and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered.
Bloomberg U.S. Long Government/Credit Index	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.
Bloomberg U.S. Long-Term Government Bond Index	An unmanaged index considered representative of long-term fixed- income obligations issued by the U.S. treasury, government agencies and quasi-federal corporations.
Bloomberg U.S. TIPS	A market value-weighted index consisting of U.S. Treasury Inflation Protected Securities with one or more years remaining until maturity with total outstanding issue size of $500m or more.
Bloomberg U.S. Treasury 20-30 Year STRIPS Index	A subcomponent of the Aggregate Index, this benchmark includes long-term treasury STRIPS.
Bloomberg Commodity Index	Consists of 22 exchange-traded futures on physical commodities, which are weighted to account for economic significance and market liquidity. Performance is calculated on an excess return basis and reflects commodity future price movements.

Index Definitions

Name	Description
BofA Merrill Lynch 3 Month Treasury Bill	An index that measures the average return of the last three-month U.S. Treasury Bill issues .
BofA Merrill Lynch High Yield Master	A market capitalization-weighted index that tracks the performance of U.S. dollar- denominated, below investment grade corporate debt publicly issued in the U.S. domestic market.
Citigroup 90-Day T-Bill Index	An index that measures the average return of the last three-month U.S. Treasury Bill issues
CRSP US Large Growth Cap Index	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.
CRSP US Total Market Index	An index comprised of nearly 4,000 constituents across mega, large, small, and micro capitalizations and includes securities traded on NYSE, NYSE Market, NASDAQ, or ARCA, representing nearly 100% of the U.S. investable equity market. The index is reconstituted quarterly after the market close on the third Fridays of March, June, September, and December.
Credit Suisse Leveraged Loan Index	Designed to mirror the investable universe of the U.S. dollar denominated leveraged loan market.
DJ U.S. Completion Total Stock Market Index	A capitalization-weighted index that consists of the stocks in the Dow Jones U.S. Total Stock Market Index less the stocks in the S&P 500 Stock Index.
DJ U.S. Total Stock Market Index	A capitalization-weighted stock index representing all domestic common stocks traded regularly on the organized exchanges. The index is the broadest measure of the aggregate domestic stock market and includes approximately 5,000 stocks.
FTSE 4Good U.S. Select Index	A socially responsible investment (SRI) index of US stocks that excludes companies with certain business activities such as weapons, tobacco, gambling, alcohol, nuclear power, and adult entertainment
FTSE All-World ex-U.S. Index	A capitalization-weighted stock index representing 46 developed market countries and emerging market countries excluding the U.S.

Index Definitions

Name	Description
FTSE EPRA NAREIT Global ex-U.S. Index	Designed to represent general trends in eligible real estate equities worldwide. Relevant real estate activities are defined as the ownership, disposure and development of income-producing real estate.
FTSE Global All Cap ex US Index	A market-capitalization weighted index representing the performance of roughly 5350 large, mid and small cap companies in 46 Developed and Emerging markets worldwide, excluding the USA.
FTSE Global Core Infrastructure Index	Represents the performance of infrastructure and infrastructure-related securities companies in a set of industries that FTSE defines as being involved in infrastructure. The series is based on the FTSE Global Equity Index Series and both developed and emerging markets are included.
FTSE NAREIT U.S. Equity REITS	Free float adjusted, market capitalization weighted index of US based equity real estate investment trusts (REITs).
Goldman Sachs Commodity Index	A composite index of commodity sector returns which represents a broadly diversified, unleveraged, long-only position in commodity futures.
HFR Fund-of-Fund Index.	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.
HFRI Fund Weighted Composite Index	The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in 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.
Hueler Stable Value Index	The Hueler Analytics Stable Value Pooled Fund Comparative Universe represents investment strategies of $96 billion in stable value assets, across 24 pooled funds, invested in contracts universe across a universe of 16 general account issuers and 14 synthetic wrap providers. The allocation of pooled fund assets is dominated by synthetic contracts issued by insurance companies and banks.
J.P. Morgan EMBI Global Diversified	Comprised of dollar-denominated Brady bonds, traded loans and Eurobonds issued by emerging market sovereign and quasi-sovereign entities. The Diversified version limits the weights of the index countries by only including a specified portion of those countries' eligible current face amounts of debt outstanding, providing for a more even distribution of weights within the countries in the index.

Index Definitions

Name	Description
iMoneyNet All Taxable Money Funds Index	An index made up of the entire universe of money market mutual funds. The index currently represents over 1,300 funds, or approximately 99 percent of all money fund assets.
iMoneyNet Money Fund Average.	An index made up of the entire universe of money market mutual funds. The index currently represents over 1,300 funds, or approximately 99 percent of all money fund assets.
MSCI All Country World ex-U.S. Index	A capitalization-weighted index of stocks representing 44 stock markets in Europe, Australia, the Far East, the Middle East, Latin America and North America. Index consists of 23 developed and 21 emerging countries, but excludes the U.S.
MSCI All Country World ex-U.S. Index IMI-.	A capitalization-weighted index of large, mid and small cap stocks representing 22 developed (excluding the United States) and 24 emerging market countries. The index is the broadest measure of the aggregate non-US stock market, covering approximately 99% of the global equity investment opportunity set outside of the United States.
MSCI All Country World ex-U.S. Small Cap Index	Covers all investable small cap securities with a market capitalization below that of the companies in the MSCI Standard Indices (excluding U.S.), and target approximately 14% of each market's free-float adjusted market capitalization.
MSCI All Country World Index IMI	A capitalization-weighted index of large, mid and small cap stocks representing 23 developed and 24 emerging market countries. The index is the broadest measure of the aggregate global stock market, covering approximately 99% of the global equity investment opportunity set.
MSCI 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 EAFE Growth Index	A capitalization-weighted index of 21 stock markets in Europe, Australia, Asia and the Far East designed to capture the growth-oriented companies.
MSCI EAFE Small Cap Index	A capitalization-weighted index of small cap stocks representing 23 developed country markets in Europe, Australia, Asia, and the Far East.
MSCI EAFE Value Index	A capitalization-weighted index of 21 stock markets in Europe, Australia, Asia and the Far East designed to capture the value-oriented companies.

Index Definitions

Name	Description
MSCI Emerging Markets Index	A capitalization-weighted index of stocks representing 22 emerging country markets.
MSCI U.S. Broad Market Index	A capitalization-weighted stock index that aggregates the MSCI U.S. Large Cap 300, Mid Cap 450, Small Cap 1,750 and Micro-Cap Indices. This index represents approximately 99.5% of the capitalization of the U.S. Equity market and includes approximately 3,562 companies.
MSCI U.S. REIT Index	A broad index that fairly represents the equity REIT opportunity set with proper invest ability screens to ensure that the index is investable and replicable. The index represents approximately 85% of the U.S. REIT universe
MSCI World Index	A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets, representing 24 developed market country indices.
NCREIF Property Index	NCREIF Property Index - A capitalization-weighted index of privately owned investment grade income-producing properties representing approximately $269 billion in assets.
NFI ODCE Index	NFI ODCE Index - A capitalization weighted index comprised of open-end, Core funds investing in commercial real estate properties. The funds that constitute the index are subject to certain geographic and property type diversification requirements as well as leverage restrictions. The index reflects the impact of leverage on investment results. The returns shown in this report are net of management fees of the respective funds included in the index.
Rolling 3-year Constant Maturity Treasury Index	An index published by the Federal Reserve Board based on the monthly average yield of a range of Treasury securities, all adjusted to the equivalent of a three-year maturity.
Russell 1000 Growth Index	An index that measures the performance of those Russell 1000 companies with higher price-to- book ratios and higher I/B/E/S growth forecasts.
Russell 1000 Index	A capitalization-weighted index of the 1,000 largest publicly traded U.S. stocks by capitalization.
Russell 1000 Value. Index.	An index that measures the performance of those stocks included in the Russell 1000 Index with lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.
Russell 2000 Growth Index	A capitalization-weighted index of those stocks in the Russell 2000 Index with higher price-to-book ratios and higher I/B/E/S earnings growth forecasts.

Index Definitions

Name	Description
Russell 2000 Index	A capitalization-weighted index of the smallest 2,000 stocks in the Russell 3000 Index. The index excludes the largest- and smallest-capitalization issues in the domestic stock market.
Russell 2000 Value Index	An index that measures the performance of those stocks included in the Russell 2000 Index with lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.
Russell 2500 Growth Index	A capitalization-weighted index representing those companies within the Russell 2500 Index with higher price-to-book ratios and higher I/B/E/S earnings growth forecasts.
Russell 2500 Index	The Index is constructed by first identifying the 3,000 largest-capitalization U.S. stocks and ranking them by market capitalizations, choosing the bottom 2,500 names on the list.
Russell 2500 Value Index.	an index that measures the performance of those stocks included in the Russell 2500 Index with lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.
Russell 3000 Growth Index	A capitalization-weighted index consisting of those Russell 3000 Index stocks that have higher price-to-book ratios and higher I/B/E/S earnings growth forecasts.
Russell 3000 Index	A capitalization-weighted index consisting of the 3,000 largest publicly traded U.S. stocks by capitalization. This index is a broad measure of the performance of the aggregate domestic equity market.
Russell 3000 Value Index	A capitalization-weighted index consisting of those Russell 3000 Index stocks that have lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.
Russell Mid Cap Growth Index	A capitalization-weighted index representing those stocks in the Russell MidCap Index with higher price-to-book ratios and higher I/B/E/S earnings growth forecasts.
Russell Mid Cap Value Index	A capitalization-weighted index consisting of those Russell MidCap Index stocks that have lower price-to-book ratios and lower I/B/E/S earnings growth forecasts.
S&P 500 Index	A capitalization-weighted index representing stocks chosen by Standard & Poor's, Inc. for their size, liquidity, stability and industry group representation. The companies in the S&P 500 Index are generally among the largest in their industries.

Index Definitions

Name	Description
S&P Completion Index	The S&P Completion Index is a sub-index of the S&P Total Market Index, including all stocks eligible for the S&P TMI and excluding all current constituents of the S&P 500. The index covers approximately 4,000 constituents, offering investors broad exposure to mid, small, and micro-cap companies.
S&P GSCI®	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.
S&P Leverage Loan Index	A daily total return index that uses LSTA/LPC Mark-to-Market Pricing to calculate market value change.
S&P Midcap 400 Index	A market-capitalization-weighted index of stocks in all major industries in the mid-range of the U.S. stock market.
Wilshire REIT	A measure of the types of U.S. real estate securities that represent the ownership and operation of commercial or residential real estate. To be included in the index, a company must have a market capitalization of $200 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. • Please feel free to contact us at retirement@aonhewitt.com for more index information.

Notes

- The rates of return contained in this report are shown on an after-fees basis unless otherwise noted. They are geometric and time-weighted. Returns for periods longer than one year are annualized.
- Universe percentiles are based upon an ordering system in which 1 is the best ranking and 100 is the worst ranking.
- Due to rounding throughout the report, percentage totals displayed may not sum to 100%. Additionally, individual fund totals in dollar terms may not sum to the plan total.

Disclaimer

Past performance is not necessarily indicative of future results.

Unless otherwise noted, performance returns presented reflect the respective fund's performance as indicated. Returns may be presented on a before-fees basis (gross) or after-fees basis (net). After-fee performance is net of each respective sub-advisors' investment management fees and include the reinvestment of dividends and interest as indicated on the notes page within this report or on the asset allocation and performance summary pages. Actual returns may be reduced by Aon Investments' investment advisory fees or other trust payable expenses you may incur as a client. Aon Investments' advisory fees are described in Form ADV Part 2A. Portfolio performance, characteristics and volatility also may differ from the benchmark(s) shown.

The information contained herein is confidential and proprietary and provided for informational purposes only. It is not complete and does not contain certain material information about making investments in securities including important disclosures and risk factors. All securities transactions involve substantial risk of loss. Under no circumstances does the information in this report represent a recommendation to buy or sell stocks, limited partnership interests, or other investment instruments.

The data contained in these reports is compiled from statements provided by custodian(s), record-keeper(s), and/or other third-party data provider(s). This document is not intended to provide, and shall not be relied upon for, accounting and legal or tax advice. Aon Investments has not conducted additional audits and cannot warrant its accuracy or completeness. We urge you to carefully review all custodial statements and notify Aon Investments with any issues or questions you may have with respect to investment performance or any other matter set forth herein.

The mutual fund information found in this report is provided by Thomson Reuters Lipper and Aon Investments cannot warrant its accuracy or timeliness. Thomson Reuters Lipper Global Data Feed provides comprehensive coverage of mutual fund information directly to Investment Metrics, Aon Investments' performance reporting vendor, via the PARis performance reporting platform. Thomson Reuters Lipper is the data provider chosen by Investment Metrics, and as such, Aon Investments has no direct relationship with Thomson Reuters Lipper.

Refer to Hedge Fund Research, Inc. www.hedgefundresearch.com for information on HFR indices.

FTSE International Limited ("FTSE") © FTSE 2017. "FTSE®" and "FTSE4Good®" are trademarks of the London Stock Exchange Group companies and are used by FTSE International Limited under license. The FTSE indices are calculated by FTSE International Limited in conjunction with Indonesia Stock Exchange, Bursa Malaysia Berhad, The Philippine Stock Exchange, Inc., Singapore Exchange Securities Trading Limited and the Stock Exchange of Thailand (the "Exchanges"). All intellectual property rights in the FTSE/ASEAN Index vest in FTSE and the Exchanges. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE indices and / or FTSE ratings or underlying data. No further distribution of FTSE Data is permitted without FTSE's express written consent.

Aon Investments USA Inc. ("Aon Investments") is a federally registered investment advisor with the U.S. Securities and Exchange Commission ("SEC"). Aon Investments is also registered with the Commodity Futures Trade Commission as a commodity pool operator and a commodity trading advisor, and is a member of the National Futures Association. The Aon Investments ADV Form Part 2A disclosure statement is available upon written request to:

Aon Investments USA Inc.
200 East Randolph Street
Suite 700
Chicago, IL 60601
ATTN: Aon Investments Compliance Officer

TOWNSEND® GROUP
an Aon company

Arkansas Teachers Retirement System
Third Quarter 2022 Real Assets Performance Review

PROPRIETARY & CONFIDENTIAL
February 2023

THIS PAGE LEFT BLANK INTENTIONALLY

Agenda

316

THIS PAGE LEFT BLANK INTENTIONALLY

Real Assets Markets Performance and Overview

TOWNSEND® GROUP
an Aon company

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	0.5	0.3	22.1	21.0	12.4	11.4	10.2	9.3	10.9	9.9
NCREIF Property Index "NPI"	0.6		16.1		9.9		8.6		9.7	
NCREIF Farmland Property Index “NFI”	2.0		10.2		6.5		6.3		9.5	
NCREIF Timberland Property Index “NTI”	2.4		12.5		5.8		4.7		5.9	

- In the third quarter of 2022, the NFI-ODCE (net) returned 0.3%, down 420 basis points quarter-over-quarter. NFI-ODCE returns have recovered to long-term expectations of 7% to 9% gross due to the robust recovery of the Global economy following the COVID-19 pandemic.

- The NCREIF Farmland Index (“NFI”) returned 2.0%, up 60 basis points from the prior quarter. Row crops drove performance with a returns of 2.7%, while permanent crops returned 0.9%.

- The NCREIF Timberland Index (“NTI”) returned 2.4% for the quarter and 12.5% for the trailing one-year return. Regionally, the Northwest (2.6%) was the NTI’s top performer while the Lake States (0.8%) lagged for the quarter.

318

Portfolio Funding Status and Composition

TOWNSEND® GROUP
an Aon company

As of September 30, 2022	ATRS' Portfolio $ in Millions
Number of Investments	81
Total Commitments	4,349.6
Unfunded Commitments	760.0
Total Paid-In Capital	3,832.4
Total Distributions	3,482.6
Net Asset Value	2,531.4
Gross Asset Value	3,515.2
DPI	0.9x
TVPI	1.6x
Since Inception IRR	7.5%
**Active and Liquidated*	

PORTFOLIO COMPOSITION TO TARGETS (As of 09/30/2022)		
	Target	**Actual Funded**
Target Real Asset Allocation	15%	13.4%
Portfolio Style Composition		
Real Estate	10%	8.2%
Core*	50%-70%	64.3%
Non-Core	30%-50%	35.7%
Value-Added**	*N/A*	*23.4%*
Opportunistic**	*N/A*	*12.2%*
Agriculture	1%	1.3%
Timber	2%	1.8%
Infrastructure	2%	2.0%
Leverage	50%	28.0%

* Includes Arkansas Investments

** No stated targets

- Recent infrastructure and real estate commitments will help the portfolio continue to move towards its target allocation irrespective of liquidating investments

- In general, the portfolio is in compliance with its Statement of Investment Policy. There are a few exceptions:
  - Timber geographic concentration to “Other” remains out of compliance largely due in part to the BTG OEF’s Ohio investments
  - Timber geographic concentration to “Lake States” remains out of compliance. Townsend is actively monitoring this relatively small concentration of the benchmark

ATRS' Real Assets Performance

TOWNSEND® GROUP
an Aon company

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	0.5	0.3	14.8	13.1	10.5	8.9	9.4	7.8	10.3	8.8	7.5	1.6
Total Real Assets Benchmark		0.8		17.0		9.6		8.0		8.8		

- The table shows the returns for ATRS' Total Real Assets Portfolio and the Real Assets Benchmark.
- ATRS has slightly under performed in the near term but continues to perform in-line over the longer-term period.

*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. Additionally, the Infrastructure Benchmark of CPI plus 500 bps has been adjusted to CPI plus 300 bps as of 3Q20 and the new Infrastructure Benchmark will be a blend of the two going forward.

ATRS' Real Estate Performance

TOWNSEND® GROUP
an Aon company

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	-0.2	-0.4	15.5	13.7	9.8	8.2	8.7	7.2	10.7	9.2	8.1	1.5
NFI-ODCE Value Weight	0.5	0.3	22.1	21.0	12.4	11.4	10.2	9.3	10.9	9.9		

- The table shows the time-weighted, net of fee returns for ATRS' Total Real Estate Portfolio and the NFI-ODCE benchmark.

- There are a number of Non-Core Funds that have exited the J-curve and performance is expected to have a more meaningful impact as newer funds' investments are realized.

- The real estate portfolio underperformed the benchmark for the quarter, and all other measurement periods largely due in part to market distress caused by the global pandemic, relative underperformance of UBS TPF, and a cash out refinance and property sales from an Arkansas Investments that decreased net asset value and consequently effected the return.

ATRS' Timberland and Agriculture Performance

TOWNSEND® GROUP
an Aon company

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)		10 Year (%)		Net IRR	Equity Multiple
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET		
Timberland	3.1	2.8	13.7	12.7	9.4	8.4	8.2	7.2	6.8	5.9	5.5	2.0
Timberland Property Benchmark*	2.4		12.5		6.2		4.4		5.3			
Agriculture	-0.3	-0.6	13.6	12.4	8.4	7.2	6.8	5.6	7.9	6.8	6.0	1.5
Agriculture Benchmark*	2.0		10.2		6.6		5.7		7.5			

- The timber portfolio is outperforming the benchmark over all measurable time periods.
- The agriculture portfolio underperformed for the quarter but is outperforming the benchmark over all remaining measurement periods.

*The Timberland Property Benchmark was comprised of the NCREIF Timberland returns weighted according to ATRS' regional exposure based on Net Asset Value prior to 3Q20, gross of fees. The Agriculture Benchmark was comprised of the NCREIF Farmland returns weighted according to ATRS' regional and crop type exposure based on Net Asset Value prior to 3Q20, gross of fees. As of 3Q20, the Timberland and Agriculture benchmarks going forward will no longer be weighted and are just the NCREIF Timberland and NCREIF Farmland returns, gross of fees. Additionally, the Infrastructure Benchmark of CPI plus 500 bps has been adjusted to CPI plus 300 bps as of 3Q20 and the new Infrastructure Benchmark will be a blend of the two going forward.

ATRS' Infrastructure Performance

Performance Summary	Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)		10 Year (%)		Net IRR	Equity Multiple
	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET		
Infrastructure	1.9	1.3	13.9	11.4	16.6	14.1	16.8	13.9	N/A	N/A	**13.3**	**1.5**
Infrastructure Benchmark*	0.9		9.1		7.8		7.6		N/A			

- The infrastructure portfolio slightly outperformed the Infrastructure benchmark over the quarter, primarily driven by outperformance from Macquarie Infrastructure Partners III (8.0% gross).

- ATRS' Infrastructure portfolio is outperforming the Infrastructure benchmark over all measurement periods.

*As of 3Q2020, the Infrastructure Benchmark of CPI plus 500 bps has been adjusted to CPI plus 300 bps and the new Infrastructure Benchmark will be a blend of the two going forward.

ATRS' Real Assets Portfolio Highlights

- Commitment activity update
  - ATRS made the following commitments during the quarter or subsequent to quarter end
    - Blackstone Real Estate Partners X: $75 million
    - LaSalle Value Partners US IX: $75 million
    - DIF Infrastructure VII: $50 million
  - ATRS is in the queue for a partial redemption of UBS TPF
    - As of December 8, 2022, the TPF redemption queue is $7.2 billion and expect full repayment by YE25

Significant Events

TOWNSEND GROUP an Aon company

- Subsequent to quarter end, Chuck Leitner (CEO of CBRE Investment Management) decided to retire at the end of 2022. Townsend has reviewed and is comfortable with this change in personnel and will continue to monitor the matter.

THIS PAGE LEFT BLANK INTENTIONALLY

Agenda

TOWNSEND® GROUP
an Aon company

327

THIS PAGE LEFT BLANK INTENTIONALLY

United States Real Estate Market Update (3Q22)

General

- Townsend witnessed a robust recovery across the U.S. economy and U.S. real estate markets in 2021 but has begun to moderate so far in 2022. An array of headwinds have emerged including rising interest rates, persistent inflation, various geopolitical events, and widespread global supply chain struggles. The S&P 500 locked in its 3rd worst performance since the 1950s, producing a gross total return of -25.0% during the first three quarters of the year. The MSCI US REIT index also continued its cool off following a strong 2021, posting a gross third quarter return of -10.0%.

- During the third quarter, GDP reversed course, increasing at an annualized rate of 2.6% due to a narrowing trade deficit. This positive growth is expected to be a one-off for the near-term following two quarters of negative GDP growth, which has historically signaled a recession. As a result of the atrocities of the Russian-Ukraine war, Saudi-Iranian oil concerns, and a rise in protectionist measures, commodity pricing has skyrocketed in lockstep with persistent inflation, which is anticipated to carry over well into 2023. Federal reserve officials remain committed to taming inflation and reducing the central bank's balance sheet for the foreseeable future, approving five interest rate hikes through third quarter 2022, with an additional 75 bps hike in November 2022.

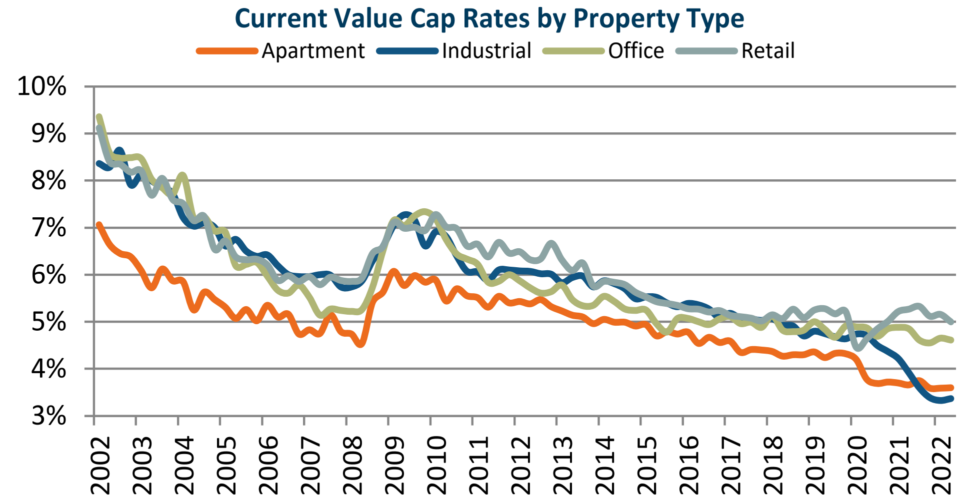
Commercial Real Estate

- Through the third quarter of 2022, total CRE transaction activity for the quarter decreased by -21% YoY, with annual transaction activity up 43% YoY. The office sector transaction volumes in the U.S. have notably not recovered to pre-pandemic levels. While office sector fundamentals signaled mild improvement, the sector faces significant headwinds in the capital markets, driven by a dramatic increase in the cost of debt.

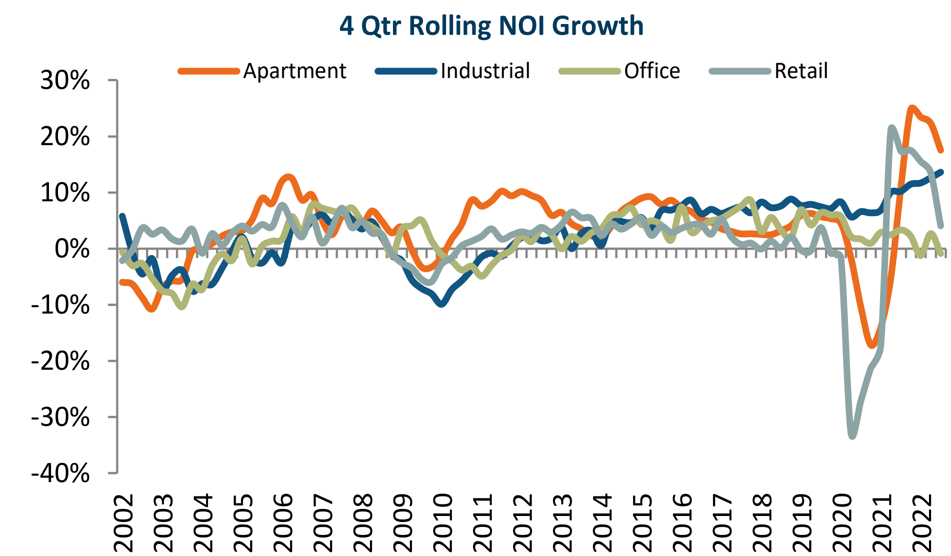
- Transaction cap rates (4.9%) expanded during the quarter, to the tune of 27 bps. This increase comes after a -35 bps quarter-over-quarter decrease in 2Q22. Current valuation cap rates decreased for retail (-16 bps) and office (-4 bps), while the industrial (+4 bps) and apartment (+1 bp) property sectors experienced slight cap rate expansion.

- NOI growth has substantially diverged between property sectors. Apartment sector fundamentals remain strong, as many would-be buyers continue to be priced out of the housing market. Apartment NOI expanded (+18%) YoY.

- 10-year treasury bond yields surged 82 bps to end the quarter at 3.8%. As economists expected rates have moved significantly higher throughout 2022.



Source: NCREIF



Source: NCREIF

Sources: Bureau of Economic Analysis, U.S. Census Bureau, St. Louis Fed, NCREIF, Real Capital Analytics, Bloomberg LP., Preqin.

United States Property Matrix (3Q22)

INDUSTRIAL

- In 3Q22, industrial properties were the second highest returning sector at 1.11% and outperformed the NPI by 54 bps.
- Transaction volumes decreased to $35 billion in the third quarter of the year, resulting in an 18% decrease year-over-year. Individual asset sales decreased 21% year-over-year, while portfolio purchases turned in a year-over-year volume decrease of 44%. At $35 billion, the industrial sector decreased by $4 billion quarter-over-quarter.
- The industrial sector turned in NOI growth of 13.6% over the past year. NOI continues to reach all time highs for the sector.
- Vacancy decreased by 97 bps year-over-year to 1.5%. Vacancy in the sector decreased 14 bps from last quarter, reaching all-time historic lows. E-commerce continues to drive demand across the sector.
- Industrial cap rates compressed approximately 55 bps from a year ago, to 3.4%. Industrial overall fundamentals still top all property sectors.

MULTIFAMILY

- The apartment sector delivered a 1.2% return during the quarter, outperforming the NPI by 63 bps.
- Transaction volume in the third quarter of 2022 decreased to $74 billion, resulting in an decrease of 17% year-over-year. Transaction volume for the sector decreased from the second quarter but it still high relative to historical levels. This volume continues to make multifamily the most actively traded sector for the nineteenth straight quarter.
- Cap rates remained steady at 3.6% quarter-over-quarter, decreasing 6 bps year-over-year. Multifamily cap rates remain at the lowest level observed in years, driven by continued increases in valuation.
- The multifamily sector saw increasing vacancy rates throughout the entirety of 2020 due to the global pandemic. Through 2021, the sector appeared to have shaken that trend although vacancy rates remained steady during the last 3 quarters. Vacancy rates increased by 69 bps quarter-over-quarter. The aging millennials have begun shifting their desires to suburban living, but continued home price appreciation has deterred the full effect of this migratory trend.

OFFICE

- The office sector returned -0.66% in 3Q22, 123 bps below the NPI return over the period.
- Transaction volumes decreased by 33% year-over-year in the third quarter. Transaction volume equated to $26 billion for the quarter, a decrease of $2 billion quarter-over-quarter. Office transaction levels have regressed from 2Q22 but not quite to levels seen during the COVID-19 pandemic.
- Office sector vacancy rates have expanded since the beginning of the pandemic due to work from home orders and uncertainty revolving around the future of office space. Office continues to be the highest vacancy property type at 12.97%, increasing 3 bps from last quarter.
- NOI growth in the office sector compressed quarter-over-quarter by 742 bps and appears to be in the midst of its recovery to pre-pandemic levels.
- Office cap rates compressed from a year ago, sitting at approximately 4.6%. Office-using job growth was stunted significantly through out 2020 due to work from home orders. Though we are observing a slow but steady flow back to in-office work, there is still uncertainty in the sector as many companies remain hesitant.

RETAIL

- As of 3Q22, the retail sector delivered a quarterly return of 0.39%, underperforming 18 bps below the NPI.
- Transaction volumes totaled $18 billion in the third quarter, decreasing 9% year-over-year. Single asset transactions accounted for just over 84% of all sales volume for the quarter.
- Cap rates have compressed approximately 27 bps within the sector over the last year, to 5.0%. Current valuation cap rates compressed quarter-over-quarter by 16 bps due to valuation adjustments made across the sector in general.
- NOI growth decreased, 9.5% over the last year. Retail has begun its slow recovery as a large portion of stores nationally have opened and operate safely.
- Retail vacancy rates decreased over the quarter by 69 bps, and down 111 bps over the past year to 8.0%. Many big box stores have closed as the need for retail space shrinks, translating to a negative outlook for rent growth. Paired with the global economic crisis, which has had a significant negative impact on this sector.

Sources: Real Capital Analytics, Green Street, NCREIF

Global Real Estate Market Update (3Q22)

- Inflationary issues have crystalized into higher financing costs linked with rising interest rates and growing concerns of economic growth overall. Global acquisitions of income producing properties slumped 30% in the third quarter when compared to the same period one year ago. With a usual lag between macro events and its effect to direct property markets, expectations are that this negative pressure is just on the onset with a looming recession.

- Tangible effects of these challenges can be witnessed in the EMEA region, with deal volume falling 13% YOY. Transaction activity in the U.K. was down 41%, in Germany by 45% and in France by 32%. . The European economy is especially vulnerable in these times of energy driven price inflation due to its dependence on global energy markets. European Commission data shows consumer confidence is at its lowest ever level and Oxford Economics expects the European economy to contract in 2023.
- The U.S. experienced a shallow decline in transaction activity relative to the top European and Asia Pacific markets. Investors spent $149 billion on U.S. income-producing properties priced at $10 million or greater between July and September, which is down 19% on the same period a year ago.

- The Asia Pacific market appears to be in the midst of a correction with transaction activity declining 6% YOY. This was due to a combination of fewer trades in major markets, rapid currency depreciation against the US dollar and the rising cost of debt sparked by an aggressive tightening of interest rates in the US. A depreciating yen pushed volumes down in Japan to US$4.6 billion, as weak activity across most sectors led to a 61% year-on-year decline. Volumes in China (US$3.3 billion) continued to decrease, down 55% year-on-year in the third quarter due to the lingering impact of Covid policies.

- Global retail sales growth softened in the third quarter as the squeeze on real incomes impacts consumer activity, and this is likely to filter through to more constrained retailer activity. With consumers becoming more selective in their discretionary retail spending, be it online or offline, the focus for retailers has shifted to improving profitability.

- In the third quarter, demand for logistics and industrial remained resilient with strong fundamentals. Nevertheless, occupiers are adopting a more cautious approach amid economic headwinds. The U.S. remains most resilient with leasing activity holding up in Q3, while limited supply in primary markets and softening demand in China were drags on performance in Europe and Asia Pacific respectively.

- Dealmaking has becoming increasing difficult in the multifamily sector, with wide bid-ask spreads on transactions, higher financing costs and general caution in the market. The number of active buyers and sellers in Europe has fallen to a 10-year low, as some investors have chosen the “wait and see” approach during this period of dislocation. The general anticipation of defined signals on the economic outlook will give way to advantageous opportunities in distressed properties or mispricing.

Global Total Commercial Real Estate Volume - 2021 - 2022

$ US Billions	Q3 2022	Q3 2021	% Change Q3 22 - Q3 21	YTD 2022	Q1-Q3 2022	% Change YTD 2022/Q1-Q3 22
Americas	159	201	-21%	533	440	21%
EMEA	53	99	-46%	232	266	-13%
Asia Pacific	207	225	-8%	568	604	-6%
Total	419	524	-20%	1332	1311	2%

Source: Real Capital Analytics, Inc., Q3' 22

Global Outlook - GDP (Real) Growth % pa, 2022-2024

	2022	2023	2024
Global	**5.9**	**4.3**	**3.6**
Asia Pacific	**4.4**	**4.6**	**4.4**
Australia	4.1	2.8	2.5
China	4.5	5.2	5.1
India	8.7	7.3	6.5
Japan	1.8	1.8	1.1
North America	**2.7**	**2.0**	**1.9**
US	2.6	2.0	1.9
Middle East	**4.1**	**4.4**	**4.5**
European Union	**3.0**	**2.1**	**2.0**
France	2.7	1.8	1.7
Germany	1.8	2.3	2.0
UK	3.7	1.2	1.7

Source: Bloomberg

Sources: Jones Lang LaSalle Research, Cushman & Wakefield, Real Capital Analytics, Inc., CBRE

Farmland – Third Quarter 2022 Market Update

FARMLAND MARKETS

- The overall farm economy remained on solid ground through the quarter **(Fig. 1)**, supported by sustained high multi-year prices of many key crops along with a foundation of strong farmer finances built over the last two years as favorable supply-demand dynamics continue.
- However, production costs remained elevated tightening farmer margins and easing record profitability (**Fig. 2**). An easing of record fertilizer prices did provide some relief as farmers pivoted to growing crops less reliant on fertilizers along with implementing precision farming methods to limit overall operating costs.
- Permanent and specialty crops continued to face headwinds, including rising water costs, labor market challenges, U.S. dollar strength impacting export demand, and inflationary pressure driving up operating costs. Almonds continue to struggle with excess supply-overhang from record carry-in levels, although export growth began to improve over the quarter.
- Brazilian row crop farmers continue to break production records and markets have remained strong during the quarter as farmers benefited from weaker currency and driving favorable export dynamics.

FIGURE 1: U.S. Net Farm Income and Net Cash Income 2002-2022F

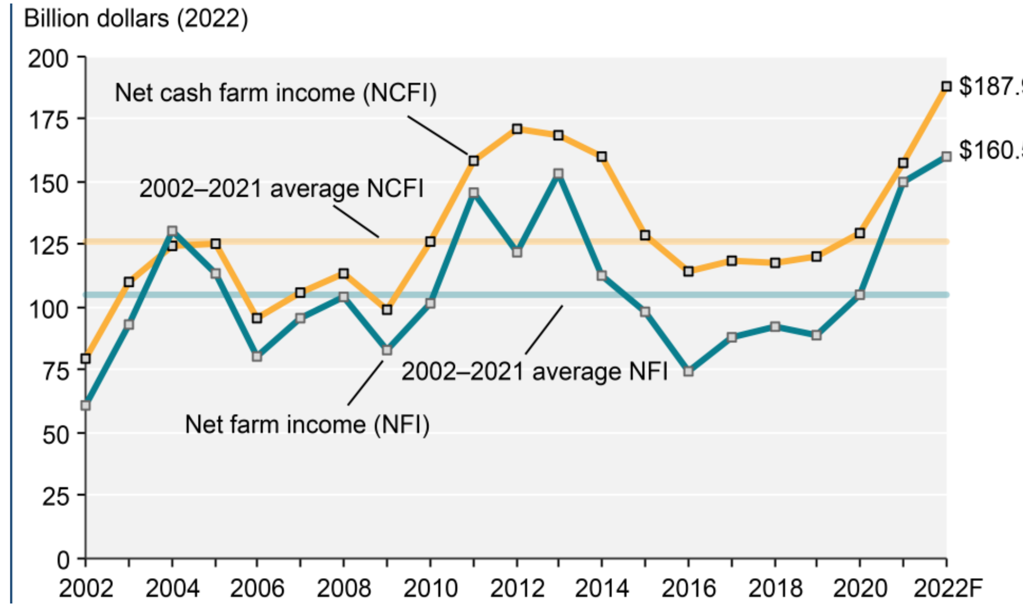
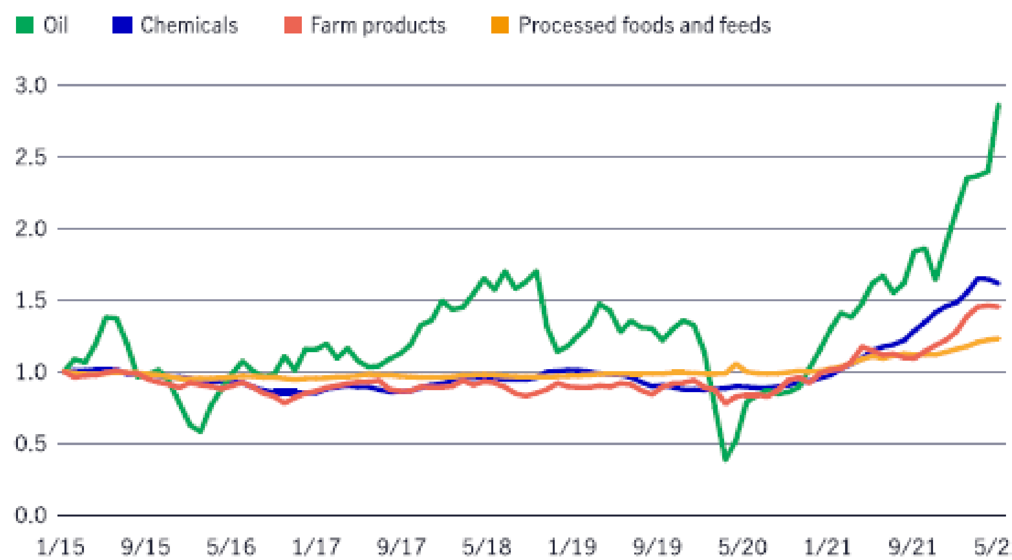


FIGURE 2: Producer Price Index for Major Ag Operating Costs - Monthly



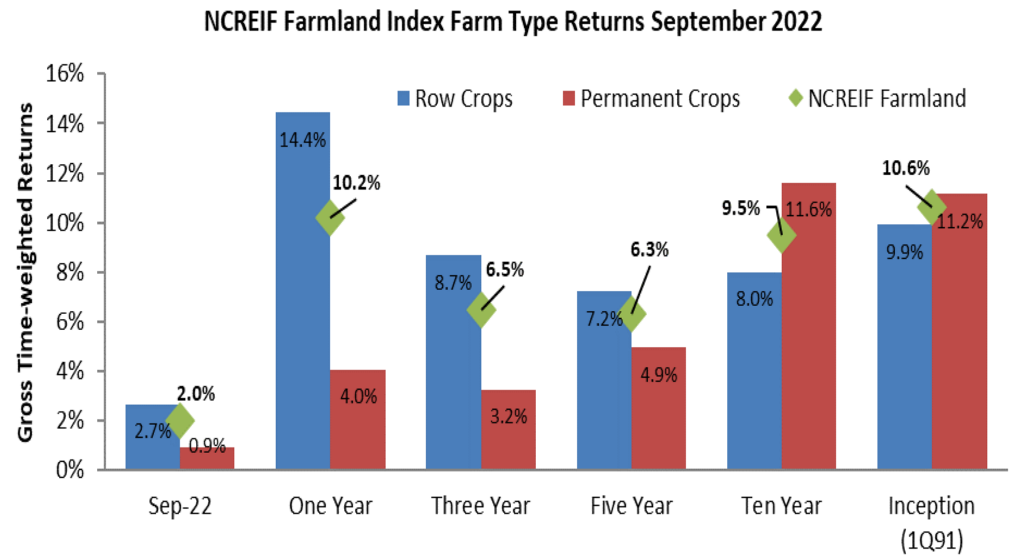
Sources by Figure: (1) USDA; (2) Hancock; US Bureau of Labor Statistics

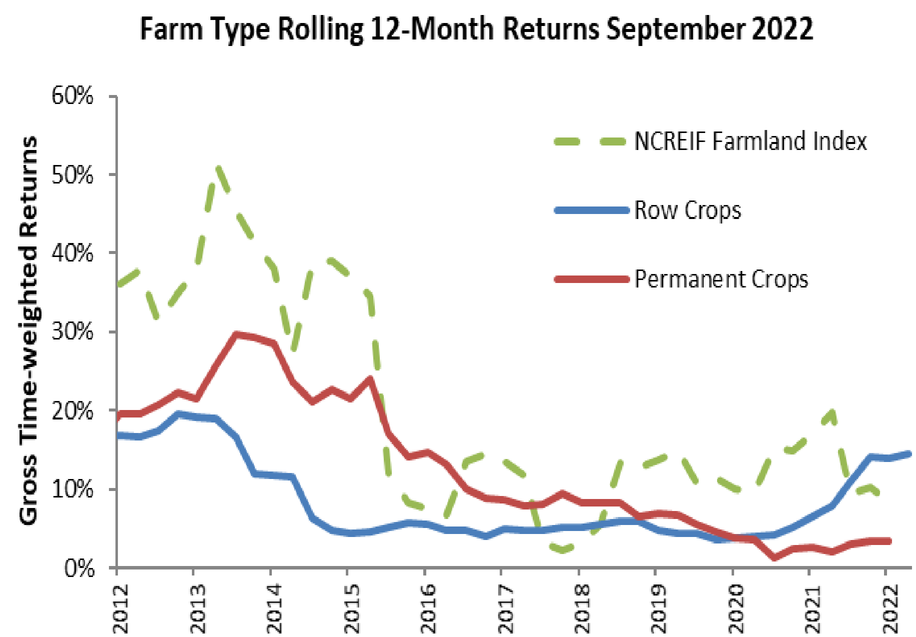
Farmland – Third Quarter 2022 Performance Update

TOWNSEND® GROUP
an Aon company

FARMLAND PERFORMANCE

- The NCREIF Farmland Index ("NFI") returned 2.0%, up from last quarter's 1.5% return, and up from last year's same quarter return of 1.5%. The return comprised 0.8% income and 1.2% appreciation.
- The NFI's relative increase in quarter-over-quarter returns has been driven by an increase in row crop returns, which on an absolute basis remained strong at 2.7% (0.7% income; 2.0% appreciation) up 60 basis points from the prior quarter. Permanent crops returned 0.9% (0.94% income; -0.04% appreciation) during the quarter, an increase over last quarter's 0.5% return.
- Row crops have continued to outperform permanent crops for 2.75 years (11 quarters) as of 3Q22, as multi-year high prices for most major commodity crops remained a key driver to a strong farm economy and continued growth in land values. The one-year return for commodity row crops (a sub-set of the row crop sub-index) delivered a 18.1%, which continues to be driven by core "blue-chip" markets in the Corn Belt and Lake States.
- Within permanent crops, almonds were the top performer during the quarter with a 1.7% return, representing 18% by MV (second largest) of the sub-index. Wine grapes, the largest component (37% by MV) returned 0.7% for the quarter and 4.6% over the past 12-months. In addition to almonds, within the NFI tree nut segment, pistachios (third largest permanent crop sub-index at ~18% MV) returned 1.2% over the quarter.



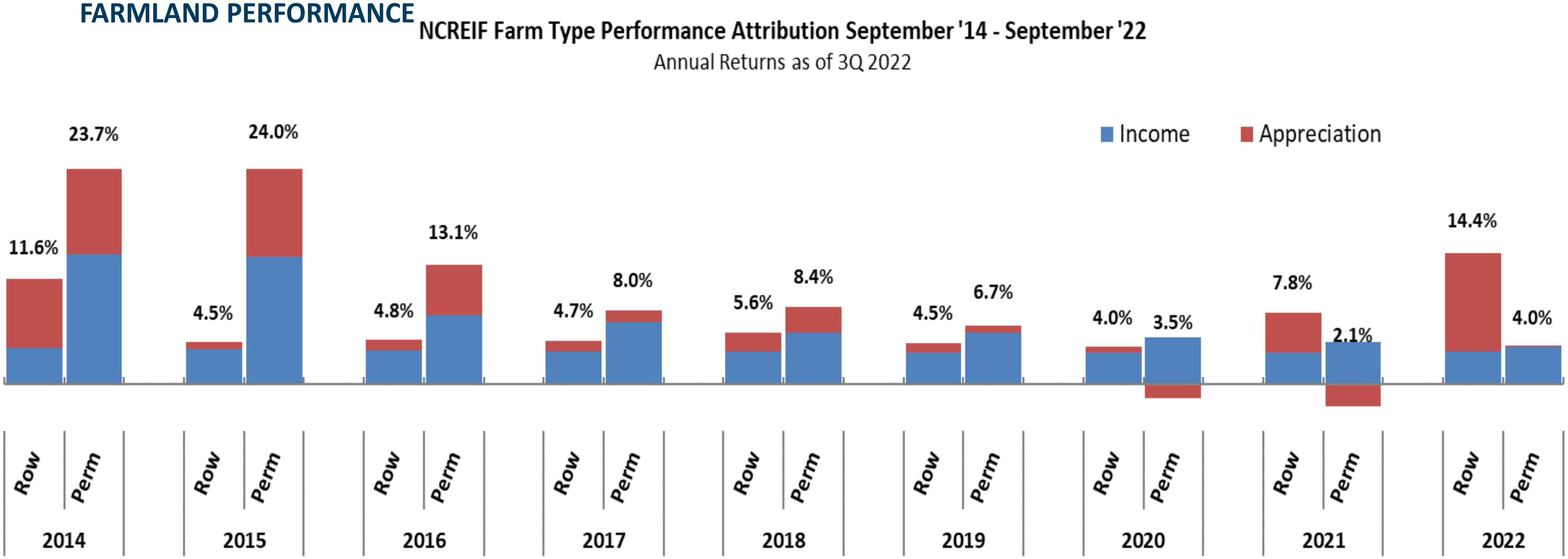


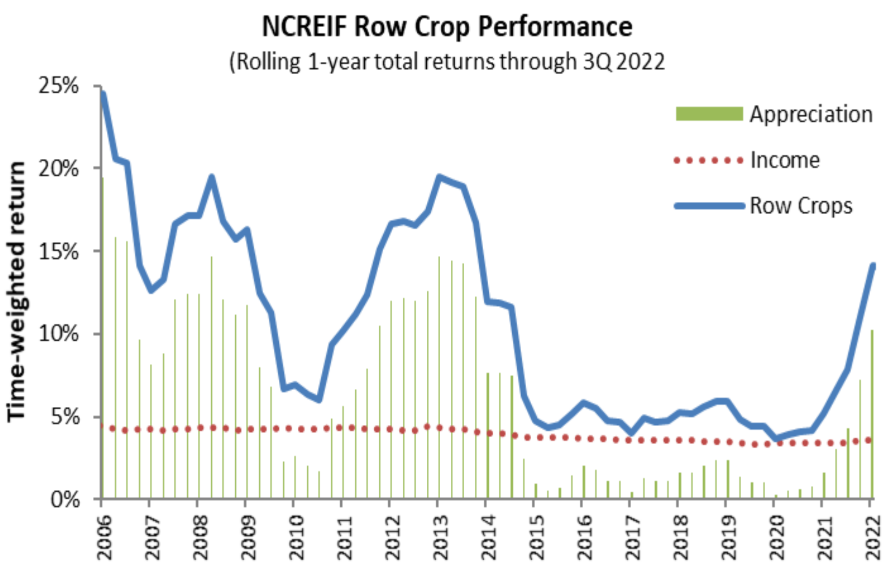
333

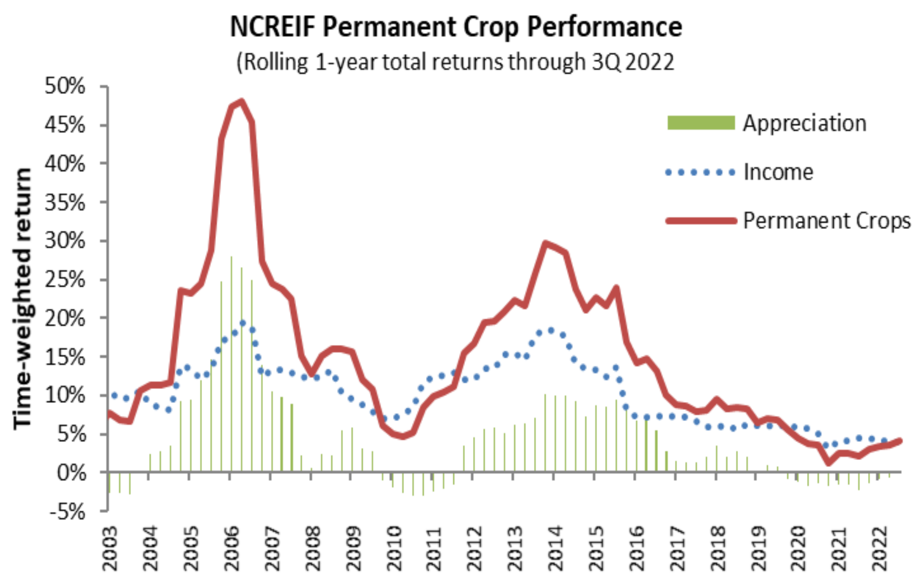
Farmland – Third Quarter 2022 Performance Update

TOWNSEND® GROUP
an Aon company

FARMLAND PERFORMANCE







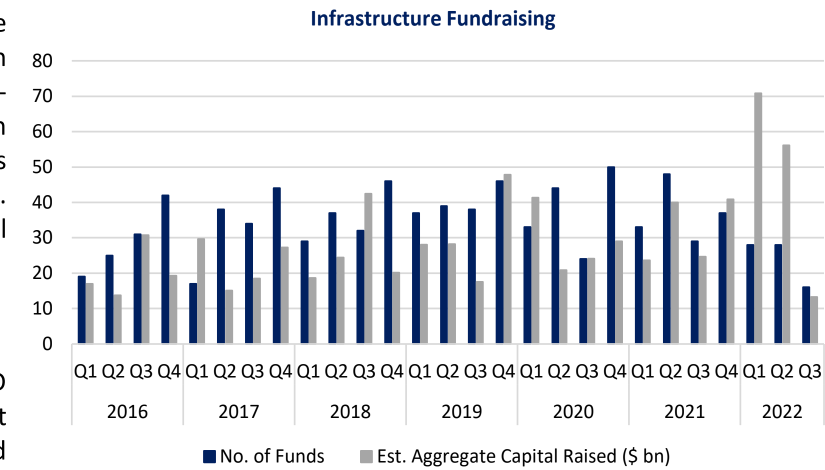
Source: NCREIF

Infrastructure – Third Quarter 2022 Market Update

TOWNSEND® GROUP
an Aon company

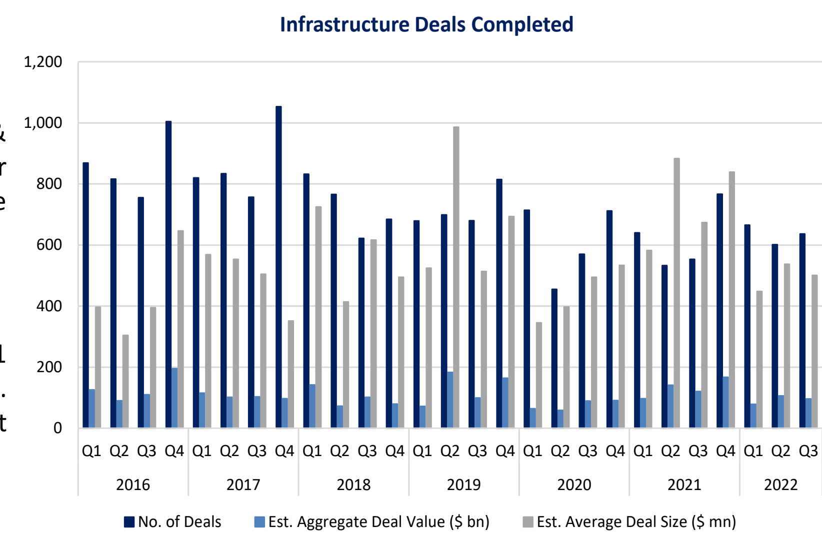
General

- Infrastructure transaction activity increased 6% quarter-over-quarter in Q3 2022, while the aggregate value of these deals decreased 9% quarter-over-quarter. Despite smaller transaction sizes, the average Third Quarter 2022 deal size of $500 million remained in line with its ten-year average ($503mm). Due to capital market uncertainty experienced globally thus far in 2022, capital raising efforts have slowed in lock-step with increasing debt costs. 16 funds reached their final close during Q3 2022, raising capital in aggregate of just over $13 billion. Respectively, these figures mark lows last witnessed in Q1 2014. Since the Q4 2020 capital raising peak, total funds raised on a quarterly basis have experienced a decrease of 68%.



Europe

- Notable European transactions for the quarter were headlined by the $6.9 acquisition of GD Towers, Deutsche Telekom's German and Austrian tower portfolio, made by Brookfield Asset Management, in a consortium with Digital Bridge Investment Management. The deal, expected to close at year-end 2022, would relinquish Deutsche Telekom's majority stake in GD Towers; however, it may regain control in the future due to a call option feature in its contract.



North America

- North American transactions for the quarter were headlined by a $5.2 billion 50-50 cash & stock acquisition, made by EQT Corporation from Quantum Energy Partners. In September 2022, the firm acquired the equivalent of 800 million cubic feet of natural gas per day, and one billion cubic feet per day of rich and lean gas trunkline in the southwest Appalachia region.

Asia Pacific

- In Q3 2022, the SPIA Development Consortium gained local government approval of its $11 billion bid (placed in Q1 2022) to develop a world class international airport at former U.S. Naval Base, Sangley Point, located in the Philippines. Through third quarter, this is the largest infrastructure deal specific to the Asia Pacific region thus far in 2022.

Timberland – Third Quarter 2022 Market Update

TOWNSEND® GROUP
an Aon company

TIMBERLAND MARKETS

- Timberland markets were stable during the quarter, but a softening of markets began to emerge across major production regions as housing markets across many developed nations began to weaken with rising borrowing costs. In the U.S., housing activity continued to decline, down 8.6% over the quarter as home affordability levels remains at 10+ year lows. (**Fig. 1 & 2**)
- U.S. South timber prices declined slightly from excess supply due to dry/favorable weather conditions across most southern regions (**Fig. 3**); markets in Pacific NW remained strong as demand continued to outpace supply, although prices also declined at quarter-end coming off record levels experienced earlier in the year.
- Brazil's forestry remained strong with broad export demand growth and accelerating pulp demand (eg,boxes) driving Eucalyptus prices significantly. **(Fig. 4)**
- Australian housing continued to decline as home values have corrected off record highs, although timber markets have remained strong across most segments.

FIGURE 1: U.S. Annual Housing Starts (SAAR)

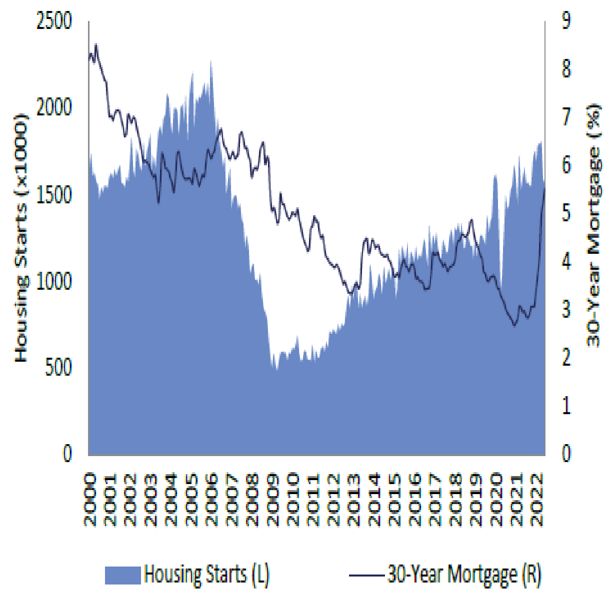


FIGURE 2: Housing Affordability Index

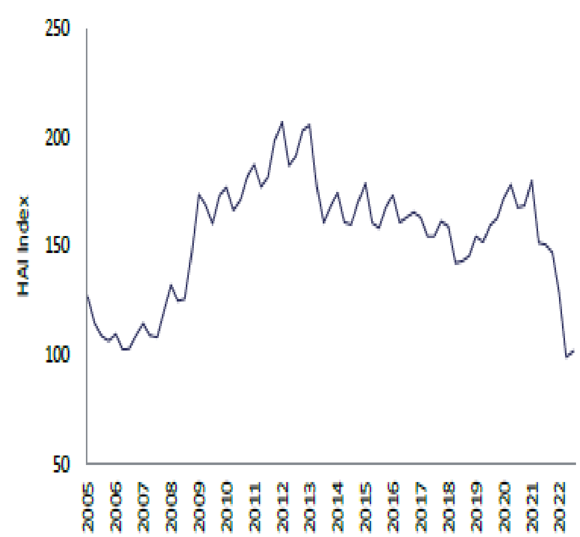


FIGURE 3: U.S. South Timber Prices

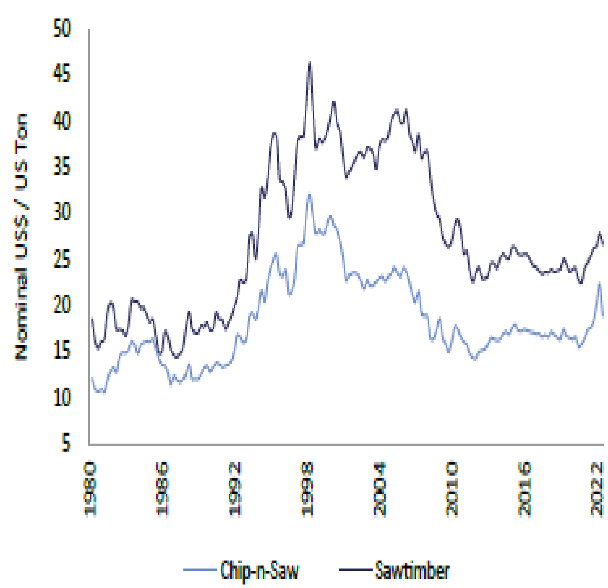
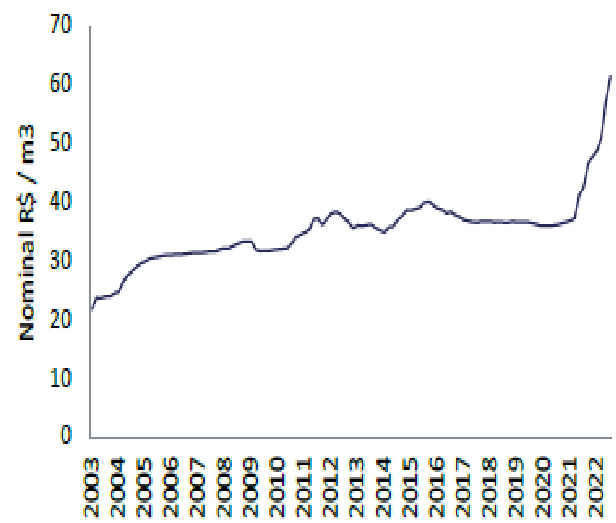


FIGURE 4: Brazil Eucalyptus Stumpage Prices

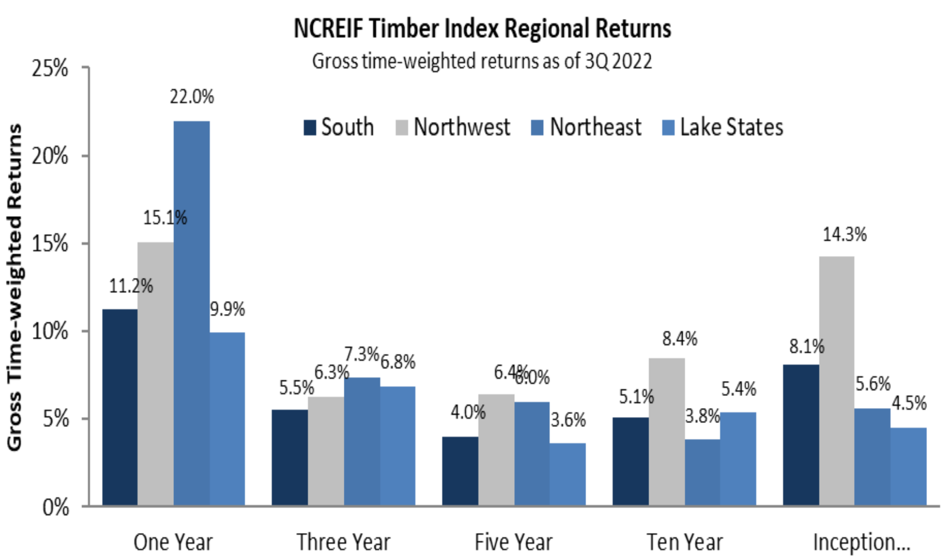


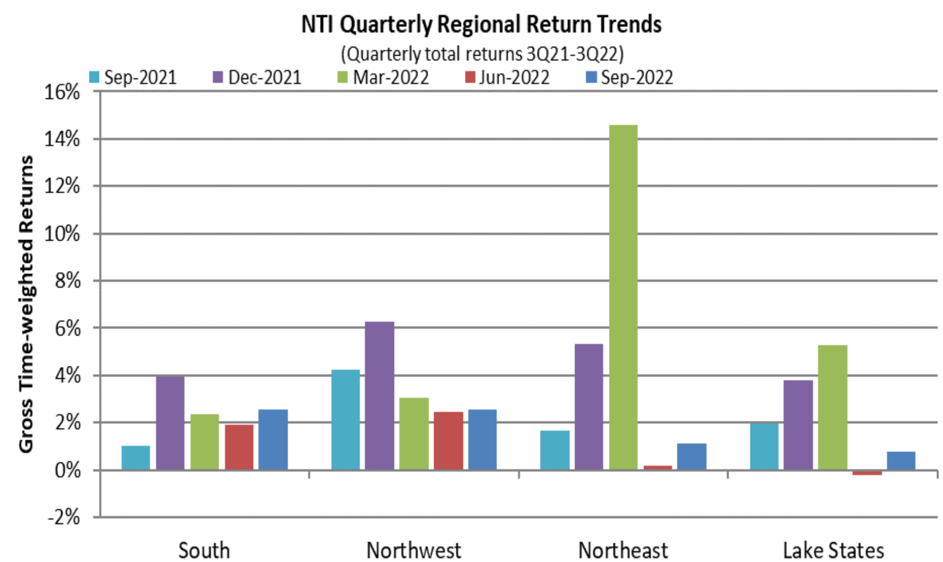
Sources by Figure: (1) Federal Reserve-St. Louis, Census Bureau, TIG Sep. 2022; (2) Bloomberg, FRED; (3) TIG; TimberMart-South Sep. 2022; (4) STCP, BTG

Timberland – Third Quarter 2022 Performance Update

TIMBERLAND PERFORMANCE

- The NCREIF Timberland Index (“NTI”) returned 2.4% for the quarter, an increase from last quarter’s 1.9% return, but lower than two top returning consecutive quarters (ie, 1Q22–3.2% / 4Q21–4.6%) over the past five years; the return was comprised of 0.7% income and 1.7% appreciation. The NFI’s trailing twelve-month return of 12.5% was the highest 12-month return since 2008; it was driven by a strong appreciation return of 9.1% and income of 3.2%.
- The U.S. South and Northwest, the NTI’s two largest regions by MV (c. 90%) – had quarterly returns of 2.5% and 2.6%, respectively, both increasing slightly relative to last quarter’s corresponding returns of 1.9% and 2.5%. The South’s return was comprised of 0.7% income and 1.9% appreciation, and the Northwest was comprised of 0.9% income and 1.6% appreciation.
- Over the trailing 12-month period, the Northeast was the top performing region delivering a 22.0% total return, which was driven predominantly by record appreciation of 19.1%, with an income return of 2.8%. The Northwest returned 15.1% over the same time period, followed by the South with an 11.2% return, and finally the Lake States generating a 9.9% return over the last 12-months.

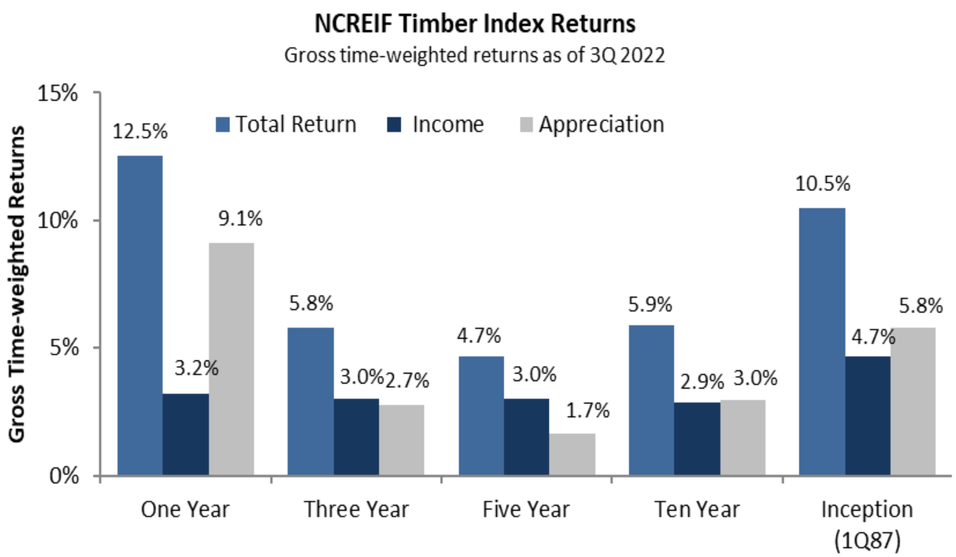


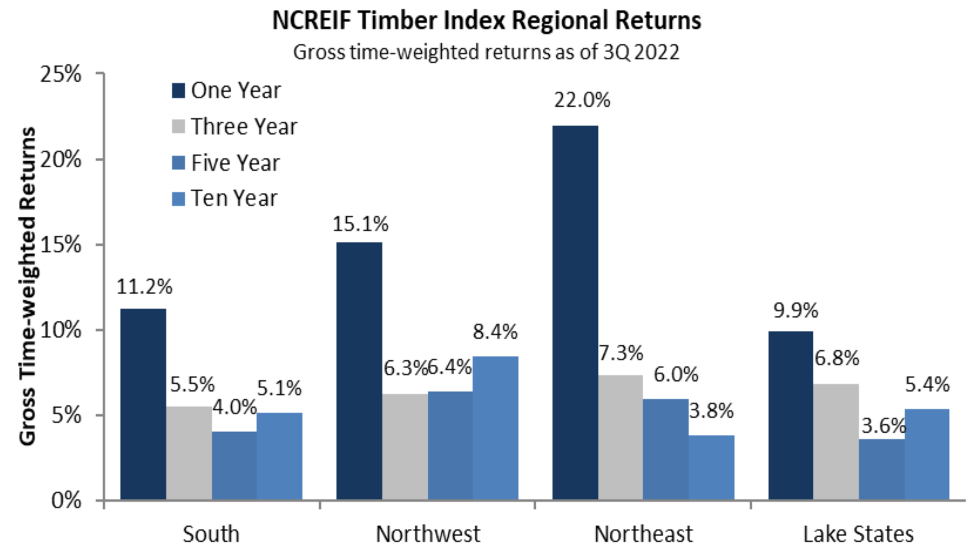


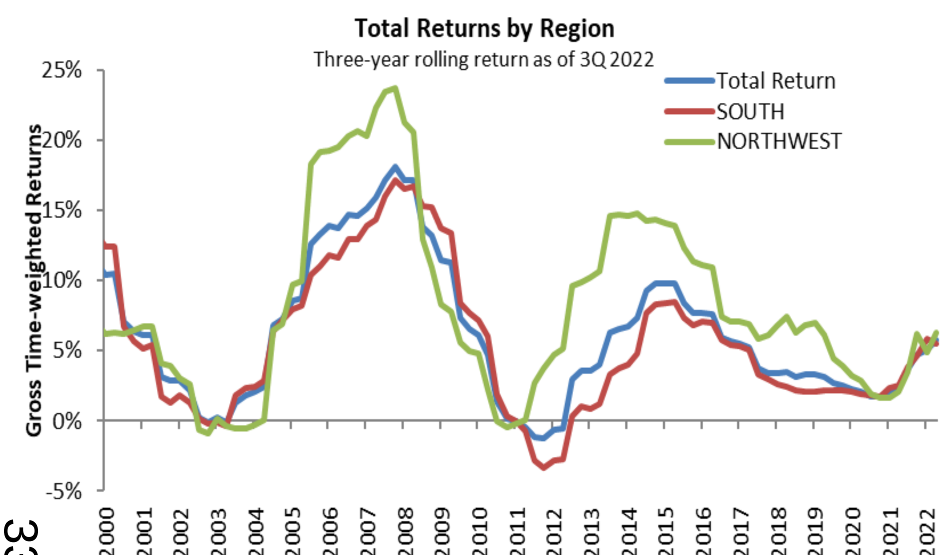
Timberland – Third Quarter 2022 Performance Update

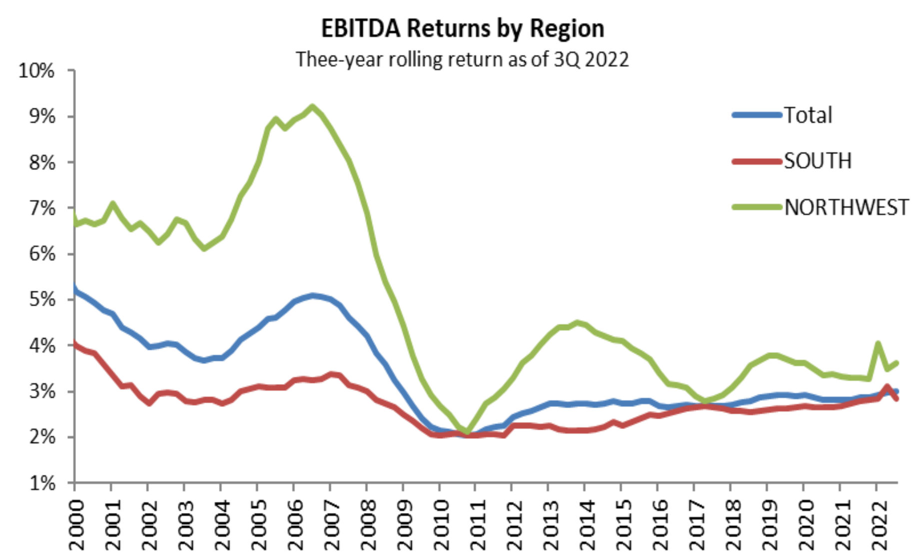
TOWNSEND® GROUP
an Aon company

TIMBERLAND PERFORMANCE









338

Sources: NCREIF

Agenda

TOWNSEND® GROUP
an Aon company

339

TOWNSEND GROUP
an Aon company

THIS PAGE LEFT BLANK INTENTIONALLY

ATRS' Real Estate Performance: Core Portfolio

TOWNSEND® GROUP
an Aon company

As of 09/30/2022

Funding Status ($)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Core								
Arkansas Investments	2007	142,694,200	144,624,546	0	202,782,716	75,350,147	3.0	2.3
JP Morgan Strategic Property Fund	2007	170,000,000	170,000,000	0	224,480,057	200,449,700	7.9	6.1
Metlife Commercial Mortgage Income Fund	2019	50,000,000	50,000,000	0	7,188,729	48,128,245	1.9	1.5
Prime Property Fund	2022	70,000,000	70,000,000	0	866,719	69,626,496	2.8	2.1
PRISA SA	2005	170,000,000	184,182,196	0	126,987,427	349,637,200	13.8	10.6
RREEF Core Plus Industrial Fund L.P.	2022	70,000,000	35,000,000	35,000,000	158,299	35,035,816	1.4	2.1
UBS Trumbull Property Fund	2006	170,000,000	190,587,980	0	212,653,058	165,555,220	6.5	5.0
UBS Trumbull Property Income Fund	2017	50,000,000	50,000,000	0	8,292,548	60,278,121	2.4	1.8
Core	**2005**	**892,694,200**	**894,394,723**	**35,000,000**	**783,409,552**	**1,004,060,946**	**39.7**	**31.6**

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			
Core																									
Arkansas Investments	0.0	-0.6	-0.6	-0.6	0.0	7.5	7.5	7.5	0.0	-2.3	-2.3	-2.3	0.0	-0.4	-0.4	-0.4	0.0	6.9	6.9	6.9	7.1	7.1	1Q08	8.1	1.9
JP Morgan Strategic Property Fund	0.7	-2.0	-1.3	-1.5	3.2	14.9	18.4	17.3	3.5	7.5	11.2	10.2	3.7	5.3	9.0	8.1	4.2	5.9	10.4	9.4	7.3	6.4	2Q07	7.2	2.5
Metlife Commercial Mortgage Income Fund	1.5	-0.6	0.8	0.6	5.5	-2.3	3.1	2.2	5.4	-1.4	4.0	3.2									4.2	3.4	3Q19	3.4	1.1
Prime Property Fund	0.8	-0.6	0.2	-0.1																	3.5	2.9	2Q22	1.1	1.0
PRISA SA	0.9	-0.7	0.2	0.0	3.8	15.7	19.9	19.0	3.9	8.4	12.5	11.7	4.1	6.3	10.6	9.8	4.5	6.5	11.3	10.4	8.1	7.3	3Q05	7.3	2.6
RREEF Core Plus Industrial Fund L.P.	0.6	0.1	0.7	0.6																	0.7	0.6	3Q22	0.6	1.0
UBS Trumbull Property Fund	0.8	-0.8	0.0	-0.2	3.7	13.2	17.2	16.4	4.0	3.5	7.6	6.8	4.2	1.6	5.9	5.2	4.6	3.0	7.7	6.8	6.4	5.5	2Q06	5.8	2.0
UBS Trumbull Property Income Fund	0.9	-0.4	0.5	0.3	3.8	9.2	13.3	12.4	3.7	4.5	8.4	7.5	3.8	3.8	7.8	7.0					7.7	6.9	3Q17	6.9	1.4
Core	**0.8**	**-0.9**	**-0.1**	**-0.3**	**3.4**	**13.1**	**16.9**	**16.0**	**3.5**	**5.4**	**9.1**	**8.3**	**3.6**	**3.9**	**7.6**	**6.9**	**3.9**	**5.4**	**9.5**	**8.7**	**8.5**	**7.7**	**3Q05**	**6.9**	**2.0**

Note: Arkansas Investments are included in Core portfolio

ATRS’ Real Estate Performance: Value-Add Portfolio

TOWNSEND GROUP
an Aon company

As of 09/30/2022

Funding Status ($)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Value Added								
Almanac Realty Securities IX, L.P.	2022	40,000,000	5,849,165	34,150,835	0	5,361,283	0.2	1.2
Almanac Realty Securities V, LP	2008	50,000,000	21,787,314	0	48,380,466	79,718	0.0	0.0
Almanac Realty Securities VI	2012	30,000,000	19,102,008	0	21,006,051	4,004,118	0.2	0.1
Almanac Realty Securities VII	2015	30,000,000	31,539,914	892,152	25,162,852	17,627,510	0.7	0.6
Almanac Realty Securities VIII	2018	30,000,000	15,952,432	15,611,140	3,341,423	15,839,535	0.6	1.0
Calmwater Real Estate Credit Fund III	2017	30,000,000	23,113,383	7,427,676	15,633,313	13,601,557	0.5	0.6
CBRE Strategic Partners U.S. Value 8	2017	25,000,000	22,826,523	2,173,477	10,377,578	22,535,979	0.9	0.8
CBRE Strategic Partners U.S. Value 9	2020	50,000,000	24,284,771	29,914,818	4,571,449	21,928,288	0.9	1.6
FPA Core Plus Fund IV	2018	30,000,000	30,000,000	0	3,137,801	35,563,109	1.4	1.1
GLP Capital Partners IV	2021	50,000,000	33,489,658	17,296,020	785,678	34,321,201	1.4	1.6
Harbert European Real Estate Fund IV	2016	25,011,918	23,920,550	1,491,550	19,288,852	8,818,120	0.3	0.3
LaSalle Income & Growth Fund VI	2013	20,000,000	19,047,619	0	22,379,425	3,951,938	0.2	0.1
LaSalle Income & Growth Fund VII	2017	20,000,000	19,571,839	1,539,268	14,229,199	13,430,439	0.5	0.5
LaSalle Income & Growth Fund VIII	2020	50,000,000	30,033,892	25,786,749	11,566,319	24,520,838	1.0	1.5
LBA Logistics Value Fund IX	2022	55,000,000	11,282,051	43,717,949	0	10,682,625	0.4	1.7
Long Wharf Real Estate Partners V	2015	30,000,000	29,828,371	0	22,345,840	18,569,395	0.7	0.6
Long Wharf Real Estate Partners VI, L.P.	2020	50,000,000	41,663,310	8,295,342	18,830,525	33,209,484	1.3	1.3
Mesa West Real Estate Income Fund V	2021	40,000,000	11,895,983	28,104,017	0	12,435,314	0.5	1.2
PGIM Real Estate Capital VII (USD Feeder) SCSp	2021	40,000,000	8,177,564	32,095,703	273,267	8,532,017	0.3	1.2
Rockwood Capital Real Estate Partners Fund IX	2012	30,000,000	27,422,960	1,692,085	32,185,259	5,278,500	0.2	0.2
Rockwood Capital Real Estate Partners Fund XI	2019	40,000,000	22,829,542	18,163,806	1,623,581	26,058,086	1.0	1.3
Walton Street Real Estate Debt Fund II, L.P.	2019	40,000,000	20,186,318	29,501,996	9,699,631	12,158,880	0.5	1.3
Westbrook Real Estate Fund IX	2013	40,000,000	46,401,160	3,603,488	48,361,088	8,298,915	0.3	0.4
Westbrook Real Estate Fund X	2016	25,000,000	24,241,955	2,016,766	21,324,570	9,355,296	0.4	0.3
Value Added	**2007**	**870,011,918**	**564,448,282**	**303,474,836**	**354,504,167**	**366,162,144**	**14.5**	**20.4**

ATRS' Real Estate Performance: Value-Add Portfolio (Cont.)

TOWNSEND® GROUP
an Aon company

Time Weighted Returns:

Returns (%)	Quarter				1 Year				3 Year				5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
Value Added																					
Almanac Realty Securities IX, L.P.	-0.7	0.0	-0.7	-5.1													12.9	109.7	2Q22	-18.6	0.9
Almanac Realty Securities V, LP	-3.2	0.6	-2.6	-2.6	-9.8	2.0	-7.9	-7.9	-19.5	2.6	-16.8	-17.1	-4.5	-2.4	-5.7	-6.4	5.5	4.1	4Q09	11.9	2.2
Almanac Realty Securities VI	0.2	0.0	0.2	-0.1	0.8	0.1	0.9	-0.2	2.2	-10.6	-8.3	-9.4	4.6	-9.8	-5.4	-6.3	4.9	3.4	1Q13	9.1	1.3
Almanac Realty Securities VII	1.7	-4.7	-3.0	-3.3	6.7	-2.6	3.9	2.8	7.5	2.5	10.1	8.9	7.7	4.6	12.6	11.2	13.9	11.2	3Q15	11.7	1.4
Almanac Realty Securities VIII	1.4	-2.2	-0.8	-1.1	7.2	13.0	21.0	19.8	7.9	10.0	18.5	10.7					29.5	-37.2	1Q19	13.1	1.2
Calmwater Real Estate Credit Fund III	1.9	0.0	1.9	1.6	7.4	0.0	7.4	6.3	9.5	0.0	9.5	7.1					10.5	7.3	1Q18	7.2	1.3
CBRE Strategic Partners U.S. Value 8	1.0	-5.1	-4.1	-3.0	6.3	2.5	8.9	8.2	7.0	3.2	10.4	9.3	7.0	5.4	12.7	11.1	11.9	10.4	2Q17	10.0	1.4
CBRE Strategic Partners U.S. Value 9	-0.6	2.1	1.5	0.8	0.8	24.0	24.9	20.2									17.8	12.5	4Q20	7.1	1.1
FPA Core Plus Fund IV	1.2	0.0	1.2	1.1	4.6	10.6	15.6	15.0	4.3	6.5	11.0	10.3					9.0	8.2	4Q18	9.6	1.3
GLP Capital Partners IV	0.3	-2.1	-1.7	-1.7	2.5	17.2	19.9	18.8									19.9	18.8	4Q21	6.2	1.0
Harbert European Real Estate Fund IV	5.0	-16.4	-11.4	-11.7	24.5	-36.1	-18.4	-19.5	13.2	-18.3	-6.4	-5.2	9.6	-8.7	0.7	-0.2	2.6	1.4	3Q16	3.8	1.2
LaSalle Income & Growth Fund VI	0.7	-28.2	-27.6	-22.0	3.7	-35.7	-33.1	-26.3	3.9	-19.4	-16.1	-12.4	3.8	-12.0	-8.5	-6.3	2.0	2.3	4Q13	9.1	1.4
LaSalle Income & Growth Fund VII	-0.8	-1.9	-2.7	-2.0	-0.3	3.6	3.2	3.2	0.2	10.4	10.6	9.1	0.8	10.8	11.6	9.7	11.7	9.9	3Q17	10.7	1.4
LaSalle Income & Growth Fund VIII	-1.1	4.9	3.7	2.4	-3.4	42.5	38.0	26.2									36.1	24.3	2Q20	21.5	1.2
LBA Logistics Value Fund IX	-1.4	0.2	-1.2	-2.9													-1.4	-5.5	2Q22	-8.2	0.9
Long Wharf Real Estate Partners V	0.0	-1.1	-1.1	0.4	1.4	10.6	12.1	10.8	1.5	6.2	7.7	7.9	1.8	10.2	12.1	10.5	11.2	8.3	1Q16	9.1	1.4
Long Wharf Real Estate Partners VI, L.P.	0.6	5.4	5.9	4.2	2.9	49.1	52.9	37.6									57.1	38.0	2Q20	31.3	1.2
Mesa West Real Estate Income Fund V	4.4	0.5	4.9	2.9													21.4	11.7	1Q22	10.1	1.0
PGIM Real Estate Capital VII (USD Feeder) SCSp	0.0	2.7	2.7	2.7	2.7	9.2	12.2	13.6									12.6	11.8	2Q21	9.5	1.1
Rockwood Capital Real Estate Partners Fund IX	0.3	1.5	1.8	1.3	3.0	2.7	5.7	3.2	3.1	-7.3	-4.4	-7.2	3.2	-3.6	-0.5	-3.3	9.4	6.4	4Q13	10.4	1.4
Rockwood Capital Real Estate Partners Fund XI	0.6	1.4	2.0	1.5	3.5	9.7	13.5	10.9									-45.5	2.2	1Q20	15.1	1.2
Walton Street Real Estate Debt Fund II, L.P.	2.3	0.0	2.3	1.9	10.4	-1.6	8.6	6.9	10.7	-1.7	8.9	7.2					9.1	7.2	3Q19	7.3	1.1
Westbrook Real Estate Fund IX	0.2	0.3	0.4	0.1	-0.4	5.1	4.7	3.4	-0.6	-6.3	-6.9	-8.1	-0.6	-1.2	-1.7	-2.9	6.3	3.6	3Q13	7.3	1.2
Westbrook Real Estate Fund X	-0.1	2.5	2.3	2.0	2.0	9.6	11.7	10.3	1.0	9.4	10.5	9.0	0.0	13.7	13.7	11.2	15.5	10.1	4Q16	11.0	1.3
Value Added	**0.7**	**-0.8**	**-0.1**	**-0.4**	**4.5**	**8.4**	**13.1**	**10.2**	**4.6**	**5.0**	**9.8**	**7.2**	**4.6**	**5.9**	**10.7**	**8.0**	**7.6**	**5.1**	**2Q07**	**7.3**	**1.3**

ATRS' Real Estate Performance: Opportunistic Portfolio

TOWNSEND® GROUP
an Aon company

As of 09/30/2022

Funding Status ($)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Opportunistic								
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	2019	49,096,184	26,785,270	27,224,958	13,705,037	18,871,885	0.7	1.4
Blackstone Real Estate Partners VII	2012	50,000,000	64,878,144	5,565,591	98,617,756	11,433,247	0.5	0.5
Carlyle Realty Partners IX	2022	35,000,000	1,148,212	33,851,788	0	708,105	0.0	1.1
Carlyle Realty Partners VII	2014	30,000,000	28,948,948	14,406,050	37,013,292	7,373,587	0.3	0.7
Carlyle Realty Partners VIII	2018	25,000,000	20,829,146	15,262,793	16,422,241	15,857,514	0.6	0.9
CBRE Strategic Partners U.S. Opportunity 5	2008	50,000,000	48,619,340	1,380,660	67,502,477	571,211	0.0	0.1
Cerberus Institutional Real Estate Partners III	2013	30,000,000	37,777,980	7,307,395	49,328,767	9,676,995	0.4	0.5
Heitman European Property Partners IV	2008	44,089,700	34,546,944	0	26,841,177	382,489	0.0	0.0
Kayne Anderson Real Estate Partners V	2018	25,000,000	24,000,000	2,184,595	16,428,664	18,743,587	0.7	0.6
Kayne Anderson Real Estate Partners VI	2021	50,000,000	10,500,000	39,500,000	0	10,771,567	0.4	1.5
Landmark Real Estate Fund VI	2010	40,000,000	35,090,608	4,909,392	52,753,910	864,250	0.0	0.2
Landmark Real Estate Fund VIII	2017	25,000,000	15,567,799	13,182,200	9,992,984	12,511,959	0.5	0.8
LaSalle Asia Opportunity Fund IV	2014	30,000,000	28,823,325	2,013,173	39,655,278	1,725,586	0.1	0.1
LaSalle Asia Opportunity V	2016	30,000,000	24,914,799	12,471,815	19,401,209	9,181,123	0.4	0.7
LaSalle Asia Opportunity VI	2022	50,000,000	0	50,000,000	0	-831,167	0.0	1.5
Lone Star Real Estate Fund IV	2015	24,260,817	19,445,848	4,814,970	19,779,413	6,773,096	0.3	0.4
Metropolitan Real Estate Partners Co-Investments Fund, L.P.	2015	20,000,000	19,132,876	867,124	17,632,804	9,846,257	0.4	0.3
O'Connor North American Property Partners II, L.P.	2008	50,000,000	58,349,078	5,000,000	44,505,783	4,571,905	0.2	0.3
Torchlight Debt Fund VII, LP	2020	50,000,000	25,000,000	25,000,000	0	26,459,005	1.0	1.6
Torchlight Debt Opportunity Fund IV	2013	30,000,000	29,369,211	0	37,982,059	3,847,412	0.2	0.1
Torchlight Debt Opportunity Fund V	2015	25,000,000	20,001,024	5,000,000	23,566,718	2,779,754	0.1	0.2
Torchlight Debt Opportunity Fund VI	2018	25,000,000	22,479,558	2,500,000	9,728,102	18,769,850	0.7	0.6
Opportunistic	**1998**	**787,446,701**	**596,208,110**	**272,442,503**	**600,857,672**	**190,889,218**	**7.5**	**14.1**

ATRS' Real Estate Performance: Opportunistic Portfolio (Cont.)

TOWNSEND® GROUP
an Aon company

Time Weighted Returns:

Returns (%)	Quarter				1 Year				3 Year				5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
Opportunistic																					
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	0.0	-9.3	-9.3	-9.4	0.0	0.9	0.9	-4.7									13.7	5.1	1Q20	14.8	1.2
Blackstone Real Estate Partners VII	0.2	-3.9	-3.7	-3.0	6.0	2.5	8.6	6.1	3.2	3.8	7.2	5.2	3.3	5.5	9.0	6.4	17.5	12.5	2Q12	15.3	1.7
Carlyle Realty Partners IX																			4Q22	N/M	N/M
Carlyle Realty Partners VII	3.4	-2.9	0.5	0.9	19.3	-8.6	9.6	11.0	18.8	-7.3	10.9	11.4	21.0	-4.2	16.4	15.6	17.1	12.9	1Q15	14.6	1.5
Carlyle Realty Partners VIII	5.1	-2.3	2.8	3.0	37.6	27.6	73.5	64.4	25.9	27.1	58.0	43.7					45.8	30.1	4Q18	34.1	1.5
CBRE Strategic Partners U.S. Opportunity 5	-0.4	0.0	-0.4	-0.4	-2.3	30.2	27.3	27.3	-1.5	18.9	17.1	17.1	-1.1	15.8	14.6	14.3	-7.1	-8.7	4Q08	5.4	1.4
Cerberus Institutional Real Estate Partners III	0.0	-7.7	-7.8	-6.2	-0.6	-11.6	-12.2	-8.9	-0.4	20.4	19.9	15.6	-0.3	16.3	16.0	12.8	17.5	13.0	4Q13	13.1	1.6
Heitman European Property Partners IV	-6.4	-3.3	-9.8	-9.8	-2.1	-13.2	-14.9	-14.9	-1.9	1.9	-0.1	-0.2	0.9	-16.7	-15.7	-16.5	-5.4	-6.6	1Q11	-3.8	0.8
Kayne Anderson Real Estate Partners V	-8.5	11.3	2.8	2.0	-15.5	45.2	25.2	18.3	0.0	26.0	26.7	19.4					21.3	14.6	3Q18	15.1	1.5
Kayne Anderson Real Estate Partners VI	1.1	5.1	6.2	4.6	12.0	17.1	30.7	11.3									24.9	0.0	3Q21	3.4	1.0
Landmark Real Estate Fund VI	N/M	N/M	-4.4	-4.4	N/M	N/M	-44.8	-45.3	N/M	N/M	-24.9	-25.7	N/M	N/M	-17.4	-18.4	17.6	15.2	3Q10	18.5	1.5
Landmark Real Estate Fund VIII	4.3	1.4	5.7	4.6	28.8	7.9	37.6	30.7	17.1	8.4	26.1	20.2	17.7	-3.6	14.3	8.8	30.2	21.9	3Q17	19.7	1.4
LaSalle Asia Opportunity Fund IV	2.9	-4.4	-1.5	-1.6	4.2	-6.5	-2.3	-2.9	-13.3	7.1	-5.4	-6.0	-5.3	7.5	4.6	-3.5	15.8	8.8	4Q14	32.2	1.4
LaSalle Asia Opportunity V	-5.8	-0.1	-5.9	-6.7	-11.9	6.8	-5.9	-8.8	-7.1	13.2	6.0	2.9	-4.8	17.5	13.2	7.7	11.5	5.7	4Q16	8.6	1.1
LaSalle Asia Opportunity VI	N/M	N/M	N/M	N/M													N/M	N/M	2Q22	N/M	N/M
Lone Star Real Estate Fund IV	-4.9	2.2	-2.6	-1.0	-7.0	7.2	-0.1	2.4	-2.0	-2.0	-4.0	-3.4	4.2	-0.6	3.9	2.9	8.0	6.8	4Q15	11.5	1.4
Metropolitan Real Estate Partners Co-Investments Fund, L.P.	0.8	0.8	1.5	1.1	2.7	7.8	10.7	8.6	1.5	1.6	3.1	2.0	1.6	8.6	10.3	8.4	9.2	7.1	1Q16	10.7	1.4
O'Connor North American Property Partners II, L.P.	0.0	0.5	0.5	0.3	-0.3	4.7	4.4	3.8	0.2	-3.5	-3.3	-4.0	0.0	-6.5	-6.5	-7.2	-4.8	-7.5	2Q08	-3.0	0.8
Torchlight Debt Fund VII, LP	1.3	1.0	2.3	1.6	8.1	3.4	11.7	7.8									14.1	7.7	4Q20	6.0	1.1
Torchlight Debt Opportunity Fund IV	0.6	-18.2	-17.6	-13.9	2.0	-18.1	-16.4	-11.8	2.3	-11.4	-9.3	-4.4	4.5	-6.0	-1.7	0.6	5.0	5.3	4Q13	9.3	1.4
Torchlight Debt Opportunity Fund V	0.4	-1.9	-1.5	-0.3	1.6	6.3	8.0	6.1	4.1	3.0	7.2	6.5	6.5	3.8	10.4	8.2	13.9	8.8	3Q15	10.4	1.3
Torchlight Debt Opportunity Fund VI	1.3	0.0	1.3	1.5	5.9	10.7	17.0	12.6	7.0	3.3	10.4	7.6					15.1	7.9	2Q18	8.8	1.3
Opportunistic	**-1.1**	**0.2**	**-0.9**	**-1.2**	**1.9**	**11.0**	**12.9**	**8.9**	**3.5**	**9.4**	**13.1**	**9.2**	**4.9**	**7.1**	**12.3**	**8.4**	**9.8**	**7.3**	**1Q98**	**10.3**	**1.4**

ATRS' Timberland, Agriculture, and Infrastructure Performance

As of 09/30/2022

Funding Status ($)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Agriculture								
Agrivest Farmland Fund	2015	50,000,000	50,000,000	0	8,852,833	60,496,966	2.4	1.8
HFMS Farmland Separate Account	2011	125,000,000	160,939,470	2,134,323	52,529,476	184,061,763	7.3	5.7
Agriculture	**2011**	**175,000,000**	**210,939,470**	**2,134,323**	**61,382,308**	**244,558,729**	**9.7**	**7.5**
Timber								
BTG Pactual Open Ended Core U.S. Timberland Fund, LP	2019	182,930,629	182,930,628	0	10,142,217	229,786,255	9.1	7.0
BTG Timber Separate Account	1998	133,069,371	157,072,360	0	328,750,000	111,762,598	4.4	3.4
Timber	**1998**	**316,000,000**	**340,002,988**	**0**	**338,892,217**	**341,548,853**	**13.5**	**10.4**

Funding Status ($)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
Infrastructure – Core								
AxInfra NA II LP	2021	50,000,000	50,915,695	0	2,972,722	54,650,315	2.2	1.7
DIF Infrastructure V	2018	47,762,784	37,737,737	10,307,692	4,911,280	39,861,024	1.6	1.5
IFM Global Infrastructure	2018	50,000,000	50,000,000	0	5,670,114	67,529,919	2.7	2.1
KKR Diversified Core Infrastructure Fund	2022	75,000,000	19,990,442	55,009,558	338,402	20,168,459	0.8	2.3
Macquarie Infrastructure Partners III	2013	50,000,000	50,502,250	5,827,001	47,069,357	50,392,575	2.0	1.7
Macquarie Infrastructure Partners V	2020	50,000,000	33,489,876	16,599,190	89,067	41,101,037	1.6	1.8
Infrastructure - Core	**2015**	**322,762,784**	**242,635,999**	**87,743,441**	**61,050,942**	**273,703,329**	**10.8**	**11.0**
Infrastructure - Non-Core								
Antin Infrastructure Partners Fund II	2014	47,696,920	35,953,565	1,715,350	65,524,367	5,634,696	0.2	0.2
Global Energy & Power Infrastructure Fund II	2014	50,000,000	54,991,929	1,203,299	53,498,446	18,432,837	0.7	0.6
Global Infrastructure Partners III	2016	50,000,000	49,787,801	6,422,898	16,729,207	54,792,518	2.2	1.9
ISQ Global Infrastructure Fund III	2021	50,000,000	5,470,475	44,529,525	0	4,863,631	0.2	1.5
KKR Global Infrastructure Investors II	2014	50,000,000	55,009,755	2,114,474	69,699,938	26,439,532	1.0	0.9
Infrastructure - Non-Core	**2014**	**247,696,920**	**201,213,525**	**55,985,546**	**205,451,958**	**110,163,214**	**4.4**	**5.1**
Infrastructure	**2014**	**570,459,704**	**443,849,524**	**143,728,987**	**266,502,899**	**383,866,543**	**15.2**	**16.0**

ATRS’ Timberland, Agriculture, and Infrastructure Performance (Cont.)

TOWNSEND® GROUP
an Aon company

Time Weighted Returns:

Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
Agriculture																									
Agrivest Farmland Fund	0.8	0.5	1.3	1.0	3.3	7.8	11.2	10.1	3.2	3.5	6.7	5.7	3.3	2.7	6.0	4.9					6.2	5.1	2Q15	5.1	1.4
HFMS Farmland Separate Account	0.7	-1.5	-0.8	-1.1	2.7	11.5	14.4	13.2	3.5	5.3	8.9	7.7	3.6	3.4	7.1	5.9	3.8	4.1	8.0	6.9	7.5	6.2	3Q11	6.2	1.5
Agriculture	**0.7**	**-1.0**	**-0.3**	**-0.6**	**2.8**	**10.6**	**13.6**	**12.4**	**3.4**	**4.8**	**8.4**	**7.2**	**3.5**	**3.2**	**6.8**	**5.6**	**3.8**	**4.0**	**7.9**	**6.8**	**7.4**	**6.1**	**3Q11**	**6.0**	**1.5**
Agriculture Benchmark*			2.0				10.2				6.6				5.7				7.5		8.3		3Q11		
Timber																									
BTG Pactual Open Ended Core U.S. Timberland Fund, LP	-0.3	4.7	4.4	4.1	12.0	0.5	13.7	12.5													11.7	10.6	1Q20	10.6	1.3
BTG Timber Separate Account	-0.5	1.0	0.4	0.3	4.7	8.8	13.7	13.0	19.0	-19.9	6.3	5.6	11.5	-10.6	6.3	5.5	6.9	-4.1	5.9	5.1	7.5	6.8	2Q98	5.3	2.8
Timber	**-0.4**	**3.4**	**3.1**	**2.8**	**9.5**	**3.5**	**13.7**	**12.7**	**19.1**	**-17.3**	**9.4**	**8.4**	**11.5**	**-8.9**	**8.2**	**7.2**	**6.9**	**-3.2**	**6.8**	**5.9**	**7.9**	**7.1**	**2Q98**	**5.5**	**2.0**
Timberland Property Benchmark*			2.4				12.5				6.2				4.4				5.3		5.6		2Q98		

Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
Infrastructure – Core																									
AxInfra NA II LP	0.9	1.9	2.8	2.1	2.4	9.1	11.6	8.9													16.9	14.0	2Q21	10.1	1.1
DIF Infrastructure V	0.8	-4.8	-4.0	-4.3	1.4	-2.8	-1.4	-2.8	3.6	6.0	9.7	7.8									8.8	6.1	3Q18	6.0	1.2
IFM Global Infrastructure	0.5	-0.1	0.4	0.2	2.3	7.0	9.5	7.8	3.6	8.0	11.8	9.8									12.4	10.4	4Q18	10.4	1.5
KKR Diversified Core Infrastructure Fund	1.5	0.5	2.0	1.9																	2.8	2.6	2Q22	2.6	1.0
Macquarie Infrastructure Partners III	1.7	7.3	8.9	7.0	9.2	23.4	34.5	26.1	3.5	25.9	30.1	22.8	2.6	22.8	25.8	19.4					22.5	16.8	2Q15	16.5	1.9
Macquarie Infrastructure Partners V	-0.1	2.9	2.8	2.4	-0.3	25.1	24.8	22.2													23.2	19.4	1Q21	20.7	1.2
Infrastructure - Core	**0.8**	**1.4**	**2.2**	**1.5**	**3.2**	**11.0**	**14.4**	**11.3**	**3.0**	**13.6**	**16.9**	**13.4**	**2.6**	**14.1**	**17.0**	**12.9**					**16.7**	**12.5**	**2Q15**	**12.7**	**1.4**
Infrastructure - Non-Core																									
Antin Infrastructure Partners Fund II	-0.1	5.6	5.6	5.3	7.4	9.0	17.2	16.2	3.3	20.6	24.7	23.7	2.9	18.9	22.4	21.5					17.0	15.4	4Q14	13.3	2.0
Global Energy & Power Infrastructure Fund II	0.9	-0.3	0.6	0.1	4.3	-4.8	-0.6	-2.6	9.1	-11.5	-2.6	-4.2	7.6	-1.7	6.2	3.2					14.9	6.5	1Q15	14.6	1.3
Global Infrastructure Partners III	-0.8	0.2	-0.6	-1.0	2.8	19.7	23.0	21.4	4.6	8.6	13.7	12.1	4.6	8.9	14.0	11.4					13.1	9.1	4Q16	10.2	1.4
ISQ Global Infrastructure Fund III	-3.1	12.0	9.0	4.1																	26.0	9.2	1Q22	-15.4	0.9
KKR Global Infrastructure Investors II	6.1	-2.9	3.2	3.2	22.3	-18.6	2.2	3.1	23.9	-6.4	21.3	20.9	14.4	0.0	17.6	16.4					17.8	14.2	1Q15	16.8	1.7
Infrastructure - Non-Core	**1.1**	**0.0**	**1.1**	**0.7**	**9.2**	**2.8**	**12.3**	**10.8**	**11.8**	**3.2**	**15.7**	**14.4**	**8.1**	**7.2**	**16.1**	**14.1**					**15.7**	**12.1**	**4Q14**	**13.7**	**1.6**
Infrastructure	**0.9**	**1.0**	**1.9**	**1.3**	**5.3**	**8.2**	**13.9**	**11.4**	**7.4**	**8.6**	**16.6**	**14.1**	**5.4**	**10.8**	**16.8**	**13.9**					**15.8**	**11.6**	**4Q14**	**13.3**	**1.5**
Infrastructure Benchmark*			0.9				9.1				7.8				7.6						6.8		4Q14		

347

*The Timberland Property Benchmark was comprised of the NCREIF Timberland returns weighted according to ATRS’ regional exposure based on Net Asset Value prior to 3Q20, gross of fees. The Agriculture Benchmark was comprised of the NCREIF Farmland returns weighted according to ATRS’ regional and crop type exposure based on Net Asset Value prior to 3Q20, gross of fees. As of 3Q20, the Timberland and Agriculture benchmarks going forward will no longer be weighted and are just the NCREIF Timberland and NCREIF Farmland returns, gross of fees. Additionally, the Infrastructure Benchmark of CPI plus 500 bps has been adjusted to CPI plus 300 bps as of 3Q20 and the new Infrastructure Benchmark will be a blend of the two going forward.

Portfolio Performance Detail: By Vintage Year

TOWNSEND® GROUP
an Aon company

As of 09/30/2022

Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)
1997	75,000,000	80,737,536	0	120,795,230	0	0.0	0.0
1998	233,069,371	269,935,009	0	476,689,777	111,762,598	4.4	3.4
1999	178,794,401	189,842,518	0	316,052,650	0	0.0	0.0
2000	209,242,960	228,396,220	0	289,418,462	355,396	0.0	0.0
2005	170,000,000	184,182,196	0	126,987,427	349,637,200	13.8	10.6
2006	170,000,000	190,587,980	0	212,653,058	165,555,220	6.5	5.0
2007	417,694,200	418,942,712	0	540,188,483	275,799,847	10.9	8.4
2008	264,089,700	229,747,453	9,604,568	277,134,866	5,605,323	0.2	0.4
2010	40,000,000	35,090,608	4,909,392	52,753,910	864,250	0.0	0.2
2011	125,000,000	160,939,470	2,134,323	52,529,476	184,061,763	7.3	5.7
2012	110,000,000	111,403,112	7,257,675	151,809,066	20,715,865	0.8	0.9
2013	170,000,000	183,098,220	16,737,884	205,120,696	76,167,836	3.0	2.8
2014	207,696,920	203,727,522	21,452,346	265,391,321	59,606,237	2.4	2.5
2015	179,260,817	169,948,032	11,574,246	117,340,459	116,092,978	4.6	3.9
2016	130,011,918	122,865,105	22,403,029	76,743,838	82,147,057	3.2	3.2
2017	150,000,000	131,079,544	24,322,621	58,525,622	122,358,056	4.8	4.5
2018	232,762,784	200,998,872	45,866,220	59,639,626	212,164,538	8.4	7.8
2019	362,026,813	302,731,758	74,890,760	42,359,194	335,003,351	13.2	12.5
2020	250,000,000	154,471,849	105,596,099	35,057,360	147,218,651	5.8	7.7
2021	280,000,000	120,449,374	161,525,265	4,031,667	125,574,044	5.0	8.7
2022	395,000,000	143,269,870	251,730,130	1,363,420	140,751,618	5.6	11.9
Total Portfolio (Including Current & Historical Activity)							
	4,349,649,884	3,832,444,960	760,004,558	3,482,585,608	2,531,441,828	100.0	100.0

Portfolio Performance Detail: By Vintage Year (Cont.)

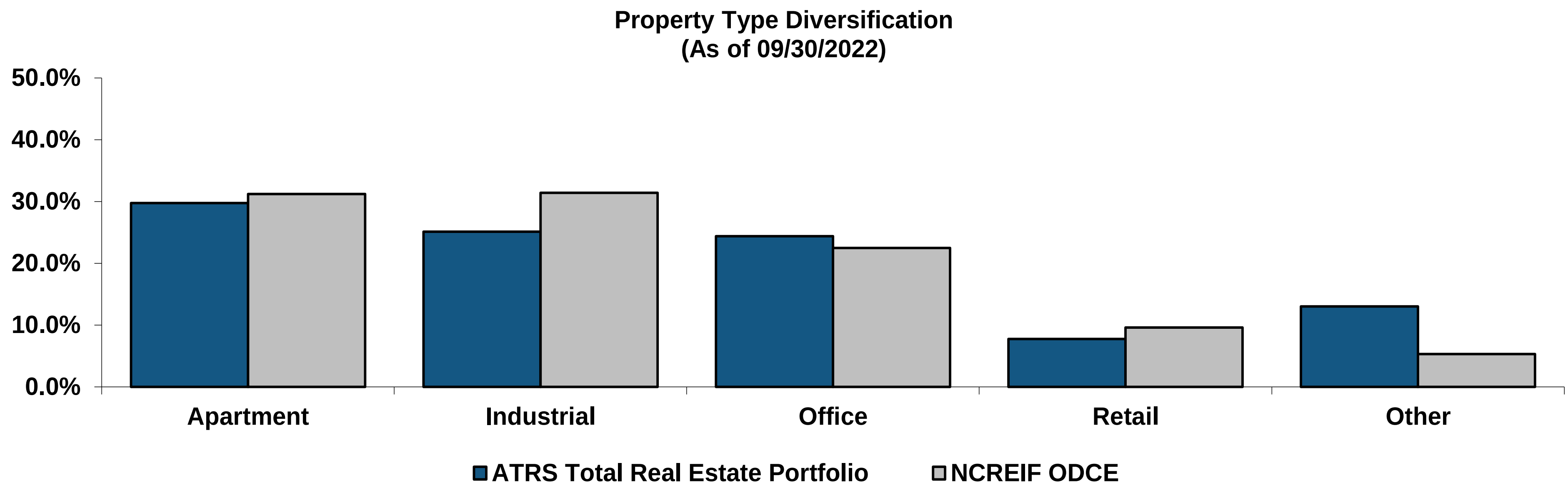
TOWNSEND® GROUP
an Aon company

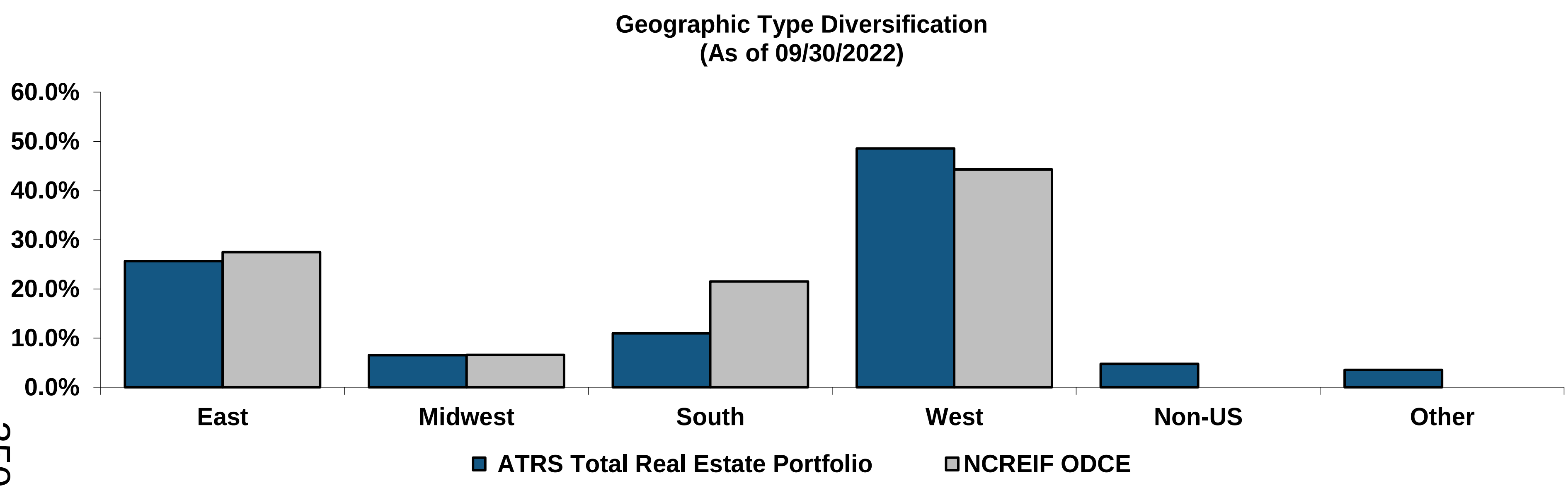
Time Weighted Returns:

Investment Vintage Year	Quarter				1 Year				3 Year				5 Year				Inception		TWR Calculation Inception	Net IRR	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET			
1997																			1Q98	13.4	1.5
1998	-0.5	1.0	0.4	0.3	4.7	8.8	13.7	13.0	19.0	-19.9	6.3	5.6	11.5	-10.6	6.3	5.5	7.6	6.6	2Q98	5.6	2.2
1999																			4Q99	15.9	1.7
2000																			4Q00	8.5	1.3
2005	0.9	-0.7	0.2	0.0	3.8	15.7	19.9	19.0	3.9	8.4	12.5	11.7	4.1	6.3	10.6	9.8	8.1	7.3	3Q05	7.3	2.6
2006	0.8	-0.8	0.0	-0.2	3.7	13.2	17.2	16.4	4.0	3.5	7.6	6.8	4.2	1.6	5.9	5.2	6.4	5.5	2Q06	5.8	2.0
2007	0.5	-1.6	-1.1	-1.2	2.4	13.3	15.9	15.0	2.6	5.1	7.9	7.2	2.7	3.9	6.7	6.0	7.6	6.9	2Q07	6.4	1.9
2008	-0.6	0.2	-0.4	-0.6	-0.8	4.3	3.5	2.9	-0.7	2.3	1.6	1.1	0.6	-2.6	-2.0	-2.7	-1.1	-3.8	2Q08	3.9	1.2
2010	N/M	N/M	-4.4	-4.4	N/M	N/M	-44.8	-45.3	N/M	N/M	-24.9	-25.7	N/M	N/M	-17.4	-18.4	17.6	15.2	3Q10	18.5	1.5
2011	0.7	-1.5	-0.8	-1.1	2.7	11.5	14.4	13.2	3.5	5.3	8.9	7.7	3.6	3.4	7.1	5.9	7.5	6.2	3Q11	6.2	1.5
2012	0.2	-1.9	-1.7	-1.5	4.9	2.8	7.8	5.3	3.1	-0.1	3.1	0.9	3.5	1.5	5.1	2.7	15.0	10.6	2Q12	13.4	1.5
2013	1.1	0.6	1.7	1.2	5.7	8.8	15.1	11.6	2.4	15.0	17.8	13.2	2.1	13.5	15.9	11.9	16.0	11.5	3Q13	11.9	1.5
2014	3.5	-1.4	2.1	2.0	14.4	-8.8	5.0	4.7	14.9	-1.6	13.9	13.2	11.2	3.6	15.7	13.9	17.3	13.8	4Q14	15.8	1.6
2015	0.4	-0.5	-0.1	0.1	2.8	6.6	9.5	8.4	3.0	3.1	6.2	5.5	4.0	4.8	9.0	7.5	9.5	7.5	2Q15	7.9	1.4
2016	-0.6	-1.6	-2.2	-2.6	4.0	6.7	10.9	9.3	4.0	4.5	8.8	7.8	3.6	7.7	11.7	9.3	10.6	7.3	3Q16	8.4	1.3
2017	1.2	-1.2	0.0	0.0	6.2	5.8	12.3	11.0	5.9	4.7	10.8	9.2	6.0	4.2	10.3	8.4	11.9	9.5	2Q17	8.8	1.4
2018	0.3	-0.2	0.1	-0.2	3.1	11.0	14.3	11.8	5.1	9.9	15.3	12.3					11.3	0.5	2Q18	11.1	1.4
2019	0.2	2.6	2.8	2.5	9.4	1.3	11.3	9.6	4.0	6.4	10.8	9.0					10.4	8.7	3Q19	9.4	1.2
2020	0.0	3.3	3.3	2.4	1.5	28.4	30.2	23.2									24.4	14.0	2Q20	18.1	1.2
2021	0.8	1.3	2.2	1.5	3.2	12.4	15.9	11.6									16.6	10.6	2Q21	8.0	1.1
2022	0.5	-0.2	0.3	-0.3													1.8	-0.3	2Q22	-1.5	1.0

Portfolio Diversification – Real Estate

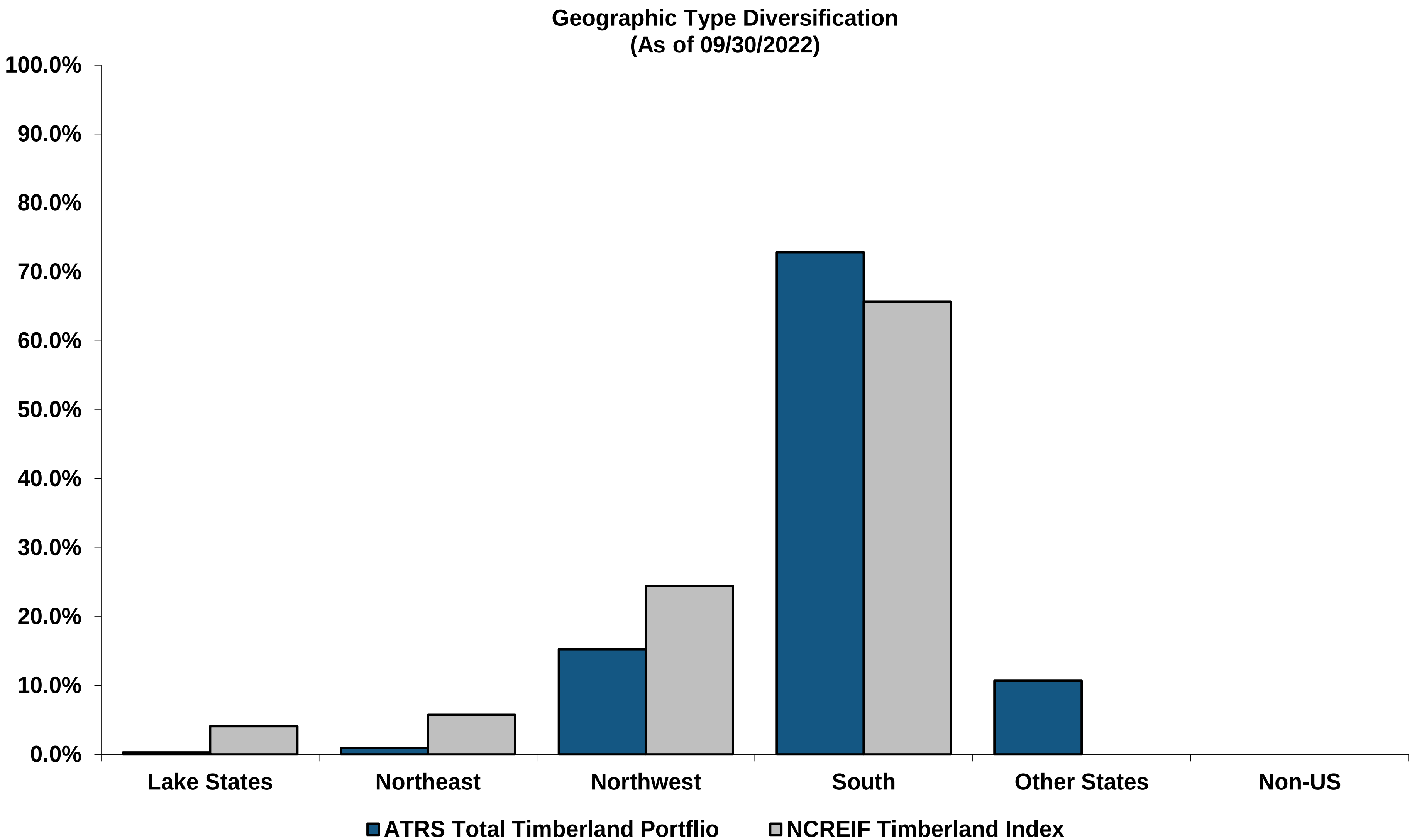
TOWNSEND® GROUP
an Aon company





350

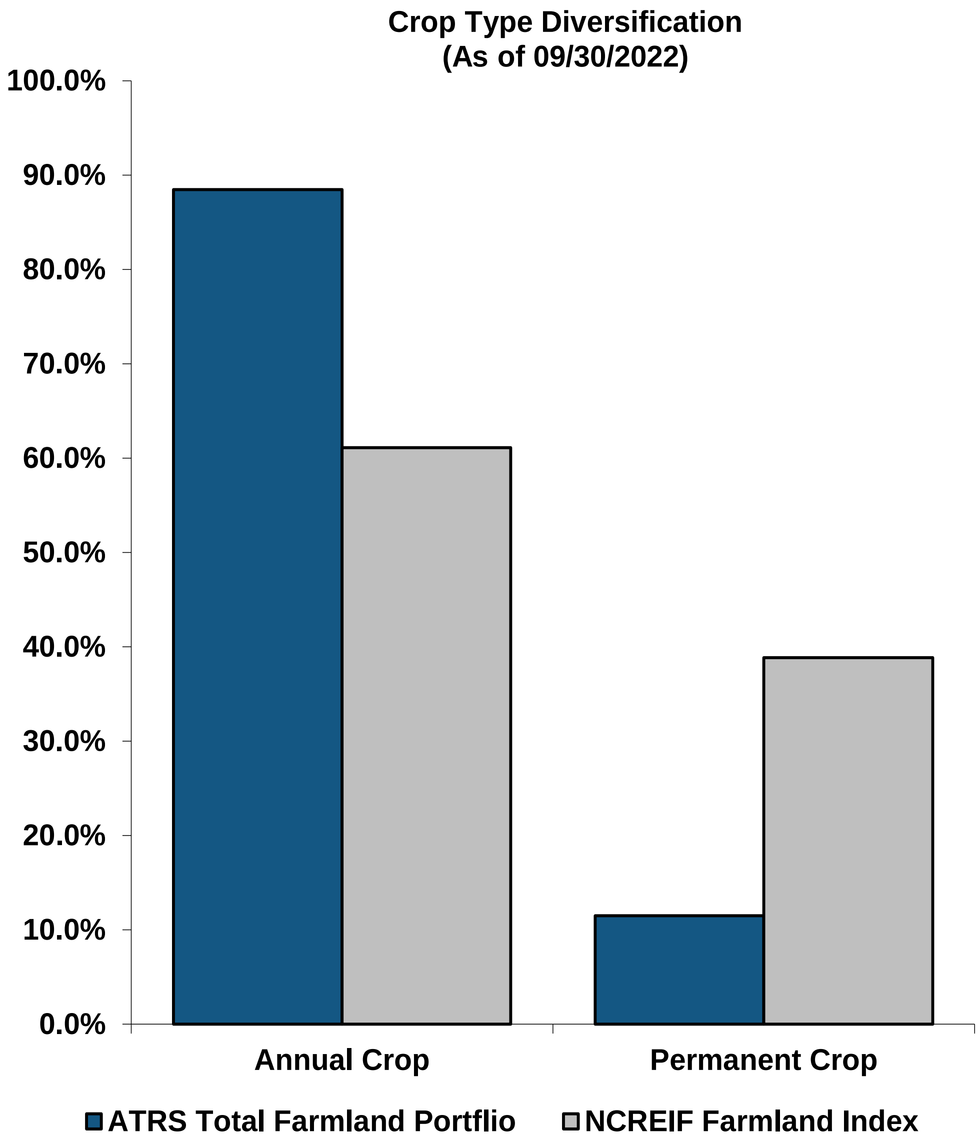
Portfolio Diversification – Timberland

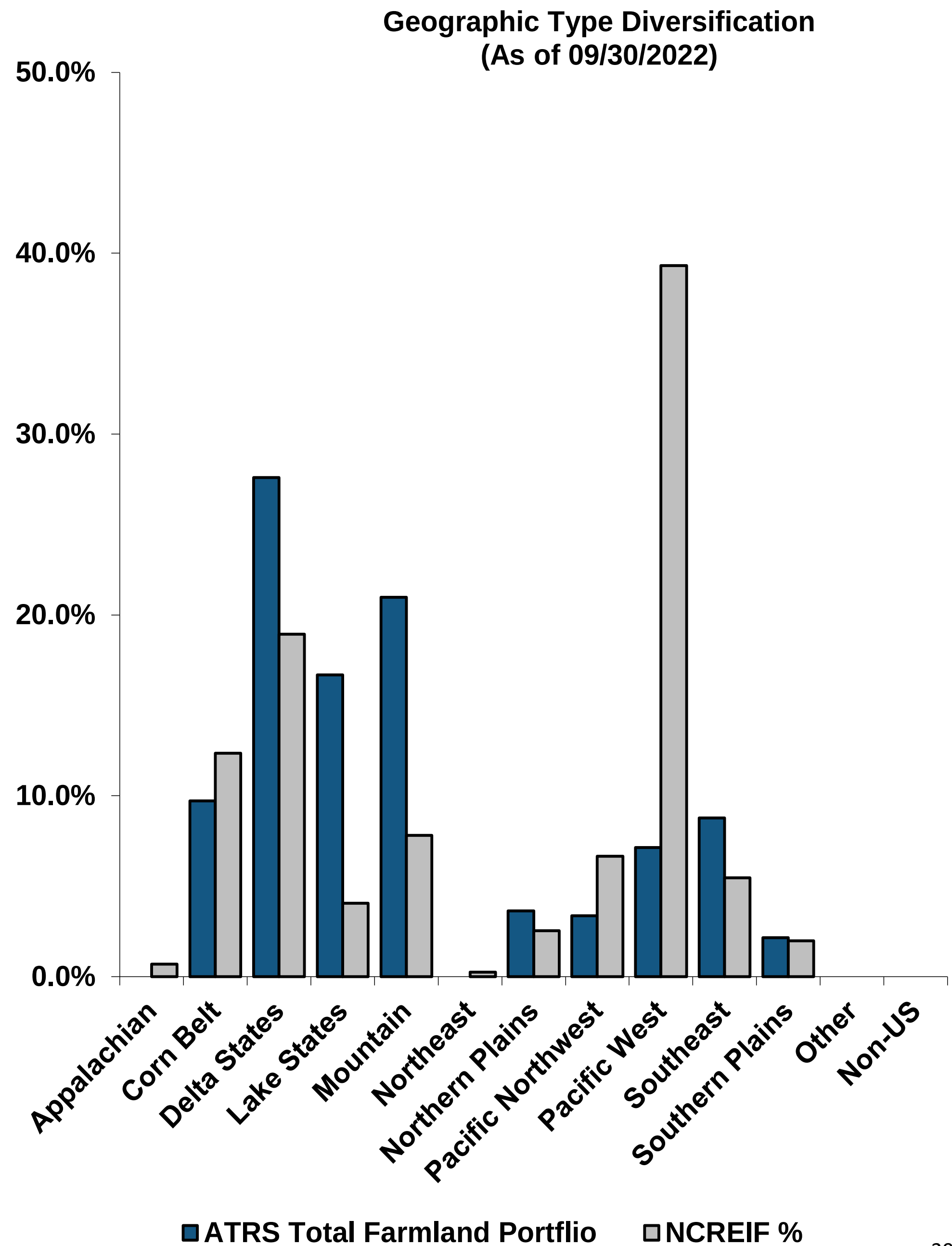


351

Portfolio Diversification – Agriculture

TOWNSEND® GROUP
an Aon company

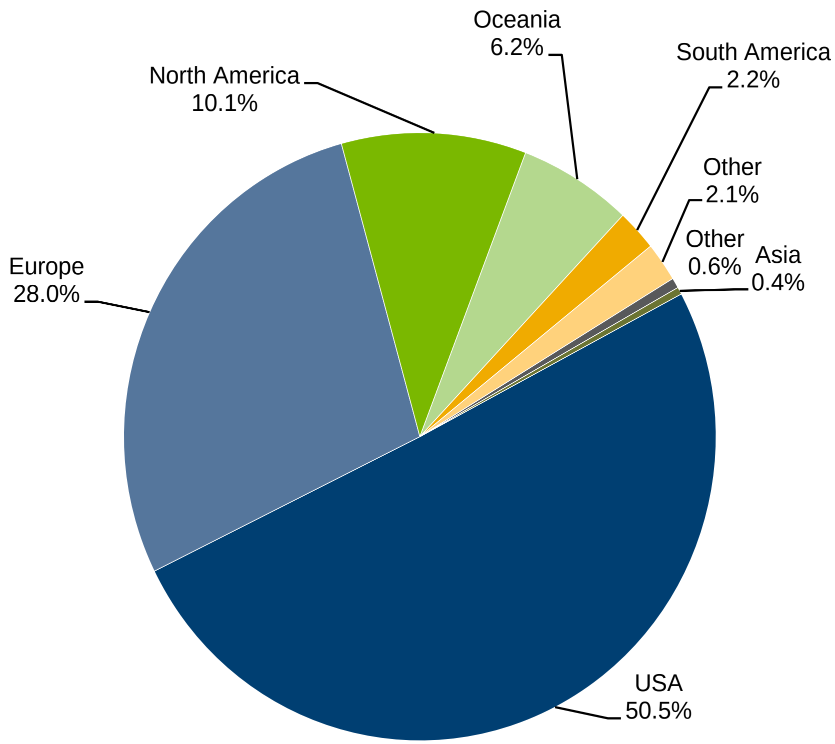




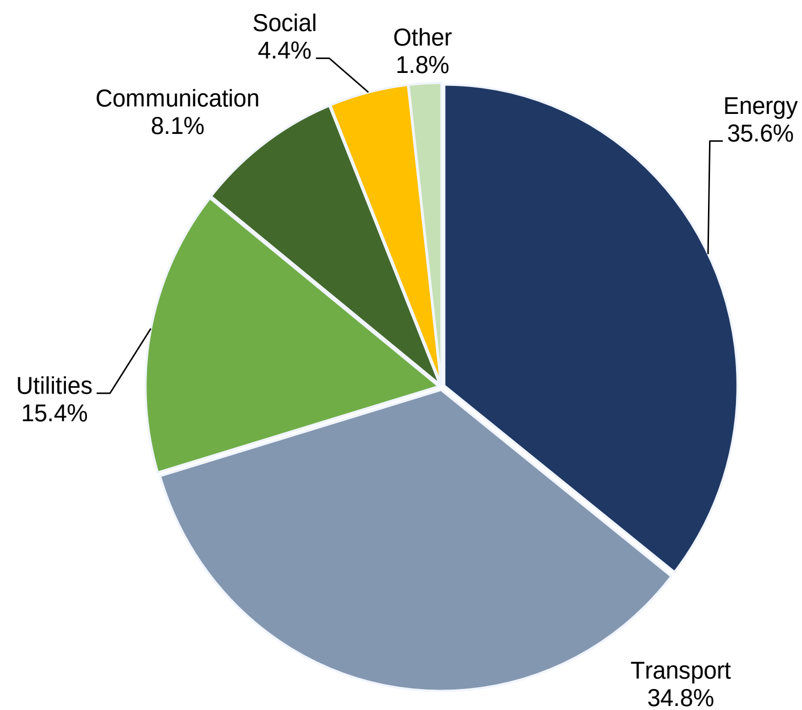
352

Portfolio Diversification – Infrastructure

Geographic Diversification
as % of Portfolio Company Value



Industry Diversification
as % of Portfolio Company Value

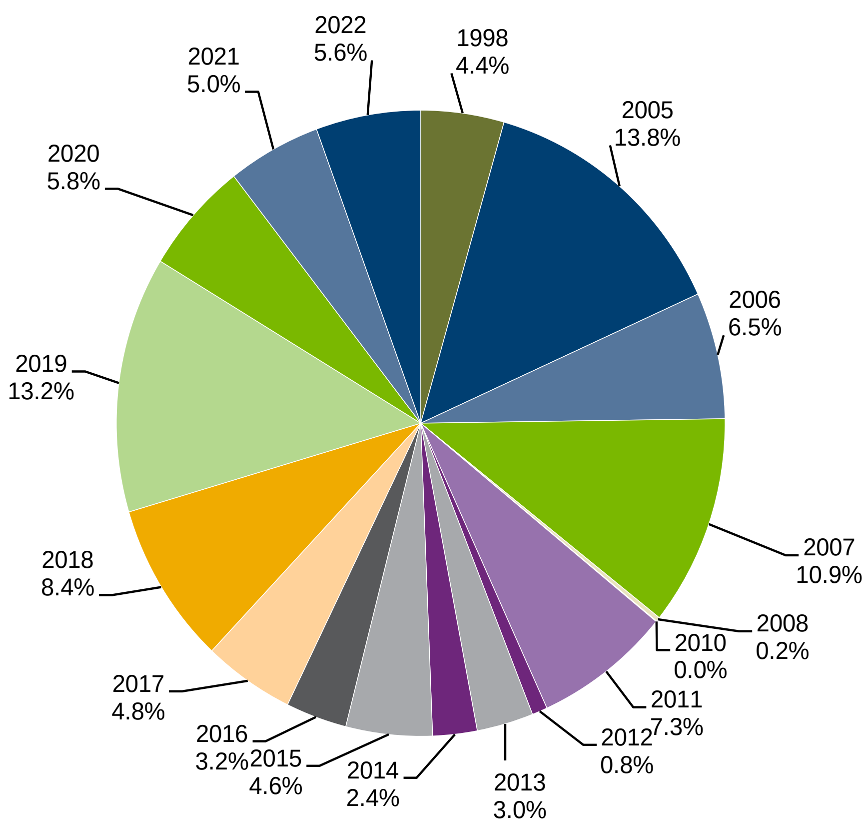


353

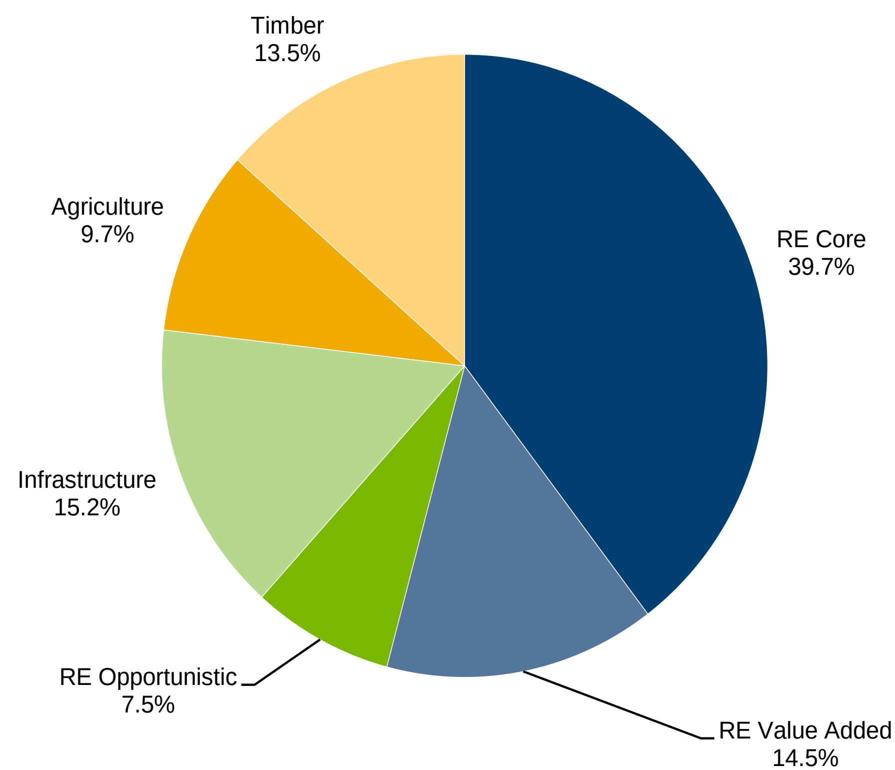
As of 9/30/2022

Portfolio Diversification (cont'd)

Vintage Year Diversificiation by Net Asset Value (As of 09/30/2022)



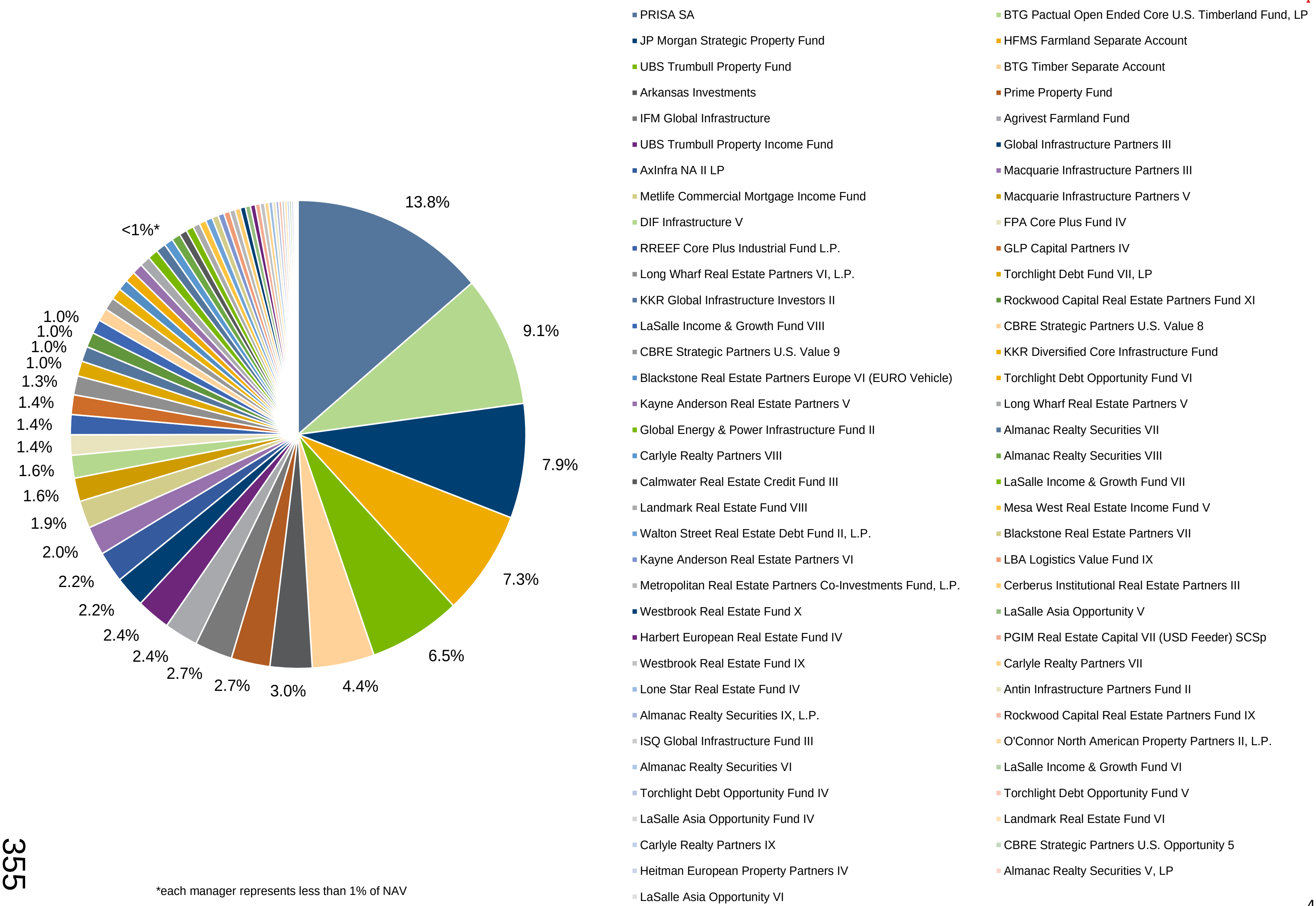
Style Diversification by Net Asset Value (As of 09/30/2022)



Note: Arkansas Investments are included in Core portfolio

Manager Diversification

TOWNSEND® GROUP
an Aon company



*each manager represents less than 1% of NAV

355

Management Fees

Partnership Name	Current Quarter Management Fees	YTD Management Fees
Core		
Arkansas Investments	0	0
JP Morgan Strategic Property Fund	-401,635	-1,645,945
Metlife Commercial Mortgage Income Fund	-100,000	-300,000
Prime Property Fund	-147,756	-184,506
PRISA SA	-674,973	-1,945,223
RREEF Core Plus Industrial Fund L.P.	-62,240	-62,240
UBS Trumbull Property Fund	-299,406	-925,735
UBS Trumbull Property Income Fund	-119,662	-348,692
Core	**-1,805,672**	**-5,412,341**
Value Added		
Almanac Realty Securities IX, L.P.	-115,945	-344,055
Almanac Realty Securities V, LP	0	0
Almanac Realty Securities VI	-11,263	-33,422
Almanac Realty Securities VII	-50,437	-149,069
Almanac Realty Securities VIII	-42,556	-109,708
Calmwater Real Estate Credit Fund III	-60,400	-185,130
CBRE Strategic Partners U.S. Value 8	-44,031	-132,093
CBRE Strategic Partners U.S. Value 9	-156,249	-468,747
FPA Core Plus Fund IV	-50,032	-146,260
GLP Capital Partners IV	0	-197
Harbert European Real Estate Fund IV	-31,962	-108,297
LaSalle Income & Growth Fund VI	-4,466	-22,039
LaSalle Income & Growth Fund VII	-47,612	-140,550
LaSalle Income & Growth Fund VIII	-126,027	-373,973
LBA Logistics Value Fund IX	-158,125	-419,910
Long Wharf Real Estate Partners V	-57,184	-167,553
Long Wharf Real Estate Partners VI, L.P.	-189,041	-560,959
Mesa West Real Estate Income Fund V	-136,110	-403,891
PGIM Real Estate Capital VII (USD Feeder) SCSp	-340	-1,020
Rockwood Capital Real Estate Partners Fund IX	-30,296	-107,018
Rockwood Capital Real Estate Partners Fund XI	-129,615	-386,368
Walton Street Real Estate Debt Fund II, L.P.	-53,500	-147,976
Westbrook Real Estate Fund IX	-25,248	-76,718
Westbrook Real Estate Fund X	-29,859	-91,091
Value Added	**-1,550,298**	**-4,576,043**

Management Fees (cont'd)

Partnership Name	Current Quarter Management Fees	YTD Management Fees
Opportunistic		
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	-161,733	-517,310
Blackstone Real Estate Partners VII	-6,743	-128,384
Carlyle Realty Partners IX	-125,340	-368,435
Carlyle Realty Partners VII	-26,460	-89,157
Carlyle Realty Partners VIII	-60,630	-191,912
CBRE Strategic Partners U.S. Opportunity 5	0	0
Cerberus Institutional Real Estate Partners III	-4,127	-16,595
Heitman European Property Partners IV	0	0
Kayne Anderson Real Estate Partners V	-77,558	-251,072
Kayne Anderson Real Estate Partners VI	-156,250	-468,750
Landmark Real Estate Fund VI	0	-4,696
Landmark Real Estate Fund VIII	-62,500	-187,500
LaSalle Asia Opportunity Fund IV	-2,663	-7,902
LaSalle Asia Opportunity V	-82,221	-237,000
LaSalle Asia Opportunity VI	-176,438	-350,959
Lone Star Real Estate Fund IV	-5,165	-15,495
Metropolitan Real Estate Partners Co-Investments Fund, L.P.	-23,696	-71,032
O'Connor North American Property Partners II, L.P.	-9,704	-31,330
Torchlight Debt Fund VII, LP	-137,500	-412,500
Torchlight Debt Opportunity Fund IV	-13,558	-39,849
Torchlight Debt Opportunity Fund V	-10,996	-37,717
Torchlight Debt Opportunity Fund VI	-57,494	-200,596
Opportunistic	**-1,200,776**	**-3,628,193**
Real Estate	**-4,556,745**	**-13,616,577**

357

Management Fees (cont'd)

TOWNSEND® GROUP
an Aon company

Partnership Name	Current Quarter Management Fees	YTD Management Fees
Infrastructure - Core		
AxInfra NA II LP	-172,242	-514,801
DIF Infrastructure V	-126,776	-418,610
IFM Global Infrastructure	-131,191	-383,003
KKR Diversified Core Infrastructure Fund	-21,934	-43,482
Macquarie Infrastructure Partners III	-104,782	-309,823
Macquarie Infrastructure Partners V	-162,355	-482,545
Infrastructure - Core	**-719,281**	**-2,152,264**
Infrastructure - Non-Core		
Antin Infrastructure Partners Fund II	-12,165	-53,481
Global Energy & Power Infrastructure Fund II	-103,900	-319,197
Global Infrastructure Partners III	-183,995	-528,984
ISQ Global Infrastructure Fund III	-158,830	-475,072
KKR Global Infrastructure Investors II	-67,569	-197,969
Infrastructure - Non-Core	**-526,459**	**-1,574,703**
Infrastructure	**-1,245,739**	**-3,726,967**
Agriculture		
Agrivest Farmland Fund	-150,617	-447,233
HFMS Farmland Separate Account	-531,017	-1,540,207
Agriculture	**-681,634**	**-1,987,440**
Timber		
BTG Pactual Open Ended Core U.S. Timberland Fund, LP	-575,993	-1,679,756
BTG Timber Separate Account	-179,079	-532,110
Timber	**-755,072**	**-2,211,865**
Total Real Assets	**-2,682,445**	**-7,926,272**
Total Portfolio		
Arkansas Teachers Retirement System	**-7,239,190**	**-21,542,849**

358

Compliance Matrix

RISK MANAGEMENT						
Property Type - Real Estate	**NFI-ODCE**	**Target/Constraint**	**Minimum**	**Maximum**	**Actual**	**Compliant?**
Office	22.50	NFI-ODCE +/- 50%	11.25	33.75	24.38	Yes
Retail	9.60	NFI-ODCE +/- 50%	4.80	14.40	7.73	Yes
Industrial	31.40	NFI-ODCE +/- 50%	15.70	47.10	25.11	Yes
Apartment	31.20	NFI-ODCE +/- 50%	15.60	46.80	29.76	Yes
Other	5.30	n/a	0.00	20.00	13.03	Yes
Geography - Real Estate	**NFI-ODCE**	**Target/Constraint**	**Minimum**	**Maximum**	**Actual**	**Compliant?**
West	44.30	NFI-ODCE +/- 50%	22.15	66.45	48.59	Yes
East	27.50	NFI-ODCE +/- 50%	13.75	41.25	25.68	Yes
Midwest	6.60	NFI-ODCE +/- 50%	3.30	9.90	6.51	Yes
South	21.50	NFI-ODCE +/- 50%	10.75	32.25	10.95	Yes
Other	0.00	n/a	n/a	n/a	3.53	Yes
Non-U.S.	0.00	n/a	0.00	40.00	4.74	Yes
Geography – Timber	**NCREIF Timberland**	**Target/Constraint**	**Minimum**	**Maximum**	**Actual**	**Compliant?**
Lake States	4.08	NCREIF Timberland +/- 15%	0.61	4.69	0.29	No
Northeast	5.76	NCREIF Timberland +/- 15%	0.86	6.62	0.94	Yes
Northwest	24.45	NCREIF Timberland +/- 15%	3.67	28.12	15.25	Yes
South	65.71	NCREIF Timberland +/- 15%	9.86	75.57	72.85	Yes
Other	0.00	NCREIF Timberland +/- 15%	0.00	0.00	10.67	No

Compliance Matrix (cont’d)

RISK MANAGEMENT

Geography - Agriculture	NCREIF Farmland	Target/Constraint	Minimum	Maximum	Actual	Compliant?
Appalachian	0.69		0.00	50.00	0.00	Yes
Corn Belt	12.35		0.00	50.00	9.71	Yes
Delta States	18.93		0.00	50.00	27.60	Yes
Lake States	4.05		0.00	50.00	16.67	Yes
Mountain	7.80		0.00	50.00	20.97	Yes
Northeast	0.24		0.00	50.00	0.00	Yes
Northern Plains	2.53		0.00	50.00	3.63	Yes
Pacific Northwest	6.65		0.00	50.00	3.36	Yes
Pacific West	39.32		0.00	50.00	7.13	Yes
Southeast	5.46		0.00	50.00	8.76	Yes
Southern Plains	1.98		0.00	50.00	2.15	Yes
Other	0.00		0.00	50.00	0.00	Yes
Non-U.S.	0.00		0.00	50.00	0.00	Yes

Geography - Infrastructure	Target/Constraint	Minimum	Maximum	Actual	Compliant?
U.S.		n/a	n/a	50.48	Yes
Non-U.S.		0.00	50.00	49.52	Yes

Asset Type - Infrastructure	Target/Constraint	Minimum	Maximum	Actual	Compliant?
Energy/Utilities		0.00	70.00	51.00	Yes
Transportation		0.00	70.00	34.75	Yes
Social		0.00	70.00	4.36	Yes
Communications		0.00	70.00	8.10	Yes
Other		0.00	70.00	1.79	Yes

Manager	Target/Constraint	Minimum	Maximum	Max	Compliant?
		0.00	30.00	13.81	Yes

Style - Real Estate	Target/Constraint	Minimum	Maximum	Actual	Compliant?
Core		50.00	70.00	64.30	Yes
Non-Core		30.00	50.00	35.67	Yes

Agenda

TOWNSEND GROUP
an Aon company

THIS PAGE LEFT BLANK INTENTIONALLY

362

Glossary of Terms

- Catch-up - The provision that dictates how cash flows from the fund will be allocated between the investors and the manager in order for the manager to receive their performance fee. This allocation of cash flows occurs once the investors have collected their capital and preferred return
- Core - The most conservative institutional real estate investing style
- Core-Plus - A style whereby investments have a slightly higher level of risk and expected return than Core, primarily through use of leverage
- Development - The construction of buildings from breaking the ground through building completion. This may also include entitlement of the land and the pursuit of permits prior to construction
- DPI – Distributions to Paid In; the ratio of distributions from investments to total invested capital
- First Closing - The point at which a manager receives and executes the subscription documents and can begin drawing capital from investors
- Final Closing - The final date at which new investors can subscribe to a fund
- Internal Rate of Return (IRR) - A method of measuring the performance of a portfolio from inception through a particular point in time. This method weights returns according to the dollars invested at each point in time. Hence, this is known as dollar-weighted return. This is a better measure when the manager controls when dollars must be invested and is the most commonly used method of real estate performance evaluation; Gross IRR is gross of fee and Net IRR is net of fee
- NFI-ODCE – NCREIF Fund Index Open-end Diversified Core Equity Index is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy; underlying funds are leveraged with gross and net returns available
    - NCREIF changed the basis of diversification for the NFI ODCE from NREA to GRE effective 1Q20
- NPI – NCREIF Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only; it is reported unlevered and gross of fee

Glossary of Terms (Cont'd)

- FTSE-NAREIT Equity REIT – An unmanaged capitalization-weighted index of all equity real estate investment trusts
- FTSE EPRA/NAREIT Global REIT – An unmanaged market-weighted total return index, which consists of many companies from Global markets whose floats are larger than $100 million and derive more than half of their revenue from property-related activities
- Opportunistic - A style that is the riskiest form of real estate investing. The name derives from when such funds were formed after the early 1990s real estate market crash to take advantage of opportunities in unwanted properties. Such investments include ground-up development, highly-leveraged purchases, or transactions involving highly complicated legal or environmental situations
- Pre-Specified Deals – Investments that are purchased for a fund before its final close. The assets are typically warehoused on a line of credit
- Promote (Carried Interest) -The performance fee a manager receives once the investors have received their return of capital and the preferred return (return promised by the manager)
- RVPI – Residual Value to Paid In; the ratio of the residual value of an investment to total invested capital
- Time-Weighted Return - A method of measuring the performance of a portfolio over a particular period of time. Effectively, it is the return of one dollar invested in the portfolio at the beginning of the measurement period. This is a better return measure when the manager does not control when the dollars must be invested
- TVPI – Total value to paid-in ratio; the ratio of total value from an investment, including distributions, to total invested capital
- Value-Added - A style that represents moderate-risk real estate. A manager typically increases the future value of the investment by undertaking activities such as leasing, improving an existing building, or taking some risk through operating intensive assets, such as hotels or self-storage
- Vintage Year - The year in which a fund has its final closing. Typically coincides with the year a fund begins making investments

Glossary of Terms (Cont'd)

- NCREIF Timberland Index- The National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only.
- NCREIF Farmland Index- The National Council of Real Estate Investment Fiduciaries (NCREIF) Farmland Index is a quarterly time series composite return measure of investment performance of a large pool of individual agricultural properties acquired in the private market for investment purposes only.

Disclosures

This presentation (the "Presentation") is being furnished on a confidential basis to a limited number of sophisticated individuals meeting the definition of a Qualified Purchaser under the Investment Advisors Act of 1940 for informational and discussion purposes only and does not constitute an offer to sell or a solicitation of an offer to purchase any security.

This document has been prepared solely for informational purposes and is not to be construed as investment advice or an offer or solicitation for the purchase or sale of any financial instrument. While reasonable care has been taken to ensure that the information contained herein is not untrue or misleading at the time of preparation, The Townsend Group makes no representation that it is accurate or complete. Some information contained herein has been obtained from Fourth-party sources that are believed to be reliable. The Townsend Group makes no representations as to the accuracy or the completeness of such information and has no obligation to revise or update any statement herein for any reason. Any opinions are subject to change without notice and may differ or be contrary to opinions expressed by other divisions of The Townsend Group as a result of using different assumptions and criteria. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Statements contained in this Presentation that are not historical facts and are based on current expectations, estimates, projections, opinions and beliefs of the general partner of the Fund and upon materials provided by underlying investment funds, which are not independently verified by the general partner. Such statements involve known and unknown risks, uncertainties and other factors, and undue reliance should not be placed thereon. Additionally, this Presentation contains "forward-looking statements." Actual events or results or the actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements.

Material market or economic conditions may have had an effect on the results portrayed.

Neither Townsend nor any of its affiliates have made any representation or warranty, express or implied, with respect to the fairness, correctness, accuracy, reasonableness or completeness of any of the information contained herein (including but not limited to information obtained from Fourth parties unrelated to them), and they expressly disclaim any responsibility or liability therefore. Neither Townsend nor any of its affiliates have any responsibility to update any of the information provided in this summary document. The products mentioned in this document may not be eligible for sale in some states or countries, nor suitable for all types of investors; their value and the income they produce may fluctuate and/or be adversely affected by exchange rates, interest rates, or other factors. Prospective investors in the Fund should inform themselves as to the legal requirements and tax consequences of an investment in the Fund within the countries of their citizenship, residence, domicile and place of business.

There can be no assurance that any account will achieve results comparable to those presented. Past performance is not indicative of future results.

366

FRANKLIN PARK

Arkansas Teacher Retirement System

Private Equity Portfolio Review

September 30, 2022

Table of Contents

368

Executive Summary

Portfolio Summary

Since establishing the private equity program in 1996, Arkansas Teacher Retirement System ("ATRS") has committed approximately $6.0 billion to 99 primary funds, 30 fund-of-funds, 1 co-investment fund, and 12 direct investments through September 30, 2022. Of the $6.0 billion committed, 90% has been contributed, 116% of contributed capital has been returned, and a total value of 1.7 times contributed capital has been generated. ATRS' portfolio has outperformed the Dow Jones U.S. Total Stock Market Index equivalent ("PME") by 420 basis points since inception.

Investment Activity

For the nine months ended September 30, 2022, ATRS made capital contributions of approximately $264.0 million and received distributions of $362.7 million, for net distributions of $98.7 million.

Commitment Activity

Since January 1, 2022, ATRS closed on the following commitments:

- FP Venture Opp - $30.0 million
- FP Venture XIV - $60.0 million
- FP Intnl XI - $30.0 million
- FP CF Access II - $90.0 million
- SK Capital VI - $30.0 million
- Riverside Value Fund I - $30.0 million
- Thoma Bravo Discover IV - $15.0 million
- Thoma Bravo XV - $15.0 million
- Arlington VI - $30.0 million
- Thoma Bravo Explore II - $15.0 million
- BV XI - $30.0 million
- Greenbriar VI - $30.0 million
- JF Lehman VI - $30.0 million
- Alpine Investors IX - $30.0 million

Subsequent to quarter end, ATRS approved additional $30.0 million commitments to both FP Venture Opp and FP Intnl XI, which remain pending.

Market Commentary

U.S. Private Equity

Market activity continued to decline through 3Q 2022 with deal count and deal value falling below the trailing five-year averages. During the third quarter, 1,482 deals closed totaling $186 billion, representing a 13% drop from the prior quarter. Pricing and leverage remain high with median entry multiples at 11.4x EBITDA and median leverage multiples of 6.0x EBITDA. Fundraising has slowed, but remains robust with $259 billion raised across 296 funds YTD.

U.S. Venture Capital

Venture markets recorded the third consecutive quarterly decline in completed deals with just $43 billion invested. However, year-to-date investment activity surpassed all prior years, except for 2021 which was a record-breaking year. Exit activity slowdown continued through the third quarter generating $14 billion in exit value, the lowest quarterly exit value experienced since 4Q 2016. Fundraising activity remained strong setting a new record high of $151 billion of capital raised after adding $29.4 billion in 3Q 2022.

Franklin Park

January 17, 2023

Portfolio Overview

Portfolio Summary

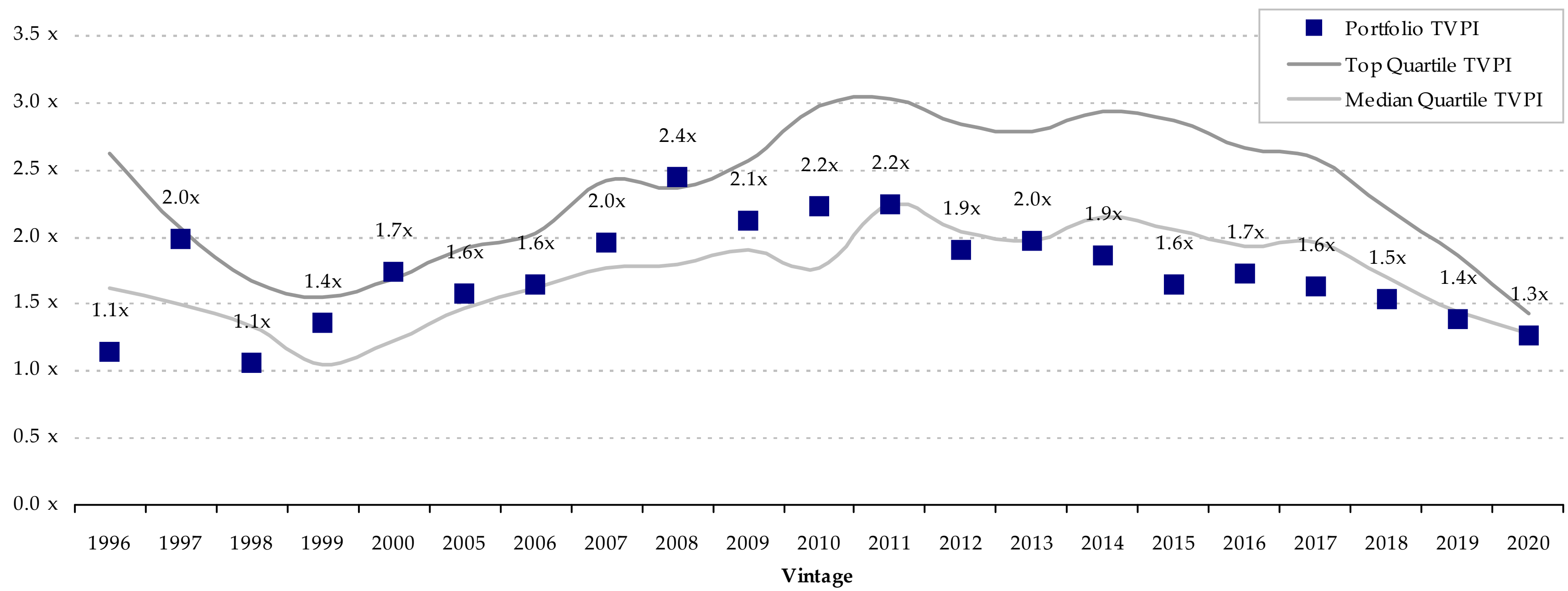
FRANKLIN PARK

Group	Num.	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	Remaining Value (%)	Exposure ($)	DPI	TVPI	Net IRR
By Vehicle											
1996-2000: Legacy Portfolio	13	1,106,390,461	1,070,676,238	0	1,641,226,547	0	0.0%	0	1.5 x	1.5 x	9.2%
2005-2006: CSFB Portfolio	2	654,300,000	688,662,653	64,549,513	1,031,322,373	95,768,719	3.2%	160,318,232	1.5 x	1.6 x	9.0%
Post 2006 Fund Portfolio	115	3,688,323,718	3,091,894,746	1,229,043,419	3,126,458,588	2,574,016,683	87.2%	3,803,060,102	1.0 x	1.8 x	17.6%
Big River Steel	8	257,880,449	257,940,356	0	430,039,782	1,677,862	0.1%	1,677,862	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	2	218,244,727	234,114,727	0	31,674,525	210,491,053	7.1%	210,491,053	0.1 x	1.0 x	1.2%
GTLA Holdings	1	20,000,000	20,000,000	0	0	70,000,000	2.4%	70,000,000	0.0 x	3.5 x	35.9%
Total	**142**	**5,963,139,355**	**5,383,028,721**	**1,293,592,932**	**6,266,106,951**	**2,951,954,316**	**100.0%**	**4,245,547,248**	**1.2 x**	**1.7 x**	**11.7%**
By Fund Type											
Co-Investment Fund	1	263,823,718	402,733,383	206,512,177	367,914,773	374,534,901	12.7%	581,047,078	0.9 x	1.8 x	21.0%
Fund-of-Funds	30	1,574,300,000	1,236,957,179	433,348,582	1,499,282,508	844,012,912	28.6%	1,277,361,494	1.2 x	1.9 x	12.0%
Operating Company	12	514,125,176	531,795,084	0	467,099,442	282,168,914	9.6%	282,168,914	0.9 x	1.4 x	10.6%
Primary Fund	99	3,610,890,461	3,211,543,075	653,732,173	3,931,810,228	1,451,237,589	49.2%	2,104,969,762	1.2 x	1.7 x	11.3%
Total	**142**	**5,963,139,355**	**5,383,028,721**	**1,293,592,932**	**6,266,106,951**	**2,951,954,316**	**100.0%**	**4,245,547,248**	**1.2 x**	**1.7 x**	**11.7%**

Group	Num.	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	Remaining Value (%)	Exposure ($)	DPI	TVPI	Net IRR
By Strategy											
Buyout	74	2,827,390,461	2,387,188,168	635,661,272	2,900,248,230	1,227,537,256	41.6%	1,863,198,528	1.2 x	1.7 x	11.8%
Distressed Debt	3	100,000,000	93,881,464	36,543,175	105,723,545	25,597,823	0.9%	62,140,998	1.1 x	1.4 x	6.4%
Growth Equity	3	120,000,000	104,104,590	18,757,033	245,453,916	31,721,682	1.1%	50,478,715	2.4 x	2.7 x	20.9%
Hard Assets	12	545,744,727	562,407,654	22,484,717	271,020,567	459,424,027	15.6%	481,908,744	0.5 x	1.3 x	7.6%
Infrastructure	8	270,880,449	272,676,670	0	427,199,627	1,677,862	0.1%	1,677,862	1.6 x	1.6 x	12.3%
Mezzanine	7	285,000,000	209,497,043	21,974,485	232,913,221	43,169,659	1.5%	65,144,144	1.1 x	1.3 x	10.2%
Multi-Strategy	6	974,123,718	1,158,384,070	271,544,690	1,431,338,793	472,935,546	16.0%	744,480,236	1.2 x	1.6 x	9.2%
Special Assets	1	30,000,000	14,251,786	16,801,734	1,178,625	11,465,513	0.4%	28,267,247	0.1 x	0.9 x	-5.9%
Structured Capital	4	115,000,000	90,854,500	49,538,745	86,726,200	44,299,619	1.5%	93,838,364	1.0 x	1.4 x	12.8%
Turnaround	9	240,000,000	180,263,199	79,890,876	182,648,479	134,555,311	4.6%	214,446,187	1.0 x	1.8 x	17.2%
Venture Capital	15	455,000,000	309,519,577	140,396,204	381,655,748	499,570,019	16.9%	639,966,223	1.2 x	2.8 x	23.0%
Total	**142**	**5,963,139,355**	**5,383,028,721**	**1,293,592,932**	**6,266,106,951**	**2,951,954,316**	**100.0%**	**4,245,547,248**	**1.2 x**	**1.7 x**	**11.7%**
By Sub-Asset Class											
Corporate Finance	115	4,994,014,179	4,541,714,060	1,153,196,728	5,417,351,760	2,170,215,383	73.5%	3,323,412,111	1.2 x	1.7 x	11.2%
Direct Investments	12	514,125,176	531,795,084	0	467,099,442	282,168,914	9.6%	282,168,914	0.9 x	1.4 x	10.6%
Venture Capital	15	455,000,000	309,519,577	140,396,204	381,655,748	499,570,019	16.9%	639,966,223	1.2 x	2.8 x	23.0%
Total	**142**	**5,963,139,355**	**5,383,028,721**	**1,293,592,932**	**6,266,106,951**	**2,951,954,316**	**100.0%**	**4,245,547,248**	**1.2 x**	**1.7 x**	**11.7%**

- Remaining Value is defined as the investor's value as reported by the fund's manager.
- Exposure is defined as the sum of the investor's Remaining Value plus Unfunded Commitment.
- DPI is the ratio of Distributed Capital to Contributed Capital.
- TVPI is the ratio of Distributed Capital plus Remaining Value to Contributed Capital.
- Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
- Results include fully liquidated investments (if applicable).
- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date.

TVPI by Vintage

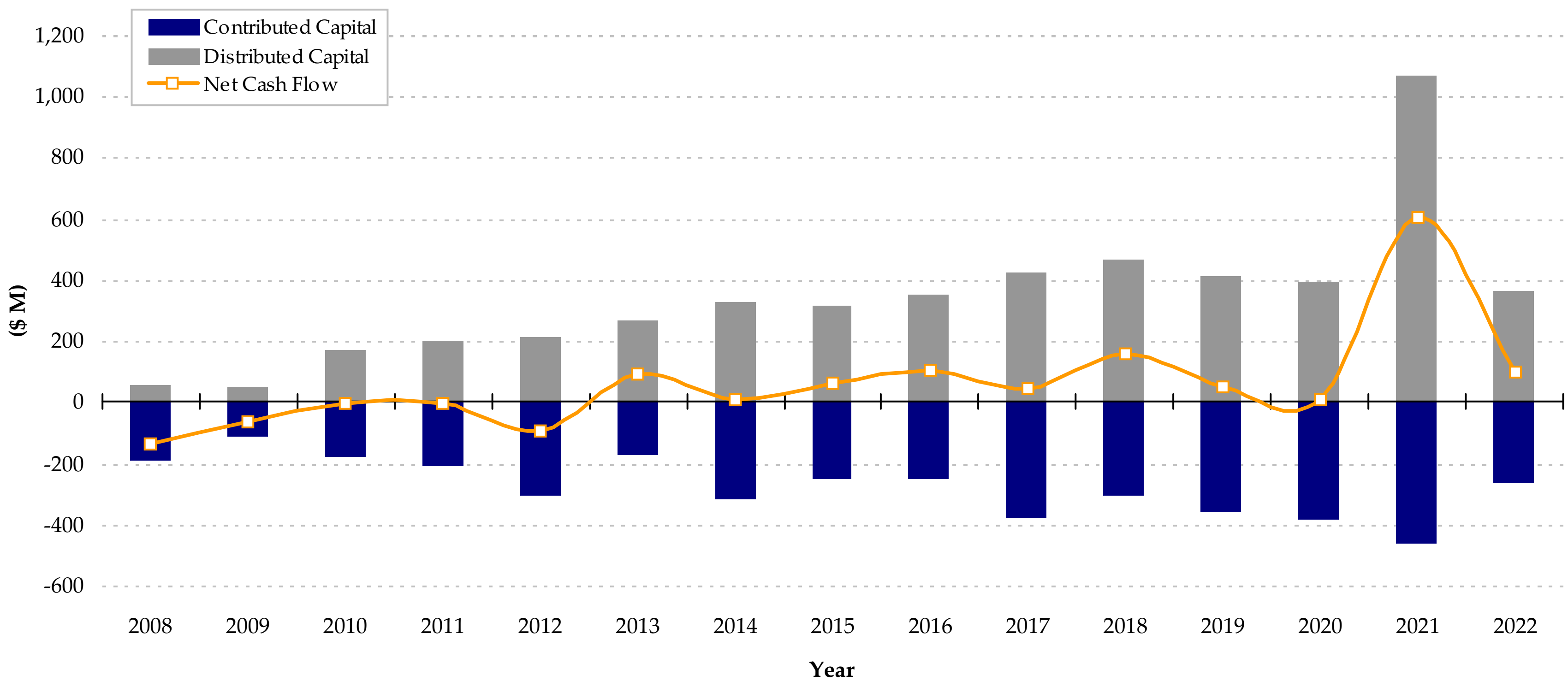


Net IRR vs. PME vs. Cambridge Associates: U.S. All Private Equity

Calculation Set	1-Year	3-Year	5-Year	10-Year	Inception
Aggregate Portfolio	7.0%	19.1%	19.1%	16.5%	11.7%
DJ US TSM TR Index* Public Market Equivalent	-18.2%	10.3%	10.1%	12.5%	7.5%
Cambridge Associates: U.S. All Private Equity	7.3%	23.8%	20.6%	17.0%	N/A
Post 2006 Fund Portfolio	7.8%	25.3%	22.0%	18.2%	17.6%
DJ US TSM TR Index* Public Market Equivalent (Post 2006 Fund Portfolio)	-18.2%	10.0%	9.9%	11.9%	11.8%

** The Dow Jones U.S. Total Stock Market Total Return Index measures all U.S. equity securities that have readily available prices and is calculated with dividend reinvestment.*

- Benchmark TVPI represents vintage year first quartile per Cambridge Associates, as of June 30, 2022. The portfolio is compared to data compiled across multiple strategies including U.S. Buyout, Growth Equity, Venture Capital, Mezzanine, Distressed, Fund-of-funds, and Secondary funds.
- Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
- The public market equivalent (PME) represents the performance of a public market index expressed in terms of an IRR, using the same cash flows and timing as the investor's investment activity in private equity. The PME serves as a proxy for the return the investor could have achieved by investing in the public market. The PME return assumes cash flows are invested at the end of each day.
- Cambridge Associates: U.S. All Private Equity reflects the pooled net IRR based on data compiled from Cambridge Associates as of June 30, 2022.
- Benchmark data is not available (N/A).

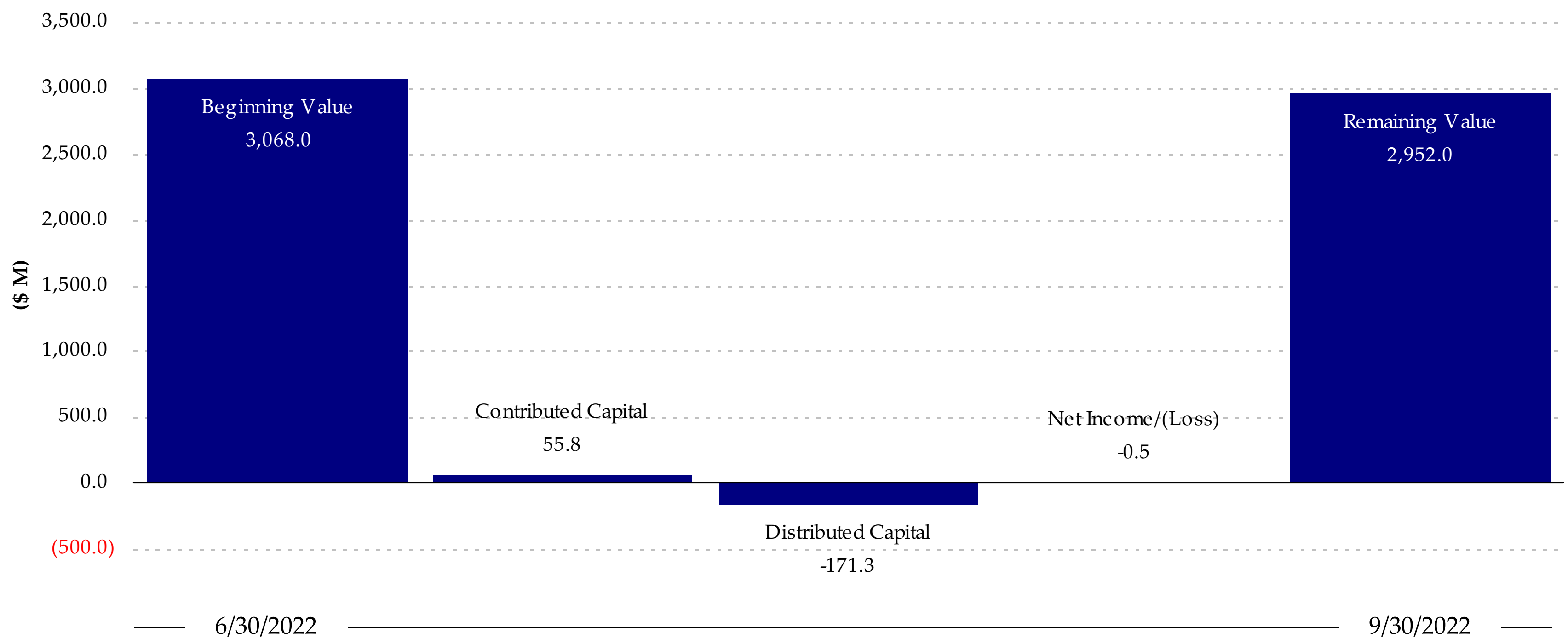


2022 ($)

Distributed	Contributed	Net Cash Flow
362,693,024	-263,993,834	98,699,190

- Cash flow data was compiled through the Report Date.

Quarterly Portfolio Activity



Percent Change in Value	0.0%

- Beginning Value represents the aggregate Remaining Value of the portfolio as of the prior quarter-end.
- Percent Change in Value is calculated by dividing Net Income / (Loss) by Beginning Value.

Recent Commitments

Commitments for Year Ended December 31, 2022

Fund	Strategy	Date	Commitment ($)
FP Venture Opp	Venture Capital	Jan 2022	30,000,000
FP Venture XIV	Venture Capital	Jan 2022	60,000,000
FP Intnl XI	Buyout	Jan 2022	30,000,000
FP CF Access II	Buyout	Feb 2022	90,000,000
SK Capital VI	Buyout	Mar 2022	30,000,000
Riverside Value Fund I	Turnaround	Mar 2022	30,000,000
Thoma Bravo Discover IV	Buyout	Apr 2022	15,000,000
Thoma Bravo XV	Buyout	Apr 2022	15,000,000
Arlington VI	Buyout	Apr 2022	30,000,000
Thoma Bravo Explore II	Buyout	May 2022	15,000,000
BV XI	Buyout	Jul 2022	30,000,000
Greenbriar VI	Buyout	Oct 2022	30,000,000
JF Lehman VI	Buyout	Oct 2022	30,000,000
Alpine Investors IX	Buyout	Dec 2022	30,000,000
Total			**465,000,000**

Year to Date Commitments as of January 17, 2023

Not Applicable

Approved and Pending Commitments as of January 17, 2023

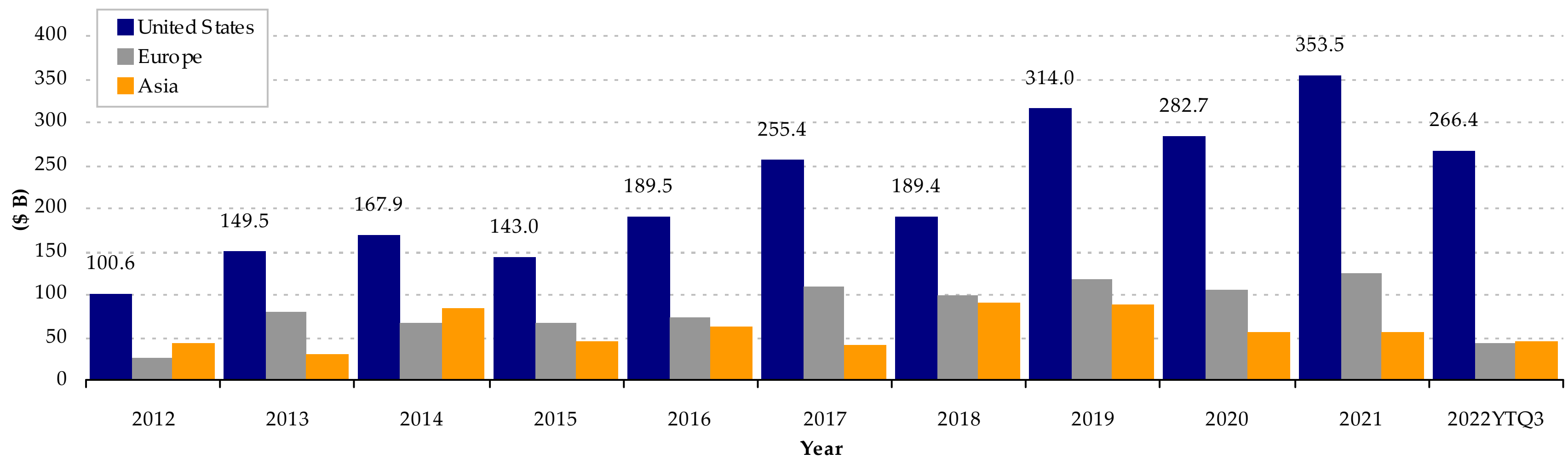
Not Applicable

- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.
- Subsequent to quarter end, ATRS approved additional $30.0 million commitments to both FP Venture Opp and FP Intnl XI, which remain pending.

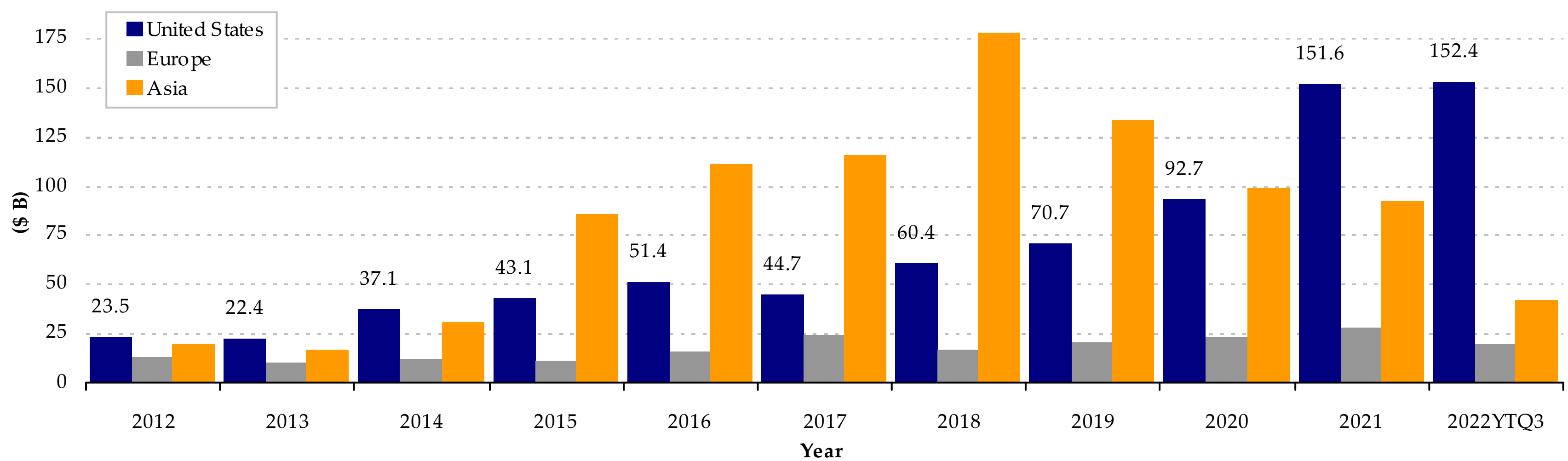
Market Update

FRANKLIN PARK

Buyout Funds

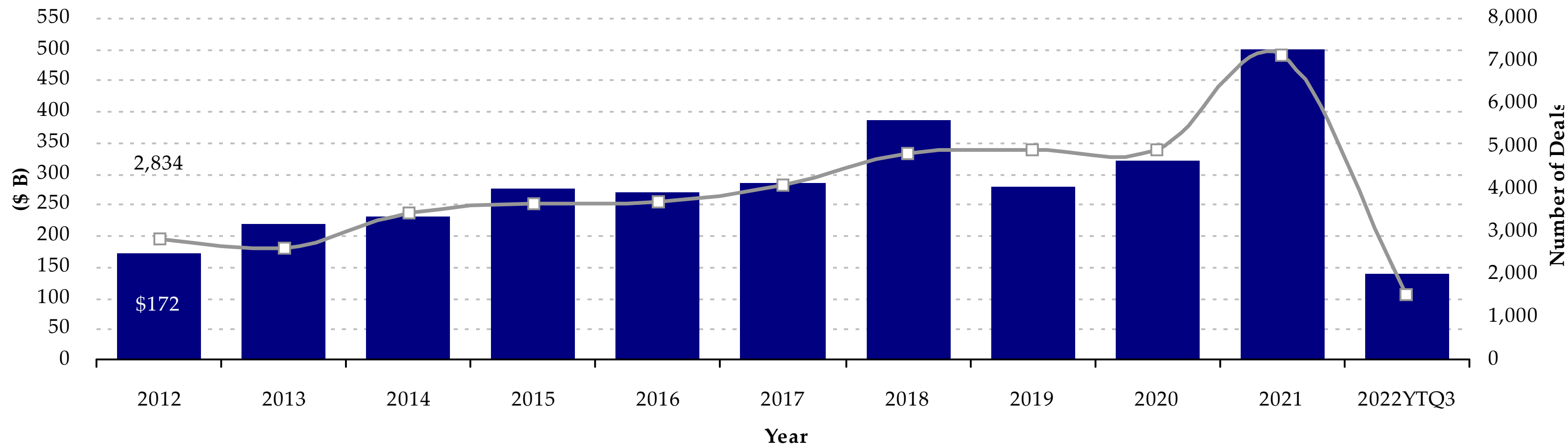


Venture Funds

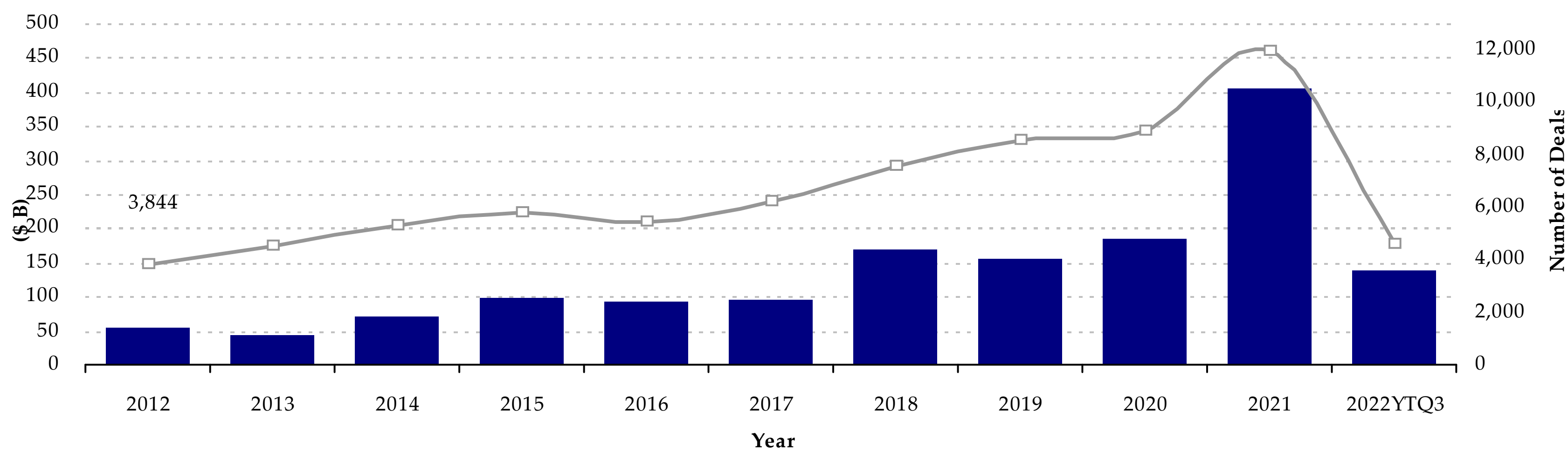


- Source: Pitchbook.
- Data compiled through Q3 2022.

U.S. Buyout

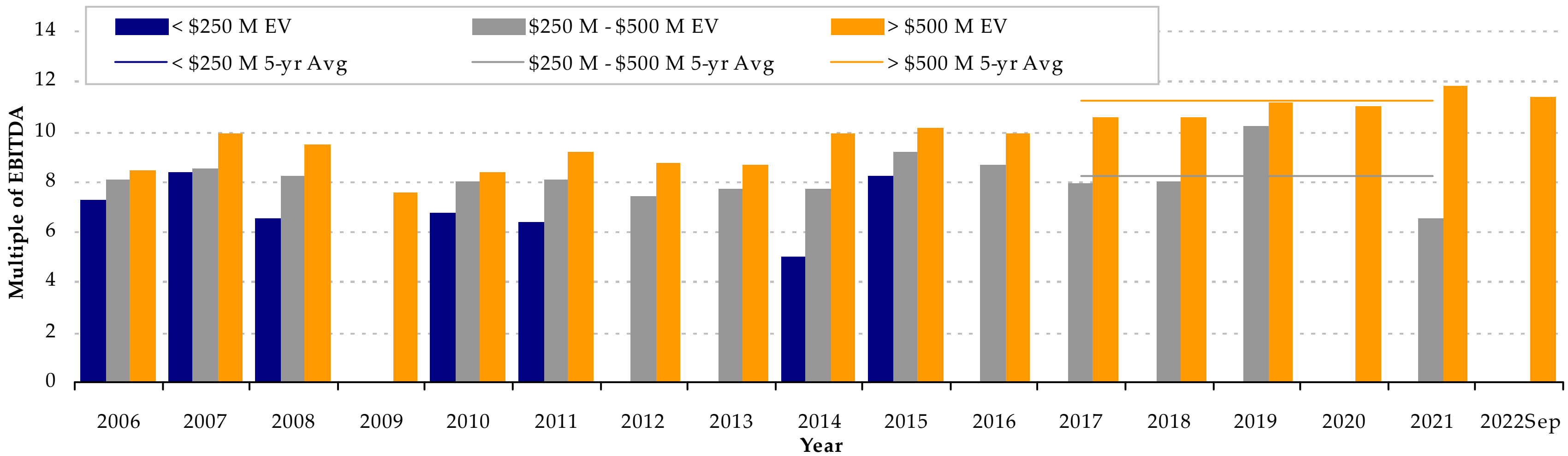


U.S. Venture

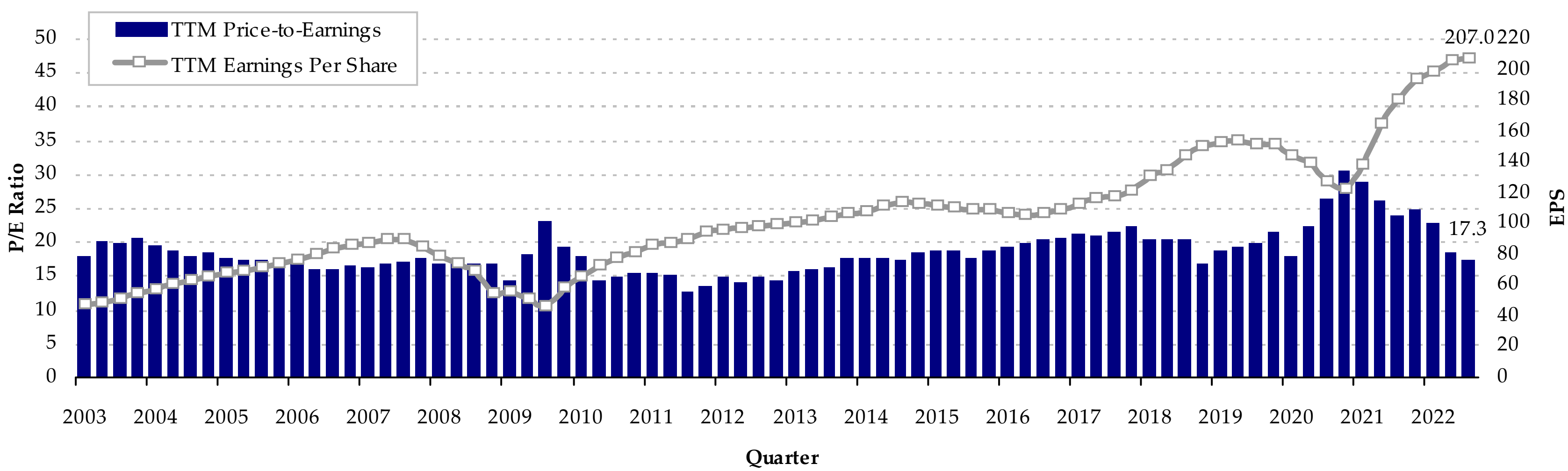


- Source: Pitchbook.
- Data compiled through Q3 2022.

U.S. LBO Pricing Multiples



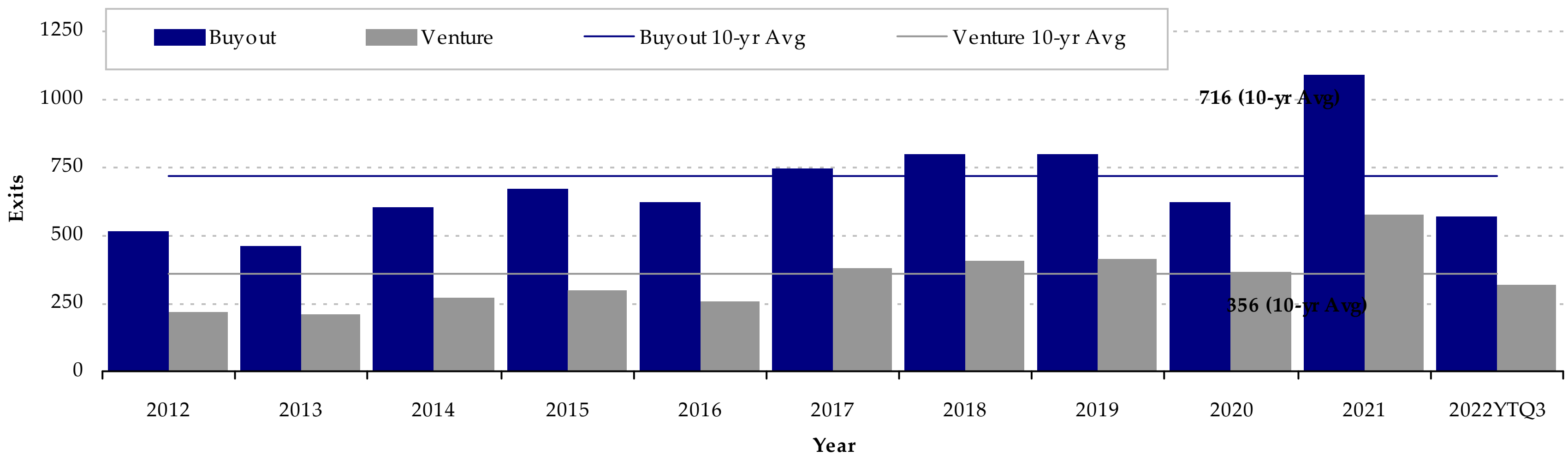
S&P 500 Valuation and Earnings



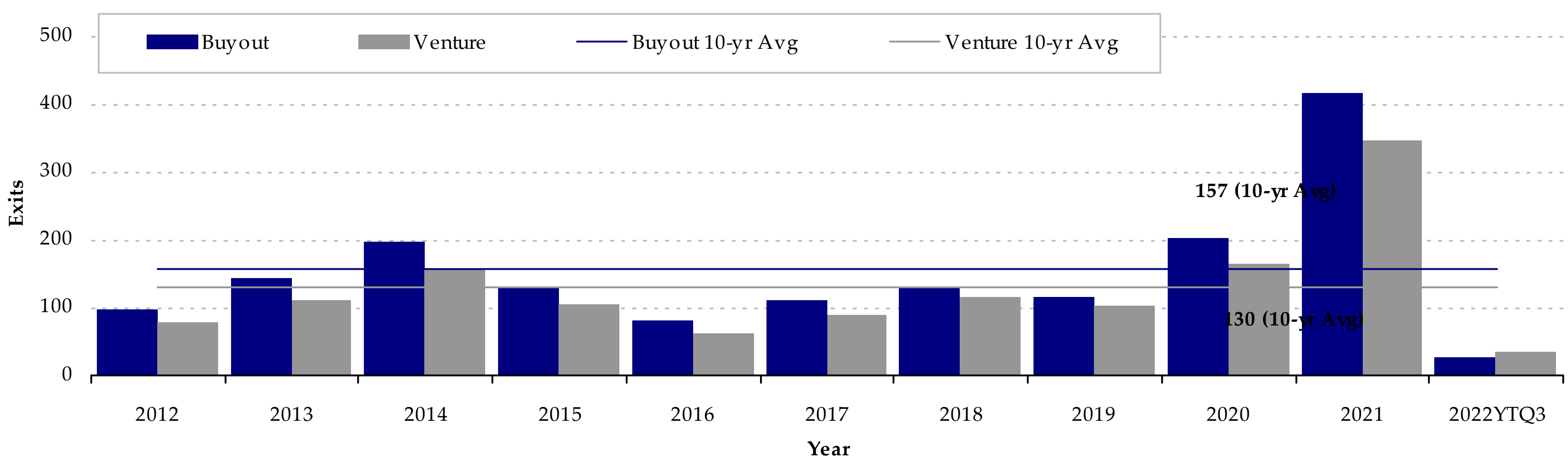
- Source: Pitchbook's Leveraged Commentary.

FRANKLIN PARK

U.S. Mergers and Acquisitions



U.S. Initial Public Offerings



- Source: Pitchbook.
- Data compiled through Q3 2022.

Vintage Returns

Group	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
U.S. All PE Median	16.7%	16.2%	15.2%	20.2%	19.8%	22.4%	26.9%	28.3%	27.9%	23.3%
U.S. All PE Top Quartile	23.0%	21.8%	22.8%	25.8%	27.3%	30.7%	38.2%	39.9%	44.9%	42.2%
U.S. Buyout Median	17.6%	15.6%	16.1%	20.9%	20.0%	22.2%	28.5%	22.8%	26.4%	24.1%
U.S. Buyout Top Quartile	24.2%	23.7%	24.6%	24.4%	29.0%	29.1%	36.3%	34.8%	36.6%	38.7%
U.S. Energy Median	0.7%	-1.4%	6.9%	9.4%	9.0%	10.1%	13.0%	7.7%	21.9%	28.7%
U.S. Energy Top Quartile	6.5%	3.9%	13.4%	12.6%	16.4%	12.3%	18.4%	24.4%	35.4%	37.8%
U.S. Real Assets Median	12.3%	10.3%	10.0%	10.1%	11.4%	11.9%	13.2%	17.9%	15.7%	23.4%
U.S. Real Assets Top Quartile	19.2%	14.7%	15.8%	13.8%	15.3%	16.1%	22.0%	25.1%	32.4%	33.6%
U.S. Real Estate Median	15.3%	11.3%	11.1%	11.1%	11.8%	12.8%	13.3%	18.7%	15.0%	18.5%
U.S. Real Estate Top Quartile	21.2%	15.5%	17.5%	14.8%	15.5%	16.2%	22.8%	26.0%	26.1%	33.2%
U.S. Venture Median	17.3%	17.6%	17.5%	20.9%	21.0%	26.2%	30.9%	33.2%	30.0%	25.5%
U.S. Venture Top Quartile	25.1%	24.4%	24.8%	30.9%	29.2%	34.0%	44.6%	44.3%	49.8%	40.3%

- Source: Cambridge Associates.
- Data compiled through June 30, 2022.

Performance Analysis

Investment	Vintage	Fund Size	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
Buyout									
21st Century Group I *	2000	$80,365,451	25,000,000	27,141,173	0	22,841,928	0	0.8 x	-3.8%
Advent GPE VI-A	2008	$9,000,000,000	40,000,000	40,167,228	0	80,492,730	3,419,014	2.1 x	16.5%
Alpine Investors VIII	2021	$2,436,551,413	30,000,000	9,169,303	20,830,697	0	12,018,269	1.3 x	NMF
Altaris Constellation	2017	$165,000,000	20,000,000	16,282,179	5,543,214	22,724,187	19,085,390	2.6 x	24.8%
Altaris IV	2018	$1,085,000,000	24,000,000	22,676,745	2,989,906	23,955,663	17,372,534	1.8 x	28.9%
Altus Capital II	2010	$200,000,000	20,000,000	19,796,396	3,222,424	24,125,912	10,265,056	1.7 x	13.2%
American Industrial VI	2016	$1,845,000,000	20,000,000	24,161,578	3,803,947	22,698,922	34,985,740	2.4 x	25.2%
American Industrial VII	2019	$3,075,000,000	30,000,000	27,119,105	8,564,528	5,683,633	28,273,147	1.3 x	21.8%
Arlington IV	2016	$700,000,000	23,000,000	24,146,971	1,419,768	15,429,853	38,970,659	2.3 x	25.9%
Arlington V	2019	$1,692,000,000	25,000,000	20,826,775	4,173,225	891,984	30,698,343	1.5 x	41.1%
Arlington VI	2023	$3,500,000,000	30,000,000	0	30,000,000	0	0	N/A	NMF
Boston Ventures VII	2006	$434,507,010	50,000,000	43,016,769	8,258,947	48,914,085	1,488,093	1.2 x	2.9%
BV IX	2017	$750,000,000	30,000,000	28,010,908	7,989,093	22,766,180	35,589,765	2.1 x	33.4%
BV VIII	2012	$486,800,000	30,000,000	27,215,697	3,065,489	42,916,261	21,913,830	2.4 x	47.9%
BV X	2020	$1,122,000,000	30,000,000	17,282,145	18,717,855	7,568,151	16,206,917	1.4 x	46.1%
BV XI	2023	$1,500,000,000	30,000,000	0	30,000,000	0	0	N/A	NMF
Clearlake V	2018	$3,623,125,000	30,000,000	42,352,631	6,076,237	52,705,107	38,612,537	2.2 x	46.4%
Clearlake VI	2020	$7,068,000,000	30,000,000	30,356,218	837,608	2,512,913	42,188,048	1.5 x	34.3%
Clearlake VII	2022	$14,125,000,000	30,000,000	10,344,778	19,655,222	730	10,171,192	1.0 x	NMF
Court Square III	2012	$3,173,449,997	40,000,000	44,414,470	1,807,924	60,582,918	33,544,216	2.1 x	20.6%
Cypress MBP II *	1999	$2,376,060,606	50,000,000	52,304,562	0	50,840,220	0	1.0 x	-0.5%
DLJ MBP III *	2000	$5,304,941,647	200,000,000	215,345,711	0	458,746,671	0	2.1 x	19.4%
Doughty Hanson III *	1997	$2,660,000,000	100,000,000	99,374,207	0	197,482,184	0	2.0 x	13.5%
DW Healthcare III	2012	$268,147,500	40,000,000	37,138,408	2,861,592	71,497,419	4,889,582	2.1 x	18.9%
DW Healthcare IV	2016	$294,274,000	30,000,000	29,750,068	1,778,898	28,157,299	29,379,520	1.9 x	25.0%
DW Healthcare V	2019	$611,000,000	30,000,000	19,520,597	10,479,403	0	21,217,645	1.1 x	5.3%
FP CF Access	2020	$146,408,500	90,000,000	43,137,883	46,969,712	1,015,434	54,684,636	1.3 x	27.4%
FP CF Access II	2022	$150,000,000	60,000,000	6,000,000	54,000,000	0	6,964,483	1.2 x	NMF
FP Intnl 2011	2011	$45,000,000	25,000,000	23,027,778	2,392,132	28,443,636	11,020,556	1.7 x	9.9%
FP Intnl 2012	2012	$70,000,000	25,000,000	17,607,143	7,651,322	16,936,508	7,669,414	1.4 x	7.9%
FP Intnl 2013	2013	$97,000,000	20,000,000	13,917,526	6,255,722	5,837,361	14,689,951	1.5 x	7.3%
FP Intnl 2014	2014	$97,000,000	25,000,000	17,654,639	7,516,235	14,636,834	14,829,341	1.7 x	14.1%
FP Intnl 2015	2015	$113,000,000	25,000,000	19,690,266	5,443,550	6,642,147	24,117,241	1.6 x	12.9%
FP Intnl 2016	2016	$97,000,000	25,000,000	20,025,773	5,133,594	4,573,700	23,015,870	1.4 x	9.9%
FP Intnl 2017	2017	$98,000,000	25,000,000	21,301,020	3,863,741	5,034,539	28,866,809	1.6 x	19.7%
FP Intnl 2018	2018	$65,500,000	25,000,000	22,519,084	2,708,086	2,011,634	25,366,576	1.2 x	10.0%

Investment	Vintage	Fund Size	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
FP Intnl 2019	2019	$70,500,000	30,000,000	17,872,340	12,372,508	1,171,418	21,985,298	1.3 x	21.1%
FP Intnl X	2021	$139,000,000	60,000,000	15,539,569	44,561,224	0	15,110,330	1.0 x	NMF
FP Intnl XI	2022	$124,500,000	30,000,000	481,928	29,535,039	1,176	353,669	0.7 x	NMF
Greenbriar V	2021	$1,682,930,000	30,000,000	19,038,909	12,085,130	1,126,683	24,153,112	1.3 x	NMF
HMTF III *	1996	$2,458,754,795	76,743,018	76,799,039	0	87,834,289	0	1.1 x	1.8%
HMTF IV *	1998	$4,023,532,721	100,000,000	98,010,015	0	67,130,479	0	0.7 x	-6.1%
HMTF V *	2000	$1,552,965,194	207,366,433	205,198,451	0	378,102,491	0	1.8 x	17.6%
JF Lehman III	2011	$575,500,000	39,000,000	44,307,479	5,298,068	52,337,761	20,702,826	1.6 x	11.6%
JF Lehman IV	2016	$833,000,000	30,000,000	29,271,611	728,389	68,072,378	8,619,441	2.6 x	35.5%
JF Lehman V	2020	$1,350,000,000	30,000,000	23,287,829	6,712,171	0	25,696,684	1.1 x	7.9%
Mason Wells III	2010	$525,000,000	30,000,000	28,553,580	1,446,420	85,999,422	29,388	3.0 x	20.6%
Oak Hill I *	1999	$1,600,000,000	50,000,000	50,786,497	0	91,264,962	0	1.8 x	10.6%
One Rock II	2017	$964,000,000	30,000,000	26,891,146	6,664,075	3,906,746	48,677,228	2.0 x	21.1%
Revelstoke III	2021	$1,500,000,000	30,000,000	12,449,966	17,550,034	36,193	13,732,426	1.1 x	NMF
Riverside IV	2009	$406,091,370	40,000,000	31,433,665	0	74,584,420	225,110	2.4 x	21.3%
Riverside V	2013	$531,833,200	35,000,000	37,188,238	1,789,148	38,930,161	25,543,316	1.7 x	12.1%
Riverside VI	2019	$327,916,667	30,000,000	19,546,354	10,453,646	184,674	25,304,821	1.3 x	14.4%
Second Cinven *	1998	£904,547,000	65,281,010	65,281,010	0	104,700,661	0	1.6 x	9.3%
Siris III	2015	$1,810,000,000	25,000,000	31,322,205	3,747,225	24,515,293	20,291,045	1.4 x	12.8%
Siris IV	2019	$3,452,454,000	30,000,000	24,580,184	7,582,081	3,540,122	33,830,952	1.5 x	20.8%
SK Capital V	2018	$2,013,000,000	30,000,000	29,085,464	4,666,958	3,992,629	29,362,804	1.1 x	8.0%
SK Capital VI	2023	$2,750,000,000	30,000,000	0	30,000,000	0	0	N/A	NMF
Thoma Bravo Discover	2016	$1,074,000,000	10,000,000	11,350,409	1,767,370	29,239,213	5,622,182	3.1 x	36.5%
Thoma Bravo Discover II	2018	$2,438,485,000	17,000,000	17,689,209	5,034,116	8,731,672	21,946,955	1.7 x	26.9%
Thoma Bravo Discover III	2021	$3,929,323,000	20,000,000	18,488,934	1,511,066	0	19,452,460	1.1 x	NMF
Thoma Bravo Discover IV	2022	$6,100,000,000	15,000,000	0	15,000,000	0	-216,778	N/A	NMF
Thoma Bravo Explore I	2020	$1,127,120,000	20,000,000	13,456,542	7,619,729	1,076,271	16,484,054	1.3 x	28.8%
Thoma Bravo Explore II	2023	$1,800,000,000	15,000,000	0	15,000,000	0	0	N/A	NMF
Thoma Bravo XI	2014	$3,662,000,000	20,000,000	20,785,558	2,135,646	43,817,416	22,525,002	3.2 x	26.6%
Thoma Bravo XII	2016	$7,603,860,000	30,000,000	32,733,395	7,380,854	25,770,611	37,934,084	1.9 x	16.6%
Thoma Bravo XIII	2019	$12,594,745,000	30,000,000	36,599,355	2,495,077	18,056,239	41,980,170	1.6 x	32.1%
Thoma Bravo XIV	2021	$17,896,818,000	20,000,000	18,828,847	1,171,153	5	16,543,119	0.9 x	NMF
Thoma Bravo XV	2022	$24,000,000,000	15,000,000	4,588,822	10,411,178	316	4,529,676	1.0 x	NMF
Vista Equity III	2007	$1,287,129,725	50,000,000	54,380,151	3,850,531	127,515,699	3,693,212	2.4 x	28.5%
Vista Foundation II	2013	$1,145,000,000	15,000,000	16,044,617	7,090,019	24,489,180	8,550,853	2.1 x	15.6%
Vista Foundation III	2016	$2,950,561,226	30,000,000	33,782,635	7,657,998	32,375,700	33,209,832	1.9 x	25.4%
Wellspring V	2011	$1,194,387,756	40,000,000	46,242,972	14,022,181	65,071,883	12,157,882	1.7 x	16.1%
Wicks IV	2011	$414,000,000	40,000,000	42,495,509	4,312,167	88,005,325	7,991,729	2.3 x	21.4%

Investment Performance by Strategy

Investment	Vintage	Fund Size	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
Total Buyout			**2,827,390,461**	**2,387,188,168**	**635,661,272**	**2,900,248,230**	**1,227,537,256**	**1.7 x**	**11.8%**
Distressed Debt									
Castlelake II	2011	$996,762,000	35,000,000	32,656,036	2,625,461	32,676,840	11,515,381	1.4 x	5.4%
Castlelake III	2014	$1,421,000,000	25,000,000	23,149,741	1,864,884	19,711,565	13,254,939	1.4 x	6.4%
Tennenbaum VI	2010	$530,000,000	40,000,000	38,075,687	32,052,830	53,335,140	827,503	1.4 x	7.3%
Total Distressed Debt			**100,000,000**	**93,881,464**	**36,543,175**	**105,723,545**	**25,597,823**	**1.4 x**	**6.4%**
Growth Equity									
LLR III	2008	$803,000,000	50,000,000	48,504,590	4,357,033	108,614,152	1,787,105	2.3 x	16.6%
LLR VI	2021	$1,800,000,000	30,000,000	16,200,000	13,800,000	151,223	15,938,131	1.0 x	NMF
TA XI	2010	$4,000,100,000	40,000,000	39,400,000	600,000	136,688,541	13,996,446	3.8 x	27.0%
Total Growth Equity			**120,000,000**	**104,104,590**	**18,757,033**	**245,453,916**	**31,721,682**	**2.7 x**	**20.9%**
Hard Assets									
EnCap IX	2013	$5,154,639,175	25,000,000	28,785,857	972,514	29,412,584	10,808,344	1.4 x	9.9%
EnCap VIII	2010	$3,608,247,422	47,500,000	54,117,730	0	34,195,313	21,346,441	1.0 x	0.6%
EnCap X	2015	$6,701,030,928	30,000,000	30,536,761	1,571,794	24,976,206	30,146,794	1.8 x	15.7%
EnCap XI	2017	$6,961,190,722	35,000,000	26,654,946	9,261,288	4,153,368	34,205,751	1.4 x	18.8%
GTLA Holdings	2018	$20,000,000	20,000,000	20,000,000	0	0	70,000,000	3.5 x	35.9%
Highland Contingent Note	2018	$152,244,727	152,244,727	152,244,727	0	15,000,000	163,145,020	1.2 x	7.1%
Highland Equity	2016	$66,000,000	66,000,000	81,870,000	0	16,674,525	47,346,033	0.8 x	-6.3%
Lime Rock Resources III	2014	$762,000,000	25,000,000	25,700,135	196,485	9,045,084	24,714,595	1.3 x	4.1%
NGP IX	2007	$4,000,000,000	50,000,000	54,229,094	201,825	77,618,619	172,701	1.4 x	10.8%
NGP X	2012	$3,586,000,000	35,000,000	36,445,423	248,307	31,152,552	5,691,277	1.0 x	0.3%
NGP XI	2014	$5,325,000,000	30,000,000	30,597,387	1,258,097	21,131,305	26,048,174	1.5 x	10.8%
NGP XII	2017	$4,304,081,633	30,000,000	21,225,593	8,774,407	7,661,012	25,798,896	1.6 x	16.0%
Total Hard Assets			**545,744,727**	**562,407,654**	**22,484,717**	**271,020,567**	**459,424,027**	**1.3 x**	**7.6%**

Investment Performance by Strategy

Investment	Vintage	Fund Size	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
Infrastructure									
Big River - Equity	2014	$151,090,000	151,090,000	151,090,000	0	296,427,836	1,677,862	2.0 x	15.0%
Big River - Funding *	2017	$3,750,000	3,750,000	3,750,000	0	3,812,795	0	1.0 x	4.3%
Big River - Holdings Note *	2017	$12,000,000	12,000,000	12,000,000	0	13,343,726	0	1.1 x	11.0%
Big River - Holdings Note 2023 *	2018	$12,000,000	12,000,000	12,000,000	0	14,582,469	0	1.2 x	5.6%
Big River - Holdings Note 2023-2 *	2018	$5,150,000	5,150,000	5,150,000	0	6,245,733	0	1.2 x	6.5%
Big River - Preferred Equity *	2017	$41,980,449	41,980,449	41,980,449	0	51,702,368	0	1.2 x	12.5%
Big River - Sr Secured Debt *	2015	$26,910,000	26,910,000	26,966,221	0	35,699,565	0	1.3 x	14.7%
Blue Oak Arkansas *	2014	$18,000,000	18,000,000	19,740,000	0	5,385,136	0	0.3 x	-34.8%
Total Infrastructure			**270,880,449**	**272,676,670**	**0**	**427,199,627**	**1,677,862**	**1.6 x**	**12.3%**
Mezzanine									
Audax Mezzanine III	2011	$1,002,250,000	25,000,000	25,892,496	6,675,000	33,085,160	1,415,846	1.3 x	9.9%
Big River - Mezzanine *	2014	$5,000,000	5,000,000	5,003,686	0	8,225,290	0	1.6 x	17.3%
Blackstone Mezzanine I *	1999	$1,141,000,000	100,000,000	73,353,517	0	96,729,026	0	1.3 x	10.2%
DLJ Investment II *	1999	$1,600,000,000	80,000,000	43,611,022	0	60,468,989	0	1.4 x	10.4%
Greyrock IV	2017	$275,000,000	30,000,000	28,187,942	2,948,044	22,195,733	15,302,721	1.3 x	10.4%
Greyrock V	2020	$280,000,000	35,000,000	23,476,910	11,871,934	348,844	24,621,827	1.1 x	8.1%
Insight Mezzanine I	2009	$94,678,011	10,000,000	9,971,470	479,507	11,860,178	1,829,265	1.4 x	6.5%
Total Mezzanine			**285,000,000**	**209,497,043**	**21,974,485**	**232,913,221**	**43,169,659**	**1.3 x**	**10.2%**
Multi-Strategy									
ATRS-FP PE	2012	$265,516,382	263,823,718	402,733,383	206,512,177	367,914,773	374,534,901	1.8 x	21.0%
CSFB-ATRS 2005-1 Series	2005	$252,525,253	250,000,000	277,750,644	10,784,361	410,593,968	24,829,475	1.6 x	7.7%
CSFB-ATRS 2006-1 Series	2006	$406,331,658	404,300,000	410,912,009	53,765,152	620,728,405	70,939,244	1.7 x	10.2%
DH Tech I *	2000	$236,700,000	50,000,000	61,471,034	0	21,987,447	0	0.4 x	-16.5%
Diamond State *	1999	$46,000,000	2,000,000	2,000,000	0	3,097,200	0	1.5 x	5.5%
Diamond State II	2007	$25,361,350	4,000,000	3,517,000	483,000	7,017,000	2,631,926	2.7 x	10.7%
Total Multi-Strategy			**974,123,718**	**1,158,384,070**	**271,544,690**	**1,431,338,793**	**472,935,546**	**1.6 x**	**9.2%**
Special Assets									
WNG II	2019	$438,350,000	30,000,000	14,251,786	16,801,734	1,178,625	11,465,513	0.9 x	-5.9%
Total Special Assets			**30,000,000**	**14,251,786**	**16,801,734**	**1,178,625**	**11,465,513**	**0.9 x**	**-5.9%**

Investment Performance by Strategy

FRANKLIN PARK

Investment	Vintage	Fund Size	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
Structured Capital									
Bison V	2017	$384,132,653	35,000,000	35,060,033	6,980,570	26,497,855	26,210,038	1.5 x	17.3%
Bison VI	2022	$500,000,000	30,000,000	0	30,000,000	0	-198,021	N/A	NMF
Levine Leichtman V	2013	$1,644,081,633	20,000,000	27,949,309	2,968,199	43,976,483	9,504,035	1.9 x	17.4%
PineBridge Structured III	2016	$600,000,000	30,000,000	27,845,159	9,589,976	16,251,862	8,783,567	0.9 x	-4.0%
Total Structured Capital			**115,000,000**	**90,854,500**	**49,538,745**	**86,726,200**	**44,299,619**	**1.4 x**	**12.8%**
Turnaround									
Atlas Capital II	2014	$900,000,000	15,000,000	21,366,379	4,122,087	18,353,726	17,726,170	1.7 x	19.7%
Insight Equity II	2009	$429,735,291	30,000,000	31,028,312	884,343	42,854,623	8,953,546	1.7 x	9.2%
KPS III Supplemental	2009	$816,326,531	40,000,000	37,780,982	16,117,982	80,415,672	76,427	2.1 x	22.8%
KPS IV	2014	$3,571,428,571	25,000,000	21,935,840	4,015,029	22,769,231	21,477,764	2.0 x	25.0%
KPS Mid-Market I	2019	$1,020,408,163	20,000,000	10,839,381	9,216,667	1,452,322	13,658,817	1.4 x	23.9%
KPS V	2020	$6,122,448,980	30,000,000	16,904,681	12,835,242	837,593	22,414,306	1.4 x	29.1%
Riverside Value Fund I	2021	$350,000,000	30,000,000	0	19,720,641	0	17,467,352	N/A	NMF
Sycamore Partners II	2014	$2,700,000,000	25,000,000	22,289,621	3,837,121	13,705,544	12,197,484	1.2 x	4.2%
Sycamore Partners III	2018	$4,870,000,000	25,000,000	18,118,003	9,141,764	2,259,767	20,583,445	1.3 x	15.3%
Total Turnaround			**240,000,000**	**180,263,199**	**79,890,876**	**182,648,479**	**134,555,311**	**1.8 x**	**17.2%**
Venture Capital									
FP Venture 2008	2008	$102,000,000	30,000,000	30,000,000	225,977	71,777,548	23,218,523	3.2 x	18.2%
FP Venture 2009	2009	$58,000,000	25,000,000	24,543,104	735,355	53,336,514	10,811,485	2.6 x	17.3%
FP Venture 2010	2010	$80,000,000	25,000,000	16,031,250	1,653,961	23,723,232	30,394,375	3.4 x	17.7%
FP Venture 2011	2011	$70,000,000	25,000,000	24,678,571	581,026	123,127,394	47,377,768	6.9 x	35.5%
FP Venture 2012	2012	$80,000,000	25,000,000	22,375,000	2,825,077	39,192,607	40,980,131	3.6 x	22.8%
FP Venture 2013	2013	$87,000,000	20,000,000	18,321,839	1,811,207	24,339,191	44,143,211	3.7 x	26.9%
FP Venture 2014	2014	$93,000,000	25,000,000	23,844,086	1,305,274	23,127,452	60,771,094	3.5 x	24.4%
FP Venture 2015	2015	$113,000,000	25,000,000	23,783,186	1,355,082	8,532,478	41,477,359	2.1 x	17.3%
FP Venture 2016	2016	$82,000,000	25,000,000	22,317,073	2,848,499	7,591,997	48,552,760	2.5 x	29.1%
FP Venture 2017	2017	$113,000,000	25,000,000	16,814,159	8,291,482	3,147,156	31,493,811	2.1 x	30.8%
FP Venture 2018	2018	$80,500,000	25,000,000	22,049,689	3,108,779	2,968,238	39,432,958	1.9 x	33.7%
FP Venture 2019	2019	$80,500,000	30,000,000	17,888,199	12,255,699	661,059	29,323,651	1.7 x	30.9%
FP Venture Opp	2022	$150,000,000	30,000,000	12,375,000	17,653,701	0	12,212,032	1.0 x	NMF
FP Venture XIII	2020	$162,000,000	60,000,000	30,586,944	29,606,633	119,991	35,905,403	1.2 x	16.2%
FP Venture XIV	2022	$250,000,000	60,000,000	3,911,477	56,138,452	10,891	3,475,458	0.9 x	NMF
Total Venture Capital			**455,000,000**	**309,519,577**	**140,396,204**	**381,655,748**	**499,570,019**	**2.8 x**	**23.0%**

FRANKLIN PARK

Investment	Vintage	Fund Size	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
Total Portfolio			**5,963,139,355**	**5,383,028,721**	**1,293,592,932**	**6,266,106,951**	**2,951,954,316**	**1.7 x**	**11.7%**

- Remaining Value is defined as the investor's value as reported by the fund's manager.
- TVPI is the ratio of Distributed Capital plus Remaining Value to Contributed Capital.
- Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
- An asterisk indicates an investment that is fully liquidated, if applicable.
- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.
- Returns calculated for funds in the early years of their lives are particularly not meaningful given the J-curve effect. During these early years, due to illiquidity, stagnant valuations, fees and expenses, fund performance tends to be negative (the bottom of the "J").

Investment Performance by Vintage Year

Investment	Strategy	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
1996								
HMTF III *	Buyout	76,743,018	76,799,039	0	87,834,289	0	1.1 x	1.8%
Total 1996		**76,743,018**	**76,799,039**	**0**	**87,834,289**	**0**	**1.1 x**	**1.8%**
1997								
Doughty Hanson III *	Buyout	100,000,000	99,374,207	0	197,482,184	0	2.0 x	13.5%
Total 1997		**100,000,000**	**99,374,207**	**0**	**197,482,184**	**0**	**2.0 x**	**13.5%**
1998								
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%
Total 1998		**165,281,010**	**163,291,025**	**0**	**171,831,140**	**0**	**1.1 x**	**0.9%**
1999								
Blackstone Mezzanine I *	Mezzanine	100,000,000	73,353,517	0	96,729,026	0	1.3 x	10.2%
Cypress MBP II *	Buyout	50,000,000	52,304,562	0	50,840,220	0	1.0 x	-0.5%
Diamond State *	Multi-Strategy	2,000,000	2,000,000	0	3,097,200	0	1.5 x	5.5%
DLJ Investment II *	Mezzanine	80,000,000	43,611,022	0	60,468,989	0	1.4 x	10.4%
Oak Hill I *	Buyout	50,000,000	50,786,497	0	91,264,962	0	1.8 x	10.6%
Total 1999		**282,000,000**	**222,055,598**	**0**	**302,400,397**	**0**	**1.4 x**	**7.7%**
2000								
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%
Total 2000		**482,366,433**	**509,156,369**	**0**	**881,678,537**	**0**	**1.7 x**	**14.8%**
2005								
CSFB-ATRS 2005-1 Series	Multi-Strategy	250,000,000	277,750,644	10,784,361	410,593,968	24,829,475	1.6 x	7.7%
Total 2005		**250,000,000**	**277,750,644**	**10,784,361**	**410,593,968**	**24,829,475**	**1.6 x**	**7.7%**

Investment Performance by Vintage Year

FRANKLIN PARK

Investment	Strategy	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
2006								
Boston Ventures VII	Buyout	50,000,000	43,016,769	8,258,947	48,914,085	1,488,093	1.2 x	2.9%
CSFB-ATRS 2006-1 Series	Multi-Strategy	404,300,000	410,912,009	53,765,152	620,728,405	70,939,244	1.7 x	10.2%
Total 2006		**454,300,000**	**453,928,778**	**62,024,099**	**669,642,490**	**72,427,337**	**1.6 x**	**9.5%**
2007								
Diamond State II	Multi-Strategy	4,000,000	3,517,000	483,000	7,017,000	2,631,926	2.7 x	10.7%
NGP IX	Hard Assets	50,000,000	54,229,094	201,825	77,618,619	172,701	1.4 x	10.8%
Vista Equity III	Buyout	50,000,000	54,380,151	3,850,531	127,515,699	3,693,212	2.4 x	28.5%
Total 2007		**104,000,000**	**112,126,245**	**4,535,356**	**212,151,318**	**6,497,839**	**2.0 x**	**20.3%**
2008								
Advent GPE VI-A	Buyout	40,000,000	40,167,228	0	80,492,730	3,419,014	2.1 x	16.5%
FP Venture 2008	Venture Capital	30,000,000	30,000,000	225,977	71,777,548	23,218,523	3.2 x	18.2%
LLR III	Growth Equity	50,000,000	48,504,590	4,357,033	108,614,152	1,787,105	2.3 x	16.6%
Total 2008		**120,000,000**	**118,671,818**	**4,583,010**	**260,884,430**	**28,424,642**	**2.4 x**	**17.0%**
2009								
FP Venture 2009	Venture Capital	25,000,000	24,543,104	735,355	53,336,514	10,811,485	2.6 x	17.3%
Insight Equity II	Turnaround	30,000,000	31,028,312	884,343	42,854,623	8,953,546	1.7 x	9.2%
Insight Mezzanine I	Mezzanine	10,000,000	9,971,470	479,507	11,860,178	1,829,265	1.4 x	6.5%
KPS III Supplemental	Turnaround	40,000,000	37,780,982	16,117,982	80,415,672	76,427	2.1 x	22.8%
Riverside IV	Buyout	40,000,000	31,433,665	0	74,584,420	225,110	2.4 x	21.3%
Total 2009		**145,000,000**	**134,757,533**	**18,217,187**	**263,051,407**	**21,895,833**	**2.1 x**	**17.1%**
2010								
Altus Capital II	Buyout	20,000,000	19,796,396	3,222,424	24,125,912	10,265,056	1.7 x	13.2%
EnCap VIII	Hard Assets	47,500,000	54,117,730	0	34,195,313	21,346,441	1.0 x	0.6%
FP Venture 2010	Venture Capital	25,000,000	16,031,250	1,653,961	23,723,232	30,394,375	3.4 x	17.7%
Mason Wells III	Buyout	30,000,000	28,553,580	1,446,420	85,999,422	29,388	3.0 x	20.6%
TA XI	Growth Equity	40,000,000	39,400,000	600,000	136,688,541	13,996,446	3.8 x	27.0%
Tennenbaum VI	Distressed Debt	40,000,000	38,075,687	32,052,830	53,335,140	827,503	1.4 x	7.3%
Total 2010		**202,500,000**	**195,974,643**	**38,975,635**	**358,067,560**	**76,859,209**	**2.2 x**	**15.9%**

Investment Performance by Vintage Year

Investment	Strategy	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
2011								
Audax Mezzanine III	Mezzanine	25,000,000	25,892,496	6,675,000	33,085,160	1,415,846	1.3 x	9.9%
Castlelake II	Distressed Debt	35,000,000	32,656,036	2,625,461	32,676,840	11,515,381	1.4 x	5.4%
FP Intnl 2011	Buyout	25,000,000	23,027,778	2,392,132	28,443,636	11,020,556	1.7 x	9.9%
FP Venture 2011	Venture Capital	25,000,000	24,678,571	581,026	123,127,394	47,377,768	6.9 x	35.5%
JF Lehman III	Buyout	39,000,000	44,307,479	5,298,068	52,337,761	20,702,826	1.6 x	11.6%
Wellspring V	Buyout	40,000,000	46,242,972	14,022,181	65,071,883	12,157,882	1.7 x	16.1%
Wicks IV	Buyout	40,000,000	42,495,509	4,312,167	88,005,325	7,991,729	2.3 x	21.4%
Total 2011		**229,000,000**	**239,300,840**	**35,906,035**	**422,747,999**	**112,181,988**	**2.2 x**	**17.5%**
2012								
ATRS-FP PE	Multi-Strategy	263,823,718	402,733,383	206,512,177	367,914,773	374,534,901	1.8 x	21.0%
BV VIII	Buyout	30,000,000	27,215,697	3,065,489	42,916,261	21,913,830	2.4 x	47.9%
Court Square III	Buyout	40,000,000	44,414,470	1,807,924	60,582,918	33,544,216	2.1 x	20.6%
DW Healthcare III	Buyout	40,000,000	37,138,408	2,861,592	71,497,419	4,889,582	2.1 x	18.9%
FP Intnl 2012	Buyout	25,000,000	17,607,143	7,651,322	16,936,508	7,669,414	1.4 x	7.9%
FP Venture 2012	Venture Capital	25,000,000	22,375,000	2,825,077	39,192,607	40,980,131	3.6 x	22.8%
NGP X	Hard Assets	35,000,000	36,445,423	248,307	31,152,552	5,691,277	1.0 x	0.3%
Total 2012		**458,823,718**	**587,929,524**	**224,971,888**	**630,193,038**	**489,223,351**	**1.9 x**	**19.6%**
2013								
EnCap IX	Hard Assets	25,000,000	28,785,857	972,514	29,412,584	10,808,344	1.4 x	9.9%
FP Intnl 2013	Buyout	20,000,000	13,917,526	6,255,722	5,837,361	14,689,951	1.5 x	7.3%
FP Venture 2013	Venture Capital	20,000,000	18,321,839	1,811,207	24,339,191	44,143,211	3.7 x	26.9%
Levine Leichtman V	Structured Capital	20,000,000	27,949,309	2,968,199	43,976,483	9,504,035	1.9 x	17.4%
Riverside V	Buyout	35,000,000	37,188,238	1,789,148	38,930,161	25,543,316	1.7 x	12.1%
Vista Foundation II	Buyout	15,000,000	16,044,617	7,090,019	24,489,180	8,550,853	2.1 x	15.6%
Total 2013		**135,000,000**	**142,207,386**	**20,886,809**	**166,984,960**	**113,239,710**	**2.0 x**	**15.5%**

Investment Performance by Vintage Year

FRANKLIN PARK

Investment	Strategy	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
2014								
Atlas Capital II	Turnaround	15,000,000	21,366,379	4,122,087	18,353,726	17,726,170	1.7 x	19.7%
Big River - Equity	Infrastructure	151,090,000	151,090,000	0	296,427,836	1,677,862	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	19,711,565	13,254,939	1.4 x	6.4%
FP Intnl 2014	Buyout	25,000,000	17,654,639	7,516,235	14,636,834	14,829,341	1.7 x	14.1%
FP Venture 2014	Venture Capital	25,000,000	23,844,086	1,305,274	23,127,452	60,771,094	3.5 x	24.4%
KPS IV	Turnaround	25,000,000	21,935,840	4,015,029	22,769,231	21,477,764	2.0 x	25.0%
Lime Rock Resources III	Hard Assets	25,000,000	25,700,135	196,485	9,045,084	24,714,595	1.3 x	4.1%
NGP XI	Hard Assets	30,000,000	30,597,387	1,258,097	21,131,305	26,048,174	1.5 x	10.8%
Sycamore Partners II	Turnaround	25,000,000	22,289,621	3,837,121	13,705,544	12,197,484	1.2 x	4.2%
Thoma Bravo XI	Buyout	20,000,000	20,785,558	2,135,646	43,817,416	22,525,002	3.2 x	26.6%
Total 2014		**389,090,000**	**383,157,072**	**26,250,858**	**496,336,419**	**215,222,425**	**1.9 x**	**13.8%**
2015								
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	30,536,761	1,571,794	24,976,206	30,146,794	1.8 x	15.7%
FP Intnl 2015	Buyout	25,000,000	19,690,266	5,443,550	6,642,147	24,117,241	1.6 x	12.9%
FP Venture 2015	Venture Capital	25,000,000	23,783,186	1,355,082	8,532,478	41,477,359	2.1 x	17.3%
Siris III	Buyout	25,000,000	31,322,205	3,747,225	24,515,293	20,291,045	1.4 x	12.8%
Total 2015		**131,910,000**	**132,298,640**	**12,117,651**	**100,365,689**	**116,032,439**	**1.6 x**	**15.0%**
2016								
American Industrial VI	Buyout	20,000,000	24,161,578	3,803,947	22,698,922	34,985,740	2.4 x	25.2%
Arlington IV	Buyout	23,000,000	24,146,971	1,419,768	15,429,853	38,970,659	2.3 x	25.9%
DW Healthcare IV	Buyout	30,000,000	29,750,068	1,778,898	28,157,299	29,379,520	1.9 x	25.0%
FP Intnl 2016	Buyout	25,000,000	20,025,773	5,133,594	4,573,700	23,015,870	1.4 x	9.9%
FP Venture 2016	Venture Capital	25,000,000	22,317,073	2,848,499	7,591,997	48,552,760	2.5 x	29.1%
Highland Equity	Hard Assets	66,000,000	81,870,000	0	16,674,525	47,346,033	0.8 x	-6.3%
JF Lehman IV	Buyout	30,000,000	29,271,611	728,389	68,072,378	8,619,441	2.6 x	35.5%
PineBridge Structured III	Structured Capital	30,000,000	27,845,159	9,589,976	16,251,862	8,783,567	0.9 x	-4.0%
Thoma Bravo Discover	Buyout	10,000,000	11,350,409	1,767,370	29,239,213	5,622,182	3.1 x	36.5%
Thoma Bravo XII	Buyout	30,000,000	32,733,395	7,380,854	25,770,611	37,934,084	1.9 x	16.6%
Vista Foundation III	Buyout	30,000,000	33,782,635	7,657,998	32,375,700	33,209,832	1.9 x	25.4%
Total 2016		**319,000,000**	**337,254,672**	**42,109,293**	**266,836,060**	**316,419,689**	**1.7 x**	**17.0%**

Investment	Strategy	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
2017								
Altaris Constellation	Buyout	20,000,000	16,282,179	5,543,214	22,724,187	19,085,390	2.6 x	24.8%
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	35,060,033	6,980,570	26,497,855	26,210,038	1.5 x	17.3%
BV IX	Buyout	30,000,000	28,010,908	7,989,093	22,766,180	35,589,765	2.1 x	33.4%
EnCap XI	Hard Assets	35,000,000	26,654,946	9,261,288	4,153,368	34,205,751	1.4 x	18.8%
FP Intnl 2017	Buyout	25,000,000	21,301,020	3,863,741	5,034,539	28,866,809	1.6 x	19.7%
FP Venture 2017	Venture Capital	25,000,000	16,814,159	8,291,482	3,147,156	31,493,811	2.1 x	30.8%
Greyrock IV	Mezzanine	30,000,000	28,187,942	2,948,044	22,195,733	15,302,721	1.3 x	10.4%
NGP XII	Hard Assets	30,000,000	21,225,593	8,774,407	7,661,012	25,798,896	1.6 x	16.0%
One Rock II	Buyout	30,000,000	26,891,146	6,664,075	3,906,746	48,677,228	2.0 x	21.1%
Total 2017		**317,730,449**	**278,158,375**	**60,315,914**	**186,945,666**	**265,230,409**	**1.6 x**	**19.7%**
2018								
Altaris IV	Buyout	24,000,000	22,676,745	2,989,906	23,955,663	17,372,534	1.8 x	28.9%
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	42,352,631	6,076,237	52,705,107	38,612,537	2.2 x	46.4%
FP Intnl 2018	Buyout	25,000,000	22,519,084	2,708,086	2,011,634	25,366,576	1.2 x	10.0%
FP Venture 2018	Venture Capital	25,000,000	22,049,689	3,108,779	2,968,238	39,432,958	1.9 x	33.7%
GTLA Holdings	Hard Assets	20,000,000	20,000,000	0	0	70,000,000	3.5 x	35.9%
Highland Contingent Note	Hard Assets	152,244,727	152,244,727	0	15,000,000	163,145,020	1.2 x	7.1%
SK Capital V	Buyout	30,000,000	29,085,464	4,666,958	3,992,629	29,362,804	1.1 x	8.0%
Sycamore Partners III	Turnaround	25,000,000	18,118,003	9,141,764	2,259,767	20,583,445	1.3 x	15.3%
Thoma Bravo Discover II	Buyout	17,000,000	17,689,209	5,034,116	8,731,672	21,946,955	1.7 x	26.9%
Total 2018		**365,394,727**	**363,885,552**	**33,725,846**	**132,452,911**	**425,822,829**	**1.5 x**	**20.3%**

Investment Performance by Vintage Year

FRANKLIN PARK

Investment	Strategy	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
2019								
American Industrial VII	Buyout	30,000,000	27,119,105	8,564,528	5,683,633	28,273,147	1.3 x	21.8%
Arlington V	Buyout	25,000,000	20,826,775	4,173,225	891,984	30,698,343	1.5 x	41.1%
DW Healthcare V	Buyout	30,000,000	19,520,597	10,479,403	0	21,217,645	1.1 x	5.3%
FP Intnl 2019	Buyout	30,000,000	17,872,340	12,372,508	1,171,418	21,985,298	1.3 x	21.1%
FP Venture 2019	Venture Capital	30,000,000	17,888,199	12,255,699	661,059	29,323,651	1.7 x	30.9%
KPS Mid-Market I	Turnaround	20,000,000	10,839,381	9,216,667	1,452,322	13,658,817	1.4 x	23.9%
Riverside VI	Buyout	30,000,000	19,546,354	10,453,646	184,674	25,304,821	1.3 x	14.4%
Siris IV	Buyout	30,000,000	24,580,184	7,582,081	3,540,122	33,830,952	1.5 x	20.8%
Thoma Bravo XIII	Buyout	30,000,000	36,599,355	2,495,077	18,056,239	41,980,170	1.6 x	32.1%
WNG II	Special Assets	30,000,000	14,251,786	16,801,734	1,178,625	11,465,513	0.9 x	-5.9%
Total 2019		**285,000,000**	**209,044,075**	**94,394,568**	**32,820,076**	**257,738,357**	**1.4 x**	**21.6%**
2020								
BV X	Buyout	30,000,000	17,282,145	18,717,855	7,568,151	16,206,917	1.4 x	46.1%
Clearlake VI	Buyout	30,000,000	30,356,218	837,608	2,512,913	42,188,048	1.5 x	34.3%
FP CF Access	Buyout	90,000,000	43,137,883	46,969,712	1,015,434	54,684,636	1.3 x	27.4%
FP Venture XIII	Venture Capital	60,000,000	30,586,944	29,606,633	119,991	35,905,403	1.2 x	16.2%
Greyrock V	Mezzanine	35,000,000	23,476,910	11,871,934	348,844	24,621,827	1.1 x	8.1%
JF Lehman V	Buyout	30,000,000	23,287,829	6,712,171	0	25,696,684	1.1 x	7.9%
KPS V	Turnaround	30,000,000	16,904,681	12,835,242	837,593	22,414,306	1.4 x	29.1%
Thoma Bravo Explore I	Buyout	20,000,000	13,456,542	7,619,729	1,076,271	16,484,054	1.3 x	28.8%
Total 2020		**325,000,000**	**198,489,152**	**135,170,884**	**13,479,197**	**238,201,875**	**1.3 x**	**24.2%**
2021								
Alpine Investors VIII	Buyout	30,000,000	9,169,303	20,830,697	0	12,018,269	1.3 x	NMF
FP Intnl X	Buyout	60,000,000	15,539,569	44,561,224	0	15,110,330	1.0 x	NMF
Greenbriar V	Buyout	30,000,000	19,038,909	12,085,130	1,126,683	24,153,112	1.3 x	NMF
LLR VI	Growth Equity	30,000,000	16,200,000	13,800,000	151,223	15,938,131	1.0 x	NMF
Revelstoke III	Buyout	30,000,000	12,449,966	17,550,034	36,193	13,732,426	1.1 x	NMF
Riverside Value Fund I	Turnaround	30,000,000	0	19,720,641	0	17,467,352	N/A	NMF
Thoma Bravo Discover III	Buyout	20,000,000	18,488,934	1,511,066	0	19,452,460	1.1 x	NMF
Thoma Bravo XIV	Buyout	20,000,000	18,828,847	1,171,153	5	16,543,119	0.9 x	NMF
Total 2021		**250,000,000**	**109,715,528**	**131,229,945**	**1,314,104**	**134,415,198**	**1.2 x**	**NMF**

Investment	Strategy	Committed Capital ($)	Contributed Capital ($)	Unfunded Commitment ($)	Distributed Capital ($)	Remaining Value ($)	TVPI	Net IRR
2022								
Bison VI	Structured Capital	30,000,000	0	30,000,000	0	-198,021	N/A	NMF
Clearlake VII	Buyout	30,000,000	10,344,778	19,655,222	730	10,171,192	1.0 x	NMF
FP CF Access II	Buyout	60,000,000	6,000,000	54,000,000	0	6,964,483	1.2 x	NMF
FP Intnl XI	Buyout	30,000,000	481,928	29,535,039	1,176	353,669	0.7 x	NMF
FP Venture Opp	Venture Capital	30,000,000	12,375,000	17,653,701	0	12,212,032	1.0 x	NMF
FP Venture XIV	Venture Capital	60,000,000	3,911,477	56,138,452	10,891	3,475,458	0.9 x	NMF
Thoma Bravo Discover IV	Buyout	15,000,000	0	15,000,000	0	-216,778	N/A	NMF
Thoma Bravo XV	Buyout	15,000,000	4,588,822	10,411,178	316	4,529,676	1.0 x	NMF
Total 2022		**270,000,000**	**37,702,005**	**232,393,592**	**13,113**	**37,291,711**	**1.0 x**	**NMF**
2023								
Arlington VI	Buyout	30,000,000	0	30,000,000	0	0	N/A	NMF
BV XI	Buyout	30,000,000	0	30,000,000	0	0	N/A	NMF
SK Capital VI	Buyout	30,000,000	0	30,000,000	0	0	N/A	NMF
Thoma Bravo Explore II	Buyout	15,000,000	0	15,000,000	0	0	N/A	NMF
Total 2023		**105,000,000**	**0**	**105,000,000**	**0**	**0**	**N/A**	**NMF**
Total Portfolio		**5,963,139,355**	**5,383,028,721**	**1,293,592,932**	**6,266,106,951**	**2,951,954,316**	**1.7 x**	**11.7%**

- Remaining Value is defined as the investor's value as reported by the fund's manager.
- TVPI is the ratio of Distributed Capital plus Remaining Value to Contributed Capital.
- Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
- An asterisk indicates an investment that is fully liquidated, if applicable.
- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.
- Returns calculated for funds in the early years of their lives are particularly not meaningful given the J-curve effect. During these early years, due to illiquidity, stagnant valuations, fees and expenses, fund performance tends to be negative (the bottom of the “J”).

Performance by Vintage Year and Quartile Group

FRANKLIN PARK

	1996	1997	1998	1999
1st		○ Doughty Hanson III 13.5%		
2nd			○ Second Cinven 9.3%	○ Oak Hill I 10.6% ○ Diamond State 5.5%
3rd	○ HMTF III 1.8%			
4th			○ HMTF IV -6.1%	○ Cypress MBP II -0.5%

● Venture ○ Non-venture

BOLD = Realized

	2000	2005	2006	2007
1st				○ Vista Equity III 28.5%
2nd	○ **DLJ MBP III 19.4%** ○ **HMTF V 17.6%**	○ CSFB-ATRS 2005-1 Series 7.7%	○ CSFB-ATRS 2006-1 Series 10.2%	
3rd				○ NGP IX 10.8% ○ Diamond State II 10.7%
4th	○ **21st Century Group I -3.8%**		○ Boston Ventures VII 2.9%	

● Venture ○ Non-venture

BOLD = Realized

	2008	2009	2010	2011
1st			○ TA XI 27.0%	● FP Venture 2011 35.5%
2nd	● FP Venture 2008 18.2% ○ LLR III 16.6% ○ Advent GPE VI-A 16.5%	○ KPS III Supplemental 22.8% ● FP Venture 2009 17.3%	○ Mason Wells III 20.6%	○ Wicks IV 21.4%
3rd		○ Riverside IV 21.3%	● FP Venture 2010 17.7% ○ Altus Capital II 13.2% ○ EnCap VIII 0.6%	○ Wellspring V 16.1%
4th		○ Insight Equity II 9.2%		○ JF Lehman III 11.6% ○ FP Intnl 2011 9.9%

● **Venture** ○ **Non-venture**

BOLD = Realized

Performance by Vintage Year and Quartile Group

	2012	2013	2014	2015
1st	○ BV VIII 47.9%	● FP Venture 2013 26.9%	○ Thoma Bravo XI 26.6% ○ KPS IV 25.0%	
2nd	● FP Venture 2012 22.8% ○ ATRS-FP PE 21.0% ○ Court Square III 20.6% ○ DW Healthcare III 18.9% ○ NGP X 0.3%	○ EnCap IX 9.9%	● FP Venture 2014 24.4% ○ NGP XI 10.8%	○ EnCap X 15.7%
3rd		○ Vista Foundation II 15.6% ○ Riverside V 12.1%	○ Atlas Capital II 19.7% ○ FP Intnl 2014 14.1% ○ Lime Rock Resources III 4.1%	● FP Venture 2015 17.3%
4th	○ FP Intnl 2012 7.9%	○ FP Intnl 2013 7.3%	○ Sycamore Partners II 4.2%	○ FP Intnl 2015 12.9% ○ Siris III 12.8%

● **Venture** ○ **Non-venture**

BOLD = Realized

Performance by Vintage Year and Quartile Group

	2016	2017	2018	2019
1st	○ Thoma Bravo Discover 36.5% ○ JF Lehman IV 35.5%	○ EnCap XI 18.8%	○ Clearlake V 46.4%	○ Arlington V 41.1%
2nd	● FP Venture 2016 29.1% ○ Arlington IV 25.9% ○ Vista Foundation III 25.4% ○ American Industrial VI 25.2% ○ DW Healthcare IV 25.0%	○ BV IX 33.4% ○ NGP XII 16.0%	● FP Venture 2018 33.7% ○ Altaris IV 28.9% ○ Thoma Bravo Discover II 26.9%	○ Thoma Bravo XIII 32.1% ● FP Venture 2019 30.9%
3rd	○ Thoma Bravo XII 16.6%	● FP Venture 2017 30.8% ○ Altaris Constellation 24.8%		○ KPS Mid-Market I 23.9% ○ American Industrial VII 21.8% ○ FP Intnl 2019 21.1% ○ Siris IV 20.8%
4th	○ FP Intnl 2016 9.9%	○ One Rock II 21.1% ○ FP Intnl 2017 19.7%	○ Sycamore Partners III 15.3% ○ FP Intnl 2018 10.0% ○ SK Capital V 8.0%	○ Riverside VI 14.4% ○ DW Healthcare V 5.3%

● **Venture** ○ **Non-venture**

BOLD = Realized

FRANKLIN PARK

2020

Quartile	Fund	Net IRR
1st	○ BV X	46.1%
2nd	○ Clearlake VI	34.3%
	○ KPS V	29.1%
	○ Thoma Bravo Explore I	28.8%
	○ FP CF Access	27.4%
	● FP Venture XIII	16.2%
3rd		
4th	○ JF Lehman V	7.9%

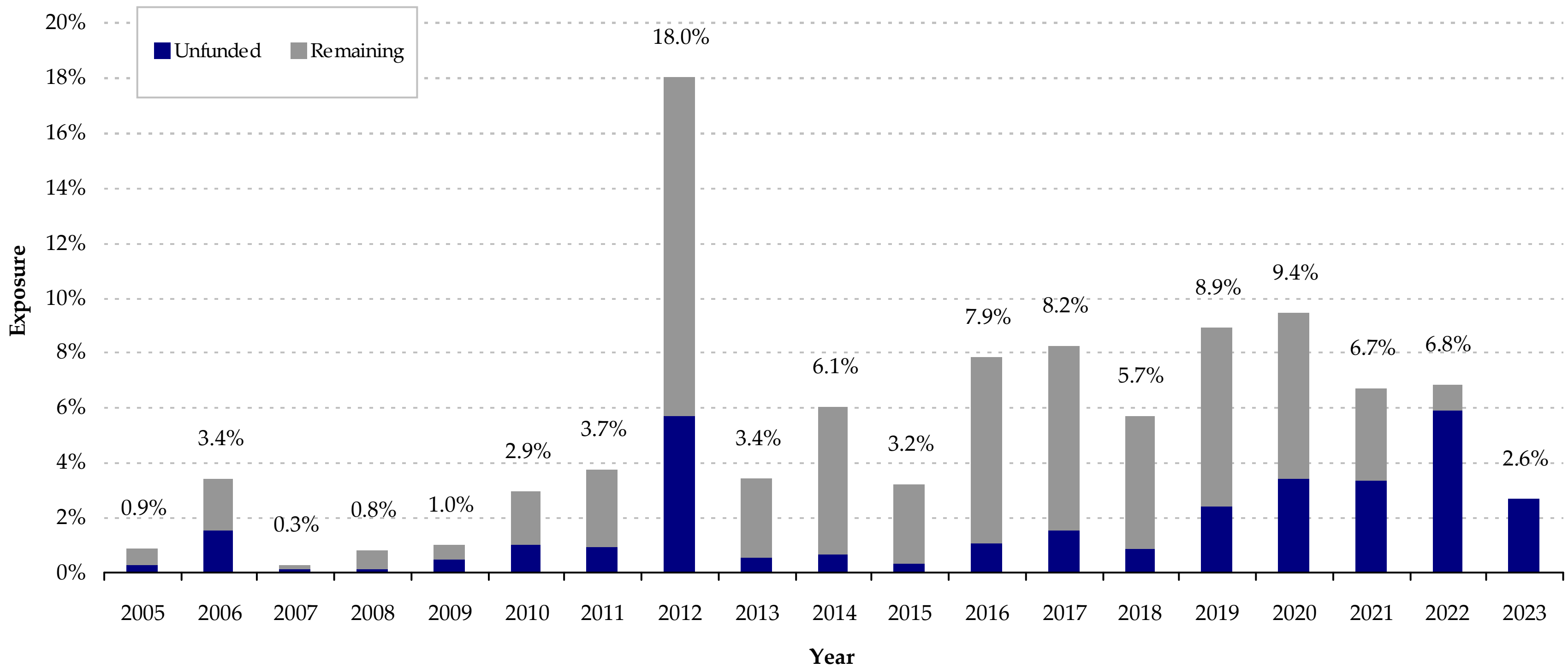
● **Venture** ○ **Non-venture**

BOLD = Realized

- The analysis compares each fund's Net IRR versus its respective peer group by vintage year and strategy. Funds with a corporate finance strategy, excluding private debt, are compared to Cambridge Associates, U.S. Buyout. Funds with a venture capital strategy are compared to Cambridge Associates, U.S. Venture Capital. Multi-strategy funds are compared to data compiled by Cambridge Associates for funds across multiple strategies including U.S. Buyout, Growth Equity, Venture Capital, Mezzanine, Distressed, Fund-of-Funds, and Secondary Funds. Funds with a hard assets strategy are compared to Cambridge Associates, U.S. Private Equity Energy. Funds with a real estate strategy are compared to Cambridge Associates, U.S. Real Estate. Benchmark data is not available for funds with a private debt strategy.
- The analysis excludes the two most recent vintage years, as fund performance is deemed not yet meaningful (NMF).
- Net IRR is defined as the annualized, compound rate of return using daily draws, distributions and Remaining Value as of the Report Date, net of fees and expenses, including late closing interest.
- Benchmark data was compiled from Cambridge Associates as of June 30, 2022. Hard Assets benchmark data for Vintage Years prior to 2005 is not available.

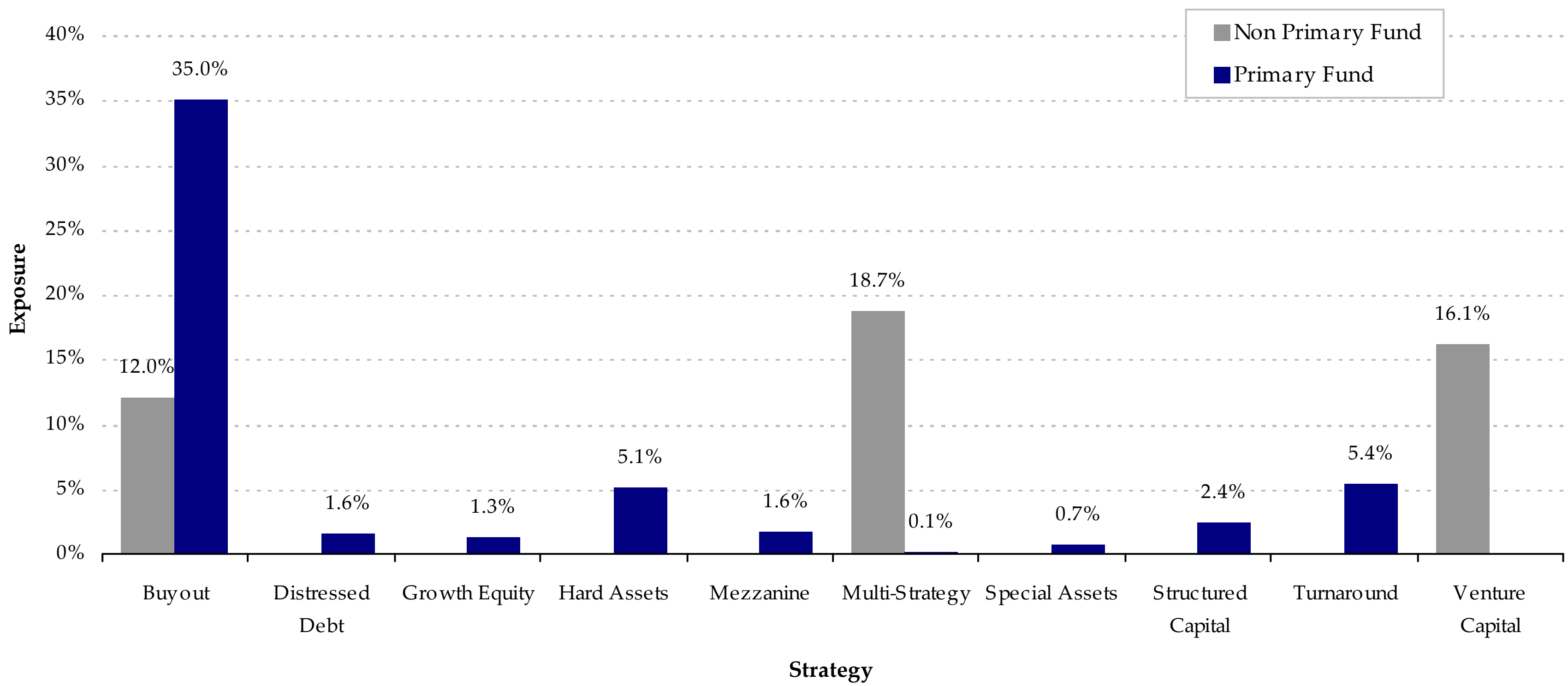
Diversification Analysis

Exposure By Vintage Year



- Exposure is defined as the sum of the investor's Remaining Value plus Unfunded Commitment.
- Data includes commitments through the Report Date.

FRANKLIN PARK

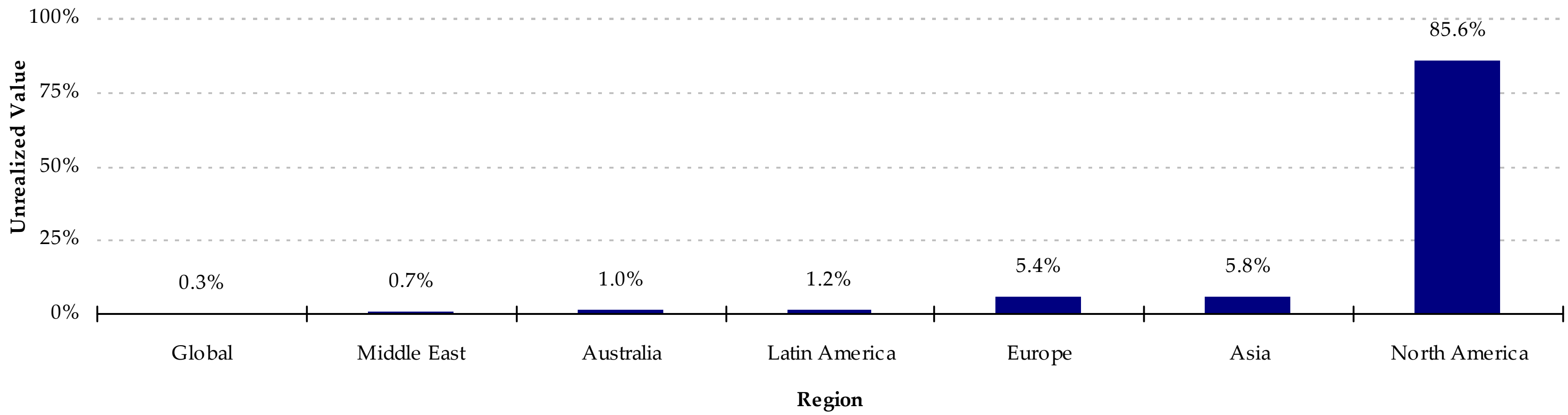


- Exposure is defined as the sum of the investor's Remaining Value plus Unfunded Commitment.
- Primary Fund represents interests in private equity funds acquired directly from the seller (i.e. fund manager). Non Primary Fund represents interests in private equity funds acquired through a commitment to a fund-of-funds or secondary fund-of-funds.

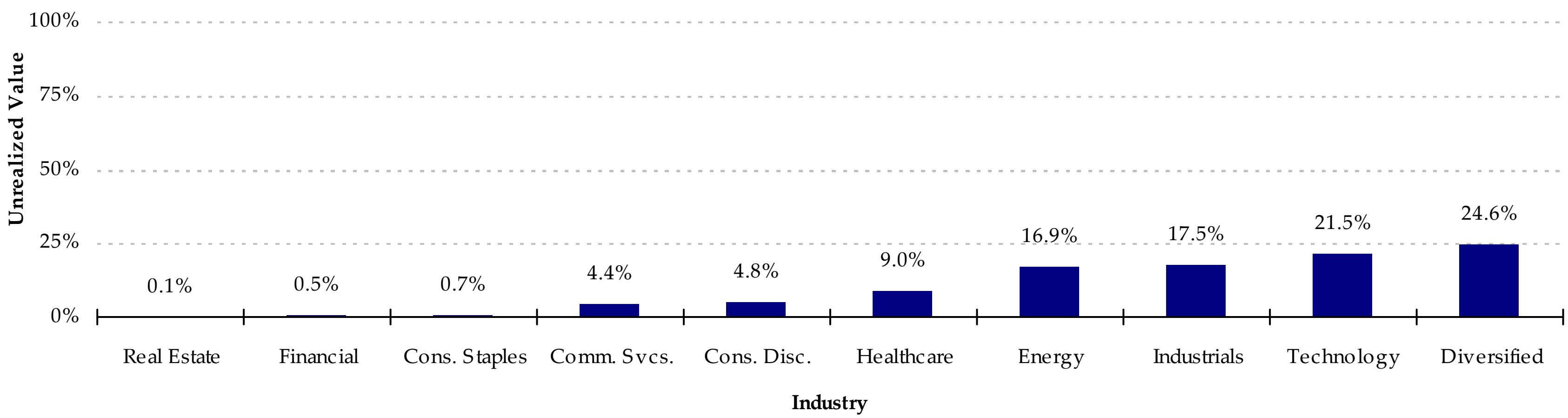
Holdings by Region and Industry

FRANKLIN PARK

Region

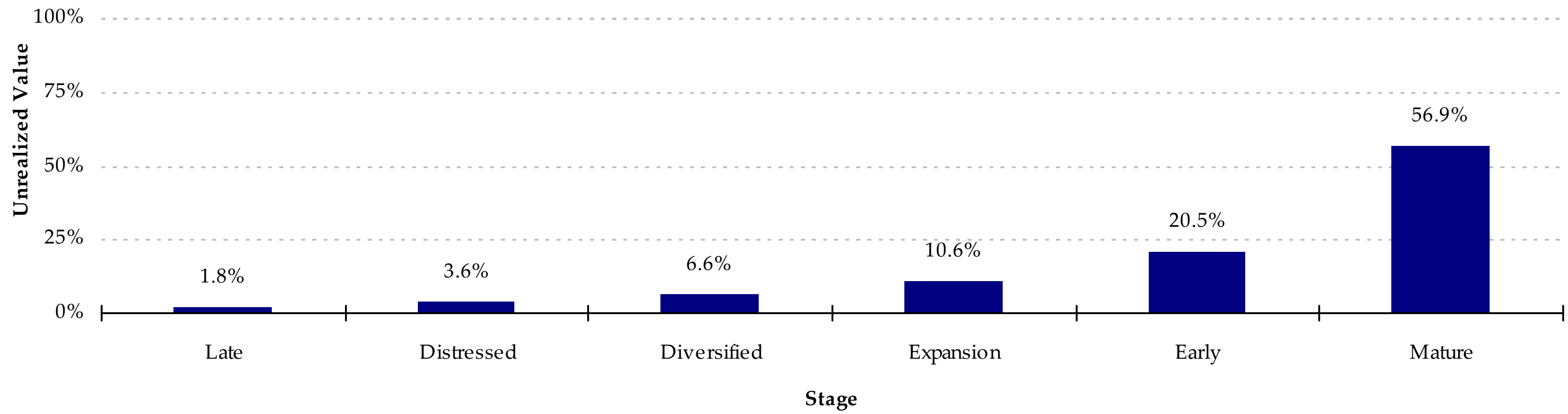


Industry

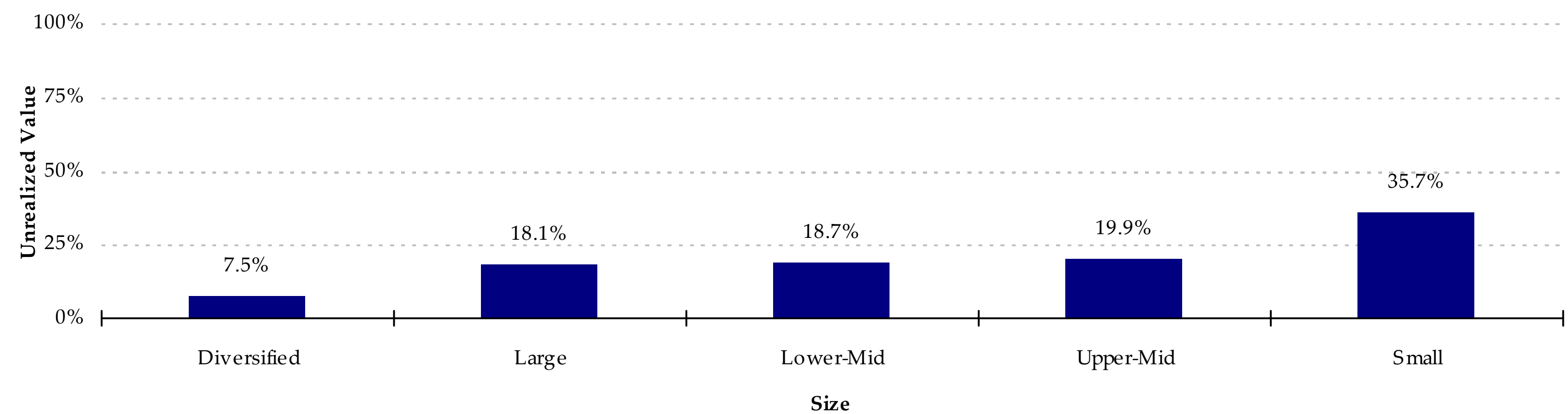


- Unrealized Value represents the value of portfolio holdings as reported by fund managers.
- Values are estimated based on the investor's percent interest in each fund's portfolio holdings.
- Values are converted to the investor's currency, when applicable, as of the Report Date.

Stage

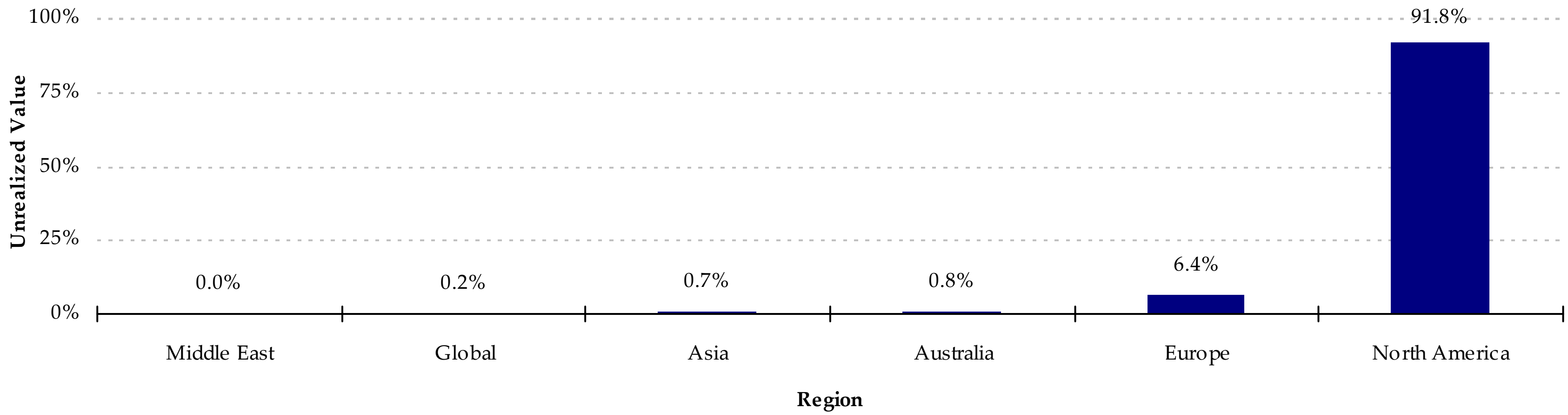


Size

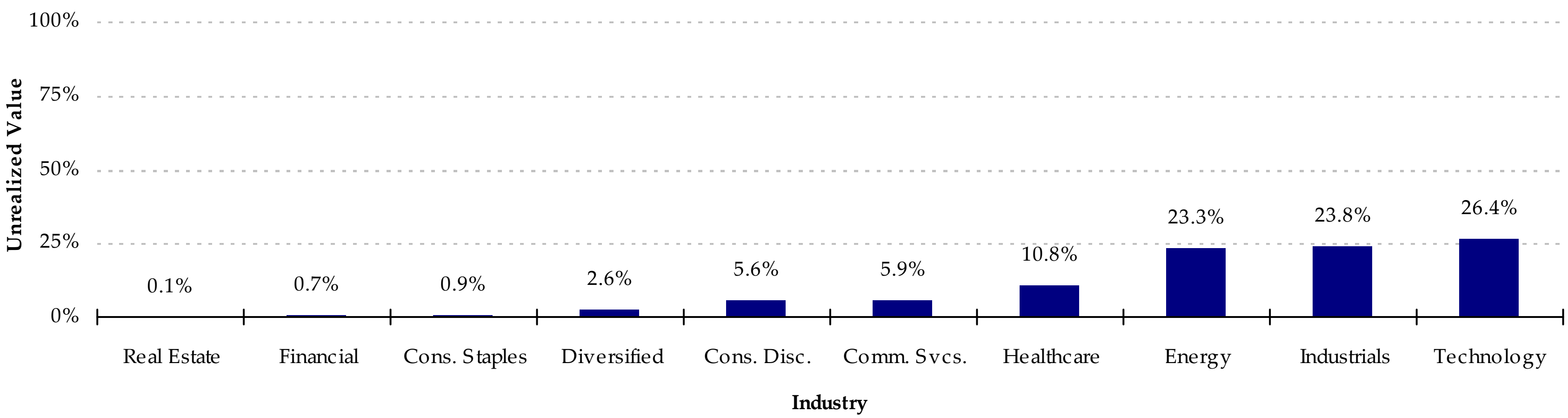


- Unrealized Value is the value of portfolio holdings as reported by the fund manager.
- Values are estimated based on the investor’s percent interest in each fund’s portfolio holdings.
- Values converted to the investor's currency, when applicable, as of the Report Date.

Region



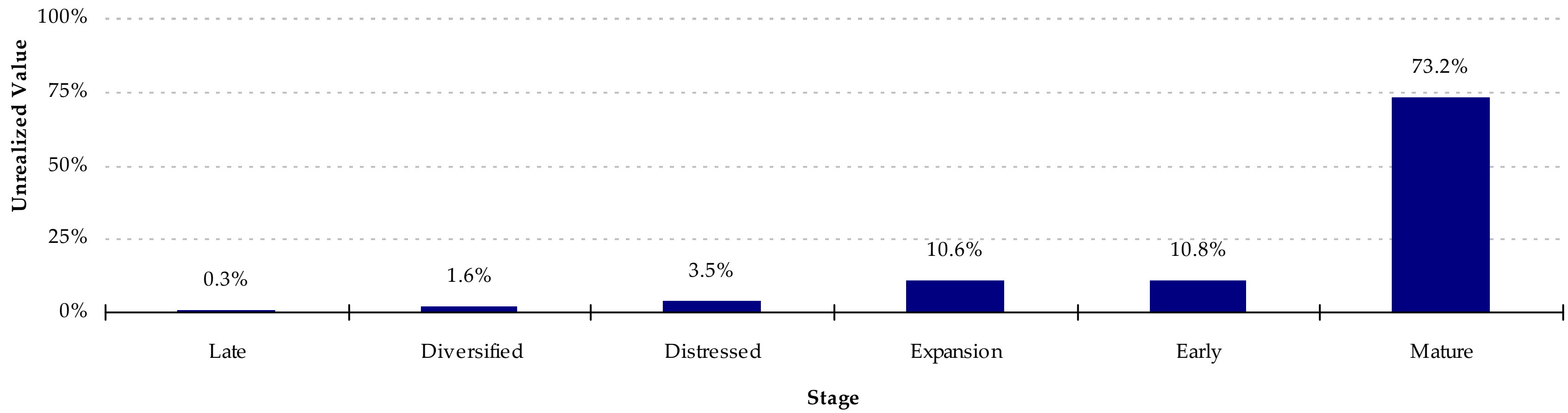
Industry



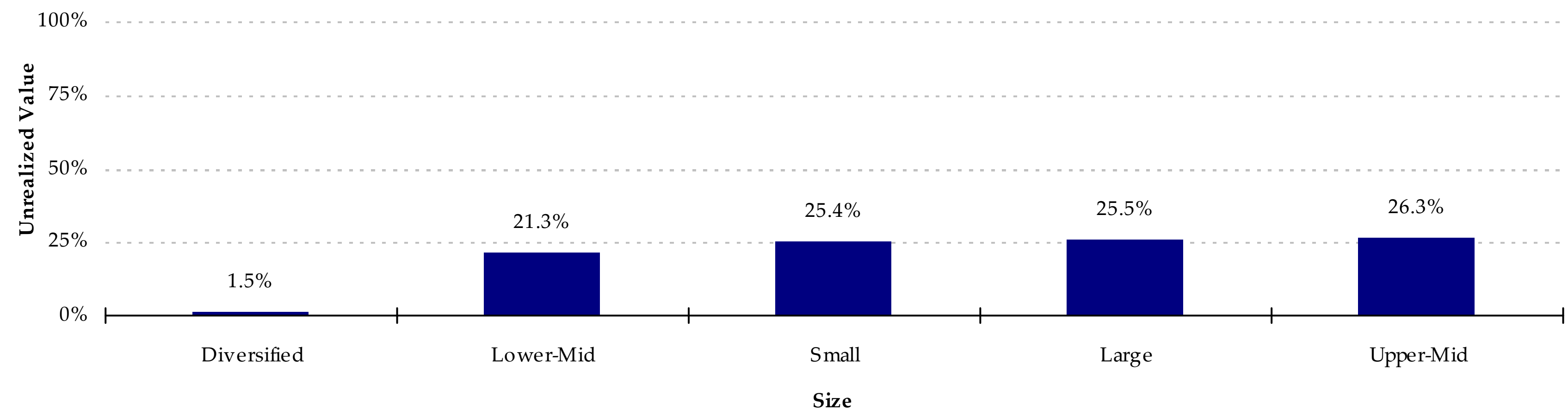
- Fund investments in other funds were excluded from this analysis.
- Unrealized Value represents the value of portfolio holdings as reported by fund managers.
- Values are estimated based on the investor’s percent interest in each fund’s portfolio holdings.
- Values are converted to the investor's currency, when applicable, as of the Report Date.

Holdings by Stage and Size (ex Fund Holdings)

Stage



Size

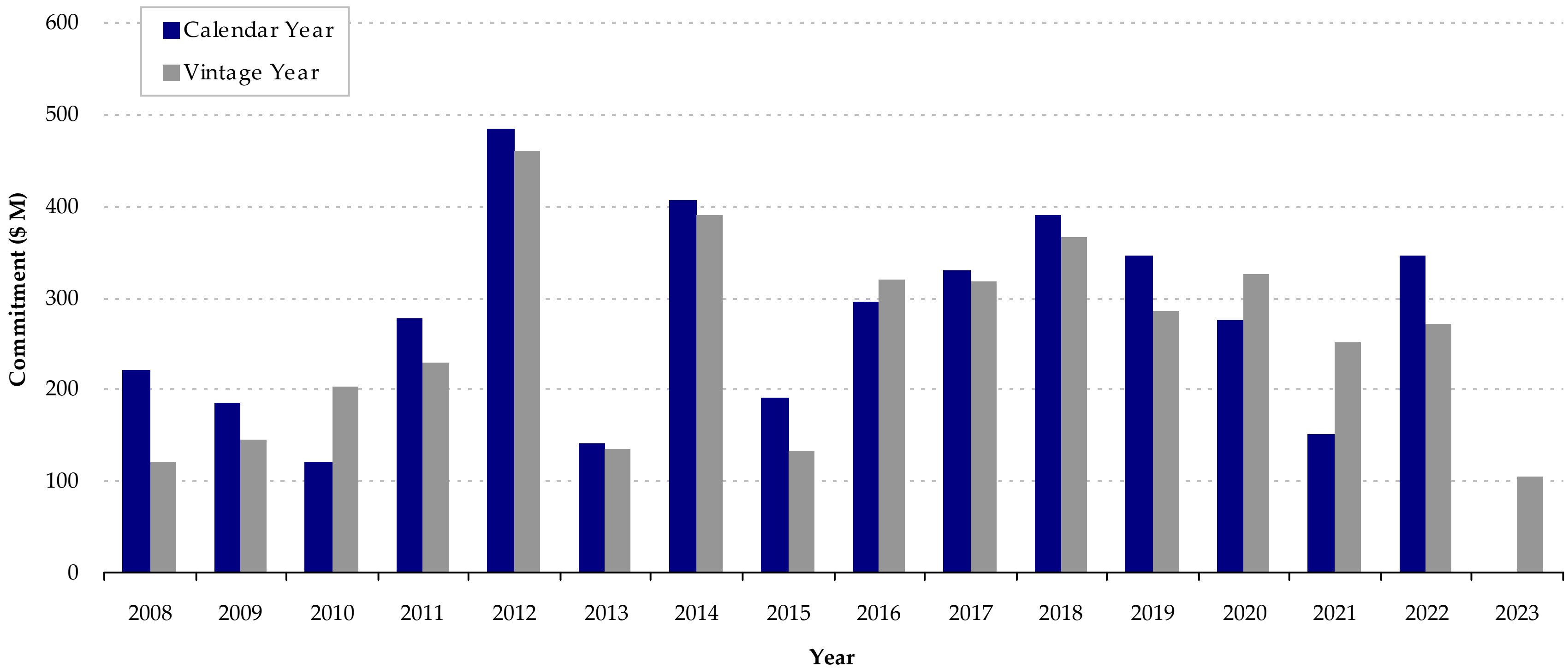


- Fund investments in other funds were excluded from this analysis.
- Unrealized Value represents the value of portfolio holdings as reported by fund managers.
- Values are estimated based on the investor's percent interest in each fund's portfolio holdings.
- Values are converted to the investor's currency, when applicable, as of the Report Date.

Recent Activity

Annual Commitments

FRANKLIN PARK



- Vintage Year represents the year in which investors first contribute capital to a fund.
- Calendar Year represents the year in which a commitment to a fund formally closed.
- Commitments made in a foreign currency have been converted into U.S. dollars using an exchange rate as of the Report Date, if applicable.
- Commitments were compiled through the Report Date.

Glossary

Term	Definition
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.
Bridge Financing	Temporary funding that will eventually be replaced by permanent capital from equity investors or debt lenders
Buyout	Fund whose strategy is to acquire controlling interests in companies
Co/Direct Investment	Investment made directly into a company, rather than indirectly through a fund
Committed Capital	Total dollar amount of capital pledged to a fund
Contributed Capital	Total capital contributed to a fund for investments, fees and expenses, including late closing interest paid, less returns of excess capital called
Cost Basis	Remaining amount of invested capital
Debt	Security type that signifies a repayment obligation by a company (e.g. senior debt, subordinated debt, bridge loan etc.)
Distressed	A company's final Stage of development. Company is generally experiencing operational or financial distress
Distressed Debt	• Distressed Trading – Fund whose strategy is to invest and trade debt of financially stressed companies • Distressed Restructuring – Fund whose strategy is to acquire and restructure debt of financially stressed companies • 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 • Structured Capital – Fund whose strategy is to issue hybrid debt and equity securities to mature companies
Distributed Capital	Capital distributed to the limited partners, including late closing interest earned

Term	Definition
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.
DPI	Ratio of Distributed Capital to Contributed Capital
Early Stage	A company's first Stage of development. Company is generally generating modest or no revenues
Equity	Security type that signifies ownership of a company (e.g. common stock, preferred stock, warrants, etc.)
Expansion Stage	A company's third Stage of development. Company is generally experiencing high growth and nearing profitability
Exposure	Sum of Remaining Value plus Unfunded Commitment
Fund-of-Funds	Fund whose strategy is to make investments in other funds
Geographic Region	Market location of a company: North America, Western Europe, Africa/Middle East, Latin America, Asia/Pacific Rim
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
Hard Assets	Fund whose strategy is to invest in natural resources or infrastructure
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
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
Large	Company with a Size greater than $1 billion
Late Stage	A company's second Stage of development. Company is generally generating high revenue growth and high losses
Lower-Mid	Company with a Size greater than $100 million, but less than $250 million
Mature	A company's fourth Stage of development. Company is generally generating modest to no growth and operating profitably
Mezzanine	• Sponsored Mezzanine – Fund whose strategy is to issue subordinated loans to companies owned by private equity fund sponsors • Non-Sponsored Mezzanine – Fund whose strategy is to issue subordinated loans to companies not owned by private equity fund sponsors
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.
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.)
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.
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
Percent Interest	Represents an investor's economic interest in a fund based upon the investor's commitment divided by total fund commitments
Primary Investment	An interest in a private equity fund acquired directly from the fund manager during the fundraising period
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
Publication Date	Refers to the date this report was created as reflected in the Executive Summary
Real Assets	Fund whose strategy is to invest in assets that are tangible or physical in nature such as land, machinery, and livestock
Real Estate	Fund whose strategy is to acquire interests in real estate property
Realized Capital	Capital distributed to a fund from portfolio holdings
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
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.
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.
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.
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.
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
Sector	Industry in which the company operates: technology, telecommunications, healthcare, financial services, diversified, industrial, consumer, energy, etc.
Senior Debt	• Direct Lending – Fund whose strategy is to issue senior loans to mature companies • Unitranche – Fund whose strategy is to issue hybrid senior and subordinated loans to mature companies • Venture Debt – Fund whose strategy is to issue loans to venture stage companies • 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 • Rescue Financing – Fund whose strategy is to issue loans to financially stressed companies

Term	Definition
Size	Capitalization size of a company: Large, Upper-Mid, Lower-Mid, Small
Small	Company with a Size of less than $100 million
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
Small Buyout	Fund whose strategy is to acquire or recapitalize Small businesses
Special Assets	• Healthcare Royalties – Fund whose strategy is to acquire royalty or revenue interests, or issue loans, backed by approved life science products • Music Royalties – Fund whose strategy is to acquire royalty or revenue interests, or issue loans, backed by music copyright assets • Aircraft Leasing – Fund whose strategy is to acquire and lease commercial aircraft • Life Settlement - Fund whose strategy is to acquire life insurance policies • Shipping – Fund whose strategy is to acquire and charter commercial shipping vessels • Asset Backed Securities – Fund whose strategy is to acquire or structure securities that are backed by income-producing assets
Stage	The course of development through which a company passes from its inception to its termination: Early, Late, Expansion, Mature, Distressed
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

FRANKLIN PARK

Term	Definition
Vintage Year	The calendar year in which an investor first contributes capital to a fund

End Notes

The information contained in this report is confidential and may contain proprietary information and trade secret information. The information contained herein is prepared by Franklin Park and is not reviewed or approved by the general partners or affiliates of underlying portfolio fund investments and is strictly for the use of Arkansas Teacher Retirement System and, subject to applicable law, may not be reproduced, transmitted or used in whole or in part for any other purpose without the expressed written consent of Franklin Park. Franklin Park requests that investors maintain this information in confidence and that this report is not disclosed to any person other than affiliates, advisers, and accountants, who agree to maintain this information in similar confidence, without the prior written consent of Franklin Park.

Information regarding the Arkansas Teacher Retirement System portfolio, trends and performance returns are based on or derived from information and data provided by third-party sources, including Arkansas Teacher Retirement System's historical records. Franklin Park assumes that such information is accurate and that the sources from which it has been obtained are reliable. For example, the performance figures contained within this report are calculated by Franklin Park based on information provided by the managers of Arkansas Teacher Retirement System's private equity fund investments (General Partners). The General Partners have not verified the performance figures presented by Franklin Park and such figures may differ from those calculated by General Partners or other investors.

Franklin Park presents Net IRR performance as recommended by the CFA Institute. The IRR calculation is a dollar-weighted return measurement, which considers both cash flow timing and amount, and is net of fees, expenses and carried interest. The total portfolio Net IRR presented herein is net of fees, expenses and carried interest paid by underlying private equity fund investments, but is gross of fees and expenses paid to Franklin Park. The IRR is most commonly used for measuring the performance of private equity funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. An IRR is particularly not meaningful in the first two years of a fund's life given the J-curve effect (see footnote). The actual IRR of any private equity fund investment is not known until final liquidation.

- The J-curve refers to the shape of the curve that illustrates a private equity fund’s performance over time. During the initial years of a fund's life, due to fees and expenses, a fund’s performance tends to be negative (the bottom of the “J”). Eventually, as portfolio company investments increase in value, fund performance improves and returns move up the “J” shaped curve.

Arkansas Teacher Retirement System

Recommendation Report
LLR Equity Partners VII, L.P.

FRANKLIN PARK

Executive Summary

Fund LLR Equity Partners VII, L.P. (the "Fund")

General Partner LLR Partners (the "General Partner" or "LLR")

Report Date January 2023

Fundraising The General Partner is targeting capital commitments of $2.25 billion. The General Partner is targeting a first closing for late February 2023.

Source Franklin Park sourced the offering directly from the General Partner.

Investment Strategy The Fund is being formed to invest in control and non-control transactions in U.S. small and lower middle market growth companies. The Fund will focus on companies in the technology and healthcare sectors.

The Fund will target companies that often meet the following criteria:

- Revenues between $10-$100 million and enterprise values typically less than $200 million,
- Double digit revenue growth, meaningful recurring revenue and competitive differentiation,
- Total addressable markets of at least $500 million,
- Management teams looking to raise their first institutional capital,
- Attractive subsectors within technology (software, industrial technology, fintech, HR technology) and healthcare (healthcare providers, healthcare IT, managed care, education technology),
- Sub-optimized organic growth where the Value Creation Team can help unlock value, and
- Profitability, or attractive unit margins and a path to profitability within 24 months for negative EBITDA companies.

Post-acquisition, the General Partner focuses on driving revenue growth at its portfolio companies. The General Partner has built a 20-person Value Creation Team consisting of functional experts that are deployed across portfolio companies. The Value Creation Team's focus areas include finance and operations, human capital, sales and marketing, strategic planning, product management and M&A.

Management Team Based in Philadelphia, the General Partner was established by Ira Lubert, Seth Lehr and Howard Ross in 1999 as a member of Independence Capital Partners ("ICP"), a not-for-profit organization of private equity firms. Today, the General Partner is led by twelve senior investment professionals (the "Principals"). The General Partner has a 51-person investment team, a 19-person origination team, a 20-person value creation team and a 21-person finance & operations team.

Track Record The General Partner has raised six prior funds. The following chart summarizes the performance of the prior funds, as of September 30, 2022 ($000).

Aggregate Performance Summary[1] (USD 000)

Fund (Vintage)	Fund Size	Rlzd Deals / # Deals	Invested	Realized	Unrealized	Gross ROI	Gross IRR
Fund I (1999)	260,000	23 / 23	233,480	642,765	0	2.8x	29.8%
Fund II (2004)	360,000	16 / 16	358,024	781,418	0	2.2x	17.6%
Fund III (2008)	803,000	21 / 22	732,117	2,087,764	31,194	2.9x	23.7%
Fund IV (2014)	905,000	18 / 24	855,963	2,168,336	457,322	3.1x	30.2%
Fund V (2018)	1,225,000	4 / 25	1,113,755	460,296	1,872,883	2.1x	27.3%
Fund VI (2020)	1,800,000	0 / 21	1,236,560	2,374	1,304,817	1.1x	6.6%
Total		**82 / 131**	**4,532,250**	**6,142,953**	**3,666,217**	**2.2x**	**25.9%**

[1] *Gross of fees and carried interest expenses. The unrealized investments are valued by the General Partner.*

Investment Evaluation

1. **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 growing companies. Purchase prices for small companies are typically lower than larger companies, and smaller companies often have higher growth potential. Moreover, there are significant opportunities for value creation with small companies that an experienced private equity investment team can exploit. The Fund's target companies have a number of favorable investment traits, including recurring revenues, significant organic growth, high cash flow margins and often limited leverage. Further, the General Partner's proactive sourcing approach can position it to acquire companies outside formal sale processes or through limited auction processes.

2. **The General Partner's team is deep, experienced and cohesive.** The Principals average more than 17 years with the General Partner. Further, in recent years, the General Partner has supported the investment team with the additions of dedicated origination and value creation teams.

3. **The General Partner has a deep and attractive track record.**
   - In aggregate, the General Partner's 131 prior investments have produced a 2.2x ROI and 25.9% gross IRR.
   - In aggregate, the General Partner's 80 realized deals since inception have produced a 3.1x ROI and 27.0% gross IRR.
   - Funds I, II, III and IV have performed well, with net IRRs, DPIs and TVPIs that each rank in the first or second quartile, as compared to buyout funds of the same vintage.

   However, there are some track record concerns.
   - **The net IRRs of Funds V & VI rank in the third and fourth quartile, respectively, as compared to buyout funds of the same vintage.** However, Fund V has produced a solid 22.1% net IRR and the General Partner believes it will produce similar results to Fund IV, and Fund VI is early in its life, with 13 of its 21 investments held for a year or less.
   - **Fund II exhibited a high loss ratio.** Fund II has a 46% loss ratio. However, the General Partner has narrowed its sector focus to technology and healthcare over the last three funds. Five of the six losses or markdowns in the Fund II portfolio were in the industrial, consumer discretionary and financial sectors, which are no longer areas of focus for the General Partner. Further, based on lessons learned from prior losses, the General Partner's strategy has evolved

to prioritize companies with double digit revenue growth, meaningful recurring revenue and competitive differentiation.

Recommendation Franklin Park recommends a commitment of up to $30 million to the Fund, subject to satisfactory negotiation of final documentation, based on the following:

- The Fund's investment strategy is compelling;
- The General Partner's team is deep, experienced and cohesive; and
- The General Partner has a deep and attractive track record.

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

R E S O L U T I O N
No. 2023-10

Approving Investment in LLR Equity Partners VII, L.P. with Imminent Need

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

WHEREAS, the ATRS Board has reviewed the recommendation of its private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **LLR Equity Partners VII, L.P.,** a growth equity fund that will focus on small and middle market companies in the technology and healthcare sectors; and

WHEREAS, the ATRS Board approves an investment of up to **$30 million dollars ($30,000,000.00)** in **LLR Equity Partners VII, L.P.,** and the Board, after its review of the timing in which the closing of the investment in **LLR Equity Partners VII, L.P.** may need to occur, has determined that there is an imminent need to immediately enter into the partial equity ownership agreement prior to the next scheduled meeting of the Arkansas Legislative Council. The Board also deems it financially appropriate to enter into the partial equity ownership agreement and concludes that to forego the opportunity to promptly implement its investment directives under the prudent investor rule would be inconsistent with its fiduciary duty of care to the members and annuitants;

NOW, THEREFORE, BE IT RESOLVED, that the ATRS Board approves an investment of up to **$30 million dollars ($30,000,000.00)** in **LLR Equity Partners VII, L.P.** and agrees to immediately move to close and subscribe the approved ATRS limited partnership interest in **LLR Equity Partners 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 Board**;** and

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

Adopted this 6th day of February 2023

____

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

Executive Summary
GCG Investors VI, L.P.

Executive Summary

Fund

GCG Investors VI, LP (the "Fund")

General Partner

Greyrock Capital Group (the "General Partner" or "Greyrock")

Report Date

January 2023

Fundraising

The General Partner is targeting capital commitments of $200 million, with a cap of $300 million. The General Partner held a first closing in December 2022 on $113 million.

Source

Franklin Park sourced the fund offering directly from the General Partner.

Investment Strategy

The Fund is being formed to invest in mezzanine debt and equity of small and lower middle market companies in North America. In particular, the General Partner utilizes a barbell approach to portfolio construction by investing in two types of transactions: (i) traditional lower middle market sponsored mezzanine investments with relatively small equity co-investments and (ii) smaller companies alongside a smaller or independent sponsor through a more balanced combination of mezzanine securities and significant equity ownership stakes. The portfolio is expected to be roughly evenly allocated to each strategy to provide a margin of safety, income from contractual coupons, typically with a low to mid-teens yield, and potential equity upside. Overall, the Fund is expected to invest 70-75% of capital in debt securities and 25-30% of capital in equity securities.

The General Partner generally targets investments with the following characteristics:

- Stable or growing end markets that are, at most, modestly cyclical
- Niche market leadership
- Recurring, sustainable demand that translates into predictable cash flow
- Sustainable margins indicative of enduring competitive advantages and effective management
- Favorable transaction dynamics including senior management continuity and seller rollover

Post-investment, the General Partner typically relies on the sponsors to lead the value-add initiatives with portfolio companies. However, the General Partner seeks to add value by: (i) arranging for introductions between the portfolio companies and relevant members of the Principals' professional networks, (ii) evaluating add-on acquisitions, and (iii) providing guidance to sponsors and management teams based on prior experiences. The General Partner will have at least board observer rights in traditionally sponsored companies and will have board seats and sometimes control of the board in smaller companies

Management Team

The General Partner was formed in 2001 by professionals who previously worked together in the corporate finance division of Bank of America Commercial Finance ("BACF"). The General Partner currently operates out of offices in Walnut Creek, CA, Chicago, IL, and Wilton, CT. The General Partner is led by three senior investment professionals (the "Principals") who are supported by four additional investment professionals, a CFO and two Advisors.

The table below summarizes the Principals' backgrounds.

Principals	Office	Yrs. GP*	Yrs. PE	Background
Steve Dempsey	Wilton	27	32	BACF, GMAC Comm. Fin.
Sam Snyder	Walnut Creek	10	10	Renaissance Cap, Goldman Sachs
Daniel Kapnick	Chicago	5	9	Brightwood Capital, Credit Suisse

* Includes tenure with BACF

Track Record

The General Partner has raised five prior funds. The following chart summarizes the performance of the prior funds, as of September 30, 2022.

Aggregate Performance Summary[1] (USD 000)

Fund (Vintage)	Fund Size	Rlzd Deals / # Deals	Invested	Realized	Unrealized	Gross ROI	Gross IRR
Fund I (2002)	199,000[2]	33 / 33	279,784	481,087	0	1.7x	13.9%
Fund II (2008)	122,000	11 / 11	129,037	346,408	0	2.7x	29.2%
Fund III (2013)	191,000	13 / 15	186,576	393,067	33,421	2.3x	26.8%
Fund IV (2017)	275,000	8 / 17	256,499	231,805	160,293	1.5x	16.8%
Fund V (2020)	280,000	0 / 11	183,226	13,339	195,693	1.1x	18.6%

Notes:
(1) Gross of fees and carried interest expenses. The unrealized investments were valued by the General Partner.
(2) Includes SBA leverage. Total private capital raised was $72 million.

Investment Evaluation

1. **The Fund's strategy should generate attractive risk-adjusted returns.** The Fund will invest in a combination of debt and equity securities. The benefit to the Fund is current income and downside protection, with return upside through equity participation. The Fund's debt investments will have a substantial contractual rate of return, with coupons in the low to mid-teens. These coupons lessen the J-curve of a traditional private equity fund.

2. **The General Partner is well-positioned to source ample quality deal flow given its long tenure and deep sponsor relationships.** Greyrock generates a large number of potential investment opportunities given the firm's established presence in East, West and Midwest offices and the Principals' long tenures in each of their served markets. Since inception, the General Partner has partnered with over 50 unique private equity sponsors, and has made repeat investments with more than 10 sponsors.

3. **The Principals have significant experience.** The Principals average 17 years of credit experience and two of the Principals have worked together at the General Partner for over a decade.

   However, there has been some recent team evolution. Tracy Perkins and Todd Osburn, each Founding Partners, are moving to Advisors for the Fund. Messrs. Perkins and Osburn led a total of four deals combined across Fund IV and V. Over the last few years, their roles have been scaled back and their relationships have been transitioned.

4. **The General Partner has an attractive risk-adjusted track record.** In particular,
   - **Funds II and III have generated solid aggregate returns.** Funds II and III have generated 29.2% and 26.8% gross IRRs, respectively, and have experienced no credit losses.
   - **The General Partner's realized transactions have produced attractive returns.** The General Partner's 32 realizations across Funds II-IV have produced a 2.2x ROI and 28.5% gross IRR.

   However,
   - **Fund I's performance was volatile.** Fund I includes seven losses among its 33 investments. However, the General Partner made refinements to its investment criteria at the beginning of Fund II, including the establishment of its current barbell strategy. Therefore, Fund I's performance is not fully relevant to the current strategy.
   - **Fund IV has generated modest returns to date.** Fund IV's performance was negatively affected by an early write off in the portfolio. However, the majority of the portfolio is performing and the General Partner believes there is significant upside in the remaining equity positions.

Recommendation Franklin Park recommends a commitment of up to $30 million to the Fund, based on the following:

- The Fund's strategy should generate attractive risk-adjusted returns;
- The Principals have significant experience and are well positioned to source ample deal flow; and
- The General Partner has generated an attractive risk-adjusted track record.

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

R E S O L U T I O N
No. 2023-11

Approving Investment in GCG Investors VI, L.P. with Imminent Need

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

WHEREAS, the ATRS Board has reviewed the recommendation of its private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **GCG Investors VI, L.P.,** a mezzanine fund focused on both debt and equity securities in the small and lower middle market; and

WHEREAS, the ATRS Board approves an investment of up to **$30 million dollars ($30,000,000.00)** in **GCG Investors VI, L.P.,** and the Board, after its review of the timing in which the closing of the investment in **GCG Investors VI, L.P.** may need to occur, has determined that there is an imminent need to immediately enter into the partial equity ownership agreement prior to the next scheduled meeting of the Arkansas Legislative Council. The Board also deems it financially appropriate to enter into the partial equity ownership agreement and concludes that to forego the opportunity to promptly implement its investment directives under the prudent investor rule would be inconsistent with its fiduciary duty of care to the members and annuitants;

NOW, THEREFORE, BE IT RESOLVED, that the ATRS Board approves an investment of up to **$30 million dollars ($30,000,000.00)** in **GCG Investors VI, L.P.** and agrees to immediately move to close and subscribe the approved ATRS limited partnership interest in **GCG Investors VI, L.P.** The total investment amount is to be determined by the private equity consultant and ATRS staff based upon the allocation available to ATRS and the overall investment objectives set by the Board**;** and

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

Adopted this 6th day of February 2023

____

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

Franklin Park
Co-Investment Fund VI, L.P.

February 2023

Disclaimer

This Presentation (this "Presentation") has been prepared by Franklin Park Associates, LLC ("Franklin Park") solely for informational purposes for the exclusive use of the party to whom Franklin Park delivers this Presentation (the "Recipient"). This Presentation is not to be construed as a solicitation, invitation or an offer by Franklin Park or any of its members, officers, employees or agents to buy or sell any securities or related financial instruments. This Presentation is furnished on a confidential and limited basis for the sole and exclusive purpose of providing general and background information concerning Franklin Park Co-Investment Fund VI, L.P. (the 'Fund") as well as Franklin Park and its activities. This Presentation is not an offer or sale of, or a solicitation to any person to buy, any security or investment product or investment advice. Any such offer, sale or solicitation of interests in the Fund will be made only pursuant to the Fund's definitive documents, and will be subject to the terms and conditions contained in such documents. This Presentation is qualified in its entirety by reference to the Fund's definitive documents.

The information in this Presentation has been obtained from Franklin Park's proprietary research and other publicly available sources and has not been independently verified by Franklin Park or any of its members, officers, employees, agents, representatives or advisers or any other person. Any valuations, projections, estimates, forecasts, targets, prospects, returns and/or opinions contained herein involve elements of subjective judgment and analysis. Any opinions expressed in this material are subject to change without notice. This Presentation may contain forward-looking statements. Any estimates or projections as to events that may occur in the future are based upon the reasonable expectation of Franklin Park. No obligation is undertaken by Franklin Park or any other person to provide the Recipient with additional information or to update, revise or reaffirm the information contained in this Presentation or to correct any inaccuracies therein which may become apparent.

Past or projected performance information contained in this Presentation is not necessarily indicative of future results. There can be no assurance that the Fund will ultimately achieve comparable performance results.

This Presentation is not intended to be relied upon as legal, tax, accounting or investment advice or a recommendation and is not, and should not be assumed to be, complete. The Recipient agrees that Franklin Park and its affiliates, members, partners, stockholders, managers, directors, officers, employees and agents shall have no liability for any misstatement or omission of fact or any opinion expressed herein. The contents herein are not to be construed as legal, business or tax advice, and the Recipient should consult its own attorney, business advisor and tax advisor as to legal, business and tax advice. Recipient is expected to rely on its own due diligence if it wishes to proceed further.

The Recipient further agrees that it will (i) not copy, reproduce or distribute the Presentation, in whole or in part, to any person or party without the prior written consent of Franklin Park, (ii) keep permanently confidential all information contained herein not already public and (iii) use the Presentation solely for the purpose set forth in the first paragraph above.

By accepting this Presentation the Recipient agrees to be bound by the foregoing obligations and limitations.

Investment Strategy

Focus on corporate finance equity transactions in the middle market

Strategy
Direct co-investments alongside private fund sponsors

Transaction Types
Buyouts, build-ups, growth equity, structured equity, financial restructurings, operational turnarounds

Transaction Size
Primarily middle market companies/transactions

Geographic Focus
Primarily U.S., with up to 20% outside the United States and Canada

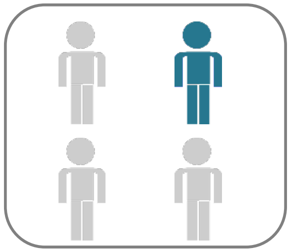
Portfolio Composition
25-35 deals during the investment period

FRANKLIN PARK

Co-investments are made through direct purchase of company securities or through an interest in a special purpose vehicle that holds company securities. Investments in private funds such as the Fund are illiquid, high-risk investments. No assurance can be given that the Fund will achieve its investment objectives or avoid substantial losses. There can be no assurance that the Fund can achieve the expected portfolio composition. The Fund's actual portfolio composition may vary. See additional discussion of risks and limitations in the Footnotes in the Appendix. The Fund terms are subject to change. Refer to the Fund's governing documents for a complete listing of terms.

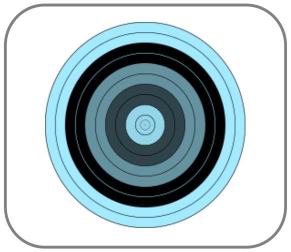
Investment Criteria

Rigorous criteria to find compelling investment opportunities



Sponsor Relationship

- ✓ Sponsors Franklin Park has identified as Top-Tier[1]
- ✓ Fully vetted by Franklin Park



Sponsor's Sweet Spot

- ✓ Fits the sponsor's core strategy
- ✓ Expertise from relevant prior deals
- ✓ Led by a partner with demonstrated success
- ✓ "Investment edge" – Franklin Park believes the sponsor has an advantaged sourcing, structuring or value creation position

Favorable Transaction Characteristics

- ✓ Economically aligned with sponsor
- ✓ No fee & no carry

Risk management guidelines

- ✓ 15% single investment limit
- ✓ 20% limit outside North America
- ✓ 30% single sponsor limit

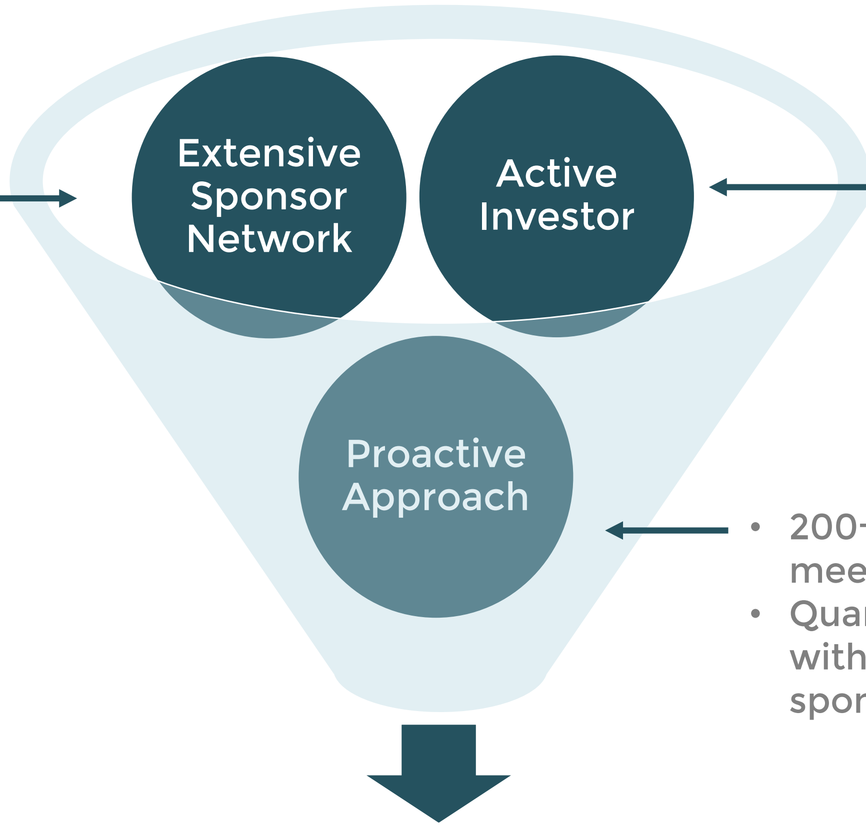
[1]Identification of a private equity sponsor as "Top-Tier" indicates that a sponsor has been vetted by Franklin Park through its due diligence process and Franklin Park has made a recommendation to invest in a private fund offering of such sponsor. Identification of a sponsor as Top-Tier is not a guarantee of performance and a sponsor's status as Top-Tier is subject to change based on Franklin Park's further review and analysis. Such determinations are not reviewed or approved by any fund sponsor. Other market participants may have differing views or use different criteria or definitions of "top-tier".

Investments in private funds such as the Fund are illiquid, high-risk investments. No assurance can be given that the Fund will achieve its investment objectives or avoid substantial losses. See additional discussion of risks and limitations in the Footnotes in the Appendix. Risk management guidelines are subject to change and are outlined in the Fund's governing documents. Please refer to the Fund's governing documents for a complete listing of terms.

Sourcing Advantage

Leveraging our position to source deal flow from sponsors we have identified as Top-Tier

- Long established sponsor relationships
- Proprietary database with 7,300+ managers
- Monitor 500+ sponsors
- Commitments to 100+ sponsors



- Active across all regions, strategies and sectors
- Advisory committee member and/or significant committed capital in 100+ funds
- Clients deploy more than $1.5 billion into direct funds annually

- 200+ sponsor meetings annually
- Quarterly calls with 50+ core sponsors

> 100 co-investments sourced in 2022

No assurance can be given that Franklin Park's sourcing efforts will gain the Fund access, or obtain preferred allocation amounts, to investments for which a commitment is sought. See additional discussion of risks and limitations in the Footnotes in the Appendix.

Select Sponsor Relationships

Relationships with middle market sponsors Franklin Park has identified as Top-Tier

bv
GRAYCLIFF PARTNERS
CENTER ROCK
RUBICON technology partners
CLEARLAKE CAPITAL
INVERNESS GRAHAM
Fort Point Capital Partners
RIVERGLADE CAPITAL
MiddleGround Capital
GALLANT CAPITAL
Staple Street CAPITAL
ALPINE
ASCEND
BANNEKER PARTNERS
SK CAPITAL
O2
CLARENDON CAPITAL
J.F. Lehman & Company
GREENBRIAR
GOLDNERHAWN
WATER STREET
NOVACAP
AMULET CAPITAL PARTNERS LP
CELEBRATING TWENTY YEARS CAROUSEL CAPITAL
SHERIDAN CAPITAL PARTNERS
CIVC PARTNERS
ASTARA CAPITAL PARTNERS
CenterGate CAPITAL
MAIN POST PARTNERS
THOMABRAVO
GAIN/LINE CAPITAL PARTNERS
SILVER OAK SERVICES PARTNERS
DWHP DW Healthcare Partners
ACP ARLINGTON CAPITAL PARTNERS
BISON CAPITAL
TOWER ARCH CAPITAL
CLEARHAVEN PARTNERS
Riverside PARTNERS
PRINCETON EQUITY GROUP
LLR
SUNSTONE PARTNERS
Crest Rock Partners
NEW STATE CAPITAL PARTNERS

Sponsors presented are for illustrative purposes only and should not be considered representative sponsor relationships available to the Fund or in which the Fund will invest. A sponsor's status as Top-Tier is not a guarantee of performance and is subject to change based on Franklin Park's further review and analysis and such change may not be reflected herein. Other market participants may have different views or use different definitions of "top-tier". No assurance can be given that Franklin Park's sponsor relationships will gain the Fund access, or obtain desired allocation amounts, to investments for which a commitment is sought. The sponsors listed have been selected at the sole discretion of Franklin Park and are not intended to represent a complete list of sponsors with which Franklin Park has existing relationships. References to the sponsors in this presentation should not be considered a recommendation or solicitation for the sponsors mentioned.

Franklin Park's Co-Investment Track Record – By Vehicle

Franklin Park has historically managed five co-investment vehicles

Vehicle	Vintage Year	# of Deals	Invested Capital	Distributed Capital	Remaining Value	ROI	TVPI	Gross IRR	Net IRR
Fund I	2012-2021	41	213.3	258.7	227.5	2.3x	2.1x	22.0%	19.9%
Fund II	2015	14	73.7	80.0	70.6	2.0x	1.9x	21.9%	19.6%
Fund III	2017	17	67.7	49.2	97.9	2.2x	2.0x	50.6%	47.2%
Fund IV	2018	15	19.8	9.4	33.7	2.2x	2.0x	49.3%	45.4%
Fund V	2021	20	216.3	1.0	239.9	1.1x	1.1x	19.7%	19.5%
Total		**107**	**590.7**	**398.4**	**669.6**	**1.8x**	**1.7x**	**23.9%**	**21.8%**

As of June 30, 2022. $in millions.

Fund I represents ATRS/FP Private Equity Fund, L.P., Fund II represents Raspberry Street Fund I, L.P., Fund III represents Raspberry Street Fund II, L.P. , Fund IV represents Franklin Park Private Equity Co-Investment Fund I, L.P., and Fund V represents Franklin Park Co-Investment Fund V, L.P., Fund I, II, III and IV are discretionary separate account vehicles, and Fund V is a commingled vehicle. Funds I –V (each a "Vehicle" and together, the "Vehicles") all follow a strategy of investing in equity co-investments alongside private equity fund sponsors. See additional information in the footnotes.

Vintage Year represents the year in which the Vehicle made an initial co-investment. Fund I is an evergreen fund structure. Vintage Years for Fund I represent the years in which co-investment deals were made.

Number of Deals represents the co-investment transactions completed by each Vehicle. More than one Vehicle may be invested in a co-investment. In aggregate, the Vehicles have invested in 64 co-investments as of June 30, 2022.

ROI and Gross IRR calculations are based on the investment activity the Vehicles and are presented exclusive of Franklin Park's investment advisory fees, carried interest and Vehicle expenses. TVPI and Net IRR are net performance calculations based on the expected fees structure of the Fund applied to the investment activity of the Vehicles ("Model Performance"). No individual investor received the net performance returns presented. See further details on Model Performance in the Footnotes in the Appendix. Additional information on the risks and limitations of using model performance calculations in making investment decisions is available upon request. See additional important information in the Footnotes section in the Appendix.

Investments in private funds such as the Fund are illiquid, high-risk investments and involve substantial risk of loss. Past results are not necessarily indicative of future performance. Wherever there is the potential for profit, there is the potential for loss. No assurance can be given that the Fund will achieve its investment objectives or avoid substantial losses. See additional risks and limitations in the Footnotes in the Appendix.

FRANKLIN PARK

Key Terms

Franklin Park Co-Investment Fund VI will have the same terms as Fund V

Fund
Franklin Park Co-Investment Fund VI, L.P., a Delaware limited partnership

Strategy
To make co-investments in corporate finance private equity transactions alongside private fund sponsors

Target Size
$350 million

Investment Period
5 years

Partnership Term
10 years subject to two one-year extensions with LP approval

GP Commitment
Up to $2 million

Annual Management Fee
During the investment period, 100 bps of aggregate commitments; thereafter, 100 bps of LP net invested capital; provided that the management fee rate shall be 50 bps for existing Franklin Park clients/investors

GP Incentive
10% carried interest once 8% preferred return is achieved

FRANKLIN PARK

Investments in private funds such as the Fund are illiquid, high-risk investments and involve a substantial risk of loss. See additional discussion of risks and limitations in the Footnotes in the Appendix. The Fund terms are subject to change. Refer to the Fund's governing documents for a complete listing of terms.

Proposal

Continue co-investment exposure through Franklin Park Co-Investment Fund VI, L.P.

Size commitment the same as Franklin Park Co-Investment Fund V, L.P.:

- $65 million commitment to be considered at the February 2023 IC/board meeting (as included in the 2023 Private Equity Pacing Plan approved at the December 2022 IC/board meeting)
- $60 million to be considered at a later IC/board meeting as part of the 2024 Private Equity Pacing Plan

Appendix

Footnotes

Based in Bala Cynwyd, Pennsylvania, Franklin Park was formed in April 2003. Franklin Park is an independent, registered investment adviser with the U.S. Securities and Exchange Commission. Franklin Park assists its clients in building and managing customized investment portfolios of private market investments.

Invested Capital represents the amount of capital contributed to co-investments.

Distributed Capital represents the amount of capital distributed from co-investments.

Remaining Value represents the remaining Unrealized Value of co-investments.

Unrealized Value represents fair value of the investments as determined by Franklin Park in accordance with its valuation policy

ROI is the ratio of Distributed Capital plus Remaining Value to Invested Capital.

TVPI is the ratio of distributions plus remaining value to contributed capital.

IRR is the discount rate that results in a net present value of zero of a series of cash flows and considers both cash flow timing and amount.

Liquidity Risk:
Private fund investments such as the Fund are long-term, illiquid investments. Private funds such as the Fund generally have a term of ten years or more, and investors are generally not able to redeem their interests in private funds. Please refer to the Fund's governing documents for complete terms and conditions.

Valuation Risk:
There can be no assurance that investments with an unrealized value will be realized at the valuations shown, as actual realized returns will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations contained herein are based. Accordingly, the actual realized return of these unrealized investments may differ materially from the returns indicated herein.
.

No Investment Advice:
References to the sponsors or co-investments in this Presentation should not be considered a recommendation or solicitation for the sponsors or co-investments mentioned, nor should individual sponsor or co-investment performance be considered representative of portfolio investments held, or to be held, by the Fund.

Risk of Loss;
Past performance is not a guarantee. Investments in private equity funds such as the Fund are speculative and involve a substantial risk of loss. No assurance can be given that the Fund will achieve its investment objectives or avoid substantial losses. Information about other investments made by Franklin Park, including the past performance of other Franklin Park vehicles and investments, is provided solely to illustrate Franklin Park's investment experience, and processes and strategies used by Franklin Park in the past with respect to other Franklin Park vehicles and investments. The performance information relating to Franklin Park's previous investments is not intended to be indicative of the Fund's future results. Past performance is not necessarily indicative, or a guarantee, of future results. There can be no assurance that the Fund will achieve comparable results as those presented or that investors in the Fund will not lose any of their invested capital.

Please refer to the Fund's Private Placement Memorandum and other governing documents for discussion of additional risk factors.

Model Performance:
In order to approximate the impact on performance utilizing the applicable fee structure of the Fund, had it been charged to other Franklin Park- managed vehicles, a model is utilized to calculate performance. The model is based on the investment activity of Franklin Park-managed vehicles (the "Gross Activity"). Gross Activity represents the cash flows and Unrealized Values of the co-investments.

The model applies the expected management fee and carried interest rates of the Fund to the Gross Activity to produce a resulting stream of cash flows net of expenses, and anticipated investment advisory fees and carried interest (the "Net Activity"). The Net Activity is utilized to calculate TVPI and Net IRR performance returns ("Model Performance") approximating the impact of the Fund's fee structure to Franklin Park-managed vehicles. Model Performance is measured in U.S. dollars on an inception to date basis through June 30, 2022. No individual investor received the Model Performance returns.

Model Performance does not consider such terms as may be applicable to the Fund such as management fee offsets, capital recycling, use of credit facilities, or other terms and conditions which may have an impact on performance results.

Model Performance is hypothetical performance. Hypothetical performance results have inherent limitations and no representation is being made that any Franklin Park investor, fund, or investment portfolio will or is likely to achieve profits similar to those shown. There will be differences between hypothetical performance and actual results achieved. Hypothetical performance is for illustrative purposes only and does not reflect the actual returns of any Franklin Park investor, fund, or investment portfolio. Additional information on the risks and limitations of using model performance calculations in making investment decisions is available upon request.

Co-Investment Track Record – by Vehicle.:
The table provides performance results for four discretionary separate account vehicles (Funds I-IV) and a commingled vehicle (together, the "Vehicles") managed by Franklin Park investing in portfolios of primarily U.S. corporate finance equity investments alongside private equity fund sponsors as of June 30, 2022. Co-investments are made through direct purchase of company securities or through an interest in a special purpose vehicle that holds company securities.

ROI and Gross IRR of the Vehicles are based on the actual Gross Activity of the Vehicles in U.S. Dollars since the inception of each Vehicle and in aggregate (December 23, 2010) through June 30, 2022. TVPI and Net IRR are calculated using Model

FRANKLIN PARK

Footnotes

Performance as described above using the expected management fee and carried interest rates of the Fund. No individual investor received the performance results presented.

Total performance as presented is hypothetical performance and is from more than one portfolio and may not be a meaningful comparison for a single investment fund due to a variety of reasons including vehicle specific investment criteria, diversification, investment allocation, risk, time horizon, leverage, certain commingled fund expenses and market conditions. The performance information is for illustrative purposes only and may not be a meaningful indicator of FP Co-Invest V's performance.

Fund I(ATRS/FP Private Equity Fund, L.P.) invests in private equity funds and the appraisal rights of private companies in addition to co-investments. The performance calculations presented for Fund I are based the investment activity of Fund I only for the 41 co-investments made by the fund as of June 30, 2022, and exclude investments in 15 private funds and the appraisal rights of two private companies. The Fund I performance including the private fund investments and appraisal rights is available upon request. The investments for Fund I are extracted performance and the results may have been different if the Fund I had invested only in co-investments. Extracted performance is for illustrative purposes only and does not reflect the actual returns of any single investor, fund, or investment portfolio. The extracted performance as presented is from a subset of one fund and may not be a meaningful comparison for a single investment fund due to a variety of reasons including vehicle specific investment criteria, diversification, investment allocation, risk, and time horizon. The performance information is for illustrative purposes only and may not be a meaningful indicator of the Fund's performance.

FRANKLIN PARK

Franklin Park Associates, LLC
251 St. Asaphs Road
Three Bala Plaza, Suite 500 West
Bala Cynwyd, PA 19004

For more information, please contact us at info@franklinparkllc.com

Franklin Park Associates, LLC is an SEC registered investment advisor pursuant to the Investment Advisers Act of 1940

FRANKLIN PARK

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

R E S O L U T I O N
No. 2023-12

Approving Investment in Franklin Park Co-Investment Fund VI, L.P. with Imminent Need

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

WHEREAS, the ATRS Board has reviewed the recommendation of its private equity consultant, Franklin Park Associates, LLC, along with the recommendation of the Investment Committee and ATRS staff regarding a potential investment in **Franklin Park Co-Investment Fund VI, L.P.,** a fund of individual co-investments managed by Franklin Park; and

WHEREAS, the ATRS Board approves an investment of up to **$65 million dollars ($65,000,000.00)** in **Franklin Park Co-Investment Fund VI, L.P.,** and the Board, after its review of the timing in which the closing of the investment in **Franklin Park Co-Investment Fund VI, L.P.** may need to occur, has determined that there is an imminent need to immediately enter into the partial equity ownership agreement prior to the next scheduled meeting of the Arkansas Legislative Council. The Board also deems it financially appropriate to enter into the partial equity ownership agreement and concludes that to forego the opportunity to promptly implement its investment directives under the prudent investor rule would be inconsistent with its fiduciary duty of care to the members and annuitants;

NOW, THEREFORE, BE IT RESOLVED, that the ATRS Board approves an investment of up to **$65 million dollars ($65,000,000.00)** in **Franklin Park Co-Investment Fund VI, L.P.** and agrees to immediately move to close and subscribe the approved ATRS limited partnership interest in **Franklin Park Co-Investment Fund VI, L.P.** The total investment amount is to be determined by the private equity consultant and ATRS staff based upon the allocation available to ATRS and the overall investment objectives set by the Board**;** and

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

Adopted this 6th day of February 2023

____

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

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

SENATE BILL 115

By: Senator K. Hammer
By: Representative Warren

For An Act To Be Entitled

AN ACT TO AMEND AND UPDATE THE LAW CONCERNING SURVIVOR ANNUITY BENEFITS UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO CLARIFY SURVIVOR APPLICATION DEADLINES UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO CLARIFY A DEPENDENT CHILD'S ABILITY TO RECEIVE A DEPENDENT CHILD ANNUITY UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM WHEN THE CHILD IS CALLED TO ACTIVE MILITARY DUTY OR TRAINING; TO CLARIFY A DEPENDENT CHILD'S ELIGIBILITY FOR A DEPENDENT CHILD ANNUITY UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM WHEN THE CHILD'S PARENT HAS RETIRED BUT RETURNS TO WORK UNDER A COVERED EMPLOYER; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO AMEND AND UPDATE THE LAW CONCERNING SURVIVOR ANNUITY BENEFITS UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-710 is amended to read as follows:

24-7-710. Survivor annuity benefits.

(a)(1) If an active member with five (5) or more years of actual and reciprocal service, including credited service for the year immediately preceding his or her death, dies before the receipt of retirement benefits from the Arkansas Teacher Retirement System, then the benefits provided in this section shall be paid to eligible survivors.

(2)(A) An immediately eligible survivor is entitled to receive monthly benefits beginning the month after the death of the active member if the survivor application is filed with the system ~~within three (3) months of the death of the member~~ by the end of the sixth full calendar month following the date of the active member's death, otherwise the monthly benefits shall begin the month that the survivor application is filed with the system.

(B) If an immediately eligible survivor or the minor survivor's guardian or legal representative fails to complete the application process ~~within six (6) calendar months after~~ by the end of the sixth full calendar month following the date on which the application required under subdivision (a)(2)(A) of this section and any additional documentation required by the system is filed, ~~including the submission of any additional documentation required by the system,~~ the application shall be void unless an extension is granted by the ~~system~~ Executive Director of the Arkansas Teacher Retirement System.

(b)(1)(A)(i) Unless the active member otherwise directs an alternative beneficiary to receive a residue with a payable balance by using a beneficiary form approved by the system, ~~a~~ the active member's surviving spouse, who was married to the active member for at least the two (2) years immediately preceding the active member's death, shall receive an annuity computed in the same manner in all respects as if the active member had retired on the date of the active member's death and elected Option A under § 24-7-706 to provide one hundred percent (100%) survivor annuity benefits, including benefits applicable under § 24-7-713, for his or her surviving spouse.

(ii)(a) Unless otherwise provided by this section, a surviving spouse who is ineligible for an annuity under this section solely as a result of the active member designating an alternative beneficiary shall be eligible for an annuity under this section if the alternative beneficiary waives his or her right to the residue.

(b) If the active member does not have a residue with a payable balance, a waiver of an alternative beneficiary's right to a residue shall not be required.

~~(ii)~~(iii) The system shall continue to pay any benefits applicable under § 24-7-713 for an eligible surviving spouse, including a spouse who began receiving benefits on or after July 1, 2009.

(B)(i) If a surviving spouse is immediately eligible to receive a monthly benefit immediately after the death of ~~a~~ an active member, the immediately eligible surviving spouse is entitled to receive monthly benefits beginning the month after the death of the active member if the survivor application and all other required additional information is filed with the system w~~ithin three (3) months of the death of the member~~ by the end of the sixth full calendar month following the date of the active member's death, otherwise the monthly benefits shall begin the month that the survivor application is filed with the system if at the time of the active member's death the active member had:

(a) Accumulated twenty-five (25) years or more of credited service and qualified as eligible to receive a retirement annuity under §§ 24-7-701 and 24-7-702; or

(b) Reached sixty (60) years of age and qualified as eligible to receive a retirement annuity under § 24-7-707.

(ii) If an immediately eligible spouse fails to complete the application process ~~within six (6) calendar months after~~ by the end of the sixth full calendar month following the date on which the survivor application and additional documentation required under subdivision (b)(1)(B)(i) of this section is filed, ~~including the submission of all additional documentation required by the system,~~ the survivor application shall be void unless an extension is granted by the ~~system~~ executive director.

(C)(i) If the surviving spouse is not immediately eligible to receive monthly benefits under subdivision (b)(1)(B) of this section, the surviving spouse's benefits shall begin the later of either the month following the date the active member would have been eligible to receive benefits had the active member survived or the date that ~~an application for a surviving spouse's benefits~~ a survivor application is filed with the system.

(ii) If a surviving spouse becomes eligible for surviving spouse benefits and fails to complete the application process ~~within six (6) calendar months after~~ by the end of the sixth full calendar month following the date on which the survivor application and additional documentation required under subdivision (b)(1)(B)(i) of this section is filed, ~~including the submission of any additional documentation required by the system,~~ the survivor application shall be void unless an extension is granted by the ~~system~~ executive director.

(D) If the surviving spouse is eligible to receive the survivor annuity and the active member had not reached sixty (60) years of age at the time of the active member's death, the surviving spouse may elect to defer receipt of the annuity until the active member would have reached sixty (60) years of age, and the surviving spouse's benefits shall not be reduced under the early retirement provisions of § 24-7-702.

(E) The surviving spouse's benefits under this section are payable for the surviving spouse's lifetime.

(F) If the active member directs an alternative beneficiary by using a beneficiary form approved by the system, the active member may designate one or more residual beneficiaries to receive a lump-sum payment of the active member's residue amount under § 24-7-709 in lieu of the active member's surviving spouse.

(2) If at the time of the active member's death there are no dependent children and the surviving spouse who is eligible to receive the annuity under this subsection files with the system a written waiver of his or her right to the spousal annuity, a lump-sum distribution of the deceased active member's accumulated contributions plus regular interest may be made to the surviving spouse.

~~(3) The Board of Trustees of the Arkansas Teacher Retirement System may adopt rules to carry out the provisions of this section.~~

(c)(1)(A)(i) ~~A surviving dependent child of the member~~ An active member's surviving dependent child shall receive an annuity in an amount equal to one percent (1%) of the active member's highest salary year for each quarter of a year credited as actual service in the system but not to exceed twenty (20) quarters of a year that are credited as actual service in the system for up to a maximum of twenty thousand dollars ($20,000).

(ii) If the active member's highest salary year occurs in the year that the active member died, the system shall calculate the surviving dependent child's annuity on the basis of a full year of salary by the active member.

(B) If ~~a~~ an active member has more than three (3) surviving dependent children, the aggregate amount of the surviving dependent children's annuity shall not exceed the lesser of sixty percent (60%) of the active member's highest salary year or sixty thousand dollars ($60,000) per year and shall be divided equally among the surviving dependent children.

(2)(A) A deceased active member's child shall be considered a dependent child and eligible for the dependent child annuity until he or she reaches eighteen (18) years of age.

(B)(i) ~~The child of a deceased member is considered a dependent child and is eligible for the dependent child annuity at eighteen (18) years of age or older, but not older than twenty-three (23) years of age, if the dependent child stays continuously enrolled as a full-time student at an accredited secondary school, college, or university.~~ A deceased active member's child shall be considered a dependent child who is eligible for a dependent child annuity if the child:

(a) Is at least eighteen (18) years of age and not older than twenty-two (22) years of age; and

(b) Stays continuously enrolled as a full-time student in an accredited secondary school, college, university, or vocational-technical school.

(ii) Notwithstanding subdivision (c)(2)(B)(i)(b) of this section, a dependent child who enrolls in an accredited college, university, or vocational-technical school and defers his or her enrollment in accordance with rules promulgated by the Board of Trustees of the Arkansas Teacher Retirement System shall remain eligible to receive a dependent child annuity during his or her period of deferred enrollment.

~~(ii)~~(C) Regardless of age, a deceased active member's child who has been deemed physically or mentally incapacitated by a court of competent jurisdiction is eligible to receive a dependent child annuity for as long as the incapacity exists.

(D)(i) A dependent child may have his or her dependent child annuity temporarily suspended if the dependent child:

(a) Is called to active military duty or active military training; and

(b) Submits a copy of his or her military orders to the system.

(ii) The dependent child's dependent child annuity shall be temporarily suspended for the duration of the dependent child's participation in active military duty or active military duty training.

(iii) The dependent child's dependent child annuity shall be reinstated if the dependent child:

(a) Is at least eighteen (18) years of age and not older than twenty-two (22) years of age;

(b) Immediately enrolls as a full-time student at an accredited secondary school, college, university, or vocational-technical school after returning from active military duty or active military training; and

(c) Submits documentation of his or her enrollment at an accredited secondary school, college, university, or vocational-technical school to the system.

(3) When a dependent child ceases to ~~be a dependent~~ qualify as a dependent child or dies, the dependent child shall not be eligible to qualify as a dependent child of the deceased active member again, and his or her share of the dependent child annuity shall terminate.

(d) For the purposes of §§ 24-7-709 and 24-7-711 related to the disposition of a member's residue amount, a survivor annuity received from ~~the~~ an active member's deposit account under this section shall be considered annuity payments received by the active member or his or her designated beneficiary and shall offset any disposition of residue payable under §§ 24-7-709 and 24-7-711 to the estate of the member or to an alternate payee.

(e) If ~~the~~ an active member ~~had~~ previously received benefits from the system and has not repaid in full all amounts payable by him or her to the system, the annuity amounts otherwise provided by this section shall be withheld until the total amount owed to the system is repaid.

(f)(1) For eligibility under this section, a member is considered active for an additional fiscal year following the last fiscal year that the member renders actual service to a covered employer and obtains at least one-fourth (¼) of a year of service credit.

(2) In addition, a member is considered active for eligibility under this section if in the fiscal year of a member's death, the member earned at least ten (10) days of service credit in each quarter before and including the quarter of the member's death.

(3) Service credit used in calculating any benefits paid under

this section ~~means~~ includes days of service~~, including~~ and any paid sick leave covered by the covered employer.

(g)(1) A dependent child annuity shall be payable to each surviving child of a retiree who dies after returning to work if the child qualifies as a dependent child and is eligible for a dependent child annuity under this section and the rules and resolutions of the system.

(2) The provisions of this section that are applicable to the child of an active member shall be used to determine:

(A) Whether the child of a retiree who dies after returning to work qualifies as a dependent child who is eligible for a dependent child annuity;

(B) When the dependent child annuity is payable to the child of a retiree who dies after returning to work; and

(C) The amount of the dependent child annuity payable to the child of a retiree who dies after returning to work.

(h) A member's effective retirement date and the date when survivor benefits under this section are payable shall be determined by the law in effect at the time of a member's death.

(i) The board may adopt rules to carry out this section.

SECTION 2. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring these provisions into conformance with sound public pension policy and actuarial requirements; that the current provisions of the Arkansas Teacher Retirement System Act are unclear with regard to application deadlines, a dependent child's ability to continue receiving a dependent child annuity when the dependent child is called to active military duty or training, and the eligibility of a child of a retiree who returns to work to receive a dependent child annuity; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance and necessary for improving and protecting member benefits; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

SENATE BILL 116

By: Senator K. Hammer
By: Representative Warren

For An Act To Be Entitled

AN ACT TO ALLOW THE PURCHASE OF PERMISSIVE SERVICE CREDIT UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO ADD DEFINITIONS APPLICABLE TO THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO ALLOW THE PURCHASE OF PERMISSIVE SERVICE CREDIT UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-202, concerning definitions applicable to the Arkansas Teacher Retirement System Act, is amended to add additional subdivisions to read as follows:

<u>(45) "Gap year" means a period of time:</u>

<u>(A) In which a member:</u>

<u>(i) Was an inactive member; and</u>

<u>(ii) Either:</u>

<u>(a) Was unemployed; or</u>

<u>(b) Did not provide qualified service; and</u>

<u>(B) For which the system may grant the member permissive service credit;</u>

<u>(46) "Permissive service credit" means service:</u>

(A) That is credited under the system for the purpose of calculating a member's benefit;

(B) That has not previously been credited under the system; and

(C) For which a member contributes or pays the amount necessary to fund the benefit attributable to the service as required by the system; and

(47) "Qualified service" means the service described in 26 U.S.C. § 415(n)(3)(C)(i)-(iv), as it existed on January 1, 2023.

SECTION 2. Arkansas Code Title 24, Chapter 7, Subchapter 6, is amended to add a new section to read as follows:

24-7-613. Permissive service credit — Gap year service.

(a) A member of the Arkansas Teacher Retirement System may purchase permissive service credit for one (1) or more gap years if:

(1) The member:

(A) Has five (5) years of actual service in the system;

(B) Has left his or her position as a classroom teacher immediately before each nonconsecutive gap year or the initial gap year of consecutive gap years;

(C) Returns to his or her position as a classroom teacher after one (1) or more gap years;

(D) Accrues at least one-half (1/2) year of service credit after returning to his or her position as a classroom teacher;

(E) Was inactive during the gap year or gap years; and

(F) Is ineligible to receive free service credit for each gap year under another provision of the law applicable to this system; and

(2) Each gap year amounts to an entire fiscal year.

(b)(1) A member may purchase one (1) year of permissive service credit for each one (1) gap year.

(2) A member shall not purchase more than five (5) years of permissive service credit.

(c) Permissive service credit for one (1) or more gap years shall not be purchasable after a member retires from the system.

(d) Permissive service credit shall be credited in accordance with § 24-7-601.

(e)(1) The member shall pay the actuarial equivalent of the member's benefits to the system for each year of permissive service credit purchased.

(2) A year of permissive service credit that is being purchased by a member shall not become credited service under the system until the actuarial equivalent of the member's benefits is paid in full.

(f) At the member's request, a member's payment for permissive service credit under this section shall be refunded if the:

(1) Member ceases to be an active member before the permissive service credit is established as credited service in the system; or

(2) Permissive service credit is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 3. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

SENATE BILL 117

By: Senator K. Hammer
By: Representative Warren

For An Act To Be Entitled

AN ACT TO AMEND THE LAW CONCERNING THE TERMINATION SEPARATION PERIOD UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO AMEND THE LAW CONCERNING THE TERMINATION SEPARATION PERIOD UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-502(a)(2), concerning termination from employment for purposes of retirement eligibility under the Arkansas Teacher Retirement System, is amended to read as follows:

(2) Effective ~~September 1, 2021~~ July 1, 2023, a member shall not be terminated from employment for purposes of retirement eligibility if within ~~six (6) calendar months~~ the third full calendar month of the member's effective date of retirement the member:

(A) Becomes employed with a covered employer; and

(B) Has not attained the system's normal retirement age.

SECTION 2. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement

System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that the provisions of this act assist in addressing the shortage of teachers in Arkansas and will enable retired teachers to return to employment with public schools and public charter schools sooner; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

HOUSE BILL 1183

By: Representative Maddox
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT TO AMEND AND UPDATE PROVISIONS FOR OUTSOURCING UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO AMEND AND UPDATE PROVISIONS FOR OUTSOURCING UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-506 is amended to read as follows:

24-7-506. Outsourcing — Election to participate — Definitions.

(a) As used in this section:

(1)(A) "Covered employer" means any public school, public educational agency, or other eligible employer participating in the Arkansas Teacher Retirement System.

(B) "Covered employer" does not include a<u>:</u>

<u>(i)</u> Nonmandatory employer or a PSHE employer as defined under § 24-7-1602; <u>or</u>

<u>(ii) Covered employer that reports through the Arkansas Administrative Statewide Information System;</u>

(2)(A) "Embedded employee" means a person who:

(i) Provides an outsourced service on the premises of a covered employer; and

(ii) Is employed and paid by an outsource contractor.

(B) “Embedded employee” does not include a person who is employed by:

(i) A covered employer listed under § 24-7-202; or

(ii) An employer that offers the Arkansas Teacher Retirement System as an optional retirement plan as of the date of outsourcing;

(3) “Outsource” or “outsourcing” means the use of a contractor by a covered employer for the performance of a service common to the normal daily operation on the premises of the covered employer;

(4) “Outsource contractor” means a person who is contractually obligated under an outsourcing agreement to provide a covered employer with a service common to the normal daily operation of the covered employer;

(5) “Participating employer” means a covered employer that outsources and opts for the embedded employees of all of ~~its~~ the covered employer’s outsource contractors to become members of the Arkansas Teacher Retirement System;

(6)(A) “School nursing” means a nursing service that is required to be offered in a public school under § 6-18-706 or the Standards for Accreditation of Arkansas Public Schools and School Districts.

(B) “School nursing” does not include nursing services provided by a:

(i) School-based health clinic under § 6-18-703;

(ii) Medical clinic operated on a public school campus by a hospital or physician’s office that is under contract with the public school;

(iii) Healthcare provider other than a nurse; or

(iv) Healthcare service reimbursed or paid for by Medicaid, Medicare, health insurance, or any other third-party payer;

(7) “Service common to the normal daily operation” means and is limited to a service that:

(A) Is provided by an outsource contractor or embedded employee to a covered employer;

(B) Is physically provided or based on the premises of a covered employer;

(C) Is paid for with public funds and not with private grant funds; and

(D) Consists of one (1) or more of the following:

(i) The maintenance and operation of:

(a) One (1) or more vehicles used for the regular and daily transport of passengers; and

(b) A facility that provides support for the maintenance and operation of one (1) or more vehicles described under subdivision (a)(7)(D)(i)(a) of this section;

(ii) The maintenance and operation of a cafeteria or other food service operation;

(iii) Custodial or maintenance services for the regular and continuous maintenance, repair, and upkeep of grounds or facilities;

(iv) Security services that are not covered by another retirement system;

(v) School nursing;

(vi) Substitute teaching; or

(vii) Service as a teacher's aide; and

(8) "Surcharge employer" means a covered employer that outsources and pays a surcharge to the Arkansas Teacher Retirement System ~~in lieu of opting for the embedded employees of outsource contractors to accrue service credit in the Arkansas Teacher Retirement System~~.

(b) A covered employer that enters into an agreement to outsource a service common to the normal daily operation shall ~~make an irrevocable election to be either a participating employer or~~ become a surcharge employer within sixty (60) days of the outsourcing agreement ~~on a form provided by or in a manner established by the Arkansas Teacher Retirement System~~.

(c)(1) ~~If a covered employer elects to become a surcharge employer under this section, then the covered employer~~ A surcharge employer shall account for and remit to the Arkansas Teacher Retirement System a ~~monthly~~ surcharge of no more than four percent (4%) on the total salaries paid to all the embedded employees on an aggregate basis ~~as follows:~~.

~~(A) Five-tenths of one percent (0.5%) during the 2018 fiscal year;~~

~~(B) One percent (1%) during the 2019 fiscal year;~~

~~(C) Two percent (2%) during the 2020 fiscal year;~~

~~(D) Three percent (3%) during the 2021 fiscal year; and~~

~~(E) An amount not to exceed four percent (4%) during the 2022 fiscal year and succeeding fiscal years as established by a resolution of the Board of Trustees of the Arkansas Teacher Retirement System at a meeting of the board.~~

(2) ~~If the covered employer is outsourcing on August 1, 2017, the surcharge shall be payable beginning in the 2018 fiscal year.~~ The Board of Trustees of the Arkansas Teacher Retirement System may establish by resolution the surcharge rate for any fiscal year following the 2022 fiscal year.

(3) A surcharge adopted by the board applies to an entire fiscal year and shall be adopted ~~prior to~~ before the beginning of the fiscal year.

~~(d) If a covered employer elects to become a participating employer as provided under this section, then the covered employer shall account for and remit each of the covered employer's contributions in the same amount and in the same manner as required for covered employer contributions under § 24-7-401 and member contributions under § 24-7-406.~~

~~(e)(1)(A) A covered employer that begins outsourcing after August 1, 2017, and elects to become a participating employer may phase-in the election by selecting an effective date that is no later than the beginning of the third fiscal year after the effective date of the outsourcing agreement.~~

~~(B) During the phase-in of becoming a participating employer, the covered employer shall account for and remit a phase-in surcharge in the same amount and manner required of a surcharge employer under subsection (c) of this section.~~

~~(2)(A) If a covered employer is outsourcing on August 1, 2017, and the covered employer elects to become a participating employer, then the covered employer may phase-in the election by selecting an effective date that is no later than the beginning of the fourth fiscal year after August 1, 2017.~~

~~(B) During the phase-in of becoming a participating employer, the covered employer shall account for and remit a phase-in surcharge in the same amount and manner as required of a surcharge employer under subsection (c) of this section.~~

~~(f)(1)~~(d)(1) The Arkansas Teacher Retirement System may require a

~~covered employer that makes an election under this section~~ surcharge employer to provide any documentation necessary to collect and account for the surcharge ~~or contributions~~ as is consistent with the covered employer's election.

(2) The Arkansas Teacher Retirement System ~~may~~ shall collect an unremitted surcharge amount due, including interest, from a surcharge employer under § 24-7-401 or contribution due from a participating employer under § 24-7-406 in any manner allowed by law.

(3) If a ~~covered employer~~ surcharge employer reasonably accepts a written statement from an outsource contractor reporting the salaries paid by the outsource contractor to embedded employees for services common to the normal daily operation of the ~~covered employer~~ surcharge employer, it shall be conclusively presumed that the written statement accurately reflects the salaries subject to surcharge under this section.

~~(g)(1) A covered employer or an outsource contractor may request a determination from the Arkansas Teacher Retirement System as to whether an embedded employee performs or will perform a service common to the normal daily operation of a covered employer.~~

~~(2) A request made under subdivision (g)(1) of this section shall include:~~

~~(A) Information about the employment relationship and contract provisions that are necessary for the Arkansas Teacher Retirement System to evaluate the service provided to the covered employer; and~~

~~(B) Any additional information requested by the Arkansas Teacher Retirement System to make the determination.~~

~~(3) The board may promulgate rules necessary to administer this section.~~

~~(h)(1)~~(e)(1) The Division of Youth Services Education System shall be a participating employer and may designate any or all of its embedded employees as eligible for membership in the Arkansas Teacher Retirement System.

(2) An embedded employee of a contractor for the Division of Youth Services Education System who becomes a member of the Arkansas Teacher Retirement System shall remain a member of the Arkansas Teacher Retirement System as long as the member remains an embedded employee of a contractor for the Division of Youth Services Education System.

~~(i)~~(f) The use of the terms “employee” and “employer” in this section does not:

(1) Create or modify an employment relationship between an embedded employee and a covered employer;

(2) Create, permit, expand, or modify any liability or obligation by a covered employer to an embedded employee; or

(3) Create, permit, expand, or modify any cause of action by an embedded employee against a covered employer under any employment, labor, civil rights, or other law.

(g) The board may promulgate rules to implement this section.

SECTION 2. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act, need revision and updating to address reporting, contribution, and other administrative complexities caused by these provisions and to bring these provisions into conformance with sound public pension policy and actuarial requirements; that the revisions and updates are of great importance to members and covered employers of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance and necessary for protecting member benefits and clarifying the reporting and contribution requirements of employers participating in the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

HOUSE BILL 1184

By: Representative Maddox
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT TO AMEND THE LAW CONCERNING THE MEMBERSHIP STATUS OF CERTAIN MEMBERS OF THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO CLARIFY THE CONTRIBUTORY OR NONCONTRIBUTORY STATUS OF CERTAIN MEMBERS OF THE ARKANSAS TEACHER RETIREMENT SYSTEM WHO ENTER INTO AN EMPLOYMENT CONTRACT WITH A COVERED EMPLOYER AFTER THE START OF THE FISCAL YEAR; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO AMEND THE LAW CONCERNING THE MEMBERSHIP STATUS OF CERTAIN MEMBERS OF THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-406(e)(3)(E), concerning when a member under contract with a covered employer becomes a contributory member of the Arkansas Teacher Retirement System, is amended to add an additional subdivision to read as follows:

(iii) If a member enters into a contract with a covered employer after the start of the fiscal year, the system may prorate the number of contracted days in order to determine whether the member should be classified as a contributory member or a noncontributory member who may make an election under subdivision (e)(3)(E)(ii) of this section.

SECTION 2. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that additional clarity is necessary concerning the contributory or noncontributory membership status of certain members who enter into an employment contract with a covered employer after the start of the fiscal year; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

HOUSE BILL 1186

By: Representative A. Collins
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT TO AMEND AND UPDATE THE LAW CONCERNING ANNUITY OPTIONS UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO ALLOW A RETIRANT TO DESIGNATE BOTH SURVIVING SPOUSE AND DEPENDENT CHILDREN AS OPTION BENEFICIARIES UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO CLARIFY WHEN A SURVIVING SPOUSE OF A DISABILITY RETIRANT IS ENTITLED TO BEGIN RECEIVING PAYMENTS UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO AMEND AND UPDATE THE LAW CONCERNING ANNUITY OPTIONS UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-706(a)(2), concerning a member's annuity election and criteria that must be met for a member's nominated beneficiary to receive an annuity in accordance with the Option A — 100% Survivor Annuity option under the Arkansas Teacher Retirement System, is amended to read as follows:

(2) The member may ~~nominate~~ designate ~~a beneficiary~~ one (1) or more beneficiaries, in accordance with one (1) of the following options:

(A) Option A — 100% Survivor Annuity.

(i) Under Option A, upon the death of a ~~retirant~~ retiree, his or her reduced annuity shall be continued throughout the life of and paid ~~to such person~~ in equal shares to each person as he or she ~~shall have~~ has nominated by written designation executed and filed with the Board of Trustees of the Arkansas Teacher Retirement System before the date the first payment of his or her annuity becomes due.

(ii)(a) ~~The~~ A person designated as a beneficiary ~~by the retirant~~ of a retiree shall be~~:~~ the spouse or a dependent child of the retiree.

~~(a)~~(b) The ~~retirant's spouse for not less than one (1) year immediately preceding the first payment due date; or~~ spouse of a retiree may be designated as the retiree's beneficiary if the retiree has been married to the spouse for at least one (1) year immediately preceding the first annuity payment due date.

~~(b)~~(c) A ~~dependent child of the retirant who has been adjudged physically or mentally incapacitated by a court of competent jurisdiction~~ dependent child of a retiree may be designated as the beneficiary of the retiree if the dependent child has been:

(1) Adjudged physically or mentally incapacitated by a court of competent jurisdiction; or

(2) Found by the Social Security Administration to be disabled, as shown by a Social Security Administration determination letter;

SECTION 2. Arkansas Code § 24-7-706(a)(2)(B), concerning the Option B – 50% Survivor Annuity option under the Arkansas Teacher Retirement System, is amended to read as follows:

(B) Option B – 50% Survivor Annuity.

(i) Under Option B, upon the death of a ~~retirant~~ retiree, one-half (½) of his or her reduced annuity shall be continued throughout the life of and paid ~~to such person~~ in equal shares to each person as he or she has nominated by written designation executed and filed with the board before the date the first payment of his or her annuity becomes due.

(ii)(a) ~~The~~ A person designated as a beneficiary ~~by the retirant~~ of a retiree shall be~~:~~ the spouse or a dependent child of the retiree.

~~(a)~~(b) ~~The retirant's spouse for not less than one (1) year immediately preceding the first payment due date; or~~ The spouse of a retiree may be designated as the retiree's beneficiary if the retiree has been married to the spouse for at least one (1) year immediately precediing the first annuity payment due date.

~~(b)~~(c) A ~~dependent child of the retirant who has been adjudged physically or mentally incapacitated by a court of competent jurisdiction~~ dependent child of a retiree may be designated as the beneficiary of the retiree if the dependent child has been:

(1) Adjudged physically or mentally incapacitated by a court of competent jurisdiction; or

(2) Found by the Social Security Administration to be disabled, as shown by a Social Security Administration determination letter; or

SECTION 3. Arkansas Code § 24-7-706(a), concerning annuity options under the Arkansas Teacher Retirement System, is amended to add a new subdivision to read as follows:

(4) If both a spouse and dependent child are designated as the Option A or Option B beneficiaries of a retiree and annuity payments to either the spouse or dependent child have begun, the following shall apply:

(A) The dependent child's portion of the annuity shall not revert to the spouse if the dependent child predeceases the spouse or otherwise becomes ineligible to continue receiving annuity payments; and

(B) The spouse's portion of the annuity shall not revert to the dependent child if the spouse predeceases the dependent child or otherwise becomes ineligible to continue receiving annuity payments.

SECTION 4. Arkansas Code § 24-7-706(d), concerning the ability of a residue beneficiary under § 24-7-709 to cancel the form of annuity in effect and elect Option A – 100% Survivor Annuity option under certain conditions, is amended to add additional subdivisions to read as follows:

(4) A surviving spouse who is eligible to receive an annuity under this section may elect to receive a lump-sum distribution of the retiree's residue in lieu of the spousal annuity if:

(A) The retiree did not designate one (1) or more dependent children as a beneficiary; and

(B) The surviving spouse files a written waiver of his or her right to the spousal annuity with the system.

(5) If a residue beneficiary elects the Option A – 100% Survivor Annuity under this subsection and is the surviving spouse of a disability retiree, the same procedures used under § 24-7-710 to determine when an active member's surviving spouse is entitled to begin receiving benefit payments shall be used to determine when the residue beneficiary is entitled to begin receiving benefit payments.

SECTION 5. Arkansas Code § 24-7-706, concerning annuity options, is amended to add an additional subsection to read as follows:

(g) A retiree's effective retirement date and the date when survivor benefits under this section are payable shall be determined by the law in effect at the time of the retiree's death.

SECTION 6. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that the current provisions of the Arkansas Teacher Retirement System Act do not allow a retirant to provide for both his or her surviving spouse and dependent children in the event of the retirant's death by designating both his or her surviving spouse and dependent children as option beneficiaries; that the current provisions of the Arkansas Teacher Retirement System Act do not clearly address when the surviving spouse of a disability retirant is entitled to begin receiving benefit payments; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30; that a July 1, 2023, effective date is necessary to allow the provisions within this act to begin on the first day of the fiscal year to provide for the proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

HOUSE BILL 1187

By: Representative A. Collins
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT TO AMEND AND UPDATE THE LAW CONCERNING THE LUMP-SUM DEATH BENEFIT UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO CLARIFY THE ADMINISTRATION OF THE LUMP-SUM DEATH BENEFIT UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO CLARIFY THE ELIGIBILITY OF A RETIRED MEMBER AND A T-DROP PARTICIPANT TO RECEIVE A LUMP-SUM DEATH BENEFIT UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO AMEND AND UPDATE THE LAW CONCERNING THE LUMP-SUM DEATH BENEFIT UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-720 is amended to read as follows:

24-7-720. Lump-sum <u>death</u> benefit — Definition.

(a)(1)(A) I~~f prior to July 1, 2007, an active member of the Arkansas Teacher Retirement System with five (5) or more years of actual service, including actual service for the year immediately preceding the member's death, dies in employer service before retirement, then a lump sum of up to ten thousand dollars ($10,000) shall be paid to such persons as he or she shall have nominated by written designation duly executed and filed with the~~

~~Board of Trustees of the Arkansas Teacher Retirement System~~ If an active member, T-DROP participant, or a retired member with five (5) years of actual service, including actual service for the year immediately preceding the retired member's death, dies before July 1, 2007, then one (1) lump-sum death benefit of up to ten thousand dollars ($10,000) shall be paid in equal shares to each person designated by the member as a beneficiary in the manner required by the Arkansas Teacher Retirement System.

(B) ~~If on or after July 1, 2007, an active member of the Arkansas Teacher Retirement System with ten (10) or more years of actual service dies in employer service before retirement, then a lump sum of up to ten thousand dollars ($10,000) shall be paid to the persons he or she has nominated by written designation executed and filed with the board~~ Effective July 1, 2009, if a member who retired or became a T-DROP participant on or before July 1, 2007, with five (5) or more years of actual service dies, then one (1) lump-sum death benefit of up to ten thousand dollars ($10,000) shall be paid in equal shares to each person designated by the member as a beneficiary in the manner required by the system.

(C) If an active member, T-DROP participant, or a retired member with ten (10) or more years of actual service dies on or after July 1, 2007, then one (1) lump-sum death benefit of up to ten thousand dollars ($10,000) shall be paid in equal shares to each person designated by the member as a beneficiary in the manner required by the system.

(D)(i) If a member accrues a minimum of ten (10) years of actual, contributory service, regardless of noncontributory service accrued in combination with the contributory service, the member shall receive the maximum lump-sum death benefit as determined by the Board of Trustees of the Arkansas Teacher Retirement System under this section.

(ii) Upon the member's death, the maximum lump-sum death benefit shall be paid in equal shares to each person designated by the member as a beneficiary in the manner required by the system.

(iii) The board may set a lump-sum death benefit for noncontributory service as the board deems appropriate.

(2) ~~If there are no designated persons who survive the member, the lump sum shall be paid to the member's estate~~ If a member designates more than one (1) beneficiary, the lump-sum death benefit shall be divided equally amongst each designated beneficiary.

(3) If all of the member's designated beneficiaries do not survive the member, the lump-sum death benefit shall be paid to the member's estate.

~~(b)(1) If a retired member of the system dies prior to July 1, 2007, and the retired member accrued five (5) or more years of actual service, including actual service for the year immediately preceding the member's death, then a lump sum of up to ten thousand dollars ($10,000) shall be paid to such persons as he or she shall have nominated by written designation duly executed and filed with the board.~~

~~(2) If a retired member of the system dies on or after July 1, 2007, and the retired member accrued ten (10) or more years of actual service, including actual service for the year immediately preceding the member's death, then a lump sum of up to ten thousand dollars ($10,000) shall be paid to such persons as he or she shall have nominated by written designation duly executed and filed with the board.~~

~~(3) If there are no designated persons who survive the member, the lump sum shall be paid to the member's estate.~~

~~(c)~~(b) The amount of the lump-sum death benefit payments under this section shall be set periodically and not more often than annually by rules and resolutions of the board as the board determines is actuarially appropriate for the system.

~~(d)(1) For determining eligibility for the lump-sum death benefit under this section, "actual service" means service rendered in a position covered by the system.~~

~~(2) "Actual service" does not include purchased or free credited service or reciprocal service.~~

~~(e)(1)~~(c)(1) A benefit enhancement provided for under this section shall not be implemented if it would cause the system's unfunded actuarial accrued liabilities to exceed an eighteen-year amortization.

(2) If the system's unfunded actuarial accrued liabilities exceed an eighteen-year amortization, a benefit enhancement provided for under this section shall not be implemented until the unfunded actuarial accrued liability is reduced to a level less than the standards prescribed by § 24-1-101 et seq.

~~(f)(1)~~(d) Pursuant to the board's fiduciary duty, the board shall implement this benefit provision for lump-sum death benefit payments by either making the lump-sum death benefit payments directly from the system or by purchasing a group life insurance policy for the benefit of system members.

~~(2) A lump-sum payment under this subsection is intended to be exempt from income tax.~~

~~(g) Effective July 1, 2009, a retired member of the system who retired on or before July 1, 2007, and had five (5) or more years of actual service credited in his or her account at retirement shall have the lump-sum death benefit paid upon the retired member's death under subsection (b) of this section.~~

~~(h)~~(e) A lump-sum death benefit payment under this section is intended to be exempt from income tax.

~~(i)~~(f) For eligibility under this section, a member is considered active for an additional fiscal year following the last fiscal year that the member renders actual service in a position reported to the system by a covered employer and the member obtains at least one-fourth (¼) year of service credit.

~~(j)(1)(A) If a member accrues a minimum of ten (10) years of actual, contributory service, regardless of noncontributory service accrued in combination with the contributory service, the member shall receive the maximum lump-sum death benefit as determined by the board under this section.~~

~~(B) Upon the member's death, the lump-sum death benefit shall be paid to persons the member selects by written designation executed and filed with the board.~~

~~(2) The board may set a lump-sum benefit for noncontributory service as the board deems appropriate.~~

SECTION 2. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that the current provisions of the Arkansas Teacher Retirement System Act create ambiguity as to the proper administration of the lump-sum death benefit and the eligibility of a retiree and T-DROP participant to receive a lump-sum death benefit; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

HOUSE BILL 1188

By: Representative A. Collins
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT TO AMEND AND UPDATE THE LAW CONCERNING THE FINAL AVERAGE SALARY UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO AMEND AND UPDATE THE LAW CONCERNING THE FINAL AVERAGE SALARY UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-736(c)(2)(A), concerning the method through which full and partial service years are used to calculate a member's final average salary under the Arkansas Teacher Retirement System, is amended to read as follows:

(2)(A) Full and partial service years that are recorded as service credit shall be used in the calculation of the final average salary <u>in accordance with rules promulgated by the board</u>.

SECTION 2. Arkansas Code § 24-7-736(c)(4)(D), concerning the calculation of a member's final average salary under the Arkansas Teacher Retirement System, is amended to read as follows:

(D)<u>(i)</u> 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 the ~~salary differential~~ anti-spiking amount unless the next-highest year's value is less than or equal to the ~~percentage increase~~ anti-spiking percentage of the base salary.

(ii) Subdivision (c)(4)(D)(i) of this section shall not apply to a partial service year or a fiscal year immediately following a partial service year.

SECTION 3. Arkansas Code § 24-7-736(e), concerning the ability of the Board of Trustees of the Arkansas Teacher Retirement System to adjust a member's calculated final average salary by board resolution when certain criteria are met, is amended to read as follows:

(e) The board may adjust the final average salary calculated in accordance with subsection (c) of this section by board resolution provided that:

(1) The ~~percentage increase~~ anti-spiking percentage under subdivision (c)(4)(D) of this section is set no lower than one hundred five percent (105%) per year and no higher than one hundred twenty percent (120%) per year; and

(2) The ~~salary differential~~ anti-spiking amount permitted under subdivision (c)(4)(D) of this section is set no lower than one thousand two hundred fifty dollars ($1,250) per year and no higher than five thousand dollars ($5,000) per year.

SECTION 4. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

HOUSE BILL 1199

By: Representative Perry
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT TO PERMIT A REFUND OF UNUSED PURCHASED SERVICE CREDIT UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO PERMIT A REFUND OF UNUSED PURCHASED SERVICE CREDIT UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-1-107(b)(1)(B), concerning credit for federal service for a member of the Arkansas Teacher Retirement System, is amended to read as follows:

(B)(i) An active member of the Arkansas Teacher Retirement System shall receive credit for the member's federal service upon the payment of the cost of service under § 24-7-502(b) and as prescribed by the Board of Trustees of the Arkansas Teacher Retirement System.

(ii) At the member's request, a member's payment for federal service credit under this section shall be refunded if the:

(a) Member ceases to be an active member before the federal service credit is established as credited service in the system; or

(b) Federal service credit is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 2. Arkansas Code § 24-7-602(b), concerning military service credit for a member of the Arkansas Teacher Retirement System, is amended to read as follows:

(b)(1) All United States Armed Forces service not otherwise creditable under this section shall be creditable, provided the member pays to the system the actuarial equivalent for the service credit.

(2) At the member's request, a member's payment for United States Armed Forces service credit under this subsection shall be refunded if the:

(A) Member ceases to be an active member before the United States Armed Forces service credit is established as credited service in the system; or

(B) United States Armed Forces service credit is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 3. Arkansas Code § 24-7-603, concerning service credit under the Arkansas Teacher Retirement System for service rendered in another state under similar circumstances, is amended to add an additional subsection to read as follows:

(f) At the member's request, a member's payment under this section shall be refunded if the:

(1) Member ceases to be an active member before the out-of-state service is established as credited service in the system; or

(2) Out-of-state service is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 4. Arkansas Code § 24-7-604, concerning service credit under the Arkansas Teacher Retirement System for service rendered at an overseas school, is amended to add an additional subsection to read as follows:

(c) At the member's request, a member's payment under this section shall be refundable if the:

(1) Member ceases to be an active member before the overseas service is established as credited service in the system; or

(2) Overseas service is not otherwise used to establish the

member's eligibility for retirement under the system.

SECTION 5. Arkansas Code § 24-7-605, concerning service credit under the Arkansas Teacher Retirement System for service rendered as a member of the General Assembly, is amended to add an additional subsection to read as follows:

(c) At the member's request, member's payment under this section shall be refunded if the:

(1) Member ceases to be an active member before the General Assembly service is established as credited service in the system; or

(2) General Assembly service is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 6. Arkansas Code § 24-7-606(a)(1), concerning a public school teacher or administrator's ability to receive credited service under the Arkansas Teacher Retirement System for leave of absence to obtain an advanced degree at an institution of higher learning or to fulfill the requirements of a scholarship or grant, is amended to read as follows:

(a)(1) ~~From and after June 28, 1985, any~~ A public school teacher or administrator who is a member of the Arkansas Teacher Retirement System and takes a leave of absence from a school in order to obtain an advanced degree at an institution of higher learning or to fulfill the requirements of a scholarship or grant shall be eligible, upon application, to receive credited service in the system for the time of actual enrollment in the institution.

SECTION 7. Arkansas Code § 24-7-606, concerning the purchase of service credit under the Arkansas Teacher Retirement System for time spent on a leave of absence from a school under certain conditions, is amended to add an additional subsection to read as follows:

(d) At the member's request, a member's payment under this section shall be refunded if the:

(1) Member ceases to be an active member before the service for leave of absence to obtain an advanced degree at an institution of higher learning or to fulfill the requirements of a scholarship or grant is established as credited service in the system; or

(2) Service for leave of absence to obtain an advanced degree at

an institution of higher learning or to fulfill the requirements of a scholarship or grant is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 8. Arkansas Code § 24-7-607(b)(3)(B)(ii), concerning when private school service becomes credited service under the Arkansas Teacher Retirement System, is amended to read as follows:

(ii) ~~If a member ceases to be an active member before the private school service has been established as system-credited service, the member payments contributed under this section shall be refunded to the member upon request~~ At the member's request, a member's payment for certified private school service credit shall be refunded if the:

(a) Member ceases to be an active member before the certified private school service is established as credited service in the system; or

(b) Certified private school service is not otherwise used to establish the member's eligibility for retirement under the system;

SECTION 9. Arkansas Code § 24-7-607(c)(2)(B)(ii), concerning when noncertified private school service or private education-related entity private school service becomes credited service under the Arkansas Teacher Retirement System, is amended to read as follows:

(ii) ~~If a member ceases to be an active member before the noncertified service has been established as system-credited service, the member payments contributed under this section shall be refunded to the member upon request~~ At the member's request, a member's payment for noncertified private school service credit or noncertified private education-related entity private school service shall be refundable if the:

(a) Member ceases to be an active member before the noncertified private school service or private education-related entity private school service is established as credited service in the system; or

(b) Noncertified private school service or private education-related entity private school service is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 10. Arkansas Code § 24-7-610(f), concerning the refund of member payments contributed to the Arkansas Teacher Retirement System when a member ceases to be an active member before service in the National Guard or the armed forces reserve has been established as system-credited service, is amended to read as follows:

(f) ~~If a member ceases to be an active member before the service in the National Guard or the armed forces reserve has been established as system-credited service, the member payments contributed as specified in subdivision (b)(1)(C) of this section shall be refundable~~ At the member's request, a member's payment under this section shall be refunded if the:

(1) Member ceases to be an active member before the service in the National Guard or the armed forces reserve is established as credited service in the system; or

(2) Service in the National Guard or the armed forces reserve is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 11. Arkansas Code § 24-7-611, concerning the purchase of service credit under the Arkansas Teacher Retirement System for domestic federal service rendered as a teacher or administrator at a facility administered by the United States Department of Defense, is amended to add an additional subsection to read as follows:

(e) At the member's request, a member's payment under this section shall be refunded if the:

(1) Member ceases to be an active member before the domestic federal service is established as credited service in the system; or

(2) Domestic federal service is not otherwise used to establish the member's eligibility for retirement under the system.

SECTION 12. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that under the current provisions of the Arkansas Teacher Retirement System Act, a member is unable to receive a refund of certain types of purchased service credit when the member becomes inactive or the purchased service is not otherwise used to establish the member's retirement eligibility; that this act would allow members to receive a refund of purchased service credit when the member becomes inactive or the purchased service is not otherwise used to establish the member's retirement eligibility; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

State of Arkansas
94th General Assembly
A Bill
Regular Session, 2023

HOUSE BILL 1200

By: Representative Perry
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT CONCERNING AN INACTIVE MEMBER'S ELIGIBILITY FOR FREE MILITARY SERVICE CREDIT AND ABILITY TO PURCHASE MILITARY, CONTRIBUTORY, AND FEDERAL SERVICE CREDIT IN THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

CONCERNING AN INACTIVE MEMBER'S ELIGIBILITY FOR FREE MILITARY SERVICE CREDIT AND ABILITY TO PURCHASE MILITARY, CONTRIBUTORY, AND FEDERAL SERVICE CREDIT IN THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-1-107(b)(1)(B), concerning recognition of federal retirement programs, is amended to read as follows:

(B) ~~An active~~ A member of the Arkansas Teacher Retirement System shall receive credit for the member's federal service upon the payment of the cost of service under § 24-7-502(b) and as prescribed by the Board of Trustees of the Arkansas Teacher Retirement System.

SECTION 2. Arkansas Code § 24-7-406(e)(1)(B)(iv), concerning retirement fund assets, accounts, members' deposit accounts, and contributions under the Arkansas Teacher Retirement System, is amended to read as follows:

(iv) ~~An active~~ A member who has previous noncontributory credited service may change credited service on which a member contribution has not been paid to contributory credited service by paying the system the actuarial equivalent of the member benefits.

SECTION 3. Arkansas Code § 24-7-602(a)(1) and (2), concerning military service credit under the Arkansas Teacher Retirement System, are amended to read as follows:

(a)(1) If ~~an active~~ a member of the Arkansas Teacher Retirement System enters the United States Armed Forces during a period that a federal military draft was in effect and obtains a refund of member contributions from the system, the compulsory military service required of the member may be established as free credited service under this subchapter, if after an honorable discharge from the United States Armed Forces and before retirement the member repays to the system the actuarial equivalent of the member's refunded service.

(2)(A) ~~In addition, an active member who entered the United States Armed Forces during any period that a federal military draft was in effect and who becomes an active member after an honorable discharge from the United States Armed Forces is eligible to receive free military service credit under this section, whether or not the member has five (5) or more years of credited service at the time of the reemployment.~~ In addition, a member is eligible to receive free military service credit under this section if the member:

(i) Entered the United States Armed Forces during any period that a federal military draft was in effect; and

(ii) Becomes an active member after an honorable discharge from the United States Armed Forces.

(B) Subdivision (a)(2)(A) of this section applies to a member whether or not the member has five (5) or more years of credited service at the time of the member's reemployment.

SECTION 4. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement

System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring these provisions into conformance with sound public pension policy and actuarial requirements; that under the current provisions of the Arkansas Teacher Retirement System Act, inactive members are ineligible for free military service credit and cannot purchase military, contributory, and federal service credit; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance and necessary for improving and protecting member benefits; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

HOUSE BILL 1201

By: Representative Warren
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT TO ENACT THE ARKANSAS TEACHER RETIREMENT SYSTEM'S GENERAL OMNIBUS ACT; TO CORRECT CERTAIN REFERENCES TO "ALTERNATE RETIREMENT PLAN", "COVERED EMPLOYER", "CREDITED SERVICE", "RETIRANT", "SERVICE CREDIT", AND "THE SYSTEM"; TO AMEND AND ADD CERTAIN DEFINITIONS APPLICABLE TO THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO CLARIFY THE LAW CONCERNING BENEFIT INCREASES AND COMPUTATION, DEADLINES, SYSTEM ASSETS, TERMINATION SEPARATION PERIOD, SERVICE CREDIT, SECOND REVIEWS OF DISABILITY RETIREMENT APPLICATIONS, A MEMBER'S RESIDUE, CONTRACT BUYOUT SETTLEMENT AGREEMENTS, THE DE MINIMIS AMOUNT, AND OTHER VARIOUS PROVISIONS APPLICABLE TO THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO ENACT THE ARKANSAS TEACHER RETIREMENT SYSTEM'S GENERAL OMNIBUS ACT; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 21-5-411(a)(1)(A)(v), concerning the eligibility of certain retired employees to participate in the State and Public School Life and Health Insurance Program, is amended to read as follows:

(v) An alternate retirement plan ~~of a qualifying institution under~~ as defined in § ~~24-7-801~~ 24-7-202; and

SECTION 2. Arkansas Code § 24-2-302(3)(D), concerning the classification under the Arkansas Teacher Retirement System of a person employed in a position requiring professional training or certification with an area vocational-technical school or employed by the Arkansas Educational Television Commission, is amended to read as follows:

(D) Any person employed in a position requiring professional training or certification with an area vocational-technical school or employed by the Arkansas Educational Television Commission, except that employees of area vocational-technical schools and the Division of Career and Technical Education, the Adult Education Section, and the Office of Skills Development, who have elected to participate in an alternate retirement plan established by ~~§§ 24-7-901 and 24-7-903 — 24-7-908~~ § 24-7-901 et seq. shall be active members of the alternate retirement plan; and

SECTION 3. Arkansas Code § 24-2-401(3)(F), concerning the definition of "reciprocal system" that is applicable to public employee retirement plans, is amended to read as follows:

(F) An alternate retirement plan ~~for:~~

~~(i) A college, university, or the Division of Higher Education provided for under § 24-7-801 et seq.; or~~

~~(ii) A vocational-technical school or the Division of Career and Technical Education, the Adult Education Section of the Division of Workforce Services, the Division of Higher Education, and the Office of Skills Development, with respect to plans provided for under § 24-7-901 et seq.~~ as defined in § 24-7-202; or

SECTION 4. Arkansas Code § 24-2-401(4)(D), concerning the definition of "state employer" that is applicable to public employee retirement plans, is amended to read as follows:

(D) A public employer ~~who is:~~

~~(i) A college, university, or the Division of Higher Education whose employees are covered by an alternate retirement plan~~

~~provided for under § 24-7-801 et seq.; or~~ ~~(ii) A vocational-technical school or the Division of Career and Technical Education, the Adult Education Section, and the Office of Skills Development, whose employees are covered by an alternate retirement plan provided for under § 24-7-901 et seq.~~ that has an alternate retirement plan as defined in § 24-7-202;

SECTION 5. Arkansas Code § 24-2-402(g)(6), concerning death-in-service benefits as to an alternate retirement plan, is amended to read as follows:

(6) If the reciprocal system is an alternate retirement plan ~~under § 24-7-801 et seq. or § 24-7-901 et seq.~~ as defined in § 24-7-202, death-in-service benefits shall be contingent on death-in-service benefits having been provided by the alternate retirement plan and having been selected by the member as a benefit.

SECTION 6. Arkansas Code § 24-2-402(k), concerning the payment of payable benefits in accordance with terms specified in a written alternate retirement plan document, is amended to read as follows:

(k) If the reciprocal system is an alternate retirement plan ~~for a college, a university, or the Division of Higher Education provided for under § 24-7-801 et seq., or for a vocational-technical school or the Department of Career Education provided for under § 24-7-901 et seq.~~ as defined in § 24-7-202, the benefits payable shall be in accordance with terms specified in the written alternate retirement plan document for purchasing the insurance policies or annuity contracts, both fixed and variable in nature, for the participants.

SECTION 7. Arkansas Code § 24-4-901(a)(1)(F), concerning credited service and reciprocity under the Arkansas Public Employees' Retirement System and the amount of annuity awarded to a member employed by an alternate retirement plan, is amended to read as follows:

(F) An alternate retirement plan ~~under § 24-8-101 et seq. or § 24-9-201 et seq.~~ as defined in § 24-7-202; or

SECTION 8. Arkansas Code § 24-4-901(a)(3)(B), concerning credited service and reciprocity under the Arkansas Public Employees' Retirement

System and the computation of final average compensation for credited service in the Arkansas Judicial Retirement System or an alternate retirement plan, is amended to read as follows:

(B) Compensation for credited service in the Arkansas Judicial Retirement System or an alternate retirement plan ~~under § 24-8-101 et seq. or § 24-9-201 et seq.~~ as defined in § 24-7-202 shall not be used to determine final average compensation.

SECTION 9. Arkansas Code § 24-4-901(b)(1)(F), concerning credited service and reciprocity under the Arkansas Public Employees' Retirement System and what criteria an annuity is determined from when a member of an alternate retirement plan retires due to disability or dies in service, is amended to read as follows:

(F) An alternate retirement plan ~~under § 24-8-101 et seq. or § 24-9-201 et seq.~~ as defined in § 24-7-202; or

SECTION 10. Arkansas Code § 24-4-901(b)(4), concerning credited service and reciprocity under the Arkansas Public Employees' Retirement System and the contingency of disability and death-in-service benefits being awarded if provision of the benefits were provided to the alternate retirement plan and were selected by the member as a benefit, is amended to read as follows:

(4) If a member has service credit in an alternate retirement plan ~~under § 24-8-101 et seq. or § 24-9-201 et seq.~~ as defined in § 24-7-202, disability and death-in-service benefits shall be contingent on provision of those benefits having been provided by the alternate retirement plan and having been selected by the member as a benefit.

SECTION 11. Arkansas Code § 24-4-901(d)(6), concerning credited service and reciprocity under the Arkansas Public Employees' Retirement System and the provision of reciprocal service credits between contributory and noncontributory members of an alternate retirement plan, is amended to read as follows:

(6) An alternate retirement plan ~~for a college, university, or the Division of Higher Education provided for under § 24-8-101 et seq. or for a vocational-technical school or the Division of Career and Technical~~

~~Education, the Adult Education Section, and the Office of Skills Development, provided for under § 24-9-201 et seq.~~ as defined in § 24-7-202; and

SECTION 12. Arkansas Code § 24-7-202(7), concerning the definition of "annuity" applicable to the Arkansas Teacher Retirement System, is amended to read as follows:

(7) "Annuity" means an amount payable to a ~~retirant~~ retiree each fiscal year by the Arkansas Teacher Retirement System in equal monthly installments;

SECTION 13. Arkansas Code § 24-7-202(14), concerning the definition of "credited service" applicable to the Arkansas Teacher Retirement System, is amended to read as follows:

(14) "Credited service" means service which is ~~creditable~~ credited as service by the Arkansas Teacher Retirement System;

SECTION 14. Arkansas Code § 24-7-202(19)(D)(iii), concerning the definition of "employment with a school" applicable to the Arkansas Teacher Retirement System, is amended to read as follows:

(iii) Each education-related agency or organization shall ~~be~~:

(a) ~~Approved~~ Be approved according to rules established by the ~~board~~ Board of Trustees of the Arkansas Teacher Retirement System;

(b) ~~Considered an employer under subdivision (18) of this section~~ Become a covered employer at the time that an employee elects to become or remain a member of the Arkansas Teacher Retirement System; ~~and~~

(c) Be considered a covered employer only for each employee who elects to become or remain a member of the Arkansas Teacher Retirement System; and

(d) ~~Responsible~~ Be responsible for all required employer contributions;

SECTION 15. Arkansas Code § 24-7-202(21)(B), concerning the definition of "inactive member" applicable to the Arkansas Teacher Retirement System, is amended to read as follows:

(B) Not a ~~retirant~~ retiree;

SECTION 16. Arkansas Code § 24-7-202(28), concerning the definition of "normal retirement age" applicable to the Arkansas Teacher Retirement System, is amended to read as follows:

(28) "Normal retirement age" means:

(A) Sixty-five (65) years of age if the member has at least five (5) years of actual service or reciprocal service; or

(B) ~~At least sixty (60) years of age if the member has a combined total of thirty-eight (38) years or more of credited service in the Arkansas Teacher Retirement System, Teacher Deferred Retirement Option Plan, or reciprocal service in another eligible state retirement system~~ Sixty (60) years of age or older if the member's age and the member's combined years of credited service in the Arkansas Teacher Retirement System, Teacher Deferred Retirement Option Plan, or reciprocal service in another eligible state retirement system total ninety-eight (98);

SECTION 17. Arkansas Code § 24-7-202(32), concerning the definition of "retiree" or "retirant" under the Arkansas Teacher Retirement System, is amended to read as follows:

(32) "Retiree" ~~or "retirant"~~ means a member receiving an Arkansas Teacher Retirement System annuity;

SECTION 18. Arkansas Code § 24-7-202, concerning definitions applicable to the Arkansas Teacher Retirement System, is amended to add additional subdivisions to read as follows:

(45)(A) "Benefit enhancement" means any change to the current benefit policy for a retired, active, or inactive member of the Arkansas Teacher Retirement System or T-DROP participant that increases the amortization period by one (1) year or more.

(B) Benefit enhancement does not include any change that is required to comply with federal law, prevent a manifest injustice, correct an error, avoid an unintended consequence of an existing statutory provision, or prevent undue hardship on any benefit participant or class of benefit participants.

(46) “Employment with a covered employer” means the employment of an employee that would require a covered employer to pay employer contributions to the system; and

(47) "Residue" for the purposes of § 24-7-701 et seq. means the difference between the accumulated contributions and regular interest credited to the retirement reserve account as of the member’s effective date of retirement and the total amount of retirement annuities paid.

SECTION 19. Arkansas Code § 24-7-207 is amended to read as follows:

24-7-207. Increase in benefit amount.

(a)(1) The Board of Trustees of the Arkansas Teacher Retirement System is authorized ~~by this act~~ to raise the level of benefits provided to the current ~~retirants~~ retirees and other beneficiaries of the Arkansas Teacher Retirement System ~~to a comparable level increase to match the increase in benefits that would accrue to active members as a result of any reduction of the calculation of “final average salary” to not less than a three-year period nor more than the five-year period in accordance with any rules the board might promulgate~~.

(2) The board may raise the level of benefits to a comparable level increase that matches the increase in benefits that would accrue to active members as a result of any reduction caused by setting the applicable number of years used in computing final average salary for retirement benefits at not less than three (3) years and not more than five (5) years in accordance with any rules that the board may promulgate.

(b) The amount of any increase for ~~retirants~~ retirees and other beneficiaries shall also be determined in accordance with the rules of the board as is actuarially appropriate for the system.

SECTION 20. Arkansas Code § 24-7-301(4) and (5), concerning the membership of the Board of Trustees of the Arkansas Teacher Retirement System and the election thereof, are amended to read as follows:

(4)(A) Three (3) ~~retirants~~ retirees shall be elected ~~retirant~~ retiree trustees by the retirees of the system.

(B) Each ~~retirant~~ retiree trustee shall be a ~~retirant~~ retiree with an annuity being paid by the system at the beginning of his or her term of office;

(5) The member and ~~retirant~~ retiree trustees shall be elected in accordance with rules as have been adopted by the board to govern the elections; and

SECTION 21. Arkansas Code § 24-7-302(a)(2)(B), concerning the ineligibility of a retirant trustee to serve on the Board of Trustees of the Arkansas Teacher Retirement System after becoming active, is amended to read as follows:

(B) A ~~retirant~~ retiree trustee is ineligible to serve after becoming active.

SECTION 22. Arkansas Code § 24-7-305(b)(5), concerning the ability of the Board of Trustees of the Arkansas Teacher Retirement System to set a de minimis amount to charge for distributing or collecting various moneys, is amended to read as follows:

(5) The board may set or amend by a motion or resolution at any board meeting a de minimis amount ~~of twenty-five dollars ($25.00) or less~~ concerning the system's obligation to distribute or collect payments, penalties, interest, funds, or moneys.

SECTION 23. Arkansas Code § 24-7-403(b), concerning the restriction of trustees, officers, and employees of the Board of Trustees of the Arkansas Teacher Retirement System from holding an interest in the gains or profits of any of the board's investments, is amended to read as follows:

(b)(1) Except as to the rights of a member, ~~retirant~~ retiree, or beneficiary, ~~no trustee and no officer or employee~~ a trustee, officer, or employee of the board shall not have any direct or indirect interest~~, direct or indirect,~~ in the gains or profits of any investment made by the board.

(2) ~~Nor shall any of them, directly or indirectly, for himself or herself or as an agent, in any manner use the assets of the system except to make such current and necessary payments as are authorized by the board; nor shall any of them become an endorser or surety or become in any manner an obligor for moneys loaned by or borrowed from the board~~ A trustee, officer, or employee of the board shall not directly or indirectly use the assets of the system in any manner for himself or herself or as an agent.

(3) A trustee, officer, or employee of the board shall not in

any manner become an endorser, surety, or obligor for moneys loaned by or borrowed from the board.

(4) A trustee, officer, or employee of the board may make such current and necessary payments as are authorized by the board.

SECTION 24. Arkansas Code § 24-7-408 is amended to read as follows:

24-7-408. Retirement fund assets accounts — Retirement reserve account.

(a) The retirement reserve account shall be the account from which shall be paid all annuities and benefits in lieu of annuities payable as provided in this act to ~~retirants~~ retirees who retired on account of superannuation or disability and to beneficiaries of such ~~retirants~~ retirees.

(b) If a disability ~~retirant~~ retiree returns to teaching service:

(1) The amount of his or her accumulated contributions at the time of his or her disability retirement shall be transferred from the retirement reserve account to the members' deposit account; and

(2) The remainder of his or her annuity reserve at the time of return shall be transferred from the retirement reserve account to the employer accumulation account.

SECTION 25. Arkansas Code § 24-7-501(a)(2)(B)(iii), concerning the employer contribution rate under the Arkansas Teacher Retirement System being established at a rate necessary to fund liabilities, is amended to read as follows:

(iii) The employer contribution rate for this closed system shall be established at a rate necessary to fund all present and future liabilities until such time as there are no longer members, ~~retirants~~ retirees, or deferred annuitants.

SECTION 26. Arkansas Code § 24-7-502(a)(6), concerning restrictions on a member during his or her termination separation period under the Arkansas Teacher Retirement System, is amended to read as follows:

(6) During the termination separation period, the member shall remain terminated and shall not:

(A) Form an employment relationship with ~~any system-covered employer~~ a covered employer;

(B) Render any compensable services to or on behalf of ~~any system-covered employer~~ a covered employer, except that a member may ~~provide~~ perform volunteer activities ~~at a system-covered employer~~ for a covered employer that ~~does~~ do not have the effect of holding a position open for the member during a termination separation period; ~~and~~

(C) Exercise any authority to act as a representative of ~~any system-covered employer~~ a covered employer or exercise any authority over employees of ~~any system-covered employer~~ a covered employer; or

(D) Be indirectly employed by or through an independent contractor, limited liability company, partnership, corporation, or legal entity that is employed by a covered employer if the member has substantial control of the employer-employee relationship, including without limitation the ability to negotiate rates of pay with the covered employer or assign work and work hours to the member.

SECTION 27. Arkansas Code § 24-7-601(e)(5), concerning the provision of a benefit amount that is not dependent on length of credited service under the Arkansas Teacher Retirement System, is amended to read as follows:

(5) When the Arkansas Teacher Retirement System provides a benefit amount that is not dependent on length of credited service, the benefit amount shall be reduced to the proportion that actual system service bears to total ~~reciprocal system-credited~~ service credited by a reciprocal system.

SECTION 28. Arkansas Code § 24-7-601(g)(1), concerning concurrent service earned in the Arkansas Teacher Retirement System and reciprocal systems, is amended to add an additional subdivision to read as follows:

(C) A member's part-time employment with a PSHE employer or an employer covered by the Arkansas Public Employees' Retirement System shall not prevent the member from earning service credit under the Arkansas Teacher Retirement System if the member does not earn service credit in an alternate retirement plan or the Arkansas Public Employees' Retirement System.

SECTION 29. Arkansas Code § 24-7-602(c)(1), concerning military service credit under the Arkansas Teacher Retirement System when a member leaves employment with a school to serve in the uniformed services of the United States and later returns to employment with a school, is amended to read as follows:

(c)(1)(A) ~~Effective December 12, 1994, a~~ A member who leaves employment with a school or employment with a covered employer to serve, on a voluntary or involuntary basis, in the uniformed services of the United States and returns to employment with a school or employment with a covered employer shall be treated as not having incurred a break in service with the employer.

(B) The employer shall certify to the system that reemployment was in accordance with the requirements set forth in section 4312 of the Uniformed Services Employment and Reemployment Rights Act of 1994, Pub. L. No. 103-353.

SECTION 30. Arkansas Code § 24-7-701(a)(1)(B), concerning the time frame necessary for a member to submit a complete application for voluntary retirement under the Arkansas Teacher Retirement System, is amended to read as follows:

(B) If a member fails to submit a complete retirement application ~~within six (6) calendar months after~~ by the end of the sixth full calendar month immediately following the effective date of benefits, including all additional documentation required by the system, the application shall be void unless an extension has been granted by the ~~system~~ Executive Director of the Arkansas Teacher Retirement System.

SECTION 31. Arkansas Code § 24-7-701(e)(1), concerning when a member may cancel an application for voluntary retirement benefits under the Arkansas Teacher Retirement System, is amended to read as follows:

(e)(1) A member may cancel an application for voluntary retirement benefits ~~up to two (2) calendar months after~~ any time before the end of the second full calendar month immediately following the effective date of benefits.

SECTION 32. Arkansas Code § 24-7-702(a)(1)(A) and (B), concerning a member's application for voluntary early retirement under the Arkansas Teacher Retirement System, are amended to read as follows:

(a)(1)(A) Except as provided under subdivision (a)(2) of this section, an active or inactive member who has a combined total of twenty-five (25) or more years of actual and reciprocal service, including purchased or free credited service, but has not attained sixty (60) years of age and is not eligible for retirement under § 24-7-701 may voluntarily retire early by filing a written application with the ~~Board of Trustees of the Arkansas Teacher Retirement System~~ Arkansas Teacher Retirement System.

(B) If a member fails to submit a complete retirement application ~~within six (6) calendar months of~~ by the end of the sixth full calendar month immediately following the effective date of benefits, including all additional documentation required by the Arkansas Teacher Retirement System, the application shall be void unless an extension is granted by the ~~system~~ Executive Director of the Arkansas Teacher Retirement System.

SECTION 33. Arkansas Code § 24-7-702(f)(1), concerning when a member may cancel an application for early voluntary retirement benefits under the Arkansas Teacher Retirement System, is amended to read as follows:

(f)(1) A member may cancel an application for early voluntary retirement benefits up to two (2) full calendar months after the effective date of benefits.

SECTION 34. Arkansas Code § 24-7-704(a)(1)(D)(i) and (ii), concerning when a member must submit an application and accompanying documentation for disability retirement under the Arkansas Teacher Retirement System, are amended to read as follows:

(D)(i) A member has ~~six (6) calendar months from~~ until the end of the sixth full calendar month immediately following the date of his or her application for disability retirement to submit a completed application and accompanying documentation.

(ii) If a member does not provide all accompanying documentation requested by the system ~~within the six (6) calendar months~~ by the end of the sixth full calendar month immediately following the date of his or her application for disability retirement, the system shall:

(a) Submit the application to the medical committee for review as complete; or

(b) Withdraw the application at the request of the member unless an extension is granted by the ~~system~~ Executive Director of the Arkansas Teacher Retirement System.

SECTION 35. Arkansas Code § 24-7-704(a)(1)(G) and (H), concerning actions by the medical committee related to when a member submits an application for disability retirement under the Arkansas Teacher Retirement System, are amended to read as follows:

(G) If the medical committee requests additional documentation upon initial review, a member has ~~six (6) calendar months from~~ until the end of the sixth full calendar month immediately following the date of a medical committee request to submit any additional accompanying documentation unless an extension is granted by the ~~system~~ executive director.

(H)(i) If the medical committee finds that a member is not qualified to receive disability benefits, written notice of the medical committee's finding shall be sent to the member and the member may request a second review provided the member submits additional medical documentation.

(ii)(a) ~~A second review may be requested one (1) time~~ A member may request a second review one (1) time for each application for disability retirement filed by the member.

(b) A member's option to request a second review does not apply to a disability retiree who applies for a review under subsection (b) of this section.

(iii) The member has ~~six (6) calendar months~~ until the end of the sixth full calendar month immediately following the date of the written notice to submit additional medical documentation unless an extension is granted by the ~~system~~ executive director.

SECTION 36. Arkansas Code § 24-7-704(a)(3)(B), concerning when a member must submit all documents and election forms required to begin annuity payments for disability retirement under the Arkansas Teacher Retirement System, is amended to read as follows:

(B) If a member does not submit the required documents ~~within six (6) calendar months after~~ by the end of the sixth full calendar month immediately following the date on which the medical committee finds that the member qualifies to receive disability benefits, the member's application shall be void unless an extension has been granted by the ~~system~~ executive director.

SECTION 37. Arkansas Code § 24-7-704(a)(4), concerning restrictions on when a member is eligible to begin receiving disability retirement payments under the Arkansas Teacher Retirement System, is amended to read as follows:

(4) To begin receiving disability retirement, a member shall not:

(A) Be employed by a ~~system-covered employer~~ covered employer; or

(B) ~~Be indirectly employed by or through an independent contractor, limited liability company, partnership, corporation, or legal entity that is employed by a system-covered employer if the member has substantial control of the employer-employee relationship, including without limitation the ability to negotiate rates of pay with the system-covered employer or assign work and work hours to the member~~ Unless otherwise provided by law, perform any action described in § 24-7-502(a)(6).

SECTION 38. Arkansas Code § 24-7-704(b)(3)(C)(iii), concerning actions not taken by a disability retiree under the Arkansas Teacher Retirement System that will cause termination of disability retirement benefits, is amended to read as follows:

(iii) Apply for a review by the system's medical committee ~~within three (3) months of disability benefits ceasing~~ by the end of the third full calendar month immediately following the cessation of disability benefits due to the lack of a Social Security Administration determination letter finding that the disability retiree is unable to perform his or her former work duties as described in subdivision (a)(1)(E)(iii) of this section.

SECTION 39. Arkansas Code § 24-7-704(b)(3)(D)(i), concerning certain conditions that allow a disability retiree under the Arkansas Teacher Retirement System to seek a review by the system's medical committee, is amended to read as follows:

(D)(i) A disability retiree who seeks and fails to receive a determination letter finding the disability retiree is unable to perform his or her former work duties as described in subdivision (a)(1)(E)(iii) of this section by the Social Security Administration may seek a review permitted under subdivision (b)(3)(C)(iii) of this section no earlier than three (3) full calendar months before the date on which the member's disability retirement would otherwise end and no later than ~~three (3) months after~~ the end of the third full calendar month immediately following the termination of disability retirement.

SECTION 40. Arkansas Code § 24-7-706(a)-(e), concerning annuity options under the Arkansas Teacher Retirement System, are amended to read as follows:

(a)(1) Before the date the first payment of his or her annuity becomes due, a member may elect to receive his or her annuity as a straight life annuity, or he or she may elect to receive the actuarial equivalent, at that time, of his or her straight life annuity in a reduced annuity payable throughout his or her life.

(2) The member may nominate a beneficiary, in accordance with one (1) of the following options:

(A) Option A — 100% Survivor Annuity.

(i) Under Option A, upon the death of a ~~retirant~~ retiree, his or her reduced annuity shall be continued throughout the life of and paid to such person as he or she shall have nominated by written designation executed and filed with the Board of Trustees of the Arkansas Teacher Retirement System before the date the first payment of his or her annuity becomes due.

(ii) The person designated as a beneficiary by the ~~retirant~~ retiree shall be:

(a) The ~~retirant's~~ retiree's spouse for not less than one (1) year immediately preceding the first payment due date; or

(b) A dependent child of the ~~retirant~~ retiree who has been adjudged physically or mentally incapacitated by a court of competent jurisdiction;

(B) Option B — 50% Survivor Annuity.

(i) Under Option B, upon the death of a ~~retirant~~ retiree, one-half (½) of his or her reduced annuity shall be continued throughout the life of and paid to such person as he or she has nominated by written designation executed and filed with the board before the date the first payment of his or her annuity becomes due.

(ii) The person designated as a beneficiary by the ~~retirant~~ retiree shall be:

(a) The ~~retirant's~~ retiree's spouse for not less than one (1) year immediately preceding the first payment due date; or

(b) A dependent child of the ~~retirant~~ retiree who has been adjudged physically or mentally incapacitated by a court of competent jurisdiction; or

(C) Option C — Annuity for Ten (10) Years Certain and Life Thereafter.

(i) Under Option C, a ~~retirant~~ retiree shall receive a reduced annuity payable throughout his or her life with the provision that if he or she dies before he or she has received one hundred twenty (120) monthly annuity payments, the payments shall be continued for the remainder of the period of one hundred twenty (120) months and paid to such persons in equal shares as the ~~retirant~~ retiree has nominated by written designation executed and filed with the board.

(ii) If the designated beneficiaries predecease the ~~retirant~~ retiree, the ~~retirant~~ retiree may nominate successor beneficiaries or may elect to return to his or her single lifetime benefit equivalent by written designation executed and filed with the board, to be effective the month following receipt of his or her election by the Arkansas Teacher Retirement System.

(iii)(a) If the designated beneficiary is the spouse of the ~~retirant~~ retiree and the marriage ends in divorce or other marriage dissolution, the ~~retirant~~ retiree may:

(1) Nominate a successor beneficiary; or

(2) Elect to return to his or her single lifetime benefit equivalent.

(b) The nomination or election made under subdivision (a)(2)(C)(iii)(a) of this section shall be in writing, executed by the ~~retirant~~ retiree, and filed with the board, to be effective the month following receipt of his or her election by the system.

(iv) If no designated beneficiary survives the

~~retirant~~ retiree, the annuity reserve for the remainder of the annuity payments shall be paid to the ~~retirant's~~ retiree's estate.

(v) If the last designated beneficiary receiving annuity payments dies before all annuity payments are made, the annuity reserve for the remainder of the annuity payments shall be paid to the beneficiary's estate.

(vi) Effective the month following completion of the one-hundred-twenty-month period, the ~~retirant's~~ retiree's annuity shall return to his or her single lifetime benefit equivalent.

(3) In addition to the persons eligible to be designated as a beneficiary under either Option A or Option B in subdivision (a)(2) of this section, the board may promulgate rules concerning the addition of classes of eligible persons to be designated as a beneficiary under this section and for the rights of option beneficiaries of deceased disability retirees under § 24-7-704.

(b)(1)(A) If a member's marital status changes after retirement due to the death of the member's spouse, or a divorce or marriage dissolution from the member's spouse who is also the member's designated beneficiary, then the member may elect to cancel any optional plan designating the former spouse as a beneficiary.

(B) A member's election under subdivision (b)(1)(A) of this section shall cause the member to return to his or her lifetime benefit equivalent, to be effective the month following the system's receipt of the approved form.

(2) A ~~retirant~~ retiree who is receiving a single lifetime benefit and who marries after retirement may elect to cancel his or her single lifetime benefit and may elect an annuity providing continuing lifetime benefits to his or her spouse under rules promulgated by the board.

(c) If a member fails to elect an option, his or her annuity shall be paid to him or her as a straight life annuity.

(d)(1) Notwithstanding anything contained in this section to the contrary, the residue beneficiary under § 24-7-709 may elect to cancel the form of annuity in effect and elect Option A — 100% Survivor Annuity upon the death of a ~~retirant~~ retiree on or after July 1, 1989, if:

(A) The ~~retirant~~ retiree died within one (1) year following the effective date of retirement;

(B) The ~~retirant~~ retiree was receiving a straight life annuity; and

(C) The residue beneficiary otherwise qualifies for an Option A – 100% Survivor Annuity.

(2) The election to change may be made only one (1) time and shall be on a form approved by the system.

(3) The election form must be received by the system within one hundred twenty (120) days of the death of the retiree.

(e)(1) Notwithstanding anything in this section to the contrary, a ~~retirant~~ retiree who retired on or after July 1, 1994, may elect to cancel his or her election made at retirement for receiving an annuity and elect another option, provided that he or she:

(A) Does so within one (1) year after July 1, 1995, or within one (1) year of retirement;

(B) Files with the system a new election form approved by the system; and

(C)(i) Repays to the system the difference between the amount of the annuity received when he or she retired and the new annuity due as a result of the election change, plus interest from July 1, 1994, or his or her retirement date, whichever is later, to the date of payment in full.

(ii) The difference shall be calculated retroactively to July 1, 1994, or his or her retirement date, whichever is later.

(2) The election to change shall be made only one (1) time.

(3) The election change shall be effective retroactively to the effective date of his or her annuity.

SECTION 41. Arkansas Code § 24-7-707(d), concerning when a member must submit an application for deferred retirement under the Arkansas Teacher Retirement System, is amended to read as follows:

(d) If a member fails to submit a complete deferred retirement application ~~within six (6) calendar months of~~ by the end of the sixth full calendar month immediately following the effective date of benefits, including all additional documentation required by the system, the application shall be void unless an extension is granted by the ~~system~~ Executive Director of the Arkansas Teacher Retirement System.

SECTION 42. Arkansas Code § 24-7-707(e)(1), concerning when a member may cancel an application for deferred retirement under the Arkansas Teacher Retirement System, is amended to read as follows:

(e)(1) A member may cancel an application for deferred retirement benefits any time before ~~two (2) calendar months from~~ the end of the second full calendar month immediately following the effective date of benefits.

SECTION 43. Arkansas Code § 24-7-709 is amended to read as follows:

24-7-709. Disposition of ~~member~~ retiree contributions — Residue.

(a)(1)~~(A)~~ If a retiree and his or her option annuitants, if any, die before receiving annuity payments equal to the ~~member's~~ retiree's residue ~~amount~~, then the residue ~~amount~~ shall be paid to ~~such persons as the retiree shall have nominated by written designation duly~~ one (1) or more beneficiaries nominated by the retiree in a written designation that is executed and filed with the Arkansas Teacher Retirement System.

~~(B) As used in this subchapter, "residue" means the difference between the accumulated contributions and regular interest credited to the retirement reserve account as of the member's retirement effective date and the total amount of retirement annuities paid.~~

(2) If a retiree designates more than one (1) beneficiary, the residue shall be divided equally among each designated beneficiary.

(3) If a retiree and his or her option annuitants die and the member has failed to designate a beneficiary or if all designated beneficiaries have predeceased the retiree, the residue shall be paid to the retiree's estate.

(4) If all designated beneficiaries predecease the retiree, the residue shall be paid to the estate of the most recently deceased designated beneficiary.

(b) If upon the termination of the option annuity no surviving beneficiary designated by the ~~member~~ retiree survives and it is impracticable to make payment to the ~~member's~~ retiree's estate, the residue shall be forfeited to the trust assets of the system subject to any valid claim of the ~~member's~~ retiree's estate under § 24-7-734.

SECTION 44. Arkansas Code § 24-7-710(a)(2)(B), concerning when an eligible survivor or a minor survivor's guardian or legal representative must complete an application for survivor annuity benefits under the Arkansas Teacher Retirement System, is amended to read as follows:

(B) If an immediately eligible survivor or the minor survivor's guardian or legal representative fails to complete the application process ~~within six (6) calendar months after~~ by the end of the sixth full calendar month following the date on which the application required under subdivision (a)(2)(A) of this section is filed, including the submission of any additional documentation required by the system, the application shall be void unless an extension is granted by the ~~system~~ Executive Director of the Arkansas Teacher Retirement System.

SECTION 45. Arkansas Code § 24-7-710(b)(1)(A)(i), concerning a member's survivor annuity under the Arkansas Teacher Retirement System and when it is received by a member's surviving spouse who was married to the member for at least the two (2) years immediately preceding the member's death, is amended to read as follows:

(b)(1)(A)(i) Unless the member otherwise directs an alternative beneficiary to receive the member's residue amount by using a beneficiary form approved by the system, a member's surviving spouse, who was married to the member for at least the two (2) years immediately preceding the member's death, shall receive an annuity computed in the same manner in all respects as if the member had retired on the date of the member's death and elected Option A under § 24-7-706 to provide one hundred percent (100%) survivor annuity benefits, including benefits applicable under § 24-7-713, for his or her spouse.

SECTION 46. Arkansas Code § 24-7-710(b)(1)(B)(ii), concerning when an immediately eligible spouse must complete an application process for a survivor annuity benefit under the Arkansas Teacher Retirement System, is amended to read as follows:

(ii) If an immediately eligible spouse fails to complete the application process ~~within six (6) calendar months after~~ by the end of the sixth full calendar month following the date on which the application required under subdivision (b)(1)(B)(i) of this section is filed, including the submission of all additional documentation required by the system, the application shall be void unless an extension is granted by the ~~system~~ executive director.

SECTION 47. Arkansas Code § 24-7-710(b)(1)(C)(ii), concerning when a surviving spouse's application for surviving spouse benefits becomes void under the Arkansas Teacher Retirement System, is amended to read as follows:

(ii) If a surviving spouse becomes eligible for surviving spouse benefits and fails to complete the application process ~~within six (6) calendar months after~~ by the end of the sixth full calendar month following the date on which the application required under subdivision (b)(1)(B)(i) of this section is filed, including the submission of any additional documentation required by the system, the application shall be void unless an extension is granted by the ~~system~~ executive director.

SECTION 48. Arkansas Code § 24-7-713(a)(1), concerning when certain persons receiving benefits under the Arkansas Teacher Retirement System receive a simple cost of living adjustment, is amended to read as follows:

(a)(1) July 1 of each year, ~~retirants~~ retirees, survivors, participants in the Teacher Deferred Retirement Option Plan, and annuity beneficiaries who have been receiving monthly benefits for the previous twelve (12) months shall receive a simple cost of living adjustment.

SECTION 49. Arkansas Code § 24-7-713(d), concerning the administration of the Arkansas Teacher Retirement System benefit stipend by the Board of Trustees of the Arkansas Teacher Retirement System, is amended to read as follows:

(d)(1) The board may remove by board resolution the benefit stipend from the base amount of current ~~retirants~~ retirees and option beneficiaries if the board determines that the removal of the benefit stipend from the base amount is prudent in order to maintain actuarial soundness.

(2) The board may phase in the removal of the benefit stipend from the base amount of current ~~retirant~~ retiree and option beneficiaries by board resolution.

SECTION 50. Arkansas Code § 24-7-714 is amended to read as follows:

24-7-714. Increase in monthly benefits — Acts 1979, No. 655, and Acts

1981, No. 885.

(a) The monthly retirement benefit payable to ~~retirants~~ retirees and beneficiaries of the Arkansas Teacher Retirement System who were retired on or before July 1, 1978, and who were receiving benefits on July 1, 1979, shall be increased as follows:

(1) For all benefits to ~~retirants~~ retirees and beneficiaries of the system whose total credited service is before July 1, 1961, a monthly benefit increase equal to one dollar ($1.00) per each year of credited service;

(2) For all benefits to ~~retirants~~ retirees and beneficiaries of the system which are based in whole or in part upon credited service rendered after July 1, 1961, a monthly benefit increase equal to seventy-five cents (75¢) per each year of credited service;

(3) For benefit increases authorized by subdivisions (a)(1) and (2) of this section, fractional years of service shall be disregarded, and the increase shall be added to the monthly annuity after the annual postretirement increase based on the consumer price index has been applied to the ~~retirant's~~ retiree's base annuity; and

(4) In the event that there is more than one (1) beneficiary or survivor of a member or ~~retirant~~ retiree receiving benefits, the increases in subdivisions (a)(1) and (2) of this section shall be based upon the member's total credited service. The benefit increase so determined shall be divided between the survivors or beneficiaries in proportion to their base annuities.

(b) For retirements effective after July 1, 1978, for which a monthly benefit is payable for the month of July 1981 or later, calculations shall be made as provided in subdivisions (b)(1) and (2) of this section. If the monthly benefit calculated using subdivision (b)(1) of this section is more than the monthly benefit calculated using subdivision (b)(2) of this section, then the difference shall be paid to the ~~retirant~~ retiree as a monthly benefit increase, subject to the provisions of subdivisions (b)(3)-(6) of this section, as follows:

(1) Calculate the monthly annuity payable to the member under § 24-7-705, based on the provisions of § 24-7-705, his or her salary record, and his or her service record, all as of July 1, 1978, and add seventy-five cents (75¢) for each year of the member's credited service rendered before July 1, 1978;

(2) Calculate the monthly annuity payable to the member under the provisions of § 24-7-705 in effect at the time of the member's retirement;

(3) For benefit increases authorized by this subsection, fractional years of service shall be disregarded. The increase shall be added to the monthly annuity after the annual postretirement increase based on the consumer price index has been applied to the ~~retirant's~~ retiree's base annuity;

(4) In the event that there is more than one (1) beneficiary or survivor of a member or ~~retirant~~ retiree receiving benefits, the increases in this subsection shall be based upon the member's total credited service, and the benefit increase so determined shall be divided between the survivors or beneficiaries in proportion to their base annuities;

(5) Any benefit increase created by this subsection shall be effective at retirement but not for any month before July 1981; and

(6) If there is any change in § 24-7-705 after the member's retirement, the amount under subdivision (b)(2) of this section shall be recalculated using the changed provisions, and the benefit increase provided by this subsection shall be changed correspondingly.

SECTION 51. Arkansas Code § 24-7-727(a)(1), concerning when the Board of Trustees of the Arkansas Teacher Retirement System may compound the cost of living adjustment for retirants and participants in the Teacher Deferred Retirement Option Plan, is amended to read as follows:

(a)(1) ~~After July 1, 1999, the~~ The Board of Trustees of the Arkansas Teacher Retirement System may compound the cost of living adjustment for all ~~retirants~~ retirees and participants in the Teacher Deferred Retirement Option Plan who have received a monthly retirement benefit for the prior twelve-month period.

SECTION 52. Arkansas Code § 24-7-727(b)(3)(A), concerning when the Board of Trustees of the Arkansas Teacher Retirement System may reverse a compounding of the cost of living adjustment for retirants and participants in the Teacher Deferred Retirement Option Plan, is amended to read as follows:

(3)(A) The board may reverse a compounding of the cost of living adjustment for all ~~retirants~~ retirees and participants in the Teacher Deferred Retirement Option Plan who benefit from the compounding.

SECTION 53. Arkansas Code § 24-7-728 is amended to read as follows:

24-7-728. Computation of benefits based on life annuity.

(a)(1) The Board of Trustees of the Arkansas Teacher Retirement System is authorized ~~by this section~~ to raise the level of benefit to the current ~~retirants~~ retirees and other beneficiaries of the Arkansas Teacher Retirement System ~~to a comparable level increase to match the increase in benefits that would accrue to active members as a result of any increase in the calculation of a life annuity as provided in § 24-7-705(a)(1) in accordance with any rules the board might promulgate~~.

(2) The board may raise the level of benefit to a comparable level increase that matches the increase in benefits that would accrue to active members as a result of any increase in the calculation of a life annuity as provided in § 24-7-705(a)(1) in accordance with any rules the board might promulgate.

(b)(1) The amount of any increase for ~~retirants~~ retirees and other beneficiaries shall also be determined in accordance with the rules of the board as is actuarially appropriate for the system.

(2) ~~Prior to~~ Before increasing a benefit as provided in this section, the board shall file relevant information concerning the actuarial appropriateness of the action with the Joint Committee on Public Retirement and Social Security Programs, and the action shall be reviewed by the Joint Committee on Public Retirement and Social Security Programs.

SECTION 54. Arkansas Code § 24-7-730(a)(1), concerning the required dates of distributions of member benefits under the Arkansas Teacher Retirement System, is amended to read as follows:

(a)(1)(A) Notwithstanding the provisions of this subchapter regarding the required dates of distribution of benefits under the Arkansas Teacher Retirement System to former members, the distribution of a former member's benefits under the system shall in any event be made or begun by April 1 of the calendar year following the ~~later of the calendar year~~ latter of the calendar year in which the member ~~attains age seventy-two (72) or the calendar year in which the member~~ retires or the calendar year in which the member attains the applicable age.

(B) The applicable age for a member is as follows:

(i) In the case of a member who attains seventy-two (72) years of age after December 31, 2022, and seventy-three (73) years of age before January 1, 2030, the applicable age is seventy-three (73) years of age;

(ii) In the case of a member who attains seventy-three (73) years of age after December 31, 2029, and seventy-four (74) years of age before January 1, 2033, the applicable age is seventy-four (74) years of age; and

(iii) In the case of a member who attains seventy-four (74) years of age after December 31, 2032, the applicable age is seventy-five (75) years of age.

SECTION 55. Arkansas Code § 24-7-733(a)(2), concerning the requirement that annual benefits under the Arkansas Teacher Retirement System shall not violate limitations under the Internal Revenue Code, 26 U.S.C. 415(b), is amended to read as follows:

(2) The annual benefits, as may be increased in subsequent years, that are paid to ~~retirants~~ retirees by the system shall not violate the limitations under the Internal Revenue Code, 26 U.S.C. 415(b), applicable to the annuity effective date under the Internal Revenue Code, 26 U.S.C. 415(d), and benefits shall be paid in a manner that protects the tax-qualified status of the system.

SECTION 56. Arkansas Code § 24-7-735(c), concerning a member or employer's ability to purchase service credit, additional salary, or both for a member under the Arkansas Teacher Retirement System, is amended to add an additional subdivision to read as follows:

(4)(A) Service credit purchased under a settlement agreement or court order shall offset service credit that is earned by the member as an employee of another covered employer during the same period of time covered by the service credit purchased under the settlement agreement or court order.

(B) Service credit purchased under a settlement agreement or court order shall not be applied by the system in a manner that allows the member to earn more than one (1) year of service credit in a fiscal year.

SECTION 57. Arkansas Code § 24-7-738(b)(2), concerning the recovery of an erroneously paid disability retirement benefit for a month in which a member receives salary from a covered employer under the Arkansas Teacher Retirement System, is amended to read as follows:

(2) Any disability retirement benefit erroneously paid to the member or ~~retirant~~ retiree for a month in which the member receives salary from a covered employer may be recovered by the system as an overpayment as allowed by law.

SECTION 58. Arkansas Code § 24-7-1302(c), concerning when a member may withdraw his or her application for the Teacher Deferred Retirement Option Plan under the Arkansas Teacher Retirement System, is amended to read as follows:

(c) The member may withdraw his or her plan application if notice to withdraw is received by the system ~~no later than two (2) calendar months after~~ by the end of the second full calendar month immediately following the member's plan date.

SECTION 59. Arkansas Code Title 24, Chapter 7, Subchapter 15 is amended to read as follows:

Subchapter 15 — ~~Retirants'~~ Retirees' Ad Hoc Increase Act

24-7-1501. Title.

This subchapter shall be known and may be cited as the "~~Retirants'~~ Retirees' Ad Hoc Increase Act".

24-7-1502. Benefit generally.

(a)(1) The annual benefit payable to eligible retirees, survivors, and beneficiaries of ~~retirants~~ retirees of the Arkansas Teacher Retirement System shall be subject to a one-time ad hoc increase based on the ~~retirant's~~ retiree's years of credited service that is grouped within descending decades as calculated by subtracting the total years of credited service from the date of retirement.

(2) A break in credited service is not considered under this

subchapter.

(3) Teacher Deferred Retirement Option Plan participants shall have the total years of credited service subtracted from the date of entry into the plan.

(b)(1) One-half (½) of the annual dollar increase per year of credited service shall be calculated and provided to all retirees, survivors, and beneficiaries of ~~retirants~~ retirees that are eligible to receive this increase.

(2) One-half (½) of the annual dollar increase per year of credited service shall be calculated then prorated based on the amount of contributory service credit to total service on the ~~retirant's~~ retiree's:

(A) Retirement date; or

(B) Plan entry date.

(3) The amounts under this subsection shall be calculated and provided to all retirees, survivors, and beneficiaries of ~~retirants~~ retirees.

(c) The ad hoc benefit is payable to the retirees, survivors, and beneficiaries of ~~retirants~~ retirees of the system beginning on a July 1 that is at least twelve (12) full months after the effective date of a monthly benefit.

(d) The ad hoc benefit for a ~~retirant~~ retiree, survivor, and beneficiary of a ~~retirant~~ retiree shall not increase the ~~retirant's~~ retiree's current benefit by more than twenty-five percent (25%) of the annuity benefit payable as of the prior June 30.

24-7-1503. Ad hoc benefit formula.

The schedule of decade dollar amounts per year of credited service is:

Formula Decades in Which Credited Service Was Accrued Service	Annual $ Increase Per Year of Credited Service
2000 – and later	$5
1990–1999	$10
1980–1989	$20
1970–1979	$30
1960–1969	$40
1950–1959	$50

1940–1949	$60
1930–1939	$70
1920–1929	$80
1910–1919	$90

24-7-1504. Promulgation of rules — Duty of board.

(a) The Board of Trustees of the Arkansas Teacher Retirement System shall promulgate rules for the ad hoc benefit under this subchapter.

(b) An ad hoc benefit under this subchapter shall not be implemented if the ad hoc benefit would cause the Arkansas Teacher Retirement System's unfunded actuarial accrued liabilities to exceed an eighteen-year amortization.

(c) The board shall only authorize an ad hoc benefit that is actuarially appropriate for the system.

(d) Before an increase of retirement benefit through an ad hoc benefit is authorized, the board shall file relevant information with the Joint Interim Committee on Public Retirement and Social Security Programs regarding the actuarial appropriateness of the increase.

(e) The board may reduce the decade increase formula under § 24-7-1503 proportionately on a one-to-one formula basis for each decade when the reduction is actuarially feasible to implement.

(f) The ad hoc benefit increase is a one-time adjustment and shall also be used to increase the base amount of a ~~retirant's~~ retiree's benefits when calculating any future additional benefit increases.

SECTION 61. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

Stricken language would be deleted from and underlined language would be added to present law.

State of Arkansas
94th General Assembly
Regular Session, 2023

A Bill

HOUSE BILL 1202

By: Representative Warren
By: Senator K. Hammer

For An Act To Be Entitled

AN ACT TO AMEND THE LAW CONCERNING THE MULTIPLIER USED TO CALCULATE A LIFE ANNUITY UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES.

Subtitle

TO AMEND THE LAW CONCERNING THE MULTIPLIER USED TO CALCULATE A LIFE ANNUITY UNDER THE ARKANSAS TEACHER RETIREMENT SYSTEM; AND TO DECLARE AN EMERGENCY.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 24-7-705(b)(2)(G), concerning the special contributory multiplier rate set by the Board of Trustees of the Arkansas Teacher Retirement System for the first ten (10) years of service credit, are amended to read as follows:

(G) The board may set a special contributory multiplier rate for the first ten (10) years of service credit as follows:

~~(i) The multiplier rate for contributory service shall not be less than one and seventy-five hundredths percent (1.75%) or higher than two and fifteen hundredths percent (2.15%);~~

~~(ii)~~ <u>(i)</u> The multiplier rate for contributory service used for the first ten (10) years of service shall not be ~~higher than the multiplier rate for subsequent years of service~~ <u>less than one and seventy-</u>

five hundredths percent (1.75%) or more than two and fifteen hundredths percent (2.15%); and

~~(iii)~~(ii) After a member earns ten (10) years of credited service, the board may increase the multiplier rate earned in the first ten (10) years to the standard multiplier rate for contributory service for all or part of the first ten (10) years of service.

SECTION 2. Arkansas Code § 24-7-705(b)(3)(G)(i), concerning the special noncontributory multiplier rate set by the Board of Trustees of the Arkansas Teacher Retirement System for the first ten (10) years of service credit, is amended to read as follows:

(i) The multiplier rate for noncontributory service used for the first ten (10) years of service shall not be ~~higher than the multiplier rate for subsequent years of service~~ less than five-tenths of one percent (0.5%) or more than one and twenty-five hundredths percent (1.25%); and

SECTION 3. EMERGENCY CLAUSE. It is found and determined by the General Assembly of the State of Arkansas that the operations of a state public retirement system are complex; that the Arkansas Teacher Retirement System must be able to meet the needs of its members as anticipated by the General Assembly; that certain provisions of the Arkansas Teacher Retirement System Act need revision and updating to bring them into conformance with sound public pension policy and actuarial requirements; that the revisions and updates are of great importance to members of the Arkansas Teacher Retirement System and to other citizens of the State of Arkansas; that as the Arkansas Teacher Retirement System operates on a fiscal year of July 1 to June 30, a July 1, 2023, effective date is necessary in order to allow the provisions within this act to begin on the first day of the fiscal year and to allow for a structured and proper administration of the procedures referenced in this act; that the updates and revisions to the Arkansas Teacher Retirement System Act are of great importance for actuarial purposes and for the improvement and protection of member benefits under the Arkansas Teacher Retirement System; and that this act is necessary in order to maintain an orderly system of benefits for the members of the Arkansas Teacher Retirement System. Therefore, an emergency is declared to exist, and this act being necessary for the preservation of the public peace, health, and safety shall become effective on July 1, 2023.

BEFORE THE
BOARD OF TRUSTEES OF THE ARKANSAS TEACHER RETIREMENT SYSTEM

IN RE DISABILITY RETIREE – ATRS ID # 378469

ORDER VACATING IN PART THE PROPOSED DISABILITY REVIEW ORDER DATED APRIL 5, 2021, AND FINDING DISABILITY RETIREE ATRS ID # 378469 QUALIFIED TO RECEIVE DISABILITY RETIREMENT BENEFITS

At its meeting on February 6, 2023, the Board of Trustees of the Arkansas Teacher Retirement System ("Board") considered the matter of disability retiree - ATRS ID # 378469 ("Disability Retiree"). In accordance with the Administrative Procedures Act, Ark. Code Ann. § 25-15-101 et seq., the Board finds as follows:

I. FINDINGS OF FACT

1. The Disability Retiree was approved for disability retirement under the Arkansas Teacher Retirement System ("ATRS") and his effective date of disability retirement was October 1, 2016.
2. The Disability Retiree was required to provide ATRS with a Social Security Administration determination letter ("SSA determination letter") finding him unable to perform his work duties within thirty-six (36) months from the effective date of her disability retirement. As such, the Disability Retiree was required to provide ATRS with a favorable SSA determination letter by September 30, 2019.
3. On August 22, 2019, the Disability Retiree received an unfavorable SSA determination letter causing him to apply for disability review on September 12, 2019.
4. The Disability Retiree's disability retirement benefits were suspended on October 1, 2019, pending the Medical Committee's consideration of his application for disability review.
5. The Disability Retiree's application for disability review was denied by the Medical Committee on November 6, 2019.
6. On April 21, 2020, the Disability Retiree advised ATRS that his unfavorable SSA determination letter would probably be overturned.

7. On March 17, 2021, the Disability Retiree advised ATRS that he had been approved or believed he had been approved for SS disability.
8. On April 5, 2021, the Medical Committee's November 6, 2019, recommendation was presented to the Board for approval. On the same date, the Board entered a Proposed Disability Review Order in which it found the Disability Retiree no longer disabled within the meaning of ATRS law and no longer entitled to continue receiving ATRS disability benefits.
9. On November 9, 2022, the Disability Retiree submitted an order from the SSA Office of Hearings Operations to ATRS. The SSA Office of Hearings Operations order reversed the unfavorable August 22, 2019, SSA determination letter and found the Disability Retiree eligible for SS disability benefits.

II. <u>CONCLUSIONS OF LAW</u>

Ark. Code Ann. § 24-7-704 provides as follows:

1. In order to continue receiving disability retirement benefits under ATRS, a disability retiree is required to provide ATRS with a SSA determination letter finding the disability retiree unable to perform his or her work duties;
2. A disability retiree must provide ATRS with a SSA determination letter finding the disability retiree unable to perform his or her work duties within thirty-six (36) months of the applicable time period provided by Ark. Code Ann. § 24-7-704;
3. A favorable SSA determination letter finding that a member is unable to perform his or her current work duties creates a rebuttable presumption that the member qualifies to receive disability retirement benefits;
4. The Medical Committee must hear all applications for disability review concerning the termination of disability retirement benefit payments to a disability retiree due to the lack of a favorable SSA determination letter finding the disability retiree unable to perform his or her former work duties; and
5. The Medical Committee's recommendation to find a disability retiree qualified to continue

receiving disability retirement benefits must be consistent with finding that the:

a. Disability retiree is physically or mentally incapacitated;

b. Disability retiree exhibits symptoms of physical or mental incapacitation while he or she was employed by a system employer as an active member;

c. Disability retiree is unable to perform his or her work duties;

d. Disability retiree's incapacity will most likely be permanent; and

e. Disability retiree should be retired.

6. After receiving the Medical Committee's recommendation, the Board must issue a final order consistent with the provisions of § 24-7-704 and the system's rules for initial disability retirement.

III. ORDER

1. Upon consideration of Ark. Code Ann. § 24-7-701 et seq., applicable ATRS rules, and the evidence presented at the meeting, the Board finds:

   a. That the information relayed by the Disability Retiree to ATRS on March 17, 2021, and April 21, 2021, indicates that the Disability Retiree was likely approved for SS disability before the entry of the Board's April 5, 2021, Proposed Disability Review Order, but was awaiting an order from the SSA Office of Hearings Operations reflecting the approval;

   b. That as ATRS was notified of a SSA determination favorable to the Disability Retiree before his case was submitted to the Board, the entry of an order concerning the Disability Retiree's eligibility to continue receiving disability retirement benefits should have been postponed until after ATRS received a copy of the order from the SSA Office of Hearings Operations;

   c. That the order from the SSA Office of Hearings Operations creates a rebuttable presumption that the Disability Retiree is unable to perform his work duties;

   d. That the Disability Retiree's records with ATRS do not include information sufficient to rebut the presumption that the Disability Retiree is unable to perform his work duties;

e. The Disability Retiree is eligible to continue receiving disability retirement benefits; and

f. The Board's April 5, 2021, Proposed Disability Review Order should be vacated as it pertains to the Disability Retiree.

2. Based on the foregoing findings, the Board:

a. Vacates its April 5, 2021, Proposed Disability Review Order as it pertains to the Disability Retiree;

b. Finds the Disability Retiree qualified to receive disability retirement benefits under ATRS; and

c. Orders ATRS to reinstate disability retirement benefit payments to the Disability Retiree as of October 1, 2019.

IT IS SO ORDERED

____

Danny Knight, Chairman

February 6, 2023

BEFORE THE
BOARD OF TRUSTEES OF THE ARKANSAS TEACHER RETIREMENT SYSTEM

IN RE DISABILITY RETIREE – ATRS ID # 259038

ORDER FINDING DISABILITY RETIREE QUALIFIED TO RECEIVE DISABILITY RETIREMENT BENEFITS

At its meeting on October 4, 2022, the Board of Trustees of the Arkansas Teacher Retirement System ("Board") considered the review application filed by disability retiree - ATRS ID # 259038 ("Disability Retiree") and the Medical Committee's recommendation concerning the review application. In accordance with the Administrative Procedures Act, Ark. Code Ann. § 25-15-101 et seq., the Board finds as follows:

I. FINDINGS OF FACT

1. The Disability Retiree was approved for disability retirement under the Arkansas Teacher Retirement System ("ATRS") on August 7, 2019.
2. The Disability Retiree was required to provide ATRS with a Social Security Administration determination letter ("SSA determination letter") finding her unable to perform her work duties within thirty-six (36) months from the effective date of her disability retirement.
3. The Disability Retiree's effective date of disability retirement was September 1, 2019.
4. As such, the Disability Retiree was required to provide ATRS with the SSA determination letter by August 31, 2022.
5. On September 16, 2019, and September 4, 2020, ATRS notified the Disability Retiree that she was required to provide ATRS with a SSA determination letter finding her unable to perform her former work duties within thirty-six (36) months of the Disability Retiree's effective date of disability retirement in order to continue receiving disability retirement benefits.
6. On May 17, 2022, ATRS sent a written reminder to the Disability Retiree advising that the SSA determination letter would need to be submitted to ATRS by August 31, 2022, in order for the Disability Retiree to continue receiving disability retirement benefits.
7. On August 18, 2022, ATRS received a SSA determination letter from the Disability Retiree. The SSA determination letter dated February 26, 2021, denied the Disability Retiree's application for Social Security disability benefits.

8. On August 29, 2022, the Disability Retiree applied for a review by the Medical Committee of her disability benefits ceasing due to the lack of a SSA determination letter finding the Disability Retiree unable to perform her former work duties.

9. On August 30, 2022, ATRS sent a letter advising the Disability Retiree that her disability retirement benefits were suspended.

10. On October 4, 2022, the Medical Committee met and considered the Disability Retiree's application for review.

11. After reviewing the Disability Retiree's application for review, the Medical Committee decided to recommend that the Board:

    a. Find the Disability Retiree qualified to receive disability retirement benefits under ATRS; and

    b. Reinstate disability retirement benefit payments to the Disability Retiree.

II. CONCLUSIONS OF LAW

Ark. Code Ann. § 24-7-704 provides as follows:

1. In order to continue receiving disability retirement benefits under ATRS, a disability retiree is required to provide ATRS with a SSA determination letter finding the disability retiree unable to perform his or her work duties;

2. A disability retiree must provide ATRS with a SSA determination letter finding the disability retiree unable to perform his or her work duties within thirty-six (36) months of the applicable time period provided by Ark. Code Ann. § 24-7-704;

3. ATRS is required to terminate disability retirement benefit payments to a disability retiree who does not either:

    a. Provide or receive an extension to provide ATRS with a SSA determination letter finding the disability retiree unable to perform his or her former work duties; or

    b. Apply for a review by the Medical Committee;

4. The Medical Committee must hear all applications for review concerning the termination of disability retirement benefit payments to a disability retiree due to the lack of a SSA determination letter finding the disability retiree unable to perform his or her former work duties; and

5. The Medical Committee's recommendation to find a disability retiree qualified to continue receiving disability retirement benefits must be consistent with finding that the:

   a. Disability retiree is physically or mentally incapacitated;

   b. Disability retiree exhibits symptoms of physical or mental incapacitation while he or she was employed by a system employer as an active member;

   c. Disability retiree is unable to perform his or her work duties;

   d. Disability retiree's incapacity will most likely be permanent; and

   e. Disability retiree should be retired.

III. ORDER

1. Upon consideration of Ark. Code Ann. § 24-7-701 et seq., applicable ATRS rules, and the evidence presented at the meeting, the Board voted to approve the Medical Committee's recommendation concerning the Disability Retiree's application for review.
2. The Board finds the Disability Retiree qualified to receive disability retirement benefits under ATRS and orders ATRS to reinstate disability retirement benefit payments to the Disability Retiree as of October 1, 2022.

IT IS SO ORDERED

____

Danny Knight, Chairman

February 6, 2023

ARTRS
Arkansas Teacher Retirement System

SUMMARY OF DISABILITY APPLICATIONS SUBMITTED

FOR CONSIDERATION BY THE MEDICAL COMMITTEE

The Medical Committee met in executive session in the first floor conference room at 9:30 a.m. on December 7th, 2022. Those members present were Dr. Hoyte Pyle, and Dr. Jim Morse. Anne Marie Lehman Berardi of the Teacher Retirement System was also in attendance.

A total of thirteen disability applications were considered. Of the thirteen applicants, eight were approved: ATRS ID 303127; 468556; 242360; 388484; 356267; 251670; 385927; 323373. Two applicants had more information requested: ATRS ID 301070; 296324. Three applicants were denied: ATRS ID 487367; 362322; 326578.

Respectfully Submitted,

Jim Morse, M.D.
Acting Medical Committee Chairman

Jim Morse, M.D.

Respectfully Submitted,

Anne Marie Lehman B

Anne Marie Lehman Berardi
Retirement Benefits Counselor

1400 West Third Street
Little Rock, Arkansas 72201
501.682.1517
800.666.2877
(fax) 501.682.2359
www.artrs.gov

AR)TRS
Arkansas Teacher Retirement System

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 January 4, 2023. Those members present were Dr. Eddie Phillips, Dr. Hoyte Pyle, and Dr. Jim Morse. Anne Marie Lehman Berardi of the Teacher Retirement System was also in attendance.

A total of three disability applications were considered. Of the three applicants, two were approved: ATRS ID 252343; 390479. One applicant was denied: ATRS ID 302022.

Respectfully Submitted,

Eddie Phillips, M.D.
Medical Committee Chairman

Respectfully Submitted,

Anne Marie Lehman Berardi
Retirement Benefits Counselor

1400 West Third Street
Little Rock, Arkansas 72201
501.682.1517
800.666.2877
(fax) 501.682.2359
www.artrs.gov