

PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

BOARD OF TRUSTEES MEETING

February 22, 2023

AGENDA

The meeting of the Board of Trustees of the Public Safety Personnel Retirement System (the “PSPRS” or “System”) will be held at the **main public conference room of the administrative offices of the PSPRS at 3010 E. Camelback Road, Phoenix, AZ 85016**. This meeting is available to the public and all persons wishing to attend in person are invited.

A copy of the agenda for the meeting will be posted on the PSPRS website at least twenty-four hours in advance of the meeting. To view the final agenda visit www.psprs.com/about/board-of-trustees, scroll to Board of Trustees Meetings, select “BOT Agendas” in the box, and select the appropriate meeting date. Meeting materials may be obtained similarly by selecting “BOT Meeting Materials”.

Interested members of the public and stakeholders may submit comments on any matter within the jurisdiction of the Board, including any item on the agenda for the February 22, 2023 Board of Trustees meeting.

Public comments can be submitted in person or electronically to PSPRSBoardMeetings@psprs.com. Commenters may elect to have electronic submissions presented by staff or address the Board themselves either via phone or video through the live PSPRS Public Meeting Web stream: <http://www.psprs.com/about/board-of-trustees>. Commenters shall submit their full name, phone number (if appearing by phone), affiliation (if none, indicate “member of the public”), Agenda item they wish to comment on, and their position for or against the item.

NOTE: For technological reasons, commenters selecting to address the Board live during the meeting shall indicate so in their email, at least an hour before the meeting begins. Upon receipt of the request, PSPRS Staff will facilitate the appearance and contact you, if necessary, before the Board meeting.

The foregoing procedures notwithstanding, the Chair reserves the right to control the duration of comments or impose other constraints in the interest of maintaining an orderly meeting.

**Media Contact or Agenda Materials: Christian Palmer, Communications Director
(cpalmer@psprs.com)**

The meeting will begin at 9:30 a.m. and continue until 3:00 p.m. or until the matters set forth in this agenda are otherwise addressed. Members of the Board will attend either in person or remotely via Zoom. The Board of Trustees may vote to hold an executive session, which will not be open to the public, to discuss certain matters. The Board of Trustees reserves the right to consider agenda items outside of their listed order.

1. Call to Order; Pledge of Allegiance; Roll Call; Opening Remarks.

Mr. Scott McCarty, Chairman

2. Call to the Public.

This is the time for the public to comment. Members of the Board of Trustees may not discuss items that are not specifically identified on the agenda, except to address criticism from the public. Therefore, pursuant to A.R.S. § 38-431.01(H), the Board of Trustees' reaction to any public comment is limited to addressing criticism or recommending that the Board of Trustees or Staff respond or study such comment or schedule the subject matter for further consideration at a later date after appropriate notice.

3. Appropriate **Action** for approval of the items on the Consent Agenda (documentation concerning the matters on the consent agenda, except Executive Session minutes, may be reviewed at the PSPRS office). Any matter on the Consent Agenda will be removed from the Consent Agenda and discussed as a regular agenda item upon the request of any member of the Board of Trustees.

- a. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Nancy Barto.
- b. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Russell Bowers.
- c. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Cathy Carlat.
- d. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Michael Cobb.
- e. Acceptance of Elected Officials' Retirement Plan of termination of survivor benefit of Vicki Lynn Cross.
- f. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Andrea Dalessandro.
- g. Acceptance of Elected Officials' Retirement Plan of early retirement benefit of Doug Ducey.
- h. Acceptance of Elected Officials' Retirement Plan of termination of survivor benefit of Hazel Eidson.
- i. Acceptance of Elected Officials' Retirement Plan of termination of early retirement benefit of Jay V. Flake.
- j. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Samuel Goodman.
- k. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Gary Griffith.

- l. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Miles Keegan.
- m. Acceptance of Elected Officials' Retirement Plan of termination of early retirement benefit of John T. Mawhinney.
- n. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Sheila Polk.
- o. Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Suzanne Sainz.
- p. Acceptance of Elected Officials' Retirement Plan of termination of survivor benefit of Carol J. Turnbull.
- q. Acceptance of Transfer Between State Retirement Systems of Brady Bailey.
- r. Acceptance of Transfer Between State Retirement Systems of Dustin Hooker.
- s. Acceptance of Transfer Between State Retirement Systems of Kurt Kalberer.
- t. Acceptance of Transfer Between State Retirement Systems of Brandon Johnson.
- u. Approval of the Executive Session Minutes of the January 24, 2023 Meeting of the PSPRS Board of Trustees.
- v. Approval of the Minutes of the January 24, 2023 Meeting of the PSPRS Board of Trustees.
Mr. Scott McCarty

- 4. Review, discussion and possible **Action** on pending and passed legislative actions and potential legislative proposals.
Mr. Douglas Cole, HighGround, Inc.
Ms. Dianne McCallister, Public Policy Partners, LLC

- 5. Discussion and possible **Action** regarding the election, among the Board of Trustees, of the Chair and Vice Chair of the Board of Trustees for 2023.
Mr. Scott McCarty

- 6. Update, discussion and possible **Action** regarding the Defined Contribution forfeiture funds, including annual consideration thereof.
Mr. Scott McCarty

- 7. Review, discussion and possible **Action** regarding the ASRS Health Insurance Advisory Committee PSPRS representatives.
Mr. Scott McCarty

Report by Mr. Harry A. Papp, Chairman of the Investment Committee, regarding agenda items 8 through 10, which were discussed at the Investment Committee meeting held February 15, 2023, and possible *Action* on the Committee's recommendations to the Board regarding the same.

8. Review and discussion and possible **Action** with respect to each of the following written Staff reports for the prior period:
- Mr. Mark Steed, Chief Investment Officer*
- a. Written report: Month-End and Fiscal Year-to-Date performance for the PSPRS Trust as of December 31, 2022.
 - b. Written report: Update on private credit pacing.
 - c. Written report: Performance for the Public Safety Cancer Insurance Policy (CIP) Program, as of December 31, 2022.
 - d. Written report: Portfolio Risk as of December 31, 2022.
 - e. Written report: Global Financial Market Developments.
 - f. Written report: Executed Transactions during prior period.
 - g. Written report: *Quarterly* Investment manager compliance as of December 31, 2022.
 - h. Written report: *Quarterly* PSPRS Trust's securities lending program, ending December 31, 2022.
9. Review and discussion regarding the Investment staff Forward Calendar.
- Mr. Mark Steed*
10. Presentation and discussion by NEPC regarding quarterly portfolio performance for the PSPRS Trust as of December 31, 2022.
- Mr. Allan Martin, NEPC*

Report by Mr. Dean Scheinert, Chairman of the Operations, Governance Policy and Audit Committee, regarding agenda item 11, pertaining to the Operations, Governance Policy and Audit Committee, and possible Board *Action* regarding the same.

11. Review and discussion: Staff operation reports.
- Mr. Michael Townsend, Administrator*
- a. Administrator Update.
 - i. *Quarterly* Strategic Plan report.

- b. Written report: Year to Date Budget.
- c. Written report: Law Firms' Billings for Legal Services.
- d. Written report: Local Board Rehearing.
- e. Written report: Human Resource update.
- f. Written report: IT update.

Report by Mr. Kenny Tims, Chairman of the Advisory Committee, regarding agenda item 12 pertaining to the Advisory Committee, and possible Board *Action* regarding the same.

- 12. Update and discussion regarding the Advisory Committee working group's progress pertaining to recruitment and retention as requested in SB 1268.

Mr. Kenny Tims

Report by Mr. Brian Moore, Chairman of the Defined Contribution Committee, regarding agenda items 13 and 14, which were discussed at the Defined Contribution Committee meetings held January 26, 2023, February 8, 2023, and February 13, 2023, and possible *Action* on the Committee's recommendations to the Board regarding the same.

- 13. Quarterly DC Committee meeting update.

Mr. Brian Moore

- 14. Update, discussion and possible **Action** regarding the Record-keeper RFP proposals.

Mr. Brian Moore

- 15. Update, discussion and possible **Action** regarding the CY2023 BOT agenda items.

Mr. Scott McCarty

- 16. Discussion and appropriate **Action** regarding Board of Trustee member requests to participate in training, educational and due diligence opportunities.

Mr. Scott McCarty

- 17. Discussion and consultation with legal counsel and Staff and possible **Action** regarding proposed legislation, investment matters, ongoing, contemplated or threatened legal action involving the Trust and Plans, including vendor disputes, public record requests, personnel matters and actual or potential litigation and claims based on contract, tort or statute. The Board may vote to discuss these matters in Executive Session pursuant to A.R.S. §§ 38-431.03(A)(1), (2), (3), (4) and (7) as set forth in item 18.

18. **The Board of Trustees may vote to go into Executive Session (which will not be open to the public) to discuss matters pursuant to A.R.S. §§ 38-431.03(A) (1), (2), (3), (4) and (7), as applicable, including to receive legal advice from the Board's attorneys on any matter listed on the agenda, including:**
- a. Discussion and consultation with legal counsel and Staff on pending and passed legislative actions and potential legislative proposals, including Agenda Item No. 4, as authorized by A.R.S. §§ 38-431.03(A) (3) and (4).
 - b. Discussion and consultation for legal advice with the attorney pertaining to the Biltmore Lake developments, as authorized by A.R.S. § 38-431.03 (A) (3), (4) and (7).
 - c. Discussion and consultation for legal advice with the attorney pertaining to joinder agreements and to Hualapai Tribe Fire's joinder request, as authorized by A.R.S. §§ 38-431.03(A) (3), (4) and (6).
19. Possible discussion and **Action** on future meeting dates and/or future agenda items. (Next meeting is currently scheduled for Wednesday, March 29, 2023.)
20. Adjournment.

Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Claudia Martinez, Executive Assistant, or Cheryl Cohen, Executive Assistant, at (602) 255-5575. Requests should be made as early as possible to arrange the accommodation.

PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

BOARD OF TRUSTEES MEETING

January 24, 2023

MINUTES

Present: Mr. Scott McCarty, Chairman
Mr. Harry Papp, Vice Chairman
Mr. Brian Moore, Trustee
Mr. Alan Maguire, Trustee
Ms. Stein, Trustee
Mr. Nate Weber, Trustee
Mr. Daren Wunderle, Trustee
Mr. Chris Hemmen, Trustee
Mr. Dean Scheinert, Trustee

Others Present: Mr. Michael Townsend, Administrator
Mr. Michael Smarik, Deputy Administrator
Bret Parke, Esq., Assistant Administrator/General Counsel
Ms. Claudia Martinez, Executive Assistant
Ms. Cheryl Cohen, Investment Executive Assistant – remote
Terence Thompson, Esq., Gallagher & Kennedy
Mr. Mark Steed, Chief Investment Officer
Mr. Allan Martin, NEPC – remote
Mr. James Ko, Deputy Investment Officer – remote
Ms. Rajee Mohan, Jr. IT Systems Engineer
Ms. Dianne McCallister, Public Policy Partners, LLC
Mr. Doug Cole, HighGround, Inc.
Mr. Jacob McGill, Auditor General's staff
Mr. Carl Richardson, public commenter
Mr. Brandon Nee, CSA
Ms. Rose Crutcher, Investment Paralegal
Ms. Linda , Scofield, Contracts Paralegal
Mr. Edward Bozaan, Sr. Portfolio Manager – remote
Ms. Cathleen Davis, Chief Internal Auditor
Ms. Angela Egelhoff, Chief Compliance Officer
Mr. John Moorman, Chief Financial Officer

1. Call to Order; Pledge of Allegiance; Roll Call; Opening Remarks.

Mr. Scott McCarty, Chairman

The meeting was called to order by Chairman McCarty at 9:35 AM, Pledge of allegiance was recited and roll was called.

Moved by: Mr. Dean Scheinert

Second by: Mr. Harry Papp

Time: 9:36 AM

Motion: Enter Executive Session.

Discussion: None.

Vote: 9 – 0 Passed

Board returned to public session at 10:55 AM

2. Call to the Public.

This is the time for the public to comment. Members of the Board of Trustees may not discuss items that are not specifically identified on the agenda, except to address criticism from the public. Therefore, pursuant to A.R.S. § 38-431.01(H), the Board of Trustees' reaction to any public comment is limited to addressing criticism or recommending that the Board of Trustees or Staff respond or study such comment or schedule the subject matter for further consideration at a later date after appropriate notice.

Mr. Carl Richardson foundation of Retired Police Officers spoke during the Call to the Public. Mr. Richardson commented on the positive direction that the system is heading in and thanked the Board and all others involved.

3. **Update, discussion and possible Action regarding the FY2023 legislative list and pending and passed legislative actions and potential legislative proposals, including the topic of pension reform legislation, subsequent court decisions, and recent administrative developments related to Tier 2 members and Tier 1 gap members, including member and employer contribution rates and benefits.**

Mr. Michael Townsend, Administrator

Mr. Douglas Cole, HighGround, Inc.

Ms. Dianne McCallister, Public Policy Partners, LLC

Mr. Thompson, Mr. Moore and Ms. McCallister advised the Tier 2 and Tier 1 gap rates was back on the agenda due to discussions held during a stakeholder meeting. Employer and employee groups have requested to be a part of the bill (HB2028) and in the process thereof.

Moved by: Mr. Harry Papp

Second by: Mr. Brian Moore

Time: 11:06 AM

Motion: Board finds that in the course of administering the Tier 2 and Tier 1 the gap member contribution rates for the system, it has become apparent that the existing statutory framework results in a situation that is unfair, inequitable, and is believed to not be what the legislature intended, and in a manner that is material and important to all stakeholders, including members and employers. Board finds it to be consistent with the discharge of its fiduciary duties to alert the legislature of this situation and the importance of correcting the situation so that is fair and equitable. Therefore amending and clarifying the action taken at its previous December 2022 meeting on legislative topics for the 2023 Arizona legislative session, the board should in lieu of taking sole lead on corrective legislation, work together and collegially with stakeholder members and employers on such corrective legislation.

Discussion: Mr. Wunderle and Mr. Weber inquired and/or commented on the verbiage of the rate being taken down to the 7.65% not being on this motion compared to the December 2022 motion and asked for clarification that the previous December 2022 motion would still be intact and the only change would be concerning the legislative approach. Ms. Stein and Mr. Papp advised intent was for the substance of the December 2022 motion not to be changed and the only amendment would be the legislative approach aspect.

Amended Motion: Board finds that in the course of administering the Tier 2 and Tier 1 the gap member contribution rates for the system, it has become apparent that the existing statutory framework results in a situation that is unfair, inequitable, and is believed to not be what the legislature intended, and in a manner that is material and important to all stakeholders, including members and employers. Board finds it to be consistent with the discharge of its fiduciary duties to alert the legislature of this situation and the importance of correcting the situation so that is fair and equitable. Therefore ~~amending and~~ clarifying the action taken at its previous December 2022 meeting on legislative topics for the 2023 Arizona legislative session, the board should in lieu of taking sole lead on corrective legislation, work together and collegially with stakeholder members and employers on such corrective legislation.

Time of Amended Motion: 11:15 AM

Vote: 8 – 1 Passed (Mr. McCarty OPPOSED)

Mr. McCarty expressed his disagreement with the approach of the motion.

Update was provided by Ms. McCallister and Mr. Cole. Ms. McCallister reviewed the 2023 PSPRS legislative proposals and other legislative proposals that can impact the system. Several Trustees, Staff and lobbyist engaged in discussions regarding various aspects of several bills.

Moved by: Mr. Brian Moore

Second by: Mr. Nate Weber

Time: 11:19 AM

Motion: Remove the actuarial analysis requirement, which was previously voted on to request in a bill, from the 2023 legislative session.

Discussion: None.

Vote: 9 – 0 Passed

Moved by: Mr. Harry Papp
Second by: Mr. Scott McCarty
Time: 11:26 AM

Motion: For PSPRS to support HB2430 and ask for the legislature to consider these bills due to the current funding status which has EORP in severe financial jeopardy

Discussion: None.

Vote: 8 – 1 Passed (Ms. Stein OPPOSED)

Moved by: Mr. Scott McCarty
Second by: Mr. Harry Papp
Time: 11:38 AM

Motion: Remove the cancer insurance continue coverage for retirees, which was previously voted on to request in a bill, from the 2023 legislative session based on feedback that the lobbyist have received with the intention that the item would be revisited in the FY 2024/2025 legislative session.

Discussion: None.

Vote: 9 – 0 Passed

Mr. Papp advised that there have been a series of bills that have dropped and others that could soon be dropped that relate to the ESG investments allowing considerations of non-pecuniary factors and other social aspects of investments and it is the opinion of Staff and the Investment Committee that many of those bills, without taking a stance of the political merits of those bills, would increase the expenses of administering the investment program and some of the restrictions may reduce the potential earning of the investment portfolio. The Investment Committee has suggested that the Investment Staff, PSPRS Administrator, ASRS Administrator and Mr. Papp and PSPRS lobbyist visit with various legislators who are promoting such bills to suggest adjustments that would not impact the political nature of what the sponsors are trying to achieve but reduce or avoid the added expenses or potential limitations in investments that could hurt returns going forward.

Moved by: Mr. Harry Papp
Second by: Mr. Nate Weber
Time: 11:43 AM

Motion: Use strategy suggested by the Investment Committee to deal with all of the ESG related bills and other social aspects of investments.

Discussion: Mr. McCarty asked that the potential violations of existing statutes be noted in the conversations.

Vote: 9 – 0 Passed

4. **Appropriate Action for approval of the items on the Consent Agenda (documentation concerning the matters on the consent agenda, except Executive Session minutes, may be reviewed at the PSPRS office). Any matter on the Consent Agenda will be removed from the Consent Agenda and discussed as a regular agenda item upon the request of any member of the Board of Trustees.**
- a. **Acceptance of Elected Officials' Retirement Plan of termination of survivor benefit of Brenda Abraham.**
 - b. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Charli Anderson.**
 - c. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Susan Bacal.**
 - d. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Douglas Coleman.**
 - e. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Jan Crawford.**
 - f. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Roger Hartsell.**
 - g. **Acceptance of Elected Officials' Retirement Plan of survivor benefit of Christy Hastings.**
 - h. **Acceptance of Elected Officials' Retirement Plan of termination of early retirement benefit of James Koble.**
 - i. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of William Lundy.**
 - j. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Kathleen Mead.**
 - k. **Acceptance of Elected Officials' Retirement Plan of termination of normal retirement benefit of Russell Pearce.**
 - l. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Fred Peterson.**
 - m. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Walter Seale.**
 - n. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Monica Stauffer.**
 - o. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Jay Tibshraeny.**
 - p. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Virlynn Tinnell.**
 - q. **Acceptance of Elected Officials' Retirement Plan of termination of normal retirement benefit of Alex Tolmachoff.**
 - r. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Alan Williams.**

- s. **Acceptance of Elected Officials' Retirement Plan of normal retirement benefit of Roland Winters.**
- t. **Acceptance of Transfer Between State Retirement Systems of Jerry Brown.**
- u. **Approval of the Executive Session Minutes of the December 21, 2022 Meeting of the PSPRS Board of Trustees.**
- v. **Approval of the Minutes of the December 21, 2022 Meeting of the PSPRS Board of Trustees.**

Mr. Scott McCarty

Moved by: Mr. Brian Moore

Second by: Mr. Chris Hemmen

Time: 11:45 AM

Motion: Approval of Consent Agenda as presented.

Discussion: None.

Vote: 9 – 0 Passed

Report by Mr. Harry A. Papp, Chairman of the Investment Committee, regarding agenda items 5 and 6, which were discussed at the Investment Committee meeting held January 19, 2023, and possible *Action* on the Committee's recommendations to the Board regarding the same.

Mr. Papp provided a brief report of the Investment Committee's January 19, 2023 meeting.

- 5. Review and discussion and possible Action with respect to each of the following written Staff reports for the prior period:**

Mr. Mark Steed, Chief Investment Officer

- a. **Written report: Month-End and Fiscal Year-to-Date performance for the PSPRS Trust as of November 30, 2022.**
- b. **Written report: Update on private credit placing.**
- c. **Written report: Performance for the Public Safety Cancer Insurance Policy (CIP) Program, as of November 30, 2022.**
- d. **Written report: Portfolio Risk as of November 30, 2022.**
- e. **Written report: Global Financial Market Developments.**
- f. **Written report: Executed Transactions during prior period.**

Mr. Papp and Mr. Steed reviewed reports a through f and detailed the current state of the market and Trust.

- 6. Presentation and discussion regarding international public equities.**

Mr. Mark Steed

Mr. Edward Bozaan, Sr. Portfolio Manager

Mr. Allan Martin, NEPC

Mr. Steed provided a presentation regarding international public equities. Mr. Steed advised staff will complete analysis to determine if any adjustments are required to improve the index's quality.

Board recessed for lunch at 12:15 PM.

Board returned to public session at 12:32 PM.

Report by Mr. Dean Scheinert, Chairman of the Operations, Governance Policy and Audit Committee, regarding agenda items 7 through 10, which were discussed at the Operations, Governance Policy and Audit Committee meeting held January 17, 2023, and possible *Action* on the Committee's recommendations to the Board regarding the same.

Mr. Scheinert provided a brief report of the Operations, Governance Policy and Audit Committee's January 17, 2023 meeting.

- 7. Review and discussion: Staff operation reports.**

Mr. Michael Townsend

- a. **Administrator Update.**
- b. **PSPRS Integrity Hotline FY 2022/23 Second Quarter Update.**
- c. **Written report: Year to Date Budget.**
- d. **Written report: Law Firms' Billings for Legal Services.**
- e. **Written report: Local Board Rehearing.**

f. Written report: Communication Efforts Report.

g. Written report: Human Resource Update.

Reports a through g were provided, and Mr. Townsend provided an update on the Local Board and Employer March 1, 2023 event. No further discussions were held.

8. Presentation, discussion and possible Action regarding acceptance of Operations, Audit and Governance Policy Committee Charter Compliance, Audit Report No. 2023-03.

Ms. Cathleen Davis, Chief Internal Auditor

Presentation was provided by Ms. Davis. Presentation included background on audit, key observations and findings. Mr. Scheinert addressed the findings and how they will be addressed. Mr. McCarty inquired on the next steps with the governance manual.

Moved by: Mr. Alan Maguire

Second by: Mr. Brian Moore

Time: 12:41 P.M.

Motion: Accept the Operations, Audit and Governance Policy Committee Charter Compliance, Audit Report No. 2023-03 as presented by the Chief Internal Auditor

Discussion: None.

Vote: 9 – 0 Passed

9. Update, review and discussion regarding the Cancer Insurance Program cost analysis of retiree eligibility legislative topic.

Mr. Michael Townsend

Brief review of the presentation and discussions held at the Committee meeting was provided by Mr. Scheinert. No further discussions were held.

10. Update, review and discussion regarding the Cancer Insurance Program analysis of structure changes.

Mr. Michael Townsend

Brief review of the presentation and discussions held at the Committee meeting was provided by Mr. Scheinert. No further discussions were held.

Report by Mr. Kenny Tims, Chairman of the Advisory Committee, regarding agenda items 11 and 12, which were discussed at the Advisory Committee meeting held January 23, 2023, and possible Action on the Committee's recommendations to the Board regarding the same.

Mr. Townsend provided a brief report of the Advisory Committee's January 23, 2023 meeting.

11. Review and discussion regarding the CORP and EORP Defined Contribution Committee member nominations.

Mr. Kenny Tims

Brief review of the presentation provided and discussions held at the Committee meeting was provided by Mr. Townsend. No further discussions were held.

12. Update and discussion regarding the Advisory Committee working group's progress pertaining to recruitment and retention as requested in SB 1268.

Mr. Kenny Tims

Mr. Brandon Nee, CSA

Brief review of the updated provided at the Committee meeting was provided by Mr. Townsend. Mr. Wunderle requested for the working group to provide regular updates on the progress.

Report by Mr. Brian Moore, Chairman of the Defined Contribution Committee, regarding agenda item 13, pertaining to the Defined Contribution Committee, and possible Board Action regarding the same.

13. Update, discussion and possible Action regarding the Record-keeper RFP process.

Mr. Brian Moore

Mr. Moore provided an update on the RFP process and advised a meeting to review the top finalist has been scheduled.

14. Discussion and appropriate Action regarding Board of Trustee member requests to participate in training, educational and due diligence opportunities.

Mr. Scott McCarty

Mr. McCarty advised that a member of the Kentucky retirement system requested a presentation regarding the PSPRS progress be presented by Mr. McCarty at their January 26, 2023 Board meeting. Mr. Weber and Mr. Moore thanked all who participated in the AZFD conference.

15. Discussion and possible Action regarding the election, among the Board of Trustees, of the Chair and Vice Chair of the Board of Trustees for 2023.

Item was moved to the February Board meeting.

16. Possible discussion and Action on future meeting dates and/or future agenda items. (Next meeting is currently scheduled for Wednesday, February 22, 2023.)

Next meeting will be held February 22, 2023 at 9:30 A.M.

17. Discussion and consultation with legal counsel and Staff and possible Action regarding proposed legislation, investment matters, ongoing, contemplated or threatened legal action involving the Trust and Plans, including vendor disputes, public record requests, personnel matters and actual or potential litigation and claims based on contract, tort or statute. The Board may vote to discuss these matters in Executive Session pursuant to A.R.S. §§ 38-431.03(A)(1), (2), (3), (4) and (7) as set forth in item 18.

18. The Board of Trustees may vote to go into Executive Session (which will not be open to the public) to discuss matters pursuant to A.R.S. §§ 38-431.03(A) (1), (2), (3), (4) and (7), as applicable, including to receive legal advice from the Board's attorneys on any matter listed on the agenda, including:

- a. Discussion and consultation for legal advice with the attorney pertaining to the FY2023 legislative list and pending and passed legislative actions and potential legislative proposals, including the topic of pension reform legislation, subsequent court decisions, and recent administrative developments related to Tier 2 members and Tier 1 gap members, including member and employer contribution rates and benefits, including Agenda Item No. 3, as authorized by A.R.S. § 38-431.03 (A) (3).
- b. Discussion and consultation for legal advice with the attorney pertaining to the Biltmore Lake developments, as authorized by A.R.S. § 38-431.03 (A) (3), (4) and (7).
- c. Discussion and consultation for legal advice with the attorney pertaining to joinder agreements and to Hualapai Tribe Fire's joinder request, as authorized by A.R.S. §§ 38-431.03(A) (3), (4) and (6).

19. Adjournment.

Moved by: Harry Papp

Second by: Alan Maguire

Time: 1:02 P.M.

Motion: Adjourn meeting.

Discussion: None.

Vote: 9 – 0 Passed

**Scott McCarty,
Chairman**

**Harry Papp, Trustee,
Vice Chairman**

Christopher Hemmen, Trustee

Alan Maguire, Trustee

Brian Moore, Trustee

Dean Scheinert, Trustee

Randie Stein, Trustee

Nathan Weber, Trustee

Daren Wunderle, Trustee

PSPRS Legislative Proposals for the 2023 Legislative Session

1. **SB1173 public retirement systems; plan election (Senator Mesnard)-** Our annual administrative bill. This bill includes the following five items:
 - a. **Section 115 Trust fix-** When we ran the Section 115 legislation there was language included to have the assets in the Section 115 trust count towards the total assets in the employers underlying plan. However, GASB does not allow for that and the language will be struck.
 - b. **Return to Work-** Last year we changed the return-to-work statutes to state that a bonafide separation of service is six months instead of twelve months, which was the previous language. However, there was one section of statute that didn't reference the RTW statutes but instead had 12 months written. That statute is updated with the current six-month language.
 - c. **Tier 3 plan selection-** For tier 3 members of CORP who was not previously allowed to make a plan selection that later is in a position that would have allowed for a plan selection, they will be able to choose between the DB or DC plan.
 - d. **Subsequent 90-day window-** In Tier 3, an employee has 90 days to make a plan selection when they are initially hired. However, if they change employers, that 90-day window also applies. In the future, an employee who changes employers or is rehired will start to accumulate time on their date of employment after the initial 90-day window has passed.
 - e. **Late Contribution Interest Calculation-** In tier 3, the late contribution interest calculation is compounded daily. In all other plan statutes, the late contribution interest is compounded annually. The statute will be changed to conform with the other plans.
 - This bill is ready for the Senate floor vote.
2. **HB2015 retirement plans; plan election; rehire (Representative Livingston)-** This bill allows for a tier 3 member of PSPRS or CORP who changes employers or returns to work in compliance with the return-to-work statutes to make a new plan selection at the time of their new employment. If a member changes for a DC plan to a DB plan, their years of service in the DC plan do not count as years of service in the DB plan unless they do a service purchase and purchase the time at the present value of the benefit. There is up to 90 days to make a new plan selection and if there is no selection made, they will revert to the plan previously enrolled in.
 - Bill passed out of Ways & Means unanimously. It is awaiting floor action in the House. There will be an amendment on the floor to change from the compliance with the return-to-work statutes to a bonafide termination of employment from the employer for no less than six months and with no pre-arranged re-employment agreement. This statute applies to active members and not retired members, so we initially drafted with the wrong reference.
3. **HB2028 PSPRS; contribution rates (Representative Livingston)-** This bill moves the Tier 1 gap and Tier 2 member contribution rate from the "up to 11.65%" to 7.65%

prospectively, starting July 1, 2023. Also on July 1, 2023, the excess employee contribution rates that have been accumulated to this point can be taken into consideration when calculating the employer contribution rate.

- This bill passed out of Ways & Means unanimously on 2/15.

Other Legislative Proposals for the 2022 Legislative Session

HB2027 Appropriation; unfunded liability; CORP (Rep. Livingston)

Summary: Makes a supplemental appropriation of \$428.8 million from the general fund in FY2022-23 to the Public Safety Personnel Retirement System (PSPRS) to be deposited in the Administrative Office of the Courts Corrections Officer Retirement Plan (CORP) group employer account to pay the unfunded accrued liability. The PSPRS Board is required to account for the appropriation in the June 30, 2023, actuarial valuation of CORP, and account for the appropriation when calculating the employee contribution rates and employer contribution rates during FY2023-24.

- This bill passed out of both House Ways & Means and House Appropriations. It was amended in Appropriations to require the counties to pay their responsibility back to the State.

HB2144 Open meetings; capacity; posting; violation (Rep. Dunn)

Summary: All public bodies are required to provide for an amount of seating sufficient to accommodate the reasonably anticipated attendance of all persons desiring to attend the deliberations and proceedings, when feasible. The agenda for a public meeting is required to include notice of the time that the public will have physical access to the meeting place. A head of a public body that violates this requirement is liable for a civil penalty as provided in statute for open meeting law violations.

- 1/25 Passed out of House Government.

HB2156 Proxy voting; governmental entities; prohibition (Rep. Livingston)

Summary: Only a governmental entity that establishes or maintains a "plan" (defined as any plan, fund, or program established or maintained by the state or a political subdivision to provide retirement income or benefits to employees, defer income by employees, or invest taxpayer monies for any purpose) is authorized to vote the shares held by the plan. A governmental entity is prohibited from hiring a third-party vendor or granting proxy voting authority to any person who is not a part of the governmental entity. A "fiduciary" of a plan is prohibited from adopting a practice of following the recommendations of a proxy advisory firm or other service.

- This bill was amended with language that we worked on with ASRS. It stipulates that all investments be made in the sole interest of the beneficiaries and the plan must solely use pecuniary factors when evaluating an investment. Requires that all direct shares be voted on, whether by the entity or their proxy, based solely on pecuniary factors.
- 2/15 Strike-everything passed out of House Government.

HB2430 EORP; appropriations; repayment (Rep. Livingston)

Summary: Beginning July 1, 2023 through June 30, 2033, a specified list of counties and municipalities are required to annually repay the state specified amounts for the amounts paid in FY2022-23 on the local governments' behalf to the Elected Officials Retirement Plan (EORP) for unfunded accrued liability. Counties and municipalities may pay the annual repayment amount from any source of revenue. Makes a supplemental appropriation of \$609 million from the general fund in FY2022-23 to EORP to pay the unfunded accrued liability for EORP. Numerous appropriations made from the general fund in FY2023-24 for required employer contributions to EORP are reduced. Emergency clause.

- 2/8 Passed out of House Appropriations.

HB2433 s/e Pensions; domestic relations orders (Rep. David Livingston)

Summary: States the value of a pension participant's benefit subject to a domestic relations order is the value at the time of the date of the service of the petition for annulment, dissolution of marriage or legal separation (Date of Service).

- 2/15 Passed out of House Appropriations.

HB2471 Government investments; plans; fiduciaries; products (Rep. Steve Montenegro)

Summary: A "fiduciary" (defined) is required to discharge his/her duties with respect to a "plan" (defined as any plan, fund, or program established or maintained by the state or a political subdivision to provide retirement income or benefits to employees, defer income, or invest taxpayer monies for any purpose) solely in the interest of the participants and beneficiaries of the plan, and is required to take into account only pecuniary factors when evaluating an investment. Only the governmental entity that establishes or maintains a plan may vote the shares held by the plan, and the shares held by a plan must be voted only in the pecuniary interest of the plan. A fiduciary is prohibited from adopting a practice of following the recommendations of a proxy advisory firm unless the firm's guidelines are consistent with these requirements. The State Treasurer is required to post a current list of state investments by name and a current list of investment managers on the State Treasurer's publicly accessible website. All state investments are required to be made in the sole interest of the beneficiary taxpayer.

- 2/15 Passed out of House Government.

HB2472 Social credit; use; prohibition (Rep. Steve Montenegro)

Summary: The state is prohibited from requiring a bank or financial institution to use a social credit score when the bank or financial institution evaluates whether to lend money to a customer.

- 1/31 Passed out of House Commerce. Awaiting floor action.

HB2677 Income tax; subtraction; retirement distribution (Rep. Steve Montenegro)

Summary: For the purpose of computer Arizona adjusted gross income for individual income tax purposes, the list of subtractions from Arizona gross income is expanded to include the amount of any distributions from an individual retirement account or from a qualified retirement plan as provided in specified federal code, to the extent not already excluded from Arizona gross income under the federal Internal Revenue Code.

- 2/9 Passed out of House Ways & Means

HB2808 Public records; time frame (Rep. Michael Carbone)

Summary: A custodian of public records is required to furnish copies, printouts, or photographs within five business days after receiving a request for the records. Allows an entity to extend the time for a response for specified reasons. A public body in violation of public records request laws is subject to a civil penalty of \$500 for each day the request is unfulfilled, for up to a total of \$5,000.

- 2/15 Passed out of House Government with an amendment changing it to 15 days. Members said it would need further amendments on the floor.

SB1020 Open meetings; capacity; posting (Sen. John Kavanagh)

Summary: All public bodies are required to provide for an amount of seating sufficient to accommodate the reasonably anticipated attendance of all persons desiring to attend the deliberations and proceedings, when feasible. The agenda for a public meeting is required to include notice of the time that the public will have physical access to the meeting place.

- There has been no action on this bill.

SB1031 Public employees; employment; termination (Sen. Anthony Kern)

Summary: State agencies and political subdivisions are prohibited from terminating an employee based on the employee's vaccination status or political affiliation. A violation is subject to a civil penalty of 10 percent of the state agency's or political subdivision's budget from the prior fiscal year.

- This bill was referred to Senate Health & Human Services but was not heard in committee.

SB1096 Firearms; contracts; prohibited practices (Sen. Frank Carroll)

Summary: A "public entity" (defined) is prohibited from entering into a contract with a value of \$100,000 or more with a company to acquire or dispose of services, supplies, information technology, or construction unless the contract includes a written certification that the company does not currently, and agrees for the duration of the contract that it will not, discriminate against a "firearm entity" or "firearm trade association" (both defined).

- 2/1 Passed Senate Commerce and awaiting action on the floor.

SB1138 Banks; discrimination prohibition; social criteria (Sen. Jake Hoffman)

Summary: A financial institution doing business in Arizona, either directly or through a contractor, is prohibited from discriminating against any person based on a political affiliation or other social credit, environmental, social, governance or similar values-based or impact criteria.

- 2/1 Passed Senate Government with an amendment that added in insurer and credit rating companies.

SB1139 Government investments; products; fiduciaries; plans (Sen. Jake Hoffman)

Summary: A "fiduciary" (defined) is required to discharge his/her duties with respect to a "plan" (defined as any plan, fund, or program established or maintained by the state or a political subdivision to provide retirement income or benefits to employees, defer income, or invest taxpayer monies for any purpose) solely in the interest of the participants and beneficiaries of the plan, and is required to take into account only pecuniary factors when evaluating an investment. Only the governmental entity that establishes or maintains a plan may vote the shares held by the

plan, and the shares held by a plan must be voted only in the pecuniary interest of the plan. A fiduciary is prohibited from adopting a practice of following the recommendations of a proxy advisory firm unless the firm's guidelines are consistent with these requirements. The State Treasurer is required to post a current list of state investments by name and a current list of investment managers on the State Treasurer's publicly accessible website. All state investments are required to be made in the sole interest of the beneficiary taxpayer.

- Passed Senate Third Read on party lines 16-14.

SB1146 Divestment; K-12; abortion; explicit material (Sen. Jake Hoffman)

Summary: The State Board of Investment is required to adopt a policy, and submit a copy of the policy to the Legislature, regarding companies that donate to or invest in organizations that promote, facilitate or advocate for abortions for minors, and companies that donate to or invest in organizations that promote, facilitate or advocate for the inclusion of, or the referral of students to, "sexually explicit material" (defined) in kindergarten programs or any of grades 1 through 12. The policy must include the procedure to identify these companies and a process for divestment from the companies identified. The State Treasurer is required to divest from the companies identified.

- 2/13 Passed Senate Finance.

SB1270 Open meetings; capacity (Sen. John Kavanagh)

Summary: Schools, school boards, executive boards, and municipalities are required to provide for an amount of seating sufficient to accommodate the reasonably anticipated attendance of all persons desiring to attend the deliberations and proceedings, when feasible. The agenda for a public meeting is required to include notice of the time that the public will have physical access to the meeting place.

- 2/15 Passed Senate Government.

SB1500 Government investments; fiduciaries; pecuniary benefit (Sen. Frank Carroll)

Summary: A "fiduciary" (defined) is required to discharge his/her duties with respect to a "plan" (defined as any plan, fund, or program established or maintained by the state or a political subdivision to provide retirement income or benefits to employees, defer income, or invest taxpayer monies for any purpose) solely in the interest of the participants and beneficiaries of the plan, and is required to take into account only pecuniary factors when evaluating an investment. Only the governmental entity that establishes or maintains a plan may vote the shares held by the plan, and the shares held by a plan must be voted only in the pecuniary interest of the plan. A fiduciary is prohibited from adopting a practice of following the recommendations of a proxy advisory firm unless the firm's guidelines are consistent with these requirements. The State Treasurer is required to post a current list of state investments by name and a current list of investment managers on the State Treasurer's publicly accessible website. All state investments are required to be made in the sole interest of the beneficiary taxpayer. Contains legislative findings.

- 2/15 Passed Senate Government.

SB1611 Public entities; contracts; prohibition (Sen. Anthony Kern)

Summary: A public entity is prohibited from entering into or renewing a contract with a company to acquire services, supplies, information technology, goods or construction services

unless the contract includes a written certification that the company does not currently, and agrees for the duration of the contract that the company will not, implement an "environmental, social or governance standards policy" (defined).

- 2/15 Passed Senate Government.

SB1612 - Investments; financial institutions; state treasurer (Sen. Anthony Kern)

Summary: A "public entity" is prohibited from investing public monies in or with a financial institution that has a written policy regarding environmental, social, and governance issues that include boycotting fossil fuels. The State Treasurer is authorized to cancel state contracts with financial institutions that have these policies. On referral from the State Treasurer, the Attorney General is required to investigate financial institutions that have these policies.

- Referred to Senate Finance but not heard.

EORP RETIREMENTS FOR BOARD OF TRUSTEES MEETING - JANUARY 2023

[illegible]



MEMORANDUM

TO: SCOTT MCCARTY, BOARD CHAIRMAN

FROM: MICHAEL TOWNSEND, ADMINISTRATOR

DATE: FEBRUARY 15, 2023

RE: PSPRS BOARD ELECTIONS: CHAIR AND VICE CHAIR

Agenda Title:

Discussion and possible Action regarding the election, among the Board of Trustees, of the Chair and Vice Chair of the Board of Trustees for 2023.

Purpose:

This item was on the January 2023 Board agenda and it was briefly discussed that the election is not required to be held at the January meeting. In staff discussions it was noted that there will be four trustee terms expiring January 2024. Given this circumstance, it may be more appropriate to consider the election of the Chair and Vice Chair at the March Board meetings in the future.

This would allow new trustees starting their terms in January, to experience the meeting cadence and become more familiar with all of the Trustees over a couple of months. Then, in March, have the selection of the Chair and Vice-chair and subsequent committee appointments prior to consideration of the annual operating budget adoption.

Background:

The purpose of this memo is to provide background and instruction Board Chair and Vice-Chair Elections under statute and PSPRS Governance Manual: Policy 5.03 Board of Trustees Operations Policy.

The law and policy reflect that on an annual basis, each calendar year, the board shall select a chair from among its members. Selection shall happen through nomination and elections among the members.

It does not appear that statute or the PSPRS Governance Manual requires elections to be done in January of each year. This might have been practice based on the statutory language that initiated the nine member board in 2017: “[b]eginning January 1, 2017, the board of trustees shall consist of nine members...”

Statue, [A.R.S. § 38-848](#), provides:

38-848. Board of trustees; powers and duties; independent trust fund; administrator; agents and employees; advisory committee

A. Beginning January 1, 2017, the board of trustees shall consist of nine members and shall have the rights, powers and duties that are set forth in this section. The term of office of members shall be five years to expire on the third Monday in January of the appropriate year. **The board shall select a chairperson from among its members each calendar year.** Members are eligible to receive compensation in an amount of \$50 a day, but not to exceed \$1,000 in any one fiscal year, and are eligible for reimbursement of expenses pursuant to chapter 4, article 2 of this title. Beginning January 1, 2017, the board consists of the following members appointed as follows:

PSPRS Gov. Man. Policy 5.03(A)(4) provides:

On an annual basis, the Board of Trustees shall nominate and elect from among its trustees a Chair and a Vice Chair, each to hold office for a term of one year.

Suggested Motion:

Move to have the Board of Trustees designate the Month of March for the election of the Chair and Vice-Chair for 2023 and all subsequent years.



MEMORANDUM

TO: SCOTT MCCARTY, CHAIR AND TRUSTEES

FROM: MICHAEL SMARIK, DEPUTY ADMINISTRATOR

DATE: FEBRUARY 15, 2023

RE: DC PLANS FORFEITURE FUNDS

Agenda title:

Review, discussion and possible Action regarding the forfeited funds of the PSPDCRP.

Purpose:

To provide information to the Board and determine if it wants to consider changes the allocation of forfeited funds for the new Plan year.

Issue:

The Public Safety Personnel Defined Contribution Retirement Plan (PSPDCRP) started on July 1, 2017 with no assets. Through September 30, 2021 the Plan has grown to over \$500 million, with approximately 90% of the funds coming from DROP assets that are rolled into the Plan when a participant exits DROP. The remaining funds come primarily from employer and employee contributions. The original recordkeeping fee charged to participants was 26 basis points and has declined over the years to the current 7 basis points as total plan assets have increased. The PSPDCRP has also accumulated \$3.9 million in forfeited funds, as of December 31, 2023. The IRS regulations require annual disposition of such funds.

In the November 2021 Trustee meeting, the Board approved a plan amendment that allowed for forfeited funds to be used for three of the four IRS authorized uses (see below for the authorized uses). They are, pay plan expenses, provide credits against contributions to those employers who had forfeited funds and to return money to participants. The Board took further action to authorize the use of the forfeited dollars in two areas, on an annual basis, to pay plan expenses and provide credits to employers. The Board did not authorize any of the forfeited dollars to be returned to participants.

Each plan year, the Board can adopt a different allocation of the forfeited funds, as long as the allocation complies with the IRS regulations and the Plan document.

Background (from November 2021 memo):

- Forfeited Funds occur when a participant leaves the Plan prior to fully vesting in the Employer matching contributions (i.e., a CORP participant fully vests in 3 years. If they leave prior to 3 years, they only get to retain a portion of the employer matching contributions, based upon a vesting schedule)
- There are 4 different DC plans that PSPRS administers (PSPDCRP, Elected Official Defined Contribution Retirement System, 401a Supplemental plan, 457 Supplemental plan)
 - All fall under the same administrative agreement with Nationwide
 - All are assessed the 7 bps fee charged to participants by Nationwide to cover all plan expenses
 - Fee based upon the Total Assets of all plans
 - The PSPDCRP is the primary plan that has forfeited funds
 - EODCRP participants immediately vest in employer contributions and, thus, have no forfeitures
 - Supplemental 401a has a small forfeiture balance (\$8K)
 - No forfeitures in the Supplemental 457 as these are all participant contributions, no employer matching contributions
 - The recommended approach below to utilizing forfeited funds applies only to those Plans that have them
- IRS authorized uses of funds (can utilize any combination of these methods to distribute the forfeited monies)
 - Pay Plan Expenses (Nationwide Recordkeeping, Sageview consultants, Galloway Education provider, Audit, Legal costs, Committee member travel and conferences, etc.)
 - Offset future employer contributions (The IRS regulations do NOT allow for refunds to be sent to employers)
 - Distribute to participants
 - Re-instate previously forfeited balances for participants who leave employment, take a refund and later return to employment

- PSPDCRP Assets and Fees
 - Assets come into the plan in a few ways but primarily from:
 - Employer and Employee contributions that are statutorily mandated. For example PSPRS Tier 3, DC only participants, amounts are set at 9% for both the employer and employee (CORP participants and employers also contribute, but at different rates)
 - Rollover of DROP monies when a participant exits DROP
- Based upon information available, Paying Plan expenses is the primary utilization of forfeited funds in other Plans. After that, providing credits against future employer matching contributions is the next most utilized method of disposing of forfeited funds.
- If the forfeited funds were first used to pay Plan expenses and then dedicated to providing future credits against employer matching contributions, the majority of funds would still go back to employers, at the current rate of accumulating such funds.

Potential motions:

Motion #1: Move to keep the allocation of forfeited funds the same as that adopted by the Board last year, which was to pay plan expenses and provide credits to employers (those employers that actually had forfeitures) on a pro rata basis, against future contributions for the amount remaining after paying plan expenses.

Motion #2: Move to change the allocation of forfeited funds in a manner that differs from last year's allocation, in accordance with IRS regulations and the Plan document.



MEMORANDUM

TO: SCOTT MCCARTY, CHAIRMAN AND BOARD OF TRUSTEES

FROM: MICHAEL TOWNSEND, ADMINISTRATOR

DATE: FEBRUARY 15, 2023

RE: ASRS HEALTH INSURANCE ADVISORY COMMITTEE

Agenda Title:

Review, discussion and possible Action regarding the ASRS Health Insurance Advisory Committee PSPRS representative(s).

Background:

As a follow up to the joint meeting with PSPRS and ASRS discussion regarding retiree insurance, there is an ASRS HIAC (Health Insurance Advisory Committee) that could include PSPRS representatives. The HIAC does not have a formal charter or structure. The group was formed many years ago and ASRS staff have continued to work with the group that was established. There is not a formal invitation for participation however ASRS would appreciate the opportunity for PSPRS to consider representation.

- The group is primarily retirees that serve on retiree associations (see list below). ASRS has added the Medicare advocacy group affiliated with the State of Arizona for perspective and relationship building.
- The group is not a formal decision making body, meeting minutes are not kept, and the meetings are not generally advertised. In other words, it is best described as a group of retirees offering valuable feedback/input/thoughts but do not decide how we manage or design our plans.
- The HIAC typically meets 3-4 times annually and meetings last about 90 minutes. The topics range below is a sampling of some meeting topics brought to the group.
 1. Last spring the group discussed that ASRS is considering transitioning away from Silver Sneakers to a UHC fitness program. UHC provided an educational presentation to describe the program and then engaged with the group to solicit feedback, concerns, etc.
 2. As ASRS considered self-insuring programs, the group was presented data, reports, models and analysis to educate and gain support. Some of the retirees in the group volunteered to support some legislative tweaks down at the capital.

3. When ASRS ended our Medicare Supplement plan and transitioned to a Medicare Advantage PPO plan, the group was engaged to solicit concerns, feedback, etc.
 4. Members of this group participated in the most recent cycle of RFPs for dental and medical. They serve as non-voting participants but add valuable perspective.
- The group is encouraged to propose topics and offer ideas for consideration. The group does not often propose or share ideas but appreciate ASRS's thoughts and effort with the program.

List of the associations/entities represented at our meetings.

- All Arizona School Retirees Association (AASRA)
- AEA-Retired
- University of Arizona Retirees Association
- ASU Retirees Association
- Maricopa County Community College Retiree Association
- Arizona School Administrators
- Arizona Association of Counties
- National Education Association (Local)
- State Health Insurance Assistance Program (SHIP) and Senior Medicare Patrol (SMP)
- Public Safety Personnel Retirement System

The HIAC is expected to next gather in March or April and will likely discuss results from Open Enrollment and staff will share thoughts of self-insuring the dental program. Will then meet in the summer and for presentation regarding planned design changes.

Suggested motion:

No suggested motion. The plan is to discuss the process for selecting representatives. Based on the discussion a motion may be appropriate to give direction.

Arizona PSPRS Trust - Performance as of 12/31/2022 (Gross of Fees)

Description	Asset Allocation		7/1/2021 Target	Range	Performance % (TWR)								
	Market Values	%			Month	3 Months Ending	Fiscal YTD	Calendar YTD	1 Year	3 Years*	5 Years*	7 Years*	10 Years*
Arizona PSPRS Trust - Total Fund	\$18,449,033,043	100.00%			-1.25	4.25	0.96	-6.06	-6.06	6.65	6.71	7.62	7.54
Target Fund Benchmark [†]					-2.97	6.86	3.27	-12.12	-12.12	4.77	5.82	7.08	6.84
Capital Appreciation	\$11,893,048,989	64.46%			-2.00	6.46	1.79	-9.11	-9.11	8.37	7.94	9.18	9.18
US Public Equity ¹	\$4,146,606,520	22.48%	24%	17-29%	-5.58	7.79	2.99	-18.06	-18.06	7.66	9.21	11.17	11.75
Russell 3000					-5.86	7.18	2.40	-19.21	-19.21	7.07	8.79	11.04	12.13
Int'l Public Equity	\$3,209,587,226	17.40%	16%	13-21%	-0.83	14.53	3.16	-15.84	-15.84	0.23	1.45	4.98	4.13
MSCI ACWI IMI ex-US Net					-0.62	14.15	3.09	-16.58	-16.58	0.20	0.85	4.84	3.98
Global Private Equity	\$4,410,467,623	23.91%	27%	17-32%	0.72	0.37	-0.42	4.94	4.94	14.68	11.09	10.52	10.25
Russell 3000 + 1%					-5.69	7.51	2.99	-18.21	-18.21	8.09	9.81	12.05	13.14
Venture Capital & Buyouts	\$2,057,647,474	11.15%			-0.97	-1.84	-4.93	-4.56	-4.56	19.25	15.91	14.95	16.33
Real Estate	\$1,637,029,286	8.87%			3.04	3.24	2.97	12.37	12.37	9.64	5.52	4.56	4.76
Real Assets	\$715,790,863	3.88%			0.55	0.61	5.43	20.62	20.62	10.88	8.22	9.01	6.07
Other Assets	\$126,387,621	0.69%	0%	0-10%	-0.88	-0.07	0.41	5.94	5.94	11.22	9.41	10.37	12.15
Private Securities	\$126,387,621	0.69%			-0.88	-0.07	0.41	5.94	5.94	11.22	9.41	10.37	12.15
Contractual Income	\$3,861,591,849	20.93%			0.19	1.46	-0.38	0.89	0.89	5.86	6.09	7.06	7.04
Core Bonds ²	\$1,032,794,197	5.60%	2%	1-15%	-0.17	1.25	-2.40	-8.01	-8.01	-1.88	0.67	1.54	1.66
Bloomberg Barclays Government Bond Index					-0.50	0.72	-3.61	-12.32	-12.32	-2.57	-0.06	0.43	0.60
Private Credit	\$2,321,337,257	12.58%	20%	13-38%	0.42	1.52	0.66	4.73	4.73	8.86	8.60	8.89	10.47
50% BofA ML US High Yield BB-B Cnstr/ 50% CSFB Leveraged Loans Index					0.04	2.63	3.79	-1.68	-1.68	1.90	3.15	4.32	3.82
Private Lending	\$693,613,600	3.76%			1.08	1.81	1.98	7.51	7.51	9.07	8.05	7.59	8.22
Special Credit	\$1,627,723,657	8.82%			0.14	1.38	0.10	3.61	3.61	8.70	8.96	9.64	11.06
Other Assets	\$507,460,395	2.75%	0%	0-10%	-0.13	1.42	-2.41	-2.30	-2.30	5.04	4.88	7.15	5.50
Public Securities	\$268,633,940	1.46%			-0.24	2.38	1.81	-5.30	-5.30				
Private Securities	\$238,826,455	1.29%			0.00	0.49	-6.47	1.27	1.27	8.47	6.71	11.99	16.10
Diversifying Strategies	\$1,600,843,726	8.68%	10%	3-18%	-0.31	-0.76	-2.80	-6.15	-6.15	1.83	3.28	3.61	3.42
LIBOR + 4%					0.70	2.02	3.70	6.17	6.17	5.02	5.53	5.38	5.04
Cash ³	\$1,093,548,480	5.93%	1%	0-10%	0.41	1.03	1.47	1.70	1.70	0.91	1.94	2.04	2.14
LIBOR (USD 3-Month Index)					0.39	1.06	1.75	2.17	2.17	1.02	1.53	1.38	1.04

* Please note that all the returns for all time periods exceeding 1 year are *annualized*.

¹ Please note that US Public Equity allocation above does *not* include additional \$299,479,898 in net futures exposure. When accounting for this exposure, percent allocation for US Public Equity equals 24.10%.

² Please note that Core Bonds include \$488,853,500 in exposure to US Treasury Bills.

³ The returns for Cash account for both the interest on cash holdings and the revenue from securities lending.

† - Please see Page 2 for information on the blended fund benchmark changes and effective dates.

Target Fund Benchmarks/ Effective Dates:

July 1, 2021 to Present: 24% Russell 3000 Index, 16% MSCI ACWI Ex-US IMI Net Index, 27% Russell 3000 + 100 bps, 2% Bloomberg Barclays Gov't Bond Index, 20% BofA-ML US HY BB-B Constrained Index (50%) & CSFB Leveraged Loan Index (50%), 10% LIBOR +400 bps, and 1% LIBOR.

January 1, 2021 to June 30, 2021: 23% Russell 3000 Index, 15% MSCI ACWI Ex-US IMI Net Index, 25% Russell 3000 + 100 bps, 2% Bloomberg Barclays Gov't Bond Index, 22% BofA-ML US HY BB-B Constrained Index (50%) & CSFB Leveraged Loan Index (50%), 12% LIBOR +400 bps and 1% LIBOR.

July 1, 2020 to December 31, 2021: 23% Russell 3000 Index, 15% MSCI ACWI Ex-US IMI Net Index, 25% Russell 3000 + 100 bps, 2% Bloomberg Barclays US Aggregate Index, 22% BofA-ML US HY BB-B Constrained Index (50%) & CSFB Leveraged Loan Index (50%), 12% LIBOR +400 bps and 1% LIBOR.

July 1, 2019 to June 30, 2020: 20% Russell 3000 Index, 18% MSCI ACWI Ex-US IMI Net Index, 23% Russell 3000 + 100 bps, 3% Bloomberg Barclays US Aggregate Index, 22% BofA-ML US HY BB-B Constrained Index (50%) & CSFB Leveraged Loan Index (50%), 12% LIBOR +400 bps and 2% LIBOR.

July 1, 2018 to June 30, 2019: 16% Russell 3000, 14% MSCI World Ex-US Net, 12% Russell 3000 + 100 bps, 5% Bloomberg Barclays Global Aggregate ex-US (20%) & Bloomberg Barclays U.S. Aggregate (80%), 16% Private Credit (fka Credit Opportunities) Benchmark, 12% 3-Month LIBOR + 300 bps, 9% CPI + 200 bps, 10% NCREIF NPI, 4% Risk Parity Benchmark and 2% BofA ML 3-Month T-Bill.

July 1, 2017 to June 30, 2018: 16% Russell 3000, 14% MSCI World Ex-US Net, 12% Russell 3000 + 100 bps, 5% Bloomberg Barclays Global Aggregate Index, 16% Private Credit (fka Credit Opportunities) Benchmark, 12% 3-Month LIBOR + 300 bps, 9% CPI + 200 bps, 10% NCREIF NPI, 4% Risk Parity Benchmark and 2% BofA ML 3-Month T-Bill.

July 1, 2016 to June 30, 2017: 16% Russell 3000, 14% MSCI World Ex-US Net, 11% Russell 3000 + 100 bps, 5% Bloomberg Barclays Global Aggregate Index, 15% Credit Opportunities Benchmark, 5% BofA ML 3-Month T-Bill + 200 bps, 10% 3-Month LIBOR + 300 bps, 8% CPI + 200 bps, 10% NCREIF NPI, 4% Risk Parity Benchmark and 2% BofA ML 3-Month T-Bill.

July 1, 2015 - June 30, 2016: 16% Russell 3000, 14% MSCI World Ex-US Net, 11% Russell 3000 + 100 bps, 7% Bloomberg Barclays Global Aggregate Index, 13% Credit Opportunities Benchmark, 5% BofA ML 3-Month T-Bill + 200 bps, 10% 3-Month LIBOR + 300 bps, 8% CPI + 200 bps, 10% NCREIF NPI, 4% Risk Parity Benchmark and 2% BofA ML 3-Month T-Bill.

July 1, 2014 - June 30, 2015: 16% Russell 3000, 14% MSCI World Ex-US Net, 11% Russell 3000 + 100 bps, 7% Bloomberg Barclays Global Aggregate Index, 13% Credit Opportunities Benchmark, 4% BofA ML 3-Month T-Bill + 200 bps, 10% 3-Month LIBOR + 300 bps, 8% CPI + 200 bps, 11% NCREIF NPI, 4% Risk Parity Benchmark and 2% BofA ML 3-Month T-Bill.

July 1, 2013 - June 30, 2014: 17% Russell 3000, 14% MSCI ACWI Ex-US Net, 10% Russell 3000 + 100 bps, 8% Bloomberg Barclays Global Aggregate Index, 12% Credit Opportunities Benchmark, 4% BofA ML 3-Month T-Bill + 200 bps, 10% 3-Month LIBOR + 300 bps, 8% CPI + 200 bps, 11% NCREIF NPI, 4% Risk Parity Benchmark and 2% BofA ML 3-Month T-Bill.

July 1, 2012 - June 30, 2013: 18% Russell 3000, 14% MSCI World Ex-US Net, 9% Russell 3000 + 100 bps, 12% Bloomberg Barclays Global Aggregate Index, 12% Credit Opportunities Benchmark, 4% BofA ML 3-Month T-Bill + 200 bps, 8% 3-Month LIBOR + 300 bps, 7% CPI + 200 bps, 10% NCREIF NPI, 4% Risk Parity Benchmark and 2% BofA ML 3-Month T-Bill.

July 1, 2010 - June 30, 2012: 20% Russell 3000, 15% MSCI World Ex-US Net, 8% 3-Month LIBOR + 300 bps, 20% Bloomberg Barclays US Aggregate Index, 4% BofA ML 3-Month T-Bill + 200 bps, 9% BofA ML US High Yield BB-B Constrained, 8% Russell 3000 + 100 bps, 6% CPI + 200 bps, 8% NCREIF NPI and 2% BofA ML 3-Month T-Bill.

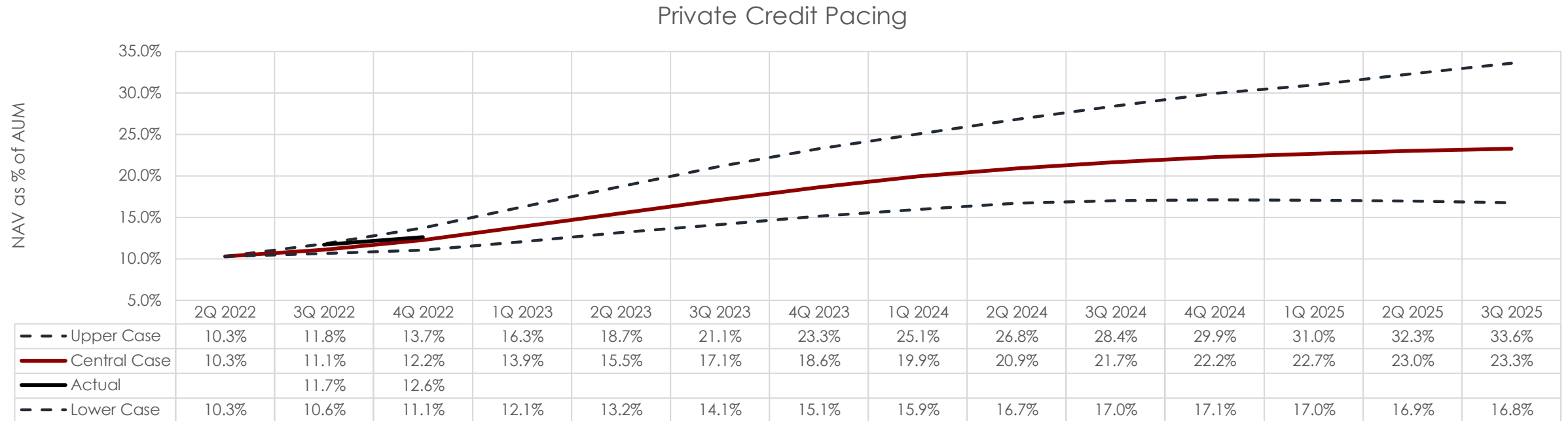
Arizona PSPRS Trust - Historical Calendar Year Performance (Gross of Fees)

Calendar Year:	Performance % (TWR)									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Arizona PSPRS Trust - Total Fund	-6.06	17.72	9.70	13.39	0.59	11.39	8.49	2.65	6.37	13.26
Target Fund Benchmark	-12.12	15.17	13.42	17.44	-1.86	12.92	7.73	1.01	5.36	12.85

Arizona PSPRS Trust - Historical Fiscal Year Performance (Net of Fees)

	Performance % (TWR)		
	Annualized 10 Years	Annualized 20 Years	Annualized 30 Years
Arizona PSPRS Trust - Total Fund * as of 6/30/2022	7.52	6.51	6.50

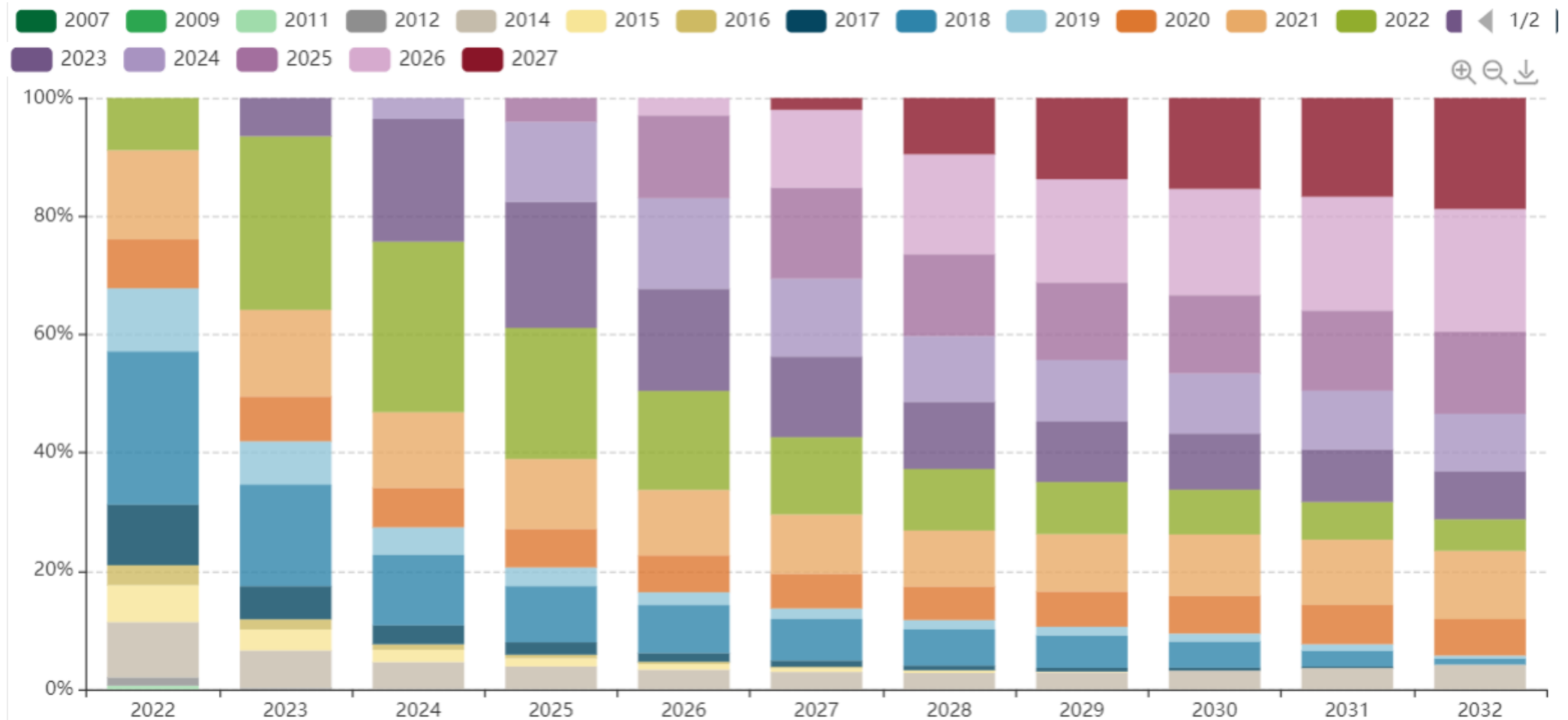
PRIVATE CREDIT CAPITAL PLANNING



- Staff anticipate reaching the target weight of 20% around the beginning of 2024, in line with original estimates
- Actual outcomes closely align with forecasted outcomes and are within both the upper and lower scenarios
- Model excludes so-called “placeholder” investments in listed funds
- Key assumptions include; portfolio appreciation, plan-level cash flows, rate of capital deployment, average investment holding period, investment growth rate and annual capital commitments

PRIVATE CREDIT CAPITAL PLANNING

NAV of Vintage Years (Central Case)



Public Safety Cancer Insurance Policy (CIP) Program - Performance as of 12/31/2022 (Net of Fees)

Description	Asset Allocation		7/1/2014 Target	Performance % (TWR)								7 Years*	10 Years*
	Market Values	%		3 Months		Fiscal YTD	Calendar YTD	1 Year	3 Years*	5 Years*			
				Month	Ending								
CIP - Total Fund	\$27,599,784	100.00%		-2.32	6.24	0.49	-13.54	-13.54	2.24	3.65	5.65	5.62	
Target Fund Benchmark ⁱ				-1.76	6.52	0.45	-13.95	-13.95	1.66	3.21	5.23	4.85	
U.S. Equity	\$6,628,366	24.02%	25%	-5.85	7.05	2.30	-19.51	-19.51	6.92	8.69	11.03	12.04	
Russell 3000				-5.86	7.18	2.40	-19.21	-19.21	7.07	8.79	11.04	12.13	
Non-U.S. Equity	\$7,045,764	25.53%	25%	-2.16	14.37	1.82	-16.27	-16.27	0.17	0.96	4.91	3.78	
MSCI ACWI Ex-US Net				-0.75	14.28	2.96	-16.00	-16.00	0.07	0.88	4.80	3.80	
Fixed Income	\$8,013,748	29.04%	30%	-1.20	1.34	-3.03	-12.86	-12.86	-3.25	-0.12	0.83	0.93	
Fixed Income Blended Benchmark - CIP ⁱ				-0.10	2.85	-2.89	-14.15	-14.15	-3.35	-0.57	0.91	0.07	
Inflation-Linked Securities	\$2,636,199	9.55%	10%	-1.32	1.92	-3.51	-12.23	-12.23	0.93	1.87	2.41	N/A	
Bloomberg Barclays U.S. TIPS Index				-1.02	2.04	-3.21	-11.85	-11.85	1.21	2.11	2.60	1.12	
Commodities	\$1,472,984	5.34%	5%	2.93	9.68	12.16	3.17	3.17	9.99	9.28	11.58	N/A	
SPDR® Gold Trust Index (GLD)				0.03	0.10	0.01	0.10	0.10	6.19	6.72	7.75	0.55	
Cash **	\$1,802,722	6.53%	5%	0.08	0.81	1.53	2.55	2.55	2.43	3.18	3.71	3.57	
BofA ML 3-Month T-Bill				0.36	0.85	1.32	1.47	1.47	0.73	1.27	1.07	0.77	

* Please note that all the returns for all time periods exceeding 1 year are *annualized*.

** The returns for Cash account for both the interest on cash holdings and the revenue from securities lending.

† - Please see below for information on the blended benchmark changes and effective dates.

Target Fund Benchmarks/ Effective Dates:

July 1, 2014 to Present: 25% Russell 3000, 25% MSCI ACWI Ex-US Net, 30% Fixed Income Blended Benchmark - CIP, 10% Barclays U.S. TIPS, 5% GLD Index Return, 5% BofA ML 3-Month T-Bill.
 July 1, 2009 - June 30, 2014: 30% Russell 3000, 30% MSCI ACWI Ex-US Net, 35% Fixed Income Blended Benchmark - CIP, 5% BofA ML 3-Month T-Bill

Target Fixed Income Benchmarks/ Effective Dates:

July 1, 2018 to Present: 20% Bloomberg Barclays Global Aggregate ex-US and 80% Bloomberg Barclays U.S. Aggregate.
 July 1, 2014 - June 30, 2018: 100% Bloomberg Barclays Global Aggregate.
 July 1, 2002 - June 30, 2014: 100% Bloomberg Barclays U.S. Aggregate.

Public Safety Cancer Insurance Policy (CIP) Program - Historical Calendar Year Performance (Net of Fees)

Calendar Year:	Performance % (TWR)									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
CIP - Total Fund	-13.54	9.74	12.63	17.23	-4.52	14.56	7.21	-1.12	5.18	13.05
<i>Target Fund Benchmark</i>	<i>-13.95</i>	<i>7.64</i>	<i>13.41</i>	<i>17.32</i>	<i>-4.96</i>	<i>14.98</i>	<i>6.06</i>	<i>-2.65</i>	<i>1.99</i>	<i>13.22</i>



PORTFOLIO RISK & ANALYTICS REPORT

02/15/2023

The PSPRS Trust



Agenda - Portfolio Risk as of December 31, 2023

Asset Allocation Structure

Slide 3

PSPRS Overview

- AUM Growth & 7-Year Rolling Return
- FYTD Attribution by Portfolio & Asset Class
- PSPRS Currency & Country Exposure

Slide 4

Slide 5

Slide 6

Realized and Forecasted Levels of PSPRS Trust Portfolio Risk

- Current Status
- Risk Decomposition by Asset Class
- Trailing Volatility Comparison
- Exposure to Major Market Factors
- Stress Test Results
- Upside and Downside Performance

Slide 7

Slide 8

Slide 9

Slide 10-11

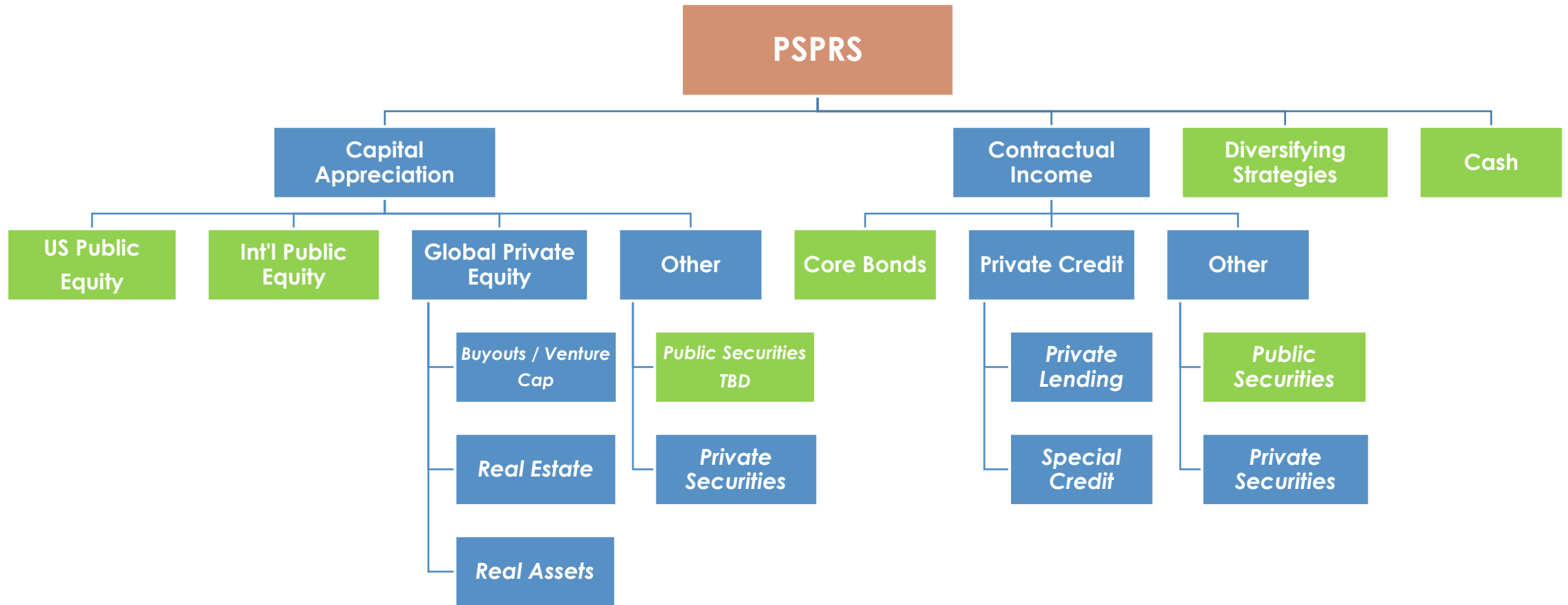
Slide 12

Slide 13

Summary

Slide 14

Asset Allocation Structure



AUM Growth & 7-Year Rolling Return

PSPRS AUM



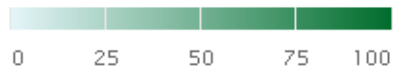
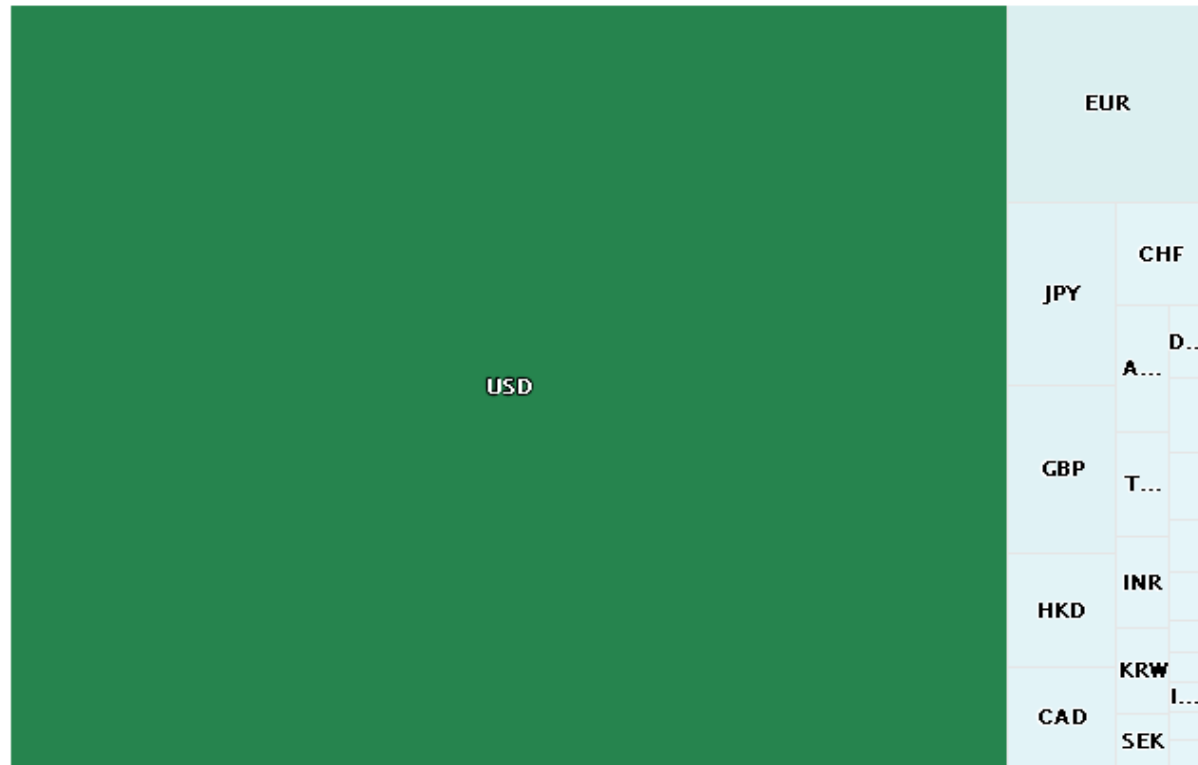
FYTD Attribution by Portfolio & Asset Class

Asset Class	Market Value	FYTD	Performance Attribution
PSPRS Trust	18,449,033,043	0.96%	0.96%
CAPITAL APPRCN	11,893,048,989	1.79%	1.16%
CONTRACTUAL INCOME	3,861,591,849	-0.38%	-0.08%
DIVERSIFYING STRTGIES	1,600,843,726	-2.79%	-0.24%
PSPRS Cash	1,093,548,480	1.47%	0.09%

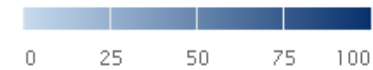
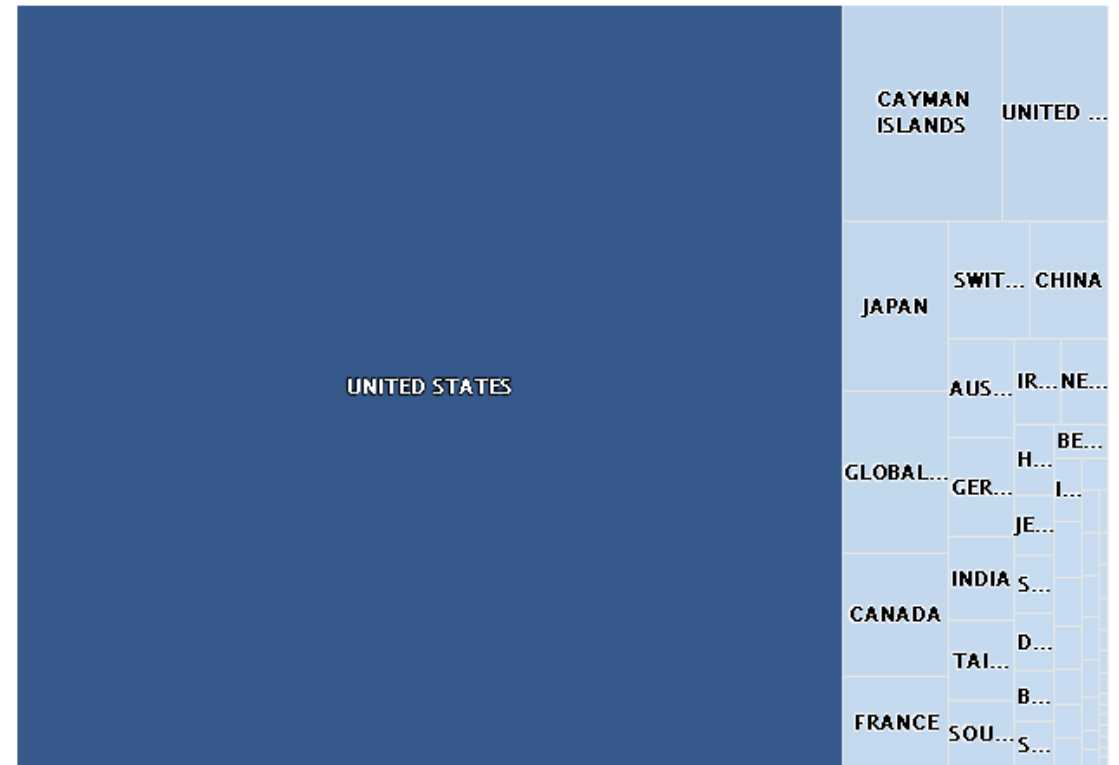
Asset Class	Market Value	FYTD	Performance Attribution
PSPRS Trust	18,449,033,043	0.96%	0.96%
CA - US PUBLIC EQTY	4,146,606,520	2.99%	0.67%
CA - INTL PUBLIC EQTY	3,209,587,226	3.16%	0.55%
CA-GLB PRIVATE EQTY	4,410,467,623	-0.42%	-0.10%
CA - OTHER ASSETS	126,387,621	0.41%	0.00%
CI - CORE BONDS	1,032,794,197	-2.40%	-0.13%
CI-PRIVATE CREDIT	2,321,337,257	0.66%	0.08%
CI-OTHER ASSETS	507,460,395	-2.41%	-0.07%
DIVERSIFYING STRTGIES	1,600,843,726	-2.79%	-0.24%
PSPRS Cash	1,093,548,480	1.47%	0.09%

PSPRS Currency & Country Exposure

PSPRS Currency Exposure



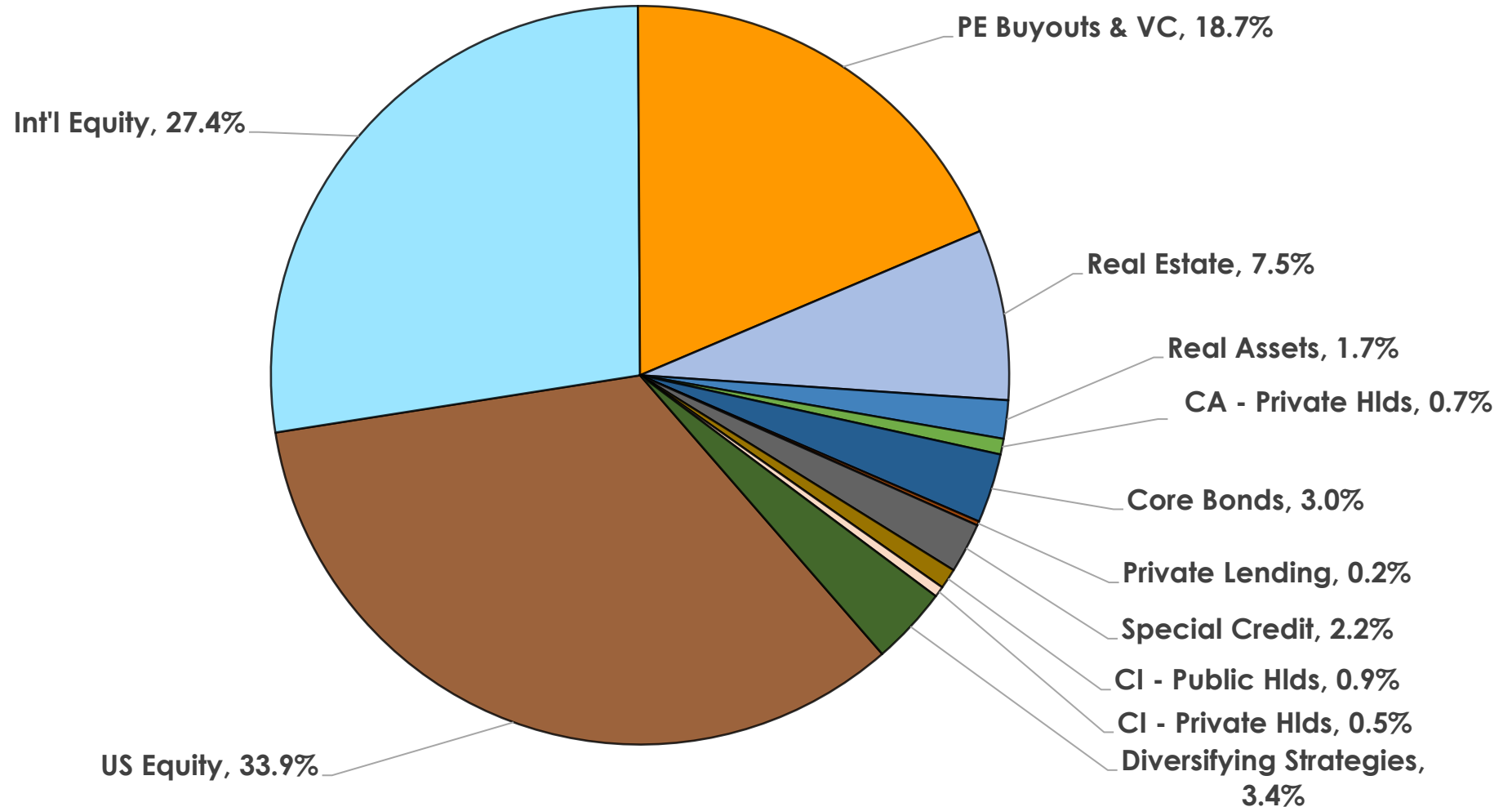
PSPRS Country Exposure



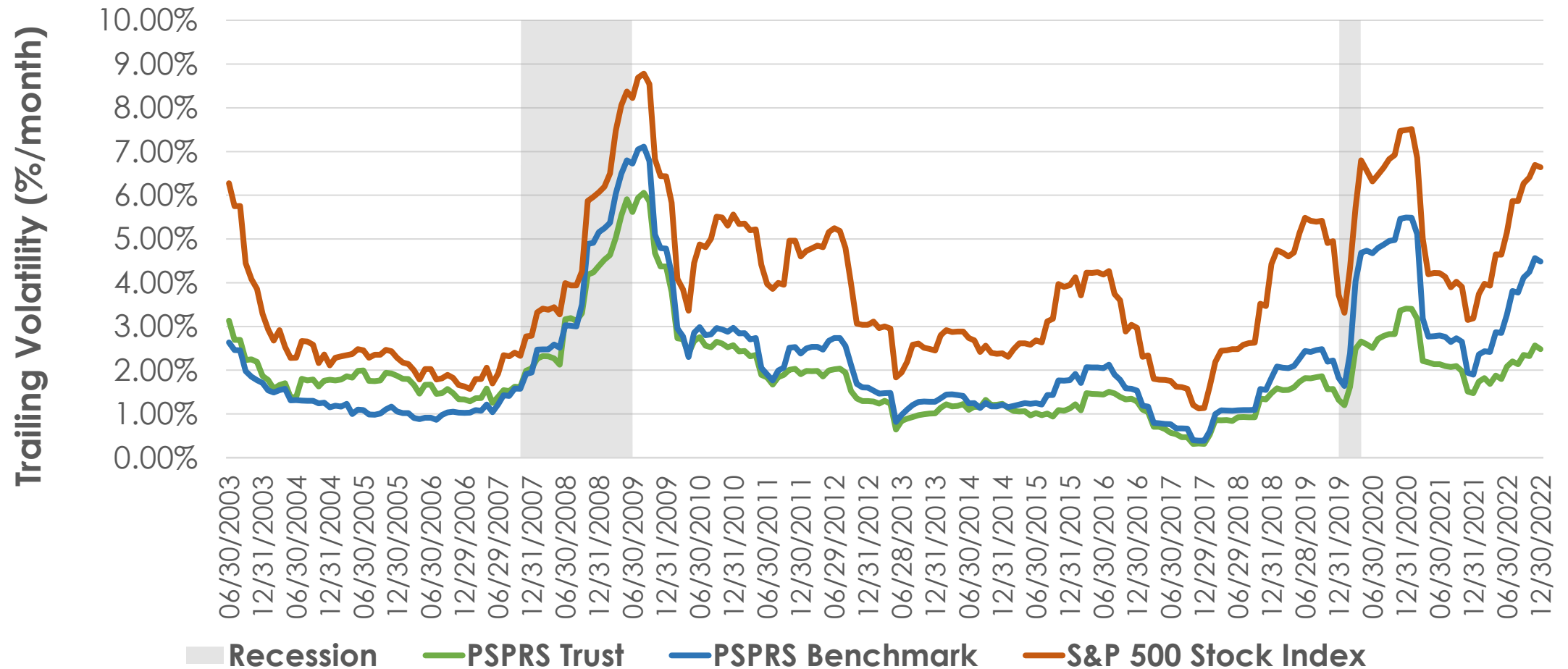
Current Status Overview

	Portfolio Weight	Historic Volatility (12m Std. Dev.)	Monthly Volatility (Forecast)	Monthly VAR Forecast (95% Confidence)
Capital Appreciation	64%			
• US Public Equity	<u>22%</u>	6.6%	4.3%	-7.1%
• Int'l Public Equity	<u>17%</u>	6.0%	4.4%	-7.4%
• Global Private Equity	<u>24%</u>			
• Buyouts & VC	11%	1.7%	4.7%	-7.9%
• Real Estate	9%	1.7%	2.9%	-4.0%
• Real Assets	4%	1.8%	3.4%	-2.0%
• Other Assets	<u>1%</u>			
• Other Private Holdings	1%	1.2%	6.2%	-4.7%
Contractual Income	21%			
• Core Bonds	<u>6%</u>	1.6%	1.5%	-2.6%
• Private Credit	<u>13%</u>			
• Private Lending	4%	0.7%	0.5%	-0.2%
• Special Credit	9%	0.7%	1.8%	-1.2%
• Other Assets	<u>3%</u>			
• Public Holdings	1%	2.0%	2.4%	-2.9%
• Private Holdings	1%	2.9%	2.6%	-1.7%
Diversifying Strategies	9%	1.3%	1.6%	-1.9%
PSPRS Trust	94%	2.5%	2.9%	-3.9%

Risk Decomposition by Asset Class



Trailing Volatility Comparison



The Trust portfolio is 63% less volatile than the market.

Notable Drivers of Asset Class Risk

PSPRS Portfolio	Portfolio Weight	Primary Driver	Secondary Driver	Fraction Explained
Capital Appreciation	64%			
• US Public Equity	<u>22%</u>	Russell 3000 TR	TLT	98%
• Int'l Public Equity	<u>17%</u>	MSCI ex US	Commodity	97%
• Global Private Equity	<u>24%</u>			
• Buyouts & VC	11%	Russell 3000 TR	Commodity	99%
• Real Estate	9%	Office REITs	Russell 3000 TR	58%
• Real Assets	4%	Commodity	Russell 3000 TR	94%
• Other Assets	<u>1%</u>			
• Other Private Holdings	1%	--	--	--
Contractual Income	21%			
• Core Bonds	<u>6%</u>	SHYG	HYG	68%
• Private Credit	<u>13%</u>			
• Private Lending	4%	FTSL	HYG	96%
• Special Credit	9%	FTSL	JNK	65%
• Other Assets	<u>3%</u>			
• Public Holdings	1%	SRLN	TLT	100%
• Private Holdings	1%	Commodity	Russell 3000 TR	53%
Diversifying Strategies	9%	Credit Suisse HF Index	TLT	80%

Notable Drivers of Asset Class Risk

- Risk modeling indicates that the PSPRS global portfolio is subject – in part – to two main drivers (explaining 85% of variance, or market risk):
 - Russell 3000 Total Return
 - Crude Oil WTI
- We report the (all other things being equal) results of stress tests on these drivers in order to gauge our exposure to them.

Market Factor Change	Portfolio Return
Russell 3000 Total Return-3 std	-3.4%
Russell 3000 Total Return-2 std	-1.8%
Russell 3000 Total Return-1 std	-0.2%
Russell 3000 Total Return+1 std	4.7%
Russell 3000 Total Return+2 std	6.3%
Russell 3000 Total Return+3 std	7.9%

Market Factor Change	Portfolio Return
Crude Oil WTI-3 std	1.9%
Crude Oil WTI-2 std	2.2%
Crude Oil WTI-1 std	2.5%
Crude Oil WTI+1 std	3.3%
Crude Oil WTI+2 std	3.6%
Crude Oil WTI+3 std	3.9%

Historical Worst-Case Scenarios

Stress Testing: The style analysis model of our current holdings can be subjected to stress scenarios.

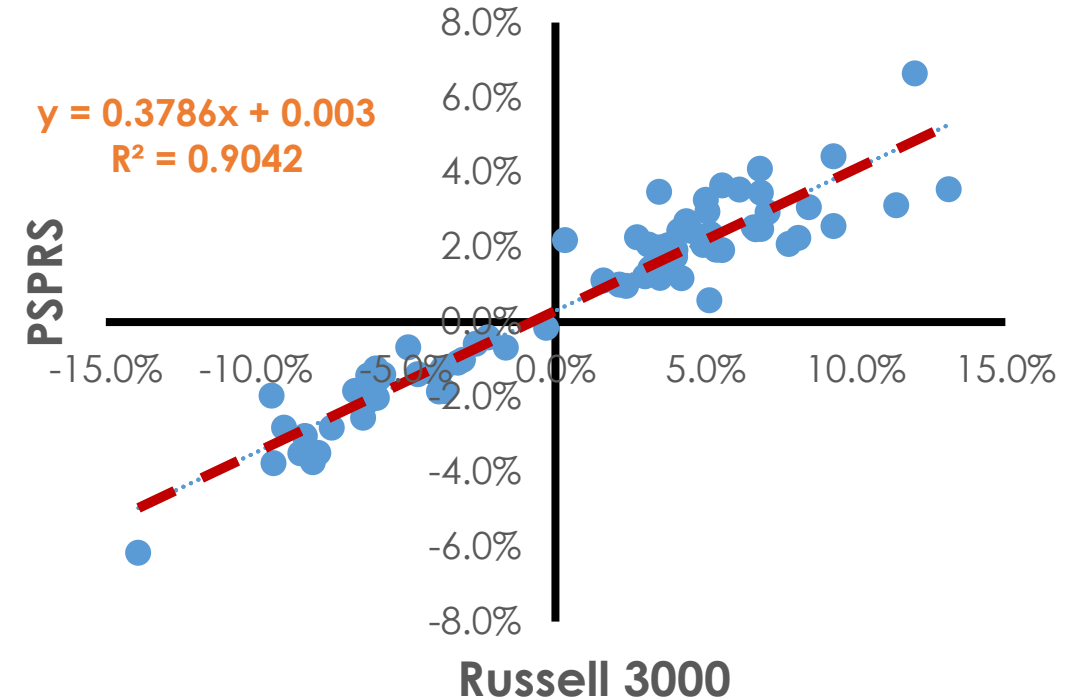
Events	Today's Portfolio	PSPRS Trust Actual
WTC Attacks - Sept. 11	-2.5%	-11.7%
Stock Market Crash 2002	-2.8%	-21.1%
August Crisis 2007	0.6%	1.6%
January Crisis 2008	-2.5%	-2.7%
Credit Crunch 2008 (Aug to Nov)	-12.0%	-23.1%
Crisis 2009 (Jan-Feb)	-4.8%	-12.9%
Flash Crash 2010	-2.6%	-3.7%
Brexit (2016)	1.1%	-0.3%
COVID-19 (2020)	-5.8%	-6.2%

Upside and Downside Performance

Actual Portfolio Returns During Market Upside and Downside

Upside			In 6-month	
Period	Russell 3000	PSPRS Actual	Russell 3000	PSPRS Actual
4/30/2020	13.1%	3.5%	14.2%	6.5%
11/30/2020	12.0%	6.6%	19.3%	14.3%
10/31/2011	11.4%	3.1%	11.6%	3.8%
07/29/2022	9.3%	2.6%	N/A	N/A
09/30/2010	9.3%	4.4%	17.7%	8.3%

Downside			In 6-month	
Period	Russell 3000	PSPRS Actual	Russell 3000	PSPRS Actual
03/31/2020	-13.9%	-6.2%	32.1%	10.8%
12/31/2018	-9.5%	-2.0%	17.6%	7.8%
04/30/2022	-9.0%	-2.8%	-6.2%	-4.6%
06/30/2022	-8.5%	-3.5%	1.5%	1.0%
02/28/2020	-8.4%	-3.1%	18.2%	5.3%



- Upside participation: 45%
- Downside mitigation: 67% (33% participation)

Summary

- Public equity markets continued to experience elevated volatilities in December. While international equities were slightly lower, S&P 500 and Russell 3000 lost approximately 5.9% separately. The total Trust portfolio returned -1.3% but outperformed the policy benchmark by 170 bps. Besides, the plan accumulated about 1% return FYTD. Most outperformance came from the U.S. and Int'l equities, and Diversifying Strategies and Core Bonds underperformed.
- The historical volatility decreased slightly (~10 bps) in various asset classes as well as the combined portfolio. However, the total forecasted volatility and VaR increased by around 10 bps. Most of the downside risk resided in the public and private equities, but the Real Estate contributed 50 bps more to the total risk than a month ago. In addition, the trailing volatility trend of the market, the Trust, and the policy benchmark all eased slightly in December.
- All the primary and secondary asset class risk drivers remained the same, except for the Special Credit and CI - Other Assets - Private Holdings. The risk model revealed that the senior floating-rate bank loans had a more significant impact on the former, and commodities were more relevant for the latter. Additionally, the results from the modeled scenario analysis and the actual market performance did not change noticeably.
- In addition to the PSPRS Trust being:
 - Top decile on risk-terms since 2009.
 - Top quartile in efficiency (Sharpe Ratio) terms since 2010.



PORTFOLIO RISK & ANALYTICS REPORT

02/15/2023

The PSPRS Trust



Agenda - Portfolio Risk as of December 31, 2023

Asset Allocation Structure

Slide 3

PSPRS Overview

- AUM Growth & 7-Year Rolling Return
- FYTD Contribution by Portfolio & Asset Class
- PSPRS Currency & Country Exposure

Slide 4

Slide 5

Slide 6

Realized and Forecasted Levels of PSPRS Trust Portfolio Risk

- Current Status
- Risk Decomposition by Asset Class
- Trailing Volatility Comparison
- Exposure to Major Market Factors
- Stress Test Results
- Upside and Downside Performance

Slide 7

Slide 8

Slide 9

Slide 10-11

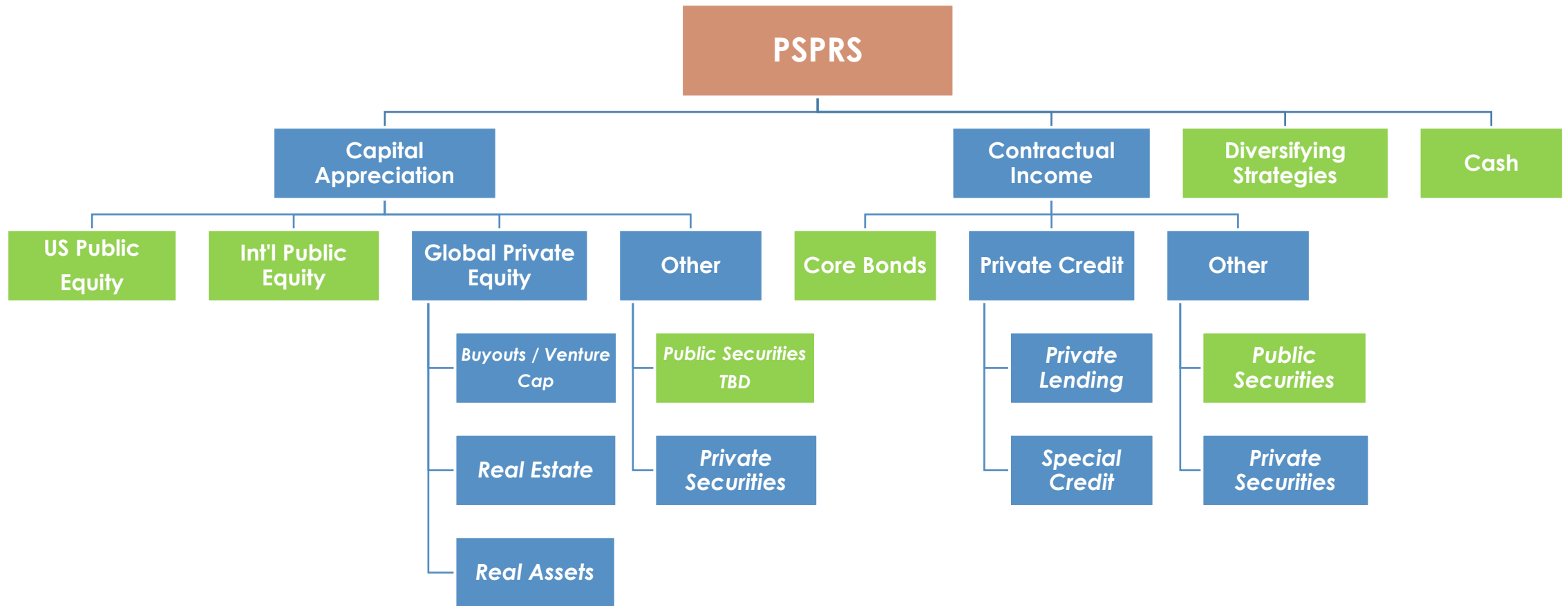
Slide 12

Slide 13

Summary

Slide 14

Asset Allocation Structure



AUM Growth & 7-Year Rolling Return

PSPRS AUM



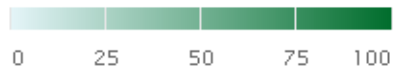
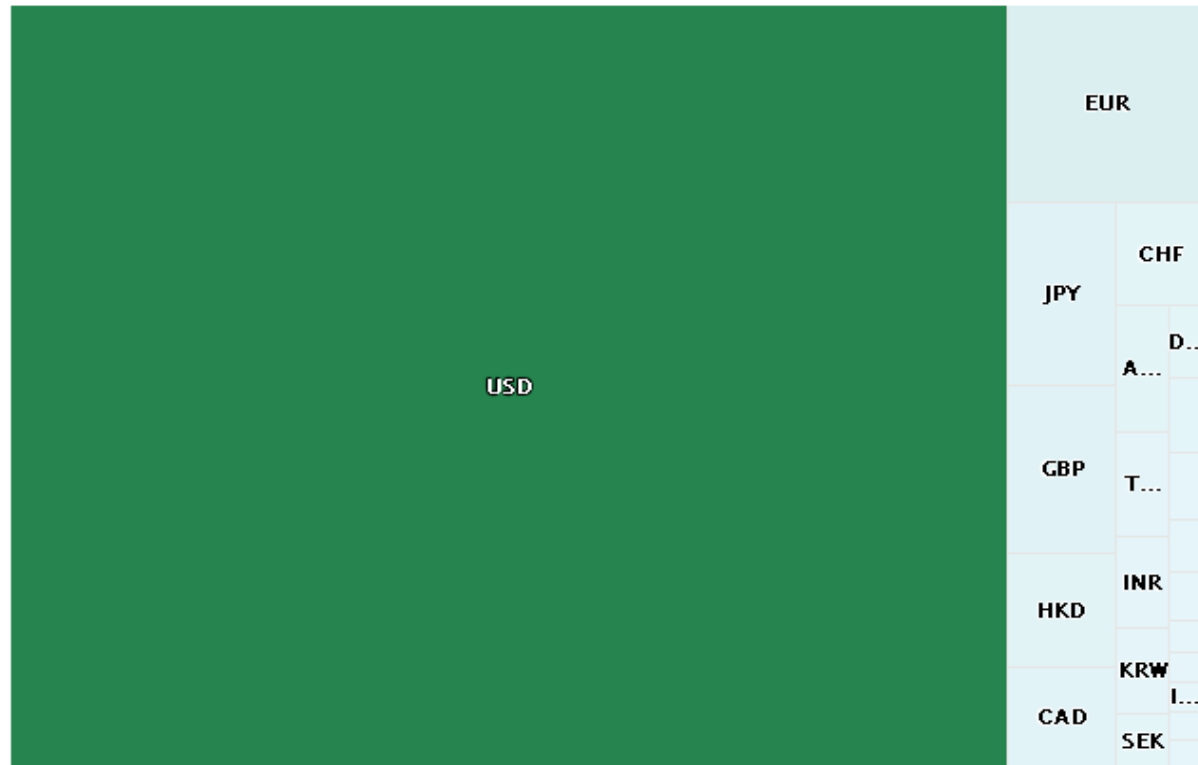
FYTD Contribution by Portfolio & Asset Class

Asset Class	Market Value	FYTD	Performance Contribution
PSPRS Trust	18,449,033,043	0.96%	0.96%
CAPITAL APPRCN	11,893,048,989	1.79%	1.16%
CONTRACTUAL INCOME	3,861,591,849	-0.38%	-0.08%
DIVERSIFYING STRTGIES	1,600,843,726	-2.79%	-0.24%
PSPRS Cash	1,093,548,480	1.47%	0.09%

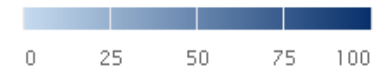
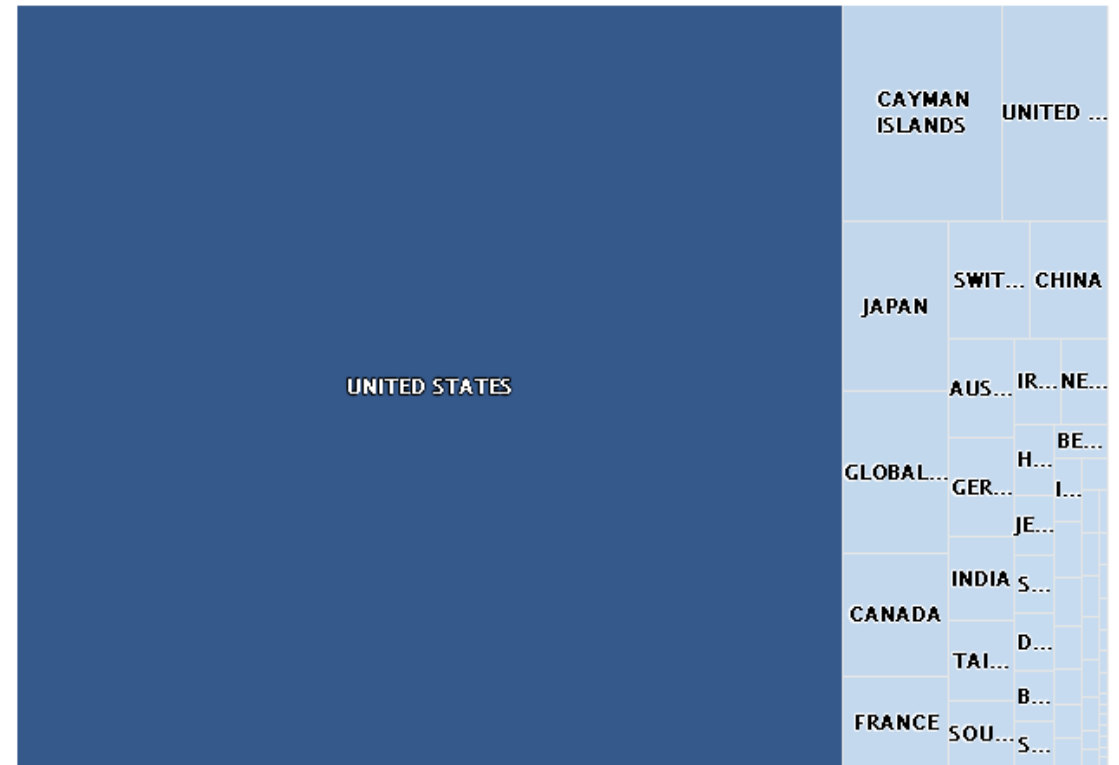
Asset Class	Market Value	FYTD	Performance Contribution
PSPRS Trust	18,449,033,043	0.96%	0.96%
CA - US PUBLIC EQTY	4,146,606,520	2.99%	0.67%
CA - INTL PUBLIC EQTY	3,209,587,226	3.16%	0.55%
CA-GLB PRIVATE EQTY	4,410,467,623	-0.42%	-0.10%
CA - OTHER ASSETS	126,387,621	0.41%	0.00%
CI - CORE BONDS	1,032,794,197	-2.40%	-0.13%
CI-PRIVATE CREDIT	2,321,337,257	0.66%	0.08%
CI-OTHER ASSETS	507,460,395	-2.41%	-0.07%
DIVERSIFYING STRTGIES	1,600,843,726	-2.79%	-0.24%
PSPRS Cash	1,093,548,480	1.47%	0.09%

PSPRS Currency & Country Exposure

PSPRS Currency Exposure



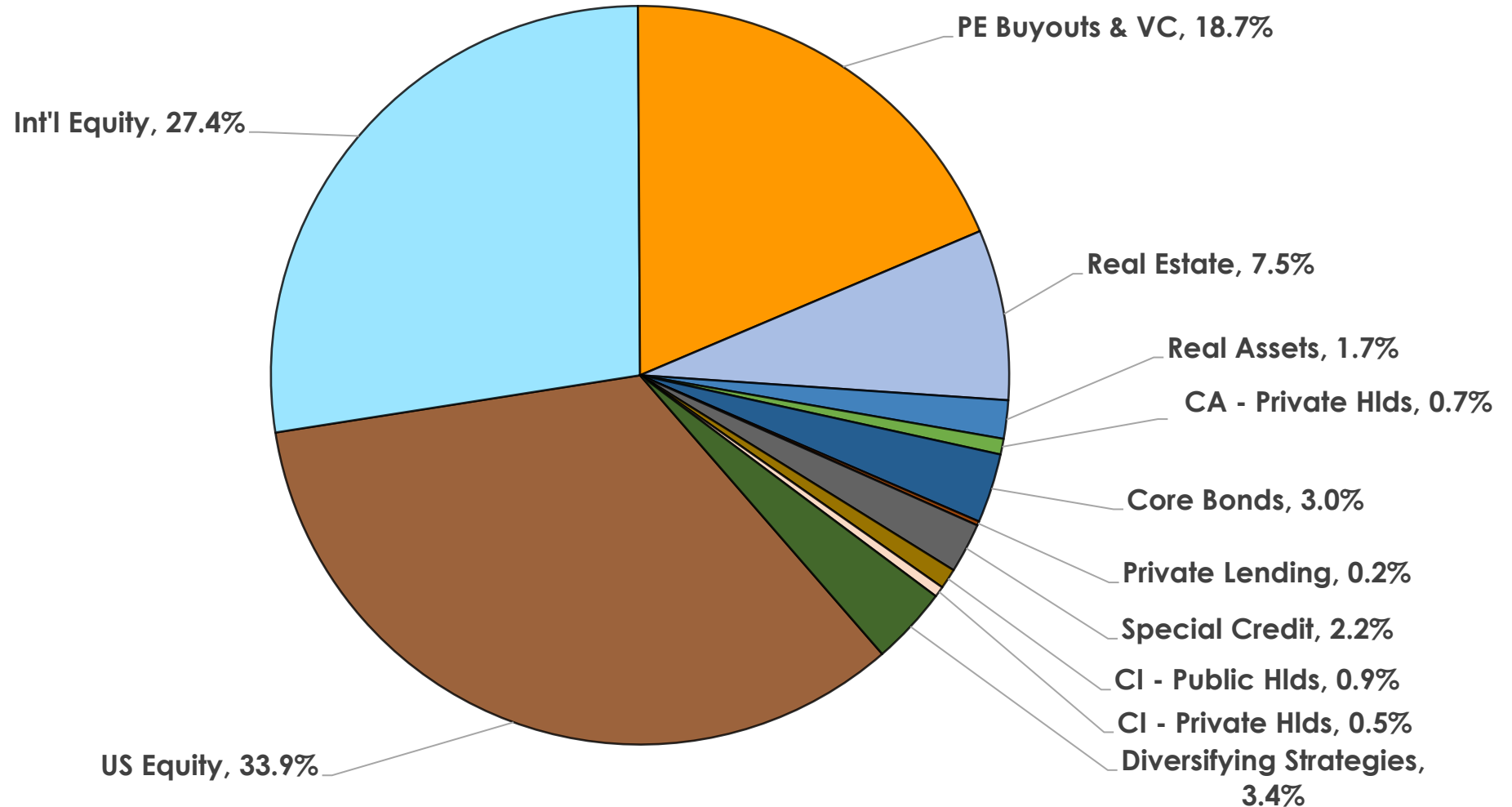
PSPRS Country Exposure



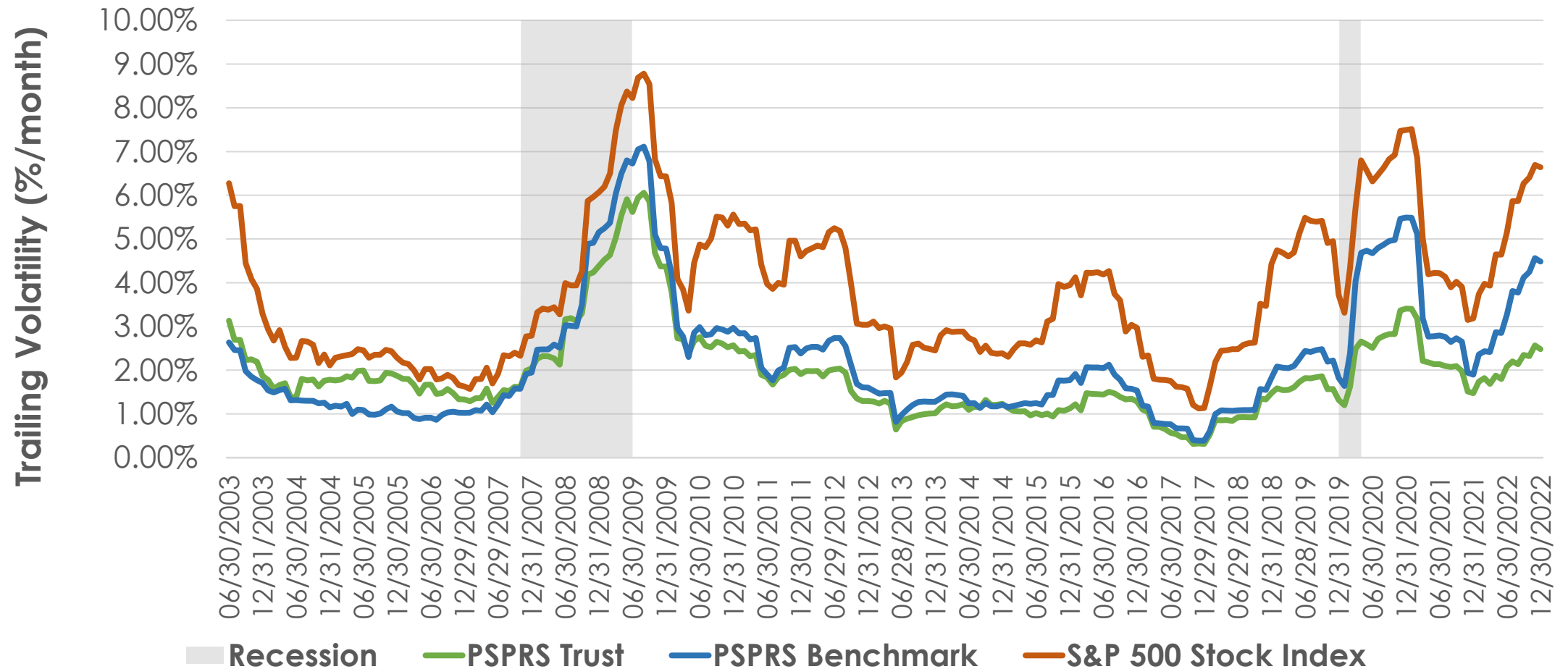
Current Status Overview

	Portfolio Weight	Historic Volatility (12m Std. Dev.)	Monthly Volatility (Forecast)	Monthly VAR Forecast (95% Confidence)
Capital Appreciation	64%			
• US Public Equity	<u>22%</u>	6.6%	4.3%	-7.1%
• Int'l Public Equity	<u>17%</u>	6.0%	4.4%	-7.4%
• Global Private Equity	<u>24%</u>			
• Buyouts & VC	11%	1.7%	4.7%	-7.9%
• Real Estate	9%	1.7%	2.9%	-4.0%
• Real Assets	4%	1.8%	3.4%	-2.0%
• Other Assets	<u>1%</u>			
• Other Private Holdings	1%	1.2%	6.2%	-4.7%
Contractual Income	21%			
• Core Bonds	<u>6%</u>	1.6%	1.5%	-2.6%
• Private Credit	<u>13%</u>			
• Private Lending	4%	0.7%	0.5%	-0.2%
• Special Credit	9%	0.7%	1.8%	-1.2%
• Other Assets	<u>3%</u>			
• Public Holdings	1%	2.0%	2.4%	-2.9%
• Private Holdings	1%	2.9%	2.6%	-1.7%
Diversifying Strategies	9%	1.3%	1.6%	-1.9%
PSPRS Trust	94%	2.5%	2.9%	-3.9%

Risk Decomposition by Asset Class



Trailing Volatility Comparison



The Trust portfolio is 63% less volatile than the market.

Notable Drivers of Asset Class Risk

PSPRS Portfolio	Portfolio Weight	Primary Driver	Secondary Driver	Fraction Explained
Capital Appreciation	64%			
• US Public Equity	<u>22%</u>	Russell 3000 TR	TLT	98%
• Int'l Public Equity	<u>17%</u>	MSCI ex US	Commodity	97%
• Global Private Equity	<u>24%</u>			
• <i>Buyouts & VC</i>	11%	Russell 3000 TR	Commodity	99%
• <i>Real Estate</i>	9%	Office REITs	Russell 3000 TR	58%
• <i>Real Assets</i>	4%	Commodity	Russell 3000 TR	94%
• Other Assets	<u>1%</u>			
• <i>Other Private Holdings</i>	1%	--	--	--
Contractual Income	21%			
• Core Bonds	<u>6%</u>	SHYG	HYG	68%
• Private Credit	<u>13%</u>			
• <i>Private Lending</i>	4%	FTSL	HYG	96%
• <i>Special Credit</i>	9%	FTSL	JNK	65%
• Other Assets	<u>3%</u>			
• <i>Public Holdings</i>	1%	SRLN	TLT	100%
• <i>Private Holdings</i>	1%	Commodity	Russell 3000 TR	53%
Diversifying Strategies	9%	Credit Suisse HF Index	TLT	80%

Notable Drivers of Asset Class Risk

- Risk modeling indicates that the PSPRS global portfolio is subject – in part – to two main drivers (explaining 85% of variance, or market risk):
 - Russell 3000 Total Return
 - Crude Oil WTI
- We report the (all other things being equal) results of stress tests on these drivers in order to gauge our exposure to them.

Market Factor Change	Portfolio Return
Russell 3000 Total Return-3 std	-3.4%
Russell 3000 Total Return-2 std	-1.8%
Russell 3000 Total Return-1 std	-0.2%
Russell 3000 Total Return+1 std	4.7%
Russell 3000 Total Return+2 std	6.3%
Russell 3000 Total Return+3 std	7.9%

Market Factor Change	Portfolio Return
Crude Oil WTI-3 std	1.9%
Crude Oil WTI-2 std	2.2%
Crude Oil WTI-1 std	2.5%
Crude Oil WTI+1 std	3.3%
Crude Oil WTI+2 std	3.6%
Crude Oil WTI+3 std	3.9%

Historical Worst-Case Scenarios

Stress Testing: The style analysis model of our current holdings can be subjected to stress scenarios.

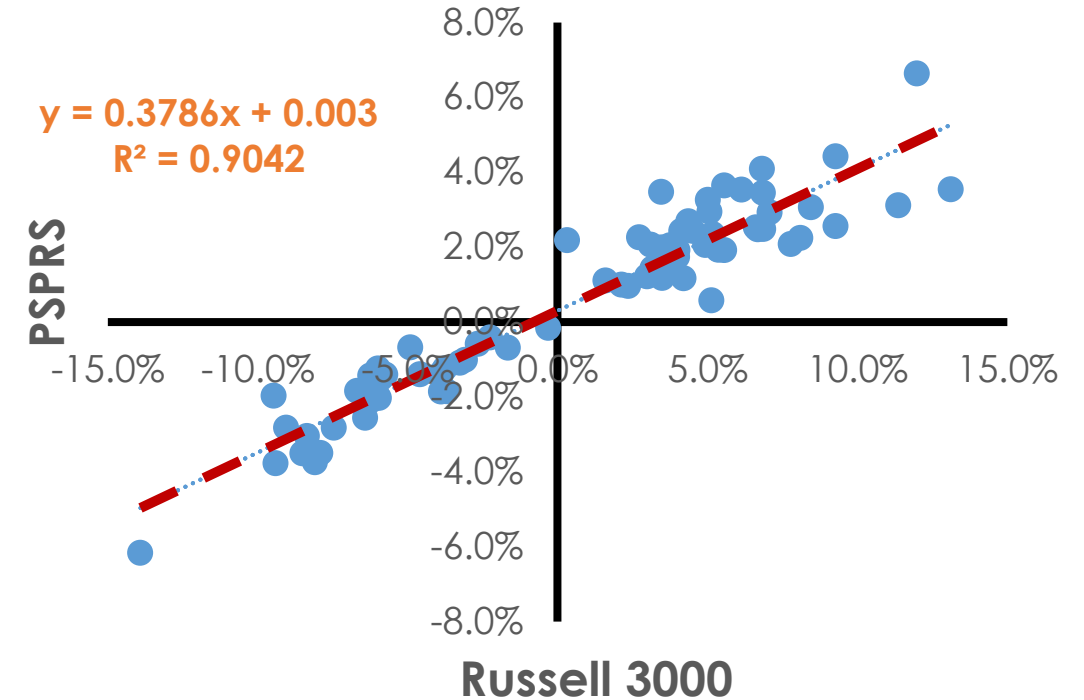
Events	Today's Portfolio	PSPRS Trust Actual
WTC Attacks - Sept. 11	-2.5%	-11.7%
Stock Market Crash 2002	-2.8%	-21.1%
August Crisis 2007	0.6%	1.6%
January Crisis 2008	-2.5%	-2.7%
Credit Crunch 2008 (Aug to Nov)	-12.0%	-23.1%
Crisis 2009 (Jan-Feb)	-4.8%	-12.9%
Flash Crash 2010	-2.6%	-3.7%
Brexit (2016)	1.1%	-0.3%
COVID-19 (2020)	-5.8%	-6.2%

Upside and Downside Performance

Actual Portfolio Returns During Market Upside and Downside

Upside			In 6-month	
Period	Russell 3000	PSPRS Actual	Russell 3000	PSPRS Actual
4/30/2020	13.1%	3.5%	14.2%	6.5%
11/30/2020	12.0%	6.6%	19.3%	14.3%
10/31/2011	11.4%	3.1%	11.6%	3.8%
07/29/2022	9.3%	2.6%	N/A	N/A
09/30/2010	9.3%	4.4%	17.7%	8.3%

Downside			In 6-month	
Period	Russell 3000	PSPRS Actual	Russell 3000	PSPRS Actual
03/31/2020	-13.9%	-6.2%	32.1%	10.8%
12/31/2018	-9.5%	-2.0%	17.6%	7.8%
04/30/2022	-9.0%	-2.8%	-6.2%	-4.6%
06/30/2022	-8.5%	-3.5%	1.5%	1.0%
02/28/2020	-8.4%	-3.1%	18.2%	5.3%



- Upside participation: 45%
- Downside mitigation: 67% (33% participation)

Summary

- Public equity markets continued to experience elevated volatilities in December. While international equities were slightly lower, S&P 500 and Russell 3000 lost approximately 5.9% separately. The total Trust portfolio returned -1.3% but outperformed the policy benchmark by 170 bps. Besides, the plan accumulated about 1% return FYTD. Most outperformance came from the U.S. and Int'l equities, and Diversifying Strategies and Core Bonds underperformed.
- The historical volatility decreased slightly (~10 bps) in various asset classes as well as the combined portfolio. However, the total forecasted volatility and VaR increased by around 10 bps. Most of the downside risk resided in the public and private equities, but the Real Estate contributed 50 bps more to the total risk than a month ago. In addition, the trailing volatility trend of the market, the Trust, and the policy benchmark all eased slightly in December.
- All the primary and secondary asset class risk drivers remained the same, except for the Special Credit and CI - Other Assets - Private Holdings. The risk model revealed that the senior floating-rate bank loans had a more significant impact on the former, and commodities were more relevant for the latter. Additionally, the results from the modeled scenario analysis and the actual market performance did not change noticeably.
- In addition to the PSPRS Trust being:
 - Top decile on risk-terms since 2009.
 - Top quartile in efficiency (Sharpe Ratio) terms since 2010.



GLOBAL FINANCIAL MARKETS UPDATE

February 15th, 2023

The PSPRS Trust



GLOBAL STOCK MARKETS HIGHLIGHTS

- ✓ Most major stock markets positive YTD in 2023 as investors forecast lower inflation, slower pace of rate hikes, and increased demand from China due to easing COVID restrictions.
 - ✓ S&P 500 up ~8.2% and NASDAQ Composite Index up ~15.4% (in US\$ terms).
 - ✓ Europe STOXX 600 up ~8.2% (in US\$ terms).
 - ✓ Hang Seng Index up ~7.1% (in US\$ terms).
 - ✓ Emerging Markets (Measured through the MSCI EM Index) up ~6.1% YTD (in US\$ terms).

GLOBAL STOCKS - ROLLING TOTAL RETURNS ENDING 01/31/2023

	S&P 500 Total Return				Russell 2000				Russell 3000			
Start/End Date	02/29/1988		01/31/2023		01/31/1979		01/31/2023		01/31/1979		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	11.9%	11.0%	10.5%	10.2%	12.7%	10.8%	10.5%	10.2%	13.1%	12.0%	11.7%	11.5%
Stdev.	16.3%	10.2%	8.0%	6.2%	21.3%	8.3%	6.1%	4.2%	17.1%	9.2%	7.2%	5.7%
Trailing Return	-8.2%	9.9%	9.5%	13.3%	-3.4%	7.5%	5.5%	10.8%	-8.2%	9.5%	9.1%	13.0%
# of σ away from avg.	-1.24	-0.11	-0.12	0.50	-0.75	-0.40	-0.81	0.13	-1.24	-0.27	-0.36	0.27
How Often This Happens	11%	46%	45%	31%	23%	35%	21%	45%	11%	39%	36%	39%

	STOXX Europe 600				Japan Nikkei 225				UK: FTSE 100			
Start/End Date	01/31/2001		01/31/2023		02/28/2007		01/31/2023		01/31/1986		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	6.5%	6.4%	6.3%	5.8%	7.5%	8.5%	9.6%	10.2%	9.5%	8.4%	8.3%	8.2%
Stdev.	18.4%	9.3%	5.5%	3.6%	22.4%	11.2%	7.9%	4.5%	15.5%	8.8%	6.5%	5.1%
Trailing Return	-0.3%	6.3%	6.0%	7.4%	3.5%	7.7%	5.5%	8.7%	8.0%	5.8%	4.6%	7.7%
# of σ Away from Avg.	-0.37	-0.02	-0.06	0.47	-0.18	-0.07	-0.52	-0.33	-0.10	-0.29	-0.57	-0.10
How Often This Happens	36%	49%	48%	32%	43%	47%	30%	37%	46%	39%	28%	46%

	Hang Seng Composite				SSE Composite Index				Brazil Bovespa Index			
Start/End Date	02/29/2000		01/31/2023		06/30/1992		01/31/2023		02/26/1999		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	8.6%	8.4%	8.9%	8.6%	10.5%	6.5%	6.1%	5.7%	14.0%	11.3%	11.8%	10.9%
Stdev.	24.8%	10.2%	7.8%	4.6%	42.2%	16.1%	10.4%	6.1%	30%	15%	12%	9%
Trailing Return	-6.2%	-0.1%	-3.4%	6.3%	-3.1%	3.0%	-1.3%	2.5%	1.1%	-0.1%	6.0%	15.9%
# of σ Away from Avg.	-0.60	-0.83	-1.57	-0.48	-0.32	-0.22	-0.71	-0.52	-0.44	-0.75	-0.50	0.56
How Often This Happens	28%	20%	6%	32%	37%	41%	24%	30%	33%	23%	31%	29%

GLOBAL STOCKS - ROLLING PRICE RETURNS ENDING 01/31/2023

	S&P 500				Russell 2000				Russell 3000			
Start/End Date	02/29/1928		01/31/2023		01/31/1979		01/31/2023		01/31/1979		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	7.8%	6.4%	6.5%	6.5%	10.8%	9.0%	8.7%	8.5%	10.2%	9.2%	9.0%	8.8%
Stdev.	20.1%	11.0%	8.0%	6.0%	20.9%	8.0%	5.8%	3.9%	16.6%	8.8%	6.7%	5.1%
Trailing Return	-9.7%	8.1%	7.6%	11.2%	-4.8%	6.2%	4.2%	9.3%	-9.7%	7.8%	7.3%	11.0%
# of σ away from avg.	● -0.87	● 0.16	● 0.14	● 0.77	● -0.75	● -0.35	● -0.78	● 0.21	● -1.20	● -0.16	● -0.25	● 0.44
How Often This Happens	19%	44%	44%	22%	23%	36%	22%	42%	11%	44%	40%	33%

	STOXX Europe 600				Japan Nikkei 225				UK: FTSE 100			
Start/End Date	01/30/1987		01/31/2023		06/30/1949		01/31/2023		01/31/1986		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	6.4%	5.4%	5.1%	5.0%	10.4%	8.8%	7.9%	7.5%	5.4%	4.3%	4.3%	4.2%
Stdev.	18.4%	11.0%	8.0%	5.8%	25.1%	15.0%	11.5%	9.5%	14.8%	8.3%	6.0%	4.6%
Trailing Return	-3.3%	3.3%	2.8%	4.1%	1.2%	5.6%	3.4%	6.6%	4.1%	2.2%	0.6%	3.6%
# of σ Away from Avg.	● -0.53	● -0.18	● -0.29	● -0.16	● -0.37	● -0.21	● -0.39	● -0.10	● -0.09	● -0.26	● -0.61	● -0.14
How Often This Happens	30%	43%	39%	44%	36%	42%	35%	46%	46%	40%	27%	44%

	Hang Seng Composite				SSE Composite Index				Brazil Bovespa Index			
Start/End Date	02/28/2001		01/31/2023		06/30/1992		01/31/2023		08/30/1991		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	6.3%	5.8%	5.7%	4.8%	10.5%	6.5%	6.1%	5.7%	299.1%	106.5%	46.9%	32.2%
Stdev.	23.8%	9.3%	7.6%	4.4%	42.2%	16.1%	10.4%	6.1%	1172%	378%	119%	65%
Trailing Return	-9.4%	-2.9%	-6.3%	3.0%	-3.1%	3.0%	-1.3%	2.5%	1.1%	-0.1%	6.0%	15.9%
# of σ Away from Avg.	● -0.66	● -0.94	● -1.58	● -0.42	● -0.32	● -0.22	● -0.71	● -0.52	● -0.25	● -0.28	● -0.34	● -0.25
How Often This Happens	25%	17%	6%	34%	37%	41%	24%	30%	40%	39%	37%	40%

COMMODITY MARKETS HIGHLIGHTS

- ✓ The S&P GSCI, a broad commodity index, down **~5.3%** YTD as investors forecast lower inflation.
- ✓ WTI Crude Oil Spot down **~8.5%** YTD.
- ✓ Natural Gas (Henry Hub Spot) down significantly - **~31.5%** YTD.
- ✓ Aluminum, a critical component of many products including electric vehicles, up **~8.5%** YTD.
- ✓ Copper moving upwards along with other metals - Up **6.8%** YTD (Copper generally considered a useful economic predictor).

COMMODITY PRICES - ROLLING RETURNS ENDING 01/31/2023

	Brent Crude				WTI				Natural Gas			
Start/End Date	08/31/1989		01/31/2023		08/31/1989		01/31/2023		05/31/1990		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	11.2%	5.2%	5.2%	5.2%	10.9%	4.6%	4.5%	4.5%	12.4%	4.0%	2.9%	2.5%
Stdev.	37.0%	15.6%	11.6%	10.3%	37.9%	14.8%	11.2%	9.9%	46.3%	16.8%	12.4%	10.6%
Trailing Return	-4.3%	14.7%	4.4%	13.1%	-11.5%	15.2%	4.0%	12.9%	-44.9%	13.4%	-2.2%	2.2%
# of σ Away from Avg.	● -0.42	● 0.61	● -0.06	● 0.78	● -0.59	● 0.72	● -0.05	● 0.85	● -1.24	● 0.56	● -0.41	● -0.03
How Often This Happens	34%	27%	47%	22%	28%	24%	48%	20%	11%	29%	34%	49%

	Corn				Feeder Cattle Near Term				Soybeans			
Start/End Date	08/31/1989		01/31/2023		08/31/1989		01/31/2023		08/31/1989		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	6.6%	3.3%	2.6%	2.2%	3.3%	2.2%	2.2%	2.5%	5.5%	3.2%	2.5%	2.4%
Stdev.	28.9%	13.0%	9.0%	7.5%	14.7%	7.4%	5.8%	3.7%	23.9%	11.0%	7.8%	6.4%
Trailing Return	8.6%	21.3%	13.5%	9.0%	14.2%	11.0%	5.1%	2.4%	3.2%	20.8%	9.1%	8.3%
# of σ Away from Avg.	● 0.07	● 1.38	● 1.20	● 0.91	● 0.74	● 1.18	● 0.50	● -0.01	● -0.09	● 1.61	● 0.84	● 0.92
How Often This Happens	47%	8%	12%	18%	23%	12%	31%	50%	46%	5%	20%	18%

	Gold				Copper				Aluminum			
Start/End Date	08/31/1989		01/31/2023		08/31/1989		01/31/2023		08/31/1989		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	5.9%	5.8%	5.7%	5.7%	8.1%	5.2%	4.9%	4.5%	3.9%	1.9%	1.8%	1.4%
Stdev.	15.0%	10.7%	9.3%	8.4%	32.3%	17.0%	12.7%	10.4%	22.8%	9.7%	5.9%	4.5%
Trailing Return	8.3%	7.0%	7.7%	8.3%	-2.1%	18.8%	5.8%	10.8%	-17.6%	14.0%	2.6%	7.5%
# of σ Away from Avg.	● 0.16	● 0.11	● 0.21	● 0.31	● -0.31	● 0.80	● 0.08	● 0.61	● -0.95	● 1.25	● 0.15	● 1.34
How Often This Happens	44%	46%	41%	38%	38%	21%	47%	27%	17%	11%	44%	9%

GLOBAL BOND MARKETS HIGHLIGHTS

- ✓ **Bond yields remain volatile as investors gauge future inflation risks.**
- ✓ The US Govt. bond yield curve remains significantly inverted (~110bps spread between 3 month and 10Y Treasuries).
- ✓ The Bloomberg US Aggregate Bond Index **up ~2.3% YTD as longer duration interest rates decreased.**
- ✓ According to Bankrate, **the average 30 year fixed mortgage rate decreased to ~6.36% as of 02/03/2023.** Mortgage rates peaked at ~7.24% on 11/11/2022.

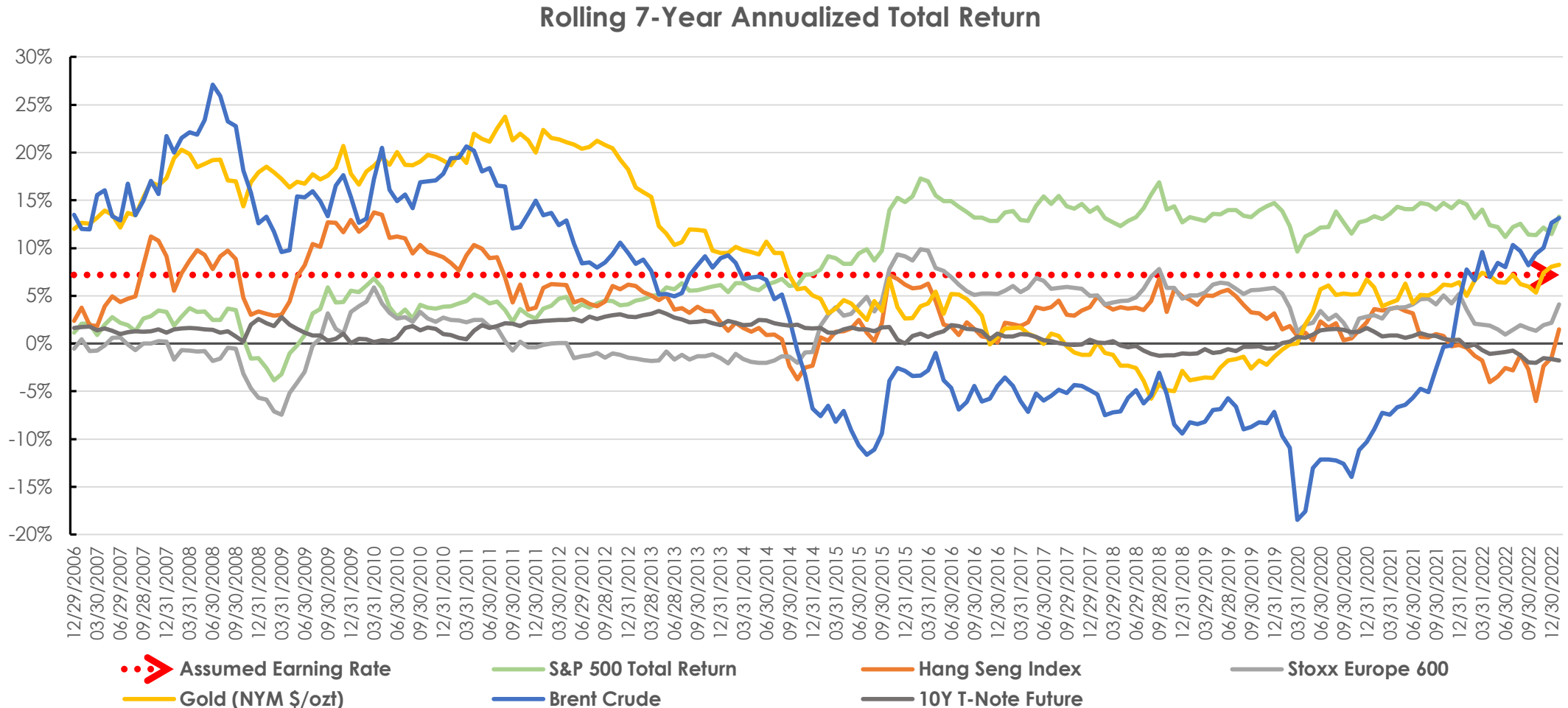
GLOBAL BOND MARKETS - ROLLING YIELDS ENDING 01/31/2023

	US 10Y T-Note Yield (TPI)				Canada Benchmark Bond (10Y)				UK 10Y Yield			
Start/End Date	08/31/1999		01/31/2023		01/31/2006		01/31/2023		04/28/2006		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	3.17	3.12	3.11	3.09	2.34	2.25	2.21	2.16	2.27	2.16	2.11	2.08
Stdev.	1.29	1.11	1.00	0.94	0.96	0.79	0.66	0.53	1.36	1.16	0.96	0.79
Trailing Average	3.13	1.81	2.06	2.07	2.89	1.71	1.78	1.72	2.66	1.25	1.18	1.18
# of σ Away from Avg.	● -0.03 ●	● -1.17 ●	● -1.05 ●	● -1.08 ●	● 0.57 ●	● -0.68 ●	● -0.66 ●	● -0.81 ●	● 0.29 ●	● -0.78 ●	● -0.96 ●	● -1.15 ●
How Often This Happens	49%	12%	15%	14%	28%	25%	26%	21%	39%	22%	17%	13%

	Euro Benchmark Bond (10Y)				France Benchmark Bond (10Y)				Italy Benchmark Bond (10Y)			
Start/End Date	02/28/2006		01/31/2023		02/28/2006		01/31/2023		02/28/2006		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	1.48	1.39	1.34	1.29	1.87	1.80	1.76	1.72	3.11	3.13	3.16	3.15
Stdev.	1.53	1.38	1.19	0.99	1.50	1.39	1.21	1.03	1.47	1.34	1.18	1.03
Trailing Average	1.42	0.21	0.15	0.18	1.94	0.62	0.52	0.55	3.32	1.76	1.94	1.89
# of σ Away from Avg.	● -0.04 ●	● -0.85 ●	● -1.00 ●	● -1.13 ●	● 0.05 ●	● -0.85 ●	● -1.02 ●	● -1.14 ●	● 0.14 ●	● -1.03 ●	● -1.04 ●	● -1.22 ●
How Often This Happens	48%	20%	16%	13%	48%	20%	15%	13%	45%	15%	15%	11%

	Japan 10Y Yield (TPI)				Korea Benchmark Bond (10Y)				Australia Benchmark Bond (10Y)			
Start/End Date	03/31/2006		01/31/2023		02/28/2006		01/31/2023		02/28/2006		01/31/2023	
Timeframe	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year	1-Year	3-Year	5-Year	7-Year
Rolling Average	0.62	0.59	0.56	0.55	3.28	3.20	3.14	3.09	3.51	3.44	3.43	3.40
Stdev.	0.61	0.56	0.50	0.42	1.33	1.24	1.07	0.89	1.59	1.42	1.22	1.01
Trailing Average	0.26	0.12	0.06	0.04	3.47	2.39	2.24	2.18	3.39	1.98	1.97	2.12
# of σ Away from Avg.	● -0.59 ●	● -0.84 ●	● -1.02 ●	● -1.22 ●	● 0.14 ●	● -0.65 ●	● -0.84 ●	● -1.01 ●	● -0.08 ●	● -1.03 ●	● -1.20 ●	● -1.26 ●
How Often This Happens	28%	20%	15%	11%	44%	26%	20%	16%	47%	15%	12%	10%

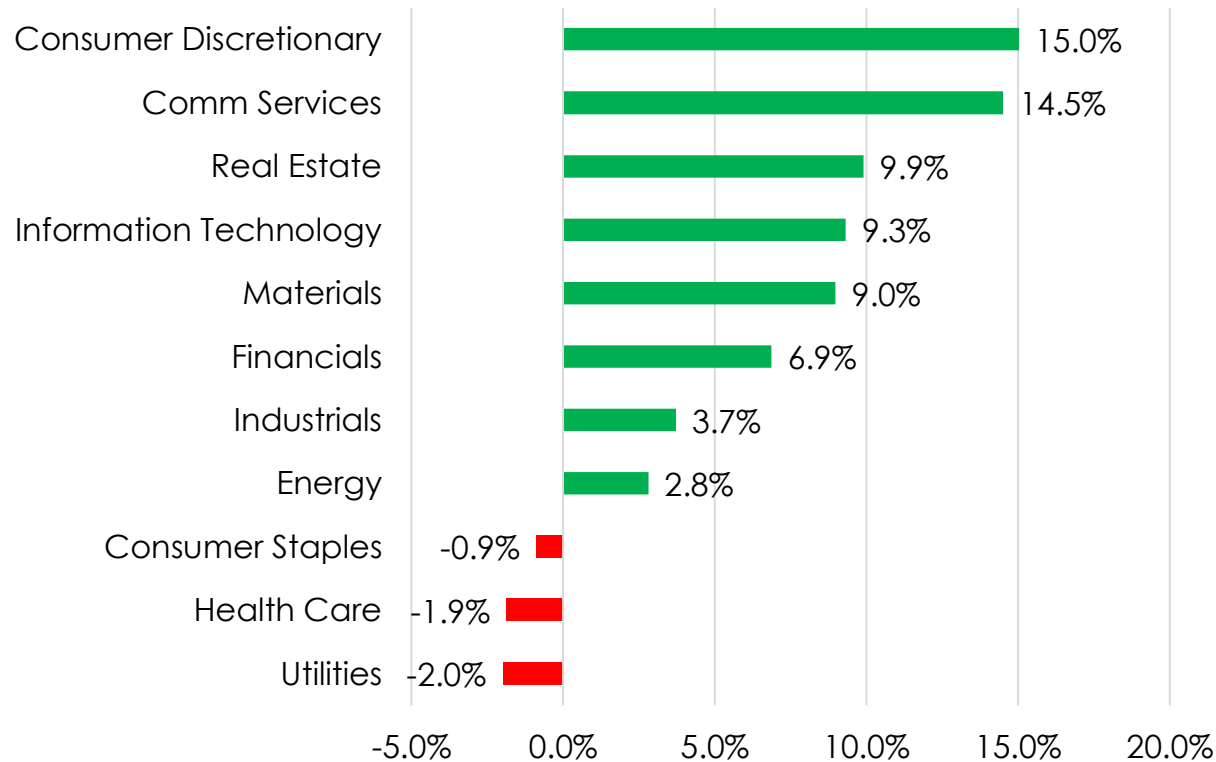
MAJOR MARKETS – 7-YEAR ROLLING RETURNS



- The above chart highlights the importance of diversification across asset classes. **As of 01/31/2023, the S&P 500 and Brent Crude continue to be the best performers on a 7-year annualized return basis.**
- The Hang Seng Index experienced a sharp movement upwards over the past few months as China eased COVID restrictions.

S&P 500 – SECTOR PERFORMANCE AND EPS ESTIMATES

YTD Sector Performance



2023 Earnings Per Share Estimates by Sector

Sector	As of 12/30/2022	As of 02/03/2023	% Change
Utilities	19.10	19.11	0.1%
Health Care	90	86.87	-3.5%
Consumer Staples	37.24	37.36	0.3%
Energy	68.29	65.58	-4.0%
Industrials	45.96	44.63	-2.9%
Financials	48.17	46.59	-3.3%
Materials	31.11	30.21	-2.9%
Information Technology	107.87	104.62	-3.0%
Real Estate	14.11	14.01	-0.7%
Comm Services	11.12	11.11	-0.1%
Consumer Discretionary	47.35	44.89	-5.2%

- Equities recovered to start 2023 with a majority of S&P 500 sectors experiencing positive YTD returns as of 01/31/2023. Investors gravitated towards cyclical sectors such as Consumer Discretionary and Real Estate even as 2023 EPS estimates continue to be revised downwards.

S&P 500 THEORETICAL VALUE INPUTS AND ASSUMPTIONS

- ✓ The S&P 500 is now trading at ~18.44x 2023 estimated EPS (**vs 20-year average of ~17.83x**).
- ✓ Year over year **earnings growth expectations fell** to 2.7% in 2023.
- ✓ S&P 500 as of February 6th, 2023 was \$4,111.08.
- ✓ 2023 **analyst earnings estimates continue to drop** reaching \$222.97 for 2023 EPS.

S&P 500 VALUATION EXAMPLE

Hypothetical input for illustration only

Earnings (TTM):	\$204.50 /share (EPS of S&P 500)	}	Determine Cash Flow
Expected Earnings Growth:	8.00% (growth rate in EPS)		
Expected cash payout:	80.00% (cash distribution to shareholders)		
Risk-Free Rate:	3.75% (10 Year Treasury Yield)	}	Determine Discount Rate
Risk Premium:	4.00% (expected return above the risk-free rate)		
Expected Long Term Growth Rate:	2.00%		

	Last 12 months	1	2	3	4	5	Terminal Year
Expected Earnings	\$205	\$221	\$239	\$258	\$278	\$300	\$306
Expected cash payout (dividends + buybacks) as % of earnings	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Expected Dividends + Buybacks =	\$164	\$177	\$191	\$206	\$223	\$240	\$245
Expected Terminal Value =						\$4,264	
Present Value =		\$164	\$164	\$165	\$165	\$3,101	
Intrinsic Value of Index =			3,760				

- The trailing twelve month (TTM) earnings was updated to \$204.50.
- The expected earnings growth rate over the next 5 years remained unchanged at 8.0%.
- The risk-free rate remained unchanged at 3.75%.
- The implied equity risk premium assumption remained unchanged at 4.00%.
- The long-term earnings growth rate remained unchanged at 2.00%.

SENSITIVITY ANALYSIS – ADJUSTMENT TO ONE INPUT

Expected Earnings Growth	Estimated Intrinsic Value	% Change
4.0%	3,168	-15.7%
5.0%	3,308	-12.0%
6.0%	3,453	-8.2%
7.0%	3,604	-4.2%
8.00%	3,760	0.0%
9.0%	3,921	4.3%
10.0%	4,089	8.8%
11.0%	4,262	13.4%
12.0%	4,441	18.1%

Expected Long Term Growth	Estimated Intrinsic Value	% Change
-0.5%	2,820	-25.0%
0.0%	2,959	-21.3%
0.5%	3,118	-17.1%
1.0%	3,300	-12.2%
1.50%	3,512	-6.6%
2.00%	3,760	0.0%
2.5%	4,055	7.9%
3.0%	4,413	17.4%
3.5%	4,854	29.1%

Risk-Free Rate 10 Year Treasury Yield	Estimated Intrinsic Value	% Change
2.0%	5,446	44.9%
2.5%	4,830	28.5%
3.0%	4,338	15.4%
3.5%	3,935	4.7%
3.75%	3,760	0.0%
4.0%	3,599	-4.3%
4.5%	3,315	-11.8%
5.0%	3,072	-18.3%
5.5%	2,862	-23.9%

Expected Risk Premium	Estimated Intrinsic Value	% Change
2.0%	5,816	54.7%
2.5%	5,120	36.2%
3.0%	4,571	21.6%
3.5%	4,127	9.8%
4.00%	3,760	0.0%
4.5%	3,452	-8.2%
5.0%	3,189	-15.2%
5.5%	2,963	-21.2%
6.0%	2,767	-26.4%

S&P 500 (As of 02/06/2023): \$4,111.08

S&P 500 EARNINGS PER SHARE ESTIMATES

Earnings Per Share	1/10/23	YoY	2/3/23	YoY
CY 2016	117.65	0.8%	117.65	0.8%
CY 2017	130.54	11.0%	130.54	11.0%
CY 2018	158.65	21.5%	158.65	21.5%
CY 2019	159.66	0.6%	159.66	0.6%
CY 2020	137.77	-13.7%	137.77	-13.7%
CY 2021	206.56	49.9%	206.56	49.9%
CY 2022E	217.85	5.5%	217.03	5.1%
CY 2023E	228.62	4.9%	222.97	2.7%
CY 2024E	251.85	10.2%	248.64	11.5%
CY 2025E	270.52	7.4%	275.60	10.8%
Q1 2023E	53.67	0.4%	51.45	-3.8%
Q2 2023E	56.22	0.7%	54.77	-1.9%
Q3 2023E	58.31	6.1%	57.15	4.0%
Q4 2023E	59.28	11.5%	58.10	9.3%

Source: FactSet

- **Analysts' earnings per share estimates for 2023 and 2024 continue to be revised downwards.**
- **Analysts remain optimistic for EPS growth in 2024 and 2025 with forecasts of 11.5% and 10.8% respectively.**
- Earnings per share are forecasted to increase by 2.7% in 2023 and by 8.3% annually over the next three years.

S&P 500 SALES PER SHARE ESTIMATES

Sales Per Share	1/10/23	YoY	2/3/23	YoY
CY 2016	1,150.46	2.5%	1,150.51	2.5%
CY 2017	1,215.26	5.6%	1,215.31	5.6%
CY 2018	1,336.89	10.0%	1,336.94	10.0%
CY 2019	1,390.86	4.0%	1,390.91	4.0%
CY 2020	1,340.47	-3.6%	1,340.53	-3.6%
CY 2021	1,575.72	17.5%	1,575.77	17.5%
CY 2022E	1,761.95	11.8%	1,765.82	12.1%
CY 2023E	1,810.62	2.8%	1,802.01	2.0%
CY 2024E	1,890.95	4.4%	1,889.16	4.8%
CY 2025E	1,998.01	5.7%	1,998.25	5.8%
Q1 2023E	435.87	3.7%	430.63	2.5%
Q2 2023E	446.87	0.8%	443.95	0.1%
Q3 2023E	456.21	1.3%	454.76	1.0%
Q4 2023E	464.43	3.1%	468.60	4.0%

Source: FactSet

- **Analysts' sales per share estimates for 2023 & 2024 continue to be revised downwards, but 2025 estimates were slightly improved to 5.8%.**
- Sales per share are forecasted to increase by 2.0% in 2023 and by 4.2% annually over the next three years.

S&P 500 YTD PERFORMANCE AND SECTOR SHIFTS

- ✓ Cyclical and long-duration stocks off to a strong start in 2023.
- ✓ The **ARK Innovation ETF**, which serves as a proxy for long-duration stocks, **was down ~67% in 2022**, but started 2023 with a **~35.2% rally**.
- ✓ **Healthcare and Energy stock performance remains muted** to start 2023 after outperforming in 2022.
- ✓ **Healthcare stocks**, measured through the Vanguard Health Care ETF, **underperformed major indices on a YTD basis (Down ~2.2%)**.

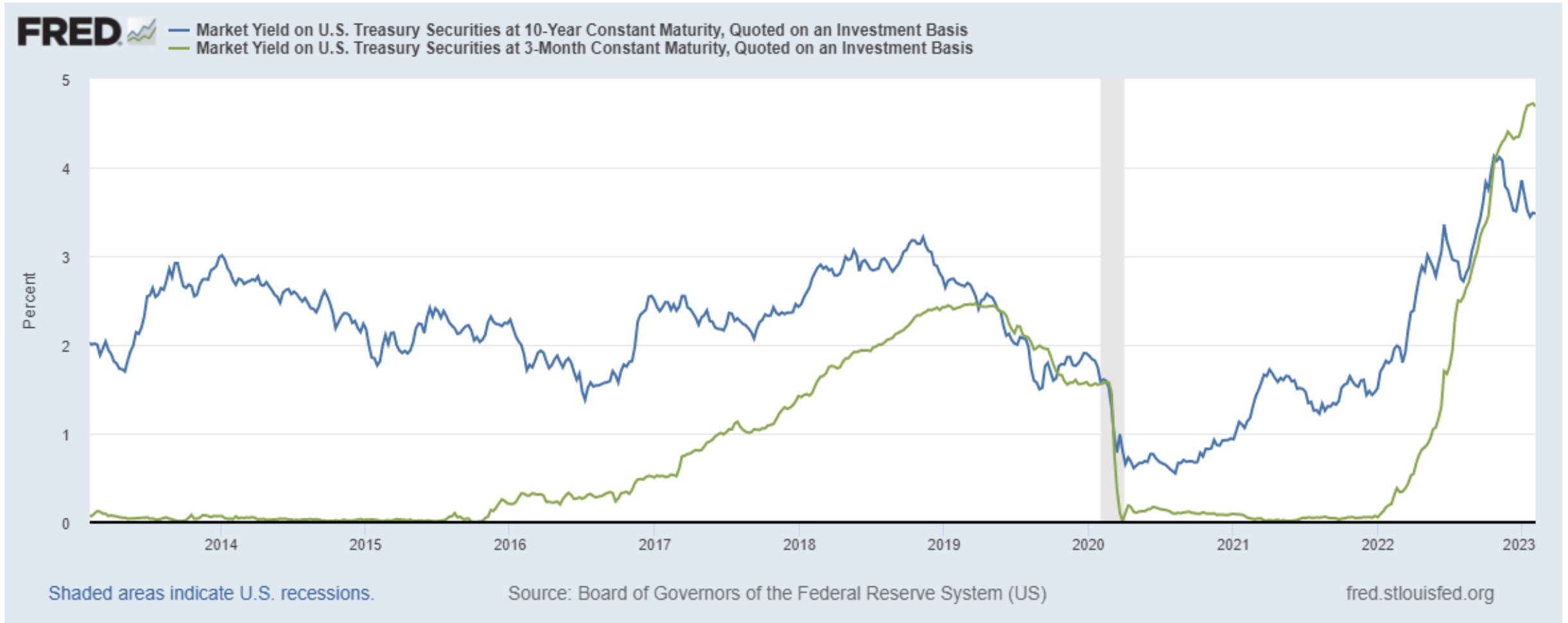
COMPONENTS OF THE S&P 500 (AS OF 02/06/2023)

Symbol	Company	Sector	Industry	YTD	3 Years	5 Years	Sales 1 Yr Gr	EPS 1 Yr Gr	Broker Est EPS 4Wk Chg	Broker Est Sales 4Wk Chg	Broker Est Curr EV/ Broker Est Sales	MKT CAP (in \$ mm)
AAPL	Apple Inc.	Information Technology	Technology Hardware Storage & Peripherals	16.8%	26.1%	31.7%	2%	9%	-2.2%	-3.0%	6.5x	2,444,491
MSFT	Microsoft Corporation	Information Technology	Software	7.1%	14.8%	24.3%	10%	20%	-2.2%	-1.6%	9.2x	1,923,107
AMZN	Amazon.com, Inc.	Consumer Discretionary	Internet & Direct Marketing Retail	21.6%	0.6%	7.4%	9%	-108%	-9.2%	-0.4%	2.0x	1,059,464
GOOG	Alphabet Inc. Class C	Communication Services	Interactive Media & Services	16.6%	11.6%	13.2%	9%	-19%	-1.2%	-1.9%	4.6x	640,369
GOOGL	Alphabet Inc. Class A	Communication Services	Interactive Media & Services	16.6%	11.5%	12.9%	9%	-19%	-1.1%	-1.9%	4.6x	625,851
TSLA	Tesla Inc	Consumer Discretionary	Automobiles	58.1%	55.1%	53.3%	51%	115%	-23.3%	-8.8%	6.2x	601,116
NVDA	NVIDIA Corporation	Information Technology	Semiconductors & Semiconductor Equipment	44.3%	52.0%	29.5%	18%	123%	0.0%	0.0%	18.3x	519,060
XOM	Exxon Mobil Corporation	Energy	Oil Gas & Consumable Fuels	1.3%	29.8%	11.4%	43%	146%	-1.6%	-1.0%	1.2x	460,919
UNH	UnitedHealth Group Incorporated	Health Care	Health Care Providers & Services	-10.4%	21.8%	17.1%	13%	N/A	-0.1%	0.5%	1.3x	441,031
JNJ	Johnson & Johnson	Health Care	Pharmaceuticals	-7.5%	5.5%	6.2%	1%	N/A	1.5%	0.0%	4.5x	430,370
FB	Meta Platforms Inc. Class A	Communication Services	Interactive Media & Services	54.6%	-3.0%	-0.4%	-1%	-38%	15.7%	0.9%	4.0x	415,172
JPM	JPMorgan Chase & Co.	Financials	Banks	6.6%	5.3%	7.5%	24%	-21%	0.5%	0.1%	6.8x	413,846
BRK.B	Berkshire Hathaway Inc. Class B	Financials	Diversified Financial Services	-0.2%	11.3%	8.1%	10%	123%	0.5%	0.0%	2.7x	401,674
WMT	Walmart Inc.	Consumer Staples	Food & Staples Retailing	-0.8%	8.9%	8.1%	5%	3%	0.3%	0.0%	0.8x	382,164
V	Visa Inc. Class A	Information Technology	IT Services	10.4%	5.2%	14.4%	18%	24%	1.9%	1.4%	15.2x	374,618
MA	Mastercard Incorporated Class A	Information Technology	IT Services	7.4%	5.3%	17.5%	18%	17%	0.6%	0.7%	14.7x	354,467
HD	Home Depot, Inc.	Consumer Discretionary	Specialty Retail	4.2%	15.0%	13.8%	6%	30%	0.0%	0.0%	2.4x	337,860
PG	Procter & Gamble Company	Consumer Staples	Household Products	-6.1%	6.8%	13.9%	2%	5%	0.3%	1.0%	4.8x	336,438
CVX	Chevron Corporation	Energy	Oil Gas & Consumable Fuels	-5.5%	22.5%	12.2%	51%	125%	-4.5%	-2.9%	1.6x	327,655
LLY	Eli Lilly and Company	Health Care	Pharmaceuticals	-7.7%	35.8%	35.5%	1%	N/A	1.3%	0.2%	10.5	334,714

MIXED MOVEMENT IN TREASURY YIELDS TO START 2023

- ✓ As you will see on the next slide and below, **the Treasury yield curve remains extremely inverted with 3-month yields exceeding 10-year yields.**
- ✓ Shorter duration Treasuries experienced increases in yields to start 2023 as longer duration yields fell.
- ✓ 3-Month T-Bill yields **rose from 4.45% (Jan. 2nd, 2023) to 4.72% (Jan. 30th, 2023).**
- ✓ 6-Month T-Bill yields **rose from 4.75% (Jan. 2nd, 2023) to 4.81% (Jan. 30th, 2023).**
- ✓ 10-Year Treasury yields **fell from 3.86% (Jan. 2nd, 2023) to 3.50% (Jan. 30th, 2023).**
- ✓ The 10-year Treasury yield often signals investor confidence or expectations for future inflation.

US 10-YEAR vs. 3 MONTH TREASURY YIELDS SINCE 2013



Source: FRED (As of 02/03/2023)

IMPLICATIONS OF FEDERAL RESERVE HIKEs AND RISING RATES

- ✓ Market participants continue to predict additional rate hikes through Q2 2023 followed by decreases beginning in December 2023.
- ✓ As of 02/06/2023 the Federal Funds Rate was 458 bps.
- ✓ **A majority of market participants now expect the Federal Funds Rate to reach 500-525 bps in 2023.**

MARKET PARTICIPANTS FORECAST A SLOWER PACE OF RATE HIKES

Target Federal Funds Rate Probabilities								
Meeting Date	400-425	425-450	450-475	475-500	500-525	525-550	550-575	575-600
3/22/2023	0.0%	0.0%	0.0%	93.7%	6.3%	0.0%	0.0%	0.0%
5/3/2023	0.0%	0.0%	0.0%	21.2%	74.0%	4.9%	0.0%	0.0%
6/14/2023	0.0%	0.0%	0.0%	12.0%	51.1%	34.8%	2.1%	0.0%
7/26/2023	0.0%	0.0%	0.0%	11.2%	48.6%	35.9%	4.1%	0.1%
9/20/2023	0.0%	0.0%	2.8%	20.6%	45.4%	27.9%	3.1%	0.1%
11/1/2023	0.0%	1.0%	9.0%	29.2%	39.4%	19.3%	2.1%	0.1%
12/13/2023	0.7%	6.8%	23.6%	36.6%	24.9%	6.9%	0.6%	0.0%

Source: CME Group (As of 02/06/2023)

- **Market participants expect the Federal Funds Rate to be held between 500-525bps for a majority of 2023.**

NO CHANGE IN STRATEGIST FORECASTS FROM LAST MONTH

As of 01/09/2023			
Firm	2023 Target	2023 EPS	Implied P/E
BAML	4,000	\$200.0	20.0
Barclays	3,725	\$207.0	18.0
BMO	4,300	\$220.0	19.5
CFRA	4,575	\$227.0	20.2
Citigroup	3,900	\$215.0	18.1
Credit Suisse	4,050	\$215.0	18.8
Deutsche Bank	4,500	\$195.0	23.1
Evercore ISI	4,150	\$206.0	20.1
Goldman Sachs	4,000	\$224.0	17.9
JPMorgan Chase	4,200	\$205.0	20.5
Morgan Stanley	3,900	\$195.0	20.0
Oppenheimer	4,400	\$230.0	19.1
RBC	4,100	\$199.0	20.6
UBS	3,900	\$198.0	19.7
Wells Fargo	4,400	\$205.0	21.5

Average Target:	4,140	\$209.4
Median Target:	4,100	\$206.0

Source: S&P 500 CNBC Market Strategist Survey

As of 02/06/2023			
Firm	2023 Target	2023 EPS	Implied P/E
BAML	4,000	\$200.0	20.0
Barclays	3,725	\$207.0	18.0
BMO	4,300	\$220.0	19.5
CFRA	4,575	\$227.0	20.2
Citigroup	3,900	\$215.0	18.1
Credit Suisse	4,050	\$215.0	18.8
Deutsche Bank	4,500	\$195.0	23.1
Evercore ISI	4,150	\$206.0	20.1
Goldman Sachs	4,000	\$224.0	17.9
JPMorgan Chase	4,200	\$205.0	20.5
Morgan Stanley	3,900	\$195.0	20.0
Oppenheimer	4,400	\$230.0	19.1
RBC	4,100	\$199.0	20.6
UBS	3,900	\$198.0	19.7
Wells Fargo	4,400	\$205.0	21.5

Average Target:	4,140	\$209.4
Median Target:	4,100	\$206.0

S&P 500 (As of 02/06/2023): \$4,111.08

SUMMARY AND RECAP

- ✓ A majority of global stock markets started 2023 positively.
 - ✓ **Investors continue to closely monitor inflation and the potential for future rate hikes.**
- ✓ Long-duration and cyclical stocks outperformed to start 2023.
- ✓ Utilities and Healthcare were the worst performing sectors on a YTD basis.
- ✓ **The yield curve remains extremely inverted entering 2023.**
- ✓ Strategists **2023 earnings estimates continue to fall.**
- ✓ War, inflation and rising rates continue to be major concerns among investors.

Investment Committee Meeting

Executed Transactions

February 15, 2022



Asset Type

Date Closed

Capital Appreciation

January 31, 2023

Public Safety Personnel Retirement System Investment Manager Compliance Report Fiscal Year 2023 – 2nd Quarter



Purpose:

The purpose of this quarterly report is to confirm that the Compliance Officer has performed due diligence with regard to investment manager related activities in compliance with established guidelines. This report is referenced in the Board of Trustees Governance Manual, Governance Policy 5.11 – Monitoring and Reporting Policy.

Activity:

The investment activity reviewed during the 2nd quarter of fiscal year 2023 (October through December) included:

Investment Manager Selections/De-Selections	3
New Bank Account Requests	3
Capital Call/Management Fee Invoices Completed	131

Capital Call Due Diligence Quality Control Review Findings:

13 (~10%) Pulled Randomly and Reviewed for Quality Control

Amount Accuracy	100%
Timely Completion	100%
Separation of Duties	100%

The activities listed above occurred throughout the 2nd quarter and are influenced by investment management agreements, General Partner capital requests, internal portfolio manager due diligence & recommendations, investment consultant guidance, and certain other activity affecting the investment portfolios.

Policy Targets:

There was one Policy Target identified as out of range during the 2nd quarter of fiscal year 2023:

- 1) As of December 31, 2022, the asset allocation for private credit was 12.58%. This is 0.42% under the lower guideline of 13%. Investment staff are rebalancing the current allocations as opportunities become available during the current market situation. This is a carryover issue and was discussed with the Investment Committee at previous meetings. The asset allocation for private credit has been considered out of range since FY2020 Q2. See appendix for additional information.

At this time I attest that, aside from the above referenced policy targets identified as out of range, the PSPRS investment managers are in compliance with established guidelines.

Angela Egelhoff

Angela Egelhoff, Chief Compliance Officer
February 3, 2023

APPENDIX A:

Private Credit Allocation Detail:

<u>Fiscal Year / Quarter</u>	<u>Allocation Percentage</u>	<u>Range</u>	<u>Guideline</u>
FY2020 Q2	12.2%	2.8% under	15% - 30%
FY2020 Q3	135.%	1.5% under	15% - 30%
FY2020 Q4	14.1%	0.9% under	15% - 30%
FY2021 Q1	13.08%	1.92% under	15% - 30%
FY2021 Q2	11.82%	3.18% under	15% - 30%
FY2021 Q3	11.77%	3.23% under	15% - 30%
FY2021 Q4	10.75%	4.25% under	15% - 30%
FY2022 Q1	9.62%	3.38% under	13% - 38%
FY2022 Q2	9.31%	3.69% under	13% - 38%
FY2022 Q3	10.04%	2.96% under	13% - 38%
FY2022 Q4	11.42%	1.58% under	13% - 38%
FY2023 Q1	11.87%	1.13% under	13% - 38%
FY2023 Q2	12.58%	0.42% under	13% - 38%

Arizona PSPRS Trust - Reinvestment Portfolio Summary QTD				
	12/31/2022	09/30/2022	06/30/2022	03/31/2022
Fund Characteristics				
Yield (360 Basis)	3.92	2.41	0.88	0.22
Total Cost (Amount Invested, in millions)	\$887.9	\$636.8	\$621.3	\$562.1
Daily Liquidity (%)	15.32	21.79	15.78	26.28
Weighted Average Days to Reset	2	2	3	19
Weighted Average Days to Maturity	109	96	106	81
Asset Classes				
Floating Rate Notes	76.00 %	69.00 %	70.00 %	39.00 %
Repos	10.00 %	8.00 %	8.00 %	8.00 %
Credit Quality				
Lowest Rated, Grade	A/A-1	A/A-1	A/A-1	A/A-1
Lowest Rated, Balance (%)	52.31%	98.71%	52.12%	62.98%
Rating Changes per Period				
Industry Exposure - Highest %				
Domestic Banks, Bank Holding Companies, & Foreign Banks	81.02	87.83	82.94	64.14
Non-Cash Collateral				
US Govt. Debt - Total, in millions	\$27.65	\$58.09	\$49.08	\$60.38

Public Safety Cancer Ins Policy Program - Reinvestment Portfolio Summary QTD				
	12/31/2022	09/30/2022	06/30/2022	03/31/2022
Fund Characteristics				
Yield (360 Basis)	3.63	2.20	0.68	0.09
Total Cost (Amount Invested, in millions)	\$4.1	\$5.2	\$4.9	\$4.7
Daily Liquidity (%)	76.19	77.97	79.55	80.65
Weighted Average Days to Reset	2	1	1	1
Weighted Average Days to Maturity	2	1	1	1
Asset Classes				
Floating Rate Notes				
Repos	100.00 %	96.00 %	92.00 %	88.00 %
Credit Quality				
Lowest Rated, Grade				AAA
Lowest Rated, Balance (%)				13.44%
Rating Changes per Period				
Industry Exposure - Highest %				
Cash Equivalents (Money Mkt Funds & REPO Counterparties)	100.00	100.00	97.90	100.00
Non-Cash Collateral				
US Govt. Debt - Total, in millions	\$0.00	\$0.00	\$0.00	\$0.00

SECURITIES LENDING PROGRAM SUMMARY REPORT

(END Q4 2022 - CALENDAR YTD)

Arizona PSPRS Trust

Average Size of Lending Pool:
\$6,680,809,729

Average Net Earnings
(monthly):
\$414,224

Average Return on:

Average Utilization Ratio:
10.63%

<u>Avail. Assets</u>	<u>Loaned Assets</u>
7.50	66.86
bps	bps

Month	Size of Lending Pool (Average/month)	Utilization Ratio (Average/month)	Net Earnings	Reinvestment (Collateral) Income	Rebate Payments/ Earnings on "Specials"	Return On Available Assets (bps)	Return on Loaned Assets (bps)
Jan-22	\$7,017,381,587	5.09%	\$89,926	\$67,833	\$37,949	1.54	30.22
Feb-22	\$6,958,296,944	8.78%	\$126,077	\$71,155	\$77,155	2.17	24.75
Mar-22	\$6,808,184,347	11.99%	\$261,355	\$100,692	\$206,777	4.61	38.41
Apr-22	\$6,817,052,864	9.58%	\$196,034	\$92,130	\$138,504	3.26	33.98
May-22	\$6,359,421,005	10.76%	\$255,450	\$348,138	(\$47,608)	4.82	44.81
Jun-22	\$6,000,374,019	10.36%	\$455,072	\$665,383	(\$130,021)	9.10	87.86
Jul-22	\$6,075,633,777	9.57%	\$546,443	\$877,580	(\$234,720)	10.79	112.74
Aug-22	\$6,856,619,048	8.14%	\$290,280	\$1,167,147	(\$825,664)	5.08	62.39
Sep-22	\$6,424,425,560	13.00%	\$432,231	\$1,877,637	(\$1,369,160)	8.07	62.12
Oct-22	\$6,150,674,195	17.24%	\$827,890	\$3,001,347	(\$2,027,384)	16.15	93.67
Nov-22	\$7,195,952,785	12.43%	\$827,120	\$2,958,205	(\$1,985,144)	13.79	110.96
Dec-22	\$7,505,700,613	10.56%	\$662,811	\$2,862,029	(\$2,082,272)	10.60	100.39
TOTAL PORTFOLIO EARNINGS			\$4,970,689	\$14,089,276	(\$8,241,586)		

Public Safety Cancer Insurance Policy (CIP) Program

Average Size of Lending Pool:
\$23,797,416

Average Net Earnings
(monthly):
\$2,612

Average Return on:

Average Utilization Ratio:
19.44%

<u>Avail. Assets</u>	<u>Loaned Assets</u>
13.20	68.20
bps	bps

Month	Size of Lending Pool (Average/month)	Utilization Ratio (Average/month)	Net Earnings	Reinvestment (Collateral) Income	Rebate Payments/ Earnings on "Specials"	Return On Available Assets (bps)	Return on Loaned Assets (bps)
Jan-22	\$26,258,595	16.18%	\$2,896	\$183	\$3,224	13.24	81.78
Feb-22	\$25,591,726	14.16%	\$2,208	\$145	\$2,452	10.35	73.09
Mar-22	\$25,078,967	20.36%	\$2,451	\$892	\$1,991	11.73	57.60
Apr-22	\$24,892,207	21.79%	\$3,178	\$1,402	\$2,336	15.32	70.31
May-22	\$23,562,741	17.37%	\$2,865	\$2,642	\$728	14.59	84.00
Jun-22	\$22,953,869	20.25%	\$2,595	\$4,705	(\$1,653)	13.56	66.98
Jul-22	\$22,672,183	20.56%	\$2,826	\$6,811	(\$3,487)	14.96	72.74
Aug-22	\$23,328,559	22.99%	\$2,926	\$10,865	(\$7,423)	15.05	65.48
Sep-22	\$22,877,098	24.56%	\$3,651	\$12,001	(\$7,707)	19.15	77.98
Oct-22	\$21,931,304	21.23%	\$2,415	\$12,548	(\$9,706)	13.22	62.25
Nov-22	\$22,950,674	19.97%	\$1,577	\$14,517	(\$12,662)	8.24	41.29
Dec-22	\$23,471,064	13.84%	\$1,755	\$11,612	(\$9,547)	8.97	64.86
TOTAL PORTFOLIO EARNINGS			\$31,341	\$78,322	(\$41,453)		

Month	Action Items	Special Topics
March	<ul style="list-style-type: none"> Investment Department Budget 	<ul style="list-style-type: none"> Capital Market Assumptions Investment Book of Record / new Committee reports
April	<ul style="list-style-type: none"> Asset Allocation Investment Policy Statement 	
May	<ul style="list-style-type: none"> Asset Allocation Investment Policy Statement 	<ul style="list-style-type: none"> 3/31 Quarterly Performance Review 3/31 Operational Due Diligence Report
June	<i>As necessary</i> <ul style="list-style-type: none"> Asset Allocation Investment Policy Statement 	
July	<ul style="list-style-type: none"> Cancer Insurance Plan 	
Aug	<ul style="list-style-type: none"> Cancer Insurance Plan 	<ul style="list-style-type: none"> 6/30 Quarterly Performance Review 6/30 Operational Due Diligence Report
Sep		
Oct		
Nov		<ul style="list-style-type: none"> 9/30 Quarterly Performance Review 9/30 Operational Due Diligence Report
Dec		



QUARTERLY PERFORMANCE REPORT

ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

DECEMBER 31, 2022

Allan Martin, Partner

Michael Miranda, CFA, Senior Consulting Specialist

MARKET ENVIRONMENT

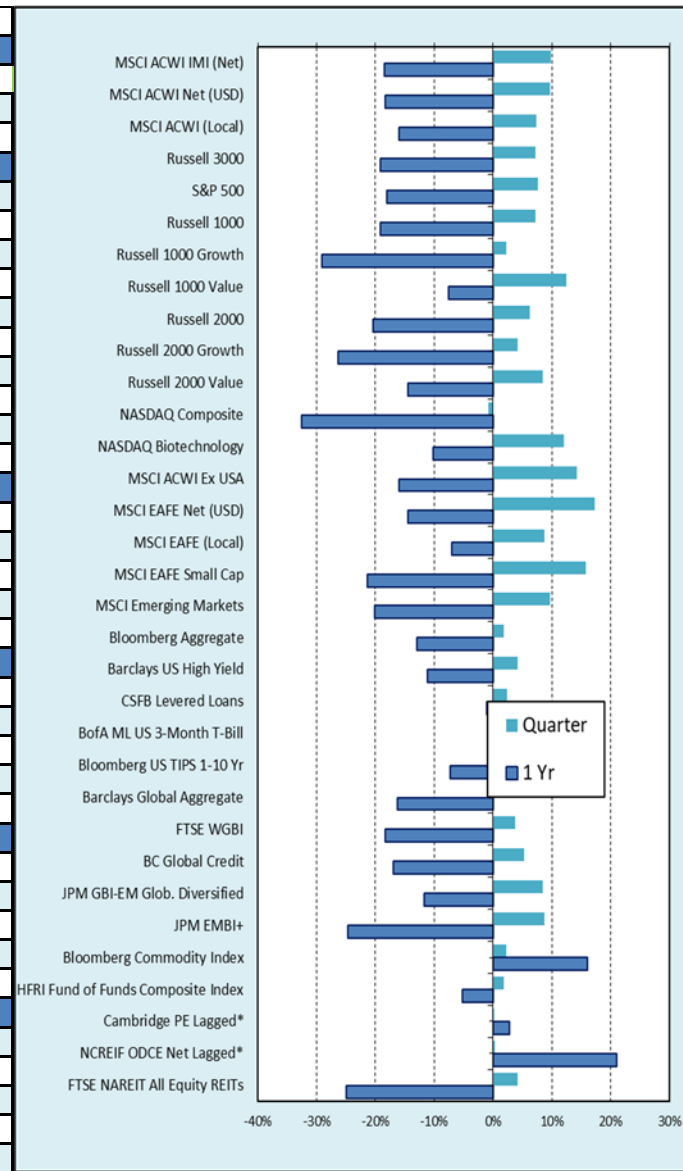
ECONOMIC ENVIRONMENT

- **Q4 Real GDP (advance estimate) increased at an annual rate of 2.9%.**
 - Retail sales ended October at +6.4% on a YoY basis. In the same period last year the YoY growth rate was +16.0%.
 - Corporate profits as a percent of GDP ended June 2022 at 11.2%, down from 12.0% in the same period last year and remain elevated relative to historical levels.
 - The inventory-to-sales ratio ended October was 1.35 up from 1.26 one year ago. Levels have remained relatively constant since early 2010 with a spike to 1.7 in April 2020.
 - The U.S. trade deficit narrowed in November as imports decreased more than exports.
- **The unemployment rate was 3.5% ended Q4, down from 3.7% in Q3; U-6, a broader measure of unemployment, decreased to 6.5% in Q4 from 6.7% in Q3.**
 - The labor force participation rate ended Q4 unchanged from Q3 at 62.3%. Labor force participation declined to 60.2% in April 2020 and is at levels below the 10 year pre-pandemic average of 63.0%.
- **The Case-Shiller Home Price Index (ended October) declined to 298.99 from 300.59 in September and remains at levels higher than that of pre-financial crisis levels of 150.9.**
- **Rolling 12-month seasonally-adjusted CPI ended Q4 at 6.42% down from Q3 at 8.2%. In the same period last year, it was 7.09%; Capacity Utilization decreased to 78.75% in Q4 from 80.07% in Q3.**
- **Fed Funds rate increased in Q4 by 1.25% to a targeted range of 4.25%-to-4.50% up from a targeted range of 3.00%-to-3.25% ended Q3. The 10-year Treasury Yield (constant maturity) finished Q4 at 3.62% up from 3.52% in Q3.**
- **The Fed continues scaling back asset purchases. The Fed continues to reduce the size of its balance sheet after a period of rapid growth post-pandemic.**
- **S&P valuations decreased in Q4 to 27.96 from 28.42x in Q3 and are lower than the 10-year average of 28.99x.**
 - Cyclically adjusted Shiller PE ratio remains above the long-term average of 16.99x.

MARKET ENVIRONMENT

Q4 2022 OVERVIEW

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI IMI (Net)	World with Small Cap	9.84%	-18.40%	3.89%	4.96%	7.94%
MSCI ACWI Net (USD)	World W/O Small Cap	9.76%	-18.36%	4.00%	5.23%	7.98%
MSCI ACWI (Local)	World (Local Currency)	7.36%	-15.98%	5.07%	6.10%	9.33%
Domestic Equity Benchmarks						
Russell 3000	Domestic All Cap	7.18%	-19.21%	7.07%	8.79%	12.13%
S&P 500	Large Core	7.56%	-18.11%	7.66%	9.42%	12.56%
Russell 1000	Large Core	7.24%	-19.13%	7.35%	9.13%	12.37%
Russell 1000 Growth	Large Growth	2.20%	-29.14%	7.79%	10.96%	14.10%
Russell 1000 Value	Large Value	12.42%	-7.54%	5.96%	6.67%	10.29%
Russell 2000	Small Core	6.23%	-20.44%	3.10%	4.13%	9.01%
Russell 2000 Growth	Small Growth	4.13%	-26.36%	0.65%	3.51%	9.20%
Russell 2000 Value	Small Value	8.42%	-14.48%	4.70%	4.13%	8.48%
NASDAQ Composite	Large Growth	-0.79%	-32.54%	6.10%	9.67%	14.43%
NASDAQ Biotechnology	Biotech	12.01%	-10.12%	4.36%	5.32%	11.92%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	14.28%	-16.00%	0.07%	0.88%	3.80%
MSCI EAFE Net (USD)	Int'l Developed	17.34%	-14.45%	0.87%	1.54%	4.67%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	8.72%	-7.00%	3.64%	3.81%	7.56%
MSCI EAFE Small Cap	Small Cap Int'l	15.79%	-21.39%	-0.93%	-0.05%	6.21%
MSCI Emerging Markets	Emerging Equity	9.70%	-20.09%	-2.69%	-1.40%	1.44%
Domestic Fixed Income Benchmarks						
Bloomberg Aggregate	Core Bonds	1.87%	-13.01%	-2.71%	0.02%	1.06%
Barclays US High Yield	High Yield	4.17%	-11.19%	0.05%	2.31%	4.03%
CSFB Levered Loans	Bank Loans	2.33%	-1.06%	2.34%	3.24%	3.78%
BofA ML US 3-Month T-Bill	Cash	0.84%	1.46%	0.72%	1.26%	0.76%
Bloomberg US TIPS 1-10 Yr	Inflation	1.64%	-7.34%	2.01%	2.50%	1.29%
Global Fixed Income Benchmarks						
Barclays Global Aggregate	Global Core Bonds	4.55%	-16.25%	-4.48%	-1.66%	-0.44%
FTSE WGBI	World Gov. Bonds	3.82%	-18.26%	-5.75%	-2.54%	-1.22%
BC Global Credit	Global Bonds	5.28%	-16.96%	-4.01%	-1.06%	0.60%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	8.45%	-11.69%	-6.11%	-2.51%	-2.03%
JPM EMBI+	Em. Mkt. Bonds	8.70%	-24.67%	-8.34%	-3.87%	-0.35%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	2.22%	16.09%	12.65%	6.44%	-1.28%
HFRI Fund of Funds Composite Index	Fund of Hedge Funds	1.79%	-5.25%	3.71%	3.02%	3.51%
Cambridge PE Lagged*	Private Equity	0.08%	2.86%	19.37%	16.75%	15.02%
NCREIF ODCE Net Lagged*	Real Estate	0.35%	21.05%	11.41%	9.28%	9.92%
FTSE NAREIT All Equity REITs	REIT	4.14%	-24.95%	0.20%	4.43%	7.10%

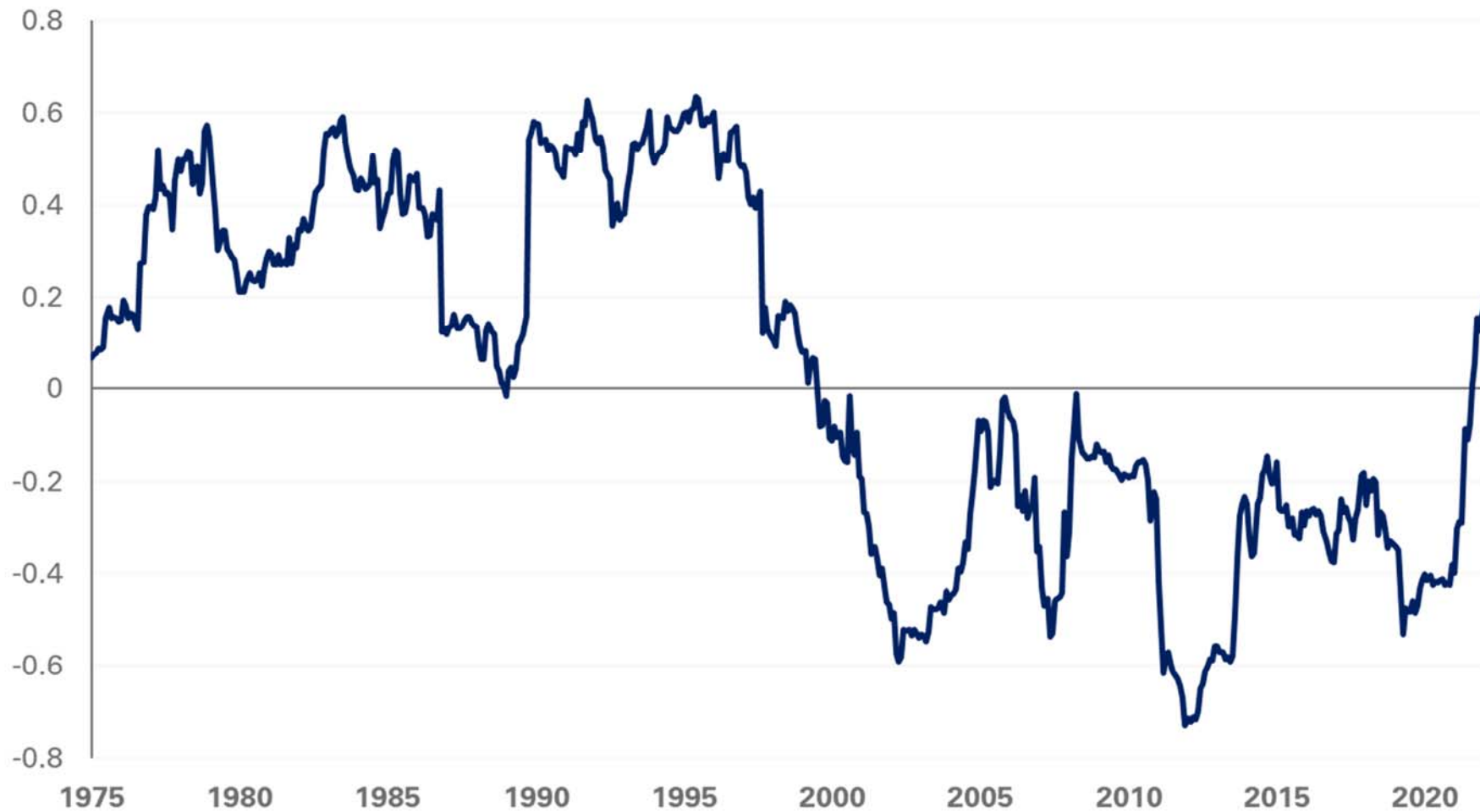


* As of 9/30/2022



ASSET CLASS CORRELATIONS SHIFTED

ROLLING CORRELATION BETWEEN THE S&P 500 AND TREASURIES



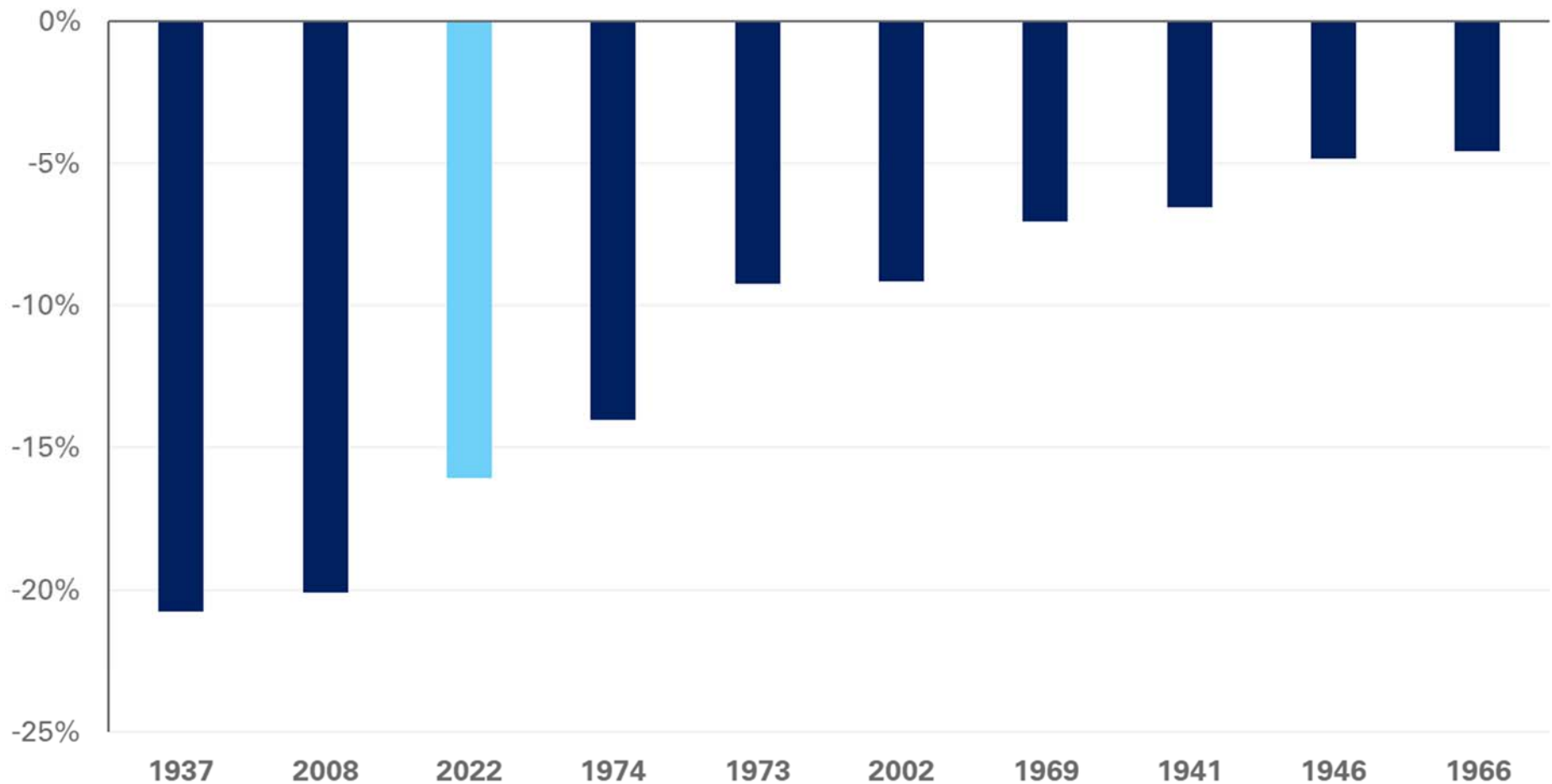
Correlations are calculated based on a rolling 3-year time horizon

Source: S&P, Bloomberg, FactSet



MOST ASSET CLASS RETURNS WERE CHALLENGED

WORST ANNUAL RETURNS: 60/40 PORTFOLIO



60/40 Portfolio represents 60% S&P 500 and 40% U.S. Aggregate Bonds (post 1975) and 40% Treasury (prior to 1974)

Data calculated from 12/31/1936

Sources: S&P, Bloomberg, FactSet



THE S&P 500 INDEX REMAINS IN A BEAR MARKET

LENGTH AND DEPTH OF S&P 500 BEAR MARKETS

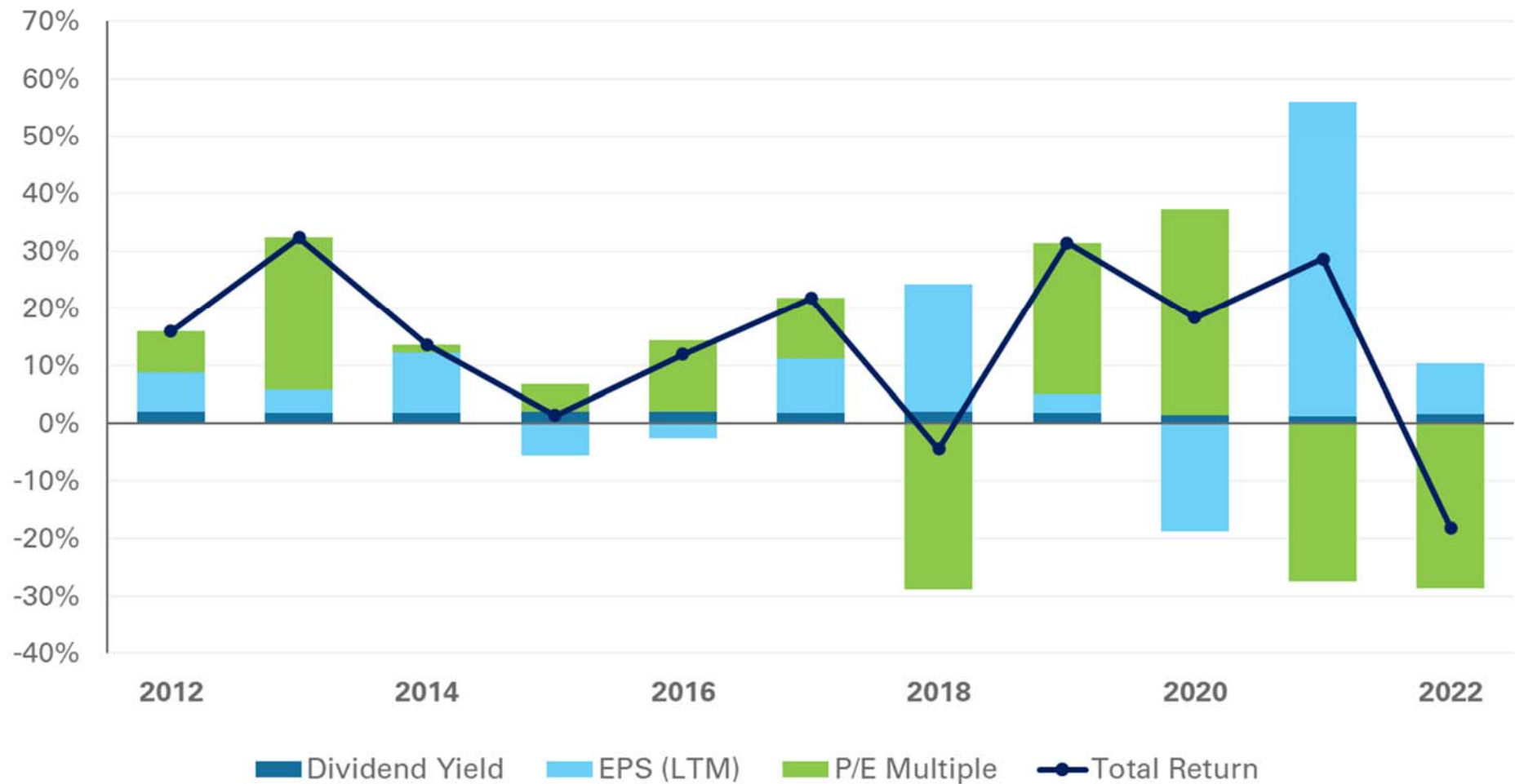
Start	End	Length of Bear Market (Months)	Length of Recovery* (Months)	S&P 500 Decline
01/03/2022	?	12*	?	-18%
02/19/2020	03/23/2020	1	5	-34%
10/09/2007	03/09/2009	17	59	-57%
03/24/2000	10/09/2002	31	80	-49%
08/25/1987	12/04/1987	3	20	-34%
11/28/1980	08/12/1982	21	3	-27%
01/11/1973	10/03/1974	21	69	-48%

Notes: 2022 bear market is ongoing; represents historical bear markets since 1970. *Length of Recovery represents time to recoup losses from the start of the bear market.

Sources: S&P, FactSet, NEPC

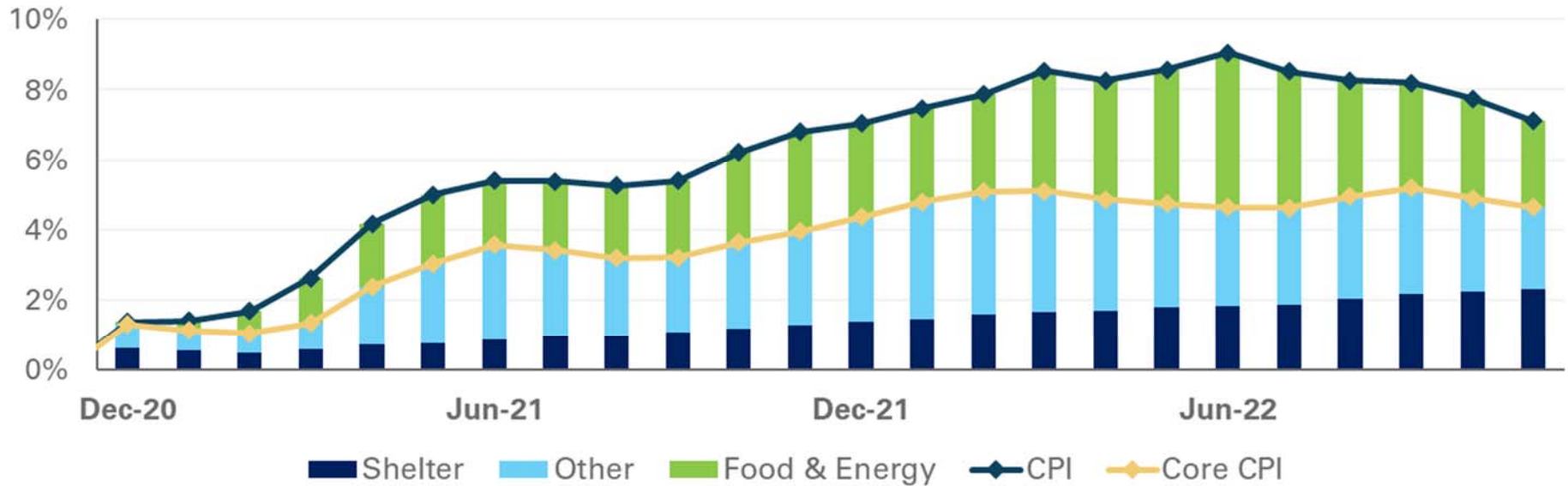
P/E RATIO CONTRACTION LED TO LOWER RETURNS

S&P 500 ATTRIBUTION TO TOTAL RETURNS



U.S. HEADLINE AND CORE CPI REMAIN ELEVATED

ANNUAL U.S. CPI-U CHANGES



Annual Change in U.S. CPI-U Subcategories



+11.2%
Food



+33.5%
Utilities



+14.7%
Transportation
Services



+19.7%
Motor Fuel



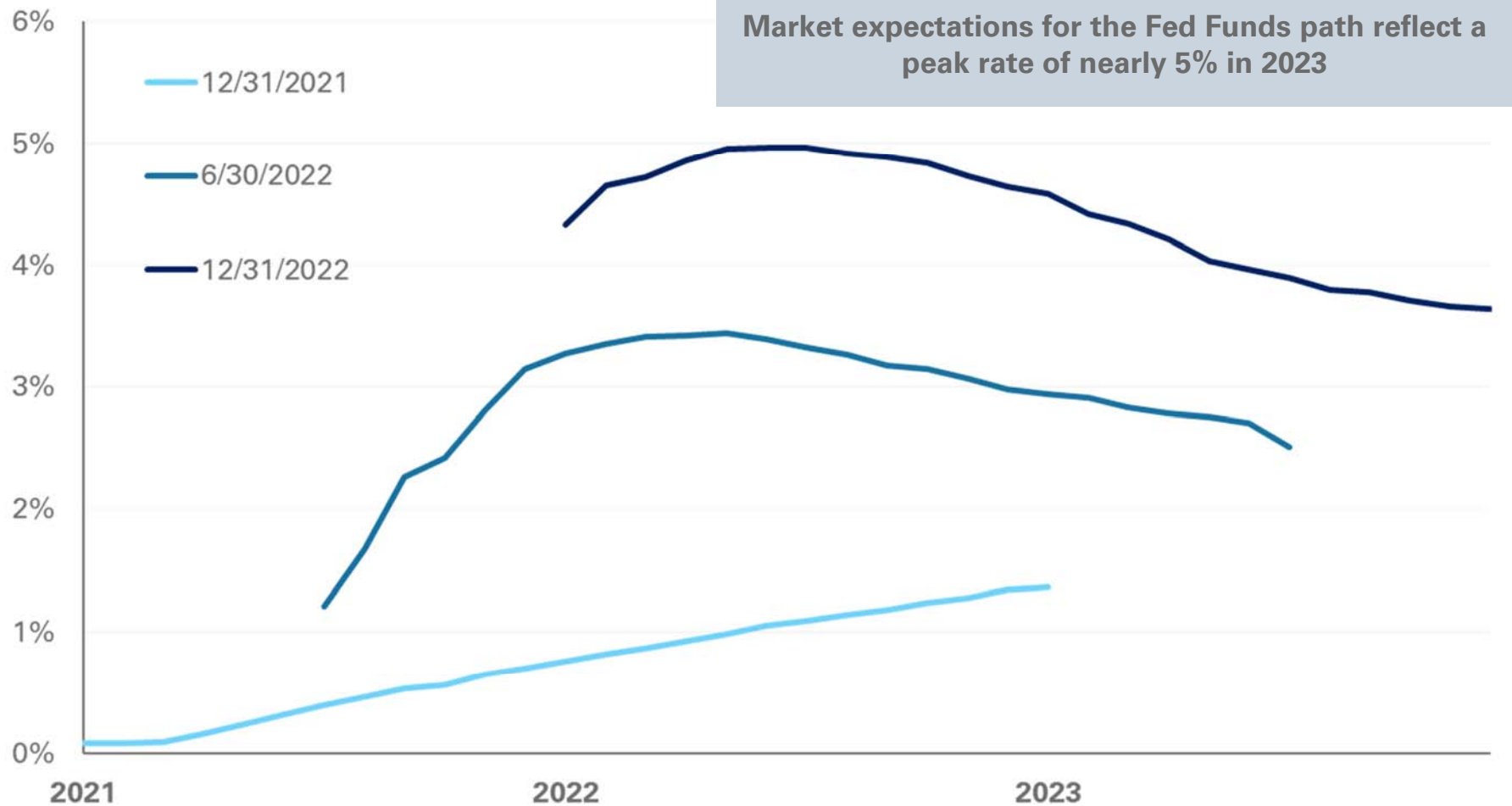
+7.4%
Used Cars
and Trucks



+6.6%
Shelter

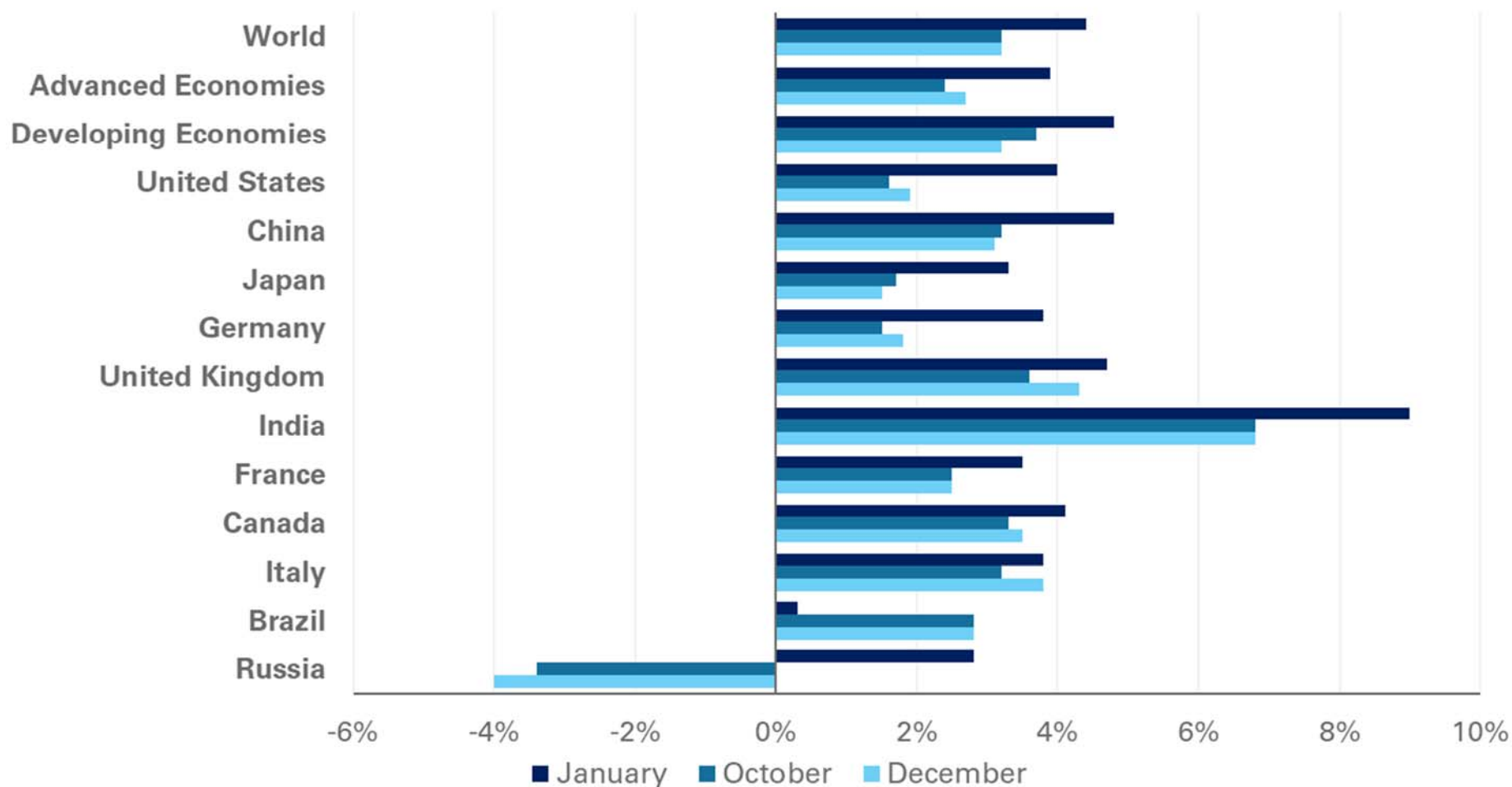
RATE EXPECTATIONS INCREASED DRAMATICALLY

FED FUNDS EXPECTATIONS



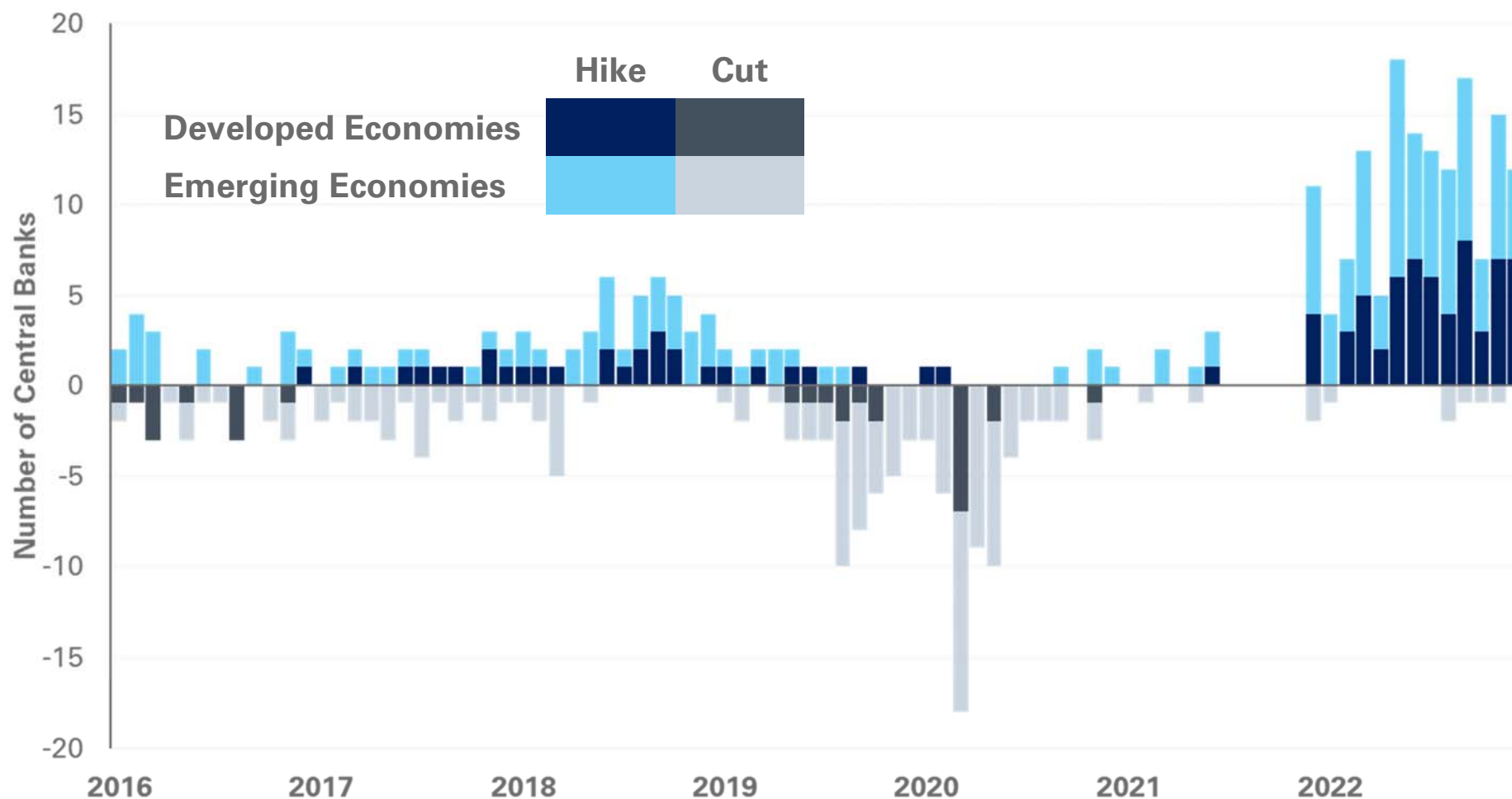
GLOBAL GROWTH EXPECTATIONS WEAKENED

2022 REAL GDP PROJECTIONS



THE MONETARY POLICY BACKDROP IS TIGHTER

INTEREST RATE CHANGES BY GLOBAL CENTRAL BANKS



Notes: Developed Economies include Australia, Canada, countries governed by the European Central Bank, Japan, New Zealand, Norway, Sweden, Switzerland, United Kingdom, and the United States. Emerging Economies include Argentina, Brazil, Chile, China, Egypt, Ghana, India, Malaysia, Mexico, Pakistan, Peru, Philippines, South Africa, Thailand, and Turkey.
Source: FactSet

2023 KEY INVESTMENT THEMES

NEPC MARKET OUTLOOK



Stagflation Trends

Stagflation trends challenge the investment landscape and are the driving force for market dynamics



Recession Outlook

Changes in unemployment, wages, and service sector inflation will inform the likelihood and potential severity of a U.S. recession



European Energy Transition

Europe is on the clock to secure new sources of natural gas supply or face severe energy shortages



China Reopening

China's reopening will have global implications for growth, trade, and inflation and may drive a consumer resurgence in China



U.S. Dollar Trajectory

U.S. Dollar strength reveals risks in the global financial system and is a tightening of financial conditions

TOTAL FUND PERFORMANCE SUMMARY (NET)

	Market Value (\$)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Arizona PSPRS Trust	18,449,033,043	3.98 (90)	0.60 (66)	-6.57 (11)	6.14 (14)	6.15 (19)	7.05 (46)	6.98 (46)
<i>Policy Index</i>		6.85 (9)	3.27 (1)	-12.12 (63)	4.71 (40)	5.77 (25)	7.04 (46)	6.82 (56)
<i>PSPRS ex-Workout Real Estate Portfolio</i>		3.96 (91)	0.46 (76)	-6.62 (11)	6.19 (11)	6.43 (13)	7.44 (29)	7.52 (29)
<i>60% MSCI World/40% FTSE WGBI</i>		7.52 (4)	0.39 (78)	-17.72 (100)	1.20 (100)	3.23 (99)	5.41 (97)	5.29 (100)
<i>InvMetrics Public DB > \$1 Billion Median</i>		5.14	0.87	-11.20	4.42	5.19	6.96	6.90

- The Fund's performance over the five-year period was 6.15%, ranking in the first quartile of the peer universe. The Fund's risk-adjusted returns rank in the first quartile over this period. The Fund's Sharpe and Sortino Ratios rank in the 8th and 8th percentiles over this period.

- Over the past three years, the Fund returned 6.14% per annum, ranking in the first quartile of the peer universe. The Fund's Sharpe and Sortino Ratios rank highly during this period, ranking in the 7th and 8th percentiles over this period.

- Over the last year, the Fund did not achieve its primary objective of the 7.0% assumed rate, returning -6.57% and ranking in the 11th percentile of its peer group. The Fund's assets totaled \$18.4 billion.

3 Years Ending December 31, 2022			
	Standard Deviation	Sharpe Ratio	Sortino Ratio
Arizona PSPRS Trust	9.08 (3)	0.61 (7)	0.96 (8)
<i>Policy Index</i>	14.70 (90)	0.33 (56)	0.48 (56)
<i>PSPRS ex-Workout Real Estate Portfolio</i>	9.15 (3)	0.61 (7)	0.96 (8)
<i>60% MSCI World/40% FTSE WGBI</i>	14.34 (87)	0.10 (100)	0.14 (100)
<i>InvMetrics Public DB > \$1 Billion Median</i>	12.43	0.36	0.51

5 Years Ending December 31, 2022			
	Standard Deviation	Sharpe Ratio	Sortino Ratio
Arizona PSPRS Trust	7.68 (4)	0.65 (8)	0.99 (8)
<i>Policy Index</i>	12.08 (83)	0.42 (47)	0.60 (45)
<i>PSPRS ex-Workout Real Estate Portfolio</i>	7.74 (5)	0.67 (6)	1.04 (6)
<i>60% MSCI World/40% FTSE WGBI</i>	12.21 (84)	0.22 (99)	0.31 (99)
<i>InvMetrics Public DB > \$1 Billion Median</i>	10.61	0.41	0.58

TOTAL FUND PERFORMANCE - NET OF FEES

	Market Value (\$)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Arizona PSPRS Trust	18,449,033,043	3.98 (90)	0.60 (66)	-6.57 (11)	6.14 (14)	6.15 (19)	7.05 (46)	6.98 (46)
PSPRS W/T NCREIF		3.34 (97)	-0.20 (97)	-6.78 (12)	9.16 (1)	8.80 (1)	9.01 (1)	8.58 (1)
Policy Index		6.85 (9)	3.27 (1)	-12.12 (63)	4.71 (40)	5.77 (25)	7.04 (46)	6.82 (56)
InvMetrics Public DB > \$1 Billion Median		5.14	0.87	-11.20	4.42	5.19	6.96	6.90

3 Years Ending December 31, 2022

	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Arizona PSPRS Trust	9.08 (3)	0.61 (7)	0.96 (8)
PSPRS W/T NCREIF	9.90 (17)	0.85 (1)	1.48 (1)
Policy Index	14.70 (90)	0.33 (56)	0.48 (56)
InvMetrics Public DB > \$1 Billion Median	12.43	0.36	0.51

5 Years Ending December 31, 2022

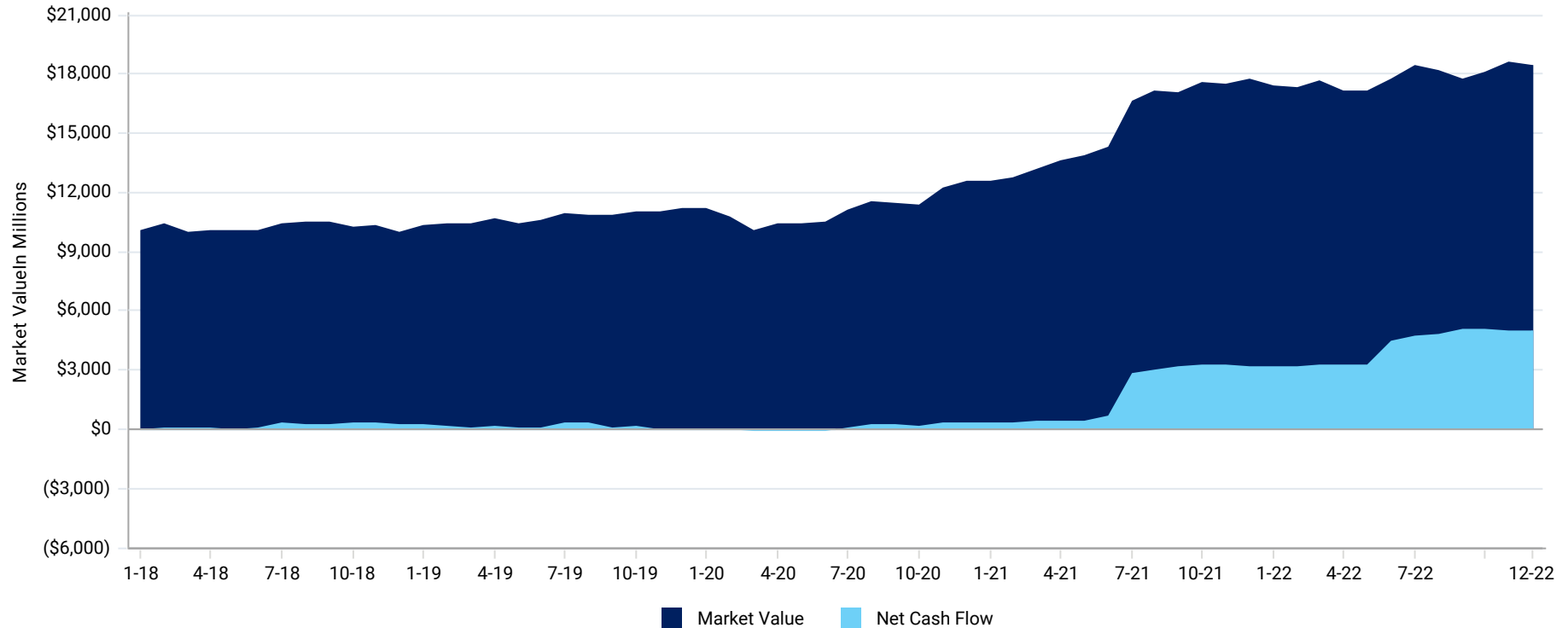
	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Arizona PSPRS Trust	7.68 (4)	0.65 (8)	0.99 (8)
PSPRS W/T NCREIF	8.34 (11)	0.90 (1)	1.53 (1)
Policy Index	12.08 (83)	0.42 (47)	0.60 (45)
InvMetrics Public DB > \$1 Billion Median	10.61	0.41	0.58

10 Years Ending December 31, 2022

	Anlzd Std Dev	Sharpe Ratio	Sortino Ratio
Arizona PSPRS Trust	5.99 (4)	1.02 (5)	1.67 (4)
PSPRS W/T NCREIF	6.37 (6)	1.20 (1)	2.14 (1)
Policy Index	9.10 (68)	0.69 (65)	1.02 (64)
InvMetrics Public DB > \$1 Billion Median	8.44	0.74	1.12

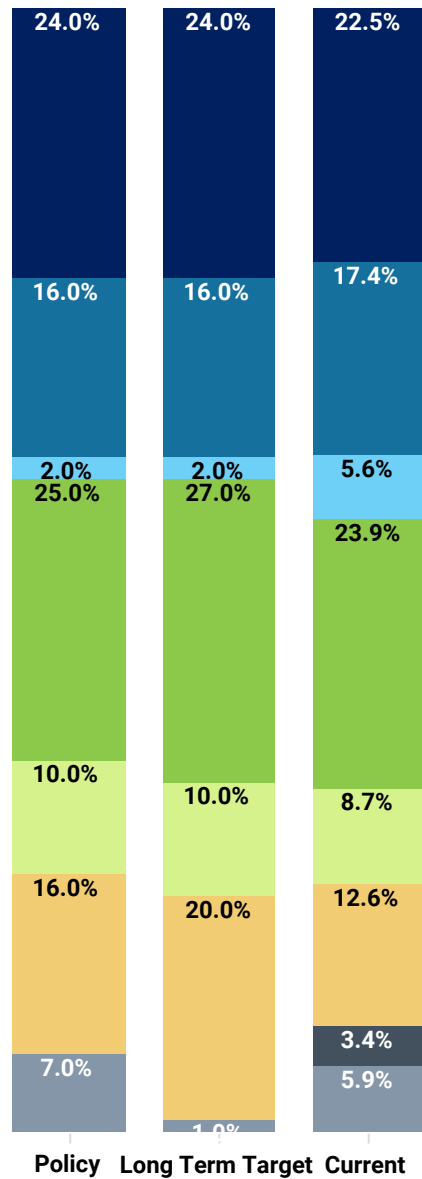
TOTAL FUND ASSET GROWTH SUMMARY

5 Years Ending December 31, 2022



	Last Three Months	FYTD	One Year	Three Years	Five Years
Beginning Market Value	17,762,492,728	17,758,095,904	17,784,848,863	11,198,666,327	9,915,781,640
Contributions	2,285,358,930	5,213,711,091	8,874,880,099	22,539,304,197	30,468,315,961
Withdrawals	-2,342,201,603	-4,668,972,689	-7,084,067,000	-17,604,470,407	-25,935,568,098
Fees	-12,873,391	-23,565,645	-41,138,294	-156,228,047	-266,765,355
Net Cash Flow	-56,842,673	544,738,402	1,790,813,100	4,934,833,790	4,532,747,863
Net Investment Change	743,382,989	146,198,737	-1,116,290,699	2,226,395,005	3,519,339,856
Ending Market Value	18,449,033,043	18,449,033,043	18,449,033,043	18,449,033,043	18,449,033,043
Net Change	686,540,315	690,937,139	664,184,180	7,250,366,717	8,533,251,404

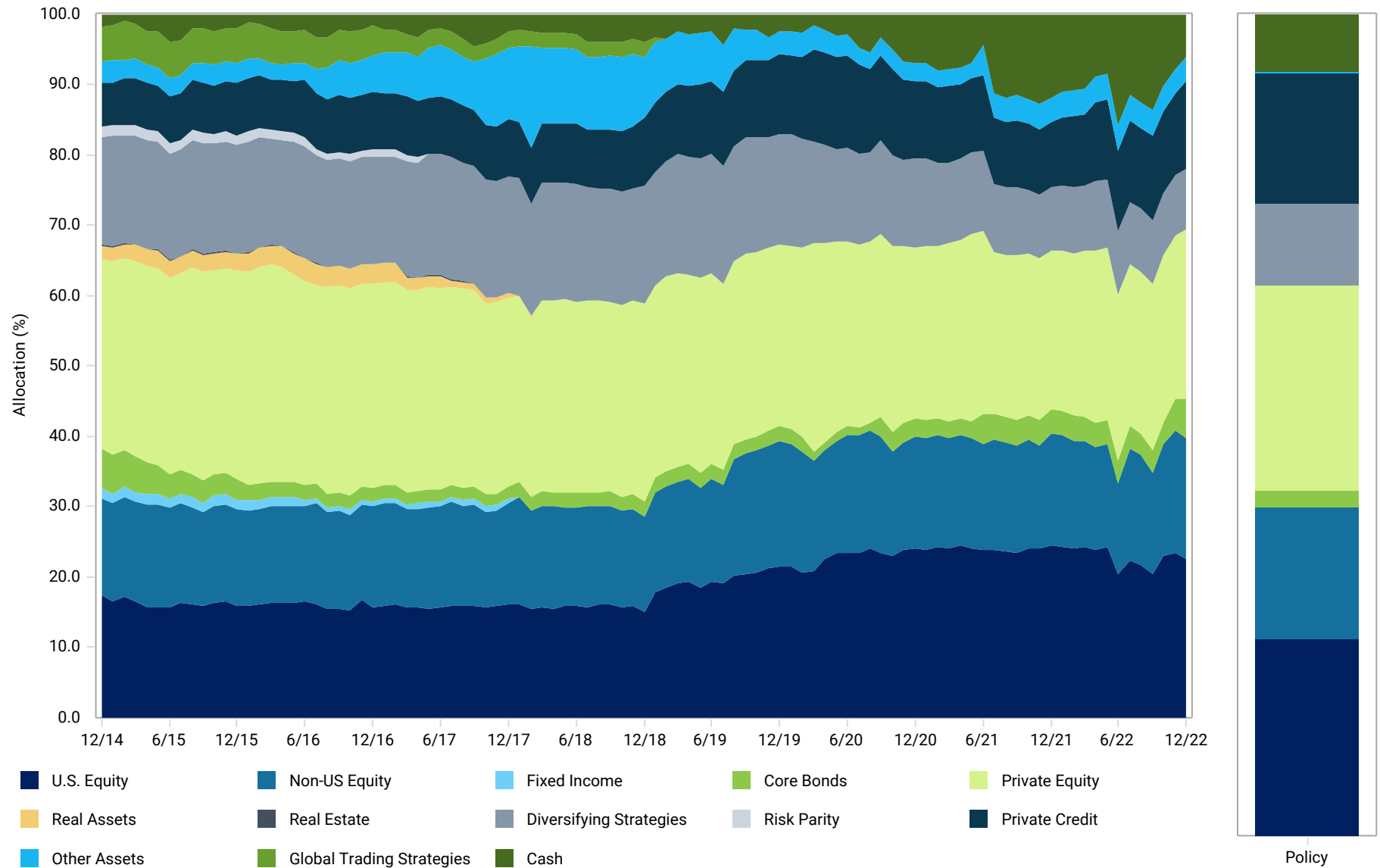
ASSET ALLOCATION VS. POLICY TARGETS



Asset Allocation vs. Target							
	Current (\$)	Current (%)	Interim Target (%)	Long Term Target (%)	Differences* (%)	Policy Range (%)	Within Range
■ U.S. Equity	4,146,606,520	22.5	24.0	24.0	-1.5	17.0 - 29.0	Yes
■ Non-US Equity	3,209,587,226	17.4	16.0	16.0	1.4	13.0 - 21.0	Yes
■ Core Bonds	1,032,794,197	5.6	2.0	2.0	3.6	1.0 - 15.0	Yes
■ Private Equity	4,410,467,623	23.9	25.0	27.0	-1.1	17.0 - 32.0	Yes
■ Diversifying Strategies	1,600,843,726	8.7	10.0	10.0	-1.3	3.0 - 18.0	Yes
■ Private Credit	2,321,337,257	12.6	16.0	20.0	-3.4	13.0 - 28.0	No
■ Other Assets	633,848,016	3.4	0.0	0.0	3.4	0.0 - 10.0	Yes
■ Cash	1,093,548,480	5.9	7.0	1.0	-1.1	0.0 - 10.0	Yes
Total	18,449,033,043	100.0	100.0	100.0	0.0		

TOTAL FUND ASSET ALLOCATION HISTORY

Asset Allocation History

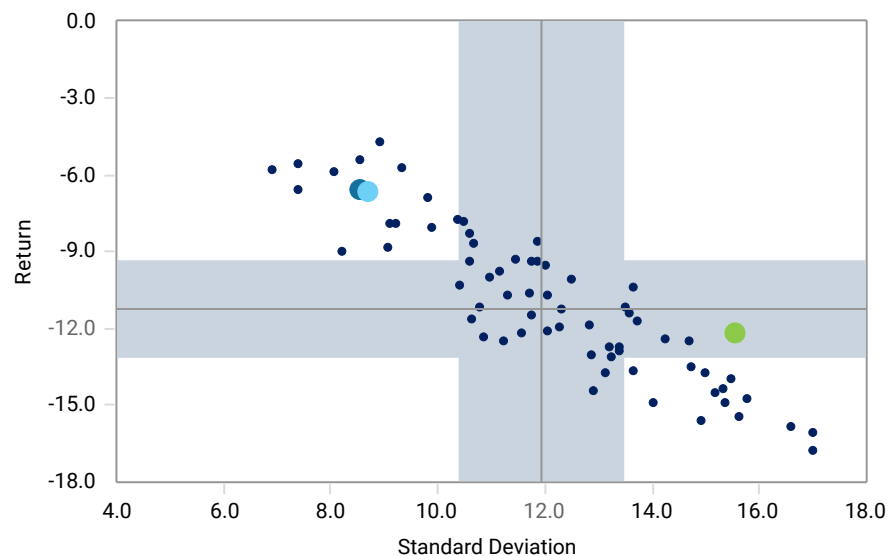


AZ Public Safety Personnel Retirement System Trust

TOTAL FUND RISK/RETURN

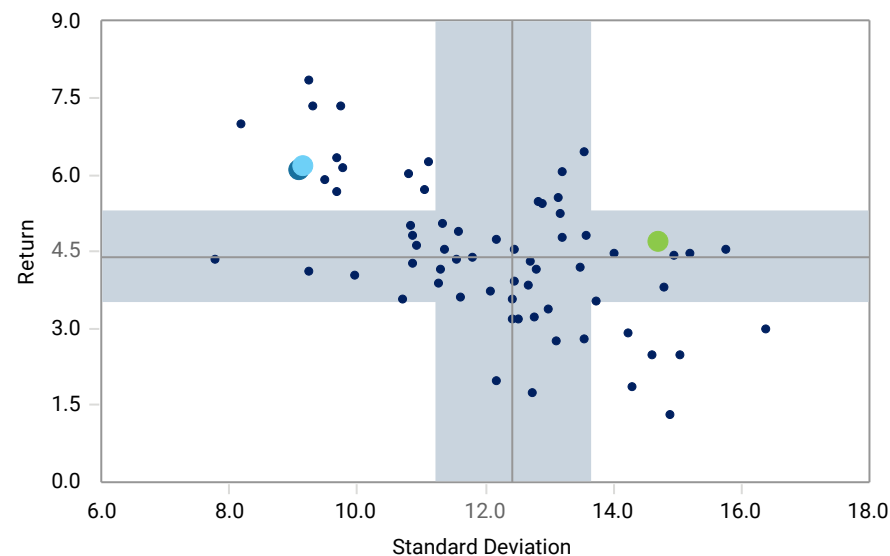
December 31, 2022

1 Year Ending December 31, 2022



- InvMetrics Public DB > \$1 Billion
- Arizona PSPRS Trust
- PSPRS ex-Workout Real Estate Portfolio
- Policy Index

3 Years Ending December 31, 2022



- InvMetrics Public DB > \$1 Billion
- Arizona PSPRS Trust
- PSPRS ex-Workout Real Estate Portfolio
- Policy Index

1 Year Ending December 31, 2022

	Ret	Std Dev	Sharpe Ratio	Sortino Ratio
Arizona PSPRS Trust	-6.6 (11)	8.6 (8)	-0.9 (24)	-1.1 (24)
PSPRS ex-Workout Real Estate Portfolio	-6.6 (11)	8.7 (9)	-0.9 (20)	-1.1 (23)
Policy Index	-12.1 (63)	15.5 (93)	-0.9 (8)	-1.0 (11)
InvMetrics Public DB > \$1 Billion Median	-11.2	11.9	-1.0	-1.2

3 Years Ending December 31, 2022

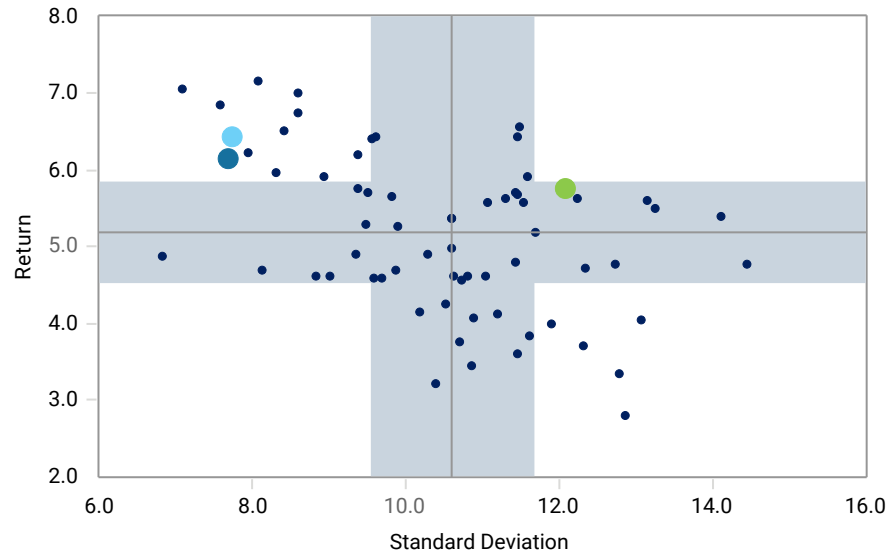
	Ret	Std Dev	Sharpe Ratio	Sortino Ratio
Arizona PSPRS Trust	6.1 (14)	9.1 (3)	0.6 (7)	1.0 (8)
PSPRS ex-Workout Real Estate Portfolio	6.2 (11)	9.2 (3)	0.6 (7)	1.0 (8)
Policy Index	4.7 (40)	14.7 (90)	0.3 (56)	0.5 (56)
InvMetrics Public DB > \$1 Billion Median	4.4	12.4	0.4	0.5

AZ Public Safety Personnel Retirement System Trust

TOTAL FUND RISK/RETURN

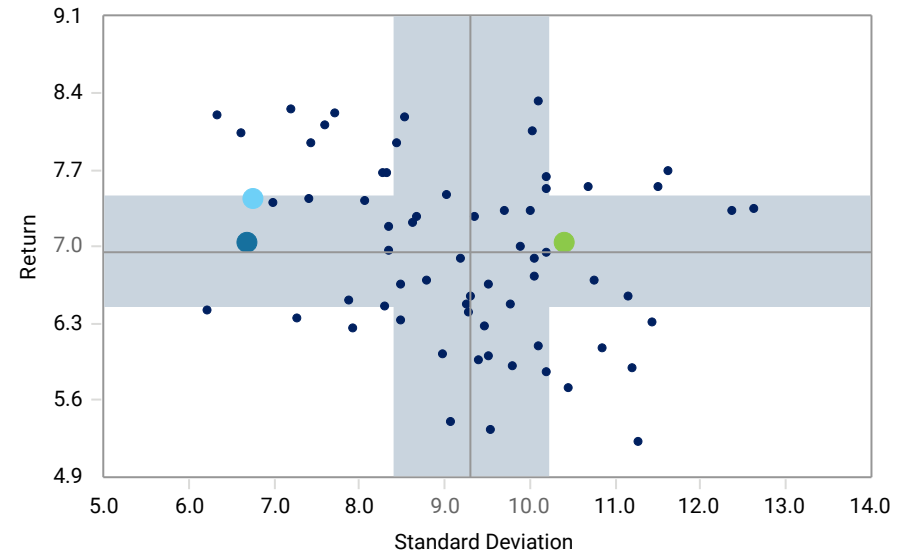
December 31, 2022

5 Years Ending December 31, 2022



- InvMetrics Public DB > \$1 Billion
- Arizona PSRS Trust
- PSPRS ex-Workout Real Estate Portfolio
- Policy Index

7 Years Ending December 31, 2022



- InvMetrics Public DB > \$1 Billion
- Arizona PSRS Trust
- PSPRS ex-Workout Real Estate Portfolio
- Policy Index

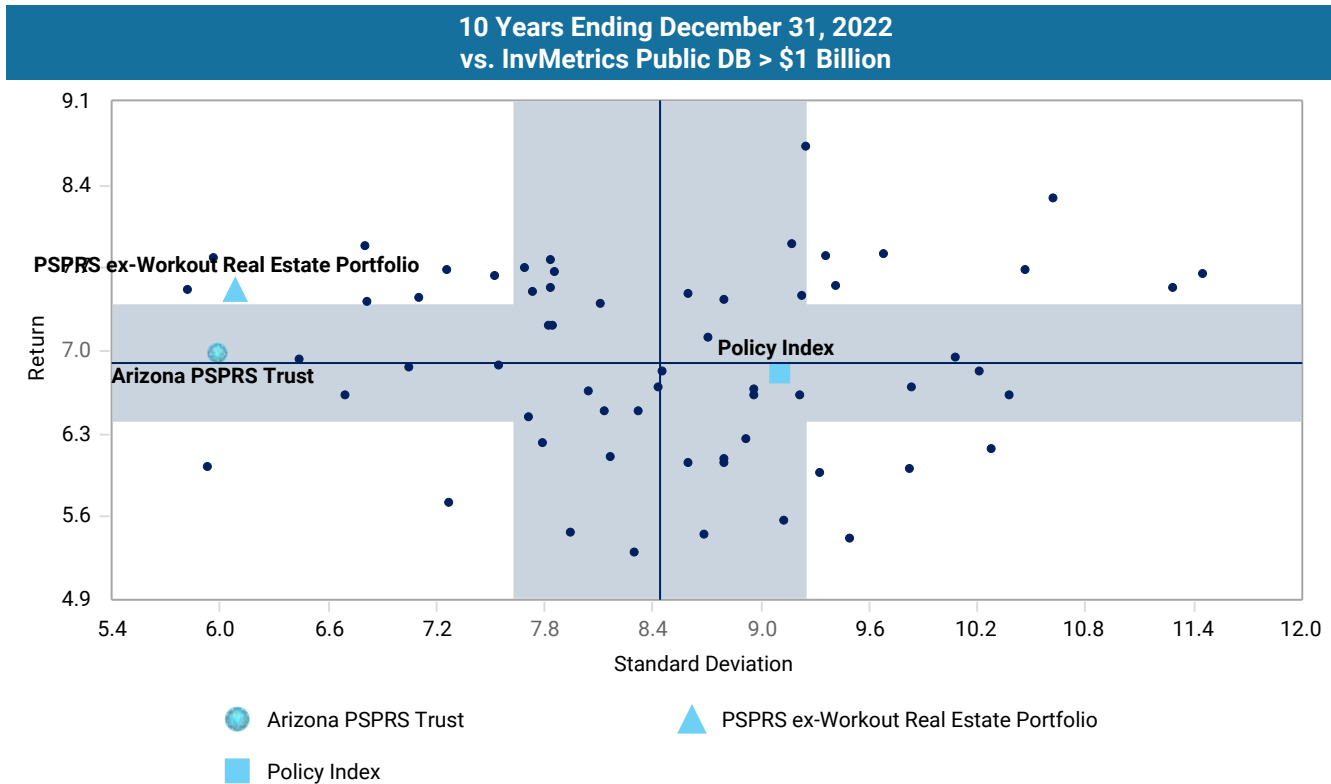
5 Years Ending December 31, 2022

	Ret	Std Dev	Sharpe Ratio	Sortino Ratio
Arizona PSRS Trust	6.2 (19)	7.7 (4)	0.6 (8)	1.0 (8)
PSPRS ex-Workout Real Estate Portfolio	6.4 (13)	7.7 (5)	0.7 (6)	1.0 (6)
Policy Index	5.8 (25)	12.1 (83)	0.4 (47)	0.6 (45)
InvMetrics Public DB > \$1 Billion Median	5.2	10.6	0.4	0.6

7 Years Ending December 31, 2022

	Ret	Std Dev	Sharpe Ratio	Sortino Ratio
Arizona PSRS Trust	7.1 (46)	6.7 (4)	0.9 (11)	1.4 (10)
PSPRS ex-Workout Real Estate Portfolio	7.4 (29)	6.8 (5)	0.9 (5)	1.5 (5)
Policy Index	7.0 (46)	10.4 (82)	0.6 (67)	0.9 (62)
InvMetrics Public DB > \$1 Billion Median	7.0	9.3	0.7	1.0

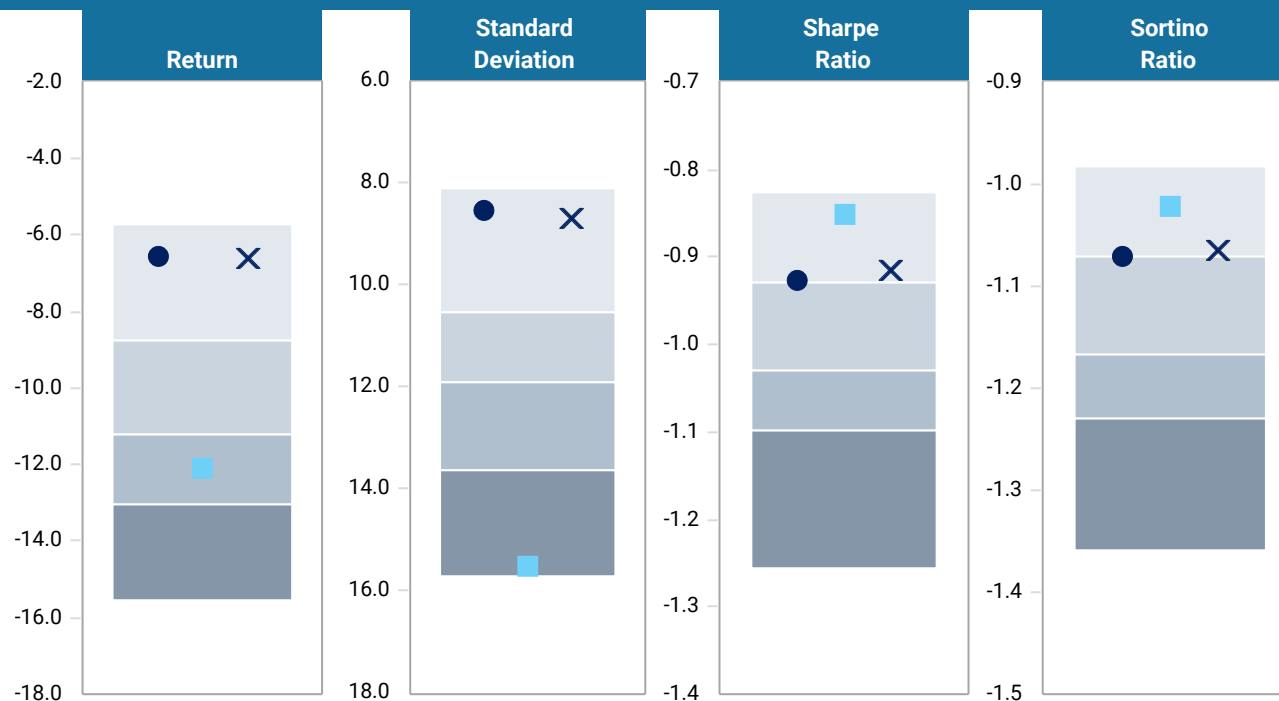
TOTAL FUND RISK/RETURN



10 Years Ending December 31, 2022				
	Ret	Std Dev	Sharpe Ratio	Sortino Ratio
Arizona PSPRS Trust	7.0 (46)	6.0 (4)	1.0 (5)	1.7 (4)
<i>PSPRS ex-Workout Real Estate Portfolio</i>	<i>7.5 (29)</i>	<i>6.1 (5)</i>	<i>1.1 (3)</i>	<i>1.8 (2)</i>
<i>Policy Index</i>	<i>6.8 (56)</i>	<i>9.1 (68)</i>	<i>0.7 (65)</i>	<i>1.0 (64)</i>
<i>InvMetrics Public DB > \$1 Billion Median</i>	<i>6.9</i>	<i>8.4</i>	<i>0.7</i>	<i>1.1</i>

RISK STATISTICS VS. PEER UNIVERSE -1 YEAR

Arizona PSPRS Trust vs. InvMetrics Public DB > \$1 Billion
1 Year

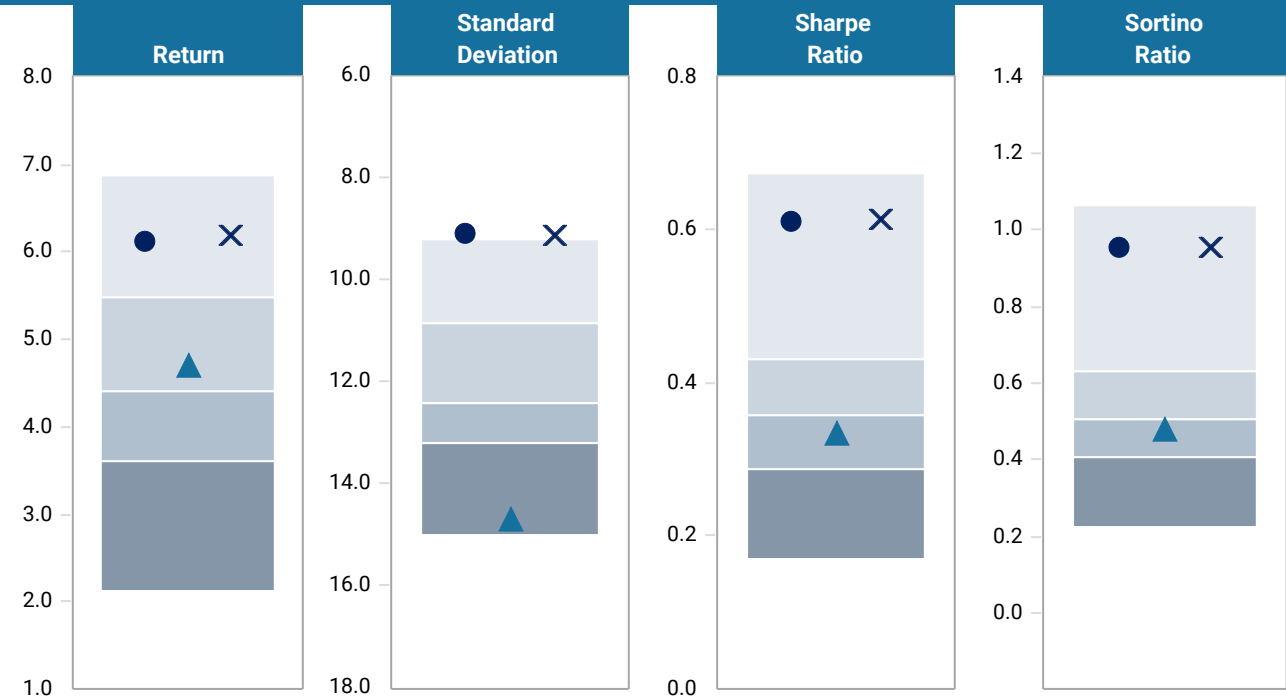


- Arizona PSPRS Trust
- Policy Index
- × PSPRS ex-Workout Real Estate Portfolio

	1 Yr	1 Yr	1 Yr	1 Yr
	-6.6 (11)	8.6 (8)	-0.9 (24)	-1.1 (24)
	-12.1 (63)	15.5 (93)	-0.9 (8)	-1.0 (11)
	-6.6 (11)	8.7 (9)	-0.9 (20)	-1.1 (23)
5th Percentile	-5.7	8.1	-0.8	-1.0
1st Quartile	-8.8	10.6	-0.9	-1.1
Median	-11.2	11.9	-1.0	-1.2
3rd Quartile	-13.0	13.6	-1.1	-1.2
95th Percentile	-15.5	15.7	-1.3	-1.4
Population	68	68	68	68

RISK STATISTICS VS. PEER UNIVERSE - 3 YEAR

Arizona PSPRS Trust vs. InvMetrics Public DB > \$1 Billion
3 Years



● Arizona PSPRS Trust
▲ Policy Index
× PSPRS ex-Workout Real Estate Portfolio

	3 Yrs	3 Yrs	3 Yrs	3 Yrs
	6.1 (14)	9.1 (3)	0.6 (7)	1.0 (8)
	4.7 (40)	14.7 (90)	0.3 (56)	0.5 (56)
	6.2 (11)	9.2 (3)	0.6 (7)	1.0 (8)
5th Percentile	6.9	9.2	0.7	1.1
1st Quartile	5.5	10.9	0.4	0.6
Median	4.4	12.4	0.4	0.5
3rd Quartile	3.6	13.2	0.3	0.4
95th Percentile	2.1	15.0	0.2	0.2
Population	66	66	66	66

RISK STATISTICS VS. PEER UNIVERSE - 5 YEAR

Arizona PSPRS Trust vs. InvMetrics Public DB > \$1 Billion
5 Years

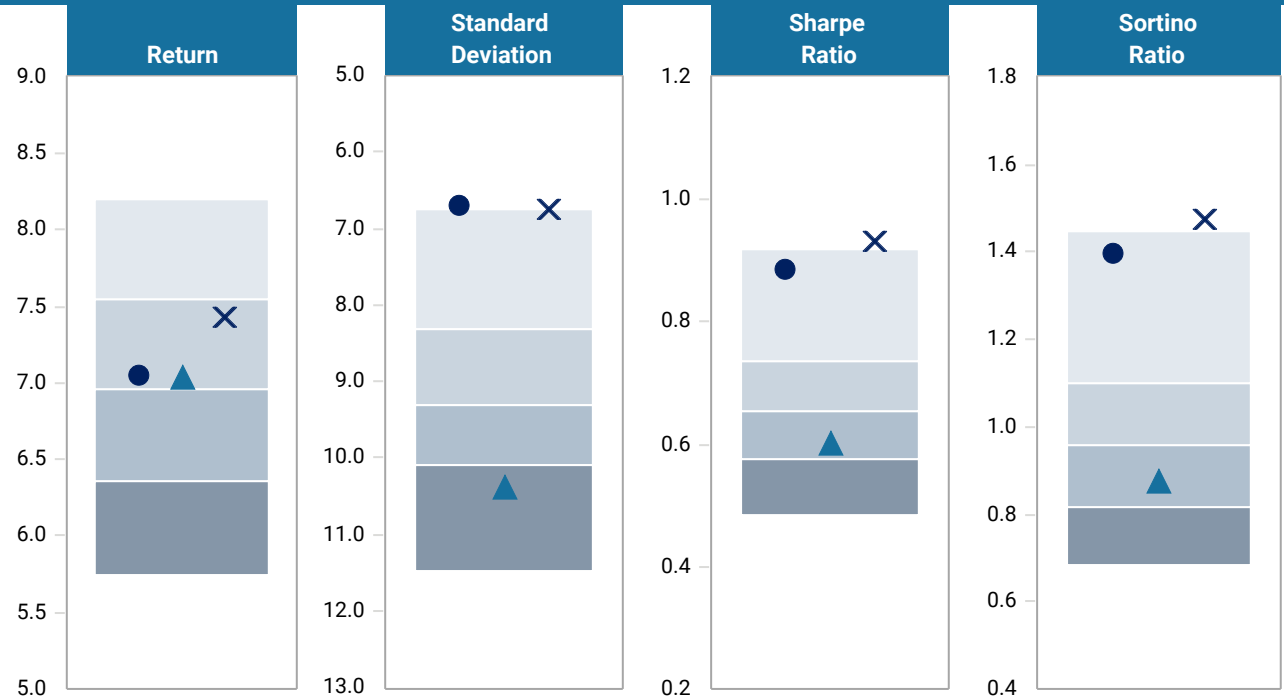


- Arizona PSPRS Trust
- ▲ Policy Index
- × PSPRS ex-Workout Real Estate Portfolio

	5 Yrs	5 Yrs	5 Yrs	5 Yrs
	6.2 (19)	7.7 (4)	0.6 (8)	1.0 (8)
	5.8 (25)	12.1 (83)	0.4 (47)	0.6 (45)
	6.4 (13)	7.7 (5)	0.7 (6)	1.0 (6)
5th Percentile	6.8	7.7	0.7	1.0
1st Quartile	5.8	9.4	0.5	0.7
Median	5.2	10.6	0.4	0.6
3rd Quartile	4.6	11.5	0.3	0.5
95th Percentile	3.5	13.1	0.3	0.3
Population	65	65	65	65

RISK STATISTICS VS. PEER UNIVERSE - 7 YEAR

Arizona PSPRS Trust vs. InvMetrics Public DB > \$1 Billion
7 Years



- Arizona PSPRS Trust
- ▲ Policy Index
- × PSPRS ex-Workout Real Estate Portfolio

	7 Yrs	7 Yrs	7 Yrs	7 Yrs
	7.1 (46)	6.7 (4)	0.9 (11)	1.4 (10)
	7.0 (46)	10.4 (82)	0.6 (67)	0.9 (62)
	7.4 (29)	6.8 (5)	0.9 (5)	1.5 (5)
5th Percentile	8.2	6.8	0.9	1.4
1st Quartile	7.5	8.3	0.7	1.1
Median	7.0	9.3	0.7	1.0
3rd Quartile	6.4	10.1	0.6	0.8
95th Percentile	5.7	11.5	0.5	0.7
Population	65	65	65	65

RISK STATISTICS VS. PEER UNIVERSE - 10 YEAR

Arizona PSPRS Trust vs. InvMetrics Public DB > \$1 Billion
10 Years

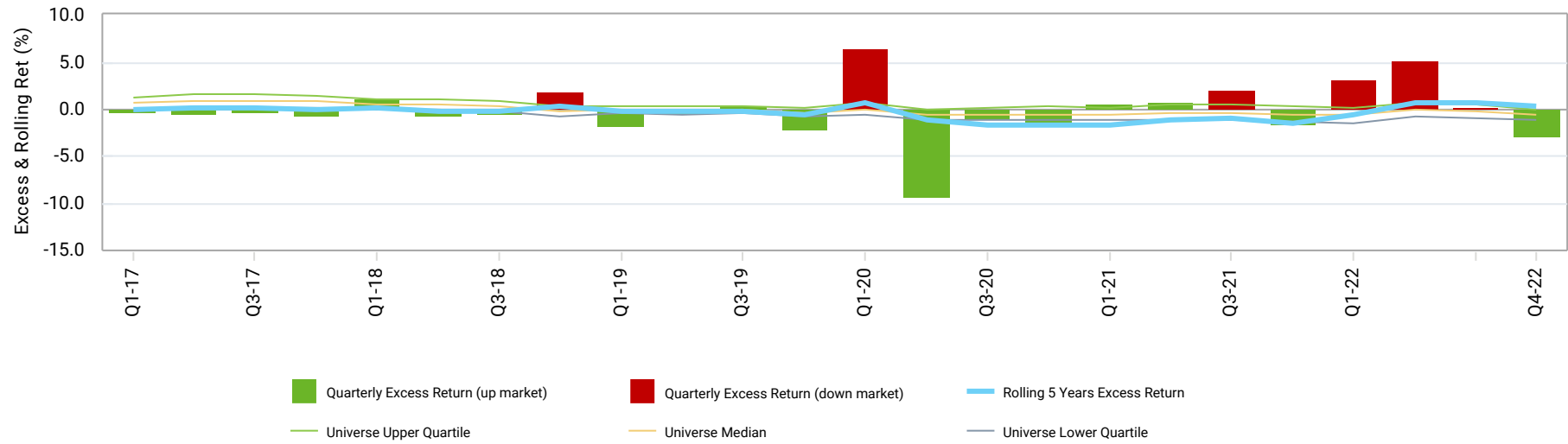


- Arizona PSPRS Trust
- ▲ Policy Index
- × PSPRS ex-Workout Real Estate Portfolio

	10 Yrs	10 Yrs	10 Yrs	10 Yrs
	7.0 (46)	6.0 (4)	1.0 (5)	1.7 (4)
	6.8 (56)	9.1 (68)	0.7 (65)	1.0 (64)
	7.5 (29)	6.1 (5)	1.1 (3)	1.8 (2)
5th Percentile	7.9	6.0	1.0	1.7
1st Quartile	7.5	7.7	0.9	1.3
Median	6.9	8.4	0.7	1.1
3rd Quartile	6.3	9.2	0.6	0.9
95th Percentile	5.5	10.5	0.6	0.8
Population	62	62	62	62

ROLLING 5 YEAR EXCESS RETURNS

Quarter Excess Return with a Rolling 5 Years Excess Return vs. Policy Index over 6 Years Ending December 31, 2022
Comparison with the InvMetrics Public DB > \$1 Billion



Quarter Excess Return with a Rolling 5 Years Excess Return vs. Policy Index over 6 Years Ending December 31, 2022
Comparison with the InvMetrics Public DB > \$1 Billion



CAPITAL APPRECIATION OVERVIEW

CAPITAL APPRECIATION – 67% Target (EQUITIES- PUBLIC AND PRIVATE)

US Public Equity - 24% Target (Range 17%-29%)

Int'l/Global Public Equity – 16% Target (Range 13%-21%)

Global Private Equity – 27% Target (Range 17%-32%)

Global Private Equity Subcomponents:

- *Buyouts – 20% Target*
- *Real Estate – 4% Target*
- *Real Assets – 3% Target*

Role: • Long-term growth

Pros: • Expected to perform well in periods of rising growth and low-moderate inflation

Cons: • Higher volatility

- Suffers during economic weakness
- Suffers during periods of high inflation or deflation

CAPITAL PRESERVATION OVERVIEW

September 30, 2022

CONTRACTUAL INCOME – 22% Target
PRIVATE CREDIT – 20% Target (Range 13%-28%)
CORE (NOMINAL) BONDS - 2% Target (Range 1%-15%)

Role: • Nominal capital preservation

Pros: • Maintains value during economic weakness

- Maintains value during periods of deflation and low inflation
- Low volatility

Cons: • Limited long-term growth

- Value eroded by inflation



*Global Private Equity is included in a separate report

DIVERSIFYING ASSETS OVERVIEW

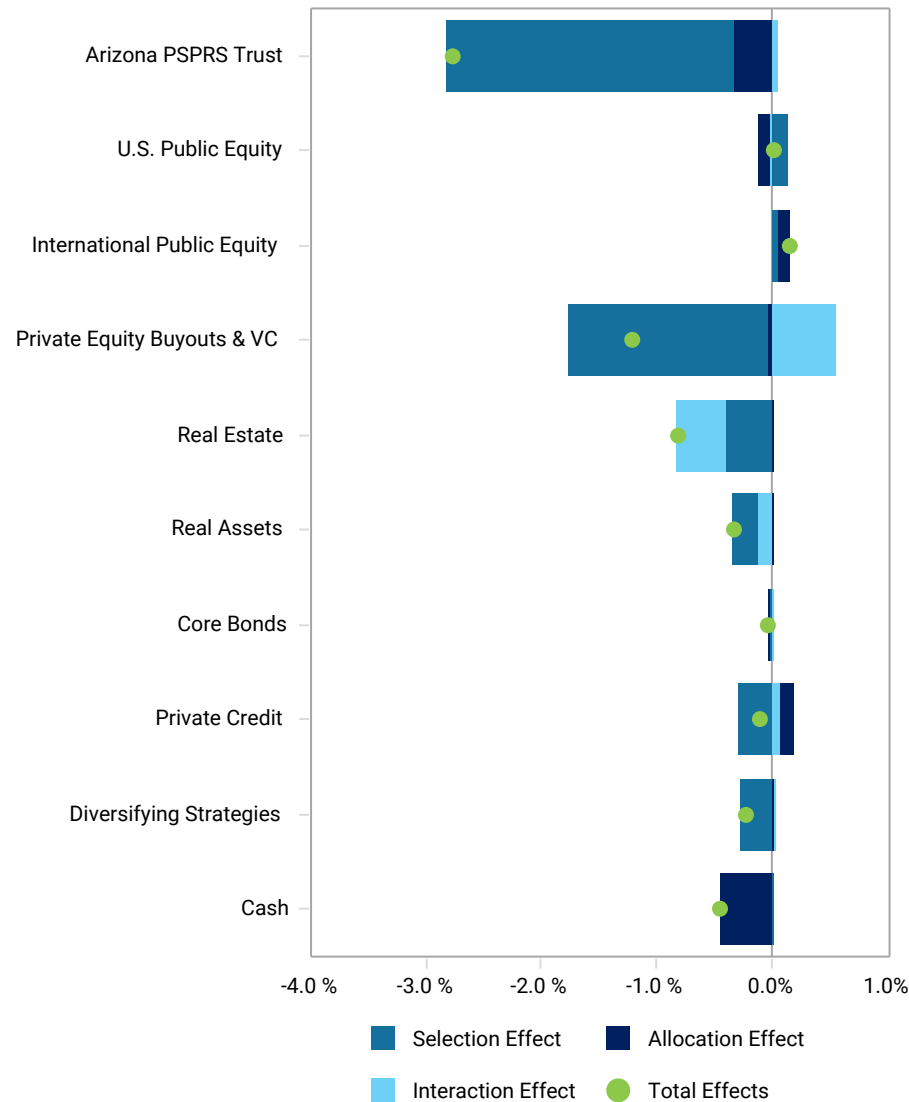
DIVERSIFYING ASSETS – 10% Target

Includes (GTS, Absolute Return, and Risk Parity) Range 3-18%

- Role:** • Stable returns, low correlation and beta to growth, rates
- Pros:** • Add diversified source of alpha to core portfolio, generate positive returns in most environments
- Cons:** • Execution risk
Moderate long-term growth

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects Relative to Policy Index
3 Months Ending December 31, 2022



Attribution Summary
3 Months Ending December 31, 2022

	Policy Weight (%)	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Interaction Effects (%)
U.S. Public Equity	24.0	7.8	7.2	0.6	0.1	-0.1	0.0
International Public Equity	16.0	14.5	14.1	0.4	0.1	0.1	0.0
Private Equity Buyouts & VC	18.0	-1.9	7.4	-9.3	-1.2	0.0	0.6
Real Estate	4.0	-2.4	7.4	-9.8	-0.8	0.0	-0.4
Real Assets	3.0	0.1	7.4	-7.4	-0.4	0.0	-0.1
Core Bonds	2.0	1.0	1.9	-0.9	0.0	0.0	0.0
Private Credit	16.0	1.4	3.2	-1.9	-0.2	0.1	0.1
Diversifying Strategies	10.0	-0.8	1.8	-2.6	-0.2	0.0	0.0
Cash	7.0	0.9	0.9	0.1	0.0	-0.5	0.0
Arizona PSPRS Trust	100.0	4.0	6.7	-2.8	-2.7	-0.3	0.1

*Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total results shown may vary from the calculated return shown on the performance summary.

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects Relative to Policy Index 1 Year Ending December 31, 2022



Attribution Summary 1 Year Ending December 31, 2022

	Policy Weight (%)	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Interaction Effects (%)
U.S. Public Equity	24.0	-18.2	-19.2	1.0	0.3	-0.2	0.0
International Public Equity	16.0	-15.7	-16.6	0.9	0.1	0.1	0.0
Private Equity Buyouts & VC	18.5	-5.5	-18.4	12.9	1.7	0.3	-0.8
Real Estate	4.0	5.9	-18.4	24.3	1.6	-0.2	0.7
Real Assets	3.0	19.4	-18.4	37.8	1.5	-0.1	0.4
Core Bonds	2.0	-8.1	-13.0	4.9	0.2	0.0	0.1
Private Credit	17.0	4.5	-5.8	10.3	1.0	-0.4	-0.7
Diversifying Strategies	10.0	1.3	5.3	-4.0	-0.3	-0.1	0.0
Cash	5.5	1.3	1.2	0.1	0.0	0.4	0.0
Arizona PSPRS Trust	100.0	-6.6	-12.6	6.0	6.1	-0.1	-0.3

*Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total results shown may vary from the calculated return shown on the performance summary.

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects Relative to Policy Index 3 Years Ending December 31, 2022



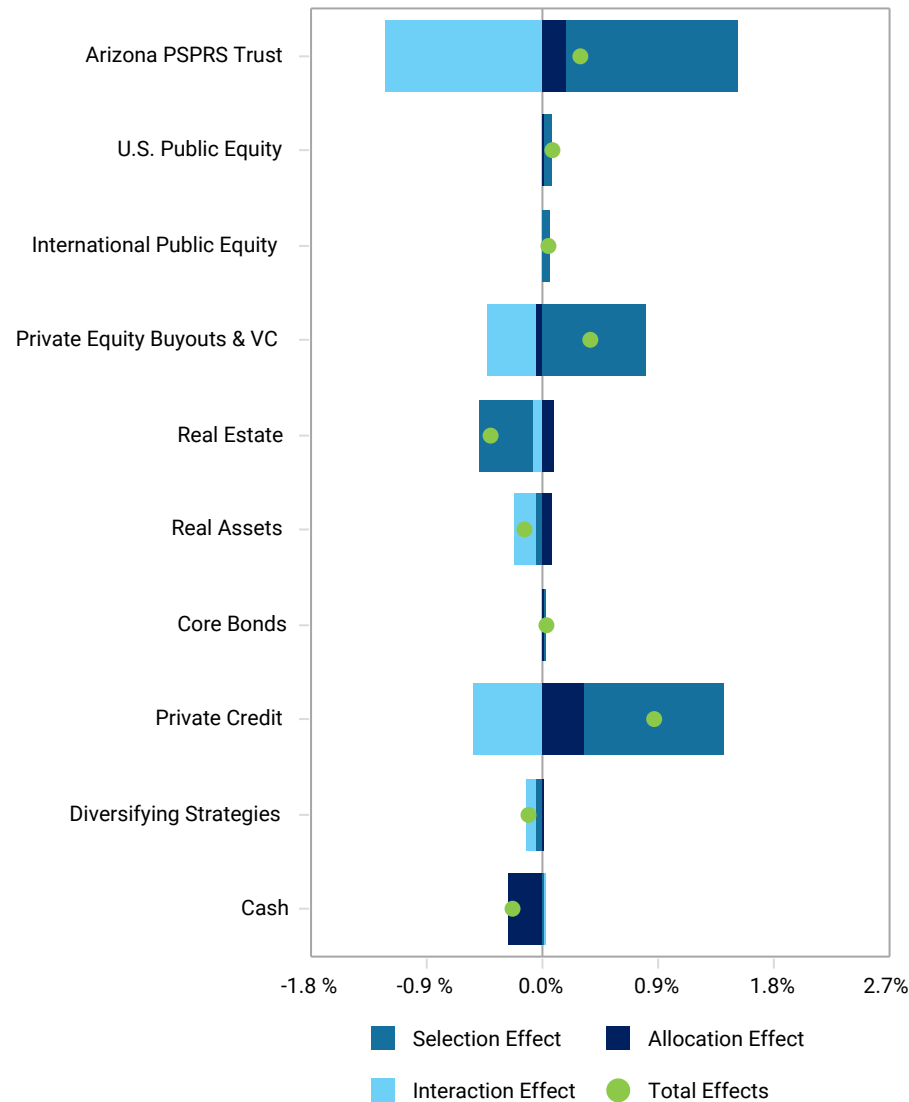
Attribution Summary 3 Years Ending December 31, 2022

	Policy Weight (%)	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Interaction Effects (%)
U.S. Public Equity	23.0	7.6	7.1	0.5	0.1	0.0	0.0
International Public Equity	16.0	0.3	0.2	0.1	0.0	0.0	0.0
Private Equity Buyouts & VC	17.8	17.5	8.1	9.4	1.0	-0.1	-0.7
Real Estate	4.3	6.8	7.9	-1.1	-0.2	0.1	-0.2
Real Assets	3.0	9.5	7.9	1.6	-0.1	0.1	-0.2
Core Bonds	2.2	-1.9	-2.7	0.8	0.0	0.0	0.0
Private Credit	20.0	8.4	1.3	7.2	0.8	0.4	-0.8
Diversifying Strategies	11.0	4.4	4.7	-0.2	-0.2	0.1	-0.1
Cash	2.7	0.9	0.7	0.2	0.0	-0.4	0.0
Arizona PSPRS Trust	100.0	6.1	4.8	1.3	1.5	0.1	-1.8

*Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total results shown may vary from the calculated return shown on the performance summary.

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects Relative to Policy Index 5 Years Ending December 31, 2022



Attribution Summary 5 Years Ending December 31, 2022

	Policy Weight (%)	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Interaction Effects (%)
U.S. Public Equity	20.6	9.1	8.8	0.4	0.1	0.0	0.0
International Public Equity	15.6	1.4	1.0	0.4	0.1	0.0	0.0
Private Equity Buyouts & VC	15.7	13.9	9.9	4.1	0.4	-0.1	-0.4
Real Estate	6.2	3.6	8.8	-5.2	-0.5	0.1	-0.1
Real Assets	4.8	6.7	8.0	-1.3	-0.2	0.1	-0.2
Core Bonds	3.1	0.6	-0.3	0.9	0.0	0.0	0.0
Private Credit	19.0	8.0	2.7	5.3	0.6	0.3	-0.5
Diversifying Strategies	12.6	4.9	5.1	-0.2	-0.1	0.0	-0.1
Cash	2.4	1.9	1.2	0.7	0.0	-0.3	0.0
Arizona PSPRS Trust	100.0	6.2	5.9	0.3	0.3	0.2	-1.2

*Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total results shown may vary from the calculated return shown on the performance summary.

TOTAL FUND RISK STATISTICS

1 Year Ending December 31, 2022						
	Anlzd Ret	Excess Return	Anlzd Std Dev	Tracking Error	Info Ratio	
U.S. Public Equity	-18.2 (56)	1.2 (56)	22.6 (34)	0.9 (1)	1.2 (33)	
<i>Russell 3000 Index</i>	-19.2 (61)	0.0	23.1 (44)	0.0	-	
eV All US Equity Median	-17.0	2.8	23.5	7.8	0.5	
Population	2,851	2,851	2,851	2,851	2,851	
International Public Equity	-15.7 (50)	1.1 (50)	20.6 (18)	1.1 (1)	0.9 (24)	
<i>MSCI AC World ex USA IMI (Net)</i>	-16.6 (54)	0.0	20.5 (17)	0.0	-	
eV All EAFE Equity Median	-15.8	0.9	22.6	6.5	0.2	
Population	401	401	401	401	401	
Diversifying Strategies	1.3 (2)	-4.6 (2)	11.0 (20)	11.1 (22)	-0.4 (--)	
<i>3-Month LIBOR + 4%</i>	6.2 (1)	0.0	0.4 (1)	0.0	-	
eV Global TAA Median	-14.2	-19.2	14.4	14.3	-1.4	
Population	147	147	147	147	147	
Core Bonds	-8.1 (42)	7.0 (42)	5.3 (31)	4.5 (44)	1.4 (48)	
<i>Fixed Income Blended Benchmark (PSPRS)</i>	-14.2 (84)	0.0	9.1 (69)	0.0	-	
eV All US Fixed Inc Median	-9.3	5.6	7.5	5.6	1.4	
Population	2,069	2,069	2,069	2,069	2,069	

*Fixed Income Blended Benchmark (PSPRS) composition July 2018 - present: 20% Bloomberg Global Agg ex-US and 80% Bloomberg US Agg. July 2012 - June 2018: 100% Bloomberg Global Agg. April 2009 - June 2012: 100% Bloomberg US Agg. July 2002 - March 2009: 100% Bloomberg US Government/Credit Composite

TOTAL FUND RISK STATISTICS

1 Year Ending December 31, 2022			
	Anlzd Ret	Excess Return	Anlzd Std Dev
Private Equity Buyouts & VC	-5.5 (94)	15.9 (94)	6.1 (62)
<i>Russell 3000 + 1%</i>	<i>-18.4 (100)</i>	<i>0.0</i>	<i>23.1 (100)</i>
InvMetrics Public DB Private Eq Median	1.8	24.8	5.2
Population	30	30	30
Real Assets	19.4 (3)	46.3 (3)	6.6 (38)
<i>Russell 3000 + 1%</i>	<i>-18.4 (96)</i>	<i>0.0</i>	<i>23.1 (100)</i>
InvMetrics Public DB Real Assets/Commodities Median	11.2	36.3	12.1
Population	17	17	17
Real Estate	5.9 (52)	29.7 (52)	6.4 (29)
<i>Russell 3000 + 1%</i>	<i>-18.4 (96)</i>	<i>0.0</i>	<i>23.1 (100)</i>
InvMetrics Public DB Real Estate Public & Private Median	5.9	29.8	7.6
Population	32	32	32
Private Credit	4.5 (1)	11.0 (1)	2.1 (1)
<i>50% BofAML US HY BB-B Constrained Ind/50% CSFB Fixed Income Arbitrage</i>	<i>-5.8 (7)</i>	<i>0.0</i>	<i>7.2 (9)</i>
eV Global Credit Fixed Inc Median	-15.1	-9.8	10.3
Population	77	77	77

TOTAL FUND RISK STATISTICS

3 Years Ending December 31, 2022						
	Anlzd Ret	Excess Return	Anlzd Std Dev	Tracking Error	Info Ratio	
U.S. Public Equity	7.6 (33)	0.5 (33)	21.3 (23)	0.9 (1)	0.4 (11)	
<i>Russell 3000 Index</i>	<i>7.1 (41)</i>	<i>0.0</i>	<i>21.8 (32)</i>	<i>0.0</i>	<i>-</i>	
eV All US Equity Median	6.4	-0.6	23.5	9.0	0.0	
Population	2,753	2,753	2,753	2,753	2,753	
International Public Equity	0.3 (62)	0.1 (62)	19.6 (14)	1.0 (1)	0.0 (70)	
<i>MSCI AC World ex USA IMI (Net)</i>	<i>0.2 (63)</i>	<i>0.0</i>	<i>19.9 (19)</i>	<i>0.0</i>	<i>-</i>	
eV All EAFE Equity Median	1.0	0.8	21.2	6.3	0.2	
Population	384	384	384	384	384	
Diversifying Strategies	4.4 (8)	-0.5 (8)	9.8 (14)	9.9 (14)	0.0 (14)	
<i>3-Month LIBOR + 4%</i>	<i>5.0 (6)</i>	<i>0.0</i>	<i>0.4 (1)</i>	<i>0.0</i>	<i>-</i>	
eV Global TAA Median	1.1	-3.7	13.6	13.6	-0.2	
Population	145	145	145	145	145	
Core Bonds	-1.9 (70)	1.5 (70)	5.6 (39)	3.9 (36)	0.4 (76)	
<i>Fixed Income Blended Benchmark (PSPRS)</i>	<i>-3.3 (92)</i>	<i>0.0</i>	<i>6.3 (53)</i>	<i>0.0</i>	<i>-</i>	
eV All US Fixed Inc Median	-0.8	2.6	6.2	4.8	0.6	
Population	2,013	2,013	2,013	2,013	2,013	

*Fixed Income Blended Benchmark (PSPRS) composition July 2018 - present: 20% Bloomberg Global Agg ex-US and 80% Bloomberg US Agg. July 2012 - June 2018: 100% Bloomberg Global Agg. April 2009 - June 2012: 100% Bloomberg US Agg. July 2002 - March 2009: 100% Bloomberg US Government/Credit Composite

TOTAL FUND RISK STATISTICS

3 Years Ending December 31, 2022			
	Anlzd Ret	Excess Return	Anlzd Std Dev
Private Equity Buyouts & VC	17.5 (61)	8.6 (61)	11.9 (32)
<i>Russell 3000 + 1%</i>	<i>8.1 (100)</i>	<i>0.0</i>	<i>21.8 (92)</i>
InvMetrics Public DB Private Eq Median	18.1	9.2	12.6
Population	29	29	29
Real Assets	9.5 (22)	1.3 (22)	8.8 (22)
<i>Russell 3000 + 1%</i>	<i>8.1 (41)</i>	<i>0.0</i>	<i>21.8 (85)</i>
InvMetrics Public DB Real Assets/Commodities Median	7.8	-0.3	13.1
Population	17	17	17
Real Estate	6.8 (75)	-1.2 (75)	6.9 (48)
<i>Russell 3000 + 1%</i>	<i>8.1 (53)</i>	<i>0.0</i>	<i>21.8 (96)</i>
InvMetrics Public DB Real Estate Public & Private Median	8.5	0.3	7.0
Population	32	32	32
Private Credit	8.4 (1)	7.1 (1)	4.5 (6)
<i>50% BofAML US HY BB-B Constrained Ind/50% CSFB Fixed Income Arbitrage</i>	<i>1.3 (3)</i>	<i>0.0</i>	<i>7.5 (11)</i>
eV Global Credit Fixed Inc Median	-2.9	-4.1	9.3
Population	67	67	67

TOTAL FUND RISK STATISTICS

5 Years Ending December 31, 2022					
	Anlzd Ret	Excess Return	Anlzd Std Dev	Tracking Error	Info Ratio
U.S. Public Equity	9.1 (25)	0.3 (25)	18.9 (24)	0.8 (1)	0.3 (10)
<i>Russell 3000 Index</i>	8.8 (30)	0.0	19.2 (31)	0.0	-
eV All US Equity Median	7.4	-1.3	20.8	7.9	-0.1
Population	2,609	2,609	2,609	2,609	2,609
International Public Equity	1.4 (48)	0.6 (48)	17.2 (16)	0.9 (1)	0.6 (5)
<i>MSCI AC World ex USA IMI (Net)</i>	0.8 (62)	0.0	17.5 (22)	0.0	-
eV All EAFE Equity Median	1.4	0.5	18.4	5.5	0.1
Population	360	360	360	360	360
Diversifying Strategies	4.9 (8)	-0.3 (8)	7.9 (11)	7.9 (12)	0.0 (14)
<i>3-Month LIBOR + 4%</i>	5.1 (6)	0.0	0.3 (1)	0.0	-
eV Global TAA Median	2.3	-2.7	11.6	11.6	-0.2
Population	141	141	141	141	141
Core Bonds	0.6 (67)	1.2 (67)	5.0 (45)	3.4 (34)	0.3 (62)
<i>Fixed Income Blended Benchmark (PSPRS)</i>	-0.6 (95)	0.0	5.5 (56)	0.0	-
eV All US Fixed Inc Median	0.9	1.5	5.2	4.2	0.4
Population	1,913	1,913	1,913	1,913	1,913
	13.9 (71)	3.7 (71)	9.9 (33)	20.1 (7)	0.1 (67)

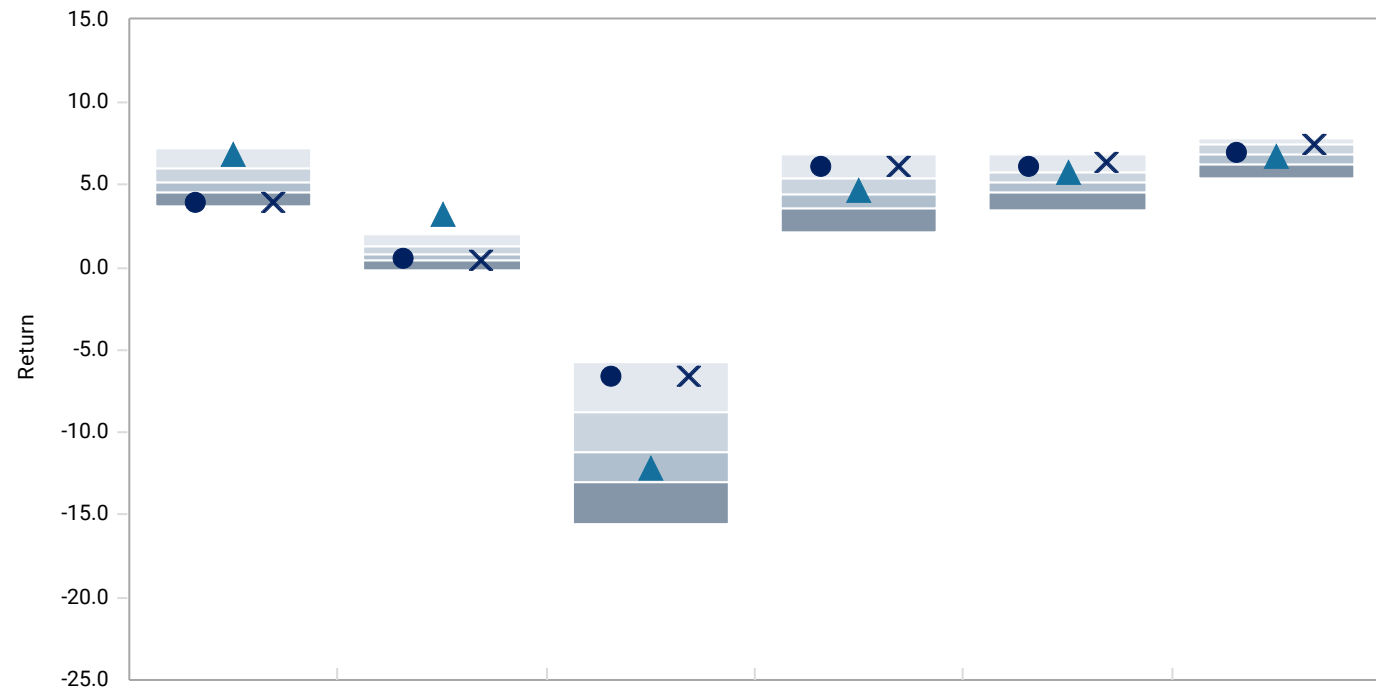
*Fixed Income Blended Benchmark (PSPRS) composition July 2018 - present: 20% Bloomberg Global Agg ex-US and 80% Bloomberg US Agg. July 2012 - June 2018: 100% Bloomberg Global Agg. April 2009 - June 2012: 100% Bloomberg US Agg. July 2002 - March 2009: 100% Bloomberg US Government/Credit Composite

TOTAL FUND RISK STATISTICS

5 Years Ending December 31, 2022			
	Anlzd Ret	Excess Return	Anlzd Std Dev
Private Equity Buyouts & VC	13.9 (71)	3.7 (71)	9.9 (33)
<i>Russell 3000 + 1%</i>	<i>9.9 (97)</i>	<i>0.0</i>	<i>19.2 (96)</i>
InvMetrics Public DB Private Eq Median	15.7	5.3	10.5
Population	28	28	28
Real Assets	6.7 (37)	-2.9 (37)	7.3 (20)
<i>Russell 3000 + 1%</i>	<i>9.9 (6)</i>	<i>0.0</i>	<i>19.2 (91)</i>
InvMetrics Public DB Real Assets/Commodities Median	4.6	-4.8	10.0
Population	15	15	15
Real Estate	3.6 (94)	-5.7 (94)	7.2 (80)
<i>Russell 3000 + 1%</i>	<i>9.9 (6)</i>	<i>0.0</i>	<i>19.2 (100)</i>
InvMetrics Public DB Real Estate Public & Private Median	7.9	-1.8	5.8
Population	31	31	31
Private Credit	8.0 (1)	5.2 (1)	3.7 (4)
<i>50% BofAML US HY BB-B Constrained Ind/50% CSFB Fixed Income Arbitrage</i>	<i>2.7 (1)</i>	<i>0.0</i>	<i>6.1 (7)</i>
eV Global Credit Fixed Inc Median	0.2	-2.5	7.9
Population	58	58	58

RETURN SUMMARY VS. PEER UNIVERSE

Arizona PSPRS Trust vs. InvMetrics Public DB > \$1 Billion



	QTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
● Arizona PSPRS Trust	4.0 (90)	0.6 (66)	-6.6 (11)	6.1 (14)	6.2 (19)	7.0 (46)
▲ Policy Index	6.9 (9)	3.3 (1)	-12.1 (63)	4.7 (40)	5.8 (25)	6.8 (56)
× PSPRS ex-Workout Real Estate Portfolio	4.0 (91)	0.5 (76)	-6.6 (11)	6.2 (11)	6.4 (13)	7.5 (29)
5th Percentile	7.3	2.1	-5.7	6.9	6.8	7.9
1st Quartile	6.0	1.3	-8.8	5.5	5.8	7.5
Median	5.1	0.9	-11.2	4.4	5.2	6.9
3rd Quartile	4.6	0.5	-13.0	3.6	4.6	6.3
95th Percentile	3.7	-0.1	-15.5	2.1	3.5	5.5

Population

68

68

68

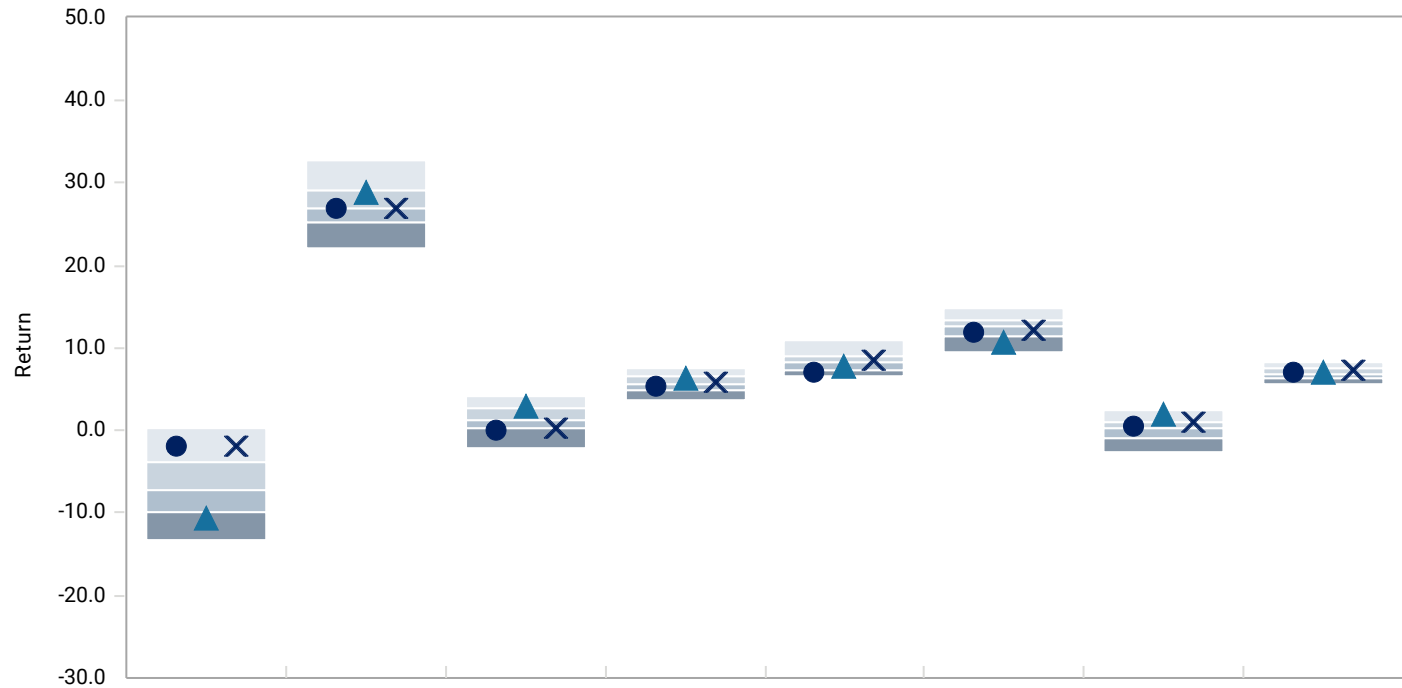
66

65

62

RETURN SUMMARY VS. PEER UNIVERSE

Arizona PSPRS Trust vs. InvMetrics Public DB > \$1 Billion



	Fiscal 2022	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	7 Yrs (%)
● Arizona PSPRS Trust	-1.9 (14)	27.1 (48)	0.0 (79)	5.5 (57)	7.1 (86)	11.9 (67)	0.6 (40)	7.1 (46)
▲ Policy Index	-10.5 (80)	28.9 (28)	3.0 (21)	6.3 (28)	7.7 (68)	10.8 (85)	2.0 (7)	7.0 (46)
× PSPRS ex-Workout Real Estate Portfolio	-1.8 (13)	27.1 (48)	0.2 (77)	5.9 (45)	8.4 (42)	12.1 (61)	1.1 (20)	7.4 (29)
5th Percentile	0.2	32.9	4.2	7.6	10.9	14.8	2.6	8.2
1st Quartile	-3.9	29.1	2.8	6.5	9.1	13.5	1.0	7.5
Median	-7.2	27.0	1.3	5.7	8.2	12.6	0.2	7.0
3rd Quartile	-10.0	25.3	0.3	4.8	7.4	11.4	-0.9	6.4
95th Percentile	-13.3	22.2	-2.1	3.7	6.7	9.6	-2.5	5.7

Population

108

146

134

108

86

83

79

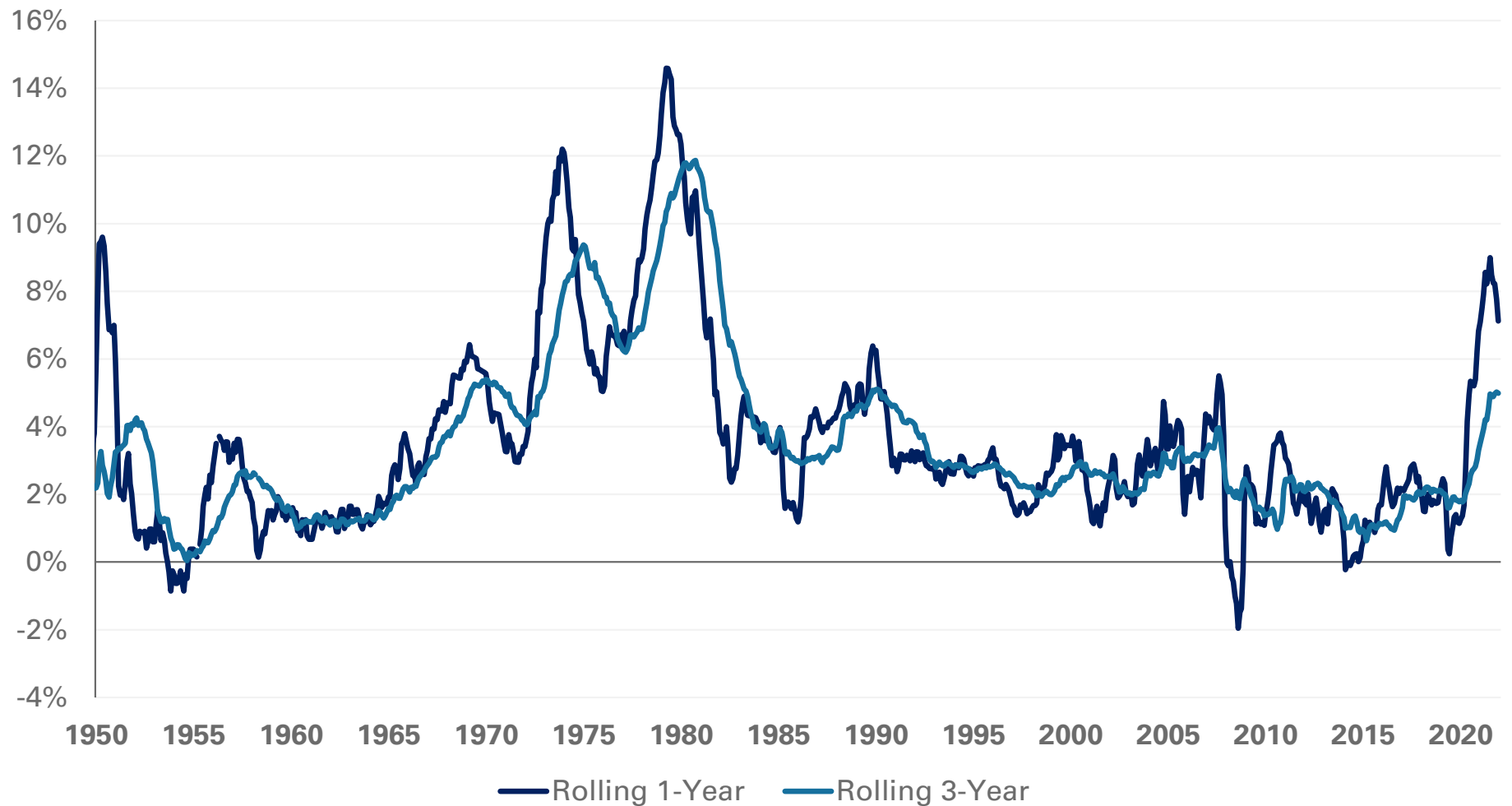
65



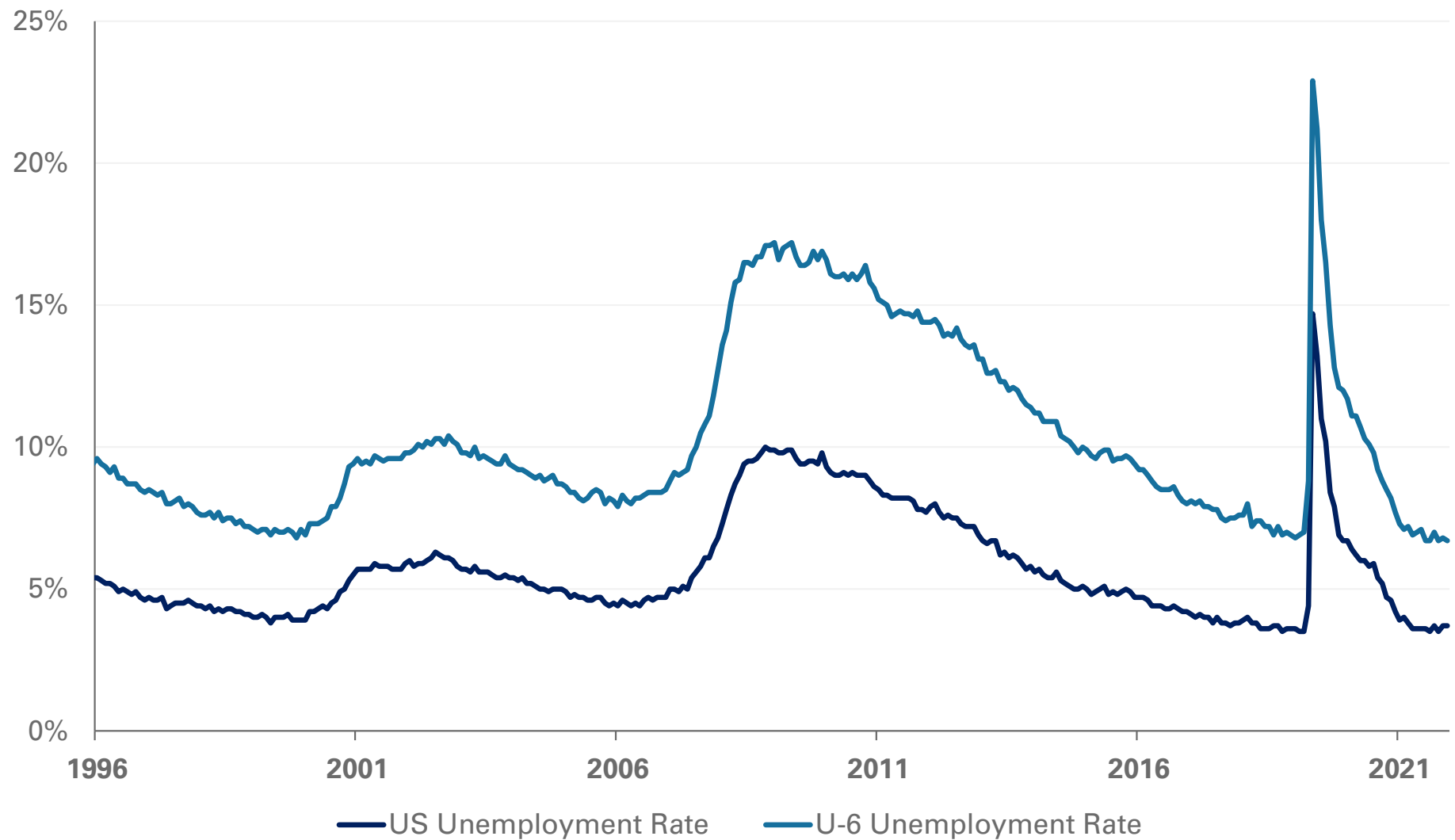
MACRO

INFLATION

U.S. CONSUMER PRICE INDEX

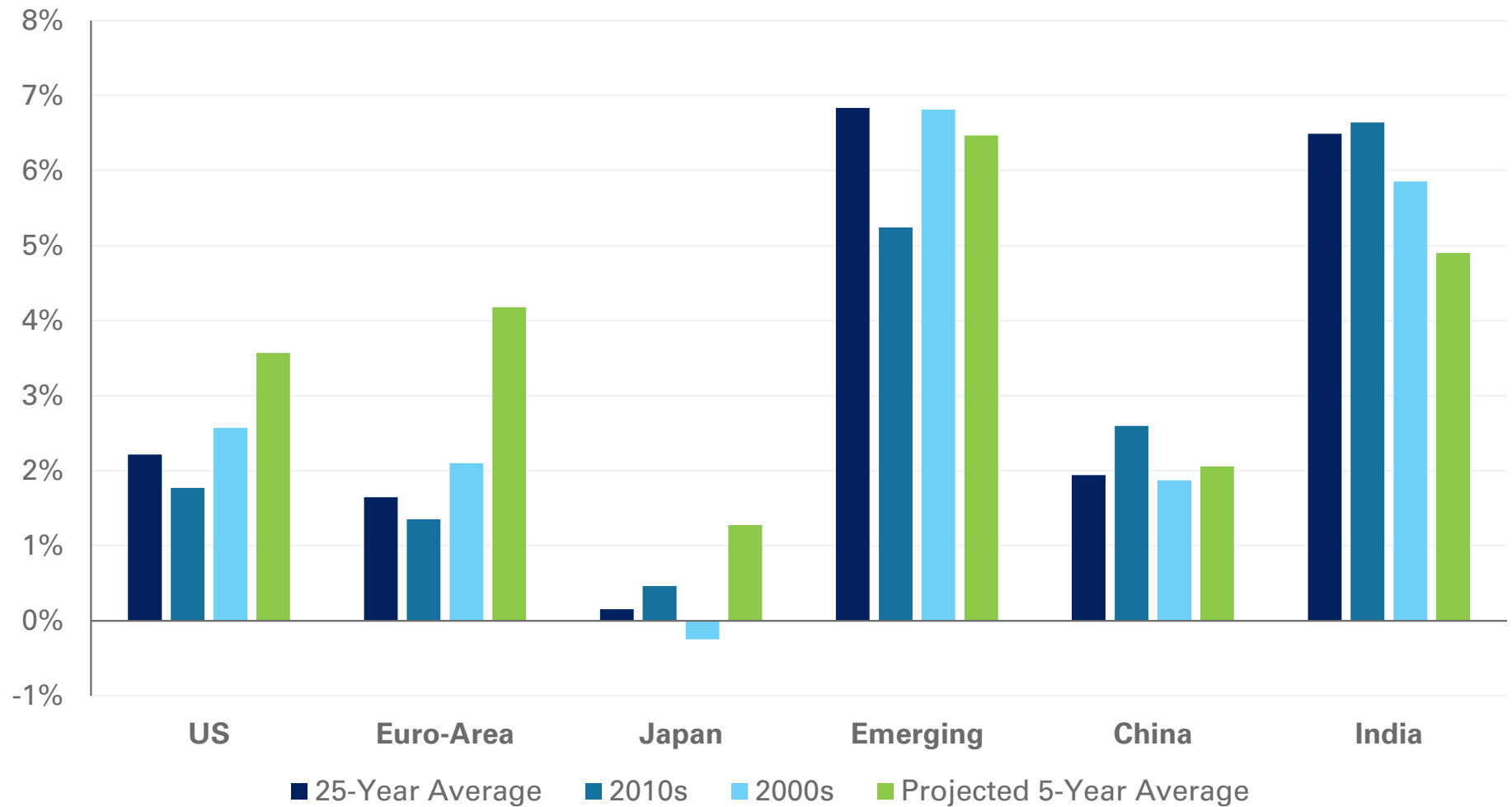


U.S. UNEMPLOYMENT RATES

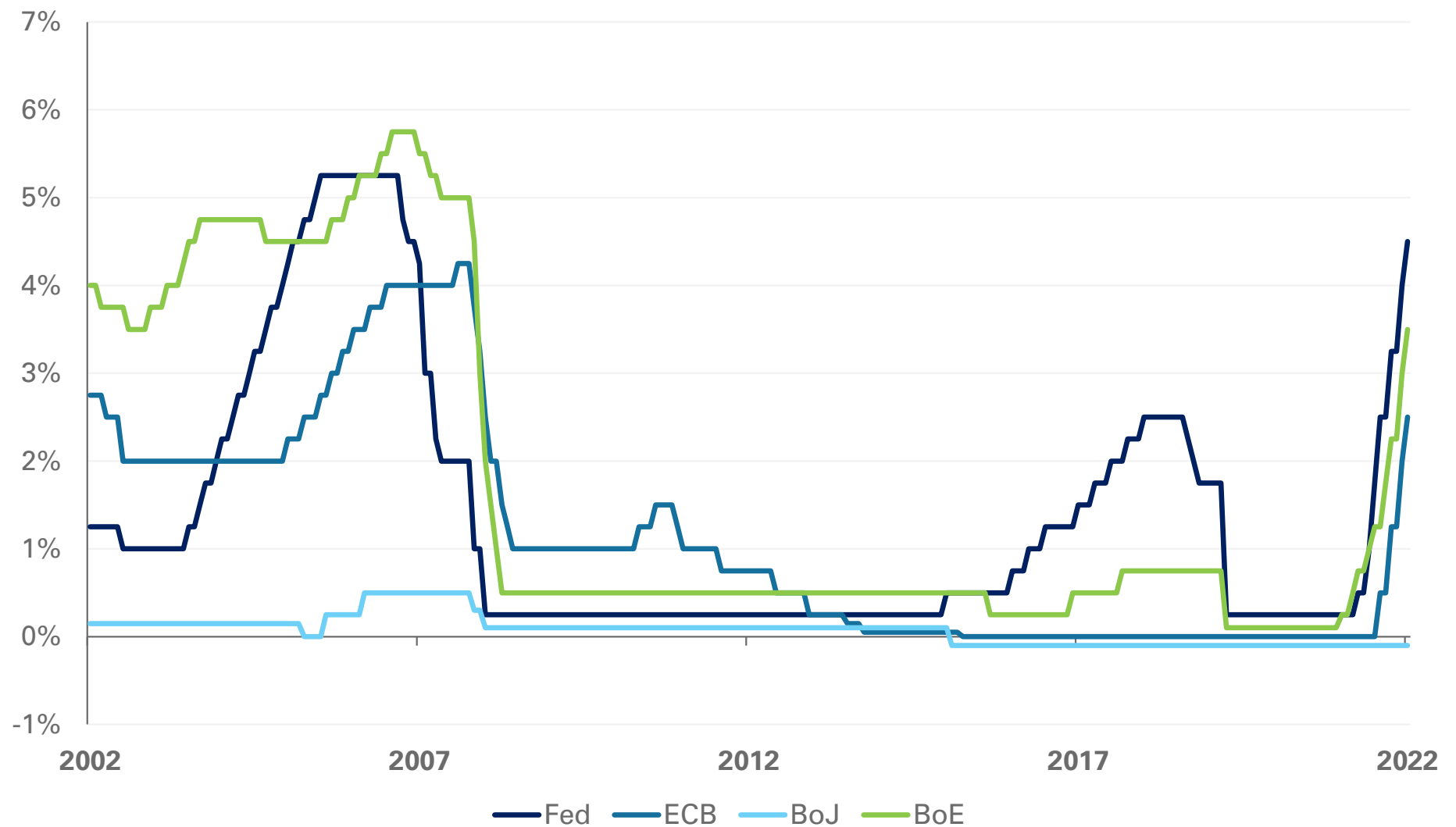


HISTORICAL INFLATION

IMF PROJECTIONS

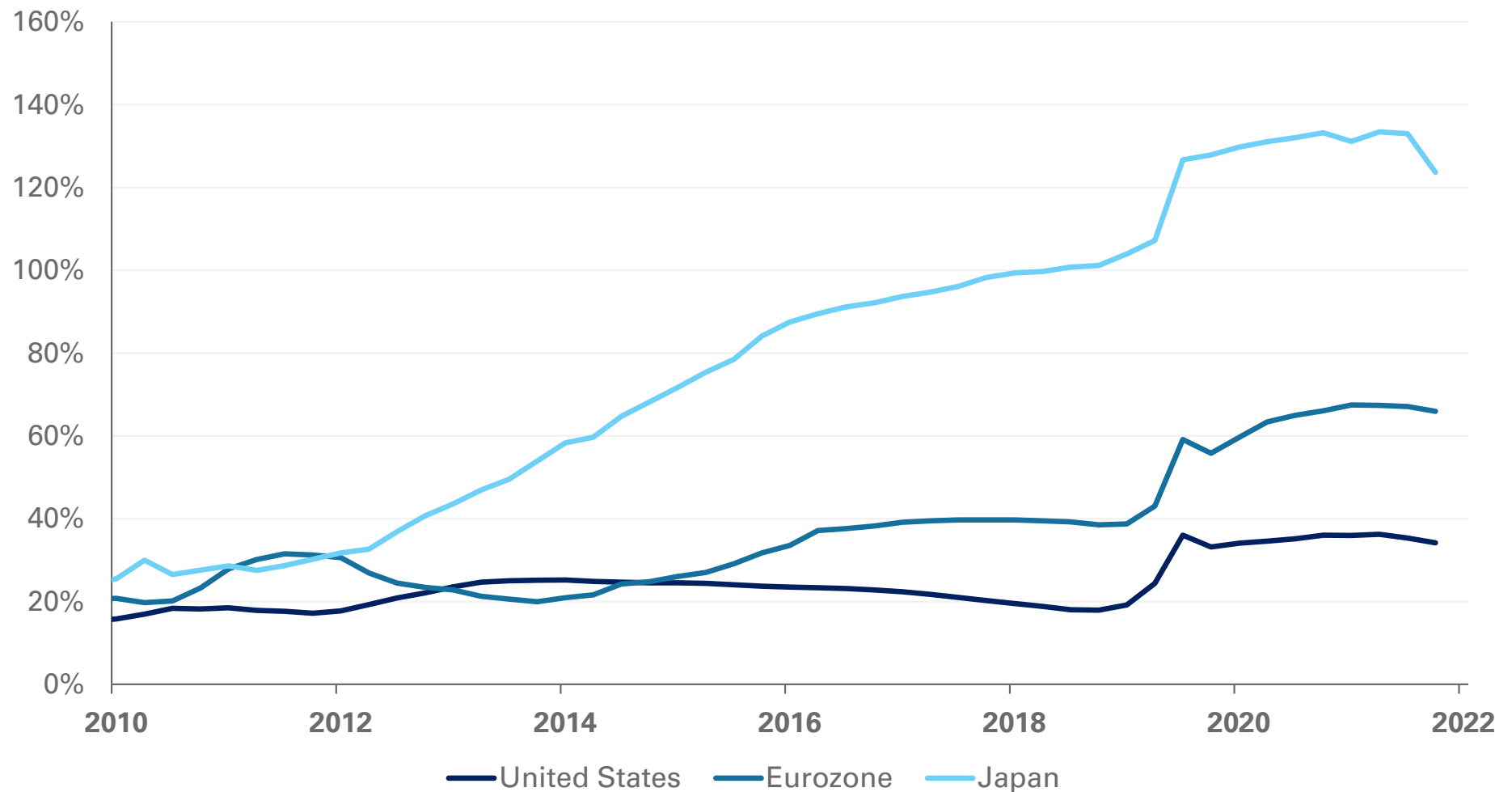


CENTRAL BANK POLICY RATES



CENTRAL BANK BALANCE SHEETS

AS A PERCENTAGE OF GDP



CURRENCIES

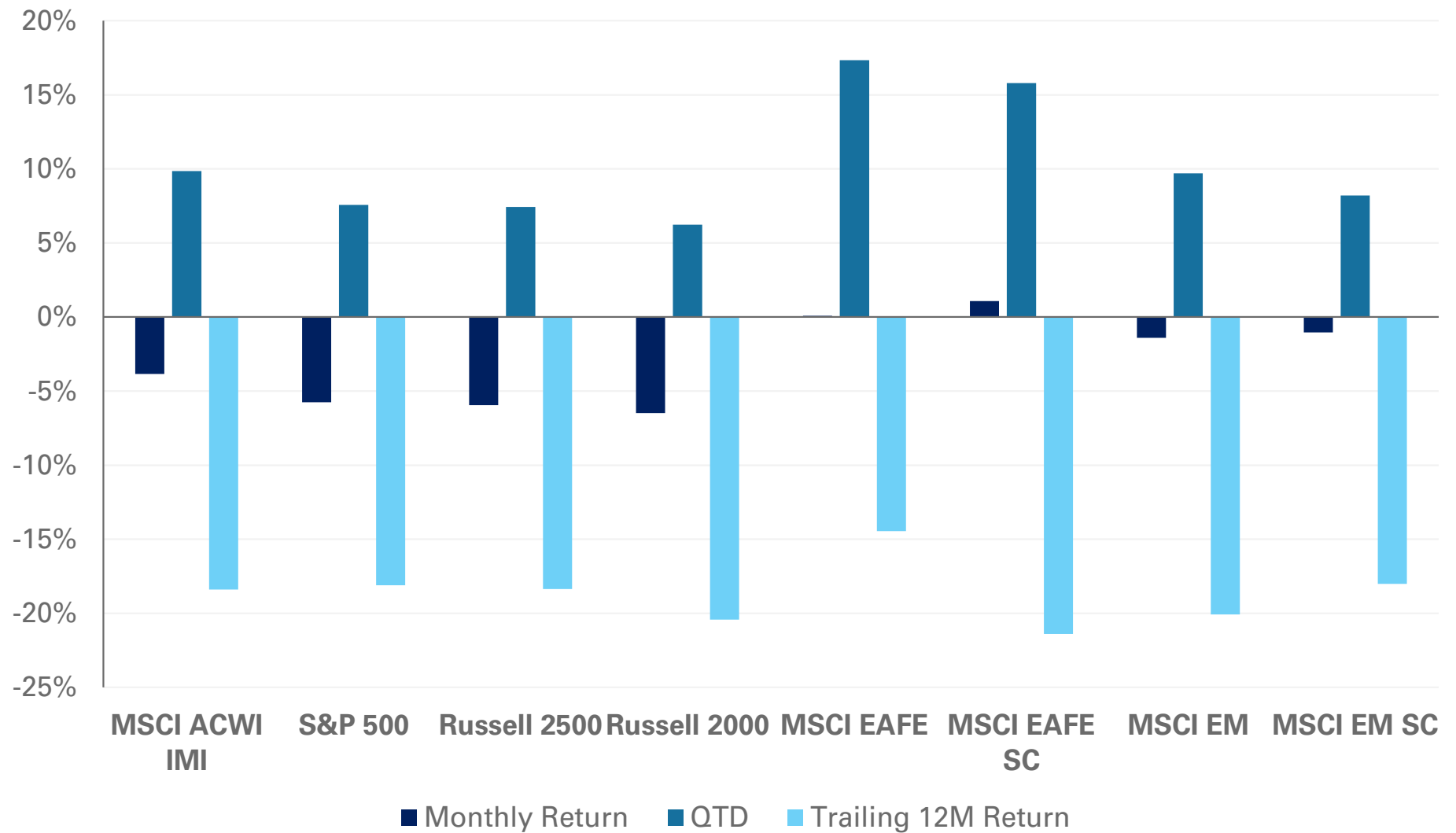
RELATIVE TO THE U.S. DOLLAR

Currencies	Spot	1 Month	QTD	1 Year
Euro	1.07	3.7%	8.9%	-6.2%
British Pound	1.20	1.0%	7.8%	-11.2%
Japanese Yen	131.95	5.8%	9.7%	-12.7%
Swiss Franc	0.93	3.0%	6.4%	-1.5%
Australian Dollar	0.68	1.3%	5.5%	-6.7%
New Zealand Dollar	1.58	1.8%	11.8%	-7.6%
Canadian Dollar	1.35	0.1%	1.4%	-6.8%
Chinese Yuan	6.95	2.8%	2.0%	-8.3%
Taiwanese Dollar	30.74	0.6%	3.3%	-10.0%
Korean Won	1265	4.3%	13.1%	-6.0%
Vietnamese Dong	23575	4.5%	1.2%	-3.3%
Thai Baht	34.64	1.8%	8.9%	-3.6%
Philippines Peso	55.73	1.5%	5.2%	-8.5%
Indian Rupee	82.73	-1.6%	-1.7%	-10.1%
Russian Ruble	73.00	-16.6%	-16.3%	2.7%
Mexican Peso	19.49	-0.6%	3.2%	5.0%
Brazilian Real	5.28	-0.4%	2.4%	5.5%
Chilean Peso	0.02	6.0%	14.5%	12.6%
Argentine Peso	177.11	-5.6%	-16.8%	-42.0%
South African Rand	17.02	-0.1%	5.6%	-6.2%

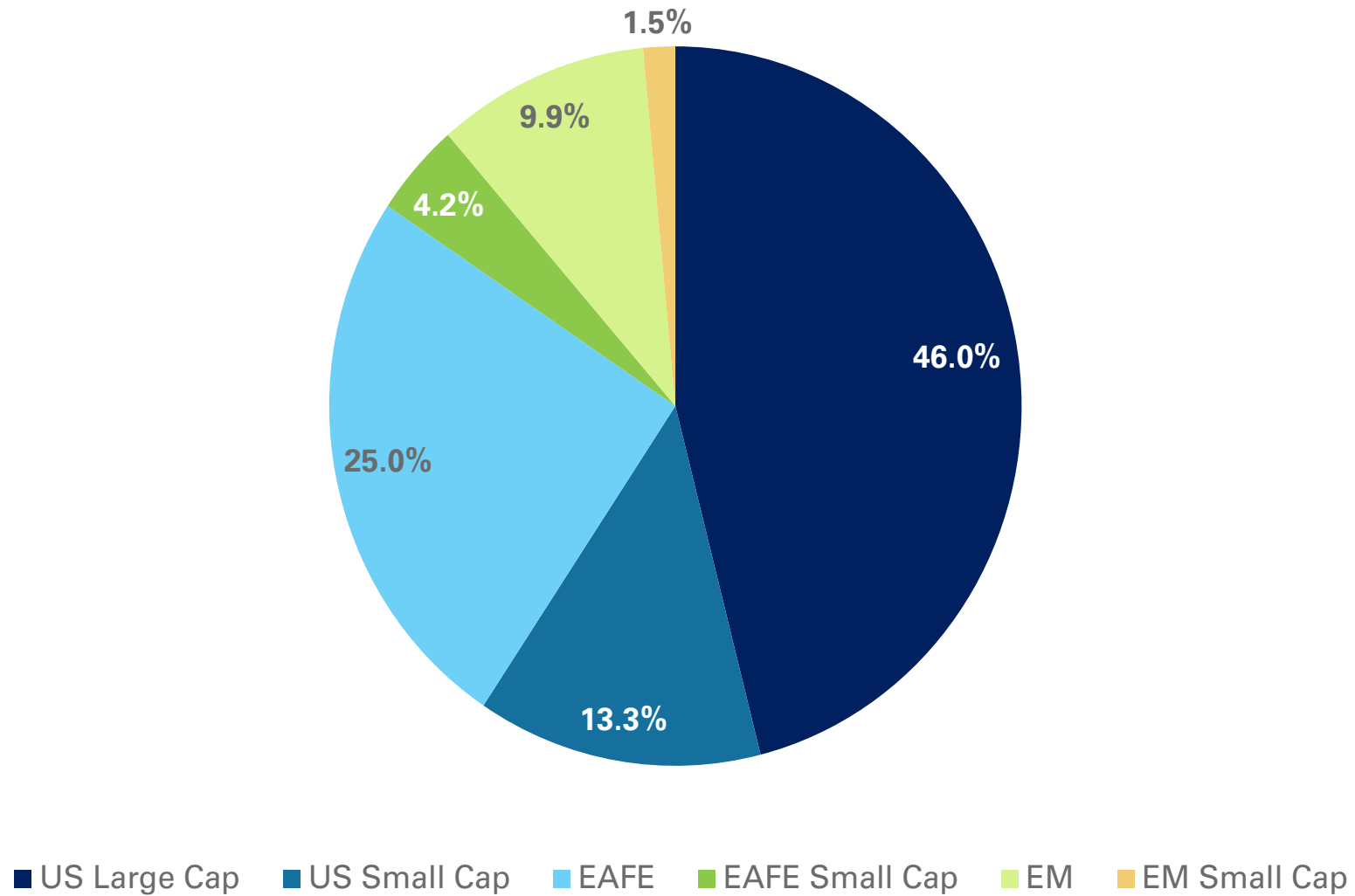


EQUITY

EQUITY INDEX PERFORMANCE

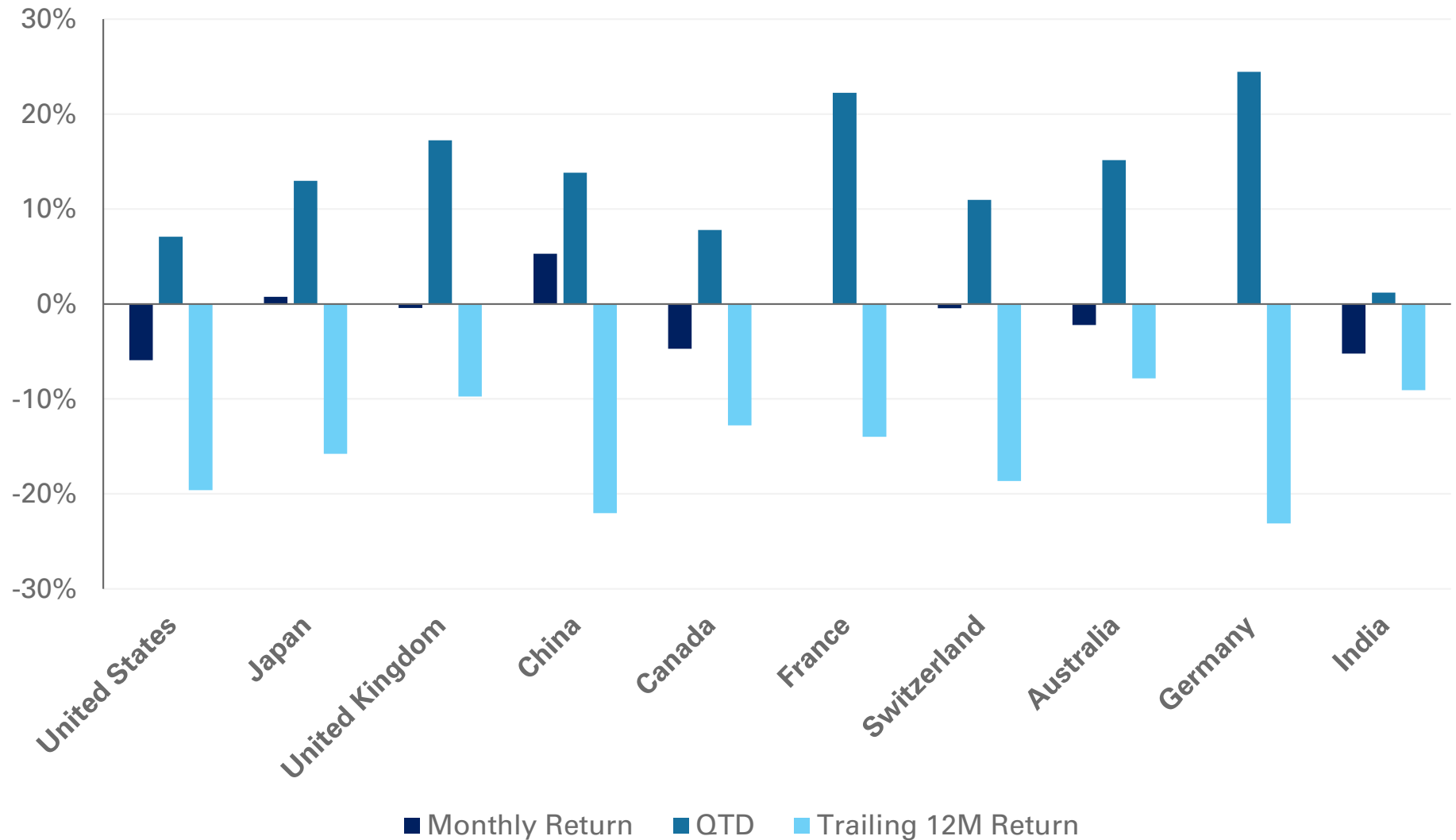


MSCI ACWI IMI WEIGHTS

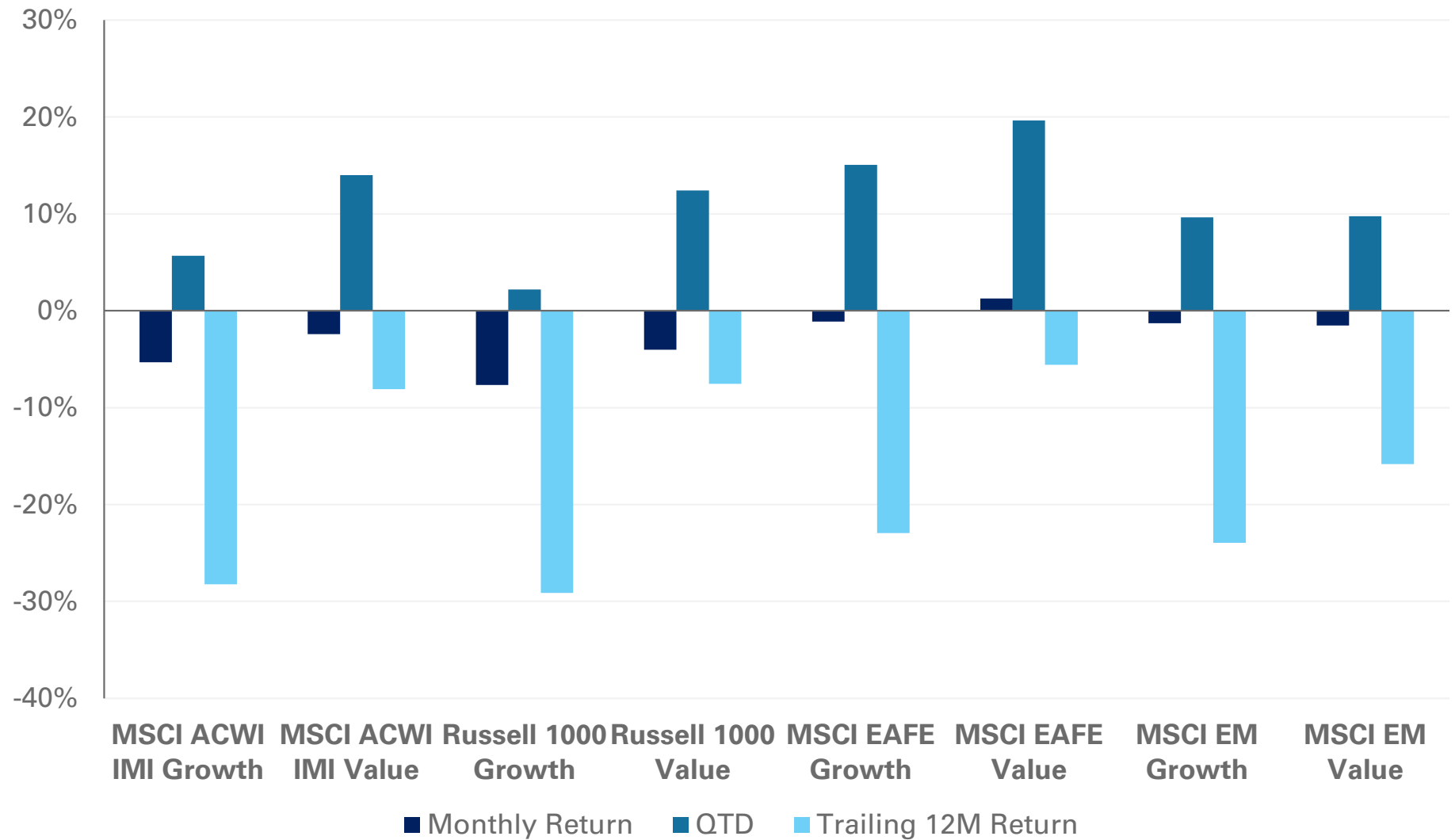


EQUITY INDEX PERFORMANCE

TOP 10 COUNTRIES BY MARKET CAP IN MSCI ACWI IMI INDEX



STYLE INDEX PERFORMANCE

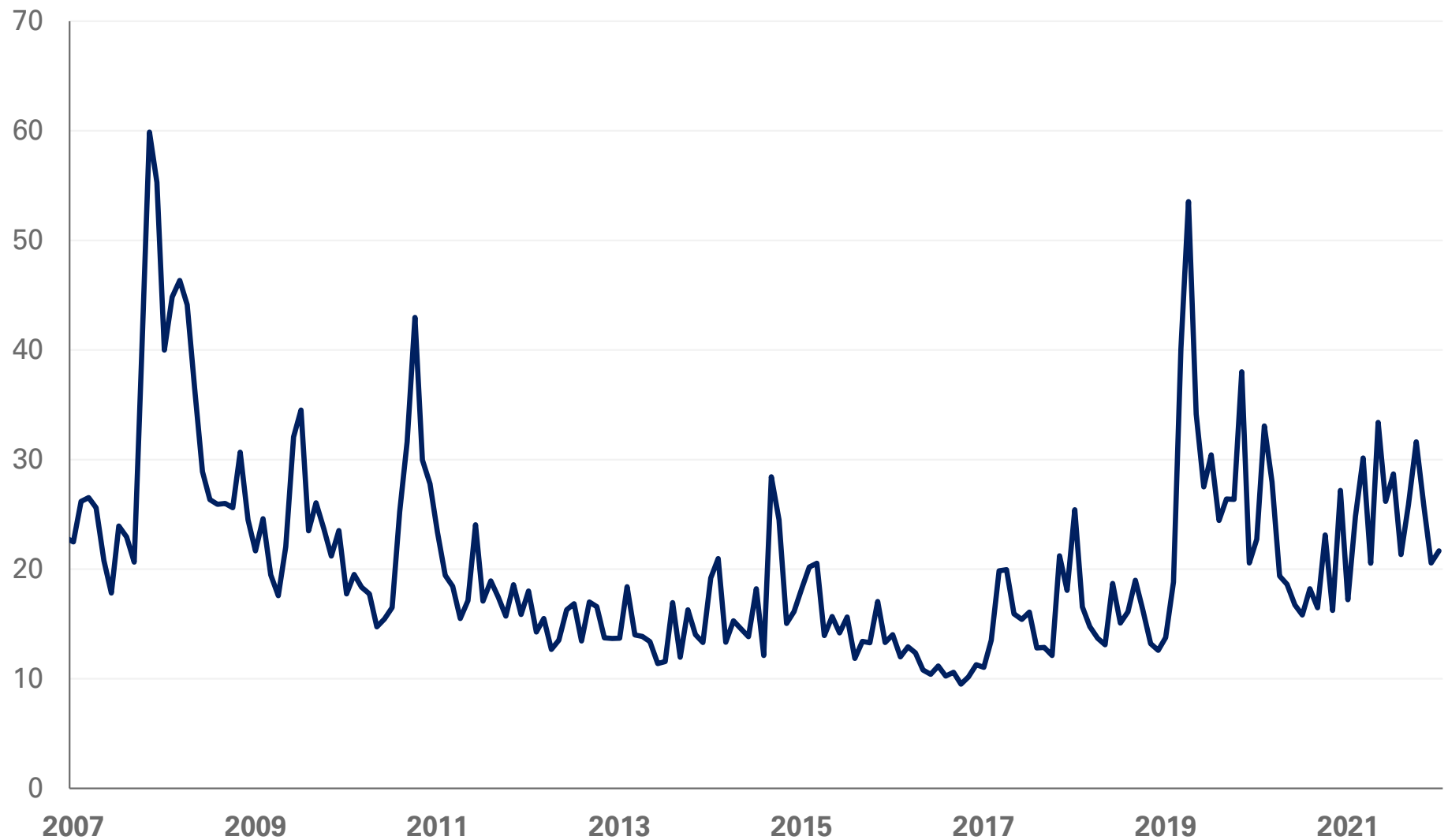


SECTOR INDEX PERFORMANCE

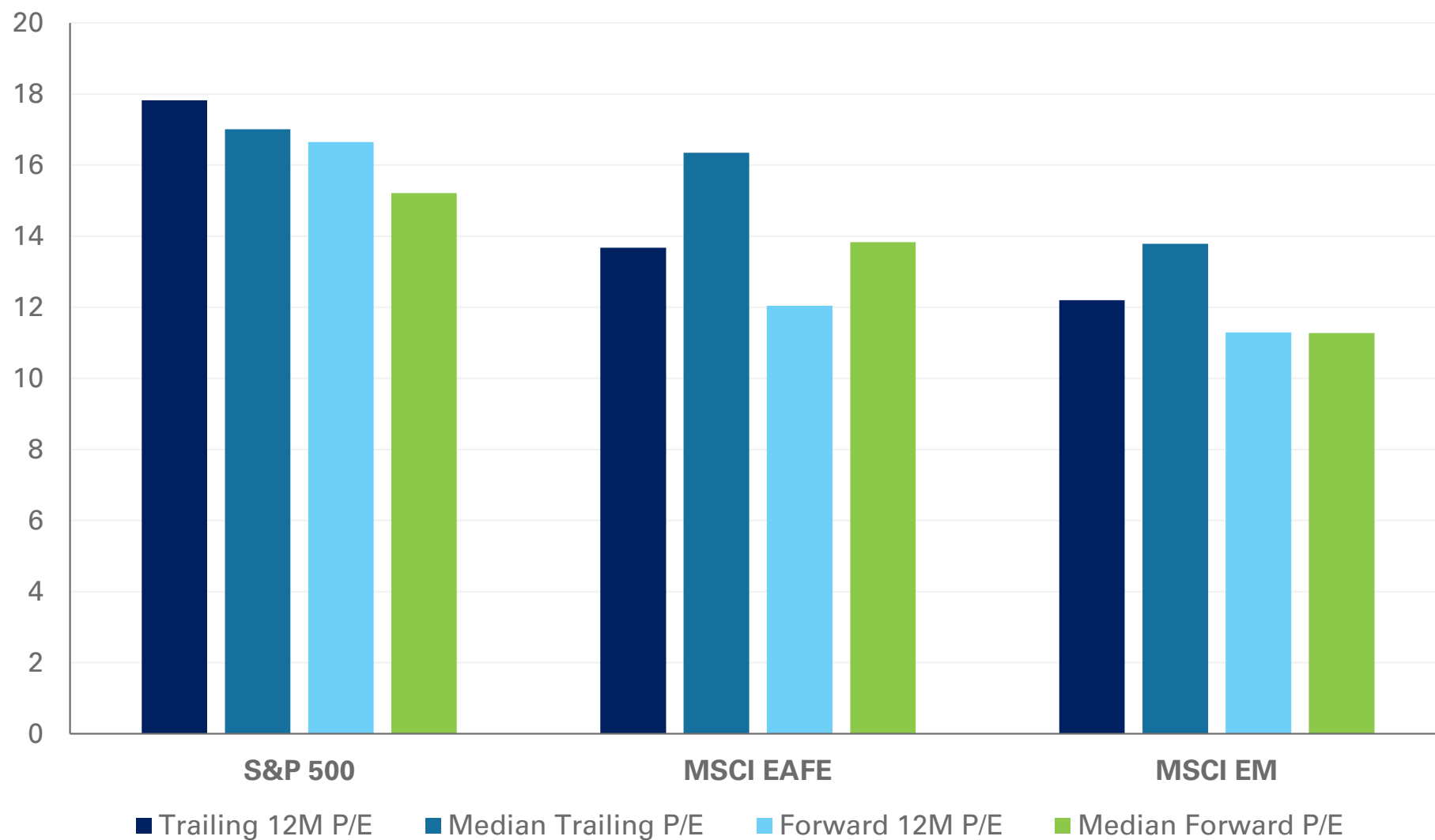
	Monthly Return	QTD	Trailing 12M Return	Index Weight
MSCI ACWI IMI	-3.8%	9.8%	-18.4%	100.0%
Communication Services	-4.4%	2.7%	-35.3%	6.3%
Consumer Discretionary	-6.7%	0.8%	-31.0%	10.7%
Consumer Staples	-1.4%	11.3%	-6.8%	7.4%
Energy	-3.9%	17.3%	34.1%	5.5%
Financials	-2.6%	14.0%	-10.1%	15.0%
Health Care	-1.3%	12.1%	-8.7%	13.0%
Industrials	-2.1%	16.7%	-13.6%	11.2%
Information Technology	-7.6%	6.0%	-30.9%	19.0%
Materials	-2.6%	15.7%	-12.1%	5.4%
Real Estate	-3.1%	6.4%	-25.5%	3.3%
Utilities	-0.2%	10.2%	-4.7%	3.2%

	Monthly Return	QTD	Trailing 12M Return	Index Weight
S&P 500	-5.8%	7.6%	-18.1%	100.0%
Communication Services	-7.8%	-1.4%	-39.9%	7.3%
Consumer Discretionary	-11.3%	-10.2%	-37.0%	9.8%
Consumer Staples	-2.8%	12.7%	-0.6%	7.2%
Energy	-2.9%	22.8%	65.7%	5.2%
Financials	-5.2%	13.6%	-10.5%	11.7%
Health Care	-1.9%	12.8%	-2.0%	15.8%
Industrials	-3.0%	19.2%	-5.5%	8.7%
Information Technology	-8.4%	4.7%	-28.2%	25.7%
Materials	-5.6%	15.0%	-12.3%	2.7%
Real Estate	-4.8%	3.8%	-26.1%	2.7%
Utilities	-0.5%	8.6%	1.6%	3.2%

EQUITY VOLATILITY INDEX (VIX)



GLOBAL EQUITY VALUATIONS

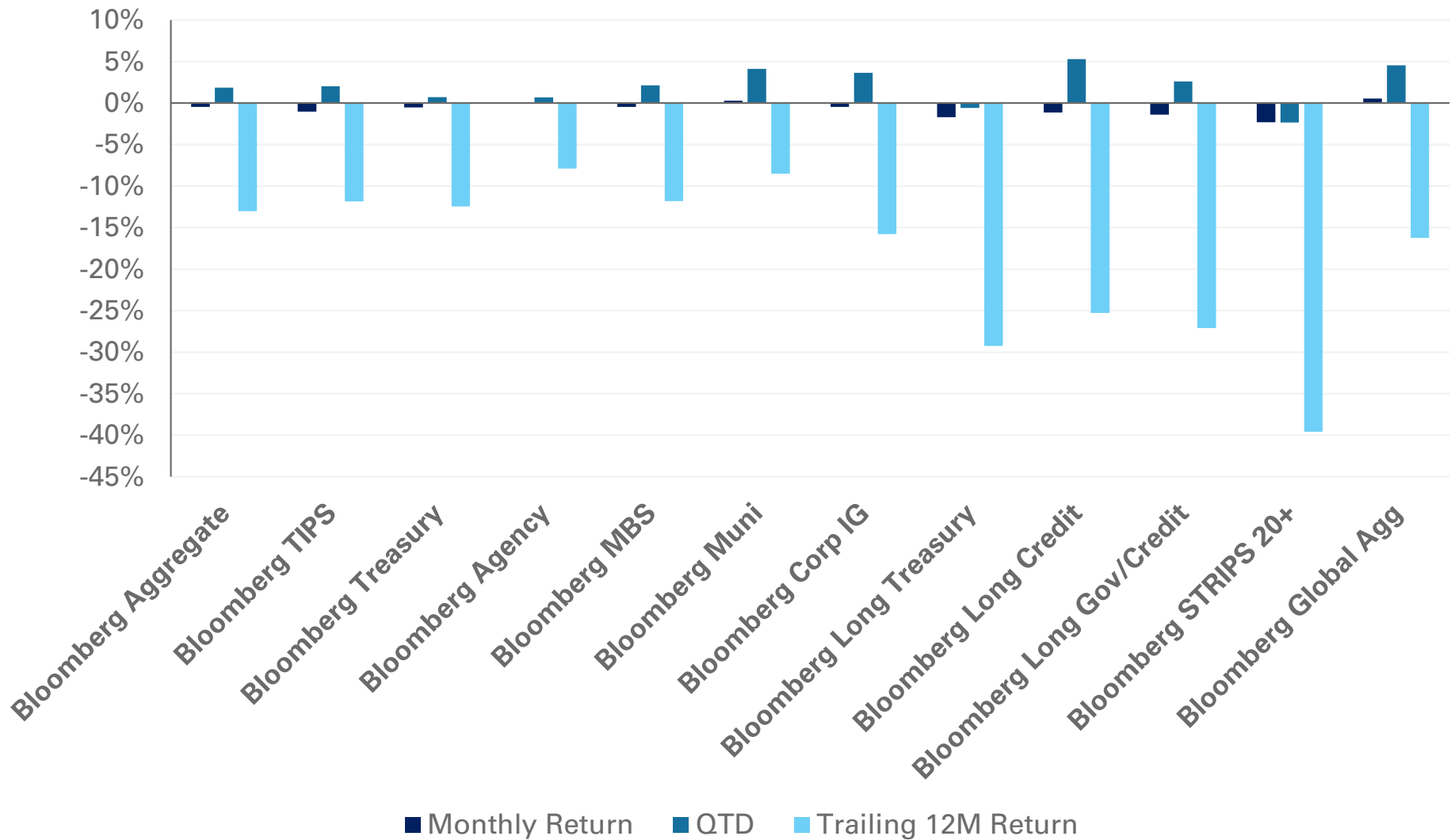




SAFE-HAVEN FIXED INCOME



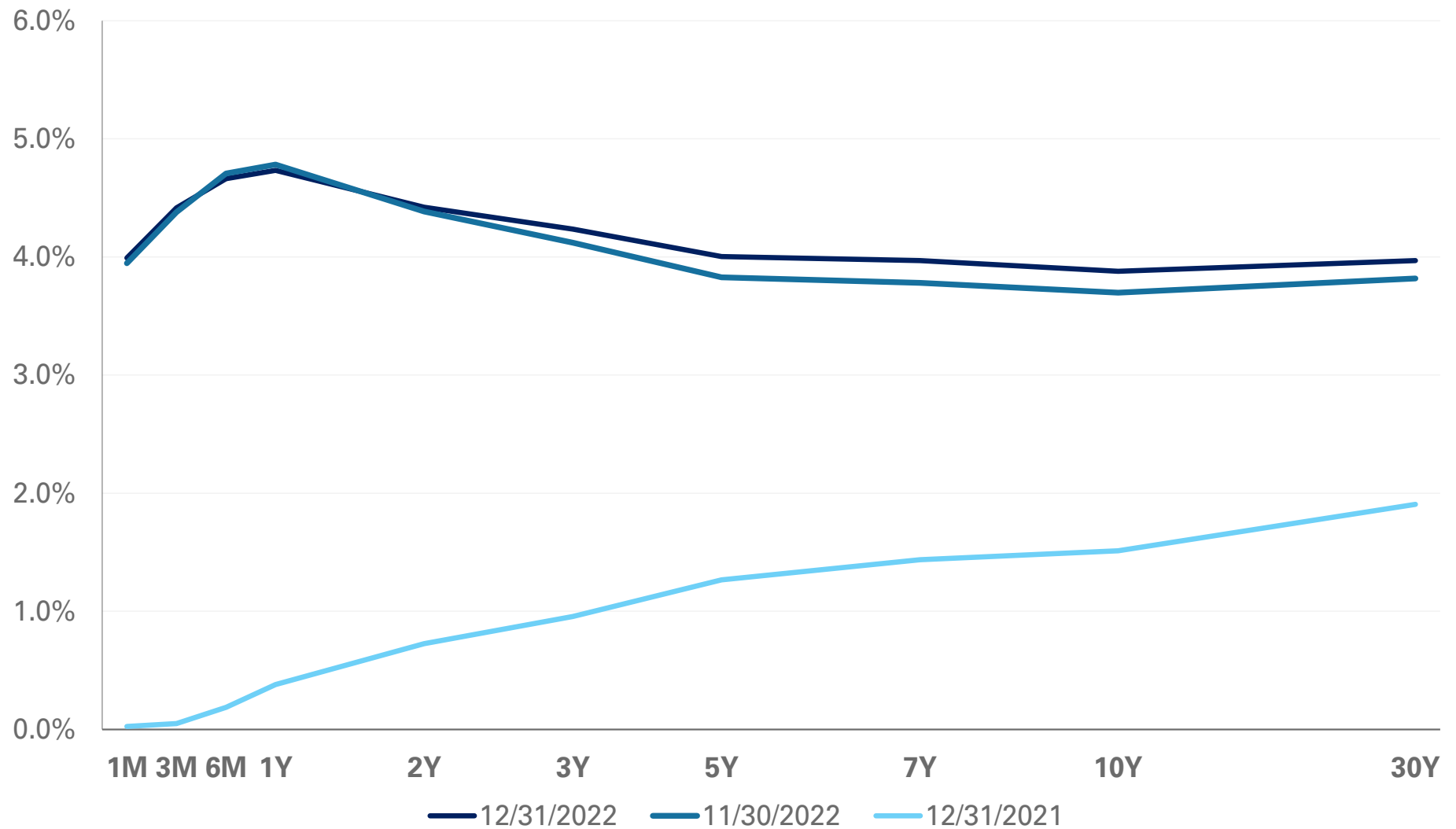
SAFE-HAVEN FIXED INCOME PERFORMANCE



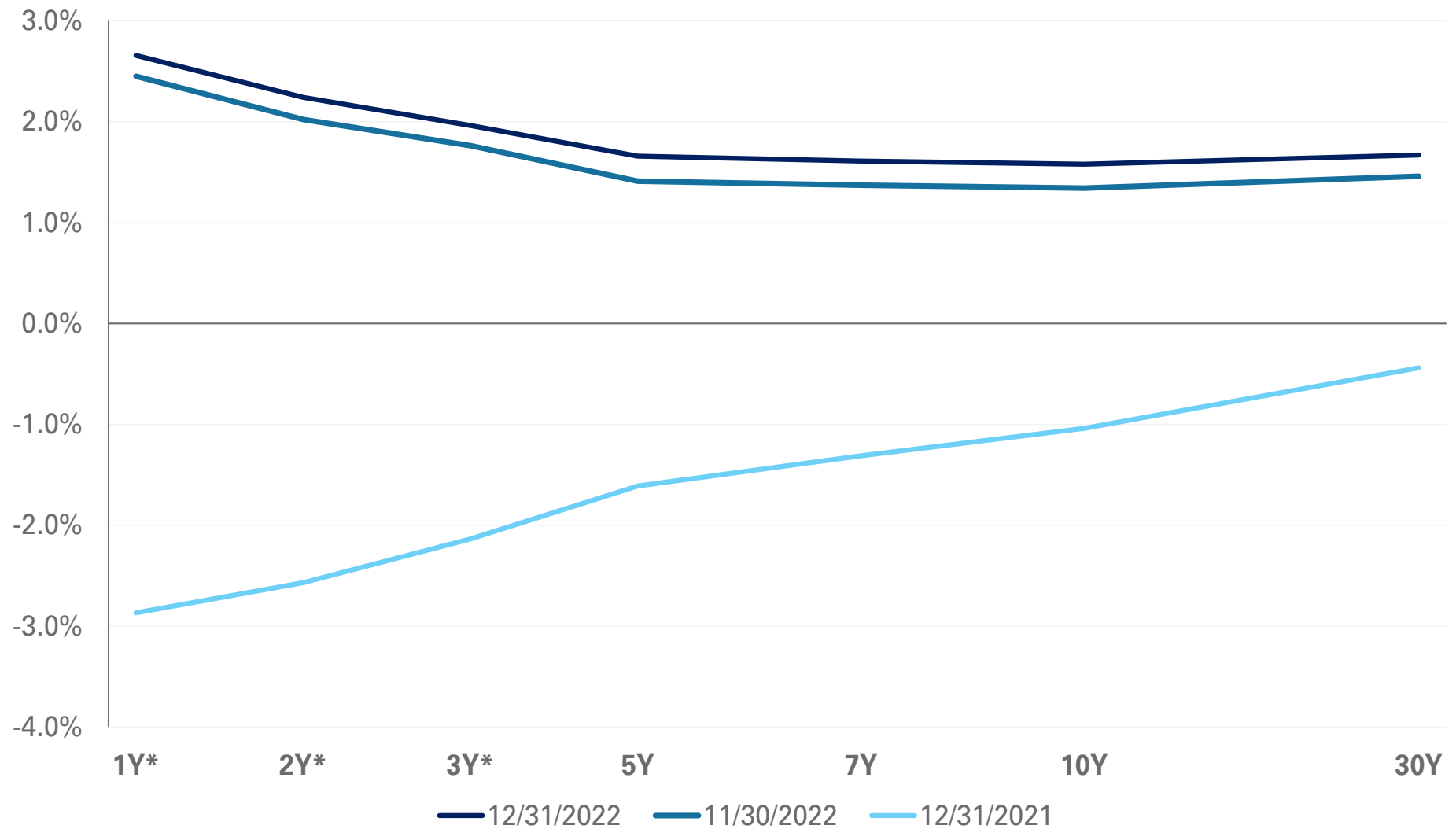
FIXED INCOME CHARACTERISTICS

	Yield to Worst	Spread (bps)	Duration (Years)
Bloomberg Aggregate	4.68%	51	6.2
Bloomberg TIPS	4.38%	-	5.4
Bloomberg Treasury	4.18%	-	6.1
Bloomberg Agency	4.58%	26	3.4
Bloomberg MBS	4.71%	51	5.8
Bloomberg Muni	3.55%	-	6.2
Bloomberg Corp IG	5.42%	130	7.1
Bloomberg Long Treasury	4.08%	-	16.2
Bloomberg Long Credit	5.59%	157	12.8
Bloomberg Long Gov/Credit	4.91%	87	14.3
Bloomberg STRIPS 20+	4.06%	-	25.0
Bloomberg Global Agg	3.73%	51	6.7

US TREASURY YIELD CURVE



US TREASURY REAL YIELD CURVE



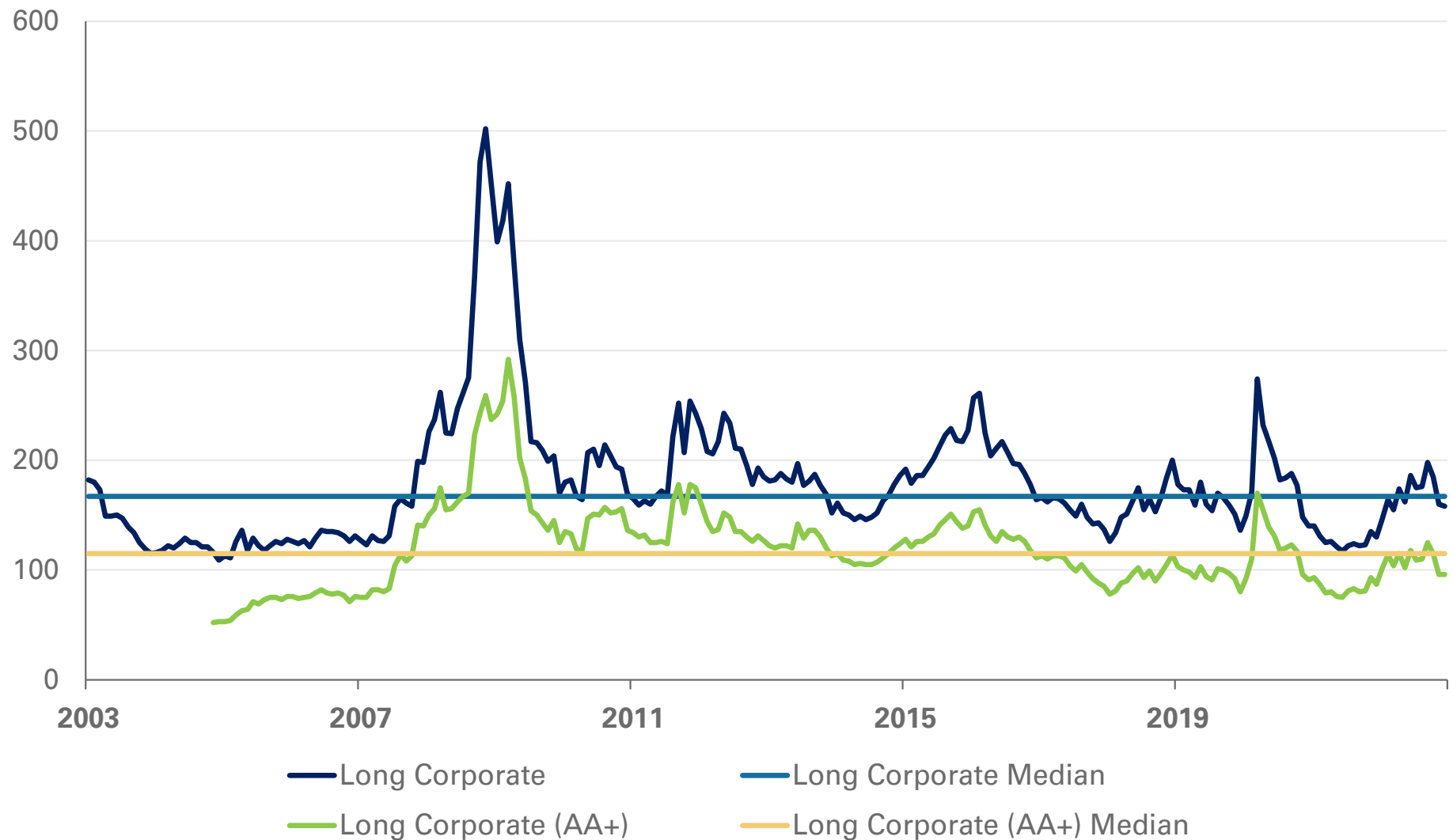
MUNI -TO-TREASURY RATIO



LONG DURATION YIELDS



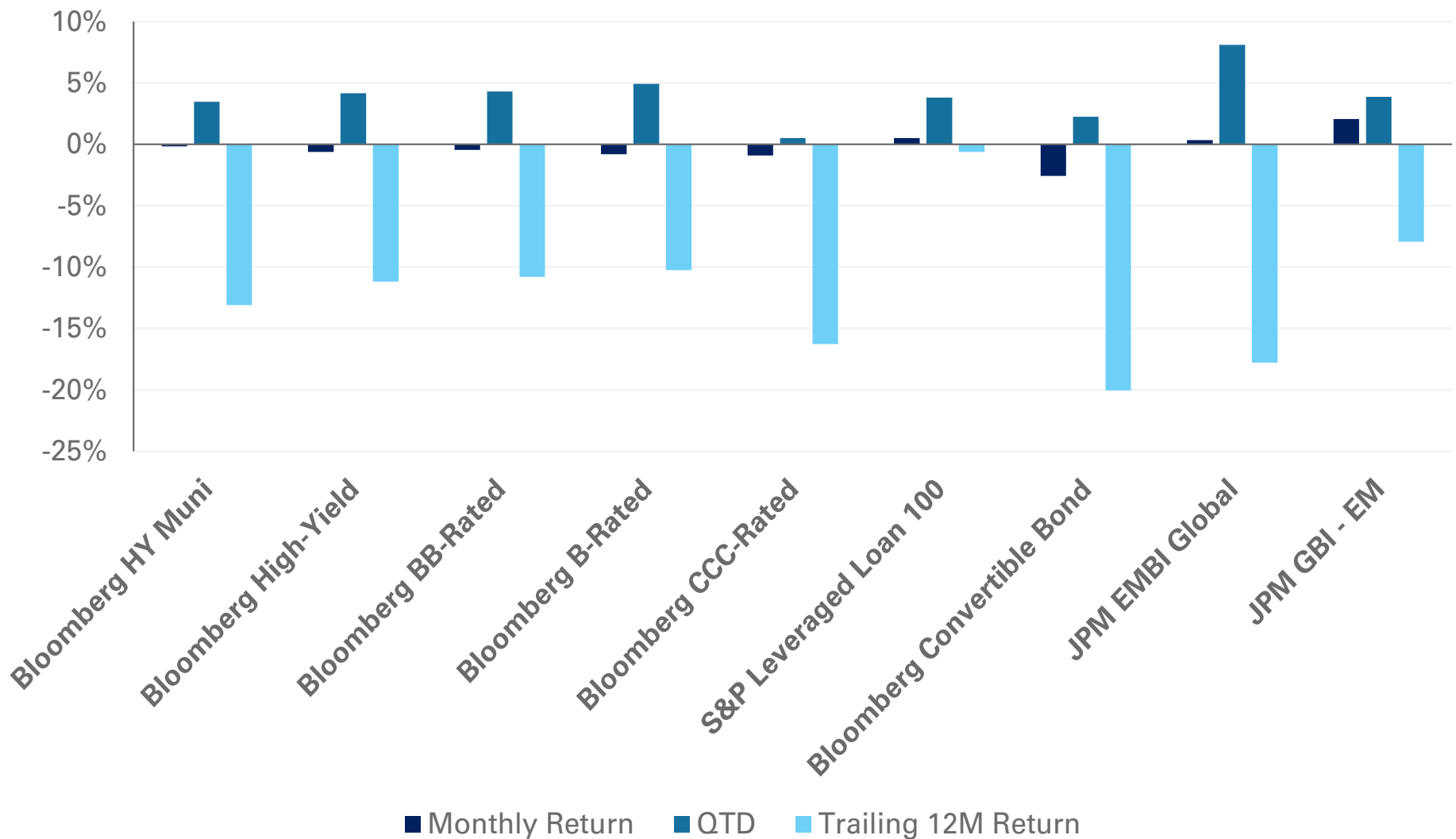
LONG DURATION CORPORATE SPREADS





RETURN-SEEKING CREDIT

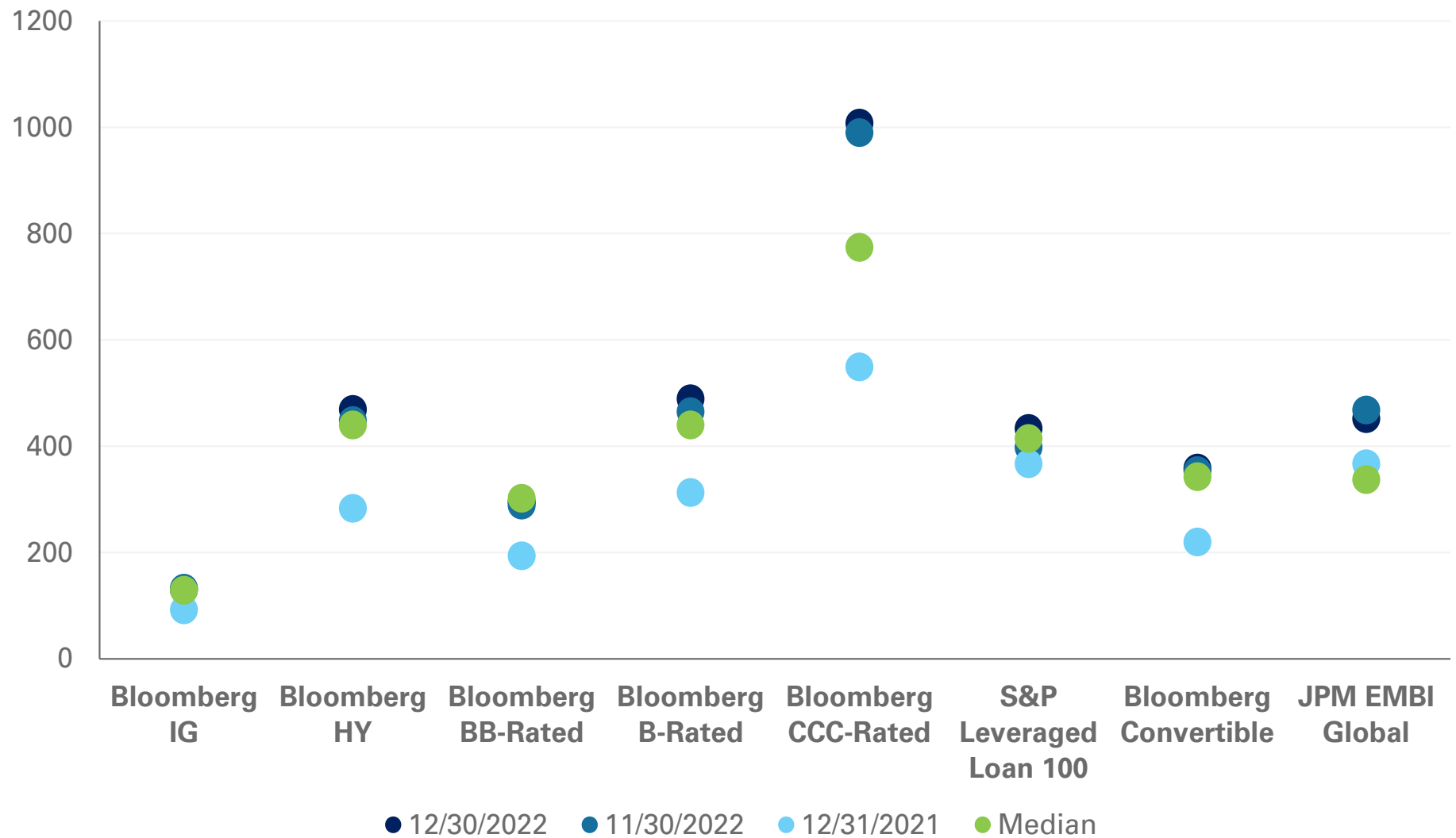
RETURN-SEEKING CREDIT INDEX PERFORMANCE



RETURN-SEEKING CREDIT CHARACTERISTICS

	Yield to Worst	Spread (bps)	Duration (Years)
Bloomberg HY Muni	5.83%	-	7.9
Bloomberg High-Yield	8.96%	469	3.9
Bloomberg BB-Rated	7.21%	295	4.3
Bloomberg B-Rated	9.21%	489	3.6
Bloomberg CCC-Rated	14.26%	1008	3.4
S&P/LSTA Leveraged Loan 100	9.10%	434	-
Bloomberg Convertible Bond	0.67%	359	2.2
JPM EMBI Global	8.56%	452	6.8
JPM GBI - EM	5.04%	-	5.4

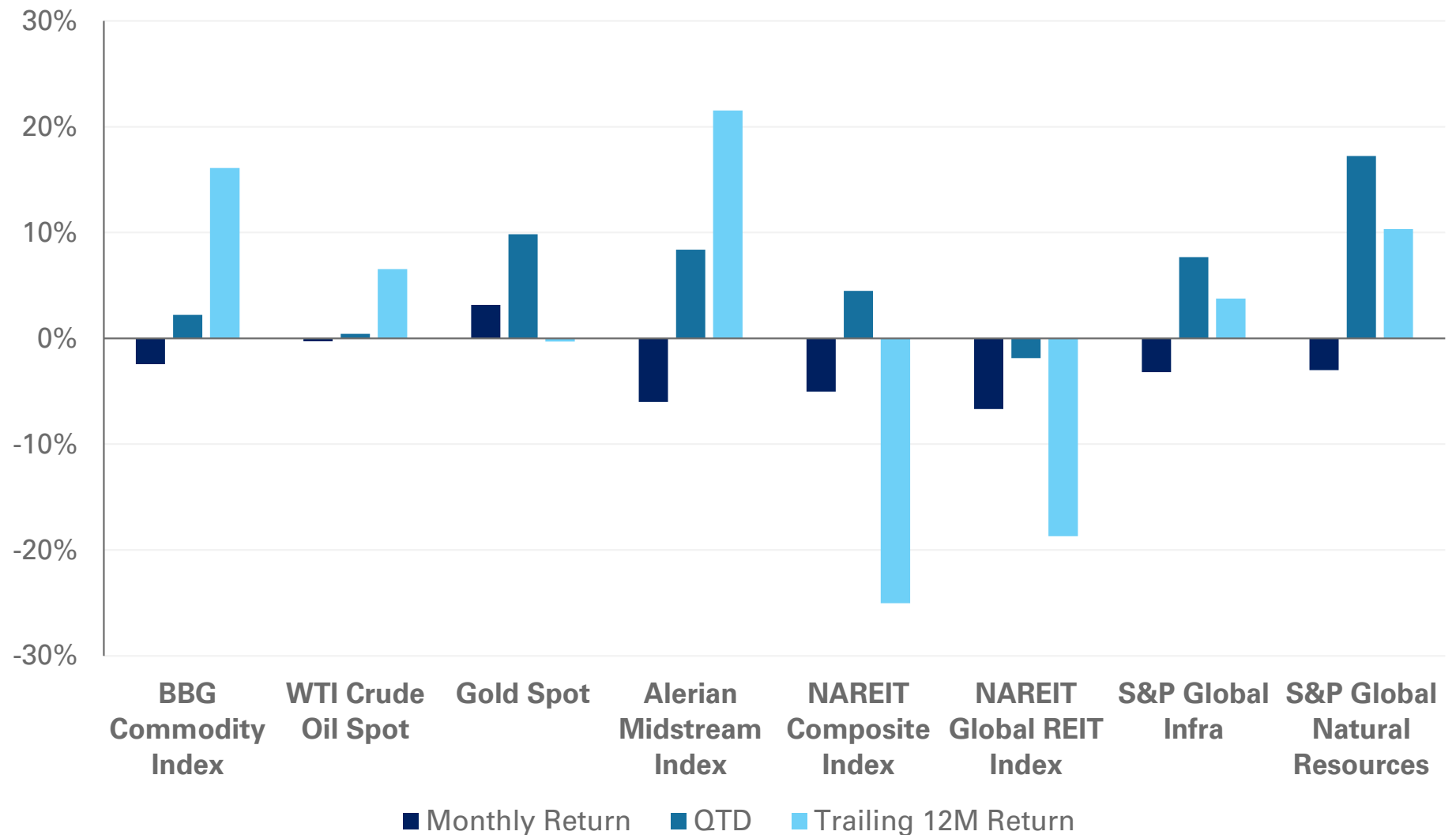
CREDIT SPREADS





REAL ASSETS

REAL ASSETS INDEX PERFORMANCE



REAL ASSETS INDEX PERFORMANCE

Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
Bloomberg Commodity Index	-2.4%	2.2%	16.1%	16.1%	12.6%	6.4%
Bloomberg Sub Agriculture Index	1.6%	2.4%	15.5%	15.5%	19.4%	9.1%
Coffee	-1.2%	-22.3%	-21.9%	-21.9%	5.0%	-0.9%
Corn	2.1%	0.3%	23.0%	23.0%	23.0%	11.0%
Cotton	-1.1%	0.8%	-6.9%	-6.9%	13.4%	4.8%
Soybean	3.8%	11.6%	28.9%	28.9%	22.5%	10.1%
Soybean Oil	-9.5%	9.2%	29.6%	29.6%	31.1%	16.9%
Sugar	2.5%	14.5%	12.2%	12.2%	15.0%	2.8%
Wheat	-0.1%	-15.3%	-2.7%	-2.7%	6.9%	6.7%
Bloomberg Sub Energy	-12.2%	-9.1%	36.2%	36.2%	5.9%	3.0%
Brent Crude	-0.9%	7.2%	41.8%	41.8%	17.1%	13.1%
Heating Oil	-2.3%	14.6%	94.9%	94.9%	23.9%	14.8%
Natural Gas	-33.2%	-36.0%	19.4%	19.4%	-3.9%	-11.0%
Unleaded Gas	2.9%	12.8%	48.7%	48.7%	20.2%	12.5%
WTI Crude Oil	-0.2%	4.9%	24.9%	24.9%	-0.2%	1.3%
Bloomberg Sub Industrial Metals	2.2%	16.4%	-2.4%	-2.4%	13.9%	5.0%
Aluminum	-4.2%	9.8%	-15.1%	-15.1%	7.0%	-0.4%
Copper	2.3%	13.0%	-13.5%	-13.5%	10.6%	2.7%
Nickel	11.3%	42.6%	46.7%	46.7%	28.8%	18.8%
Zinc	-1.4%	1.7%	-10.5%	-10.5%	10.7%	1.1%
Bloomberg Sub Precious Metals	5.7%	13.3%	0.1%	0.1%	5.7%	5.7%
Gold	4.1%	9.5%	-0.7%	-0.7%	4.7%	5.7%
Silver	10.8%	26.7%	2.6%	2.6%	8.6%	5.6%
Bloomberg Sub Livestock	2.2%	8.5%	7.4%	7.4%	-3.7%	-3.7%
Lean Hogs	3.1%	11.8%	13.0%	13.0%	-1.1%	-6.9%
Live Cattle	1.8%	7.1%	4.7%	4.7%	-4.9%	-2.3%

OIL MARKETS

WTI VERSUS BRENT CRUDE SPOT PRICES



GOLD SPOT PRICE



DISCLAIMERS & DISCLOSURES

Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

NEPC’s preferred data source is the plan’s custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.

All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.

The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time. Neither fund performance nor universe rankings contained in this report should be considered a recommendation by NEPC.

This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv

FISCAL YEAR 2023 STRATEGIC PLAN PROGRESS - QUARTERLY UPDATES			
STRATEGY #	FIVE YEAR STRATEGY	FY23 ANNUAL OBJECTIVES	FISCAL YEAR 2023 2nd QUARTER UPDATES
1	Sustained Funding Improvements	<ol style="list-style-type: none"> 1. Implement new Investment Book of Record and investment documents management system. 2. Align investments to cash flows in support of return assumptions 3. Utilize interim asset allocations and continue updating actuarial cash flow projections. 	<ul style="list-style-type: none"> • IBOR implementation updates (Awarded annual contract for the IBOR Portfolio Analytics system software) Document management system was implemented at the start of FY '23. IBOR System will go live on 3/1/23. • Completed system cash flow and investment return simulation in concert with external Actuary, Foster & Foster. Findings resulted in Board approved asset allocation on 7/1/22. • Created a glide path to invest excess cash as the result of pre-payments from employers. Monthly updates are provided to the Investment Committee.
2	Attracting and Retaining Top Talent	<ol style="list-style-type: none"> 1. Improve customer service inquiries with focus on one-call resolution. 2. Implementation of PAS to reduce unnecessary manual steps. 3. Transition Member Service operations to a broader focus on digital self-service for more real-time data management of member records. 	<ul style="list-style-type: none"> • New phone data reporting work planned with new vendor. • On schedule and on budget with implementation of PAS • Team in partnership with the Accounting & Finance team and Employer Relationship Manager have been identifying ways to better monitor employer contribution reporting. • Opened the annual PSPRS Awards nomination period with recognition at the January '23 all staff meeting.

FISCAL YEAR 2023 STRATEGIC PLAN PROGRESS - QUARTERLY UPDATES			
			<ul style="list-style-type: none"> Hires: 1, Terms: 2. Q2 Turnover Rate 2%. Fiscal YTD Turnover Rate 2%.
3	Stakeholder Service Improvements, Engagement and Education	<ol style="list-style-type: none"> Focus on training and customer service expectations and responsiveness through process improvements and new tools. Develop and enable automated financial reporting period close(s) and financial report development at plan, tier, and employer levels to serve stakeholders. Continue to develop and improve the invoicing process, employer automated payment capabilities and monitoring of employer contributions. Internal audit plan implementation, including employer reviews and education. 	<ul style="list-style-type: none"> Addressed 6 month cancer claim backlog and reduced processing to determinations being made in 3-4 weeks, rather than months. Established process by which staff is now sending out written communication to cancer claimants acknowledging receipt of claim and providing general processing timeframe. Opened access to membership for in-person consultations as well as walk-in assistance. Modernized and secured online self-service reports for retired members. Host bi-weekly PAS update meetings with ER POCs to keep employers aware of project status. Updated fund performance and asset allocation webpages Updated and improved employer contributions rates & reporting webpage Drafting/publishing of 'frequently asked questions' flyer and website for extended DROP Updating of PSPRS member tier "matrix" to reflect changes to contribution rates Drafted and distributed retiree open enrollment satisfaction survey Implemented Tier 3 Health Subsidy & Drop Extension.

FISCAL YEAR 2023 STRATEGIC PLAN PROGRESS - QUARTERLY UPDATES

			<ul style="list-style-type: none"> • Delivered Member 1099's earlier than previous year. • Local Board training & compliance reporting. Consolidated retirement packets for faster processing & simplified training. • Decreased monthly payroll check runs from 8 hours to 3 hours.
4	Information System Modernization and Process Improvement	<ol style="list-style-type: none"> 1. Implement new IBOR-Q, 2. Compliance software 3. Transition to MS O365. 4. Continue PAS support and verification and validation schedules. 5. PSPRS is completing recent updates to business continuity. 	<ul style="list-style-type: none"> • IBOR-Q vendor selected with an estimated go live date of 3/1/23. • PAS development continued with Validation testing and Verification. These covered service credit purchases, imaging configuration, DROP areas. • Completed Verifications covering workflows, local boards, QDRO calculation and processing, deferred annuity and CIP (enrollment, premiums & claims). • In partnership with employers, began initial testing of contribution import files to ensure successful import and validation within new V3locity. • Transition to Exchange 365 Email in progress.

FISCAL YEAR 2023 STRATEGIC PLAN PROGRESS - QUARTERLY UPDATES

5	Improving PSPRS Governance	<ol style="list-style-type: none"> 1. Partnership with ASRS, including health insurance. 2. Cancer Insurance Program Plan structure analysis and future plan designs, including use of reserves. 3. PSPRS Governance Manual charter reviews and updates that serves accountability, transparency and performance. 	<ul style="list-style-type: none"> • Health Insurance Team partnered with ASRS to modify Open Enrollment elections process which resulted in processing of 562 election documents with no known issues. • Implementing a new <u>Compliance Software</u> in 2023 for reporting, tracking and approving personal trades, gifts, conflicts of interest. Contract Execution (2/28), Formal kick-off within 60 days of execution in late Q3/early Q4 to include Project Plan, Target Configuration/Questionnaire, Meeting Cadence confirmed/scheduled. By end of Q4, 6/30/2023 Configuration/Integration complete, User Activation Complete and implementation is concluded. Internal training and internal go-live for employee use will commence thereafter. • Internal Auditor reviewed the Operations Audit and Governance Policy Committee charter. The findings and Management response was reviewed with OAGPC. • Piloted remote workstations & cloud-based Zero Trust Network Authentication. Replaced end-of-life firewalls. Completed Business Continuity & Disaster Recovery Plan. Creating BC/DR Roadmap.
---	----------------------------	--	--



MEMORANDUM

TO: SCOTT MCCARTY, CHAIRMAN AND BOARD OF TRUSTEES

FROM: MICHAEL TOWNSEND, ADMINISTRATOR

DATE: FEBRUARY 15, 2023

RE: ADMINISTRATOR UPDATES

- I. Registration for the PSPRS annual Employer and Local Board event has exceeded 270 participants. PSPRS has capped registration at 330 participants to ensure availability for trustees, presenting staff and actuaries. Please note that the annual event agenda has been finalized and that staff is in the process of reviewing and drafting presentation materials. The event will not be streamed online but PSPRS has contracted with a vendor to record and produce video of each presentation.
- II. PSPRS learned that it again had topped large U.S. pensions for the rate of its growth of assets under management. *Pensions & Investments* magazine contacted PSPRS in early February for comments about the combined growth of its defined benefit and defined contribution plans for the one-year period ending September 30, 2022. PSPRS DB and DC assets grew at a rate in excess of 13 percent while most large U.S. retirement plans lost value or reported low single-digit growth, according to the media outlet. Commentary provided by PSPRS attributed the growth to a large amount of additional employer contributions for the purpose of reducing unfunded liabilities. In early 2022, *Pensions & Investments* reported that the PSPRS growth rate led all large pensions who responded to a survey for the outlet's 1,000 Largest Retirement Plans special publication.
- III. Clark Partridge and Mike Townsend participated in a panel discussion on additional contribution options and related financial statement reporting at the GFOAz winter conference February 9, 2023.
- IV. Mike Townsend provided an overview and update to the Arizona House of Representatives Ways & Means Committee February 1, 2023.
- V. The IBOR (Investment Book of Record) is up and "running." Staff would like to recognize Owen Zhao for playing such an important role and leading the implementation and Laura Long for managing the RFP process. These tasks were tedious and those two deserve a lot of credit. The goal is to go-live using the most recent transactions and valuations on March 1, 2023. This system will be the foundation of our internal investment monitoring and review process.
- VI. Beginning each tax year, updates to the EPIC system have to be made to reflect changes to federal tax tables in order for proper calculation of tax withholding for retiree and survivor

annuitant W-4P elections. In 2023, these updates required further system configurations as PSPRS was required to implement changes associated with updates to the W-4P form and tax withholding methodology. The IRS did not require all annuitants to complete new forms, but in taking this approach, systems did need to incorporate an appropriate “bridge calculation” tied to W-4P elections already in effect. Over the last several months of 2022 PSPRS teams worked to implement these changes, which were rolled out and incorporated in the January pension payroll.

It was discovered, once pension payroll was processed, that the “bridge calculation” was not incorporated into the payroll processing and that an incorrect tax table was utilized in the withholding calculations for the payroll run. This resulted in annuitants experiencing noticeable differences in their monthly federal withholding. As part of the on-going review and documentation of business processes, future changes to the federal tax tables will be reviewed and tested to ensure calculations being implemented within the system are accurate and align properly for all future payroll processing.

- VII. Annually consideration of COLAs for retirees are based on the Phoenix-Mesa consumer price index (CPI) published by the US Department of Labor, Bureau of Labor Statistics. For 2022 the annual CPI amount is eleven and a half percent. Based on this information and as provided by A.R.S. 38-856.05 (PSPRS), which is also stated in the CORP and EORP statutes, the Retired Members Department will proceed with processing the annual COLA at the maximum allowable amount of two percent to be awarded on July 1, 2023 to all eligible retirees and survivors for all three retirement plans.
- VIII. Last fall, the Board of Trustees adopted an updated PSPRS Strategic Plan. This plan included a quarterly reporting requirement to the Operations Committee. As there was not an Operations Committee meeting in February the report is being included as an attachment to the Administrator’s Update and will be included with the March Operations Committee agenda.
- IX. Staff continue to meet and provide documentation to the Auditor General staff related to the PSPRS performance audit and sunset review. As a reminder State agency “sunset” reviews are standard and measure the efficiency of agency operations and whether agencies are meeting their statutory responsibilities. The Auditor General’s Office will make recommendations for improvement and/or identify best practices for PSPRS, as appropriate. The review will produce a public audit report due to the Legislature by October 1, 2023.

Employer Contacts

FY21, FY22 and FY23 (Cumulative) as of 1/31/23

Plan #	Employer Plan Name	E-mail	Discussion	Presentation	Financing	Unfunded Liability Payment	AEPPP Participant	Notes
001	BISBEE FIRE DEPARTMENT	X	X	X	X	X		
002	CASA GRANDE FIRE DEPARTMENT	X	X		X	X		
003	CASA GRANDE POLICE DEPARTMENT	X	X		X	X		
004	CHANDLER FIRE DEPARTMENT					X		
005	CHANDLER POLICE DEPARTMENT					X		
006	CLIFTON FIRE DEPARTMENT					X		
007	DEPARTMENT OF PUBLIC SAFETY	X	X			X		
008	DOUGLAS FIRE DEPARTMENT	X	X	X	X	X		
009	DOUGLAS POLICE DEPARTMENT	X	X	X	X	X		
010	FLAGSTAFF FIRE DEPARTMENT	X	X		X	X		
011	FLAGSTAFF POLICE DEPARTMENT	X	X		X	X		
012	GLENDALE FIRE DEPARTMENT	X	X	X	X	X		
013	GLENDALE POLICE DEPARTMENT	X	X	X	X	X		
014	GLOBE FIRE DEPARTMENT					X		
015	KINGMAN FIRE DEPARTMENT	X	X	X	X	X		
016	MARICOPA COUNTY SHERIFF'S OFFICE	X	X			X		
017	MESA FIRE DEPARTMENT	X	X	X		X		
018	MESA POLICE DEPARTMENT	X	X	X		X		
020	NOGALES FIRE DEPARTMENT	X	X	X				Financing in discussion.
021	PHOENIX FIRE DEPARTMENT	X	X	X		X		
022	PHOENIX POLICE DEPARTMENT	X	X	X		X		
023	PRESCOTT FIRE DEPARTMENT	X	X			X		
024	PRESCOTT POLICE DEPARTMENT	X	X			X		
025	SCOTTSDALE POLICE DEPARTMENT	X	X			X		
026	SIERRA VISTA FIRE DEPARTMENT	X	X			X		
027	TEMPE FIRE DEPARTMENT	X	X		X	X		
028	TEMPE POLICE DEPARTMENT	X	X		X	X		
029	TUCSON FIRE	X	X	X	X	X		Section 115 Trust
030	TUCSON POLICE	X	X	X	X			Section 115 Trust
031	WINSLOW FIRE DEPARTMENT							
032	YUMA FIRE DEPARTMENT	X	X	X	X	X		
033	YUMA POLICE DEPARTMENT	X	X	X	X	X		
034	YUMA COUNTY SHERIFF'S DEPARTMENT	X	X	X	X	X		
035	GAME AND FISH DEPARTMENT	X	X			X		
036	SIERRA VISTA POLICE DEPARTMENT	X	X			X		
037	BENSON POLICE DEPARTMENT							
038	BISBEE POLICE DEPARTMENT	X	X	X	X	X		
039	PIMA COUNTY SHERIFF'S DEPARTMENT	X	X	X	X	X		
040	KINGMAN POLICE DEPARTMENT	X	X	X	X	X		
041	ASU PD PSPRS LOCAL BOARD	X	X			X		
042	LAKE HAVASU CITY FIRE DEPARTMENT							
043	MOHAVE COUNTY SHERIFF'S DEPT.	X	X	X		X		
044	BULLHEAD CITY FIRE DEPARTMENT					X		
045	U OF A CAMPUS POLICE DEPARTMENT	X	X			X		

046 COCHISE COUNTY SHERIFF'S DEPT	X	X			X
047 SAFFORD POLICE DEPARTMENT	X	X	X	X	X
049 DREXEL HEIGHTS FIRE DISTRICT	X				
050 WINSLOW POLICE DEPARTMENT					
051 PAYSON FIRE DEPARTMENT	X	X			X
052 PAYSON POLICE DEPARTMENT	X	X			X
053 NORTHERN AZ. CONSOLIDATED FD #1	X	X	X	X	X
054 FRY FIRE DISTRICT	X	X	X	X	X
055 FREDONIA MARSHALS					
056 NAU CAMPUS POLICE	X	X			X
058 SOUTH TUCSON FIRE DEPARTMENT	X	X	X		X
059 AVONDALE FIRE DEPARTMENT		X			
060 PARKER POLICE DEPARTMENT					X
061 COCONINO COUNTY SHERIFF'S DEPT	X	X	X	X	X
062 CENTRAL YAVAPAI FIRE DISTRICT					
064 BUCKSKIN FIRE DISTRICT				X	X
065 SNOWFLAKE POLICE DEPARTMENT					
066 COTTONWOOD POLICE DEPARTMENT	X	X	X	X	X
067 LAKE HAVASU CITY POLICE DEPT.					
069 SOUTH TUCSON POLICE DEPARTMENT	X	X	X		X
070 APACHE JUNCTION POLICE DEPARTMENT	X	X		X	X
071 NAVAJO COUNTY SHERIFF'S DEPT.	X	X		X	X
072 MOHAVE VALLEY FIRE DISTRICT	X	X			
073 PEORIA FIRE DEPARTMENT	X	X	X		X
074 PEORIA POLICE DEPARTMENT	X	X	X		X
076 PARADISE VALLEY POLICE DEPARTMENT	X	X	X		X
077 WILLCOX POLICE DEPARTMENT				X	X
078 SHOW LOW POLICE DEPARTMENT	X	X	X		X
079 ELOY POLICE DEPARTMENT	X	X			X
080 NOGALES POLICE DEPARTMENT	X	X	X		X
081 GILBERT POLICE DEPARTMENT					X
083 CLIFTON POLICE DEPARTMENT					
085 COOLIDGE POLICE DEPARTMENT	X	X			X
086 HOLBROOK POLICE DEPARTMENT					X
087 SANTA CRUZ COUNTY SHERIFF'S DEPT.	X	X		X	X
088 PRESCOTT VALLEY POLICE DEPARTMENT					X
089 EAGAR POLICE DEPARTMENT	X	X			
090 TOLLESON POLICE DEPARTMENT					X
091 FLORENCE POLICE DEPARTMENT	X				X
092 SPRINGERVILLE POLICE DEPARTMENT	X	X			
093 EL MIRAGE POLICE DEPARTMENT	X				X
094 SUPERIOR POLICE DEPARTMENT					
095 SAN LUIS POLICE DEPARTMENT	X	X	X	X	X
096 PAGE POLICE DEPARTMENT		X			X
097 PAGE FIRE DEPARTMENT		X			X
098 YAVAPAI COUNTY SHERIFF'S DEPT.					X
100 PIMA POLICE DEPARTMENT					
101 APACHE COUNTY SHERIFF'S DEPT.	X	X		X	X
102 COTTONWOOD FIRE DEPARTMENT	X	X	X	X	X

Financing closed on 7/7/22. \$26,346,401 contribution to PSPRS delayed until July due to budget limitations.

Financing in discussion.

103 LA PAZ COUNTY SHERIFF'S DEPT.	X	X	X		X	
104 PINAL COUNTY SHERIFF'S DEPARTMENT	X	X	X	X	X	
105 CLARKDALE POLICE DEPARTMENT					X	
106 BUCKEYE POLICE DEPARTMENT	X				X	
107 MARANA POLICE DEPARTMENT					X	
108 TOLLESON FIRE DEPARTMENT					X	
109 CHINO VALLEY POLICE DEPARTMENT	X				X	
110 SURPRISE POLICE DEPARTMENT					X	
111 WELLTON POLICE	X	X	X	X	X	
112 GILA COUNTY SHERIFF'S DEPARTMENT	X	X	X	X	X	
113 PINETOP-LAKESIDE POLICE DEPT.	X	X	X	X	X	
114 BULLHEAD CITY POLICE DEPARTMENT						
115 WILLIAMS POLICE DEPARTMENT						
116 MIAMI POLICE DEPARTMENT						
117 THATCHER POLICE DEPARTMENT	X	X			X	
118 YOUNGTOWN POLICE DEPARTMENT					X	
119 DEPARTMENT OF EMER & MILITARY AFF	X	X			X	
120 SURPRISE FIRE DEPARTMENT					X	
121 CAMP VERDE MARSHALL'S				X	X	
122 ORO VALLEY POLICE DEPT.	X	X	X	X	X	
123 GREENLEE COUNTY SHERIFF'S DEPT.		X			X	
124 TUCSON AIRPORT AUTHORITY FIRE DPT	X	X			X	
125 TUCSON AIRPORT AUTHORITY POLICE	X	X			X	
126 WICKENBURG POLICE DEPARTMENT	X	X	X		X	
127 EL MIRAGE FIRE DEPARTMENT	X				X	
128 PATAGONIA MARSHALS						
129 SEDONA POLICE DEPARTMENT					X	
130 MAMMOTH POLICE DEPARTMENT	X	X				
131 GLOBE POLICE DEPARTMENT					X	
132 TOMBSTONE MARSHAL'S DEPARTMENT						
133 GOLDER RANCH FIRE DISTRICT	X	X		X	X	X
134 FORT MOJAVE MESA FIRE DISTRICT	X	X	X	X	X	X
136 GOODYEAR FIRE DEPARTMENT				X	X	
137 GOODYEAR POLICE DEPARTMENT				X	X	
139 AVONDALE POLICE DEPARTMENT		X				
140 GRAHAM COUNTY SHERIFF'S DEPT.					X	
142 GOLDEN VALLEY FIRE DISTRICT						
143 DAISY MOUNTAIN FIRE DISTRICT	X	X		X	X	
144 QUARTZSITE POLICE DEPARTMENT						
145 PICTURE ROCKS FIRE DISTRICT						
146 PIMA COUNTY COMM. COLLEGE POLICE					X	
147 NORTHWEST FIRE DISTRICT					X	
148 SUPERSTITION FIRE AND MEDICAL DIS	X	X	X	X	X	
149 GILBERT FIRE DEPARTMENT					X	
150 PINE-STRAWBERRY FIRE DISTRICT	X	X	X			Financing in discussion.
151 ATTORNEY GENERAL INVESTIGATORS	X	X			X	
153 ST. JOHNS POLICE DEPARTMENT						
154 PIMA COUNTY ATTORNEY INVESTIGATOF	X	X	X			
155 SUN LAKES FIRE DISTRICT						

156 KEARNY POLICE DEPARTMENT					
157 GREENLEE CNTY ATTY INVESTIGATORS		X			
158 NAVAJO COUNTY ATTY'S INVESTIGATOR	X	X			
162 AVRA VALLEY FIRE DISTRICT					
163 SAN LUIS FIRE DEPARTMENT	X	X	X	X	X
164 AZ DPT. LIQ. LIC. & CONTROL INVST	X	X			X
165 MARICOPA CNTY ATTY INVESTIGATORS					
166 SEDONA FIRE DISTRICT					X
167 GUADALUPE FIRE DEPARTMENT	X	X	X		
168 MAYER FIRE DISTRICT					X
169 SOMERTON POLICE DEPARTMENT					
170 NORTH COUNTY FIRE & MEDICAL DISTR					
171 SOMERTON FIRE DEPARTMENT					
172 TUBAC FIRE DISTRICT					
173 LA PAZ COUNTY ATTY. INVESTIGATORS	X	X	X		
174 SAHUARITA POLICE DEPARTMENT	X	X	X		X
176 FLORENCE FIRE DEPARTMENT	X				X
177 SUN CITY FIRE DISTRICT	X	X	X	X	X
178 HAYDEN POLICE DEPARTMENT					
179 GILA RIVER FIRE DEPARTMENT					
180 GILA RIVER POLICE DEPARTMENT					
181 SALT RIVER PIMA-MARICOPA FIRE					
182 SALT RIVER PIMA-MARICOPA POLICE					X
185 PINETOP FIRE DISTRICT	X	X		X	X
187 YAVAPAI CNTY ATTRNY INVESTIGATORS	X				X
188 THREE POINTS FIRE DISTRICT					
190 BUCKEYE FIRE DEPARTMENT	X				X
192 HEBER-OVERGAARD FIRE DISTRICT					X
193 HELLSGATE FIRE DISTRICT	X	X		X	X
194 GREEN VALLEY FIRE DISTRICT					
195 SUMMIT FIRE DISTRICT	X	X		X	X
196 CAMP VERDE FIRE DISTRICT					
197 FORT MCDOWELL TRIBAL FIRE DEPT.					
198 FORT MCDOWELL TRIBAL POLICE DEPT.					
199 HIGHLANDS FIRE DISTRICT	X	X	X		X
200 RIO RICO FIRE DISTRICT	X	X			X
201 TRI-CITY FIRE DISTRICT					
202 MARICOPA COUNTY PARK RANGERS	X	X			
203 VERDE VALLEY FIRE DISTRICT	X	X	X	X	X
204 ARIZONA STATE PARK RANGERS	X	X			X
206 HUALAPAI INDIAN TRIBE POLICE DEPT					
207 PINWOOD FIRE DISTRICT	X	X	X		
208 RINCON VALLEY FIRE DISTRICT	X	X			X
209 TONOPAH VALLEY FIRE DISTRICT					
210 JEROME POLICE DEPARTMENT	X	X	X		
211 FORT MOJAVE TRIBAL POLICE DEPT.					
212 BUCKEYE VALLEY FIRE DISTRICT					
213 ELOY FIRE DISTRICT	X	X		X	X
214 PASCUA YAQUI TRIBE FIRE DEPT.					

215 PASCUA YAQUI TRIBE POLICE DEPT.							X
216 TOWN OF SUPERIOR (FIRE DEPT)							
217 WICKENBURG FIRE DEPARTMENT	X	X	X				X
219 BLACK CANYON FIRE DISTRICT							
221 QUARTZSITE FIRE DISTRICT							X
222 RIO VERDE FIRE DISTRICT							X
223 SCOTTSDALE FIRE DEPARTMENT							X
224 AK CHIN INDIAN COMM. FIRE DEPT.							
225 AK CHIN INDIAN COMM. POLICE DEPT.							
226 CORONA DE TUCSON FIRE DISTRICT							
227 GOLDEN SHORES FIRE DISTRICT							
228 CITY OF MARICOPA - FIRE							
229 CAVE CREEK MARSHALS	X	X					X
231 SAN CARLOS TRIBAL POLICE DEPT.							X
232 GROOM CREEK FIRE DISTRICT							
233 MOUNT LEMMON FIRE DISTRICT	X	X					
234 YAVAPAI PRESCOTT TRIBAL POLICE							
235 TOHONO O'ODHAM NATION FIRE DEPT.							
236 TOHONO O'ODHAM NATION POLICE DEPT							
237 WILLIAMSON VALLEY FIRE DISTRICT							X
238 HARQUAHALA FIRE DISTRICT							X
239 COOLIDGE FIRE DEPARTMENT	X	X					
242 CENTRAL AZ. COLLEGE POLICE DEPT.							
243 CITY OF MARICOPA (POLICE DEPT.)							
244 ORACLE FIRE DISTRICT							X
245 BENSON FIRE DEPARTMENT							
246 DESERT HILLS FIRE DEPARTMENT							
247 QUEEN CREEK FIRE DEPARTMENT		X					X
248 SONOITA ELGIN FIRE DEPARTMENT							
249 CHRISTOPHER-KOHL'S FIRE DISTRICT							
250 WHETSTONE FIRE DISTRICT							X
251 QUEEN VALLEY FIRE DISTRICT							
252 LAKE MOHAVE RANCHOS FIRE DISTRICT							
253 HUACHUCA CITY POLICE DEPARTMENT							
254 PALOMINAS FIRE DISTRICT		X					
255 SUN SITES PEARCE FIRE DISTRICT							
256 PONDEROSA FIRE DISTRICT							
257 TIMBER MESA FIRE AND MEDICAL DIST							
258 CENTRAL AZ. FIRE AND MEDICAL AUTH	X	X	X	X	X	X	X
259 COPPER CANYON FIRE AND MEDICAL	X	X	X	X	X		
260 MOUNTAIN VISTA FIRE DISTRICT							
261 BEAVER DAM/LITTLEFIELD FIRE DIST.							X
262 BLUE RIDGE FIRE DISTRICT							X
263 ARIZONA FIRE & MEDICAL AUTHORITY	X	X	X	X	X		
264 TAYLOR SNOWFLAKE FIRE & MEDICAL DEPT.							
265 QUEEN CREEK POLICE DEPARTMENT		X					
500 DEPARTMENT OF CORRECTIONS - CORP	X	X					X
501 DEPT OF JUVENILE CORRECTIONS-CORF	X	X					X
502 PINAL COUNTY - CORP	X	X	X	X			X

503 GILA COUNTY - CORP	X	X	X	X	X
504 GRAHAM COUNTY - DETENTION					X
505 MARICOPA COUNTY - CORP	X	X			X
506 CITY OF AVONDALE - DETENTION					
507 LA PAZ COUNTY - DETENTION	X	X	X		
510 YUMA COUNTY - CORP	X	X	X	X	X
515 PIMA COUNTY - CORP	X	X	X	X	X
520 APACHE COUNTY - CORP	X	X		X	X
525 COCHISE COUNTY - CORP	X	X	X		
530 COCONINO COUNTY - CORP	X	X	X		
535 MOHAVE COUNTY - CORP	X	X	X		
540 SANTA CRUZ COUNTY - CORP					
545 NAVAJO COUNTY - CORP	X	X		X	X
550 YAVAPAI COUNTY - CORP					X
555 PINAL COUNTY - DISPATCHERS	X	X	X	X	X
556 ORO VALLEY - DISPATCHERS	X	X	X		
557 TOWN OF MARANA - DISPATCHERS					
558 GILA COUNTY - DISPATCHERS	X	X	X	X	X
559 TOWN OF WICKENBURG-DISPATCHERS	X	X	X		X
560 GRAHAM COUNTY - DISPATCHERS					
561 YAVAPAI COUNTY - DISPATCHERS					
562 CITY OF SOMERTON - DISPATCHERS					
563 DEPARTMENT OF PUBLIC SAFETY	X	X			X
564 DEPARTMENT OF PUBLIC SAFETY DETEN	X	X			X
575 ADMIN OFFICE OF THE COURT					
576 APACHE COUNTY - AOC					
577 COCHISE COUNTY - AOC					
578 COCONINO COUNTY - AOC					
579 GILA COUNTY - AOC					X
580 GRAHAM COUNTY - AOC					
581 GREENLEE COUNTY - AOC					
582 LA PAZ COUNTY - AOC					
583 MARICOPA COUNTY-AOC JUDICIAL BR.					
584 MOHAVE COUNTY - AOC					
585 NAVAJO COUNTY - AOC					
586 PIMA COUNTY - AOC					
587 PINAL COUNTY - AOC					
588 SANTA CRUZ COUNTY - AOC					
589 YAVAPAI COUNTY - AOC					
590 YUMA COUNTY - AOC					
Totals	133	132	70	63	164
					3

Additional Contributions for Unfunded Liabilities - PSPRS
FY21 & FY22 Thru 6/30/22 &
FY23 Thru 1/31/23

SYS NO	SYSTEM	FY21 Additional ER Contrib	FY22 Additional ER Contrib	FY23 Additional ER Contrib	Cummulative Additional ER Contrib
001	BISBEE FIRE DEPARTMENT	-	11,017,741.56	-	11,017,741.56
002	CASA GRANDE FIRE DEPARTMENT	-	23,322,507.00	-	23,322,507.00
003	CASA GRANDE POLICE DEPARTMENT	-	39,137,631.00	-	39,137,631.00
004	CHANDLER FIRE DEPARTMENT	5,226,473.00	7,285,199.00	16,615,640.00	29,127,312.00
005	CHANDLER POLICE DEPARTMENT	9,773,527.00	14,714,801.00	33,384,360.00	57,872,688.00
006	CLIFTON FIRE DEPARTMENT	43,429.00	23,429.00	-	66,858.00
007	DEPARTMENT OF PUBLIC SAFETY	500,000,000.00	420,577,796.42	-	920,577,796.42
008	DOUGLAS FIRE DEPARTMENT	13,588,944.85	-	-	13,588,944.85
009	DOUGLAS POLICE DEPARTMENT	20,728,094.12	-	-	20,728,094.12
010	FLAGSTAFF FIRE DEPARTMENT	62,199,900.00	-	-	62,199,900.00
011	FLAGSTAFF POLICE DEPARTMENT	55,060,461.00	-	-	55,060,461.00
012	GLENDALE FIRE DEPARTMENT	-	82,253,944.34	-	82,253,944.34
013	GLENDALE POLICE DEPARTMENT	-	169,069,815.26	-	169,069,815.26
014	GLOBE FIRE DEPARTMENT	260,046.59	213,770.23	-	473,816.82
015	KINGMAN FIRE DEPARTMENT	-	16,696,253.89	-	16,696,253.89
016	MARICOPA COUNTY SHERIFF'S OFFICE	-	40,000,000.00	150,000,000.00	190,000,000.00
017	MESA FIRE DEPARTMENT	433.39	7,619,387.35	3,219,916.28	10,839,737.02
018	MESA POLICE DEPARTMENT	53.79	15,914,229.03	11,620,795.36	27,535,078.18
020	NOGALES FIRE DEPARTMENT	-	-	-	-
021	PHOENIX FIRE DEPARTMENT	9,608,297.29	11,549,949.93	18,129,415.18	39,287,662.40
022	PHOENIX POLICE DEPARTMENT	16,361,491.00	28,104,419.32	38,113,698.40	82,579,608.72
023	PRESCOTT FIRE DEPARTMENT	7,237,815.93	7,117,703.68	1,413,114.04	15,768,633.65
024	PRESCOTT POLICE DEPARTMENT	7,237,815.92	9,145,618.99	963,932.75	17,347,367.66
025	SCOTTSDALE POLICE DEPARTMENT	767,378.00	35,000,000.01	-	35,767,378.01
026	SIERRA VISTA FIRE DEPARTMENT	9,690.23	77,778.76	-	87,468.99
027	TEMPE FIRE DEPARTMENT	-	122,993,405.29	-	122,993,405.29
028	TEMPE POLICE DEPARTMENT	-	218,143,844.71	-	218,143,844.71
029	TUCSON FIRE	1,754,462.75	-	-	1,754,462.75
030	TUCSON POLICE	-	-	-	-
031	WINSLOW FIRE DEPARTMENT	-	-	-	-
032	YUMA FIRE DEPARTMENT	15,286,149.48	50,217,632.68	-	65,503,782.16
033	YUMA POLICE DEPARTMENT	19,713,850.52	60,156,755.95	-	79,870,606.47
034	YUMA COUNTY SHERIFF'S DEPARTMENT	24,150,257.76	-	-	24,150,257.76
035	GAME AND FISH DEPARTMENT	1,500,000.00	98,243,000.00	-	99,743,000.00
036	SIERRA VISTA POLICE DEPARTMENT	14,803.66	-	-	14,803.66
037	BENSON POLICE DEPARTMENT	-	-	-	-
038	BISBEE POLICE DEPARTMENT	-	9,732,258.44	-	9,732,258.44
039	PIMA COUNTY SHERIFF'S DEPARTMENT	22,804,500.01	203,821,805.97	-	226,626,305.98
040	KINGMAN POLICE DEPARTMENT	0.01	16,640,284.74	-	16,640,284.75
041	ASU PD PSPRS LOCAL BOARD	-	23,565,000.00	-	23,565,000.00
042	LAKE HAVASU CITY FIRE DEPARTMENT	-	-	-	-
043	MOHAVE COUNTY SHERIFF'S DEPT.	-	-	3,500,000.00	3,500,000.00
044	BULLHEAD CITY FIRE DEPARTMENT	-	25,029,701.75	-	25,029,701.75
045	U OF A CAMPUS POLICE DEPARTMENT	-	15,645,900.00	-	15,645,900.00
046	COCHISE COUNTY SHERIFF'S DEPT	-	5,285,929.56	520,481.51	5,806,411.07
047	SAFFORD POLICE DEPARTMENT	-	12,506,994.64	-	12,506,994.64
049	DREXEL HEIGHTS FIRE DISTRICT	-	-	-	-
050	WINSLOW POLICE DEPARTMENT	-	-	-	-
051	PAYSON FIRE DEPARTMENT	-	300,000.00	-	300,000.00
052	PAYSON POLICE DEPARTMENT	-	900,000.00	-	900,000.00
053	NORTHERN AZ. CONSOLIDATED FD #1	-	3,164,418.42	-	3,164,418.42

054	FRY FIRE DISTRICT	-	16,813,967.85	-	16,813,967.85
055	FREDONIA MARSHALS	-	-	-	-
056	NAU CAMPUS POLICE	-	7,725,600.00	-	7,725,600.00
058	SOUTH TUCSON FIRE DEPARTMENT	-	-	-	-
059	AVONDALE FIRE DEPARTMENT	-	-	-	-
060	PARKER POLICE DEPARTMENT	23,908.04	10,061.50	-	33,969.54
061	COCONINO COUNTY SHERIFF'S DEPT	17,817,697.41	-	-	17,817,697.41
062	CENTRAL YAVAPAI FIRE DISTRICT	-	-	-	-
064	BUCKSKIN FIRE DISTRICT	-	5,586,911.02	-	5,586,911.02
065	SNOWFLAKE POLICE DEPARTMENT	-	-	-	-
066	COTTONWOOD POLICE DEPARTMENT	13,028,599.24	7,156.32	-	13,035,755.56
067	LAKE HAVASU CITY POLICE DEPT.	-	-	-	-
069	SOUTH TUCSON POLICE DEPARTMENT	0.01	134,038.60	-	134,038.61
070	APACHE JUNCTION POLICE DEPARTMENT	-	-	26,346,401.00	26,346,401.00
071	NAVAJO COUNTY SHERIFF'S DEPT.	-	14,119,431.66	-	14,119,431.66
072	MOHAVE VALLEY FIRE DISTRICT	-	-	-	-
073	PEORIA FIRE DEPARTMENT	-	7,500,000.00	-	7,500,000.00
074	PEORIA POLICE DEPARTMENT	-	27,500,000.00	-	27,500,000.00
076	PARADISE VALLEY POLICE DEPARTMENT	1,800,000.00	-	-	1,800,000.00
077	WILLCOX POLICE DEPARTMENT	-	4,849,287.95	-	4,849,287.95
078	SHOW LOW POLICE DEPARTMENT	975,000.00	2,000,000.00	500,000.00	3,475,000.00
079	ELOY POLICE DEPARTMENT	-	6,000,000.00	-	6,000,000.00
080	NOGALES POLICE DEPARTMENT	-	3,896.18	-	3,896.18
081	GILBERT POLICE DEPARTMENT	13,000,000.00	-	-	13,000,000.00
083	CLIFTON POLICE DEPARTMENT	-	-	-	-
085	COOLIDGE POLICE DEPARTMENT	5,000,000.00	3,190,413.00	-	8,190,413.00
086	HOLBROOK POLICE DEPARTMENT	585,000.00	600,000.00	600,000.00	1,785,000.00
087	SANTA CRUZ COUNTY SHERIFF'S DEPT.	-	8,800,000.00	-	8,800,000.00
088	PRESCOTT VALLEY POLICE DEPARTMENT	800,000.00	2,206,064.56	2,000,000.00	5,006,064.56
089	EAGAR POLICE DEPARTMENT	-	-	-	-
090	TOLLESON POLICE DEPARTMENT	400,000.00	700,000.00	500,000.00	1,600,000.00
091	FLORENCE POLICE DEPARTMENT	1,400,000.00	74,973.00	-	1,474,973.00
092	SPRINGERVILLE POLICE DEPARTMENT	-	-	-	-
093	EL MIRAGE POLICE DEPARTMENT	-	1,800,000.00	-	1,800,000.00
094	SUPERIOR POLICE DEPARTMENT	-	-	-	-
095	SAN LUIS POLICE DEPARTMENT	5,731,622.62	-	-	5,731,622.62
096	PAGE POLICE DEPARTMENT	87,949.00	-	-	87,949.00
097	PAGE FIRE DEPARTMENT	59,104.00	-	-	59,104.00
098	YAVAPAI COUNTY SHERIFF'S DEPT.	4,000,000.00	4,000,000.00	-	8,000,000.00
100	PIMA POLICE DEPARTMENT	-	-	-	-
101	APACHE COUNTY SHERIFF'S DEPT.	12,886,279.63	-	-	12,886,279.63
102	COTTONWOOD FIRE DEPARTMENT	3,794,432.22	-	-	3,794,432.22
103	LA PAZ COUNTY SHERIFF'S DEPT.	-	3,456.40	-	3,456.40
104	PINAL COUNTY SHERIFF'S DEPARTMENT	67,793,217.13	-	-	67,793,217.13
105	CLARKDALE POLICE DEPARTMENT	130,000.00	130,000.00	-	260,000.00
106	BUCKEYE POLICE DEPARTMENT	400,000.00	-	-	400,000.00
107	MARANA POLICE DEPARTMENT	-	-	6,000,000.00	6,000,000.00
108	TOLLESON FIRE DEPARTMENT	125,000.00	200,000.00	500,000.00	825,000.00
109	CHINO VALLEY POLICE DEPARTMENT	300,000.00	400,000.00	-	700,000.00
110	SURPRISE POLICE DEPARTMENT	127,059.18	-	-	127,059.18
111	WELLTON POLICE	2,274,703.51	-	-	2,274,703.51
112	GILA COUNTY SHERIFF'S DEPARTMENT	12,982,447.37	-	-	12,982,447.37
113	PINETOP-LAKESIDE POLICE DEPT.	-	6,600,000.00	-	6,600,000.00
114	BULLHEAD CITY POLICE DEPARTMENT	-	-	-	-
115	WILLIAMS POLICE DEPARTMENT	-	-	-	-
116	MIAMI POLICE DEPARTMENT	-	-	-	-
117	THATCHER POLICE DEPARTMENT	250,000.00	1,000,000.00	500,000.00	1,750,000.00

118	YOUNGTOWN POLICE DEPARTMENT	82,906.00	92,947.00	-	175,853.00
119	DEPARTMENT OF EMER & MILITARY AFF	-	8,542,800.00	-	8,542,800.00
120	SURPRISE FIRE DEPARTMENT	873,948.65	-	-	873,948.65
121	CAMP VERDE MARSHALL'S	689.51	2,549,840.69	-	2,550,530.20
122	ORD VALLEY POLICE DEPT.	500,000.00	27,612,366.00	-	28,112,366.00
123	GREENLEE COUNTY SHERIFF'S DEPT.	1,501,627.52	500,000.01	-	2,001,627.53
124	TUCSON AIRPORT AUTHORITY FIRE DP	12,111,450.00	-	-	12,111,450.00
125	TUCSON AIRPORT AUTHORITY POLICE	15,088,550.00	-	-	15,088,550.00
126	WICKENBURG POLICE DEPARTMENT	3,597,253.00	-	49,402.00	3,646,655.00
127	EL MIRAGE FIRE DEPARTMENT	-	200,000.00	-	200,000.00
128	PATAGONIA MARSHALS	-	-	-	-
129	SEDONA POLICE DEPARTMENT	467,597.36	329,616.49	1,387,351.63	2,184,565.48
130	MAMMOTH POLICE DEPARTMENT	-	-	-	-
131	GLOBE POLICE DEPARTMENT	359,116.71	222,339.74	-	581,456.45
132	TOMBSTONE MARSHAL'S DEPARTMENT	-	-	-	-
133	GOLDER RANCH FIRE DISTRICT	-	24,930,645.33	-	24,930,645.33
134	FORT MOJAVE MESA FIRE DISTRICT	-	8,157,280.00	-	8,157,280.00
136	GOODYEAR FIRE DEPARTMENT	12,000,000.00	86,404.52	-	12,086,404.52
137	GOODYEAR POLICE DEPARTMENT	12,000,000.00	-	-	12,000,000.00
139	AVONDALE POLICE DEPARTMENT	-	-	-	-
140	GRAHAM COUNTY SHERIFF'S DEPT.	2,300,000.00	600,000.00	350,551.99	3,250,551.99
142	GOLDEN VALLEY FIRE DISTRICT	-	-	-	-
143	DAISY MOUNTAIN FIRE DISTRICT	-	10,909,599.22	-	10,909,599.22
144	QUARTZSITE POLICE DEPARTMENT	-	-	-	-
145	PICTURE ROCKS FIRE DISTRICT	-	-	-	-
146	PIMA COUNTY COMM. COLLEGE POLICE	-	1,300,000.00	325,000.00	1,625,000.00
147	NORTHWEST FIRE DISTRICT	-	336,937.53	382,872.28	719,809.81
148	SUPERSTITION FIRE AND MEDICAL DIS	-	25,414,644.03	-	25,414,644.03
149	GILBERT FIRE DEPARTMENT	2,000,000.00	-	1,800,000.00	3,800,000.00
150	PINE-STRAWBERRY FIRE DISTRICT	-	-	-	-
151	ATTORNEY GENERAL INVESTIGATORS	-	9,117,700.00	-	9,117,700.00
153	ST. JOHNS POLICE DEPARTMENT	-	-	-	-
154	PIMA COUNTY ATTORNEY INVESTIGATC	-	-	-	-
155	SUN LAKES FIRE DISTRICT	-	-	-	-
156	KEARNY POLICE DEPARTMENT	-	-	-	-
157	GREENLEE CNTY ATTY INVESTIGATORS	-	-	-	-
158	NAVAJO COUNTY ATTY'S INVESTIGATOI	-	-	-	-
162	AVRA VALLEY FIRE DISTRICT	-	-	-	-
163	SAN LUIS FIRE DEPARTMENT	2,612,966.54	-	-	2,612,966.54
164	AZ DPT. LIQ. LIC. & CONTROL INVST	-	7,628,900.00	-	7,628,900.00
165	MARICOPA CNTY ATTY INVESTIGATORS	-	-	-	-
166	SEDONA FIRE DISTRICT	1,082.24	-	-	1,082.24
167	GUADALUPE FIRE DEPARTMENT	-	-	-	-
168	MAYER FIRE DISTRICT	-	19,323.72	13,783.50	33,107.22
169	SOMERTON POLICE DEPARTMENT	-	-	-	-
170	NORTH COUNTY FIRE & MEDICAL DISTR	-	-	-	-
171	SOMERTON FIRE DEPARTMENT	-	-	-	-
172	TUBAC FIRE DISTRICT	-	-	-	-
173	LA PAZ COUNTY ATTY. INVESTIGATORS	-	-	-	-
174	SAHUARITA POLICE DEPARTMENT	3,907,510.00	-	-	3,907,510.00
176	FLORENCE FIRE DEPARTMENT	583,339.60	1,721,930.00	-	2,305,269.60
177	SUN CITY FIRE DISTRICT	-	37,370,665.23	-	37,370,665.23
178	HAYDEN POLICE DEPARTMENT	-	-	-	-
179	GILA RIVER FIRE DEPARTMENT	-	-	-	-
180	GILA RIVER POLICE DEPARTMENT	-	-	-	-
181	SALT RIVER PIMA-MARICOPA FIRE	-	-	-	-
182	SALT RIVER PIMA-MARICOPA POLICE	-	7,521.52	-	7,521.52

185	PINETOP FIRE DISTRICT	-	7,393,556.39	-	7,393,556.39
187	YAVAPAI CNTY ATTRNY INVESTIGATOR:	93,942.00	108,255.00	-	202,197.00
188	THREE POINTS FIRE DISTRICT	-	-	-	-
190	BUCKEYE FIRE DEPARTMENT	1,729,756.30	-	-	1,729,756.30
192	HEBER-OVERGAARD FIRE DISTRICT	-	21,347.50	33,257.58	54,605.08
193	HELLSGATE FIRE DISTRICT	45,000.00	1,704,461.00	-	1,749,461.00
194	GREEN VALLEY FIRE DISTRICT	-	-	-	-
195	SUMMIT FIRE DISTRICT	109,439.90	5,816,059.80	-	5,925,499.70
196	CAMP VERDE FIRE DISTRICT	-	-	-	-
197	FORT MCDOWELL TRIBAL FIRE DEPT.	-	-	-	-
198	FORT MCDOWELL TRIBAL POLICE DEPT	-	-	-	-
199	HIGHLANDS FIRE DISTRICT	-	7,251,008.45	-	7,251,008.45
200	RIO RICO FIRE DISTRICT	40,587.16	17,157.53	12,650.92	70,395.61
201	TRI-CITY FIRE DISTRICT	-	-	-	-
202	MARICOPA COUNTY PARK RANGERS	-	-	-	-
203	VERDE VALLEY FIRE DISTRICT	119,035.00	8,144,273.72	-	8,263,308.72
204	ARIZONA STATE PARK RANGERS	-	8,820,600.00	-	8,820,600.00
206	HUALAPAI INDIAN TRIBE POLICE DEPT	-	-	-	-
207	PINEWOOD FIRE DISTRICT	-	-	-	-
208	RINCON VALLEY FIRE DISTRICT	41,779.49	162,977.99	-	204,757.48
209	TONOPAH VALLEY FIRE DISTRICT	-	-	-	-
210	JEROME POLICE DEPARTMENT	-	-	-	-
211	FORT MOJAVE TRIBAL POLICE DEPT.	-	-	-	-
212	BUCKEYE VALLEY FIRE DISTRICT	-	-	-	-
213	ELOY FIRE DISTRICT	650,000.00	1,151,536.58	103,304.55	1,904,841.13
214	PASCUA YAQUI TRIBE FIRE DEPT.	-	-	-	-
215	PASCUA YAQUI TRIBE POLICE DEPT.	3.00	-	-	3.00
216	TOWN OF SUPERIOR (FIRE DEPT)	-	-	-	-
217	WICKENBURG FIRE DEPARTMENT	715,153.00	-	-	715,153.00
219	BLACK CANYON FIRE DISTRICT	-	-	-	-
221	QUARTZSITE FIRE DISTRICT	107.80	-	-	107.80
222	RIO VERDE FIRE DISTRICT	495,045.48	125,000.00	9,668.21	629,713.69
223	SCOTTSDALE FIRE DEPARTMENT	273,121.00	5,000,005.63	-	5,273,126.63
224	AK CHIN INDIAN COMM. FIRE DEPT.	-	-	-	-
225	AK CHIN INDIAN COMM. POLICE DEPT.	-	-	-	-
226	CORONA DE TUCSON FIRE DISTRICT	-	-	-	-
227	GOLDEN SHORES FIRE DISTRICT	-	-	-	-
228	CITY OF MARICOPA - FIRE	-	-	-	-
229	CAVE CREEK MARSHALS	0.02	-	-	0.02
231	SAN CARLOS TRIBAL POLICE DEPT.	0.01	-	-	0.01
232	GROOM CREEK FIRE DISTRICT	-	-	-	-
233	MOUNT LEMMON FIRE DISTRICT	-	-	-	-
234	YAVAPAI PRESCOTT TRIBAL POLICE	-	-	-	-
235	TOHONO O'ODHAM NATION FIRE DEPT.	-	-	-	-
236	TOHONO O'ODHAM NATION POLICE DEF	-	-	-	-
237	WILLIAMSON VALLEY FIRE DISTRICT	707.58	-	-	707.58
238	HARQUAHALA FIRE DISTRICT	1,379.30	2,816.35	-	4,195.65
239	COOLIDGE FIRE DEPARTMENT	-	-	-	-
242	CENTRAL AZ. COLLEGE POLICE DEPT.	-	-	-	-
243	CITY OF MARICOPA (POLICE DEPT.)	-	-	-	-
244	ORACLE FIRE DISTRICT	5,000.00	5,500.00	-	10,500.00
245	BENSON FIRE DEPARTMENT	-	-	-	-
246	DESERT HILLS FIRE DEPARTMENT	-	-	-	-
247	QUEEN CREEK FIRE DEPARTMENT	1,751,972.00	-	-	1,751,972.00
248	SONOITA ELGIN FIRE DEPARTMENT	-	-	-	-
249	CHRISTOPHER-KOHL'S FIRE DISTRICT	-	-	-	-
250	WHETSTONE FIRE DISTRICT	1,708.58	-	-	1,708.58

251	QUEEN VALLEY FIRE DISTRICT	-	-	-	-
252	LAKE MOHAVE RANCHOS FIRE DISTRICT	-	-	-	-
253	HUACHUCA CITY POLICE DEPARTMENT	-	-	-	-
254	PALOMINAS FIRE DISTRICT	-	-	-	-
255	SUN SITES PEARCE FIRE DISTRICT	-	-	-	-
256	PONDEROSA FIRE DISTRICT	-	-	-	-
257	TIMBER MESA FIRE AND MEDICAL DIST	-	-	-	-
258	CENTRAL AZ. FIRE AND MEDICAL AUTH	-	42,178,027.54	-	42,178,027.54
259	COPPER CANYON FIRE AND MEDICAL	-	5,814,127.49	-	5,814,127.49
260	MOUNTAIN VISTA FIRE DISTRICT	-	-	-	-
261	BEAVER DAM/LITTLEFIELD FIRE DIST.	25,000.00	25,000.00	25,000.00	75,000.00
262	BLUE RIDGE FIRE DISTRICT	-	-	100,000.00	100,000.00
263	ARIZONA FIRE & MEDICAL AUTHORITY	-	28,515,124.97	-	28,515,124.97
264	TAYLOR SNOWFLAKE FIRE & MEDICAL I	-	-	-	-
265	QUEEN CREEK POLICE DEPARTMENT	-	-	6,900,000.00	6,900,000.00
TOTALS		1,035,186,669.41	2,217,052,462.93	325,920,597.18	3,578,159,729.52

Unallocated and Former Employers

CORP Totals	543,174,500.21	632,114,647.69	110,186,033.47	1,285,475,181.37
Combined PSPRS & CORP	1,578,361,169.62	2,849,167,110.62	436,106,630.65	4,863,634,910.89

Cumulative Recap by Fiscal Year				
Additional Employer Contributions:				
Thru 6/30/21	1,578,361,169.62			
Thru 6/30/22		4,427,528,280.24		
Thru 1/31/23			4,863,634,910.89	

Additional Contributions for Unfunded Liabilities - PSPRS
FY21 & FY22 Thru 6/30/22 &
FY23 Thru 1/31/23

SYS NO.	SYSTEM	FY21 Additional ER Contrib	FY22 Additional ER Contrib	FY23 Additional ER Contrib	Cummulative Additional ER Contrib
500	DEPARTMENT OF CORRECTIONS - CORP	500,000,000.00	474,635,300.00	-	974,635,300.00
501	DEPT OF JUVENILE CORRECTIONS-CORP	-	73,940,800.00	-	73,940,800.00
502	PINAL COUNTY - CORP	18,528,507.87	-	-	18,528,507.87
503	GILA COUNTY - CORP	2,564,513.57	-	-	2,564,513.57
504	GRAHAM COUNTY - DETENTION	50,000.00	-	-	50,000.00
505	MARICOPA COUNTY - CORP	557.87	10,000,000.00	110,000,000.00	120,000,557.87
506	CITY OF AVONDALE - DETENTION	-	-	-	-
507	LA PA COUNTY - DETENTION	-	-	-	-
510	YUMA COUNTY - CORP	10,228,996.54	-	-	10,228,996.54
515	PIMA COUNTY - CORP	7,195,500.00	64,311,859.73	-	71,507,359.73
520	APACHE COUNTY - CORP	1,271,336.04	-	-	1,271,336.04
525	COCHISE COUNTY - CORP	-	-	-	-
530	COCONINO COUNTY - CORP	-	-	-	-
535	MOHAVE COUNTY - CORP	-	-	186,033.47	186,033.47
540	SANTA CRUZ COUNTY - CORP	-	-	-	-
545	NAVAJO COUNTY - CORP	-	2,065,487.96	-	2,065,487.96
550	YAVAPAI COUNTY - CORP	500,000.00	500,000.00	-	1,000,000.00
555	PINAL COUNTY - DISPATCHERS	1,648,670.14	-	-	1,648,670.14
556	ORO VALLEY - DISPATCHERS	-	-	-	-
557	TOWN OF MARANA - DISPATCHERS	-	-	-	-
558	GILA COUNTY - DISPATCHERS	955,704.33	-	-	955,704.33
559	TOWN OF WICKENBURG-DISPATCHERS	230,196	-	-	230,196.00
560	GRAHAM COUNTY - DISPATCHERS	-	-	-	-
561	YAVAPAI COUNTY - DISPATCHERS	-	-	-	-
562	CITY OF SOMERTON - DISPATCHERS	-	-	-	-
563	DEPARTMENT OF PUBLIC SAFETY	-	6,352,000.00	-	6,352,000.00
564	DEPARTMENT OF PUBLIC SAFETY DETENTI	-	309,200.00	-	309,200.00
575	ADMIN OFFICE OF THE COURT	-	-	-	-
576	APACHE COUNTY - AOC	-	-	-	-
577	COCHISE COUNTY - AOC	-	-	-	-
578	COCONINO COUNTY - AOC	-	-	-	-
579	GILA COUNTY - AOC	517.85	-	-	517.85
580	GRAHAM COUNTY - AOC	-	-	-	-
581	GREENLEE COUNTY - AOC	-	-	-	-
582	LA PAZ COUNTY - AOC	-	-	-	-
583	MARICOPA COUNTY-AOC JUDICIAL BR.	-	-	-	-
584	MOHAVE COUNTY - AOC	-	-	-	-
585	NAVAJO COUNTY - AOC	-	-	-	-
586	PIMA COUNTY - AOC	-	-	-	-
587	PINAL COUNTY - AOC	-	-	-	-
588	SANTA CRUZ COUNTY - AOC	-	-	-	-
589	YAVAPAI COUNTY - AOC	-	-	-	-
590	YUMA COUNTY - AOC	-	-	-	-
TOTALS		543,174,500.21	632,114,647.69	110,186,033.47	1,285,475,181.37



PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

FISCAL YEAR 2023

BUDGET REPORT

ACTUAL AND PROJECTED EXPENSES

As of January 31, 2023



All Departments Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
ALL DEPARTMENTS BUDGET SUMMARY					
Personnel Services	13,228,072	6,791,720	5,159,988	1,276,365	9.65%
Education & Training	368,100	88,754	294,292	(14,945)	(4.06%)
Board of Trustees & DCC	2,225,645	772,934	1,452,711	-	0.00%
Professional Services	741,965	546,489	252,438	(56,962)	(7.68%)
Legal Counsel	376,000	33,441	342,559	-	0.00%
Communications	100,400	53,865	46,535	-	0.00%
Contractual Services	1,633,120	527,433	1,105,687	-	0.00%
Auditing Services (GASB)	176,500	112,925	63,575	-	0.00%
Investment Consulting	1,015,000	600,000	415,000	-	0.00%
BNY Mellon Expenses	1,200,000	-	1,200,000	-	0.00%
Operating Expenses	75,000	10,013	7,152	57,835	77.11%
Infrastructure	995,100	434,667	560,433	-	0.00%
Software	630,300	508,023	407,277	(285,000)	(45.22%)
Building	441,986	112,382	329,604	-	0.00%
All Departments Budget Total	23,207,188	10,592,645	11,637,251	977,293	4.21%
Special Projects	7,193,000	3,493,636	3,699,364	-	0.00%
All Budget Total	30,400,188	14,086,282	15,336,615	977,293	3.21%

Column Descriptions:

- 2023 Budget contains the budget approved by the Board of Trustees.
- 2023 Expenses contain actual expenses paid fiscal year-to-date as of report date
- Projected Expenses contain estimated remaining budgeted expenditures yet to be incurred and recurring non-budgeted expenditures;
- (Over) Under compares 2023 Expenses and Projected Expenses to the 2023 Budget.
- (Over) Under Budget % is the percentage of (Over) Under as compared to the 2023 Budget.

Budget Comments:



Administration Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections
As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
ADMINISTRATION DEPARTMENT BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	1,378,145	781,532	575,821	20,792	1.51%
Spot Incentive	32,967	750	32,217	-	0.00%
Payroll Expenses Other	699,428	275,902	154,439	269,087	38.47%
Total Personnel Services	2,110,540	1,058,183	762,477	289,879	13.73%
<u>Education & Training</u>					
Travel Expenses	9,500	6,774	2,726	-	0.00%
Dues & Subscriptions	20,300	29,295	5,000	(13,995)	(68.94%)
Education & Training	47,600	3,773	43,827	-	0.00%
Total Education & Training	77,400	39,842	51,553	(13,995)	(18.08%)
<u>Professional Services</u>					
Professional Services	101,000	117,581	25,000	(56,592)	(56.03%)
PSCIPP Direct Charges Prof Services	-	15,011	-	-	-
Total Professional Services	101,000	132,592	25,000	(56,592)	(56.03%)
<u>Legal Counsel</u>					
Legal Services	376,000	33,441	342,559	-	0.00%
Legal Services Litigation	-	-	-	-	0.00%
Total Legal Counsel	376,000	33,441	342,559	-	0.00%
<u>Contractual Services</u>					
Contract Services	300,000	-	300,000	-	0.00%
Total Contractual Services	300,000	-	300,000	-	0.00%
<u>Software</u>					
Software	-	-	-	-	0.00%
Total Software	-	-	-	-	0.00%
Total Administration Dept. Budget	2,964,940	1,264,058	1,481,589	219,292	7.40%

Notes:

Professional services shows projected expenses far exceeding the budget due to HRIS project that was not previously budgeted for
Dues & Subscriptions shows projected expenses exceeding the budget due to a new membership for the Administrator requested by the Board



Agency Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections
As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
AGENCY BUDGET					
<u>Communications</u>					
Postage	9,000	7,053	1,947	-	0.00%
Printing	5,000	2,016	2,984	-	0.00%
Delivery Service	1,000	192	808	-	0.00%
Total Communications	15,000	9,260	5,740	-	0.00%
<u>Operating Expenses</u>					
Operating Expenses	75,000	10,013	7,152	57,835	77.11%
Total Operating Expenses	75,000	10,013	7,152	57,835	77.11%
Total Agency Budget	90,000	19,273	12,892	57,835	64.26%

Notes:

Postage shows expenses exceeding the budget due to postage increases, Drop overpayment mailings, etc.



Building Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections
As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
<i>BUILDING BUDGET</i>					
<i>Building Expenses</i>					
Building Maintenance	215,336	66,927	148,409	-	0.00%
Building Management	40,000	22,854	17,146	-	0.00%
Building Insurance	75,000	22,600	52,400	-	0.00%
Total Building Expenses	330,336	112,382	217,954	-	0.00%
<i>Capital</i>					
Furniture & Equipment	10,000	-	10,000	-	0.00%
Building Improvements	101,650	-	101,650	-	0.00%
Total Building Improvements	111,650	-	111,650	-	0.00%
Total Building Budget	441,986	112,382	329,604	-	0.00%

Notes:



Board of Trustees Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
BOARD OF TRUSTEES BUDGET					
<u>Board of Trustees Expenses</u>					
BOT Per Diem	9,000	1,950	7,050	-	0.00%
BOT Expenses Other	90,000	33,442	56,558	-	0.00%
Total Board of Trustees	99,000	35,392	63,608	-	0.00%
<u>Board of Trustees Consultants</u>					
Actuarial Services	850,000	353,438	496,430	-	0.00%
PSCIPP Direct Charge (Actuarial Service)		132			
Legal Services Litigation	600,000	181,612	418,389	-	0.00%
Consulting Services	680,532	324,877	355,655	-	0.00%
Total Board of Trustees Consultants	2,130,532	860,059	1,270,473	-	0.00%
Total Board of Trustees Budget	2,229,532	895,451	1,334,081	-	0.00%
DC COMMITTEE BUDGET					
<u>DC Committee</u>					
DCC Meetings	1,000	50	950	-	0.00%
DCC Expenses Other	19,000	1,320	17,680	-	0.00%
Auditing Services DCC	35,000	-	35,000	-	0.00%
Consulting Services	105,000	40,000	65,000	-	0.00%
Total DC Committee	160,000	41,370	118,630	-	0.00%
Nationwide Reimbursement	(125,000)	(125,000)	-	-	0.00%
Nationwide Prior Year Carryover	(38,887)	(38,887)	-	-	
Total DC Committee after Reimbursement	(3,887)	(122,517)	118,630	-	0.00%

Notes:

Added a line to show Direct Charges incurred for the PSCIPP, the expenses are included into the FYTD column for actuarial services

Added \$150,000 for Actuarial Audit service in August Board meeting



Information Governance Department Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
INFORMATION GOVERNANCE DEPARTMENT BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	448,167	242,089	206,276	(198)	(0.04%)
Spot Incentive	12,459	-	12,459	-	0.00%
Payroll Expenses Other	195,982	99,168	70,605	26,209	13.37%
Total Personnel Services	656,608	341,257	289,341	26,011	3.96%
<u>Education & Training</u>					
Travel Expenses	2,000	2,950	-	(950)	(47.50%)
Dues & Subscriptions	2,500	520	1,980	-	0.00%
Education & Training	8,500	1,654	6,846	-	0.00%
Total Education & Training	13,000	5,124	8,826	(950)	(7.31%)
<u>Professional Services</u>					
Professional Services	7,000	3,475	3,525	-	0.00%
Total Professional Services	7,000	3,475	3,525	-	0.00%
<u>Software</u>					
Software	51,500	-	51,500	-	0.00%
Total Software	51,500	-	51,500	-	0.00%
Total Info. Governance Dept. Budget	728,108	349,856	353,192	25,061	3.44%

Notes:



Finance Department Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
FINANCE DEPARTMENT BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	920,734	514,969	392,578	13,187	1.43%
Spot Incentive	22,711	5,125	17,586	-	0.00%
Payroll Expenses Other	363,991	229,299	142,305	(7,614)	(2.09%)
Total Personnel Services	1,307,435	749,393	552,469	5,573	0.43%
<u>Education & Training</u>					
Travel Expenses	2,000	681	1,319	-	0.00%
Dues & Subscriptions	3,000	1,595	1,405	-	0.00%
Education & Training	16,500	5,535	10,965	-	0.00%
Total Education & Training	21,500	7,811	13,689	-	0.00%
<u>Professional Services</u>					
Professional Services	1,265	1,635	-	(370)	(29.25%)
Bank Services	8,200	3,742	4,458	-	0.00%
Consulting Services	-	-	-	-	0.00%
Total Professional Services	9,465	5,377	4,458	(370)	(3.91%)
<u>Auditing Services (GASB)</u>					
Auditing Services	137,000	111,350	24,075	-	0.00%
PSCIPP Direct Charge (Auditing Services)		1,575			
Auditing Services (GASB)	39,500	-	39,500	-	0.00%
Total Auditing Services (GASB)	176,500	112,925	63,575	-	0.00%
<u>Communications</u>					
1099 Distribution	20,000	15,000	5,000	-	0.00%
Total Communications	20,000	15,000	5,000	-	0.00%
<u>Contractual Services</u>					
Contract Services	-	-	-	-	N/A
Total Contractual Services	-	-	-	-	N/A
Total Finance Dept. Budget	1,534,900	890,506	639,191	5,203	0.34%

Notes: Added a line to show Direct Charges incurred for the PSCIPP, the expenses are included into the FYTD column for auditing services



Investment Legal Department Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
INVESTMENT LEGAL DEPARTMENT BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	468,002	215,062	194,674	58,266	12.45%
Spot Incentive	11,501	-	11,501	-	0.00%
Payroll Expenses Other	184,831	72,531	72,364	39,937	21.61%
Total Personnel Services	664,334	287,593	278,539	98,203	14.78%
<u>Education & Training</u>					
Travel Expenses	2,000	-	2,000	-	0.00%
Dues & Subscriptions	3,000	425	2,575	-	0.00%
Education & Training	8,000	-	8,000	-	0.00%
Total Education & Training	13,000	425	12,575	-	0.00%
Total Investment Legal Dept. Budget	677,334	288,018	291,114	98,203	14.50%



Investment Department Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
INVESTMENT DEPARTMENT BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	1,596,744	866,994	647,213	82,536	5.17%
Spot Incentive	40,384	375	40,009	-	0.00%
Payroll Expenses Other	635,667	296,740	190,192	148,735	23.40%
Total Personnel Services	2,272,795	1,164,109	877,414	231,271	10.18%
<u>Education & Training</u>					
Travel Expenses	80,000	23,384	56,616	-	0.00%
Dues & Subscriptions	4,000	1,073	2,927	-	0.00%
Education & Training	20,000	4,850	15,150	-	0.00%
Total Education & Training	104,000	29,306	74,694	-	0.00%
<u>Professional Services</u>					
Professional Services	-	-	-	-	0.00%
Investment Analytics	457,000	288,015	168,985	-	0.00%
Total Professional Services	457,000	288,015	168,985	-	0.00%
<u>Investment Consulting</u>					
Investment Consulting	1,015,000	600,000	415,000	-	0.00%
Total Investment Consulting	1,015,000	600,000	415,000	-	0.00%
<u>Software</u>					
Software	47,250	15,069	32,181	-	0.00%
Investment Book of Record	212,750	305,000	192,750	(285,000)	(133.96%)
Total Software	260,000	320,069	224,931	(285,000)	(109.62%)
Total Investment Dept. Budget	4,108,795	2,401,500	1,761,023	(53,729)	(1.31%)
<u>Mellon Direct Expense</u>					
Due Dilligence		240,731			
Legal Counsel		525,855			
Appraisals		-			
Total Mellon Direct Expense		766,586			

Notes:

Investment Book of Record line shows projected expenditures far exceeding the amount budgeted. \$285,000 added based on invoice received and request to charge here per Mark S. 12/1/22.



Investment Operations Department Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
INVESTMENT OPERATIONS DEPARTMENT BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	610,068	289,459	244,617	75,992	12.46%
Spot Incentive	15,395	625	14,770	-	0.00%
Payroll Expenses Other	242,722	125,162	78,196	39,364	16.22%
Total Personnel Services	868,185	415,246	337,583	115,356	13.29%
<u>Education & Training</u>					
Travel Expenses	10,000	-	10,000	-	0.00%
Dues & Subscriptions	2,500	250	2,250	-	0.00%
Education & Training	15,500	29	15,471	-	0.00%
Total Education & Training	28,000	279	27,721	-	0.00%
<u>BNY Mellon Expenses</u>					
Mellon Bank Fees	1,200,000	-	1,200,000	-	0.00%
Total Mellon Bank Fees	1,200,000	-	1,200,000	-	0.00%
Total Investment Operations Dept. Budget	2,096,185	415,526	1,565,304	115,356	5.50%



IT Systems Development Department Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
IT SYSTEMS DEVELOPMENT DEPARTMENT BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	789,177	395,867	300,148	93,162	11.80%
Spot Incentive	19,701	1,875	17,826	-	0.00%
Payroll Expenses Other	313,026	162,147	113,131	37,748	12.06%
Total Personnel Services	1,121,903	559,889	431,104	130,910	11.67%
<u>Education & Training</u>					
Travel Expenses	2,000	750	1,250	-	0.00%
Dues & Subscriptions	-	-	-	-	0.00%
Education & Training	47,000	150	46,850	-	0.00%
Total Education & Training	49,000	900	48,100	-	0.00%
<u>Contractual Services</u>					
Contract Services	1,200,000	504,937	695,063	-	0.00%
Total Contractual Services	1,200,000	504,937	695,063	-	0.00%
Total IT Development Department Budget	2,370,903	1,065,726	1,174,268	130,910	5.52%

Notes:



IT Network Services Department Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
IT NETWORK SERVICES DEPARTMENT BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	850,855	472,705	363,154	14,997	1.76%
Spot Incentive	20,760	-	20,760	-	0.00%
Payroll Expenses Other	335,364	215,318	123,013	(2,967)	(0.88%)
Total Personnel Services	1,206,979	688,023	506,927	12,030	1.00%
<u>Education & Training</u>					
Travel Expenses	12,000	680	11,320	-	0.00%
Dues & Subscriptions	1,000	500	500	-	0.00%
Education & Training	36,000	3,037	32,963	-	0.00%
Total Education & Training	49,000	4,217	44,783	-	0.00%
<u>Professional Services</u>					
Consulting Services	166,000	116,667	49,333	-	0.00%
Total Professional Services	166,000	116,667	49,333	-	0.00%
<u>Communications</u>					
Carrier Services	63,000	29,308	33,692	-	0.00%
Internet Reimbursement	2,400	297	2,103	-	0.00%
Total Communications	65,400	29,605	35,795	-	0.00%
<u>Infrastructure</u>					
IT Hardware	607,000	319,572	287,428	-	0.00%
Phone System Upgrade	40,000	28,330	11,670	-	0.00%
Virtual Desktop Pilot	100,000	32,127	67,873	-	0.00%
IT Services	101,100	28,849	72,251	-	0.00%
Disaster Recovery Services	42,000	25,790	16,210	-	0.00%
Cyber Insurance	105,000	-	105,000	-	0.00%
Total Infrastructure	995,100	434,667	560,433	-	0.00%
<u>Software</u>					
Software	144,300	65,185	79,115	-	0.00%
License Renewals	174,500	122,769	51,731	-	0.00%
Total Software	318,800	187,953	130,847	-	0.00%
Total IT Network Department Budget	2,801,279	1,461,133	1,328,117	12,030	0.43%

Notes:



Member Services Department Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
MEMBER SERVICES DIVISION BUDGET					
<u>Personnel Services</u>					
Salaries & Wages	2,091,408	1,056,777	777,323	257,309	12.30%
Spot Incentive	53,101	3,500	49,601	-	0.00%
Payroll Expenses Other	874,783	467,749	297,211	109,823	12.55%
Total Personnel Services	3,019,292	1,528,027	1,124,135	367,132	12.16%
<u>Education & Training</u>					
Travel Expenses	1,000	750	250	-	0.00%
Dues & Subscriptions	700	-	700	-	0.00%
Education & Training	11,500	100	11,400	-	0.00%
Total Education & Training	13,200	850	12,350	-	0.00%
<u>Professional Services</u>					
Professional Services	1,500	363	1,137	-	0.00%
Total Professional Services	1,500	363	1,137	-	0.00%
<u>Contractual Services</u>					
Contract Services	133,120	22,496	110,624	-	0.00%
Total Contractual Services	133,120	22,496	110,624	-	0.00%
Total Member Services Department Budget	3,167,112	1,551,735	1,248,246	367,132	11.59%

Notes:



Special Projects Budget to Actual

Public Safety Personnel Retirement System

Fiscal Year Projections

As of January 31, 2023

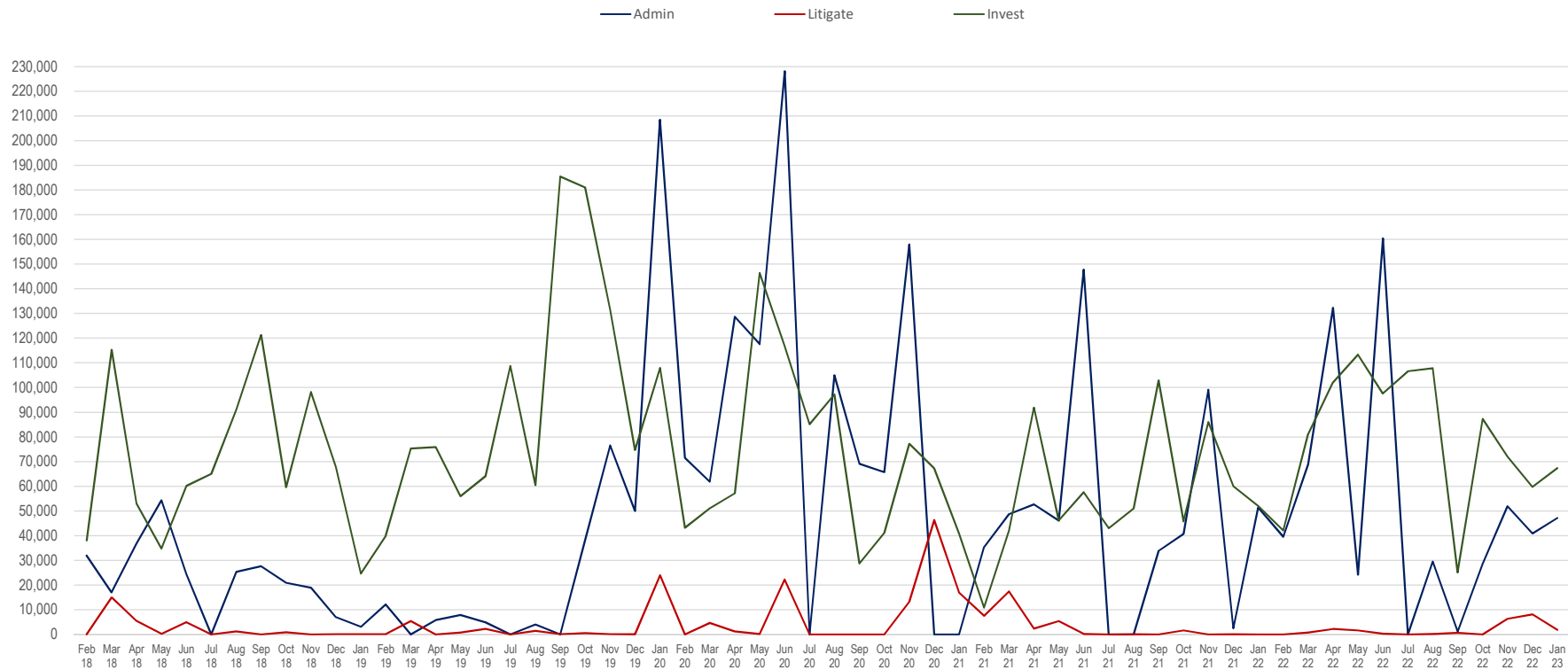
	2023 Budget	FYTD Actual	Projected Expenses	(Over) Under	(Over) Under Budget %
<i>SPECIAL PROJECTS BUDGET</i>					
<i>Pension Administration System</i>					
Consulting Services	4,128,000	2,805,983	1,322,018	-	0.00%
Contract Services	625,000	291,264	333,736	-	0.00%
Infrastructure	2,410,000	396,390	2,013,610	-	0.00%
Total Pension Administration System	7,163,000	3,493,636	3,669,364	-	0.00%
<i>Great Plains Consulting</i>					
Consulting Services	30,000	-	30,000	-	0.00%
Total 115 Trusts	30,000	-	30,000	-	0.00%
Total Special Projects Budget	7,193,000	3,493,636	3,699,364	-	0.00%

PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

TOTALS BY VENDOR

FY2023 LEGAL INVOICES PAID IN January 2023

VENDOR TYPE	AMOUNT PAID January 2023	FYTD FY2023
KUTAK ROCK		
Administration	0.00	0.00
Litigation	1,836.10	17,036.25
Investment	53,170.50	312,337.68
KUTAK TOTAL	55,006.60	329,373.93
FOLEY & LARDNER		
Administration	0.00	6,592.50
Investment	14,170.00	213,517.47
FOLEY & LARDNER TOTAL	14,170.00	220,109.97
GALLAGHER & KENNEDY		
Administration	44,140.00	181,611.50
GALLAGHER & KENNEDY TOTAL	44,140.00	181,611.50
CHARLES W. WHETSTINE		
Administration	3,036.00	11,132.00
CHARLES W. WHETSTINE TOTAL	3,036.00	11,132.00
DLA PIPER		
Investment	0.00	0.00
DLA PIPER TOTAL	0.00	0.00
Administration	\$47,176.00	\$199,336.00
Litigation	1,836.10	17,036.25
Investment	67,340.50	525,855.15
GRAND TOTAL	116,352.60	742,227.40



Public Safety Personnel Retirement System Operations Committee HR Report February 2023



Recruitment and Position Update

- Active Recruitments
 - Senior Portfolio Manager – Interviewing
 - Retirement Specialist Senior– Closes February 16th

- Promotion/Transfers
 - Harold Greene, promoted to Employer Relations Manager effective January 21st
 - Michael Garland, Retirement Specialist Senior, transferred to the Active Members team effective February 6th



Information Technology Board of Trustees Report

Respectfully submitted by CTO Michael Ajamie, February 6, 2023

IT supports PSPRS operations and transformation by aligning services to achieve core business objectives.

Intro

IT is modernizing PSPRS technology infrastructure to meet operational excellence, disaster recovery, security, and business flexibility goals. In the next Operations Committee meeting, we plan to report significant changes in *Identity & Access Management*, and its impact on the Business.

Report

This report addresses Business Continuity & Disaster Recovery. In July '21, PSPRS engaged Michael Herrera & Associates to build a disciplined BC/DR program. The following January, we presented the resulting *Current State Assessment* to Operations.

MHA & IT worked with each department to create a Business Impact Analysis and BC/DR Plan. These documents are included in your confidential materials.

Note: the original CSA was developed over 1 year ago. PSPRS acted on this assessment to institute improvements, with more planned and in-flight. So...

The next BC/DR phase will include:

1. A revised Gap Analysis,
2. Updated Current State Assessment,
3. And a BC/DR Roadmap to close the gaps.

Trustees, Thank you for your attention. I am available to answer any questions.

Sincerely,

Michael James Ajamie
Chief Technology Officer
PSPRS



MEMORANDUM

TO: SCOTT MCCARTY, CHAIRMAN AND BOARD OF TRUSTEES

FROM: MICHAEL TOWNSEND, ADMINISTRATOR

DATE: FEBRUARY 15, 2023

RE: PSPRS CY2023 AGENDA TOPICS

Agenda Title:

Review, discussion and possible Action regarding PSPRS Board and Committee agenda topics.

Background:

Attached is the list of the regularly scheduled annual agenda items in black text and planned topics to be addressed in 2023 in red text for board consideration.

The Board Chair has requested input regarding an annual strategic planning session and a joint meeting with the ASRS Board of Trustees (both are listed on the attached as placeholders).

AGENDA ITEMS, (CY2023)

JANUARY

- Legislative update
- 2nd Quarter Integrity Hotline Update
- Tier 2 and 1 gap rates legislative discussion

FEBRUARY

- Legislative update
- Quarterly Strategic Plan report
- Quarterly DC Meeting
- Quarterly NEPC report
- Quarterly investment manager compliance report
- Review CY2023 planning agendas
- Discuss timing of Chair/VC elections

MARCH

- Legislative update
- FY PSPRS Administrative Budget (Operations, Audit, Governance and Policy Committee “OAGPC”)
- Chair & Vice Chair nominations
- Contract renewal recommendations External Audit/Lobbyist (OAGPC)
- DC Committee nominations (Advisory)
- Cancer Insurance – Indemnity Structure (OAGPC)

APRIL

- Legislative update
- 3rd Quarter Integrity Hotline Update
- Administrator Evaluation
- Committee nominations
- Tier 3 policy guidance discussion and Advisory Delegation
- Allocation of Agency Expenses – Process Direction (OAGPC)
- Allocation of Investment Returns – (Investments/OAGPC)
- Contract renewal approvals External Audit/Lobbyist
- Discuss Compliance reporting to Investment/OAGPC/Administrator based on Internal Audit of Governance Manual OAGPC charter (Investments/OAGPC/Administrator)

MAY

- Legislative update
- FY PSPRS Administrative Budget approval (OAGPC)
- GASB reports (OAGPC)
- Next Year Actuarial Assumptions/Funding policy annual adoption
- Quarterly Strategic Plan report
- Cancer Insurance ACFR (OAGPC)
- Quarterly DC Meeting
- Quarterly NEPC report
- PSPRS Internal Annual Audit Plan
- Annual Risk Assessment
- Asset Allocation and potential Investment Policy Statement Revisions
- Quarterly investment manager compliance report
- Allocation of Agency Expenses action
- Allocation of Investment Returns action
- Tier 2 and 1 gap rate revisions, depending on effective date
- Cancer Insurance revised plan/transition plan (Advisory)
- Final recommendations of Compliance Officer of reporting to Investments/OAGPC/Administrator

JUNE

- Legislative session update

JULY

No meeting typically held

AUGUST

- Stress testing annual report
- Quarterly Strategic Plan report
- Quarterly DC Meeting
- Quarterly NEPC report
- Quarterly investment manager compliance report
- Annual Integrity Hotline Presentation
- Tier 3 Funding Policy recommendations (Advisory)
- Tom Sgouros analysis update
- Defining System level Stakeholder Policy, Procedure and Guidance process (OAGPC)

- Cancer Insurance revised plan document/transition plan (OAGPC)

SEPTEMBER

- Potential legislative items for new year (OAGPC)
- External Annual Financial Audit update (OAGPC)
- Yearly Board retreat (strategic planning & Trustee training)
- Operations Charter revisions recommendation (OAGPC)
- Cancer Insurance indemnity structure, plan document action (January 1 plan year)
- Auditor General PSPRS Sunset Review

OCTOBER

- Draft contribution rates, including Tier 3 considerations
- Funding Policy annual adoption, including Tier 3 considerations
- Approval of potential legislative items for new year
- PSPRS Annual Employer Seminar planning
- 1st Quarter Integrity Hotline Update
- Defining System level Stakeholder Policy, Procedure and Guidance Process draft Governance Manual updates(OAGPC)

NOVEMBER

- Quarterly DC Meeting

- Final contribution rates
- Quarterly Strategic Plan report
- Quarterly NEPC report
- Quarterly investment manager compliance report
- External Annual Financial Audit update and ACFR approval (OAGPC)

DECEMBER

If necessary