



MINUTES

**Meeting of the Investment Committee
of the Board of Trustees of the
State Universities Retirement System
Thursday, September 15, 2022, 9:00 a.m.
State Universities Retirement System
Via remote access only due to ongoing COVID-19 concerns**

The meeting on September 15, 2022, was conducted via video conference pursuant to the Governor's COVID-19 Executive Order dated August 19, 2022, and subsection (e) of Section 7 of the Illinois Open Meetings Act. Chair John Atkinson of the SURS Board of Trustees determined that a full, in-person meeting was not practical nor prudent due to the ongoing Covid-19 disaster concerns.

The following trustees were present: Mr. John Atkinson; Dr. Andriy Bodnaruk; Dr. Fred Giertz; Mr. Richard Figueroa; Ms. Jamie-Clare Flaherty; Mr. Scott Hendrie, chair; Mr. John Lyons; Dr. Steven Rock; Mr. Collin Van Meter; and Mr. Mitch Vogel.

Others present: Ms. Suzanne Mayer, Executive Director; Mr. Douglas Wesley, Chief Investment Officer (CIO); Ms. Ellen Hung, Deputy CIO; Ms. Kim Pollitt, Mr. Joe Duncan and Mr. Shane Willoughby, Sr. Investment Officers; Mr. Alex Ramos and Ms. Kelly Valle, Investment Officers; Ms. Stephany Brinkman, Investment Analyst; Ms. Bianca Green, General Counsel; Mr. Jefferey Saiger, Chief Technology Officer; Ms. Tara Myers, Chief Financial Officer; Ms. Jackie Hohn, Chief Internal Auditor; Ms. Nichole Hemming, Chief Human Resources Officer; Ms. Kristen Houch, Director of Legislative and Stakeholder Relations; Ms. Alicia Route, Legislative Analyst; Mr. Albert Lee, Associate General Counsel; Ms. Anna Dempsey, Investment Counsel; Ms. Kelly Carson, Ms. Chelsea McCarty and Ms. Annette Ackerman, Executive Assistants; Mr. David Sancewich, Mr. Collin Bebee, Ms. Hayley Tran and Ms. Ghiane Jones of Meketa; Ms. Jan Mende, Ms. Sally Haskins, Ms. Barb Bernard and Mr. Munir Iman of Callan; and Mr. Michael Calabrese of Foley.

Investment Committee roll call attendance was taken. Trustee Atkinson, absent; Trustee Bodnaruk, present; Trustee Figueroa, present; Trustee Flaherty, present; Trustee Giertz, present; Trustee Hendrie, present; Trustee Lyons, present; Trustee Rock, present; Trustee Van Meter, present; Trustee Vogel, present; and Trustee Weisbenner; absent.

APPROVAL OF MINUTES

Trustee Hendrie presented the minutes from the Investment Committee meetings of June 2, 2022.

Trustee Giertz made the following motion:

- That the minutes from the June 2, 2022 Investment Committee meetings be approved as presented.

Trustee Van Meter seconded the motion which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	aye
Trustee Hendrie	-	aye
Trustee Giertz	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	aye
Trustee Weisbenner	-	absent

APPROVAL OF CLOSED MINUTES

Trustee Hendrie presented the closed minutes from the Investment Committee meeting of June 2, 2022.

Trustee Van Meter made the following motion:

- That the closed minutes from the June 2, 2022 Investment Committee meeting be approved and remain closed.

Trustee Giertz seconded the motion which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	aye
Trustee Hendrie	-	aye
Trustee Giertz	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	aye
Trustee Weisbenner	-	absent

CHAIRPERSON'S REPORT

Trustee Scott Hendrie provided a brief overview of the items to be discussed and voted upon during the meeting.

CIO REPORT

Mr. Doug Wesley updated the board with developments over the last few months which included SURS' fourth annual Diverse Manager Week. During this event, SURS investment staff and

consultants dedicate each day of the week for discussing different strategies. This year staff met with 21 different diverse firms that offer private equity, real assets, public equity, and private credit strategies. Mr. Wesley also informed the trustees that the portfolio was rebalanced on August 11, by Parametric, SURS cash overlay manager, after a rally in public equity markets. Mr. Wesley concluded by asking trustees to please contact staff if there are any educational topics they would like to have presented during future meetings.

Copies of the staff memorandums titled “Investment Contracts Approved” and “Report from the June 2022 Investment Committee Meeting” are incorporated as part of these minutes as [Exhibit 1](#) and [Exhibit 2](#).

CLOSED SESSION

Trustee Figueroa moved that the Investment Committee go into closed session pursuant to §2(c)(7) of the Illinois Open Meetings Act to consider the sale or purchase of securities or investment or to consider an investment contract. Trustee Van Meter seconded the motion which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	aye
Trustee Hendrie	-	aye
Trustee Giertz	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	aye
Trustee Weisbenner	-	absent

RETURN TO OPEN SESSION

The Investment Committee returned to open session at 11:58 a.m.

Trustee Van Meter made the following motion:

- That based on the recommendations from SURS staff and Callan, SURS commit \$50 million to the Torchlight Debt Fund VIII, subject to successful completion of contract negotiations.

Trustee Lyons seconded the motion which failed via the following roll call vote:

Trustee Atkinson	-	nay
Trustee Bodnaruk	-	abstain
Trustee Figueroa	-	abstain
Trustee Flaherty	-	nay
Trustee Giertz	-	abstain
Trustee Hendrie	-	aye

Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	nay
Trustee Weisbenner	-	absent

The motion failed. Further discussion ensued regarding a possible Motion to Consider but no such motion was made.

RETURN TO CLOSED SESSION

Trustee Van Meter moved that the Investment Committee go into closed session pursuant to §2(c)(7) of the Illinois Open Meetings Act to consider the sale or purchase of securities or investment or to consider an investment contract. Trustee Giertz seconded the motion which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	aye
Trustee Hendrie	-	aye
Trustee Giertz	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	aye
Trustee Weisbenner	-	absent

RETURN TO OPEN SESSION

The Investment Committee returned to open session at 12:42 p.m.

Trustee Atkinson made the following motion:

- That based upon the recommendations from SURS Staff and Meketa, SURS retain Nipun Capital and William Blair for Emerging Market equity mandates with a 50/50 allocation of assets between the two managers, subject to successful completion of contract negotiations with funding from the full liquidation of the State Street Emerging Markets Index Fund.

Trustee Rock seconded the motion which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	aye
Trustee Hendrie	-	aye
Trustee Giertz	-	aye

Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	aye
Trustee Weisbenner	-	absent

FISCAL YEAR 2023 INVESTMENT PLAN

Ms. Ellen Hung presented the SURS Fiscal Year 2023 Investment Plan to the board with the purpose of recapping the prior fiscal year's performance and accomplishments and establishing the work plan for the coming fiscal year.

A copy of the staff presentation titled "FY2023 Investment Plan" is incorporated as part of these minutes as [Exhibit 3](#).

QUARTERLY PERFORMANCE REVIEW

Ms. Ghiané Jones provided a brief review of market performance through June 30, 2022, before highlighting SURS final total fund performance and peer rankings through June 30, 2022.

A copy of Meketa's presentation titled "22Q2 SURS Board Report" is incorporated as part of these minutes as [Exhibit 4](#).

RETURN TO CLOSED SESSION

Trustee Atkinson moved that the Investment Committee go into closed session pursuant to §2(c)(7) of the Illinois Open Meetings Act to consider the sale or purchase of securities or investment or to consider an investment contract. Trustee Hendrie seconded the motion which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	absent
Trustee Hendrie	-	aye
Trustee Giertz	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	aye
Trustee Weisbenner	-	absent

RETURN TO OPEN SESSION

The Investment Committee returned to open session at 2:36 p.m.

DIVERSITY UPDATE

Ms. Ghiané Jones provided a brief review of the Knight Diversity Survey Results and Meketa’s DEI annual questionnaire results. Ms. Ellen Hung provided an update regarding SURS’ commitment to diversity. Ms. Hung discussed SURS’ investment beliefs, and the staff’s diversity initiatives of the last few years, including a more efficient and streamlined method to collect diversity data. Ms. Hung also presented manager quantitative and qualitative diversity information for SURS public markets managers, and she discussed the progress made towards reaching diversity goals.

A copy of Meketa’s documents titled “Knight Diversity Survey Results,” “KDAM Industry 2021,” and “DEI Annual Questionnaire Results” are incorporated as part of these minutes as [Exhibit 5](#), [Exhibit 6](#) and [Exhibit 7](#). A copy of the staff presentation titled “SURS Diversity Update” is incorporated as part of these minutes as [Exhibit 8](#).

CONSIDERATION OF INVESTMENT POLICY AND PROCUREMENT POLICY

Ms. Ellen Hung provided information regarding the annual review of the Investment Policy. Ms. Hung discussed the proposed changes to the Defined Benefit Investment Policy and the Investment Procurement Policy.

Copies of the presentations titled “IPS Update Memo “Defined Benefit Investment Policy – ELT Approved Redlines, “Defined Benefit Investment Policy Exhibits – Final Redlines” and “Investment Procurement Policy – ELT Approved Redlines” are incorporated as part of these minutes as [Exhibit 9](#), [Exhibit 10](#), [Exhibit 11](#) and [Exhibit 12](#).

Trustee Atkinson made the following motion:

- That based upon the recommendations of SURS staff and Meketa, the revised Investment policy document for the defined benefit plan be approved, as presented.

Trustee Figueroa seconded the motion which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	absent
Trustee Hendrie	-	aye
Trustee Giertz	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	aye
Trustee Weisbenner	-	absent

Trustee Figueroa made the following motion:

- That based upon the recommendations of SURS staff and Meketa, the revised Investment Procurement Policy document be approved as presented.

Trustee Atkinson seconded the motion which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	absent
Trustee Hendrie	-	aye
Trustee Giertz	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	nay
Trustee Vogel	-	nay
Trustee Weisbenner	-	absent

CORPORATE GOVERNANCE UPDATE

Ms. Kelly Valle presented an update regarding corporate governance activity since June 2022 that included a quarterly report, a Council of Institutional Investors (CII) update, proxy voting information and an update of current events.

A copy of the staff presentation titled “Corporate Gov Update 6.30.22” is incorporated as part of these minutes as [Exhibit 13](#).

CONSULTANT SEARCH UPDATE

Ms. Ellen Hung provided an update regarding the timeline of the pending consultant searches and answered questions posed by the board.

A copy of the staff memorandum titled “Consultant Searches Update” is incorporated as part of these minutes as [Exhibit 14](#).

INFORMATIONAL ITEMS NOT REQUIRING COMMITTEE ACTION

The following items were provided for reference and are incorporated as part of these minutes.

1. [Exhibit 15](#) – Executive Summary Risk Memo
2. [Exhibit 16](#) – Executive Summary Risk Report
3. [Exhibit 17](#) – SURS FY 2022 Private Equity and Private Credit Commitments
4. [Exhibit 18](#) – Supplemental Information

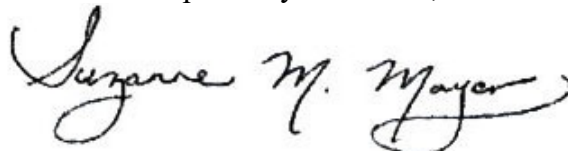
PUBLIC COMMENT

There were no public comments presented to the Investment Committee.

There was no further business brought before the committee and Trustee Van Meter moved that the meeting adjourn. The motion was seconded by Trustee Figueroa which passed via the following roll call vote:

Trustee Atkinson	-	aye
Trustee Bodnaruk	-	aye
Trustee Figueroa	-	aye
Trustee Flaherty	-	absent
Trustee Hendrie	-	aye
Trustee Giertz	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vogel	-	aye
Trustee Weisbenner	-	absent

Respectfully submitted,

A handwritten signature in cursive script that reads "Suzanne M. Mayer". The signature is written in black ink and is centered below the text "Respectfully submitted,".

Ms. Suzanne M. Mayer
Executive Director and Secretary, Board of Trustees

SMM: kc



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Investment Department

To: Suzanne Mayer
From: Douglas C. Wesley, CFA
Date: September 2, 2022
Subject: Investment Contracts Approved

The following investment agreements were approved by the Executive Director subsequent to the mailing for the June 2, 2022, Investment Committee meeting.

Defined Benefit Plan

Crow Holdings Realty Partners X

Subscription agreement and side letter were fully executed on May 26, 2022.

LongTail Alpha Tail Risk mandate

Subscription agreement and side letter were fully executed on July 11, 2022.

One River Asset Management

Subscription agreement and side letter were fully executed on July 26, 2022.

Clarion Lion Properties Fund

Subscription agreement and side letter were fully executed on July 28, 2022.

IFM Global Infrastructure Fund

Subscription agreement and side letter were fully executed on August 16, 2022.



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Investment Department

To: Investment Committee
From: Douglas C. Wesley, CFA
Date: September 2, 2022
Subject: Report from the June 2, 2022 Investment Committee Meeting

Enclosed are the Minutes of the June 2, 2022, Investment Committee Meeting. The purpose of this memorandum is to provide a status report on the action items for Investments.

Six motions were approved during the Investment Committee Meeting. These included the approval of the minutes from the April 21, 2022 Investment Committee Meeting, and that the closed session minutes from the April 21, 2022 Investment Committee Meeting be approved and remain closed. The remaining motions approved by the Board of Trustees required further action by SURS staff. Open motions requiring further action by SURS Staff are listed below.

- 1. That based on the recommendation of SURS staff and Callan, the Investment Committee approve a commitment of \$225 million to Clarion Lion Properties Fund, subject to successful completion of contract negotiations.**

Subscription agreement and side letter were fully executed on July 28, 2022.

- 2. That based on the recommendation from SURS staff and Meketa, the Investment Committee approve the retention of Capstone Investment Advisors to serve as the back-up manager for the tail risk and long volatility mandates, subject to successful contract negotiations.**

SURS staff is in the process of contract negotiations.

- 3. That based on the recommendation of SURS staff and Meketa, the Investment Committee grant discretion for staff to approve a quarterly premium spend for continued tail risk hedging up to a maximum of 15 basis points of total fund assets per quarter.**

Staff and Meketa worked with LongTail and implemented a quarterly premium spend of no more than 15 basis points of total fund assets per quarter.

- 4. That based on the recommendation from SURS staff and CAPTRUST, the Investment Committee approve replacing Janus Henderson Small-Mid Cap Value N and mapping the plan's current assets and future contributions to Earnest Partners SMID Cap Value, as soon as administratively possible.**

SURS staff is in the process of contract negotiations.

Open item from April 21, 2022

- 5. That based on the recommendation from SURS staff and Callan, a commitment of \$100 million to IFM Global Infrastructure Fund (GIF) be approved, subject to successful completion of contract negotiations.**

Subscription agreement and side letter were fully executed on August 16, 2022.

- 6. That based on the recommendation from SURS staff and Callan, a commitment of \$50 million to Crow Holdings Realty Partners X be approved, subject to successful completion of contract negotiations.**

Subscription agreement and side letter were fully executed on May 26, 2022.

- 7. That based on the recommendation from SURS staff and Meketa, the Investment Committee approve the retention of Long Tail Alpha for tail risk mandate with an initial annual premium spend of 0.3% of total fund assets, subject to successful contract negotiations.**

Subscription agreement and side letter were fully executed on July 11, 2022.

- 8. That based on the recommendation from SURS staff and Meketa, the Investment Committee approve the retention of One River Asset Management for a long volatility mandate with an allocation of approximately 1.7% of total fund assets, subject to successful contract negotiations.**

Subscription agreement and side letter were fully executed on July 26, 2022.

- 9. That the target long duration policy exposure be reduced from 4% to 2% coincident with the funding of the long volatility and tail risk strategies.**

Staff has reduced the long duration allocation to 2% and funded the LongTail (tail risk) and One River accounts as stated in items 3, 7 and 8 above.

Open item from September 13, 2018

- 10. That based on the recommendation from SURS staff and SURS investment consultant, that SURS coordinate full redemption from the KKR Prisma Codlin Fund and from the Newport Monarch Fund. At either the October or December 2018 Investment Committee meeting, staff will recommend where proceeds will be invested.**

The notifications for full redemption were submitted to KKR Prisma Codlin Fund and Newport Monarch Fund on September 19, 2018. In June 2020, assets in the KKR Prisma account were combined into the Newport Monarch to reduce administration expenses. This was made possible as both accounts are managed by PAAMCO Prisma. Total assets remaining in the hedge fund-of-funds are approximately \$3.2 million. A total of \$559.5 million has been received and all remaining distributions will be transferred to the Cash account when received.

Please advise if you have any questions prior to the September 15, 2022, Investment Committee meeting.



FISCAL YEAR 2023

INVESTMENT PLAN



Code	Product	Price	Total		3000
			2017	2018	
T0001	RICE	120	1200	1440	2500
T0002	PORK	100	850	850	2000
T0003	CORN	85	850	900	1500
T0004	PEANUT	150	300	600	1000
T0005	CHICKEN	100	2000	2500	
T0006	COCONUT	150	600	750	
T0007	MANGO	70	700	840	



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Investment Department

September 2, 2022

Board of Trustees
State Universities Retirement System
1901 Fox Drive
Champaign, IL 61820

RE: *Fiscal Year 2023 Investment Plan*

Dear Board of Trustees:

The Investment Staff is pleased to provide the SURS Investment Plan for Fiscal Year 2023. This document was developed to formalize the strategic plans for the investment portfolio for the coming year and provide transparency of the planning process. The Investment Plan for Fiscal Year 2023 marks the twelfth year of the formal plan for the SURS investment program.

The Investment Plan reviews the results of Fiscal Year 2022 and defines the strategy for Fiscal Year 2023 in accordance with the Board-approved asset-liability study and Investment Policy. Since financial markets are dynamic, revisions to the plan may be required and will be communicated to the Board in a timely manner.

The SURS investment portfolio weathered the volatile markets of the past year, its defensive structure serving to cushion the portfolio from the full impact of falling global financial markets. The SURS investment portfolio returned -1.4%, net of fees, lagging the assumed rate but significantly outpacing the policy benchmark return of -4.9%. This return marked the second best relative fiscal year return in SURS history. When compared to a universe of other large public funds, the SURS return ranks in the top decile for the one-year period ending June 30, 2022. For the three- and five-year periods, SURS ranks in the top quartile and ranks in the top third of other large public plans for the ten-year period.

From a long-term perspective, the SURS portfolio has performed well, earning an 8.1% annualized rate of return over the past 30 years, exceeding the 7.8% policy portfolio return. This return is also in excess of the 7.9% average assumed rate of return in effect over the last 30 years and the current 6.5% assumed rate of return.

As of June 30, 2022, the defined benefit plan is valued at approximately \$22.6 billion while the Retirement Savings Plan (RSP) is valued at approximately \$3.5 billion (including forfeiture and disability reserve assets). SURS also offers the new Deferred Compensation Plan (DCP), a supplemental defined contribution 457(b) type plan created in Public Act 100-0769.

Over the past several years, the portfolio has systematically and purposefully been restructured. The restructuring was designed to protect System assets and diversify the portfolio to minimize the impact of near-term negative surprises. Importantly, the new structure is expected to achieve our target expected returns with lower risk. The key portfolio change was the introduction of the Crisis Risk Offset (CRO) portfolio. First introduced in December 2019, the CRO portfolio was gradually increased to its 19% policy target weighting in February 2022. Over that period, the policy weight for the Traditional Growth portfolio (i.e., public equity), the primary funding source for CRO, was reduced from 54% to 37%. This shift from growth-oriented assets to diversifying strategies served the portfolio well in the tumultuous fiscal year.

Other key accomplishments in the defined benefit portfolio include:

- Fine-tuning of Traditional Growth portfolio structure, including graduation of a diverse firm from the Xponance manager-of-managers portfolio to a direct SURS relationship;
- Continued commitment to private market portfolios;
- Restructuring of the public/liquid credit portfolio;
- Achievement of CRO policy target as well as the completion of searches for long volatility and tail risk strategies to further diversify the CRO portfolio; and
- Continued focus on partnering with diverse investment managers. As of June 30, assets managed by diverse firms totaled \$9.3 billion, or 40.9% of the portfolio.


The new supplemental Deferred Compensation Plan (DCP), first available from participating employers on March 1, 2021, continued its rollout, with all 58 eligible SURS-covered employers having signed agreements and 56 or 58 accepting enrollments. The DCP provides members an avenue to save more and generate additional income in retirement.

Numerous projects are planned for Fiscal Year 2023, including, but not limited to, the following:

- Completion of searches for general investment consultant, defined contribution consultant and real assets consultant, as required by statute;
- Continued implementation of Private Credit and Non-Traditional Growth allocations;
- Continued review of opportunities to include firms owned by minorities, women and persons with a disability in the investment program;

The Investment Plan for Fiscal Year 2023 contains additional details on Fiscal Year 2022 accomplishments and strategic initiatives for Fiscal Year 2023. While much was achieved during Fiscal Year 2022, it is important to maintain focus on the future. The investment team and external partners continue to seek excellence in every aspect of the investment program. I look forward to discussing the *Fiscal Year 2023 Investment Plan* at future meetings.

Sincerely,


Douglas C. Wesley, CFA
Chief Investment Officer

cc: Suzanne Mayer, Executive Director



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I. Purpose

The Investment Plan reviews the results of Fiscal Year 2022 and defines the strategy for Fiscal Year 2023 in accordance with the Board-approved asset-liability study and Investment Policy¹. **This Plan is intended to be a living document. Since financial markets are dynamic, revisions to the plan may be required during the year. In the event of changing circumstances or opportunities during the year, items will be discussed with the Board as necessary.**

II. Overview

Background

SURS is the administrator of a cost-sharing, multiple employer, public employee retirement system that provides retirement, survivor, disability, and death benefits to employees of Illinois state universities, community colleges, and certain other affiliated organizations and agencies. SURS was created in 1941, by an act of the Illinois General Assembly, and is governed by the Illinois Pension Code (40 ILCS 5/15-101 et seq.). SURS provides benefit services to over 240,000 members who work for 61 employers. SURS is responsible for investing assets of approximately \$22.6 billion in a diversified portfolio across several functional asset classes, as of June 30, 2022. SURS also administers a defined contribution plan, the Retirement Savings Plan, which currently has assets of approximately \$3.5 billion (including forfeiture and disability reserve assets), as of June 30, 2022. In addition, SURS offers the Deferred Compensation Plan (DCP), a supplemental defined contribution 457(b) type plan created in Public Act 100-0769.

Fiscal Year 2022 Performance Review

The SURS investment portfolio weathered the volatile markets of the past year, its defensive structure serving to cushion the portfolio from the full impact of falling global financial markets. The SURS investment portfolio returned -1.4%, net of fees, lagging the assumed rate but significantly outpacing the policy benchmark return of -4.9%. This return marked the second best relative fiscal year return in SURS history.

Over the past several years, the portfolio has systematically and purposefully been restructured. The restructuring was designed to protect System assets and diversify the portfolio to minimize the impact of near-term negative surprises. Importantly, the new structure is expected to achieve our target expected returns with a lower risk. The key portfolio change was the introduction of the Crisis Risk Offset (CRO) portfolio. First introduced in December 2019, the CRO portfolio was gradually increased to its 19% policy target weighting in February 2022. Over that period, the policy weight for the Traditional Growth portfolio (i.e., public equity), the primary funding source for CRO, was reduced from 54% to 37%. This shift from growth-oriented assets to diversifying strategies served the portfolio well in the tumultuous fiscal year.

The table that follows illustrates the performance of the overall SURS investment portfolio relative to the policy portfolio and average assumed rates of investment return, as of June 30, 2022.

¹ The SURS Investment Policies can be found at <https://surs.org/business/investments/policy-and-procurement-practices>.

Investment Performance*
As of June 30, 2022

	1 Year	3 Years	5 Years	10 Years	20 Years	25 Years	30 Years
SURS	-1.4%	7.8%	7.5%	8.3%	7.5%	7.0%	8.1%
Policy Portfolio	-4.9%	6.4%	6.8%	7.9%	7.4%	6.8%	7.8%
SURS Assumed Rate	6.5%	6.7%	6.7%	7.0%	7.6%	7.8%	7.9%

*Net of investment management fees

The Total Fund's outperformance relative to the policy portfolio for Fiscal Year 2022 was due to several factors, including:

- Performance that matched or exceeded the benchmark in each of the six major functional asset classes.
- Outperformance by the private equity, non-core infrastructure and non-core farmland components of the Non-Traditional Growth portfolio;
- Outperformance by the Traditional Growth public equity portfolio;
- Outperformance by the stabilized real assets, public credit, and private credit fixed income segments of the Stabilized Growth portfolio;
- Strong relative performance by the Principal Protection portfolio; and
- Outperformance by each of the three sub-components of the Crisis Risk Offset class (Long Duration, Systematic Trend Following, and Alternative Risk Premia).

Highlights for FY 2022:

- The CRO portfolio, a relatively new addition to the SURS portfolio, effectively served to shield the portfolio from the full effects of the downturn in public financial markets. Overall, the CRO portfolio, which returned +12.2% during FY 2022, outpaced its benchmark by +3.8%. In addition to the strong relative performance, it is instructive to consider how the portfolio would have fared in the absence of the CRO strategies. The CRO assets were generally sourced from the public equity and emerging market debt portfolios, areas which have been hit particularly hard during the fiscal year. The market downturn helped illustrate the importance of a prudently diversified portfolio.
- Portfolio sub-classes with strong absolute returns for the fiscal year were:
 - Stabilized Real Assets (Stabilized Growth) +31.6% vs. +27.1% benchmark
 - Non-Core Real Estate (Non-Traditional Growth) +29.0% vs. +29.1% benchmark
 - Private Equity (Non-Traditional Growth) +26.7% vs. +8.1% benchmark
 - Systematic Trend Following (CRO) +26.0% vs. +23.6% benchmark
- Portfolio sub-classes with strong relative returns for the fiscal year were:
 - Private Equity (Non-Traditional Growth) Excess return of +18.6%
 - Alternative Risk Premia (CRO) Excess return of +6.2%
 - Stabilized Real Assets (Stabilized Growth) Excess return of +4.5%
 - Non-Core Infrastructure (Non-Traditional Growth) Excess return of +3.0%
 - Systematic Trend Following (CRO) Excess return of +2.4%
 - U.S. Equity (Traditional Growth) Excess return of +1.9%
 - Global Equity (Traditional Growth) Excess return of +1.9%
- Although still in early days, the Private Credit sub-class is off to a good start, providing strong absolute and relative returns.

Performance of each of the broad asset classes during FY 2022 is shown in the table that follows.

SURS FY 2022 Asset Class Returns (Net of Fees)

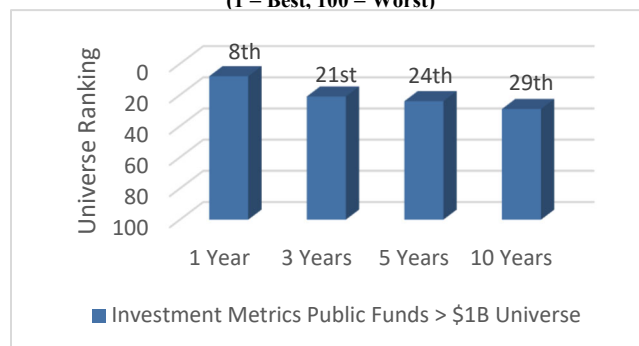
Asset Class	FY 2022 Return	Asset Class	FY 2022 Return
Growth-Oriented		Diversifying	
Non-Traditional Growth	26.2%	Inflation Sensitive	-5.1%
Performance Benchmark	11.4%	Performance Benchmark	-5.1%
Excess	14.8%	Excess	0.0%
Traditional Growth	-14.9%	Principal Protection	-6.8%
Performance Benchmark	-16.5%	Performance Benchmark	-7.6%
Excess	1.6%	Excess	0.8%
Stabilized Growth	0.1%	Crisis Risk Offset	12.2%
Performance Benchmark	-2.5%	Performance Benchmark	8.4%
Excess	2.6%	Excess	3.8%

From a long-term perspective, the SURS portfolio has performed well, earning an 8.1% annualized rate of return over the past 30 years, exceeding the 7.8% policy portfolio return. This return is also in excess of the 7.9% average assumed rate of return in effect over the last 30 years and the current 6.5% assumed rate of return. In inflation-adjusted terms, the Total Fund returned 5.9% over this time period, exceeding the current actuarial real assumed rate target of 4.25% (6.5% less the 2.25% assumed rate of price inflation).

Peer Analysis

When compared to a universe of other large public funds, the SURS return ranks in the top decile for the one-year period ending June 30, 2022. For the three- and five-year periods, SURS ranks in the top quartile and ranks in the top third of other large public plans for the ten-year period. The primary reason for the strong results in the shorter-term periods is a more defensive posture compared to peers. The SURS portfolio has a lower public equity allocation and a higher Crisis Risk Offset allocation than the median plan in the universe. While this positioning will result in weaker relative results in very strong equity markets like those seen in FY 2021, it has provided critical downside protection during periods of significant equity market declines seen during FY 2022. Asset allocation is the primary determinant of a fund's ranking in a peer universe.

SURS Total Fund Return vs. Public Funds > \$1 Billion
Periods Ending 6/30/22
(1 = Best, 100 = Worst)



III. Asset Allocation Framework

The purpose of the asset allocation policy is to establish an Investment Policy framework for SURS with a high likelihood, in the Board’s judgment, of realizing SURS’ investment objective. This is a critical step as the continued sustained growth of SURS assets is a necessary component to achieving long-term sustainability. SURS asset allocation framework organizes SURS’ assets within a functional framework rather than the descriptive-oriented asset-based framework. In this approach, assets are grouped by similar risk profiles, rather than asset class name.

Industry best practices suggest completing an asset-liability (A-L) study every three-to-five years. SURS has adhered to this practice by completing recent studies in 2011, 2014, 2018, and 2021. In June 2021, SURS completed the comprehensive 2020/2021 Asset-Liability Study that culminated in a new long-term policy portfolio. This new long-term policy portfolio was an extension of the major decisions and portfolio alterations that were approved by the Board as a result of the 2018 Asset-Liability Study. A related, but technically separate, decision by the Board was the lowering of the assumed investment return (for actuarial purposes) from 6.75% to 6.50% as of 6/30/21.

The goals of the 2021 asset-liability process were as follows:

1. To minimize the likelihood of material deterioration in the funded ratio over the near-term;
2. To achieve a long-term funded ratio in-line with the statutory goal of 90% in 2045;
3. To maintain contributions within a reasonable band and with a reasonable volatility; and
4. To improve the portfolio’s expected efficiency by achieving portfolio performance targets in-line with the current actuarial rate and at a similar or lower expected risk than the current portfolio.

At the conclusion of the study in June 2021, the Board adopted the long-term strategic policy targets shown in the table that follows. This asset mix is positioned to generate an expected return in-line with the current actuarial rate and offers an attractive mix of liquidity, drawdown protection, and expected return. Currently, four of the six broad functional classes are at target weight. The only functional classes not at target are Non-Traditional Growth and its funding source, Traditional Growth. Annual pacing plans within the Non-Traditional Growth class, comprised of private equity and non-core real assets investments, will move the class to the target over time.

	Functional Asset Class	Current Policy Target as of 7/01/22	Long-Term Strategic Policy Target
Growth-oriented	Non-Traditional Growth	14%	16%
	Traditional Growth	37%	35%
	Stabilized Growth	17%	17%
Diversifying	Inflation Sensitive	5%	5%
	Principal Protection	8%	8%
	Crisis Risk Offset	19%	19%

At the highest level, assets are classified as either growth-oriented or diversifying strategies, as shown in the following tables.

Growth-oriented strategies include risk-taking assets or strategies that produce high total returns relative to other asset classes. Success in this category is often linked to economic success or failure. The three strategic components within this group are shown and described below.

Role	Group	Description
Growth	Non-Traditional Growth	Provide growth in excess of Traditional Growth through exposure to investments driven by exposure to the equity risk and illiquidity risk premiums (i.e., Private Equity and Non-Core Real Assets)
	Traditional Growth	Provide growth in line with traditional global public equity markets
	Stabilized Growth	Provide growth through strategies that are exposed to market beta, exhibiting expected returns similar to Traditional Growth but with lower volatility (i.e., Credit fixed income, options strategies, and Core Real Assets)

Diversifying strategies provide two forms of diversification via anchor strategies and offset strategies. Anchor strategies are characterized by low volatility and high liquidity. Offset strategies, in contrast, tend to be higher volatility strategies that have zero-to-negative correlation to public equity markets. These strategies, described in the table that follows, are designed to perform well in the event of a prolonged equity market downturn.

Role	Group	Description
Diversifying	Inflation Sensitive	Serves a mixed role as part anchor (i.e., TIPS) and part offset depending on the market environment. Designed to help protect the portfolio during periods of high inflation.
	Principal Protection	Provide an anchor to the portfolio by exhibiting low volatility with minimal exposure to equity risk. Designed to provide consistent, stable returns during most market environments and preserve principal during periods where growth investments are experiencing significant drawdowns (i.e., Core Fixed Income).
	Crisis Risk Offset	Provide an offset to growth risk through liquid exposures to risk premiums expected to exhibit offsetting behavior to growth investments during periods of significant drawdown (i.e., Long Duration Treasury, Systematic Trend Following, Alternative Risk Premia, Tail Risk and Long Volatility)

IV. Fiscal Year 2022 Accomplishments

Much of the activity completed during Fiscal Year 2022 was tied to implementation of the strategic policy targets approved in June 2021. The portfolio structure is designed to produce improvement in long-term expected returns with significantly improved volatility and downside risk measures, with a much tighter range of projected return paths, compared to the previous allocations. Key projects completed include the following:

Growth-Oriented Strategies

- **Traditional Growth Portfolio** – Over the past year, much of the work in the traditional growth portfolio (public equities) has been related to fine-tuning the portfolio structure, as discussed below.
 - **Allocation to a Passive Emerging Markets Equity Strategy** – This action was taken to bring the portfolio’s structural underweighting to emerging markets in line with the overall Traditional Growth portfolio benchmark.
 - **Initiation of a Search for Active Emerging Markets Equity Managers** – A search for emerging markets managers was initiated in early 2022. Once the search is completed, assets are expected to transition from the passive emerging markets strategy to one or more active managers. SURS received 72 responses from firms by the March 31, 2022, deadline. Staff and Meketa are in the process of reviewing responses and are conducting interview of semi-finalist candidates. Finalists are scheduled to be considered by the SURS Board in September 2022.
 - **Revision to Investment Manager Line-Up** – In April 2022 the Board approved changes to the investment manager line-up. Two U.S. equity mandates were terminated, with assets transitioning to two existing global equity accounts and one existing passive U.S. equity strategy. These changes were implemented to emphasize higher conviction managers and reallocate/consolidate assets to a broad passive mandate. In addition, the revisions also continue the move to a more global portfolio structure.
 - **Graduation of Manager from Xponance Portfolio** – In December 2021, Solstein Capital was promoted from the Xponance Asset Management Manager-of-Managers portfolio to a direct relationship with SURS and allocated additional assets of approximately \$60 million. Solstein has managed a non-U.S. equity portfolio for SURS via Xponance since October 2017 and has produced excellent performance relative to benchmark since inception.
- **Stabilized Growth Portfolio** – The Stabilized Growth portfolio is made up of four components: Core Real Assets, Private Credit, Liquid Credit, and Options Strategies.
 - **Continued Commitment to Core Real Assets Portfolio** – The June 2021 asset-liability study substantially increased the targets to the two components of Real Assets.
 - Stabilized Growth (Core) was increased from 6% to 8% of total assets
 - Non-Traditional Growth (Non-Core) was increased from 4% to 5% of total assets

In December 2021, Callan, SURS non-discretionary real assets consultant, completed a pacing study to forecast how much additional capital will be required each year for SURS to reach and maintain its policy targets for the Real Assets portfolio. In line with this analysis, the SURS Board approved the following commitments to the core real assets portfolio during FY 2022²:

- IFM Global Infrastructure Fund (\$100 million)
 - Clarion Lion Properties Fund (\$225 million)
 - GI Partners ETS Fund (\$75 million)
- **Continued Buildout of Private Credit Portfolio** – In September 2020, the Board selected Meketa Investment Group as discretionary private credit advisor. In their role, Meketa will assist in the buildout of this new segment of the overall credit portfolio. The discretionary advisor provides a high level of control on private credit portfolio construction, pacing and evaluation.

In February 2022, Meketa completed a strategic plan and five-year pacing model for private credit designed to grow the portfolio to its 5% strategic policy target over the next several years. The annual commitment target was initially set at \$500-\$550 million per year. The emphasis during FY 2022 was on building core positions and introducing a co-investment program. During FY 2022, commitments totaling \$425 million were made to five private credit investments. Even though the portfolio is relatively young, SURS has already seen strong performance from the opportunistic investments in the private credit portfolio. Partnering with MWDBE firms remains a priority, and during the fiscal year, commitments to diverse-owned firms represented \$50 million of the total.

- **Restructuring of Public/Liquid Credit Portfolio** – The June 2021 asset-liability study included a lower target allocation for the stabilized growth portfolio, specifically lowering the allocation to public credit from 14% to 2% over the long term. As the allocation to public credit is reduced, the need to maintain the current number of managers within the portfolio is diminished.

As a result, in February 2022, the Board approved the elimination of two dedicated Emerging Market Debt strategies to eliminate redundancies and increase efficiency in the public credit portfolio. This action resulted in the liquidation of approximately \$340 million of Emerging Market Debt commingled funds, the proceeds of which were reallocated, along with other redemptions from the Stabilized Growth portfolio, to the Principal Protection and Crisis Risk Offset portfolios in a rebalancing effort. Manager guidelines and benchmarks for the remaining public/liquid credit managers were updated to include emerging market debt within their existing portfolios.

- **Non-Traditional Growth Portfolio** – The Non- Traditional Growth portfolio consists of the private equity and non-core real assets portfolios.
 - **Private Equity** – Aksia has served as SURS’ discretionary private equity advisor since September 2019. As discretionary advisor, Aksia evaluates the existing

² Commitments were approved by the Board during FY 2022 but closed in FY 2023.

private equity portfolio, assists in strategy formulation, and, after thorough investment and operational due diligence, selects funds for investment on SURS' behalf. During FY 2022, SURS made a total of 16 commitments to private equity investments, totaling \$515 million. These commitments were in accordance with the strategic plan and pacing model completed by Aksia in December 2021. Importantly, 21% of the commitments during this period were made to diverse firms. Highlights of commitments made during FY 2022 include:

- **Increased Exposure to the European/Nordic Region** – In order to better reflect the composition of the global private equity universe, additional commitments were made by Aksia to experienced General Partners for investment in the Nordic/European regions.
 - **Continued Emphasis on Co-Investments** – SURS continues to emphasize co-investments in the portfolio. Co-investments offer benefits of investing directly into private companies at a significantly reduced cost.
- **Non-Core Real Assets**
 - **Consideration of Non-Traditional Growth Real Assets Strategies**
Over the past year, commitments were made to further diversify the non-core real assets portfolio to include additional real estate and infrastructure exposure. During FY 2022, the Board approved the following commitments in accordance with the strategic plan and pacing study recently completed by Callan.
 - Non-Traditional Growth
 - Pantheon Global Infrastructure Fund IV (\$100 million)
 - Blackstone Real Estate Partners Asia Fund III (\$50 million)
 - Brasa Real Estate Fund II (\$40 million, or 10% of total fund commitments)
 - Crow Holding Realty Partners X (\$50 million)
 - Cabot Industrial Value Fund VII (\$50 million)

Diversifying Strategies

- **Crisis Risk Offset Continued Implementation**
 - **Continued Transition Toward Policy Target** – The CRO class, first introduced to the portfolio with a 5% allocation in January 2020, is designed to mitigate large total portfolio risks and is expected to provide significant positive returns during a Growth Risk crisis. The allocation was increased to 10% in July 2020. In late 2020, further implementation was paused until the asset-liability study was completed.

In June 2021, the Board approved new policy targets, reducing the long-term policy goal for CRO from 20% to 19%. After the June 2021, meeting, staff initiated changes to increase the actual CRO allocation from 10% to 15% to gradually move the portfolio toward the 19% target. Finally, in February 2022, staff made recommendations to eliminate the dedicated emerging market debt allocation and fund CRO to its target weight of 19%. These changes were implemented in late February 2022.

- **Search for Long Volatility and Tail Risk Strategies** – In September 2021, Meketa provided education to Trustees on long volatility and tail risk strategies.

These strategies are sometimes called “first responder” strategies in that they serve as a hedge during a Growth Risk (public equities) crisis. In December 2021, a search was launched for long volatility and tail risk strategies to help supplement the “first responder” portfolio function.

The search concluded in April 2022 with the retention of two firms providing long volatility and tail risk hedging strategies. These strategies will work in conjunction with the existing long duration strategy in fulfillment of the “first responder” role. In total, “first responder” strategies comprise 4% of the 19% CRO class. Coincident with the funding of the long volatility and tail risk mandates, the target long duration policy target was reduced from 4% to 2%, with the remaining 2% allocated to the new strategies. In June 2022, the Board approved the retention of a third manager to serve as a back-up for the tail risk and long volatility mandates.

Defined Contribution Plans

- **Recognition for Innovative Plan Design**
 - SURS received a Leadership Recognition Award from the National Association of Government Defined Contribution Administrators (NAGDCA) in the category of Plan Design and Administration.
 - SURS was recognized by Pensions & Investments (P&I) and the Defined Contribution Institutional Investment Association (DCIAA) with a 2021 Excellence & Innovation Award for the RSP plan redesign.
- **Continued rollout of the new supplemental Deferred Compensation Plan** – The new supplemental plan, first available from participating employers on March 1, 2021, continued its rollout, with all 58 eligible SURS-covered employers having signed agreements and 56 or 58 accepting enrollments. As of 6/30/2022, nearly 2,000 members were enrolled in the DCP. The DCP provides members an avenue to save more and generate additional income in retirement.
- **Review of the DC Investment Policy** took place during FY 2022 with no changes implemented.

Master Custodian and Securities Lending Provider Searches

- **Conclusion of Searches** – Searches for master custodian and securities lending provider were initiated in late FY 2021 and concluded during FY 2022. A custodian is a vital component to the operations, trust and administration of the SURS investment program. Custodial systems provide reliable access to investment holdings, accurate pricing information, and transaction data on a regular and timely basis. In October 2021, The Northern Trust Company was retained as Master Custodian and vendor for banking services. In December 2021, Mitsubishi was retained as securities lending provider.

Policies, Investment Beliefs & Trustee Education

- **Investment Policy Review and Revision** – SURS works with the Board, investment consultants, and legal department to make Policy changes. There are three main policies administered by the Investment Department: the defined benefit (DB) policy, defined contribution (DC) policy, and the Investment Procurement Policy.

The DB Investment Policy statement was updated multiple times during FY 2022 to revise diversity goals and asset allocation policy mix targets and benchmarks. In addition, the Board reviewed the asset and brokerage goals for the utilization of diverse firms. The DC and Investment Procurement policies were updated during FY 2021. These policies were reviewed during FY 2022 with no changes.

- **Trustee Education** – Education was provided to Trustees on a number of relevant topics, during FY 2022, including:
 - CRO First Responder Education
 - Inflation: Current Environment and Portfolio Implications
 - Securities Lending Education
 - Glass Lewis Proxy Voting Education
 - Use of Leverage in Investments
 - Cybersecurity Training
 - Blockchain and Digital Asset Opportunities
 - China Perspectives: Opportunities and Risks
 - Real Asset Investment in Prop Tech and Data Centers
 - Defined Contribution Investment Line-up Best Practices
 - Cyber Security for Plan Sponsors
 - Review of New Developments in the Law related to Defined Contribution
 - Review of Capital Market Assumptions

Diversity & Inclusion

- **Diverse Manager Week** – SURS hosted its fourth annual Diverse Manager Week during the week of August 1, 2022. SURS investment staff conducted meetings with 21 firms across different asset classes. SURS’ consultant/advisor partners also participated, with representatives from Meketa, Callan, Aksia, Fairview Capital Partners, The Bivium Group, Xponance, and CapTrust.
- **Participation in Diversity-Themed Conferences** - Staff also participates in various diversity themed conferences/webinars to make sure SURS is a familiar organization for diverse-owned firms in both public and private markets. Examples of events during the past year include:
 - Fairview Fearless Investors webinar – SURS participated as panelist in this October 2021 event
 - NAIC conference – October 2021
 - GCM Grosvenor Small & Emerging Manager Conference – October 2021
 - Texas TRS/ERS Emerging Manager Conference – January 2021
 - SURS/Xponance Diverse Manager Day-Panel Discussion – November 2021
 - Meketa 2022 Emerging & Diverse Manager Roundtable Discussion – April 2022
 - Manager Showcase with SURS (Presented by Loop Capital Markets) – May 2022
- **Graduation of MWDBE Firm from Manager-of-Managers Portfolio** – In December 2021, the Board approved the graduation of Solstein Capital from the manager-of-managers portfolio managed by Xponance to a direct relationship with SURS. Solstein has been a manager in the SURS manager-of-managers program since October 2017. The firm has performed well relative to benchmark, has a stable leadership team and has successfully

grown firm assets under management. As part of the graduation, the manager also received an additional allocation.

- **Development of New Process for Diversity Data Collection** – SURS staff has collaborated with Morningstar to develop a new data collection process focused on investment manager diversity data. SURS staff served on the initiative’s steering committee and provided input on data and reports. SURS public market managers provide data via the Morningstar portal. This effort provides a more efficient and streamlined method to collect diversity data from SURS investment managers.
- **Commitment to Diversity** – SURS continues to be strongly committed to diversity throughout the investment program. In total, 38 firms owned by minorities, women, or persons with a disability (MWDB) directly manage a total of \$9.3 billion, or 40.9% of the Total Fund, as of June 30, 2022. SURS employs a multi-strategy approach designed to maximize opportunities for qualified firms.
 - The Manager Diversity Program (MDP) is an initiative designed to identify and provide opportunities to highly successful MWDB investment management firms. Managers in the MDP contract directly with SURS. As of June 30, the MDP totals \$5.5 billion and includes 35 minority- or women-owned investment managers.
 - Second, SURS partners with two firms to construct manager of emerging managers programs. The Bivium Group manages a liquid credit portfolio, and Xponance manages non-US and global equity portfolios. These collaborations allow SURS to extend its reach into the minority manager universe. As of June 30, 2022, the Bivium program includes five minority- or women-owned investment managers (with six mandates) and has total assets of \$341 million. The Xponance portfolio includes nine minority- or women-owned investment managers (with 12 mandates) and has total assets of \$247 million, as of June 30, 2022.
 - It is important to note that SURS’ commitment to diversity extends beyond the bounds of the MDP and the Manager of Emerging Managers Programs. In addition to the firms previously mentioned, SURS contracts with one other passive MWDB firm, bringing the total number of MWDB firms in direct partnership with SURS to 38. As mentioned previously, assets managed for SURS by these 38 firms are approximately \$9.3 billion, or 40.9% of the Total Fund, as of June 30, 2022.

V. Fiscal Year 2023 Strategic Initiatives

Each year Staff and the General Investment Consultant (Meketa Investment Group) undertake initiatives to assist the Board with the goal of achieving more effective and cost-efficient implementation of investment strategies and positively contribute to the health of the System. The initiatives outlined below are often related and long term in nature.

Consultant Searches

SURS expects to spend a considerable amount of time during the coming fiscal year on various consultant searches. Requests for proposal (RFPs) were issued this summer for General Investment Consultant and Defined Contribution Consultant. Later this year, an RFP for Real Assets Consultant will be issued. Each of these searches is expected to conclude during FY 2023. State law requires that these positions be re-bid every five years. Incumbent firms are invited to participate. Consultants, along with investment staff, play an important role in advising the Board on prudent investment actions.

Implementation of Strategic Allocation Study

The asset-liability study conducted and approved during FY 2021 has largely been implemented, with only fine-tuning remaining. Much of this implementation occurred during FY 2022, and, currently, four of the six broad functional classes are at target weight. The only functional classes not at target are Non-Traditional Growth and its funding source, Traditional Growth. As is typical with private market investments, annual pacing plans are presented to gradually increase the allocation towards the targets.

Growth Oriented Strategies

- **Continued Implementation of Stabilized Growth Portfolio**
While the Stabilized Growth portfolio is at its target weight, some rebalancing remains within functional sub-classes as pacing into Core Real Assets and Private Credit portfolios will likely be ongoing for the next couple of years. Meketa, SURS' private credit specialty advisor, will continue to build out the private credit allocation, with a goal to commit to six to eight funds totaling \$500 million during FY 2023.
- **Continued Implementation of Non-Traditional Growth Allocation**
 - **Real Assets** - Staff will continue to work with Callan to implement the strategic plan and pacing model for the coming year. The pacing plan ensures SURS annually deploys capital at a level which allows attainment of the strategic plan over time. The real assets long-term target is currently 13% (8% to stabilized growth and 5% to non-traditional growth).
 - **Private Equity** – The long-term policy target for private equity is 11% of the total portfolio. During FY 2023, Aksia, SURS' discretionary private equity advisor, will continue implementation of the private equity strategic plan. An update to the pacing model is planned for Summer/Fall 2022 and is designed to maintain the portfolio at its target level.

Diversifying Strategies

- **Implementation of New CRO Strategies**

During the first quarter of FY 2023, Staff will complete implementation of the new long volatility and tail risk strategies approved by the Board in late FY 2022. Once in place, these strategies will serve to supplement the long duration strategies in the CRO class, further strengthening the “first responder” segment of the CRO class and providing additional downside protection in the event of sharp or significant equity market declines.

Deferred Compensation Plan (DCP)

In accordance with statute, SURS is in the process of preparing for automatic enrollment of new members into the DCP, as of July 1, 2023. Participation in DCP is voluntary and complements other SURS retirement plans. Supplemental savings play a critical role in retirement readiness.

Investment Policy Review

The Investment Policy was last reviewed and approved by the Board at the April 2022 Investment Committee meeting. Additional review will be conducted and potential revisions to the Policy will be considered during FY 2023.

Diversity Initiatives

SURS will continue to review opportunities in the investment program to consider the utilization of minorities, women and persons with a disability. Investment managers of diversity are always encouraged to participate in the search process if an applicable strategy/mandate is identified. In August 2022, SURS hosted its fourth annual Diverse Manager Week. Investment managers in strategies across the portfolio were invited to present to staff and corresponding consultants (either general or specialty). In total, 21 diverse owned firms participated in meetings during the week.

Investment Manager Oversight, Due Diligence, and Risk Management

A critical duty of the investment team and Meketa is to monitor the numerous investment managers under contract with SURS. Each manager plays a role in the success of the overall program and extensive resources are utilized to ensure strategies are functioning as desired and in accordance with guidelines. If necessary, staff and Meketa collaborate to make any necessary revisions to a manager’s guidelines.

Risk management monitoring of the program continues to expand and evolve with the implementation of BlackRock’s Aladdin, a risk analytics tool. Once fully implemented, it will provide a comprehensive view of SURS portfolio and zero in on exposure across every portfolio and functional classes. It will also allow staff to monitor risk factors and run stress tests across various scenarios. In addition to the new risk system, staff will continue implementation of a new software program designed to more efficiently manage documents and provide analytics for the expanding private markets portfolio.

Search for Database and Analytics Service Provider

SURS staff currently uses eVestment, a service which provides institutional investment data, analytics and market intelligence covering public and private markets. The service is used for manager due diligence, selection and monitoring of investment managers. An RFP for investment manager database and analytics services is planned for FY 2023. The objective of the RFP is to establish a multi-year contract with a database vendor (eVestment will be invited to rebid). A multi-year contract is expected to provide cost savings over the current annual renewal framework.

Investment Management Fees

SURS pays close attention to the level of investment management fees paid to its external investment managers. Fees are negotiated with investment managers prior to the commencement of the relationship with SURS and may be subsequently renegotiated, if appropriate, especially in instances where an investment manager receives an additional allocation(s). Fees vary significantly among investment managers, with the services of private markets managers, such as those in real assets and private equity being generally higher than those of public market managers.

During Fiscal Year 2022, staff negotiated more favorable fee arrangements with fifteen new and existing investment service providers. In aggregate, these fee negotiations are expected to result in nearly \$2.1 million in fee savings.

In total, SURS paid approximately \$106.4 million or approximately 45 basis points in investment management fees and administrative expenses for Fiscal Year 2022. Total investment management fees for Fiscal Year 2023 are projected to increase by \$16.1 million from fiscal year 2022 budgeted fees and include fees paid directly from alternative asset funds. This increase is due to the continued growth of the CRO and non-traditional growth portfolios.

VI. Environmental, Social & Governance (ESG) Issues

SURS continues to place a high priority on ESG issues. Illinois statute 40 ILCS 5/1-113.6, effective January 1, 2020, requires that SURS Investment Policy include material, relevant, and decision-useful sustainability factors to be considered by the Board, within the bounds of financial and fiduciary prudence, in evaluating investment decisions. Such factors must include, but are not limited to: (1) corporate governance and leadership factors; (2) environmental factors; (3) social capital factors; (4) human capital factors; and (5) business model and innovation factors, as provided under the Illinois Sustainable Investing Act. Revisions to the Investment Policy were made during FY 2020 to comply with this new statute. In addition, a related item has been added to the SURS Board of Trustees' Investment Beliefs.

Proxy voting is one important component of the System's corporate governance responsibilities. In September 2021, SURS concluded a search for a proxy voting and research service provider. After a thorough evaluation, Glass Lewis was retained. Additional actions pertaining to corporate governance include membership in the Council for Institutional Investors (CII), a nonprofit organization of more than 140 public, union and corporate employee benefit plans, endowments and foundations with combined assets of approximately \$4 trillion. CII is a "leading voice for effective corporate governance, strong shareowner rights and sensible financial regulations that foster fair, vibrant capital markets." Additionally, CII "works with its members to identify and promote effective engagement practices between companies and their shareholders and best disclosure of company policies on engaging with shareholders."

On October 19, 2017, SURS became a signatory to the Investor Stewardship Group (ISG), joining more than 70 U.S. and international investors with combined assets in excess of \$32 trillion. The ISG establishes a framework comprised of a set of stewardship principles for institutional investors and corporate governance principles for U.S. listed companies.

VII. Manager Diversity Program

Overview

The Manager Diversity Program (MDP) is an initiative designed to identify and provide opportunities to highly successful investment management firms owned by minorities, women, and persons with a disability.

Key items of note:

- Developed in 2004 to identify and retain MWDB firms
- Managers contract directly with SURS
- Market Value of \$5.5 billion, as of June 30, 2022

Asset Class	Number of MWDB Managers	Market Value* as of June 30, 2022	Commitment Amount (Private Equity, Real Assets & Private Credit Only)
Traditional Growth			
U.S. Equity	1	\$109 million	N/A
Non-U.S. Equity	4	\$955 million	N/A
Global Equity	4	\$880 million	N/A
Non-Traditional Growth			
Private Equity	10	\$484 million	\$650 million
Non-Core Real Assets	7	\$161 million	\$455 million
Stabilized Growth			
Options	1	\$188 million	N/A
Private Credit	2	\$35 million	\$100 million
Principal Protection	4	\$1,724 million	N/A
Crisis Risk Offset			
Systematic Trend	1	\$580 million	N/A
Alternative Risk Premia	1	\$364 million	N/A
Total	35	\$5,479 million	

*Totals may not add due to rounding

Fiscal Year 2022 MDP Accomplishments

As of June 30, 2022, the MDP is valued at approximately \$5.5 billion. A summary of MDP activities follows.

- In partnership with Aksia, SURS made private equity commitments totaling \$143 million to MWDBE-owned private equity firms during FY 2022. This total includes commitments to both fund investments and co-investments with diverse-owned firms. Commitments were made to the following funds during FY 2022, although not all had drawn capital by June 30, 2022:
 - Clearlake Capital Partners VII
 - Base10 Partners III
 - Oak HC-FT Partners V
- SURS made direct private credit allocations via our private credit advisor, Meketa. Commitments were made to the following fund during FY 2022:
 - Turning Rock Fund II

- SURS made direct real assets allocations via our real assets consultant, Callan. Commitments were made to the following funds during FY 2022:
 - Brasa Real Estate Fund II
 - Ember Infrastructure Partners I
- SURS hosted the 4th Annual SURS Diverse Manager Week event.
- SURS graduated the following manager from the Xponance Manager of Managers Program:
 - Solstein Capital

SURS' commitment to diversity extends beyond the bounds of the MDP. In addition to the 35 firms utilized in the MDP, SURS contracts with three additional MWDB firms, bringing the total number of MWDB firms in partnership with SURS to 38. In accordance with the Investment Policy, SURS has implemented guidelines for a graduation program for firms in the manager of emerging managers program to receive direct allocations from SURS.

Assets managed for SURS by these 38 firms are approximately \$9.3 billion, or 40.9% of the Total Fund, as of June 30, 2022.

Fiscal Year 2023 MDP Initiatives

Plans for the MDP in FY 2023 include the following:

- Expand industry outreach efforts
- Host the 5th Annual SURS Diverse Manager Week event
- Continue diligent monitoring of the overall program, manager structure, and risk parameters within the program
- Identify potential opportunities to increase funding to existing qualified investment managers
- Continued interaction with system consultant, Meketa, via more frequent discussions regarding MWDB investment managers

VIII. Defined Contribution Plans

Retirement Savings Plan

The Retirement Savings Plan (RSP) is a 401(a) plan type defined contribution option available to SURS members. The RSP has grown steadily since the plan's inception in April 1998. Highlights of the plan include:

- Approximately \$3.5 billion in assets as of June 30, 2022
- RSP forfeiture assets were \$14 million as of June 30, 2022
- Disability reserve assets were \$145 million as of June 30, 2022
- Administrator and recordkeeper
 - Voya Financial (\$2.9 billion of plan assets)
- Legacy service provider
 - TIAA (\$344 million of plan assets)
- Custom lifecycle solution, the SURS Lifetime Income Strategy (LIS), managed by AllianceBernstein
- 16 investment options as of June 30, 2022, including the default option of LIS.
- Over 22,000 Participants currently invested
 - 14,121 active participants
 - 8,752 inactive participants

Deferred Compensation Plan

The Deferred Compensation Plan (DCP), is a new supplemental defined contribution 457(b) type plan created in Public Act 100-0769. This plan became available to SURS members beginning in March 2021.

- Approximately \$8 million in assets as of June 30, 2022
- Administrator and recordkeeper
 - Voya Financial
- Custom lifecycle solution, the SURS Lifetime Income Strategy (LIS), managed by AllianceBernstein
- 16 investment options as of June 30, 2022, including the default option of LIS.

Fiscal Year 2022 Defined Contribution Accomplishments

- Continued the rollout of the DCP to SURS covered employers with all 58 eligible employers having signed agreements and 56 or 58 accepting enrollments. As of 6/20/2022, nearly 2,000 members were enrolled in the DCP.
- SURS received a Leadership Recognition Award from the National Association of Government Defined Contribution Administrators (NAGDCA) in the category of Plan Design and Administration.
- SURS was recognized by Pensions & Investments (P&I) and the Defined Contribution Institutional Investment Association (DCIAA) with a 2021 Excellence & Innovation Award for the RSP plan redesign.

Fiscal Year 2023 Defined Contribution Initiatives

Plans for the Defined Contribution Plan in FY 2023 include the following:

- Continue diligent monitoring of the overall program, providers, and investment options.
- Complete Defined Contribution Consultant RFP
- Prepare for automatic enrollment of new members into the DCP plan as of July 1, 2023, as outlined in Public Act 102-0540.



Illinois State Universities Retirement System

September 15, 2022

Second Quarter 2022
Board Report



Illinois State Universities Retirement System

Agenda

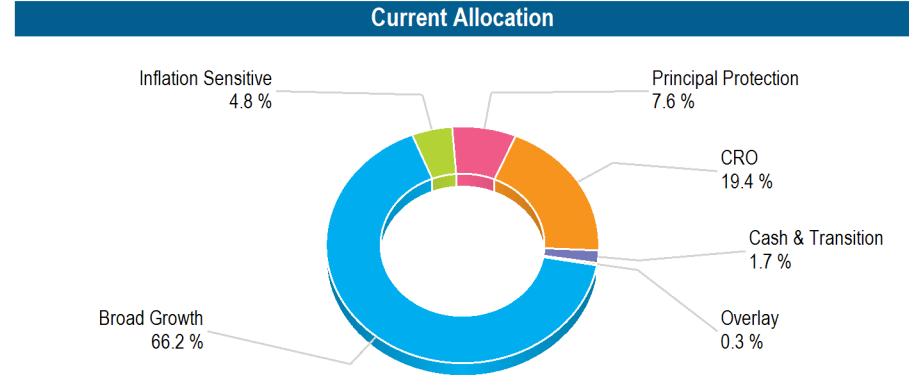
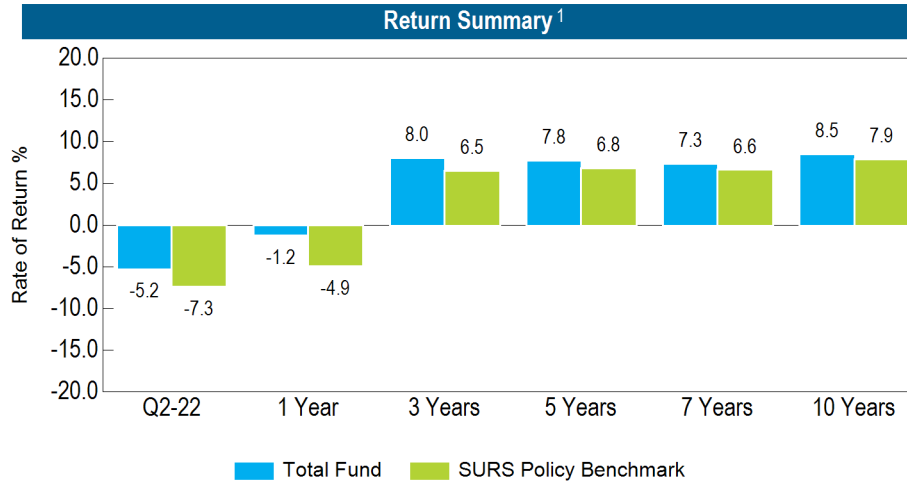
1. Performance Summary
2. Economic and Market Update
3. Total Fund
4. Private Markets Performance
5. US Equity
6. Non US Equity
7. Global Equity
8. Inflation Sensitive
9. Public Credit
10. Principal Protection
11. Crisis Risk Offset
12. Appendix

Performance Summary

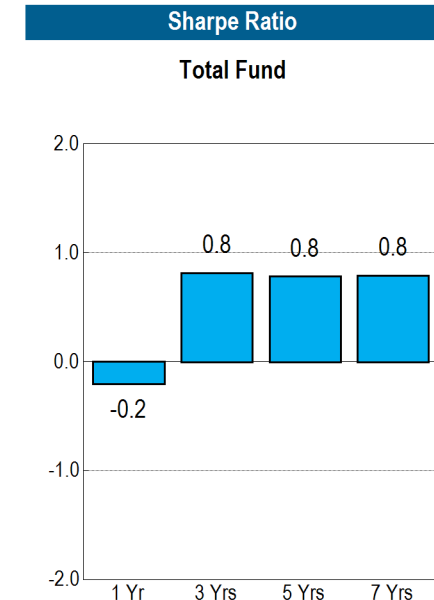
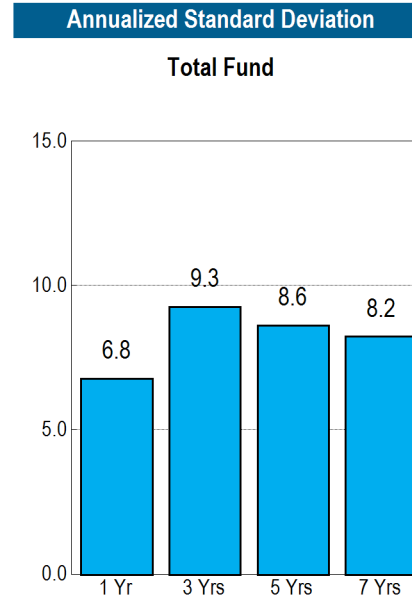
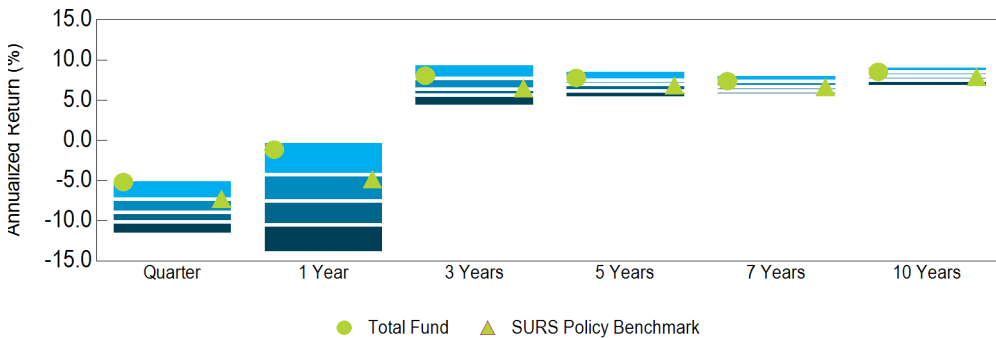


Illinois State Universities Retirement System

Total Fund | As of June 30, 2022



	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total Fund	-5.2	-1.2	8.0	7.8	7.3	8.5
<i>SURS Policy Benchmark</i>	<i>-7.3</i>	<i>-4.9</i>	<i>6.5</i>	<i>6.8</i>	<i>6.6</i>	<i>7.9</i>
Excess Return	2.1	3.7	1.5	1.0	0.7	0.6
InvMetrics Public DB > \$1B Gross Rank ²	8	8	21	24	27	29
InvMetrics Public DB > \$1B Gross Median	-8.9	-7.5	6.4	7.0	6.7	8.1



¹ Returns are gross of fees.

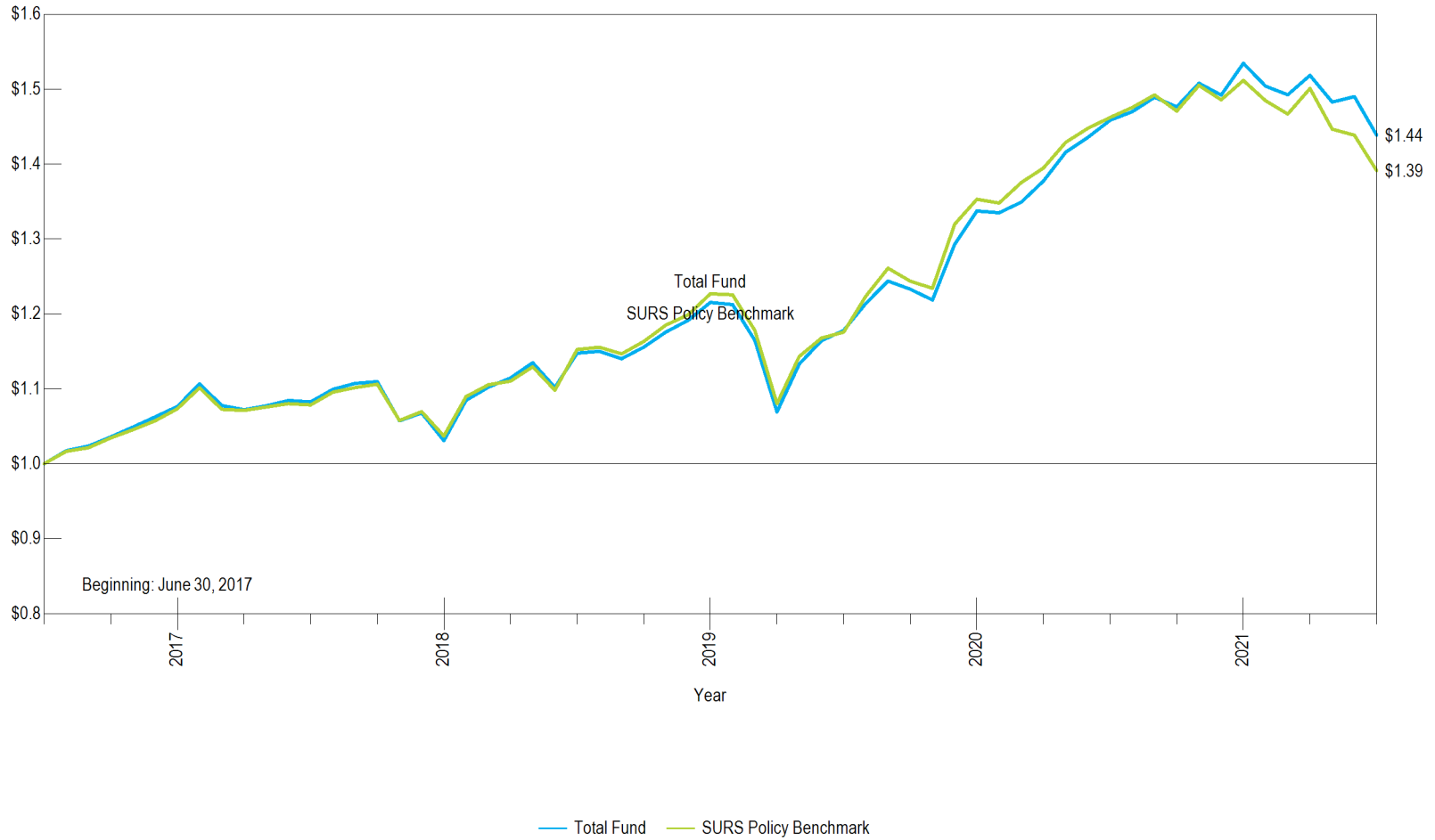
² Investment Metrics (IM) Median [Gross of Fees] - Public Fund >\$1 Billion Universe includes BNY Mellon Total Public Fund Greater than \$1Billion Universe and IM client data.



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

Growth of a Dollar 5 Years Ending June 30, 2022

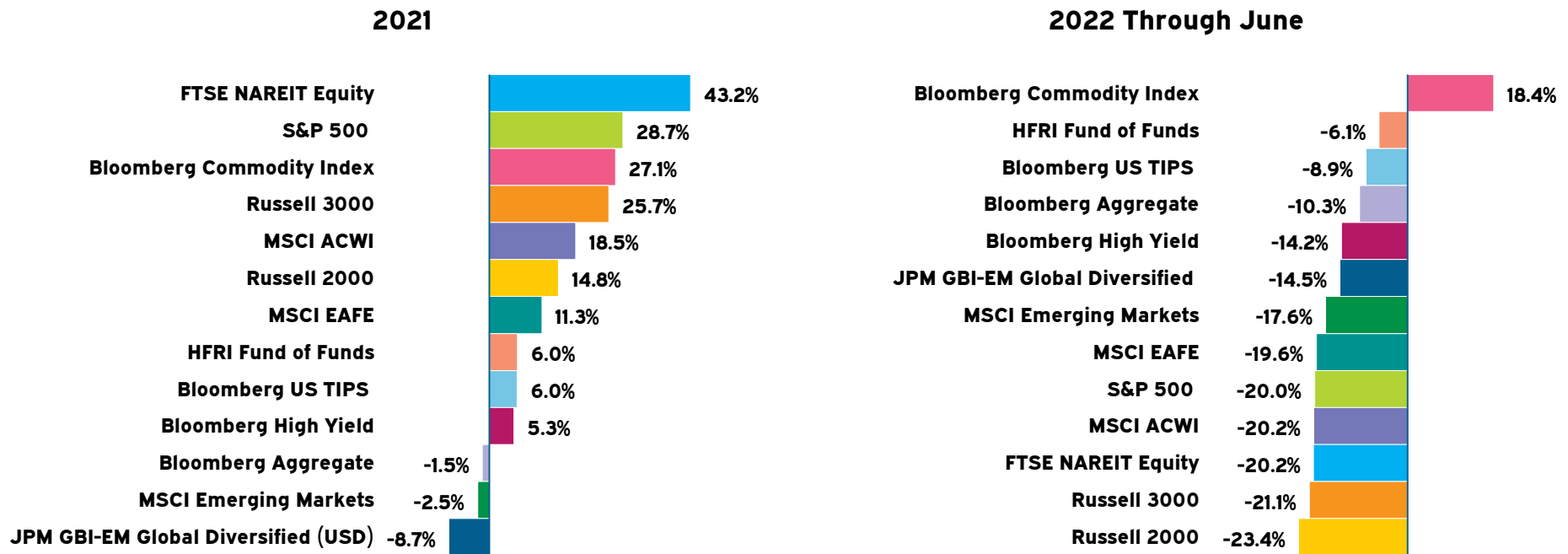


Economic and Market Update

Data as of June 30, 2022

Commentary

- Global markets resumed their sell-off in June as inflation surged in the US and Europe.
- In response, the US Federal Reserve increased interest rates 75 basis points (above prior expectations). Markets also repriced the growth outlook downward.
 - All major equity indices suffered steep declines in June. Emerging markets proved slightly more resilient than developed markets on a partial re-opening in China from pandemic related lockdowns.
 - In a reversal of the prior trend growth stocks outperformed value stocks in June.
 - The global bond selloff resumed, as inflation fears, and policy expectations weighed on all major bond markets.
- Persistently high inflation and the expected policy response, the war in Ukraine, lingering COVID-19 issues, and lockdowns in China will all have considerable economic and financial consequences for the global economy.

Index Returns¹

→ Outside of emerging markets and the broad US investment grade bond market (Bloomberg Aggregate), most asset classes appreciated in 2021.

→ In June all major asset classes posted negative returns on renewed inflation and economic growth fears, with equities experiencing the largest declines.

¹ Source: Bloomberg and FactSet. Data is as of June 30, 2022.

Domestic Equity Returns¹

Domestic Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-8.3	-16.1	-20.0	-10.6	10.6	11.3	12.9
Russell 3000	-8.4	-16.7	-21.1	-13.9	9.8	10.6	12.6
Russell 1000	-8.4	-16.7	-20.9	-13.0	10.2	11.0	12.8
Russell 1000 Growth	-7.9	-20.9	-28.1	-18.8	12.6	14.3	14.8
Russell 1000 Value	-8.7	-12.2	-12.9	-6.8	6.9	7.2	10.5
Russell MidCap	-10.0	-16.8	-21.6	-17.3	6.6	8.0	11.3
Russell MidCap Growth	-7.5	-21.1	-31.0	-29.6	4.3	8.9	11.5
Russell MidCap Value	-11.0	-14.7	-16.2	-10.0	6.7	6.3	10.6
Russell 2000	-8.2	-17.2	-23.4	-25.2	4.2	5.2	9.4
Russell 2000 Growth	-6.2	-19.3	-29.5	-33.4	1.4	4.8	9.3
Russell 2000 Value	-9.9	-15.3	-17.3	-16.3	6.2	4.9	9.0

US Equities: Russell 3000 Index declined 8.3%, and growth indices outperformed value in June.

- US stocks experienced steep losses for the month, led by the energy and materials sectors.
- Growth indices outperformed their value counterparts for the month but remain well behind for the year-to-date period.
- Small company stocks slightly outperformed large company stocks in June but remain behind their larger peers year-to-date.

¹ Source: Bloomberg. Data is as of June 30, 2022.

Foreign Equity Returns¹

Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-8.6	-13.7	-18.4	-19.4	1.3	2.5	4.8
MSCI EAFE	-9.3	-14.5	-19.6	-17.8	1.1	2.2	5.4
MSCI EAFE (Local Currency)	-6.3	-7.8	-11.3	-6.6	4.4	4.3	8.3
MSCI EAFE Small Cap	-11.0	-17.7	-24.7	-24.0	1.1	1.7	7.2
MSCI Emerging Markets	-6.6	-11.5	-17.6	-25.3	0.6	2.2	3.1
MSCI Emerging Markets (Local Currency)	-4.6	-8.1	-13.7	-20.2	3.3	4.4	6.0
MSCI China	6.6	3.4	-11.3	-31.8	-0.6	2.1	5.5

International Equities (MSCI EAFE) declined 9.3% and Emerging Markets (MSCI EM) declined 6.6% in June.

- Non-US developed market stocks slightly trailed the US for the month, while emerging markets stocks had better results due to China gaining 6.6%. Both remain notably negative for the year-to-date period, but ahead of the US.
- The war in Ukraine, high inflation and the likely monetary policy response, and slowing growth continue to weigh on sentiment.
- As in the US, growth stocks outperformed value stocks across developed and emerging markets.

¹ Source: Bloomberg. Data is as of June 30, 2022.

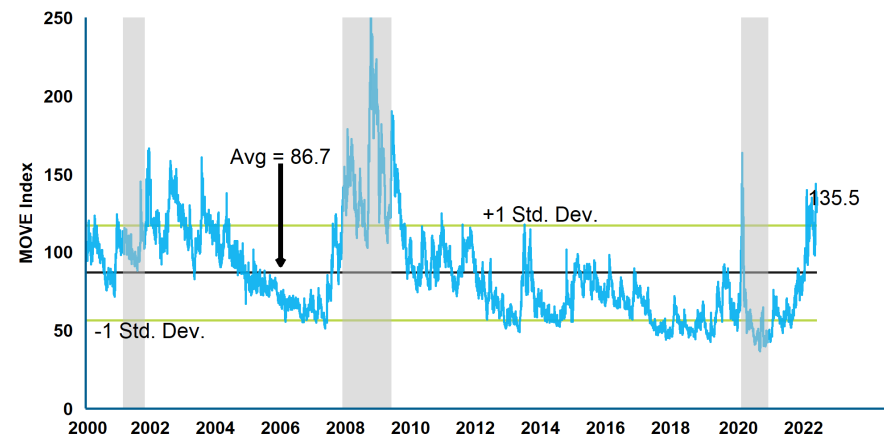
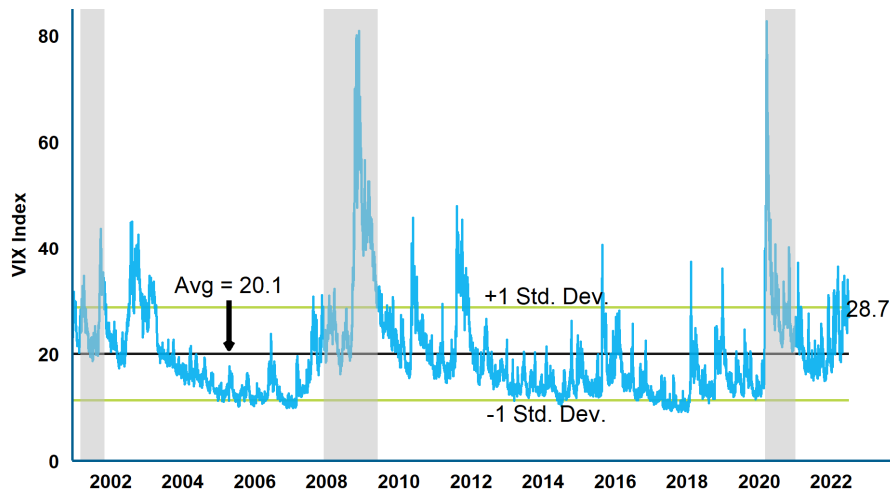
Fixed Income Returns¹

Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-2.0	-5.1	-10.9	-10.9	-0.9	0.9	1.8	4.2	6.4
Bloomberg Aggregate	-1.6	-4.7	-10.3	-10.3	-0.9	0.9	1.5	3.7	6.6
Bloomberg US TIPS	-3.2	-6.1	-8.9	-5.1	3.0	3.2	1.7	3.4	7.0
Bloomberg High Yield	-6.7	-9.8	-14.2	-12.8	0.2	2.1	4.5	8.9	4.8
JPM GBI-EM Global Diversified (USD)	-4.5	-8.6	-14.5	-19.3	-5.8	-2.3	-1.5	7.4	4.9

Fixed Income: The Bloomberg Universal declined 2.0% in June.

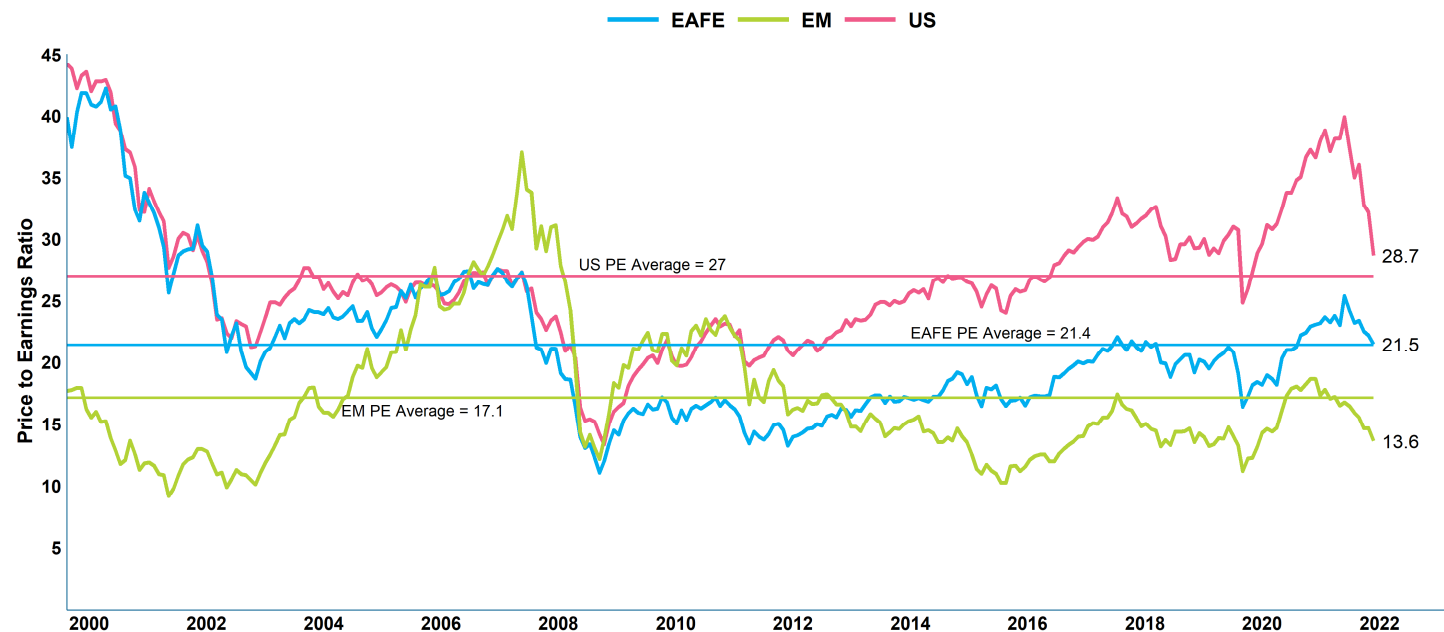
- The above expectations CPI print led to renewed inflation fears driving interest rates higher and weighing on the broad US investment grade bond market (Bloomberg Aggregate).
- Despite the above expectation CPI prints, breakeven inflation rates have continued to move down driven by the decline in nominal rates. The nominal 10-year Treasury yield peaked at 3.47% before declining to 3.01% by month-end, while the 2-year Treasury yield declined from 3.43% to 2.95%.
- US credit spreads widened, particularly for high yield debt, leading to it having the worst results among bonds for the month.
- Emerging market debt also declined for the month.

¹ Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of June 30, 2022.

Equity and Fixed Income Volatility¹

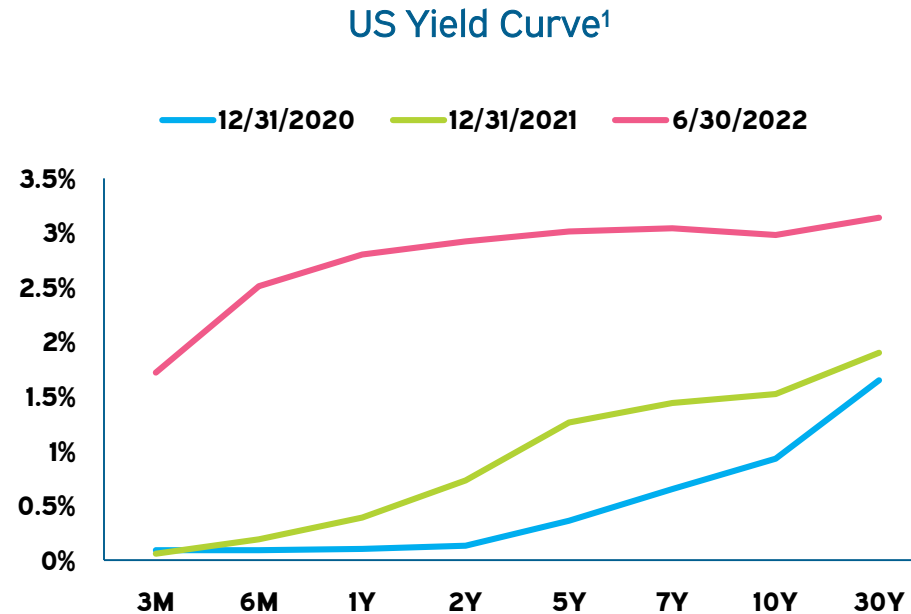
- Volatility in equities (VIX) and fixed income (MOVE) rose in June on renewed inflation fears and on building signs of weakness in economic growth.
- Fixed income volatility remains particularly high due to the uncertain path of short-term interest rates.

¹ Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of June 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the recent month-end respectively.

Equity Cyclically Adjusted P/E Ratios¹

- The steep decline in June in US equities pushed valuations lower, approaching the level of the long-term (post-2000) average.
- International developed market valuations remain below the US and are slightly above their own long-term average, with those for emerging markets the lowest and under the long-term average.

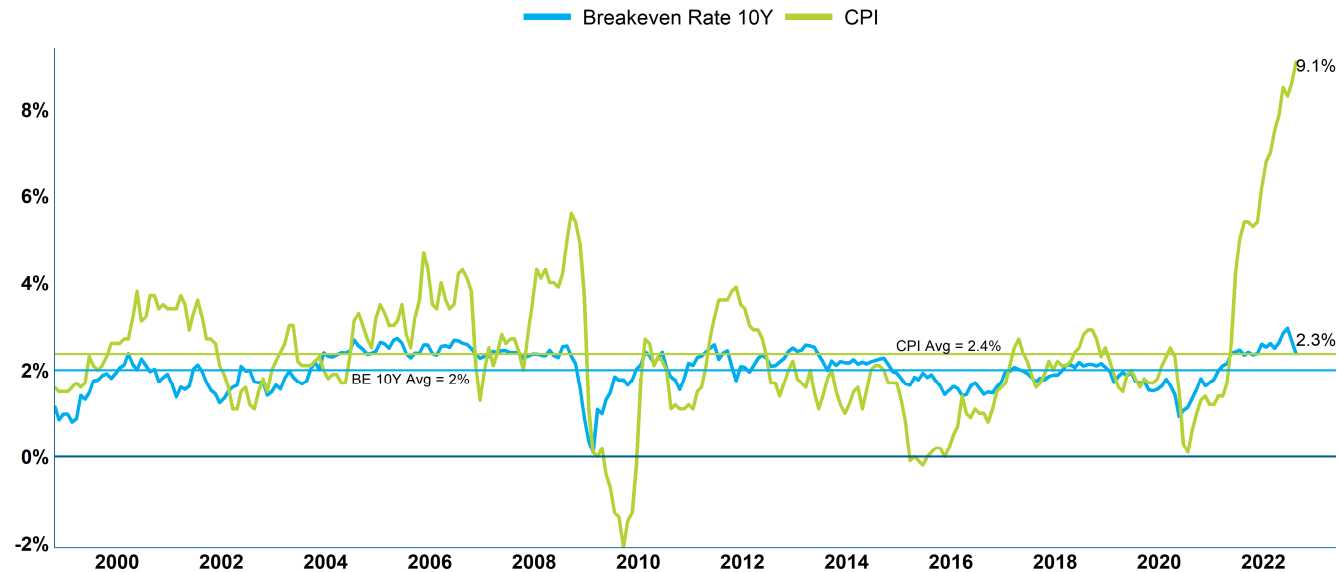
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of June 30, 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



- Rates across the yield curve remain much higher than at the start of the year.
- In June, rates rose across maturities (particularly short-dated), as markets continue to reflect elevated inflation and rate expectations.
- The curve continued to flatten in June with the spread between two-year and ten-year Treasuries falling from 30 basis points at the end of May to just 5 basis points by the end of June.
- Since month-end, the spread between two-year and ten-year Treasuries became negative which historically has often signaled a coming recession.

¹ Source: Bloomberg. Data is as of June 30, 2022.

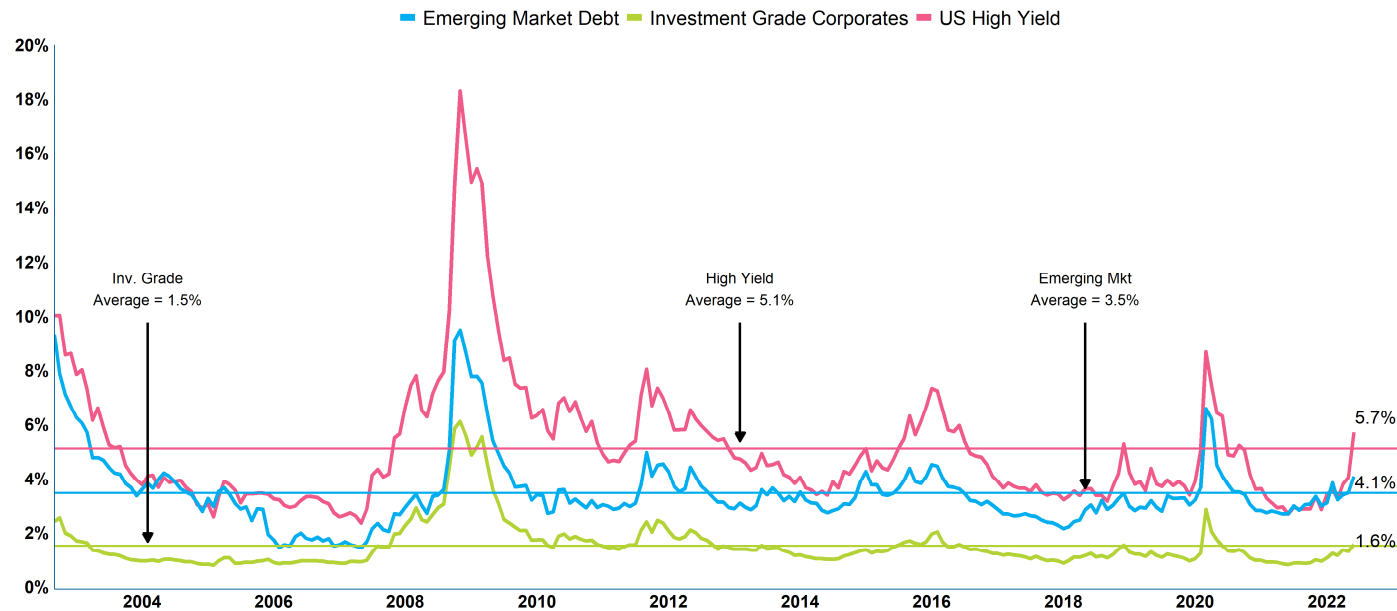
Ten-Year Breakeven Inflation and CPI¹



- Inflation expectations (breakevens) fell further in June on declining growth expectations and anticipated tighter monetary policy.
- Trailing twelve-month CPI rose in June (9.1% versus 8.6%) and notably came in above expectations. Inflation levels in the US remain well above the long-term average of 2.4%.
- Rising prices for energy (particularly oil), food, housing, and for new and used cars, remain key drivers of higher inflation.

¹ Source: Bloomberg. Data is as of June 30, 2022. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end respectively. Breakeven values represent month-end values for comparative purposes.

Credit Spreads vs. US Treasury Bonds¹



- Credit spreads (the spread above a comparable maturity Treasury) rose in June with high yield and investment grade corporate bonds breaking above their long-run averages.
- In the US, spreads for high yield significantly increased from 4.0% to 5.7% in the risk-off environment, while investment grade spreads experienced a more modest increase (1.3% to 1.6%). Emerging market spreads also rose (3.5% to 4.1% during the month) but finished much lower than US high yield spreads.

¹ Sources: Bloomberg. Data is as of June 30, 2022. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end respectively.

Global Economic Outlook

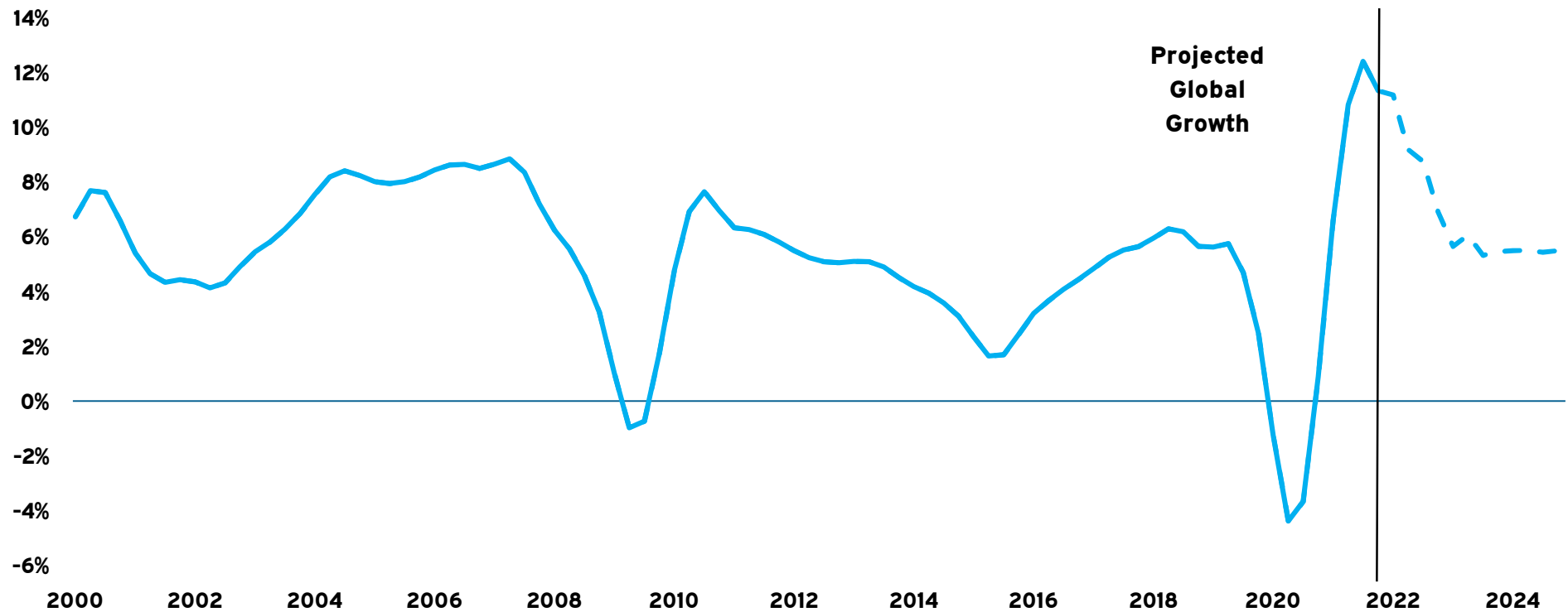
The IMF significantly lowered global growth forecasts again in their latest projections, driven by the economic impacts of persistent inflation in energy and food prices.

- The IMF forecasts global GDP growth to come in at 3.2% in 2022 (0.4% below the prior estimate) and 2.9% in 2023 (0.7% below the prior estimate).
- In advanced economies, GDP is projected to increase 2.5% in 2022 and 1.4% in 2023. The US saw another downgrade in the 2022 (2.3% versus 3.7%) and 2023 (1.0% versus 2.3%) growth forecasts largely due to policy tightening happening faster than previously expected given persistently high inflation. The euro area saw a downgrade too in expected growth (2.6% versus 2.8%) in 2022 and in 2023 (1.2% versus 2.3%) as rising energy prices particularly weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 1.7% this year and next.
- Growth projections for emerging markets are higher than developed markets, at 3.6% in 2022 and 3.9% in 2023. China's growth was downgraded for 2022 (3.3% versus 4.4%) and 2023 (4.9% versus 5.1%) given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (7.4% versus 3.8%).

	Real GDP (%) ¹			Inflation (%) ¹		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.2	2.9	3.0	7.4	4.8	3.5
Advanced Economies	2.5	1.4	1.6	5.7	2.5	1.5
US	2.3	1.0	2.1	7.7	2.9	1.9
Euro Area	2.6	1.2	0.9	5.3	2.3	1.2
Japan	1.7	1.7	0.5	1.0	0.8	0.5
Emerging Economies	3.6	3.9	4.2	8.7	6.5	5.1
China	3.3	4.9	6.7	2.1	1.8	2.1

¹ Source: IMF World Economic Outlook. Real GDP forecasts from July 2022 Update. Inflation forecasts are as of the April 2022 Update.* Actual 10 Year Average* represents data from 2012 to 2021.

Global Nominal Gross Domestic Product (GDP) Growth¹



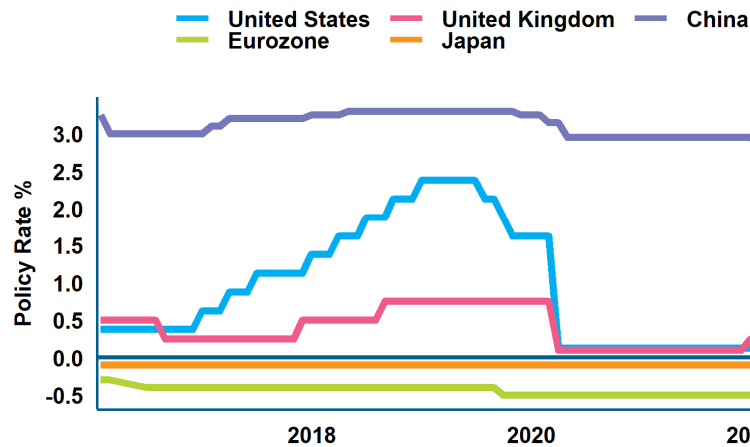
→ Global economies are expected to slow in 2022 compared to 2021 with fears of potential recessions in areas increasing recently given persistently high inflation and related tighter monetary policy.

→ Looking forward, the delicate balancing act of central banks trying to reduce inflation without dramatically impacting growth will remain key.

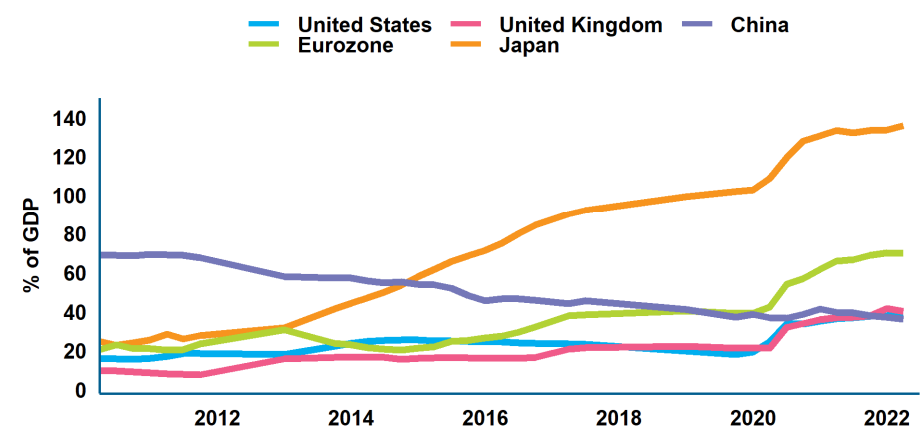
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated June 2022.

Central Bank Response¹

Policy Rates

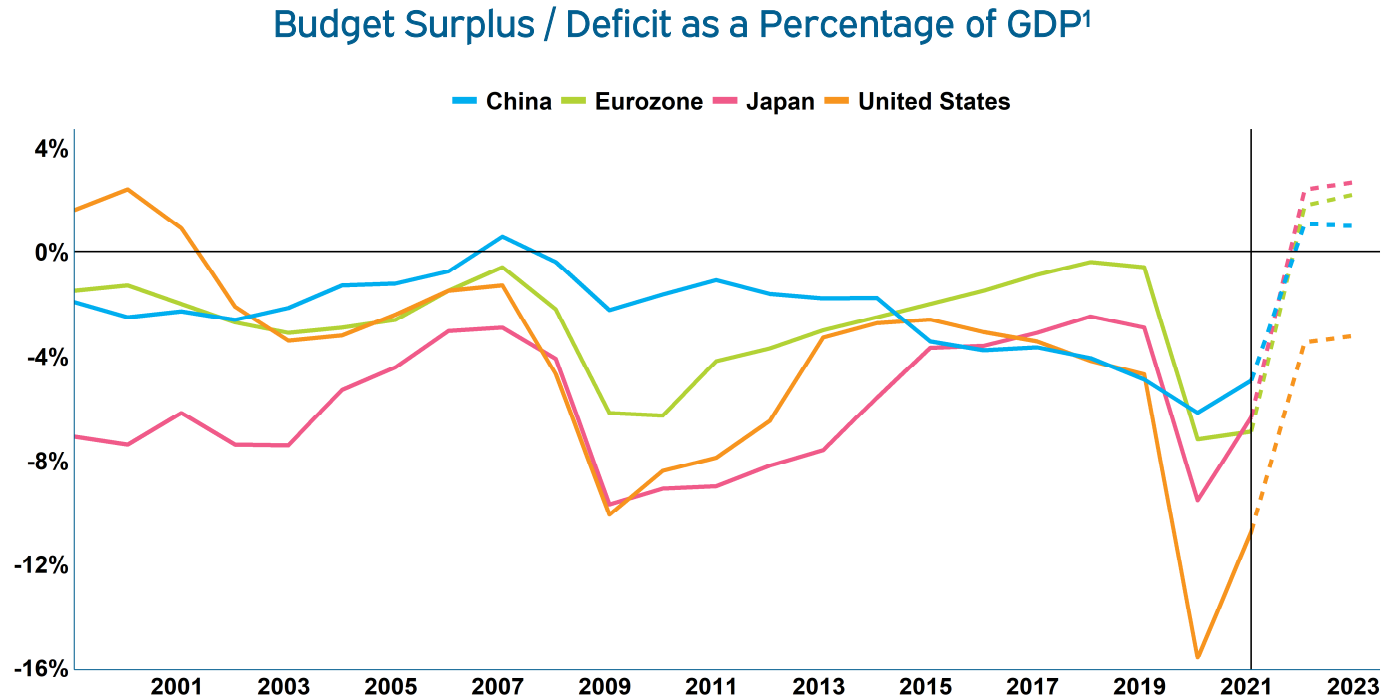


Balance Sheet as % of GDP



- After global central banks took extraordinary action to support economies during the pandemic, including policy rate cuts and emergency stimulus through quantitative easing (QE), many are reducing or considering reducing support, in the face of high inflation.
- The pace of withdrawing support will likely vary across central banks with the US expected to take a more aggressive approach. The risk remains for a policy error, particularly overtightening, as record inflation, the war in Ukraine, and a tough COVID-19 policy in China could suppress global growth.
- The one notable central bank outlier is China, where the central bank recently lowered rates and reserve requirements in response to slowing growth.

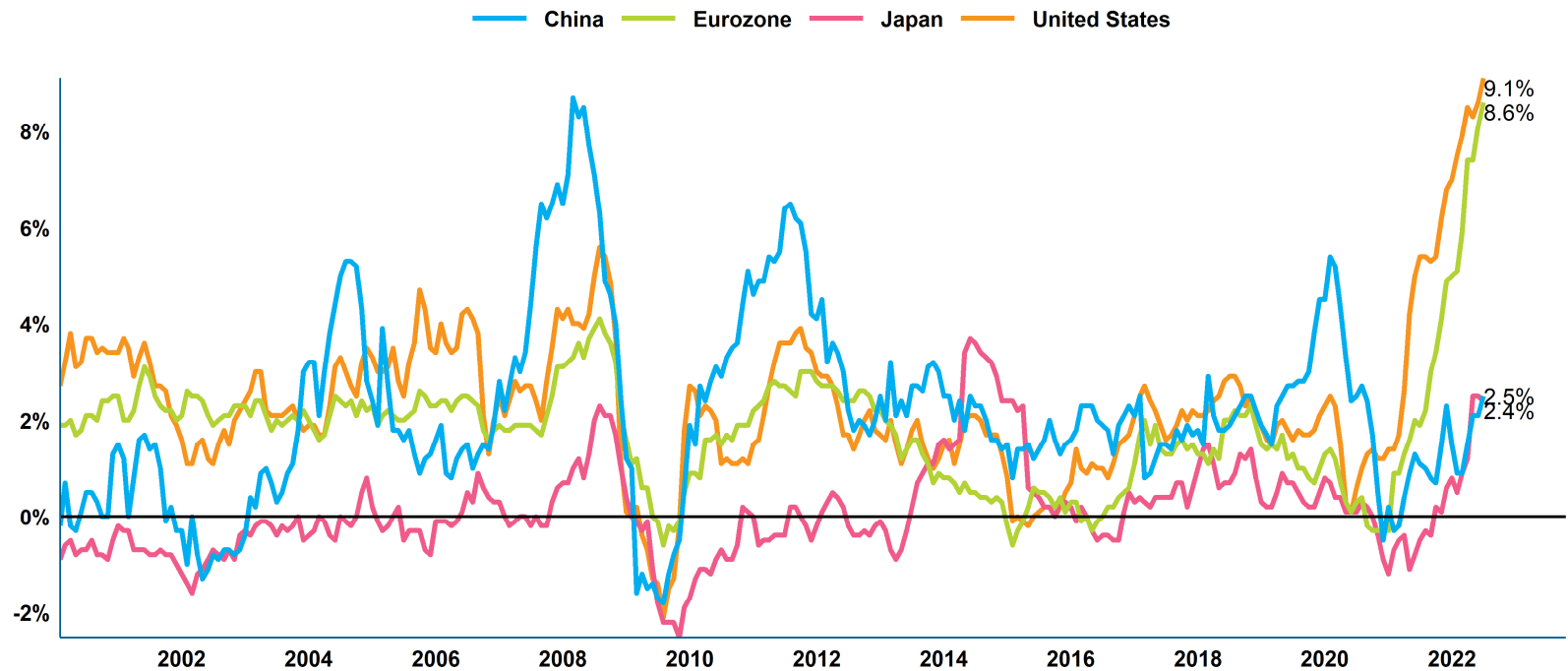
¹ Source: Bloomberg. Policy rate data is as of June 30, 2022. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of June 30, 2022.



- Budget deficits as a percentage of GDP drastically increased for major world economies, particularly the US, due to massive fiscal support and the severe economic contraction's effect on tax revenue in 2020 and 2021.
- As fiscal stimulus programs end, and economic recoveries continue, deficits should improve in the coming years.

¹ Source: Bloomberg. Data is as of June 30, 2022. Projections via IMF Forecasts from April 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

Inflation (CPI Trailing Twelve Months)¹

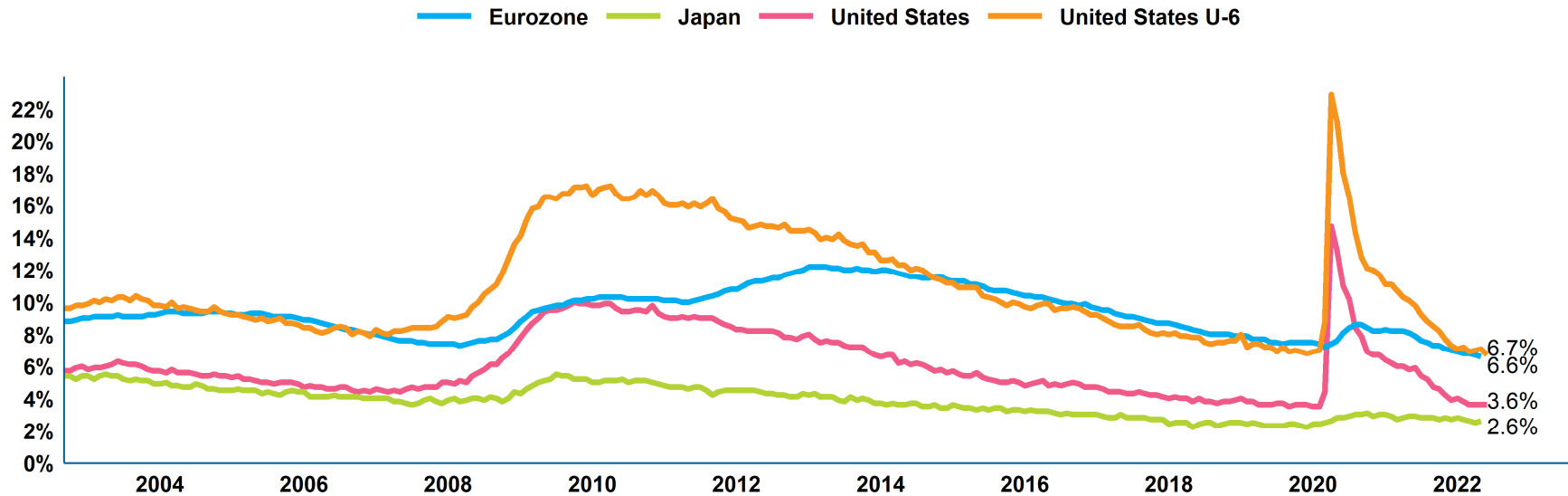


→ Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it has reached levels not seen in many decades.

→ Supply issues related to the pandemic, record monetary and fiscal stimulus, strict COVID-19 restrictions in China, and higher prices in many commodities driven by the war in Ukraine have been key drivers of inflation globally.

¹ Source: Bloomberg. Data is as of June 2022.

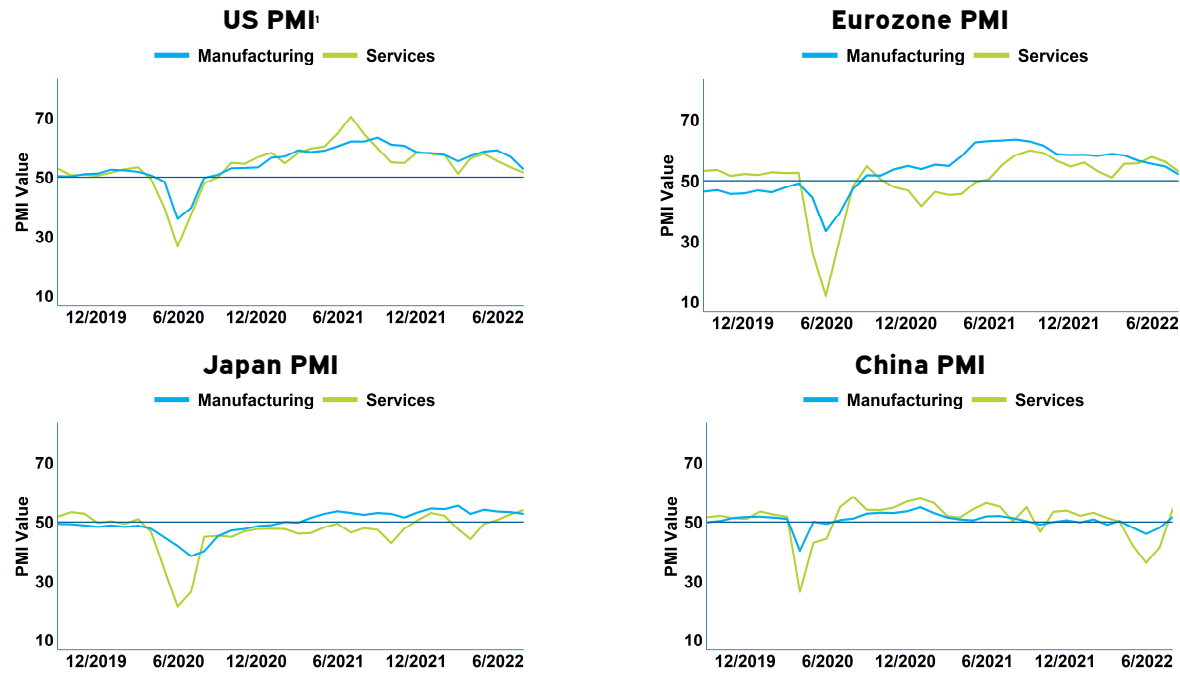
Unemployment¹



- As economies have largely reopened, helped by vaccines for the virus, improvements have been seen in the labor market.
- US unemployment, which experienced the steepest rise from the pandemic, declined back to pre-pandemic levels. The broader measure (U-6) that includes discouraged and underemployed workers declined but is much higher at 6.7%.

¹ Source: Bloomberg. Data is as of June 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of May 31, 2022.

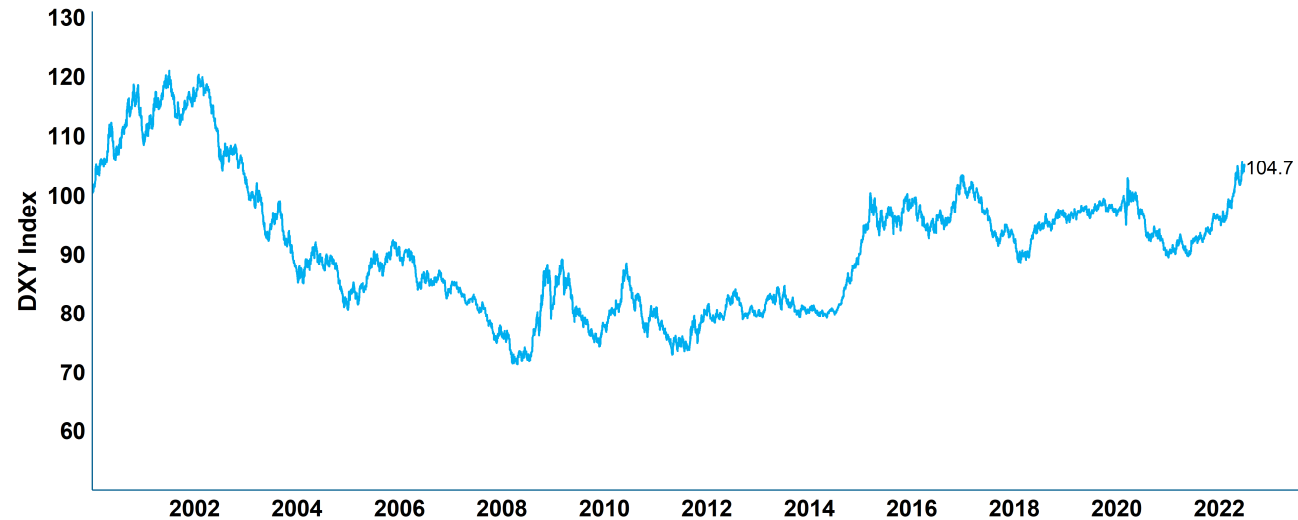
Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have experienced some pressures recently.
- Service sector PMIs in the US and Europe have recently declined due to higher prices and supply issues, while they continue to improve in Japan as pandemic restrictions ease. In China the services PMI surged to expansion territory on an easing in lockdown measures.
- Manufacturing PMIs are in expansion territory as pandemic-related production issues ease and orders increase. China also moved to expansion levels here on partial reopening.

¹ Source: Bloomberg. US Markit Services and Manufacturing PMI, Caixin Services and Manufacturing PMI, Eurozone Markit Services and Manufacturing PMI, Jibun Bank Services and Manufacturing PMI. Data is as of June 2022. Readings below 50 represent economic contractions.

US Dollar versus Broad Currencies¹



- The US dollar continued higher in June on safe-haven flows, relatively strong growth, and higher interest rates.
- The euro, yen, and yuan have all experienced significant declines versus the dollar, adding to inflation and slowing growth concerns.

¹ Source: Bloomberg. Data as of June 30, 2022.

Summary

Key Trends in 2022:

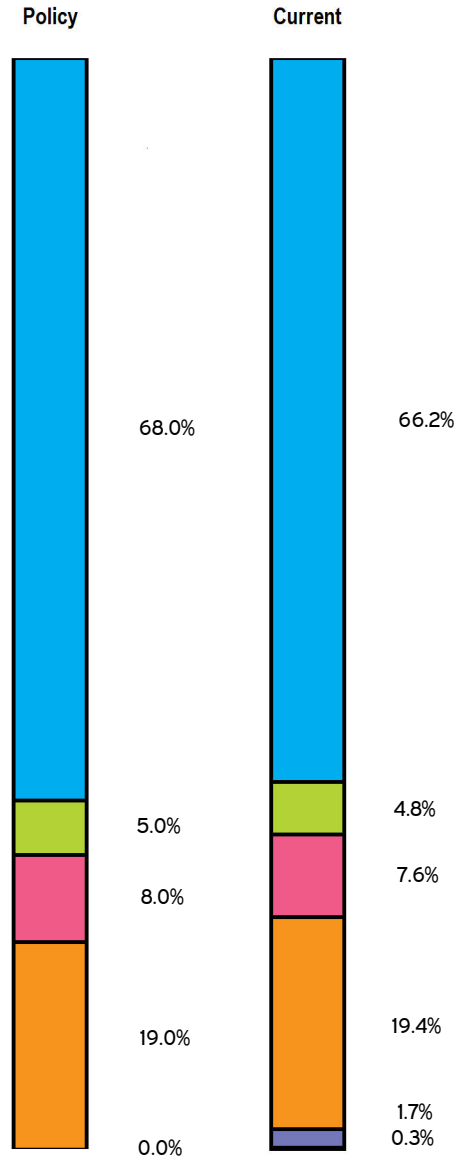
- The impacts of record high inflation will remain key going forward, with volatility likely to remain high.
- The war in Ukraine has created significant uncertainty, with a wide range of potential outcomes.
- Expect growth to slow globally in 2022 to the long-term trend or below. Inflation, monetary policy, and the war will all be key.
- The end of many fiscal programs is expected to put the burden of continued growth on consumers. Higher energy and food prices will depress consumers' spending in other areas.
- Monetary policy will likely tighten globally but will remain relatively accommodative. The risk of overtightening policy remains.
- Valuations have significantly declined in the US, approaching long-term averages.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but risks remain, including continued strength in the US dollar, higher inflation particularly weighing on Europe, and China maintaining its restrictive COVID-19 policies.

Total Fund



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

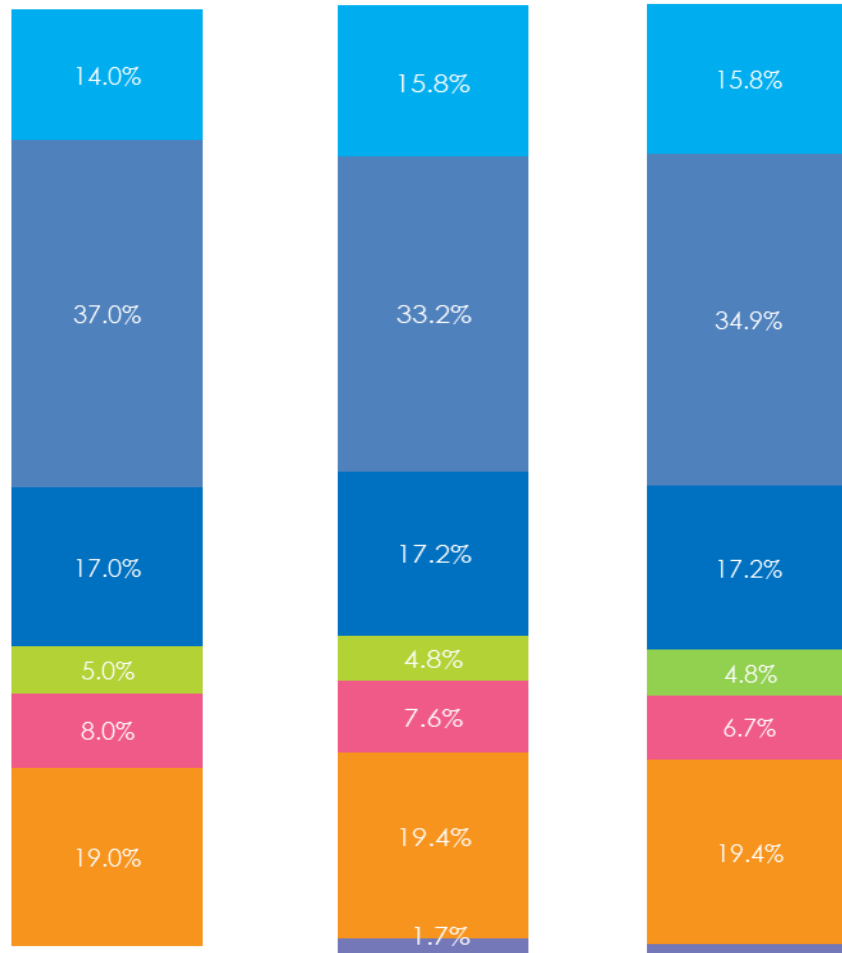


Allocation vs. Interim Policy						
	Current Balance	Current Allocation	Policy	Difference	Difference	
■ Broad Growth	\$15,082,853,556	66.2%	68.0%	-\$411,271,153	-1.8%	
■ Inflation Sensitive	\$1,096,399,357	4.8%	5.0%	-\$42,874,519	-0.2%	
■ Principal Protection	\$1,723,534,998	7.6%	8.0%	-\$99,303,203	-0.4%	
■ CRO	\$4,422,204,211	19.4%	19.0%	\$92,963,483	0.4%	
■ Cash & Transition	\$387,444,061	1.7%	0.0%	\$387,444,061	1.7%	
■ Overlay	\$73,041,331	0.3%	0.0%	\$73,041,331	0.3%	
Total	\$22,785,477,513	100.0%	100.0%			



Illinois State Universities Retirement System

Actual vs. Interim Policy | As of June 30, 2022



Asset Allocation vs. Interim Policy

	Policy	Current	Overlay	Current Value
Non-Traditional Growth	14.0%	15.8%	15.8%	\$3,609,239,088
Traditional Growth	37.0%	33.2%	34.9%	\$7,555,969,455
Stabilized Growth	17.0%	17.2%	17.2%	\$3,917,645,013
Inflation Sensitive	5.0%	4.8%	4.8%	\$1,096,399,357
Principal Protection	8.0%	7.6%	6.7%	\$1,723,534,998
Crisis Risk Offset	19.0%	19.4%	19.4%	\$4,422,204,211
Cash & Transition	0.0%	1.7%	1.2%	\$387,444,060
Overlay	0.0%	0.2%	0.0%	\$73,041,331
Total	100%	100%	100%	\$22,785,477,513

POLICY TARGET ALLOCATION

CURRENT ALLOCATION

ALLOCATION REFLECTING OVERLAY



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

Attribution Summary							
3 Months Ending June 30, 2022							
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Traditional Growth	-14.6%	-15.8%	1.3%	0.5%	0.1%	0.0%	0.6%
Stabilized Growth	-3.2%	-4.1%	0.9%	0.2%	0.0%	0.0%	0.1%
Non Traditional Growth	2.7%	-2.8%	5.5%	0.7%	0.1%	0.1%	0.9%
Inflation Sensitive	-6.2%	-6.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Principal Protection	-2.3%	-2.7%	0.5%	0.0%	0.0%	0.0%	0.0%
Crisis Risk Offset	5.1%	1.8%	3.4%	0.6%	0.0%	0.0%	0.6%
Total	-5.1%	-7.4%	2.3%	2.0%	0.2%	0.1%	2.3%

1 Year Ending June 30, 2022							
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Traditional Growth	-14.9%	-16.5%	1.7%	0.7%	0.1%	0.0%	0.8%
Stabilized Growth	0.1%	-2.2%	2.3%	0.4%	0.0%	0.0%	0.4%
Non Traditional Growth	26.2%	11.4%	14.8%	1.5%	0.3%	0.1%	2.0%
Inflation Sensitive	-5.1%	-5.1%	0.1%	0.0%	0.0%	0.0%	0.0%
Principal Protection	-6.8%	-7.6%	0.8%	0.1%	0.0%	0.0%	0.1%
Crisis Risk Offset	12.2%	8.1%	4.1%	0.6%	-0.2%	0.1%	0.5%
Total	-1.2%	-4.9%	3.7%	3.3%	0.1%	0.2%	3.7%



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

Trailing Asset Class Net Performance								
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	22,785,477,513	100.0	-5.3	-6.2	-1.4	7.8	7.5	8.3
<i>SURS Policy Benchmark</i>			-7.3	-8.0	-4.9	6.5	6.8	7.9
Total Fund ex Overlay	22,712,436,182	99.7	-5.2	-6.1	-1.2	7.8	7.5	8.2
<i>SURS Policy Benchmark</i>			-7.3	-8.0	-4.9	6.5	6.8	7.9
Broad Growth	15,082,853,556	66.2	-8.3	-9.9	-3.9	8.3	8.1	9.4
Traditional Growth	7,555,969,454	33.2	-14.6	-18.7	-14.9	6.7	7.4	9.6
<i>SURS Traditional Growth Blend</i>			-15.8	-20.4	-16.5	6.0	7.0	9.0
US Equity	1,689,491,493	7.4	-15.7	-20.0	-12.3	9.7	10.2	12.3
<i>Dow Jones U.S. Total Stock Market</i>			-16.8	-21.3	-14.2	9.6	10.5	12.5
Passive Large US Equity	1,580,749,043	6.9	-16.7	-20.8	-12.9	10.1	10.8	12.7
<i>Dow Jones U.S. Total Stock Market</i>			-16.8	-21.3	-14.2	9.6	10.5	12.5
Mid Cap	108,742,445	0.5	-17.2	-18.1	-15.4	8.8	8.2	--
<i>Russell MidCap</i>			-16.8	-21.6	-17.3	6.6	8.0	--
Non US Equity	1,420,915,183	6.2	-14.8	-19.0	-18.5	0.9	2.1	5.1
<i>SURS Non US Equity Blend</i>			-14.3	-19.1	-19.9	1.5	2.6	4.9
Active Non-US Equity	1,062,380,664	4.7	-15.6	-19.2	-17.7	0.9	2.0	6.3
<i>MSCI EAFE</i>			-14.5	-19.6	-17.8	1.1	2.2	5.4
Passive Non-US Equity	358,516,091	1.6	-12.4	-18.6	-19.9	0.2	1.9	4.6
<i>MSCI ACWI ex USA</i>			-13.7	-18.4	-19.4	1.4	2.5	4.8
Global Equity	4,445,562,778	19.5	-14.0	-18.1	-14.6	8.7	9.4	10.6
<i>SURS Global Equity Blend</i>			-15.8	-20.4	-16.5	6.0	6.9	8.7
Global Equity - Active	2,347,500,932	10.3	-13.1	-16.9	-14.3	--	--	--
Global Equity - Passive	2,098,061,846	9.2	-14.9	-19.3	-15.0	--	--	--



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Stabilized Growth	3,917,645,013	17.2	-3.2	-3.8	0.1	--	--	--
<i>SURS Stabilized Growth Blend</i>			-4.1	-5.3	-2.6	--	--	--
Option Strategies	511,676,958	2.2	-8.7	-11.6	-6.8	5.8	--	--
<i>SURS Options Strategies Blend</i>			-8.9	-7.9	-0.6	6.0	--	--
Stabilized Real Assets	1,383,214,204	6.1	6.9	15.5	31.6	12.6	9.6	--
<i>SURS Stabilized Real Assets Blend</i>			6.9	15.0	26.9	10.2	8.9	--
Core	913,033,946	4.0	6.7	16.0	32.8	12.9	9.7	--
<i>NCREIF ODCE Net 1 Qtr Lag</i>			7.1	15.4	27.4	10.3	8.9	--
Core Plus	445,988,733	2.0	7.7	15.5	30.3	12.6	--	--
<i>SURS Real Estate Blend</i>			7.1	15.4	27.3	10.3	--	--
Core Infrastructure	24,191,525	0.1	0.0	-1.4	7.8	--	--	--
<i>FTSE Dev Core Infra 50/50</i>			-7.1	-3.5	4.9	--	--	--
Public Credit	1,751,530,688	7.7	-9.0	-13.1	-13.3	--	--	--
<i>SURS Credit Fixed Income Blend</i>			-7.8	-13.2	-14.2	--	--	--
Diversified Credit	1,410,181,632	6.2	-9.3	-13.1	-12.5	-1.1	0.9	--
<i>SURS Credit ex EMD Blend</i>			-8.7	-13.2	-12.9	-0.6	1.1	--
Private Credit	268,031,484	1.2	2.7	4.2	10.4	--	--	--
<i>SURS Private Credit Blend</i>			-6.8	-9.2	-8.0	--	--	--
Non Traditional Growth	3,609,239,088	15.8	2.7	7.4	26.2	22.1	18.2	--
<i>SURS Non Traditional Growth Blend</i>			-2.8	3.7	11.4	15.0	14.2	--
Non-Core Real Assets	687,351,600	3.0	5.6	11.8	23.6	9.1	9.1	--
<i>SURS Non Core Real Assets Blend</i>			6.8	14.1	25.4	11.4	10.1	--
Non-Core Real Estate	466,865,769	2.0	6.3	14.0	29.0	8.1	9.1	--
<i>NCREIF ODCE Net Lagged + 1.5%</i>			7.5	16.2	29.2	12.0	10.5	--



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

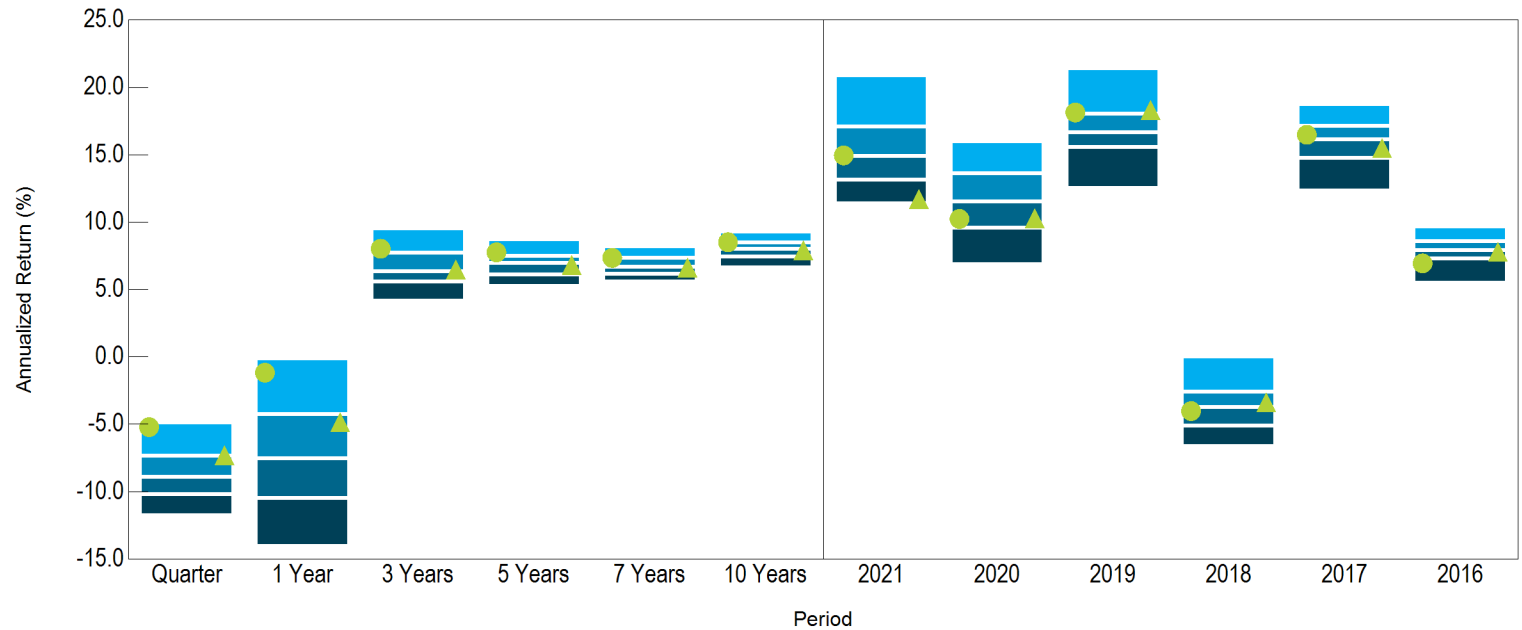
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Non-Core Real Estate Debt	57,679,467	0.3	2.0	2.4	4.4	6.8	--	--
<i>NCREIF ODCE Net Lagged + 1.5%</i>			7.5	16.2	29.2	12.0	--	--
Non-Core Infrastructure	124,235,864	0.5	3.7	8.2	16.9	14.7	10.5	10.0
<i>CPI+5% 1 Qtr Lagged</i>			4.4	7.4	13.9	9.4	8.5	7.4
Non-Core Farmland	38,570,500	0.2	8.7	11.9	14.9	--	--	--
<i>NCREIF Farmland 1 Qtr Lag</i>			2.6	6.5	9.7	--	--	--
Private Equity- Fund of Funds	2,273,153,975	10.0	1.9	5.3	26.8	27.0	21.6	15.4
<i>SURS PE Blend</i>			-5.0	1.3	8.1	16.5	15.7	16.0
Private Equity- Direct (Aksia)	648,733,513	2.8	2.4	11.0	26.1	--	--	--
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>			-5.0	1.3	8.1	--	--	--
Inflation Sensitive	1,096,399,357	4.8	-6.2	-8.9	-5.1	2.8	3.0	--
<i>SURS Inflation Sensitive Blend</i>			-6.1	-8.9	-5.1	2.6	2.5	--
TIPS	1,096,399,357	4.8	-6.2	-8.9	-5.1	2.9	3.1	1.7
<i>Bloomberg US TIPS TR</i>			-6.1	-8.9	-5.1	3.0	3.2	1.7
Principal Protection	1,723,534,998	7.6	-2.3	-6.3	-6.8	-0.3	1.2	1.8
<i>BC US Int Ag x Credit Blend</i>			-2.7	-7.2	-7.6	-0.4	1.2	1.7
Crisis Risk Offset	4,422,204,211	19.4	5.1	10.5	12.2	--	--	--
<i>SURS CRO Blend</i>			2.0	10.1	8.4	--	--	--
Long Duration	567,285,705	2.5	-11.9	-21.1	-18.4	--	--	--
<i>BBgBarc US Govt Long TR</i>			-11.9	-21.2	-18.4	--	--	--
Systematic Trend Following	2,642,175,006	11.6	10.5	26.8	26.0	--	--	--
<i>CS Mgd Futures 15% Vol</i>			8.3	29.9	23.6	--	--	--
Alternative Risk Premia	1,212,743,499	5.3	4.8	3.8	8.5	--	--	--
<i>90 Day T-Bill + 2%</i>			0.8	1.3	2.4	--	--	--
Cash Composite	387,444,061	1.7						
Total Overlay	73,041,331	0.3						



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

InvMetrics Public DB > \$1B Gross Return Comparison
Ending June 30, 2022



	Return (Rank)											
	Quarter	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017	2016
5th Percentile	-4.9	-0.1	9.5	8.7	8.2	9.3	20.9	16.0	21.4	0.0	18.8	9.7
25th Percentile	-7.3	-4.2	7.8	7.5	7.4	8.5	17.1	13.6	18.1	-2.6	17.2	8.6
Median ¹	-8.9	-7.5	6.4	7.0	6.7	8.1	14.9	11.5	16.7	-3.7	16.2	8.0
75th Percentile	-10.2	-10.5	5.6	6.1	6.2	7.5	13.2	9.6	15.6	-5.1	14.8	7.4
95th Percentile	-11.7	-14.0	4.2	5.3	5.6	6.7	11.4	6.9	12.5	-6.6	12.4	5.5
# of Portfolios	71	70	69	69	68	65	84	94	81	71	98	92
● Total Fund	-5.2 (8)	-1.2 (8)	8.0 (21)	7.8 (24)	7.3 (27)	8.5 (29)	15.0 (50)	10.2 (70)	18.1 (24)	-4.0 (60)	16.5 (42)	6.9 (84)
▲ SURS Policy Benchmark	-7.3 (25)	-4.9 (35)	6.5 (49)	6.8 (53)	6.6 (55)	7.9 (58)	11.7 (91)	10.3 (69)	18.3 (22)	-3.4 (40)	15.5 (68)	7.8 (62)

¹ Investment Metrics (IM) Median [Gross of Fees] - Public Fund >\$1 Billion Universe includes BNY Mellon Total Public Fund Greater than \$1Billion Universe and IM client data.



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

Risk-Adjusted Return of SURS vs. Peers					
	Fiscal YTD	1 Year	3 Years	5 Years	10 Years
Total Fund	-1.2	-1.2	8.0	7.8	8.5
Risk-Adjusted Median ¹	-5.7	-5.7	5.4	6.1	7.6
Excess Return	4.5	4.5	2.7	1.6	0.9

→ On a risk-adjusted basis, the SURS Total Portfolio has outperformed the Median Public Fund in all trailing time periods. The pursuit of a more efficient (i.e., higher return per unit of risk) portfolio has been an explicit consideration of the SURS Board over the last two asset-liability studies, in particular.

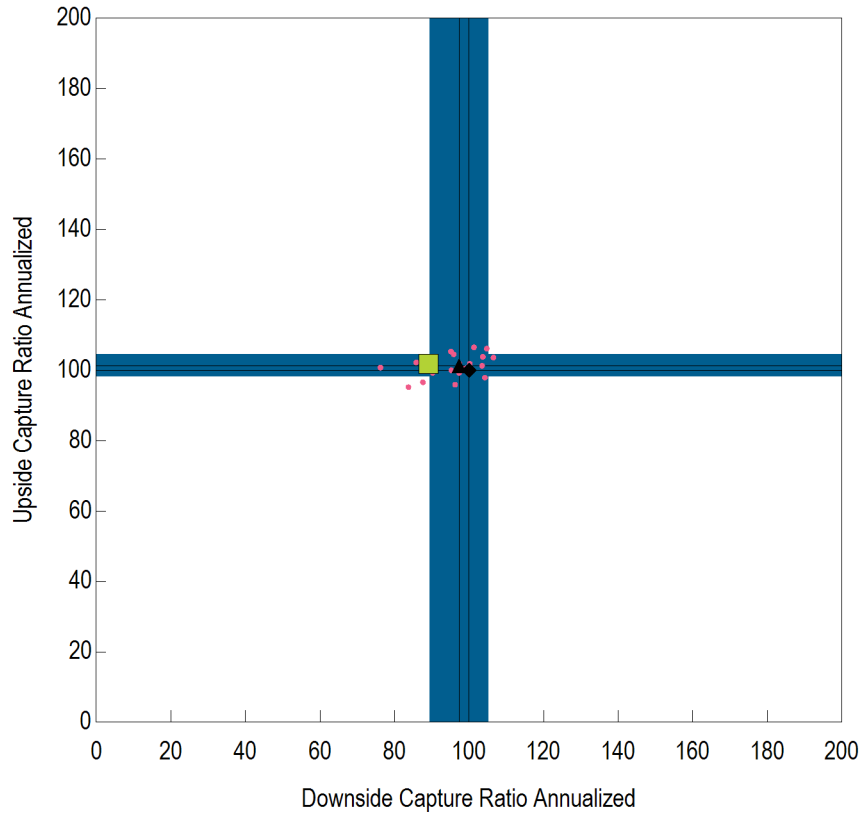
¹ Risk-adjusted median normalizes the median fund to the SURS exhibited volatility. Calculated as: risk-adjusted median = unadjusted median return * (SURS volatility/peer volatility).



Illinois State Universities Retirement System

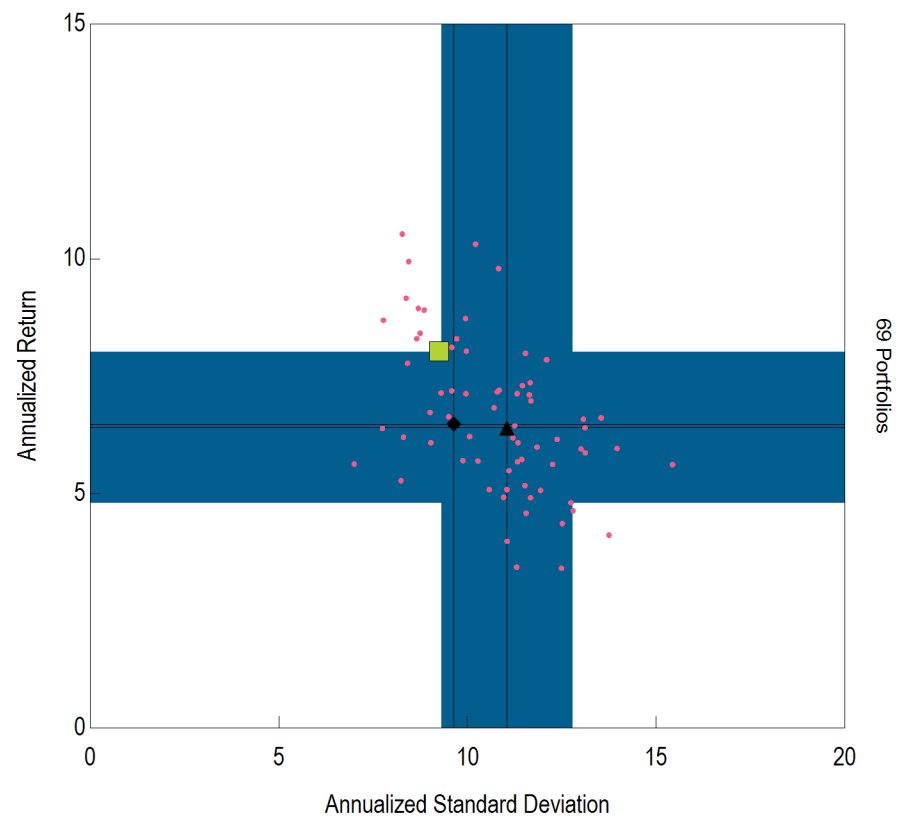
Total Fund | As of June 30, 2022

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending June 30, 2022



- Total Fund
- ◆ SURS Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2022

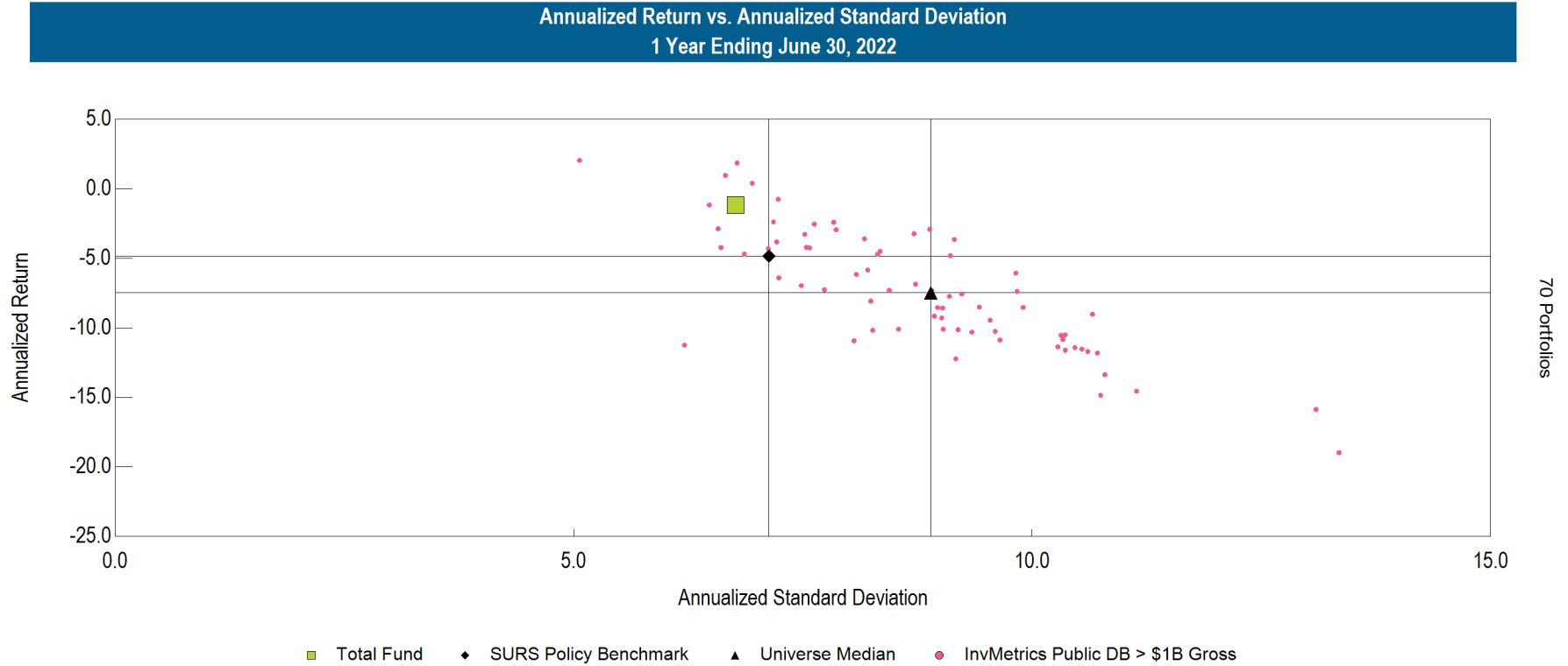


- Total Fund
- ◆ SURS Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

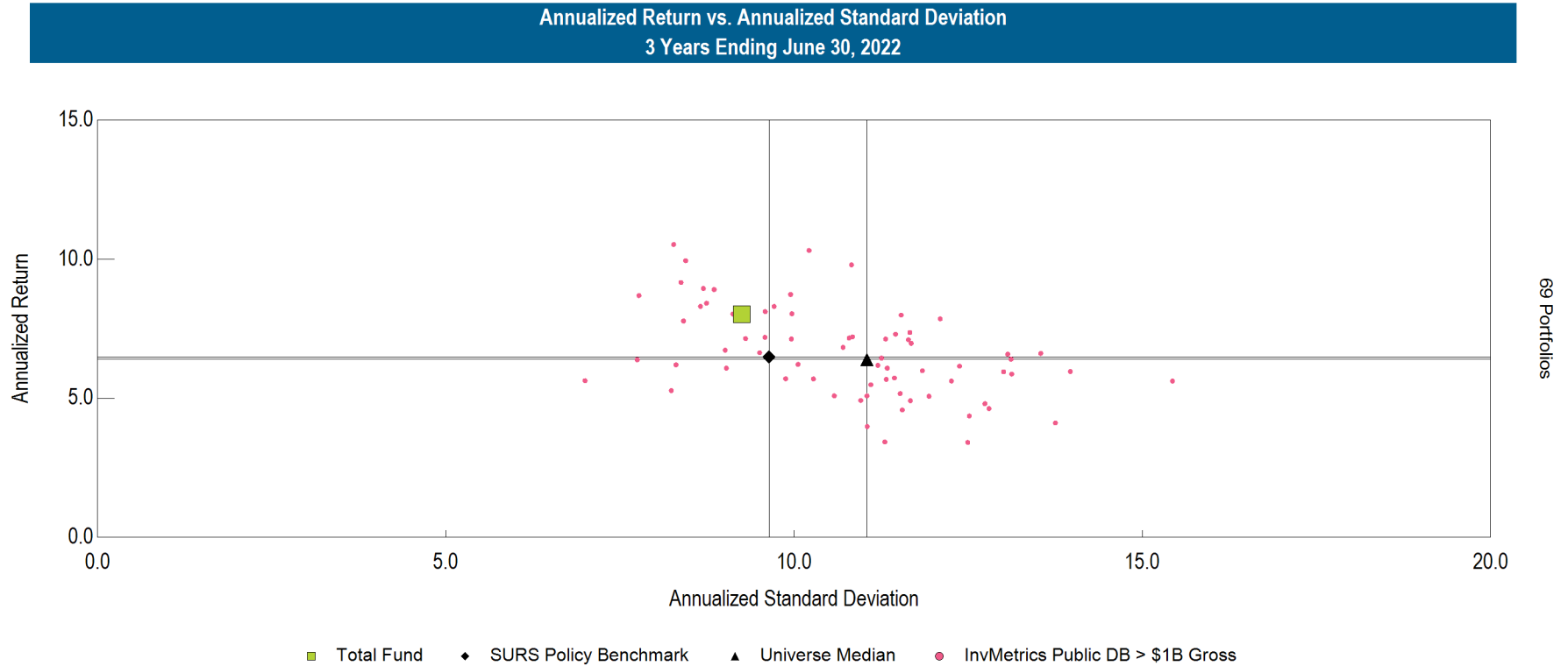


	Annualized Return	Annualized Return Rank	Annualized Standard Deviation	Annualized Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank
Total Fund	-1.2%	8	6.8%	9	-0.2	8	1.8	6
SURS Policy Benchmark	-4.9%	35	7.1%	14	-0.7	37	--	--
InvMetrics Public DB > \$1B Gross Median	-7.5%	--	8.9%	--	-0.9	--	0.4	--



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022

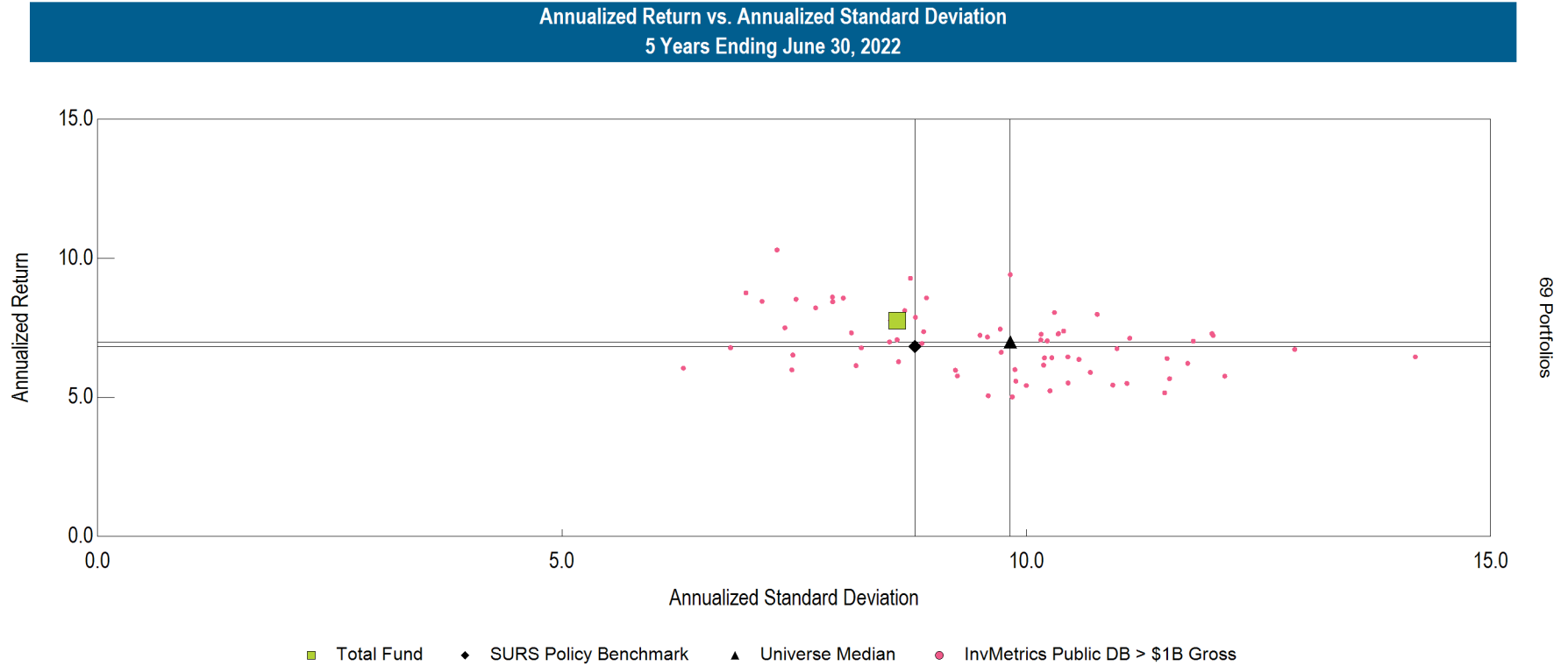


	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank
Total Fund	8.0%	21	9.3%	24	0.8	19	0.8	5
SURS Policy Benchmark	6.5%	49	9.6%	29	0.6	37	--	--
InvMetrics Public DB > \$1B Gross Median	6.4%	--	11.0%	--	0.6	--	0.4	--



Illinois State Universities Retirement System

Total Fund | As of June 30, 2022



	Annualized Return	Annualized Return Rank	Annualized Standard Deviation	Annualized Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank
Total Fund	7.8%	24	8.6%	29	0.8	25	0.6	15
SURS Policy Benchmark	6.8%	53	8.8%	34	0.7	41	--	--
InvMetrics Public DB > \$1B Gross Median	7.0%	--	9.8%	--	0.6	--	0.2	--

Private Markets Performance



Illinois State Universities Retirement System

Private Markets Performance¹ | As of March 31, 2022

	Composite Level IRRs				
	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)	Since Inception (%)
Real Estate ^{1,2}	30.8	11.6	9.9	10.2	8.1
Infrastructure	16.9	14.4	9.6	8.2	8.1
Private Equity	26.8	27.7	22.7	15.1	20.7

	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple
Real Estate	2,754,783,163	2,211,932,984	1,277,974,765	2,060,839,342	1.5
Infrastructure	405,653,409	208,613,584	154,957,717	137,513,088	1.4
Private Equity	5,053,175,202	3,973,829,138	4,448,727,750	2,889,839,799	1.9

¹ Information provided by Northern Trust.

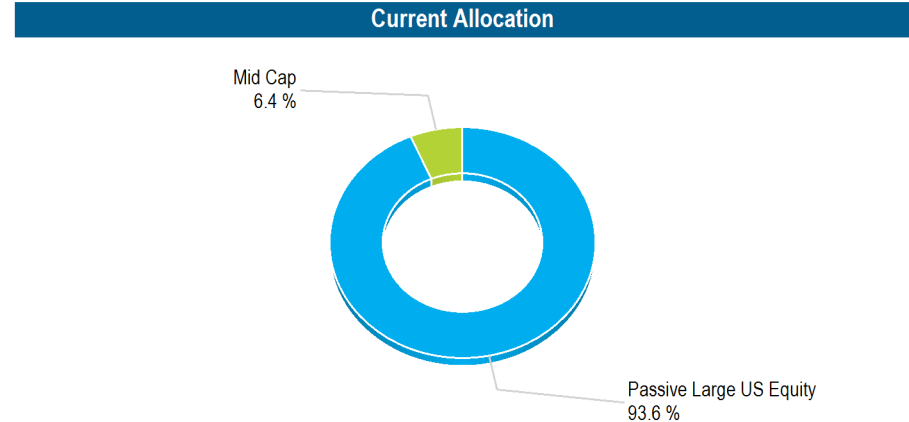
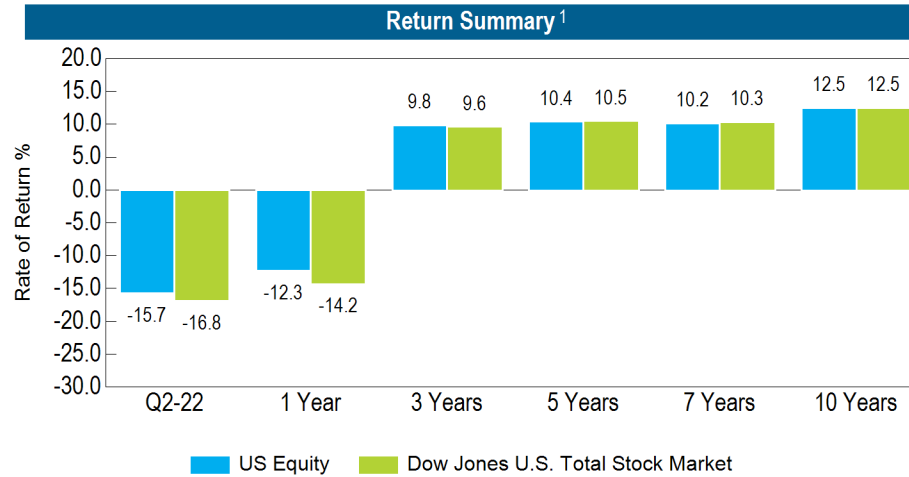
² Real Estate Composite includes Infrastructure.

US Equity

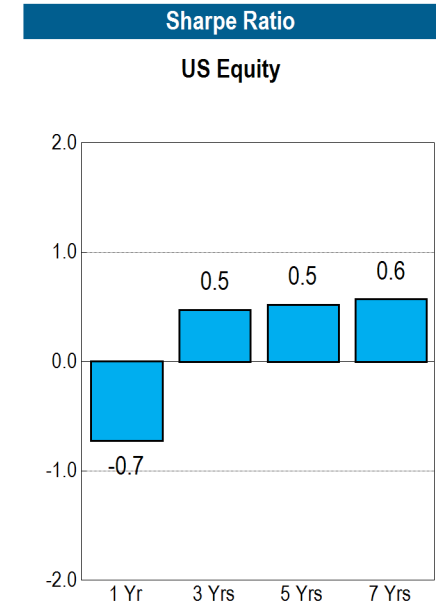
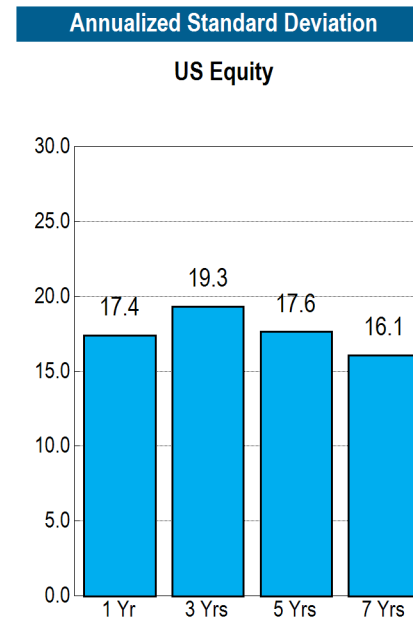
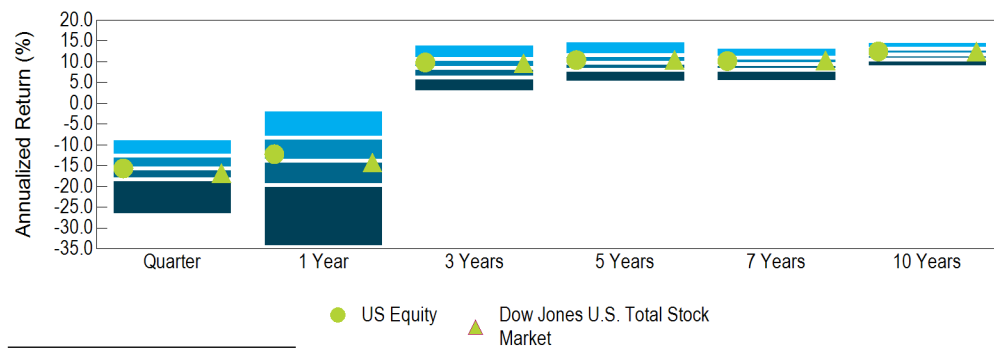


Illinois State Universities Retirement System

US Equity | As of June 30, 2022



	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
US Equity	-15.7	-12.3	9.8	10.4	10.2	12.5
<i>Dow Jones U.S. Total Stock Market</i>	<i>-16.8</i>	<i>-14.2</i>	<i>9.6</i>	<i>10.5</i>	<i>10.3</i>	<i>12.5</i>
Excess Return	1.1	1.9	0.2	-0.1	-0.1	0.0
<i>eV US All Cap Equity Gross Rank</i>	<i>52</i>	<i>43</i>	<i>38</i>	<i>43</i>	<i>38</i>	<i>40</i>
<i>eV US All Cap Equity Gross Median</i>	<i>-15.6</i>	<i>-13.7</i>	<i>8.6</i>	<i>9.8</i>	<i>9.5</i>	<i>11.9</i>



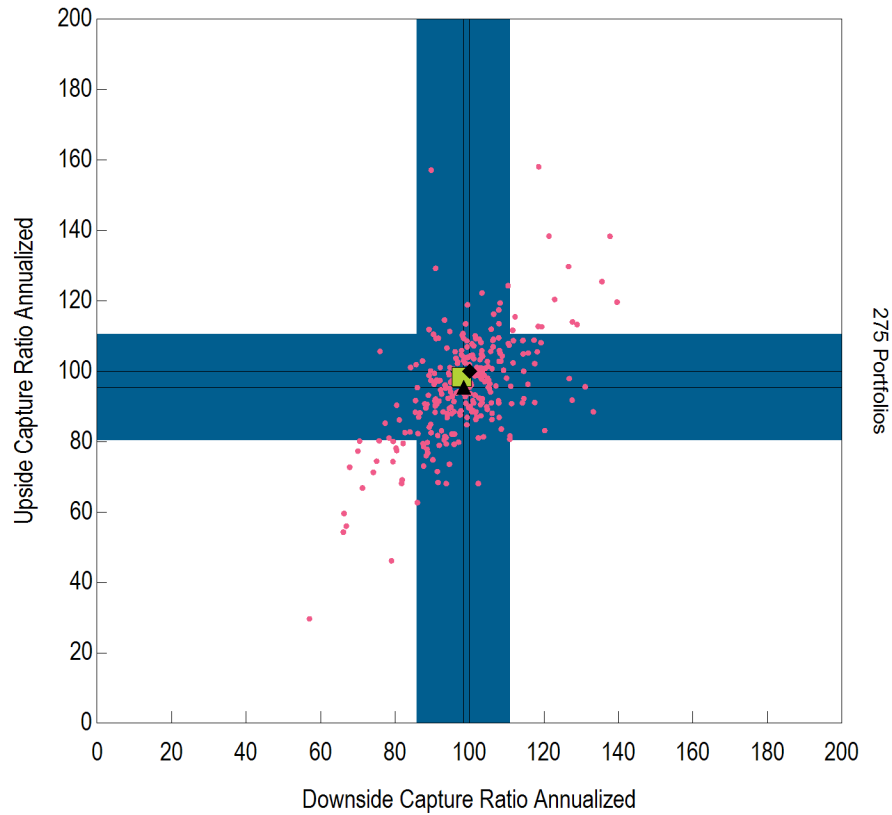
¹Returns are gross of fees



Illinois State Universities Retirement System

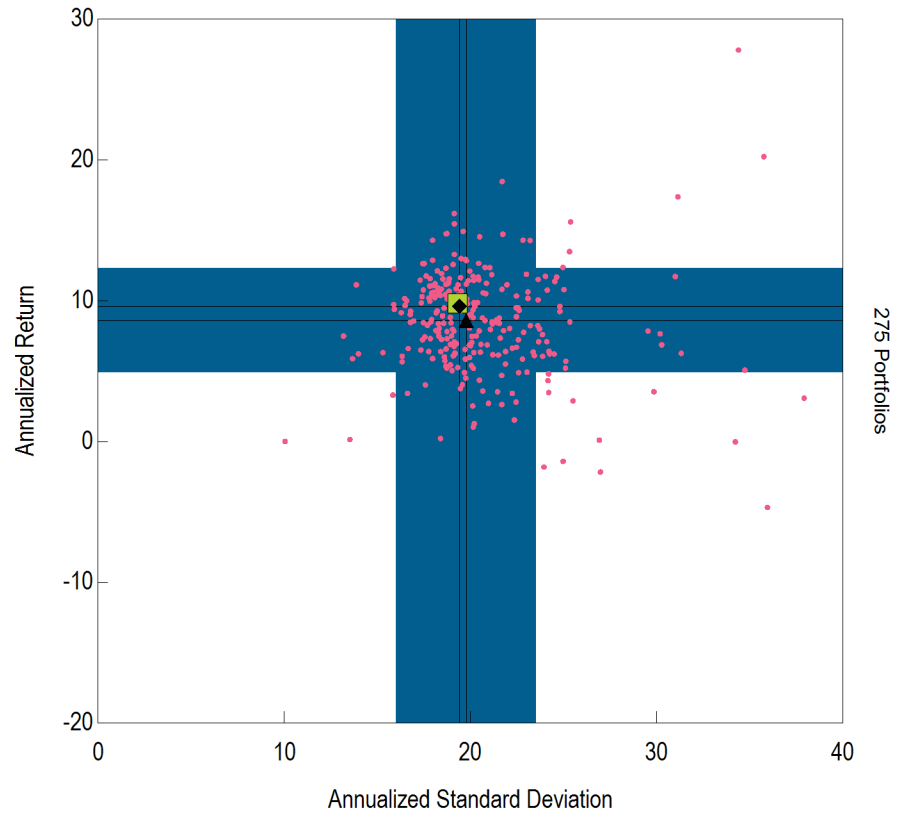
US Equity | As of June 30, 2022

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending June 30, 2022



- US Equity
- ◆ Dow Jones U.S. Total Stock Market
- ▲ Universe Median
- 68% Confidence Interval
- eV US All Cap Equity Gross

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2022



- US Equity
- ◆ Dow Jones U.S. Total Stock Market
- ▲ Universe Median
- 68% Confidence Interval
- eV US All Cap Equity Gross

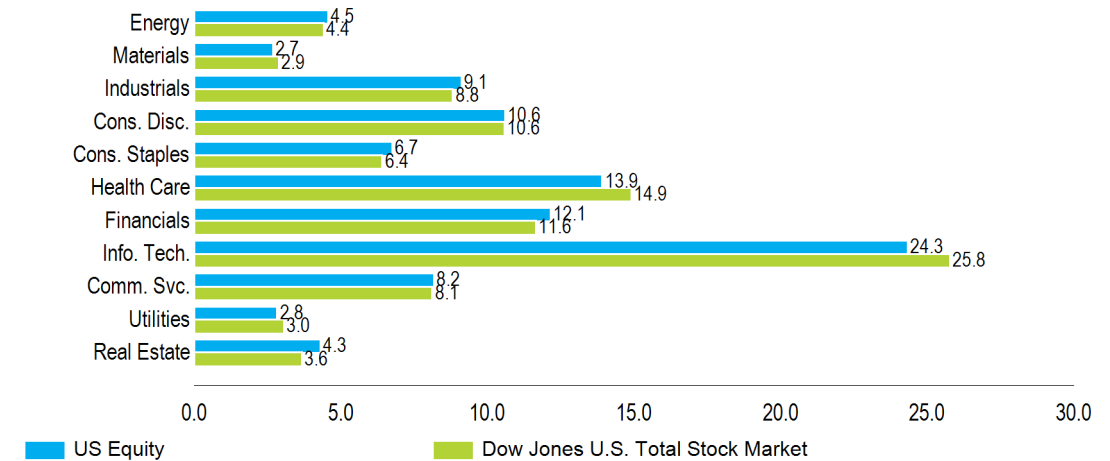


Illinois State Universities Retirement System

US Equity | As of June 30, 2022

Characteristics		
	Portfolio	Dow Jones U.S. Total Stock Market
Number of Holdings	3,100	4,184
Weighted Avg. Market Cap. (\$B)	411.8	411.2
Median Market Cap. (\$B)	2.0	1.0
Price To Earnings	17.8	17.9
Price To Book	3.5	3.6
Price To Sales	1.8	1.8
Return on Equity (%)	24.8	23.8
Yield (%)	1.7	1.7
Beta	1.0	1.0
R-Squared	1.0	1.0

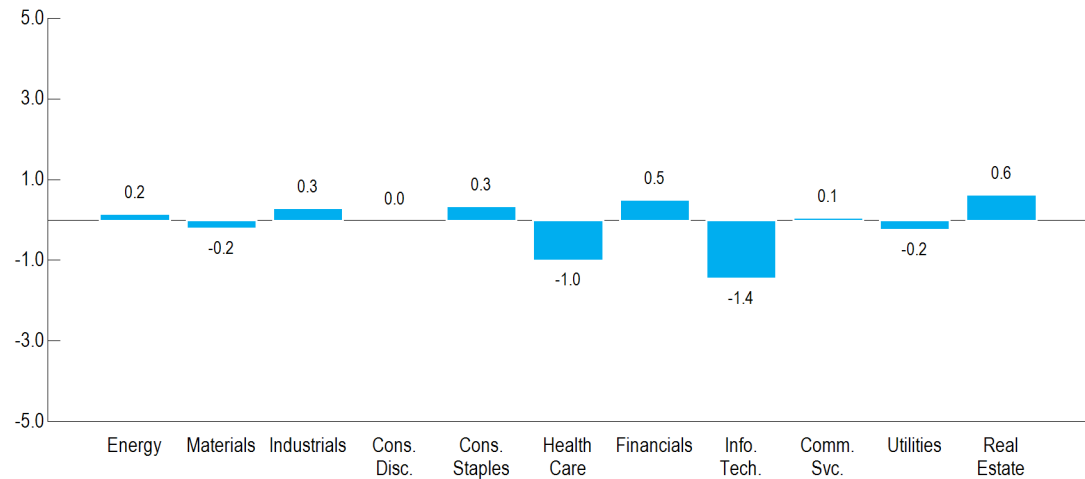
Sector Allocation (%) vs Dow Jones U.S. Total Stock Market



Top Holdings

APPLE INC	5.8%
MICROSOFT CORP	4.9%
AMAZON.COM INC	2.7%
ALPHABET INC	1.8%
ALPHABET INC	1.7%
TESLA INC	1.6%
UNITEDHEALTH GROUP INC	1.3%
JOHNSON & JOHNSON	1.2%
NVIDIA CORPORATION	1.0%
BERKSHIRE HATHAWAY INC	1.0%

Sector Over/Under Allocation (%) vs Dow Jones U.S. Total Stock Market





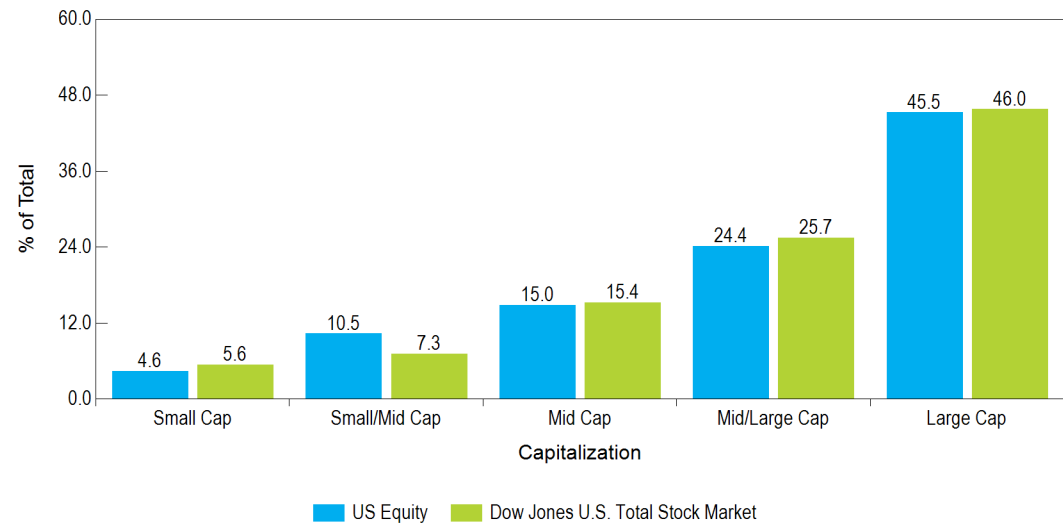
Illinois State Universities Retirement System

US Equity | As of June 30, 2022

Top Contributors

	End Weight	Return	Contribution
ELI LILLY AND CO	0.70	13.60	0.10
MERCK & CO INC	0.60	12.02	0.07
AT&T INC	0.39	16.66	0.06
LAMB WESTON HOLDINGS INC	0.24	19.74	0.05
EXXON MOBIL CORP	0.91	4.75	0.04
INTERNATIONAL BUSINESS MACHINES CORP	0.33	9.92	0.03
BRISTOL-MYERS SQUIBB CO	0.44	6.16	0.03
PHILIP MORRIS INTERNATIONAL INC	0.40	6.41	0.03
CIGNA CORP	0.22	10.45	0.02
SEAGEN INC	0.08	22.83	0.02

Market Capitalization As of June 30, 2022



Bottom Contributors

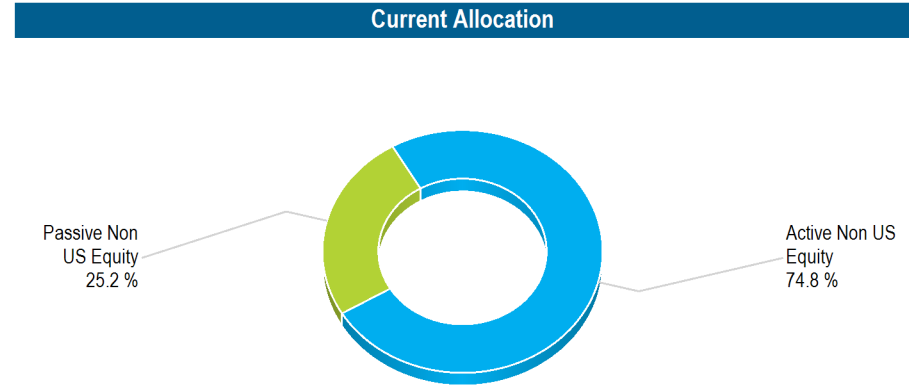
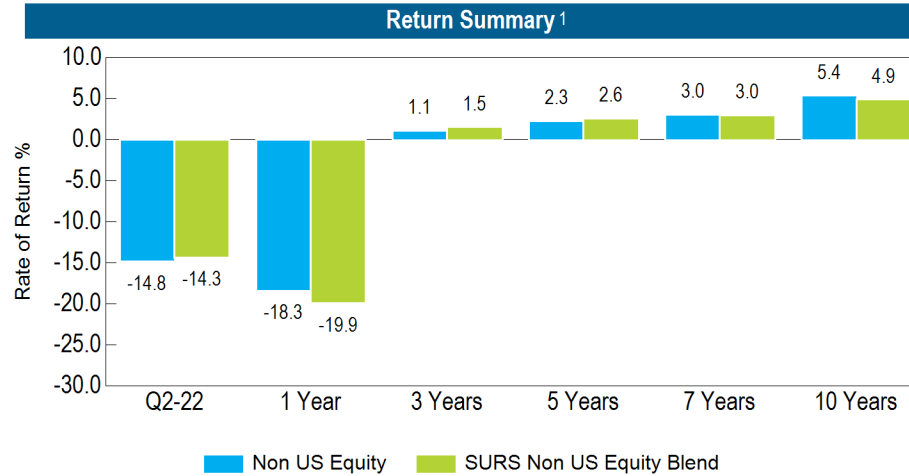
	End Weight	Return	Contribution
APPLE INC	5.77	-21.59	-1.25
AMAZON.COM INC	2.66	-34.84	-0.93
MICROSOFT CORP	4.88	-16.49	-0.80
TESLA INC	1.60	-37.51	-0.60
NVIDIA CORPORATION	0.98	-44.43	-0.43
ALPHABET INC	1.80	-21.68	-0.39
ALPHABET INC	1.67	-21.65	-0.36
META PLATFORMS INC	0.92	-27.48	-0.25
BERKSHIRE HATHAWAY INC	0.97	-22.64	-0.22
BANK OF AMERICA CORP	0.60	-24.05	-0.14

Non US Equity

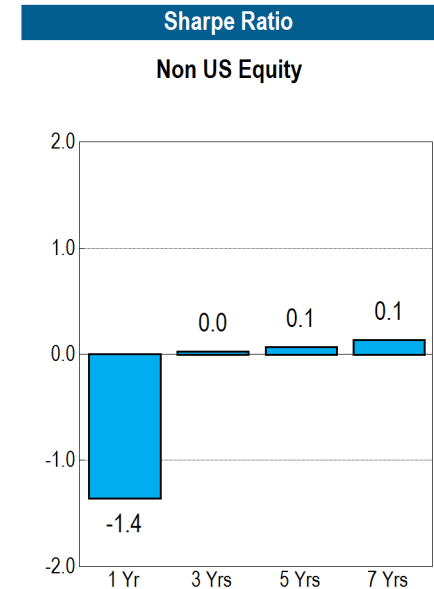
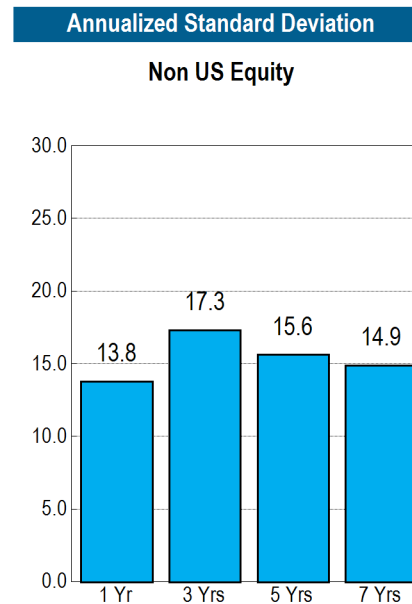
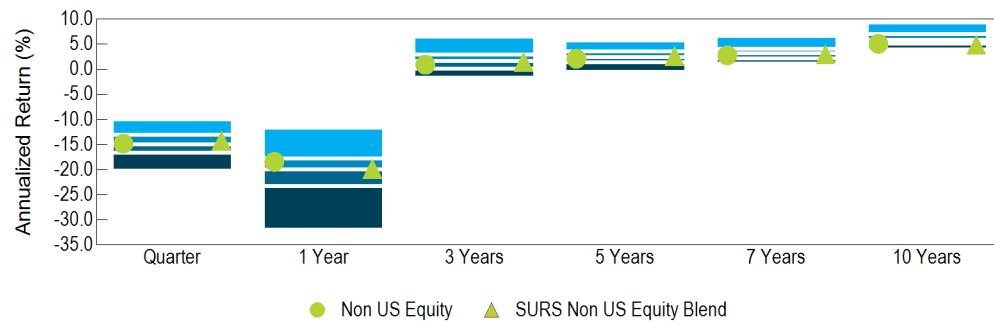


Illinois State Universities Retirement System

Non US Equity | As of June 30, 2022



	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Non US Equity	-14.8	-18.3	1.1	2.3	3.0	5.4
<i>SURS Non US Equity Blend</i>	<i>-14.3</i>	<i>-19.9</i>	<i>1.5</i>	<i>2.6</i>	<i>3.0</i>	<i>4.9</i>
Excess Return	-0.5	1.6	-0.4	-0.3	0.0	0.5
eV Non-US Diversified Core Eq Net Rank	49	34	64	58	58	71
eV Non-US Diversified Core Eq Net Median	-14.9	-20.0	1.7	2.5	3.3	5.9



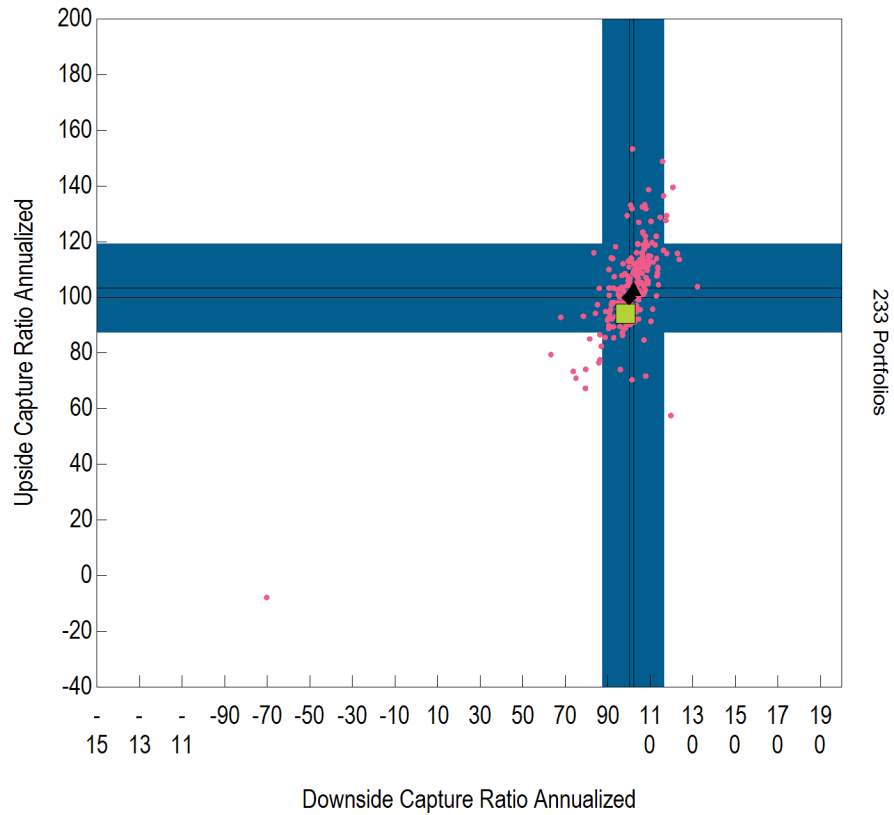
¹Returns are gross of fees



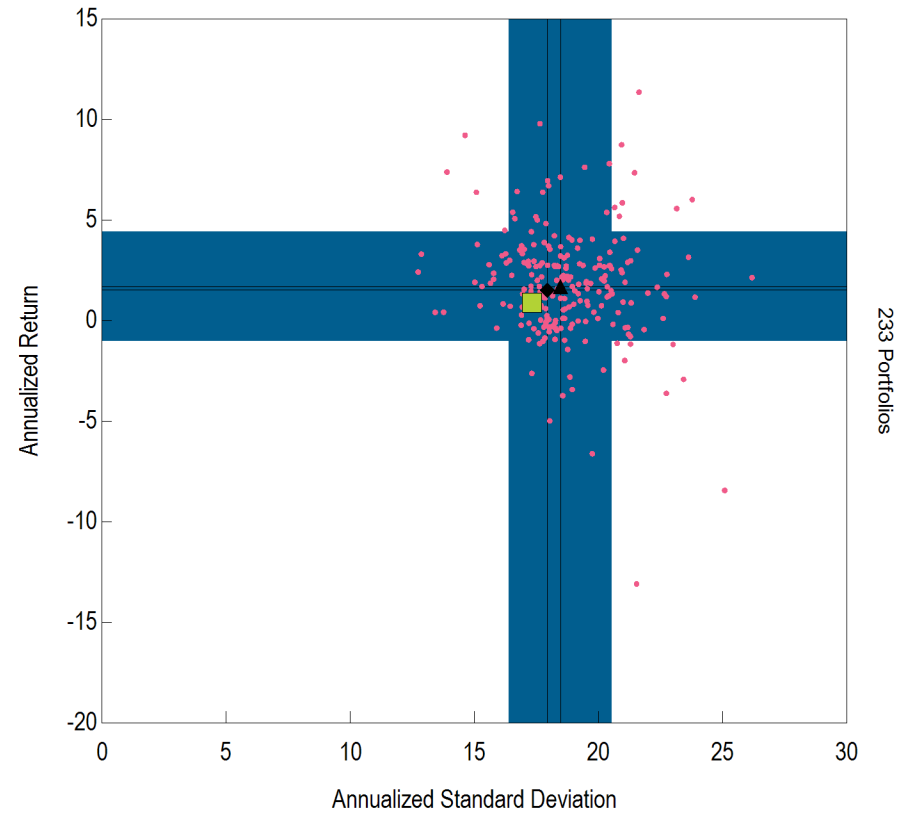
Illinois State Universities Retirement System

Non US Equity | As of June 30, 2022

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending June 30, 2022



Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2022



- Non US Equity
- ◆ SURS Non US Equity Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV Non-US Diversified Core Eq Net

- Non US Equity
- ◆ SURS Non US Equity Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV Non-US Diversified Core Eq Net

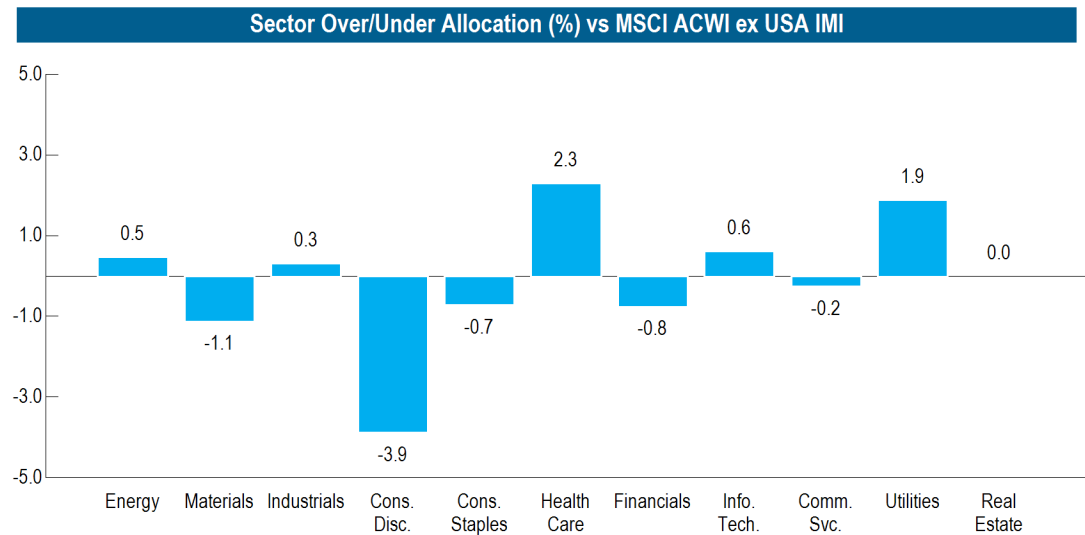
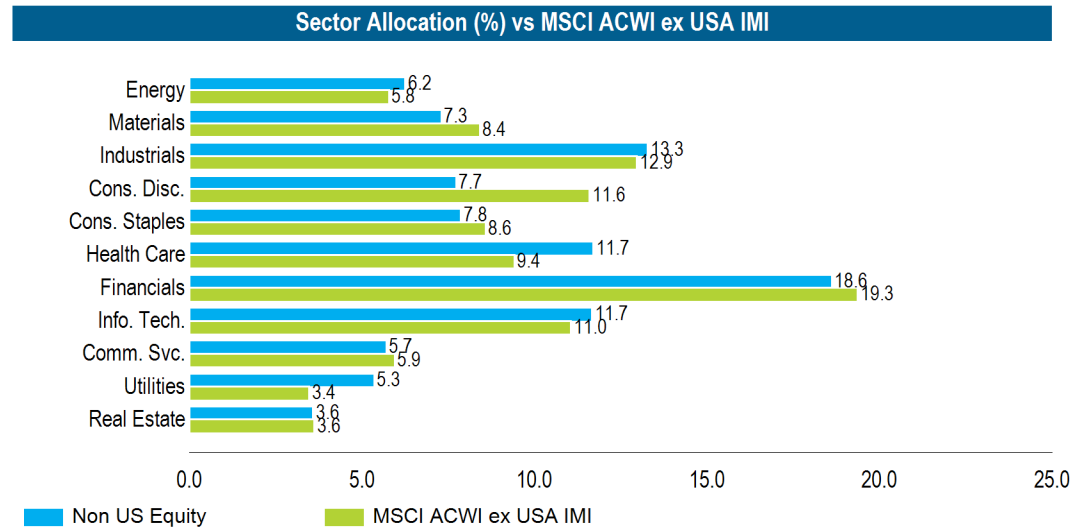


Illinois State Universities Retirement System

Non US Equity | As of June 30, 2022

Characteristics		
	Portfolio	MSCI ACWI ex USA IMI
Number of Holdings	2,319	6,420
Weighted Avg. Market Cap. (\$B)	62.2	70.7
Median Market Cap. (\$B)	8.0	1.6
Price To Earnings	10.0	12.1
Price To Book	2.4	2.3
Price To Sales	0.9	1.2
Return on Equity (%)	17.6	14.2
Yield (%)	4.2	3.5
Beta	1.0	1.0
R-Squared	1.0	1.0

Top Holdings	
NOVO NORDISK 'B'	1.4%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.3%
ROCHE HOLDING AG	1.0%
LVMH MOET HENNESSY LOUIS VUITTON SE	1.0%
SAMSUNG ELECTRONICS CO LTD	1.0%
GSK PLC	1.0%
NOVARTIS AG	1.0%
NESTLE SA, CHAM UND VEVEY	0.9%
SHELL PLC	0.9%
BHP GROUP LTD	0.9%





Illinois State Universities Retirement System

Non US Equity | As of June 30, 2022

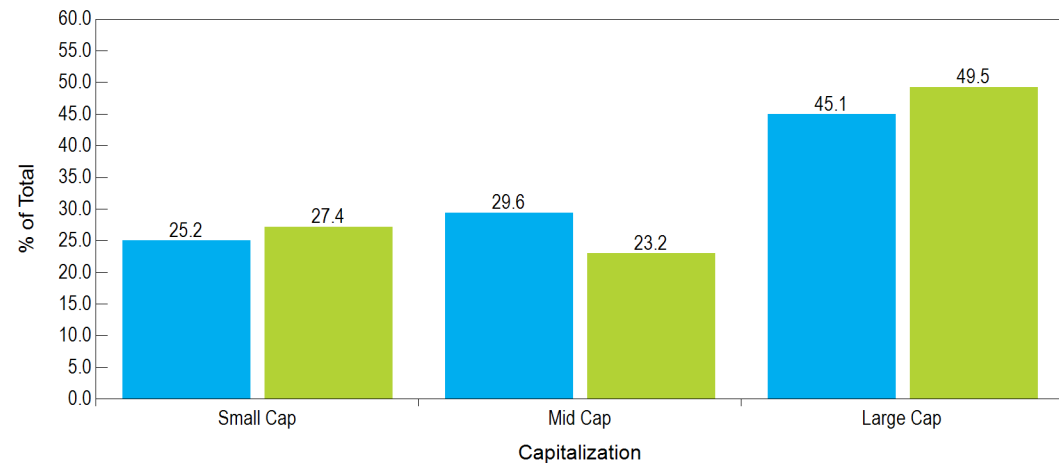
Top Contributors

	End Weight	Return	Contribution
DEUTSCHE TELEKOM AG	0.83	9.23	0.08
BAE SYSTEMS PLC	0.56	9.17	0.05
WH GROUP LTD	0.20	25.04	0.05
PICC PROPERTY & CASUALTY CO LTD	0.63	7.70	0.05
PINDUODUO	0.05	54.08	0.03
CHINA RESOURCES PHARMACEUTICAL GROUP LTD	0.08	35.10	0.03
BYD 'H'	0.07	39.70	0.03
YADEA ORD	0.08	28.84	0.02
DOGUS OTOMOTIV SERVIS VE TIC	0.11	17.16	0.02
HOMESERVE PLC	0.06	28.52	0.02

Bottom Contributors

	End Weight	Return	Contribution
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.32	-22.83	-0.30
SAMSUNG ELECTRONICS CO LTD	0.98	-22.74	-0.22
ASML HOLDING NV	0.72	-29.20	-0.21
ROCHE HOLDING AG	1.01	-16.17	-0.16
MERCK			
KOMMANDITGESELLSCHAFT AUF AKTIEN	0.82	-19.34	-0.16
BHP GROUP LTD	0.87	-17.89	-0.16
LVMH MOET HENNESSY LOUIS VUITTON SE	0.99	-14.74	-0.15
SCHNEIDER ELECTRIC SA	0.46	-28.61	-0.13
L'OREAL S.A., PARIS	0.86	-13.64	-0.12
PANDORA AS	0.32	-35.01	-0.11

Market Capitalization As of June 30, 2022



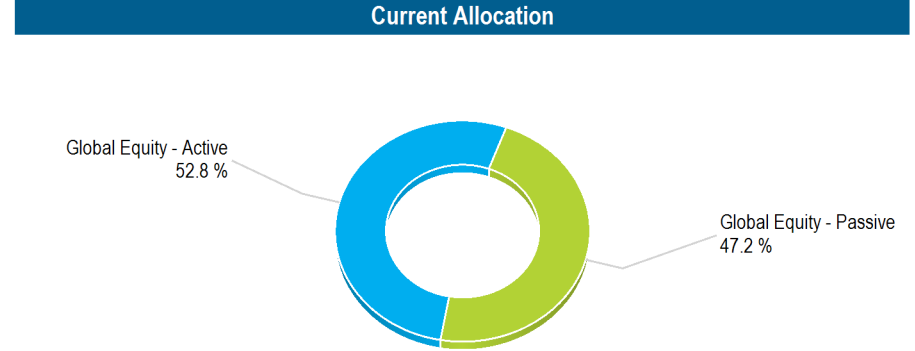
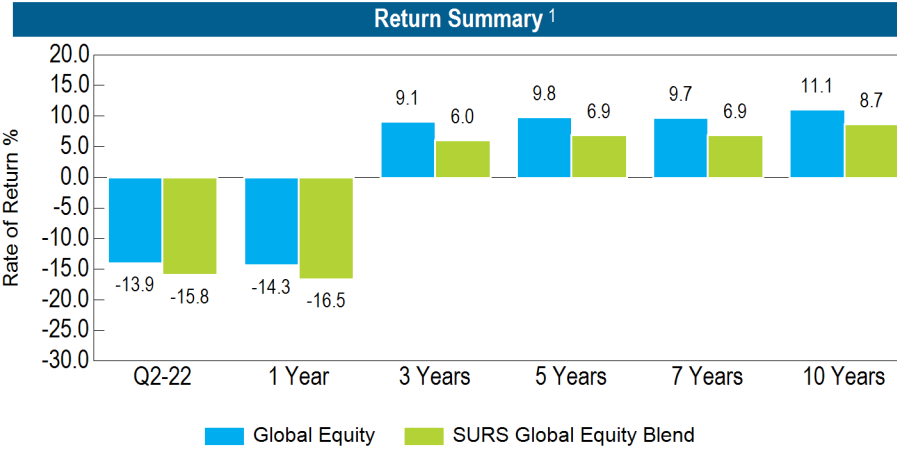
■ Non US Equity ■ MSCI ACWI ex USA IMI

Global Equity

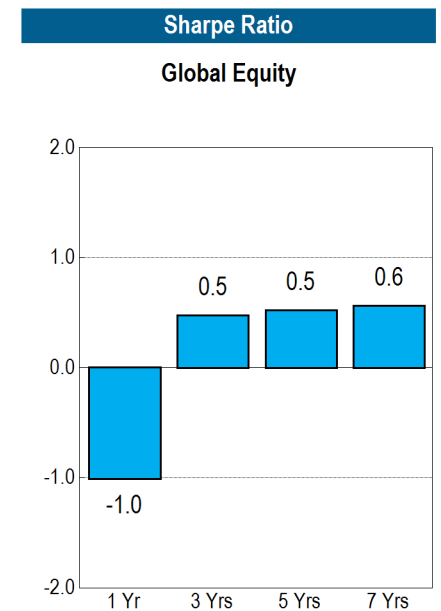
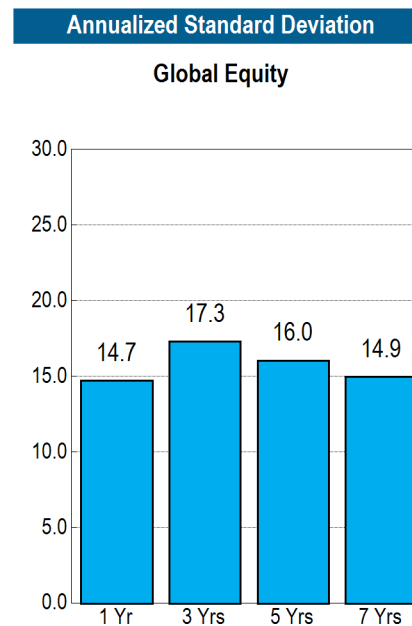
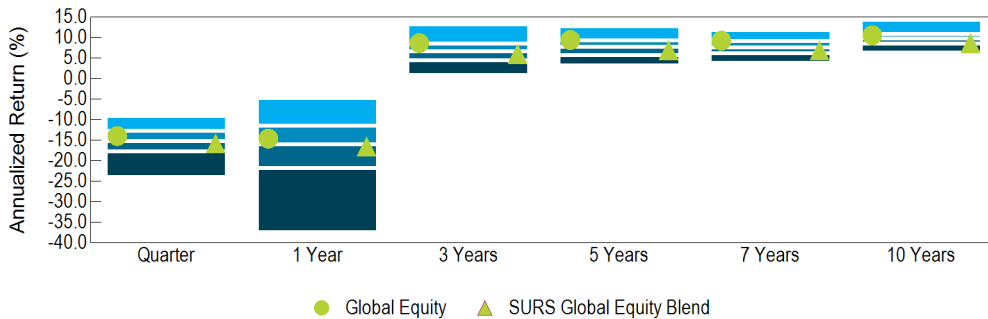


Illinois State Universities Retirement System

Global Equity | As of June 30, 2022



	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Global Equity	-13.9	-14.3	9.1	9.8	9.7	11.1
<i>SURS Global Equity Blend</i>	<i>-15.8</i>	<i>-16.5</i>	<i>6.0</i>	<i>6.9</i>	<i>6.9</i>	<i>8.7</i>
Excess Return	1.9	2.2	3.1	2.9	2.8	2.4
eV Global All Cap Equity Gross Rank	36	43	21	21	20	25
eV Global All Cap Equity Gross Median	-15.2	-16.0	6.8	7.8	7.6	9.9



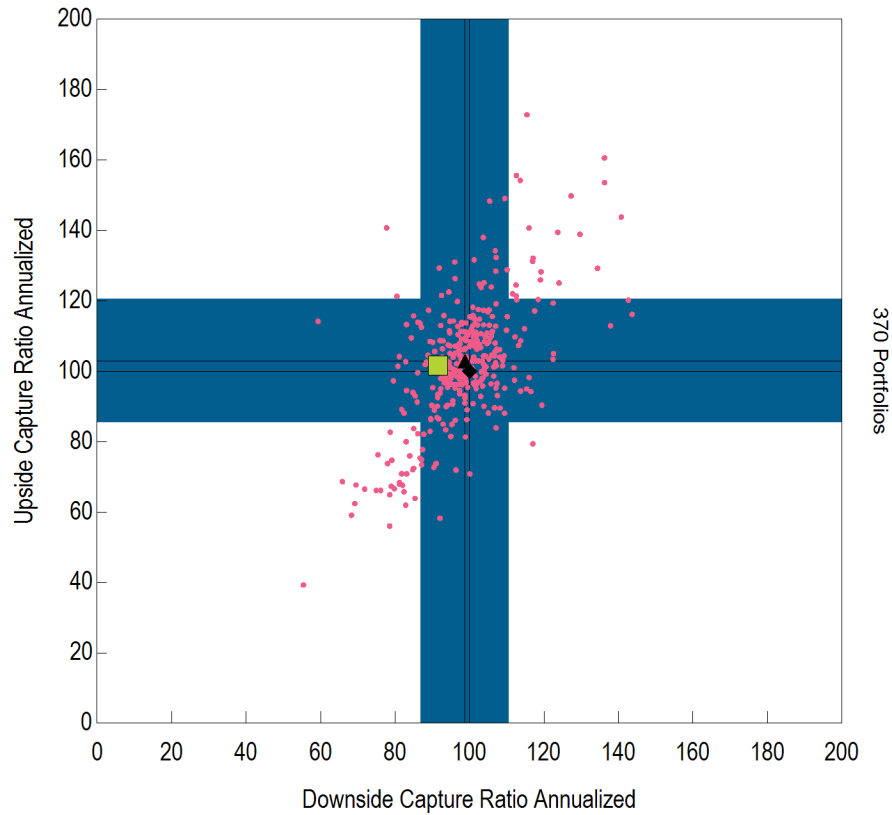
¹Returns are gross of fees



Illinois State Universities Retirement System

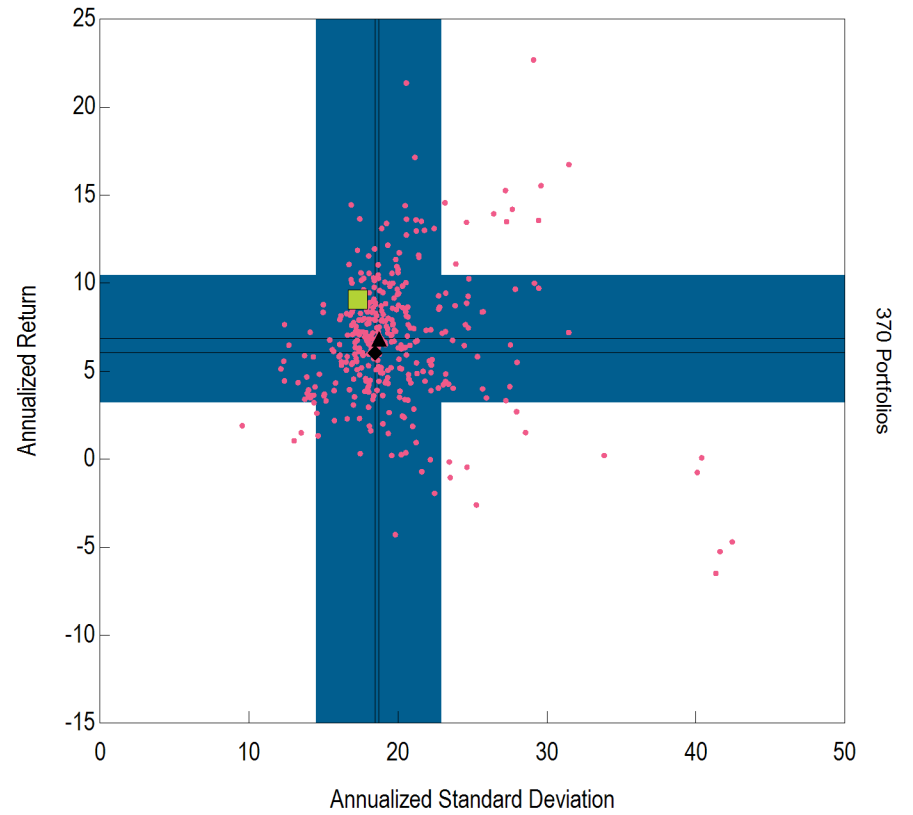
Global Equity | As of June 30, 2022

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending June 30, 2022



- Global Equity
- ◆ SURS Global Equity Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV Global All Cap Equity Gross

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2022



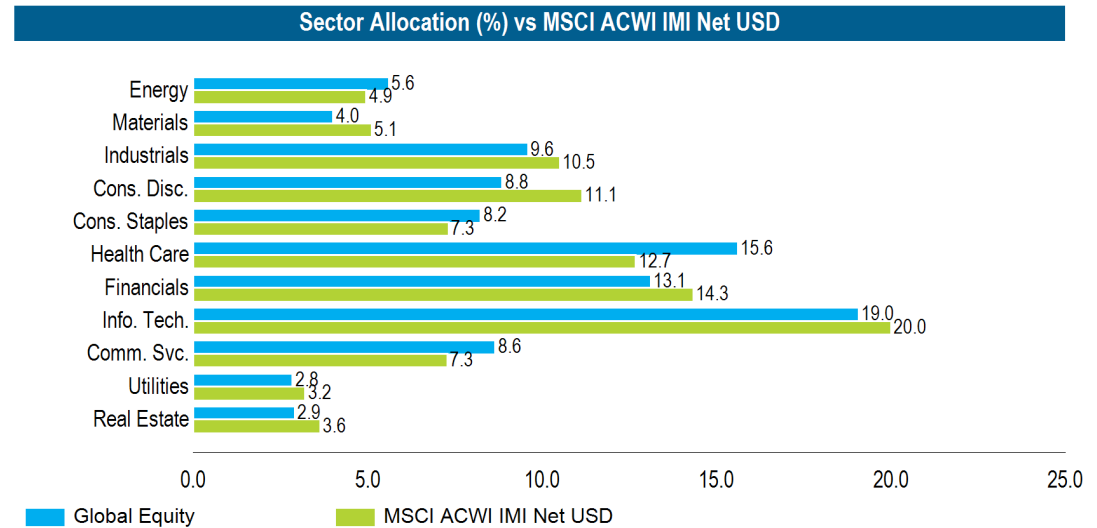
- Global Equity
- ◆ SURS Global Equity Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV Global All Cap Equity Gross



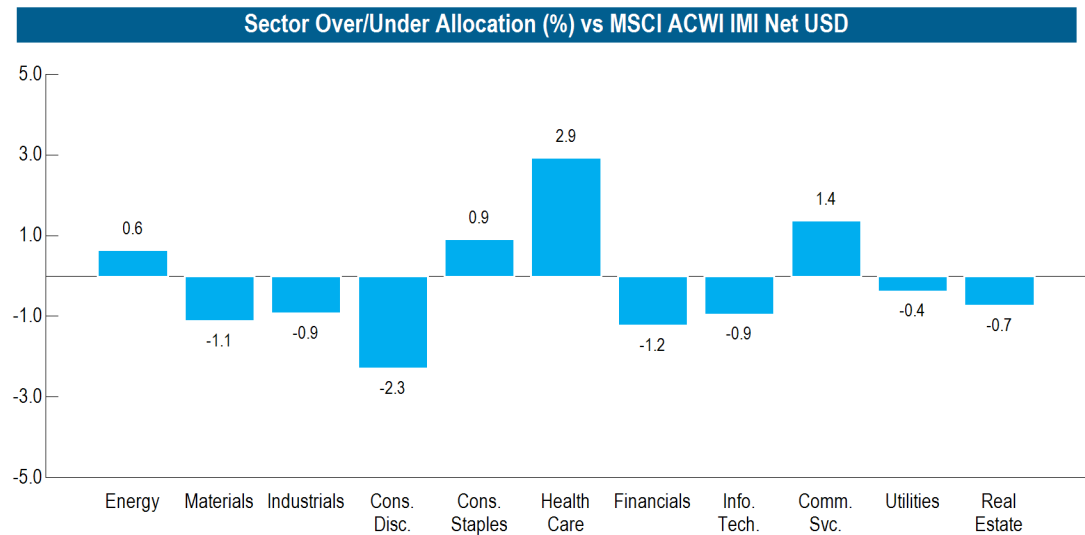
Illinois State Universities Retirement System

Global Equity | As of June 30, 2022

Characteristics		
	Portfolio	MSCI ACWI IMI Net USD
Number of Holdings	2,126	9,006
Weighted Avg. Market Cap. (\$B)	255.3	277.4
Median Market Cap. (\$B)	14.7	1.9
Price To Earnings	15.3	15.2
Price To Book	3.1	3.0
Price To Sales	1.5	1.5
Return on Equity (%)	22.6	19.8
Yield (%)	2.5	2.4
Beta	0.9	1.0
R-Squared	1.0	1.0



Top Holdings	
MICROSOFT CORP	3.3%
APPLE INC	2.2%
JOHNSON & JOHNSON	1.4%
AMAZON.COM INC	1.3%
MACQUARIE POOLED TRUST EMERGING MARKETS PORTFOLIO	1.3%
EXXON MOBIL CORP	1.0%
ALPHABET INC	1.0%
UNITEDHEALTH GROUP INC	1.0%
PHILIP MORRIS INTERNATIONAL INC	0.9%
ALPHABET INC	0.8%





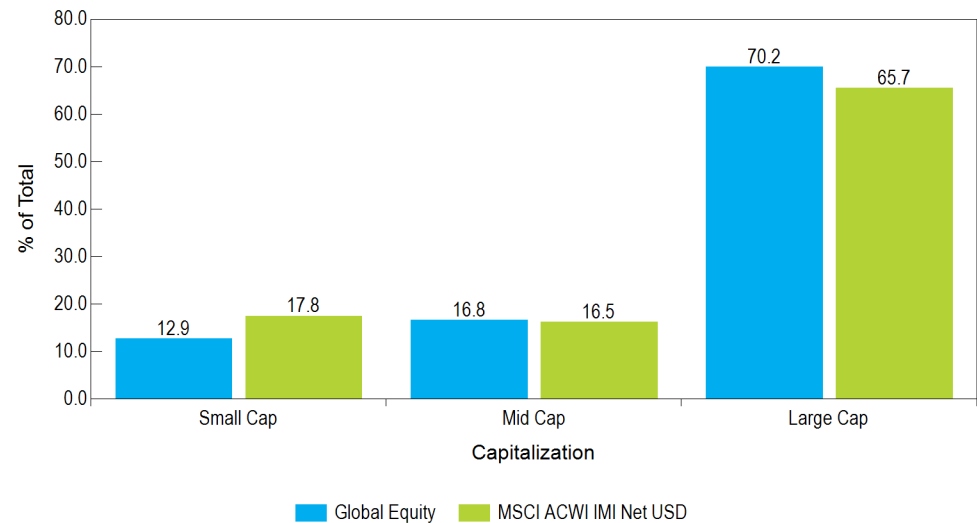
Illinois State Universities Retirement System

Global Equity | As of June 30, 2022

Top Contributors

	End Weight	Return	Contribution
ELI LILLY AND CO	0.62	13.60	0.08
PHILIP MORRIS INTERNATIONAL INC	0.88	6.41	0.06
BAIDU INC	0.45	12.42	0.06
MEITUAN DIANPING USD0.00001 A B CLASS ISIN KYG596691041	0.20	24.56	0.05
EXXON MOBIL CORP	1.02	4.75	0.05
DAIICHI SANKYO COMPANY LTD	0.32	14.60	0.05
MERCK & CO INC	0.34	12.02	0.04
AT&T INC	0.23	16.66	0.04
WH GROUP LTD	0.15	25.04	0.04
MATSUMOTOKIYOSHI HDG.	0.26	13.17	0.03

Market Capitalization As of June 30, 2022



Bottom Contributors

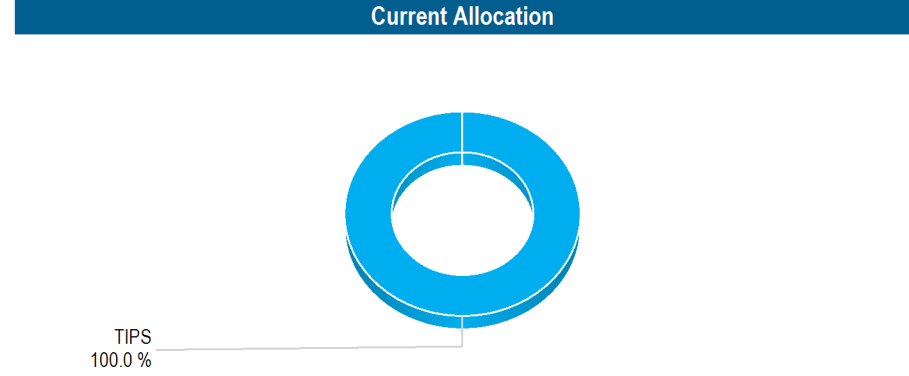
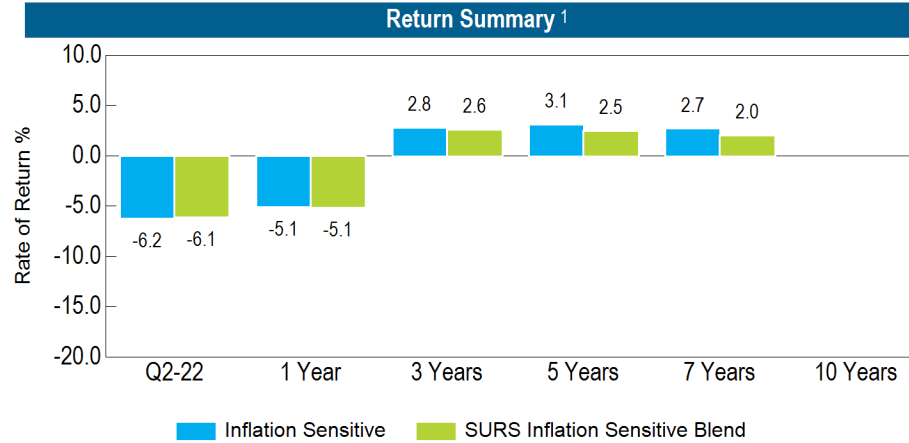
	End Weight	Return	Contribution
MICROSOFT CORP	3.27	-16.49	-0.54
APPLE INC	2.20	-21.59	-0.48
AMAZON.COM INC	1.34	-34.84	-0.47
ALPHABET INC	0.99	-21.65	-0.21
META PLATFORMS INC	0.72	-27.48	-0.20
TESLA INC	0.50	-37.51	-0.19
ALPHABET INC	0.84	-21.68	-0.18
ASML HOLDING NV	0.51	-29.20	-0.15
NVIDIA CORPORATION	0.34	-44.43	-0.15
HOYA CORP	0.51	-26.21	-0.13

Inflation Sensitive

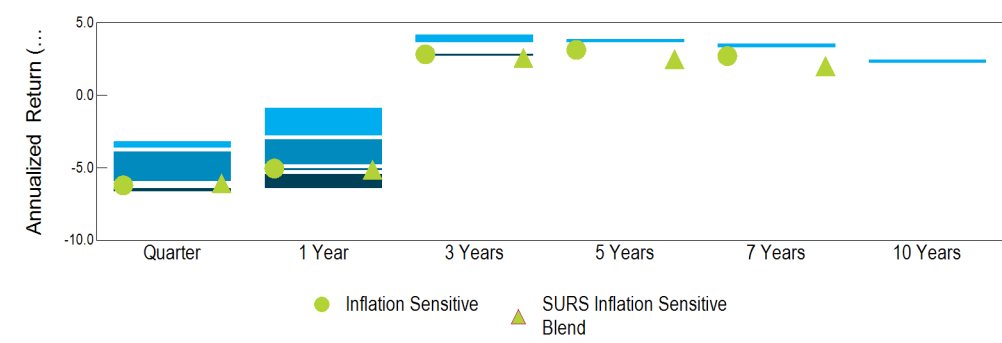
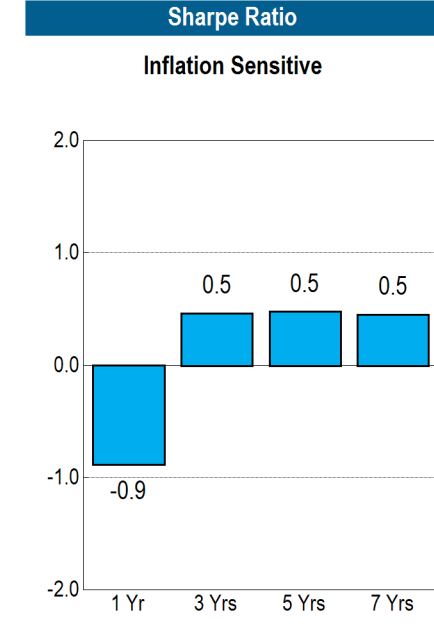
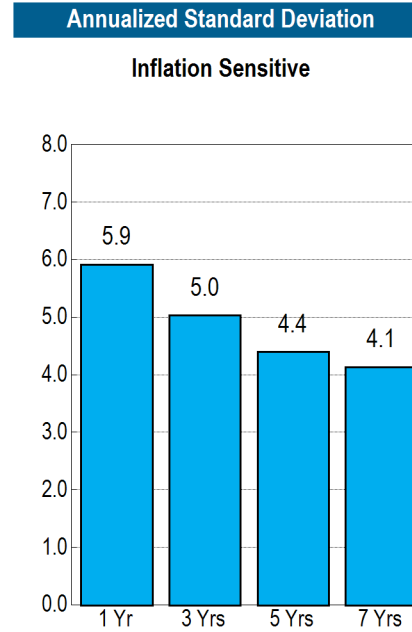


Illinois State Universities Retirement System

Inflation Sensitive | As of June 30, 2022



	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Inflation Sensitive	-6.2	-5.1	2.8	3.1	2.7	--
<i>SURS Inflation Sensitive Blend</i>	-6.1	-5.1	2.6	2.5	2.0	--
Excess Return	-0.1	0.0	0.2	0.6	0.7	--
eV US TIPS / Inflation Fixed Inc Gross Rank	72	55	91	93	91	--
eV US TIPS / Inflation Fixed Inc Gross Median	-6.0	-4.9	3.3	3.3	2.9	1.9



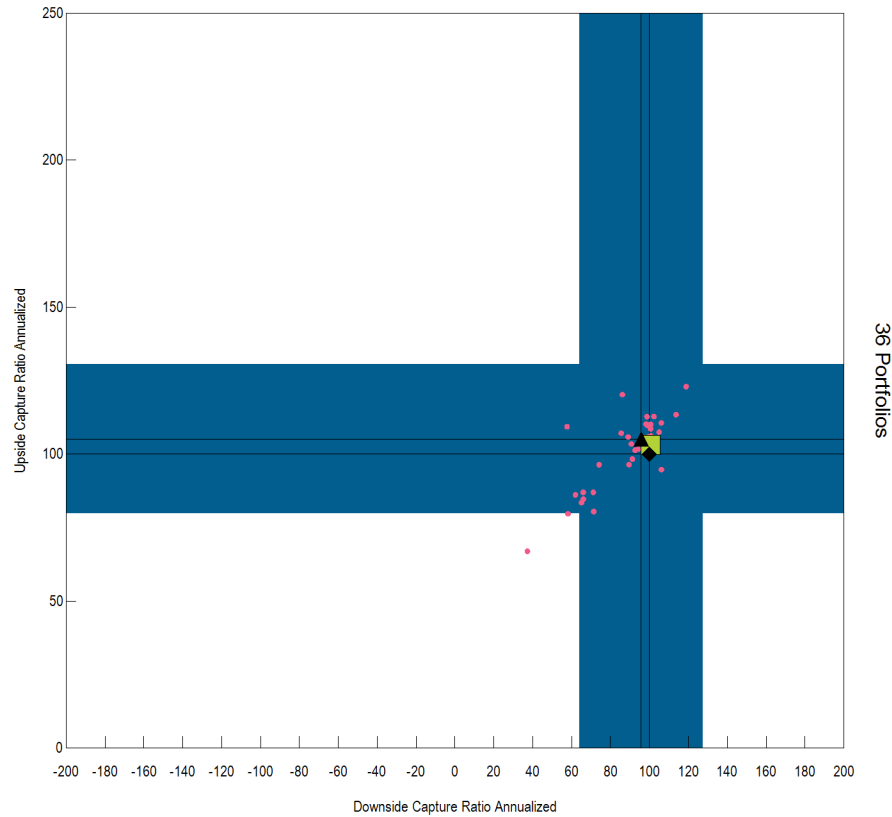
¹Returns are gross of fees



Illinois State Universities Retirement System

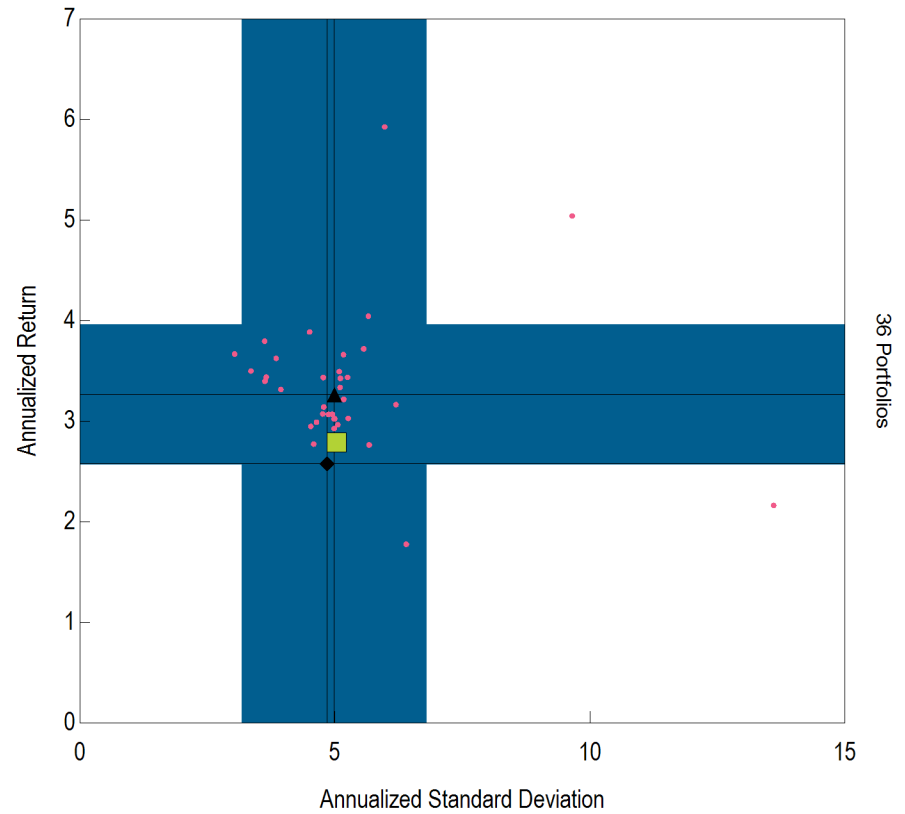
Inflation Sensitive | As of June 30, 2022

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending June 30, 2022



- Inflation Sensitive
- ◆ SURS Inflation Sensitive Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV US TIPS / Inflation Fixed Inc Gross

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2022



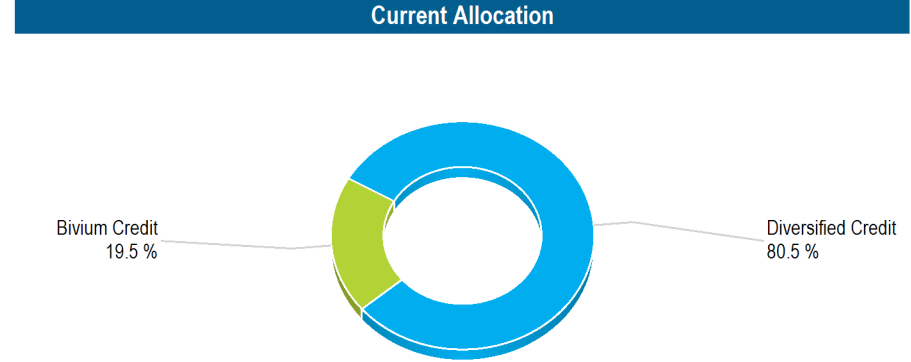
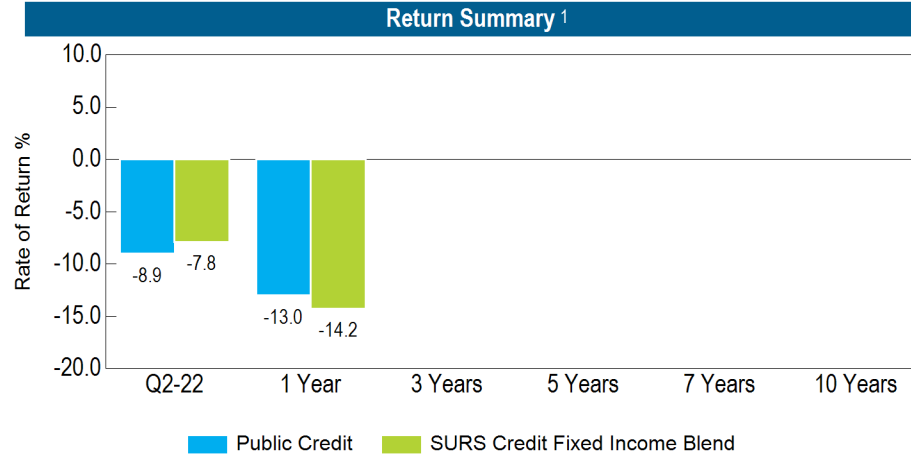
- Inflation Sensitive
- ◆ SURS Inflation Sensitive Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV US TIPS / Inflation Fixed Inc Gross

Public Credit

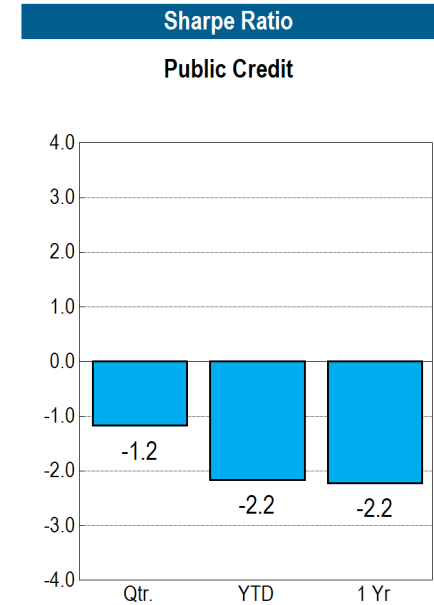
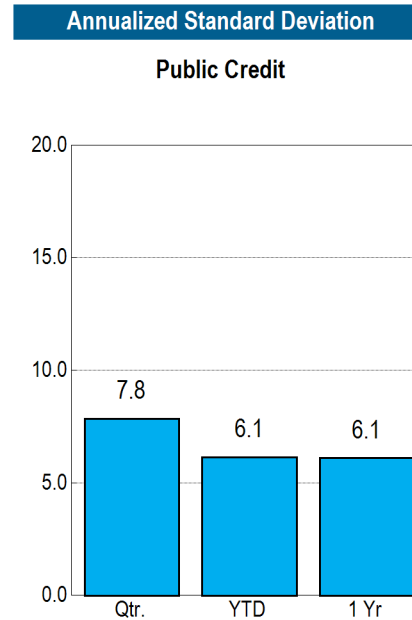


Illinois State Universities Retirement System

Public Credit | As of June 30, 2022



	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Public Credit	-8.9	-13.0	--	--	--	--
<i>SURS Credit Fixed Income Blend</i>	<i>-7.8</i>	<i>-14.2</i>	--	--	--	--
Excess Return	-1.1	1.2				



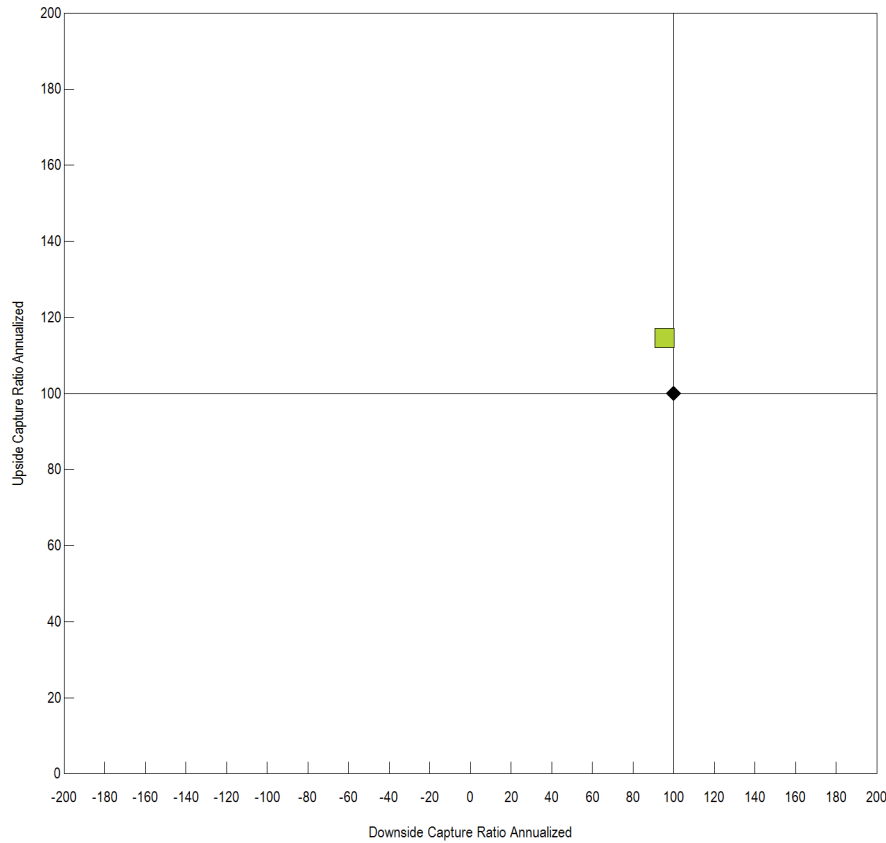
¹ Returns are gross of fees



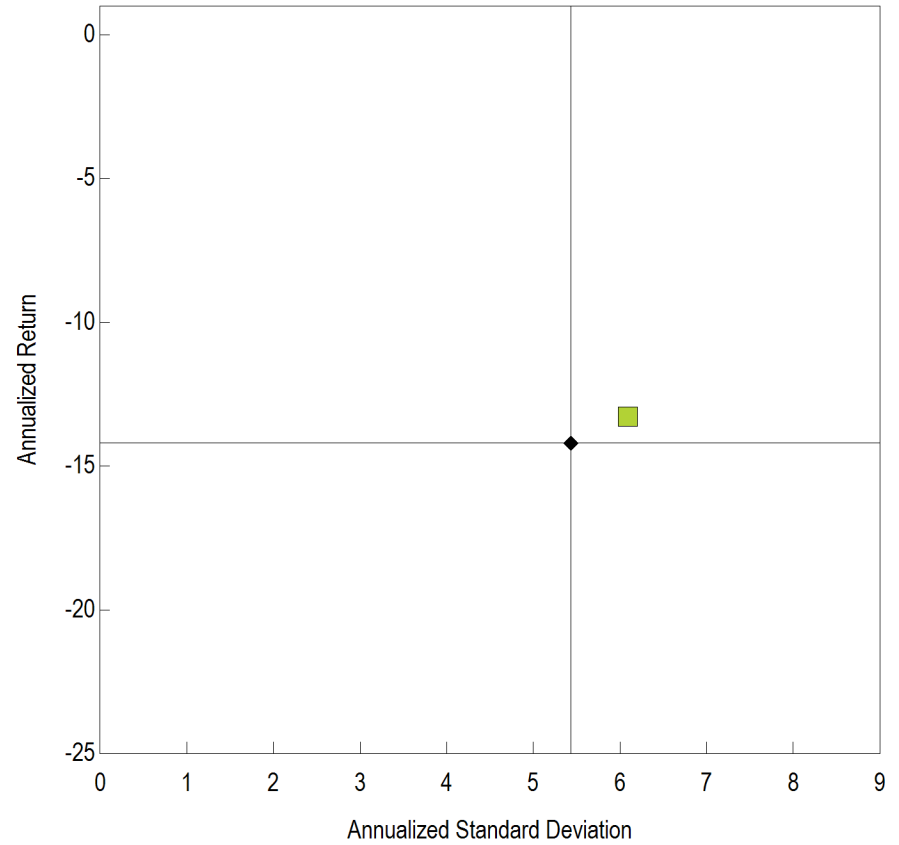
Illinois State Universities Retirement System

Public Credit | As of June 30, 2022

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
1 Year Ending June 30, 2022



Annualized Return vs. Annualized Standard Deviation
1 Year Ending June 30, 2022





Illinois State Universities Retirement System

Public Credit | As of June 30, 2022

Credit Fixed Income Fixed Income Characteristics

Portfolio
Q2-22

Fixed Income Characteristics

Yield to Maturity	7.95
Average Duration	7.37
Average Quality	BB

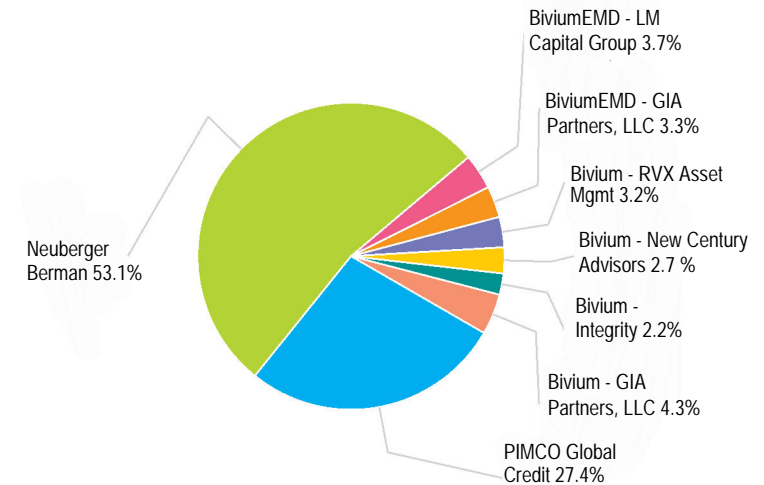
US Sector Allocation

UST/Agency	2.00
Corporate	53.30
MBS	1.77
ABS	0.82
Foreign	25.74
Muni	0.50
Yankee	0.61
Other	12.82
Cash	2.44

Credit Quality Allocation

AAA	9.42
AA	1.01
A	5.43
BBB	23.33
BB and Below	51.09
Not Rated	2.97
Cash	3.78

Current Allocation



Top Holdings

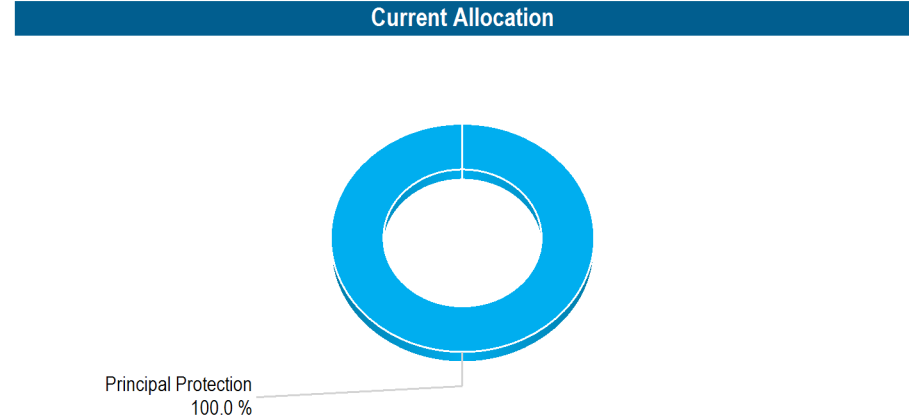
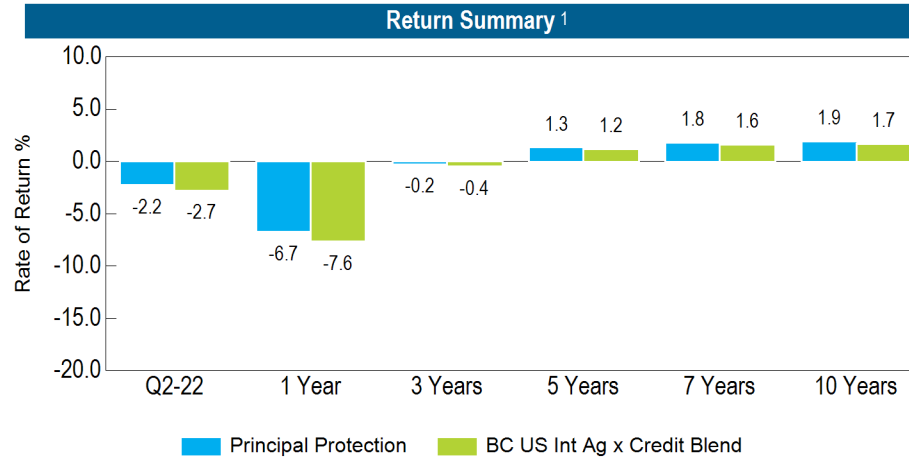
UST 0% T-BILL 29/09/2022 USD	4.06%
UST 0% NTS 31/05/23 USDBB-2023	1.23%
Petroleos Mexicanos 5.95% NTS 28/01/2031 USD	0.72%
GNR CMO 2065-04-20 USD	0.72%
UST BDS USD	0.60%
LOUISIANA LOC GOVT ENVIRONMENTAL FACS & CMNTY DEV AUTH SYS RESTORATION TAXABLE-LA UTILS RESTORATION	0.57%
UST 0.25% NTS 15/04/2023 USD	0.49%
UNITED AIRLS 2020-1A PASS THRU TRS	0.48%
Teva Pharmaceutical Finance Netherlands III B.V. SNR PIDI NTS 31/01/2025 USD (SEC REGD)	0.44%
Petroleos Mexicanos 7.69% NTS 23/01/2050 USD	0.43%

Principal Protection

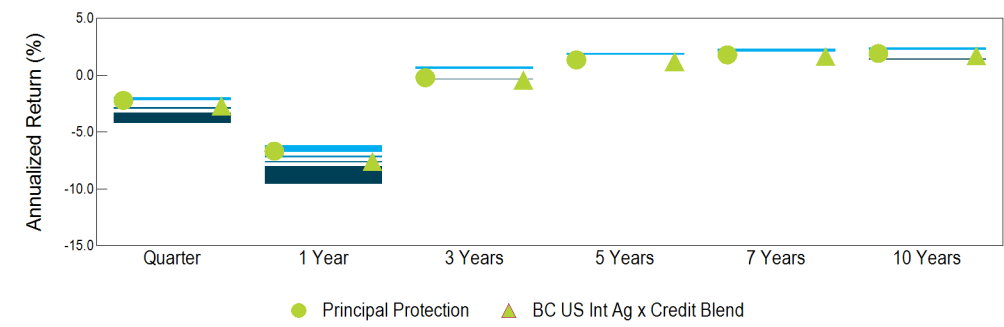
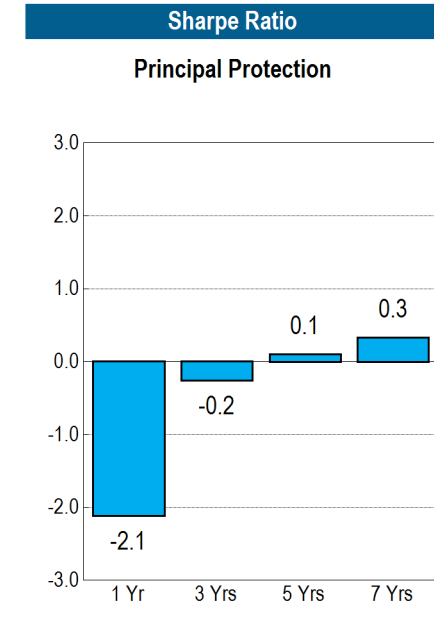
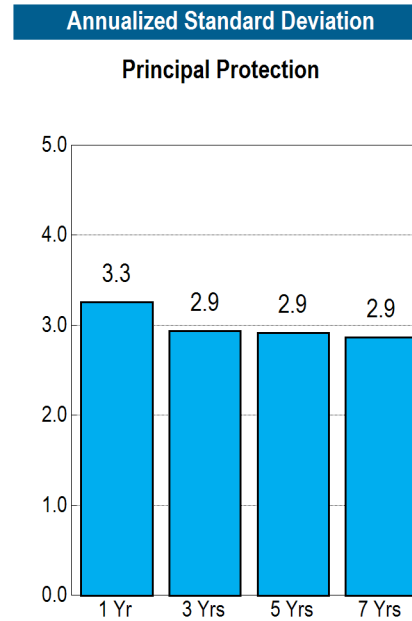


Illinois State Universities Retirement System

Principal Protection | As of June 30, 2022



	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Principal Protection	-2.2	-6.7	-0.2	1.3	1.8	1.9
<i>BC US Int Ag x Credit Blend</i>	-2.7	-7.6	-0.4	1.2	1.6	1.7
Excess Return	0.5	0.9	0.2	0.1	0.2	0.2
eV US Interm Duration Fixed Inc Gross Rank	18	18	86	62	43	39
eV US Interm Duration Fixed Inc Gross Median	-2.6	-7.4	0.1	1.4	1.7	1.8



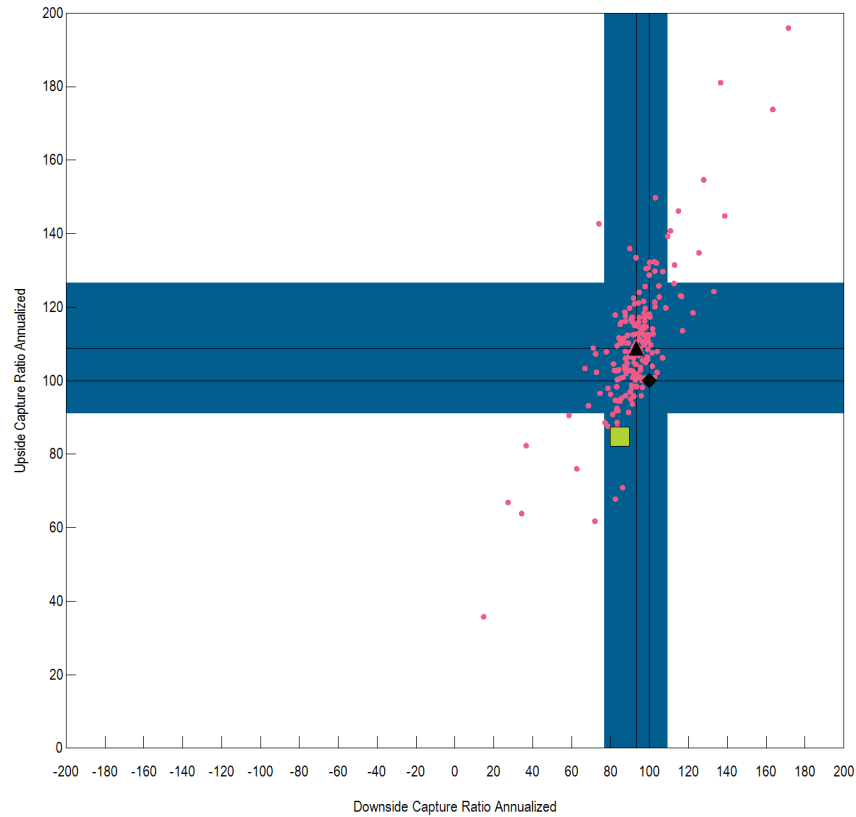
¹Returns are gross of fees



Illinois State Universities Retirement System

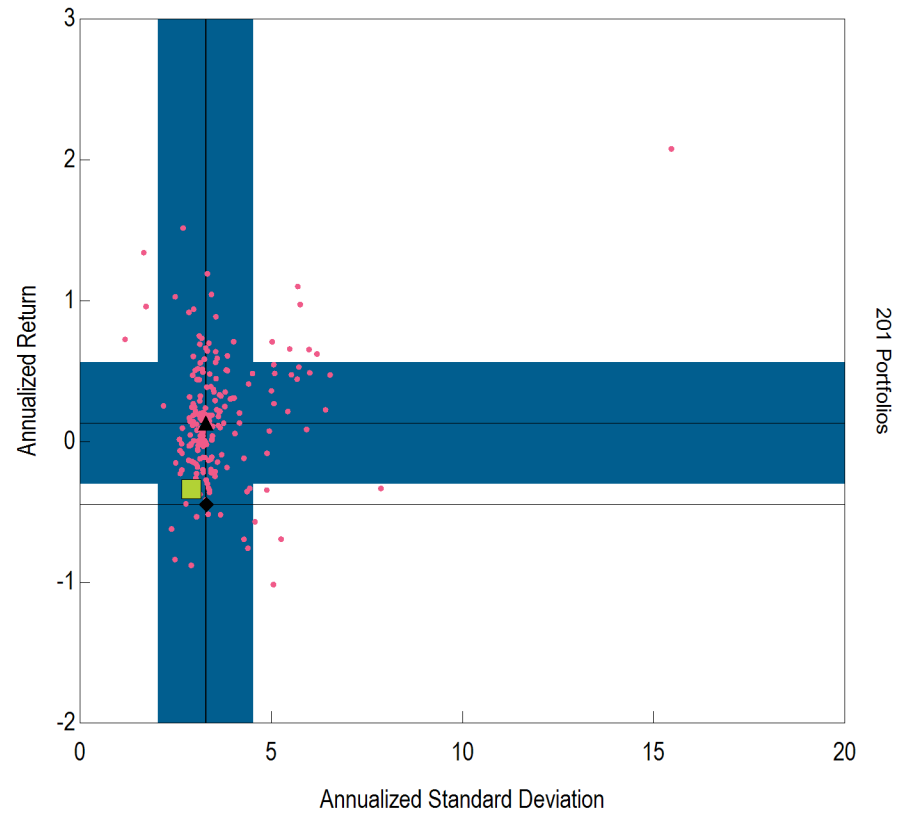
Principal Protection | As of June 30, 2022

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending June 30, 2022



- Principal Protection
- ◆ BC US Int Ag x Credit Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV US Interm Duration Fixed Inc Gross

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2022



- Principal Protection
- ◆ BC US Int Ag x Credit Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV US Interm Duration Fixed Inc Gross

Illinois State Universities Retirement System

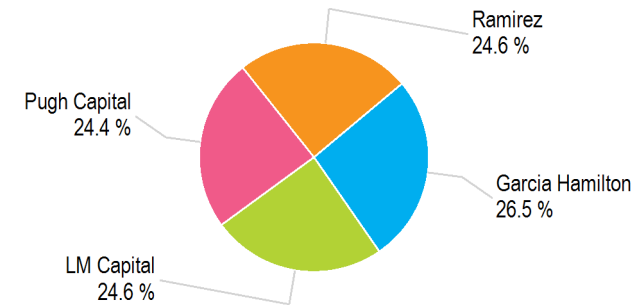
Principal Protection | As of June 30, 2022

Principal Protection Fixed Income Characteristics

Portfolio
Q2-22

Fixed Income Characteristics	
Yield to Maturity	3.41
Average Duration	4.17
Average Quality	AAA
US Sector Allocation	
UST/Agency	55.34
Corporate	3.97
MBS	30.09
ABS	3.60
Muni	4.79
Other	1.46
Cash	0.76
Credit Quality Allocation	
AAA	69.51
AA	23.95
A	3.96
BBB	1.82
Cash	0.76

Current Allocation



Top Holdings

UST 2.375% NTS 15/05/29 USD1000	5.16%
UST 1.75% NTS 31/12/24 USD1000	4.20%
UST 1.75% NTS 15/11/2029 USD	3.94%
UST 1.5% NTS 15/02/2030 USD1000	3.86%
UST 0% NTS 15/05/31 USDC-2031	3.63%
UST 2.25% SNR 15/11/27 USD1000	3.15%
UST 0% NTS 15/08/31 USDE-2031	3.04%
UST 2.875% SNR 15/08/28 USD1000	1.80%
UST 2.5% NTS 28/02/2026 USD1000	1.78%
UST 2.75% SNR 15/02/2024 USD100	1.61%

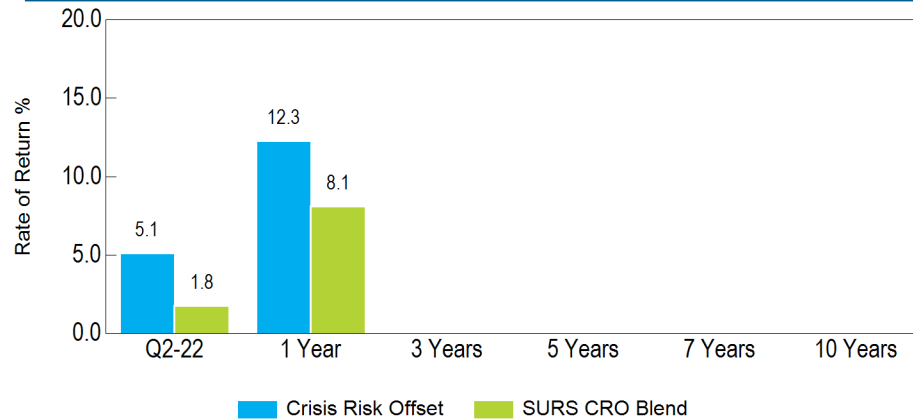
Crisis Risk Offset



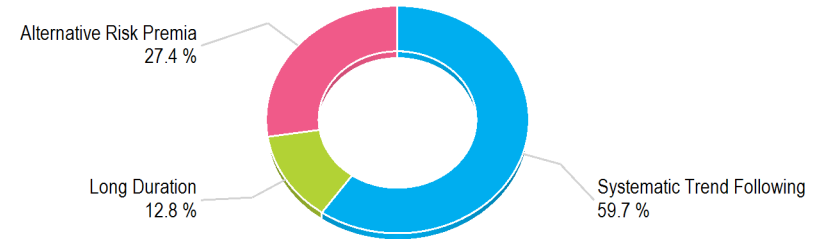
Illinois State Universities Retirement System

Crisis Risk Offset | As of June 30, 2022

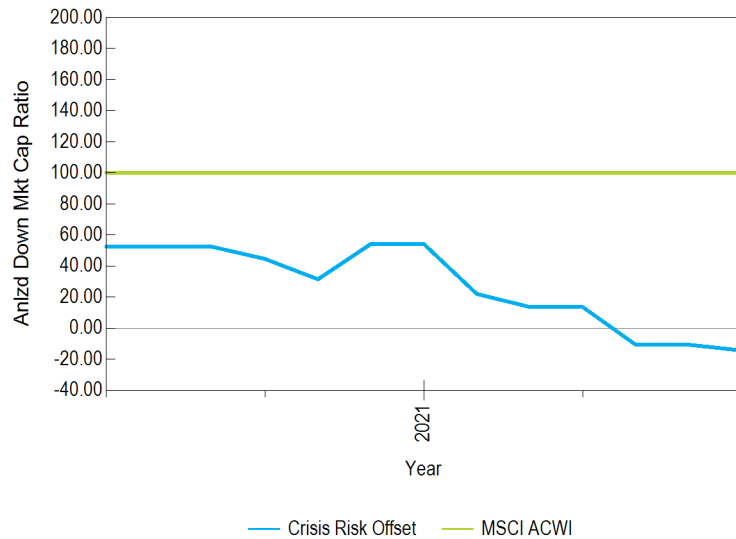
Return Summary



Current Allocation



Rolling 1 Year Annualized Down Market Capture Ratio (%)



	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Crisis Risk Offset	5.1	10.7	--	--
MSCI ACWI IMI	-5.5	6.3	--	--
S&P 500	-4.6	15.6	--	--
Bloomberg Intermediate Agg ex Credit	-4.6	-4.5	--	--
Bloomberg Aggregate	-5.9	-4.2	--	--
Bloomberg Commodities	25.5	49.3	--	--



Illinois State Universities Retirement System

Crisis Risk Offset | As of June 30, 2022

RISK RETURN STATISTICS		
December 01, 2019 Through June 30, 2022		
	Crisis Risk Offset	SURS CRO Blend
RETURN SUMMARY STATISTICS		
Number of Periods	31	31
Maximum Return	4.35	4.82
Minimum Return	-2.33	-2.34
Annualized Return	5.76	6.85
Total Return	15.57	18.66
Annualized Excess Return Over Risk Free	5.47	6.55
Annualized Excess Return	-1.08	0.00
RISK SUMMARY STATISTICS		
Beta	0.75	1.00
Upside Deviation	3.94	4.40
Downside Deviation	2.54	1.68
RISK/RETURN SUMMARY STATISTICS		
Annualized Standard Deviation	5.69	5.97
Alpha	0.06	0.00
Sharpe Ratio	0.96	1.10
Excess Return Over Market / Risk	-0.19	0.00
Tracking Error	3.84	0.00
Information Ratio	-0.28	--
CORRELATION STATISTICS		
R-Squared	0.62	1.00
Correlation	0.78	1.00
Market Proxy: SURS CRO Blend		
Risk-Free Proxy: 91 Day T-Bills		

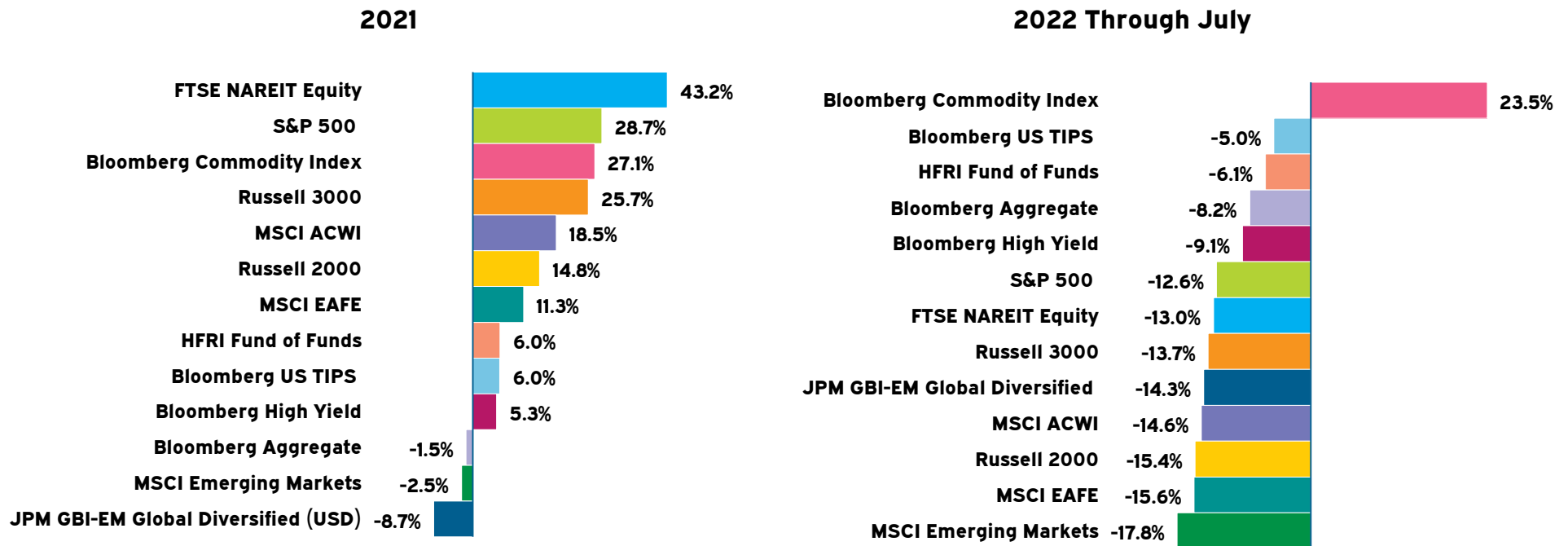
Appendix

Economic and Market Update

Data as of July 31, 2022

Commentary

- Global markets posted strong results in July on expectations that policy tightening in the US could end early next year due to slowing growth.
- As expected, the Federal Reserve increased interest rates by another 75 basis points. Notably, much focus was placed on chair Jerome Powell's comments that the pace of policy tightening could slow.
 - Developed market equity indices increased for the month, led by US equities where earnings reports were not as weak as feared. Emerging markets fell for the month driven by China instituting renewed COVID-19 lockdowns and lingering property market issues.
 - Growth stocks again outperformed value stocks in July, but trail significantly year to date.
 - Rates declined for the month as growth slowed and expectations for the pace of policy tightening moderated.
- Persistently high inflation and the expected policy response, the war in Ukraine, lingering COVID-19 issues, and lockdowns in China will all have considerable economic and financial consequences for the global economy.

Index Returns¹

→ Outside of emerging markets and the broad US investment grade bond market (Bloomberg Aggregate), most asset classes appreciated in 2021.

→ While year-to-date returns remain negative, in July most asset classes posted positive returns reflecting an improvement in sentiment related to cooling inflationary pressures and the expected path of policy.

¹ Source: Bloomberg and FactSet. Data is as of July 31, 2022.

Domestic Equity Returns¹

Domestic Equity	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	9.2	-16.1	-12.6	-4.6	13.4	12.8	13.8
Russell 3000	9.4	-16.7	-13.7	-7.4	12.6	12.2	13.5
Russell 1000	9.3	-16.7	-13.6	-6.9	12.9	12.5	13.7
Russell 1000 Growth	12.0	-20.9	-19.4	-11.9	16.1	16.3	16.0
Russell 1000 Value	6.6	-12.2	-7.1	-1.4	8.9	8.3	11.1
Russell MidCap	9.9	-16.8	-13.8	-9.8	9.5	9.7	12.3
Russell MidCap Growth	12.2	-21.1	-22.6	-21.8	7.5	11.0	12.8
Russell MidCap Value	8.6	-14.7	-9.0	-2.9	9.4	7.7	11.5
Russell 2000	10.4	-17.2	-15.4	-14.3	7.5	7.1	10.6
Russell 2000 Growth	11.2	-19.3	-21.6	-23.2	4.7	6.9	10.7
Russell 2000 Value	9.7	-15.3	-9.3	-4.8	9.5	6.7	10.2

US Equities: Russell 3000 Index rose 9.4%, and growth indices continued to outperform value in July.

- US stocks rose sharply during the month, led by the technology and consumer discretionary sectors.
- Growth indices outperformed their value counterparts for the month but remain well behind for the year-to-date period.
- Small company stocks outperformed large company stocks in July by over 100 basis points but remain behind year-to-date.

¹ Source: Bloomberg. Data is as of July 31, 2022.

Foreign Equity Returns¹

Foreign Equity	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	3.4	-13.7	-15.6	-15.3	2.9	2.4	5.0
MSCI EAFE	5.0	-14.5	-15.6	-14.3	3.2	2.6	5.8
MSCI EAFE (Local Currency)	5.2	-7.8	-6.7	-2.1	5.9	5.2	8.7
MSCI EAFE Small Cap	6.6	-17.7	-19.7	-20.3	3.6	2.3	7.8
MSCI Emerging Markets	-0.2	-11.5	-17.8	-20.1	0.9	1.0	2.8
MSCI Emerging Markets (Local Currency)	0.1	-8.1	-13.6	-14.9	3.6	3.4	5.8
MSCI China	-9.5	3.4	-19.7	-28.3	-3.6	-1.6	4.3

International equities (MSCI EAFE) gained 5.0%, while emerging markets (MSCI EM) fell 0.2% in July.

- Non-US developed market stocks trailed the US for the month, and emerging markets stocks posted negative returns due to China's drawdown of 9.5%. Both remain notably negative for the year-to-date period (EAFE -15.6%, EM -17.8%), lagging US equities.
- The war in Ukraine, high inflation and the likely monetary policy response, and slowing growth continue to weigh on sentiment.
- Growth stocks had a strong month in July, outperforming value stocks across developed and emerging markets, similar to the US.

¹ Source: Bloomberg. Data is as of July 31, 2022.

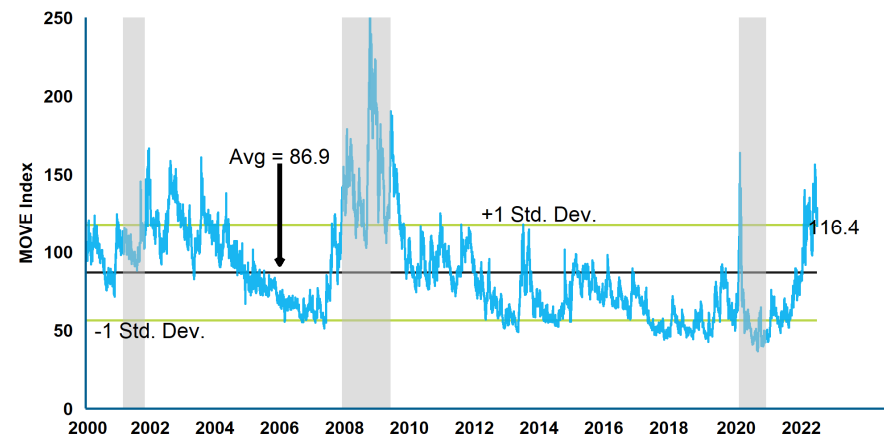
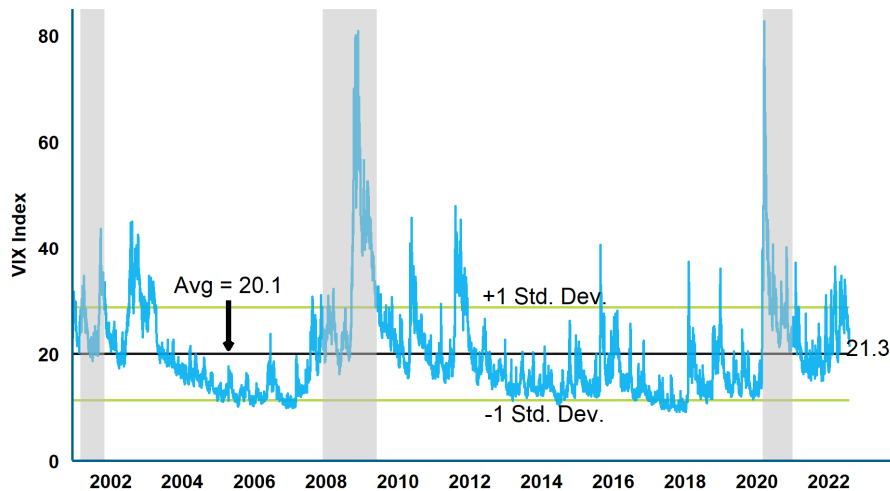
Fixed Income Returns¹

Fixed Income	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	2.5	-5.1	-8.7	-9.6	-0.2	1.3	1.9	3.9	6.4
Bloomberg Aggregate	2.4	-4.7	-8.2	-9.1	-0.2	1.3	1.6	3.4	6.6
Bloomberg US TIPS	4.4	-6.1	-5.0	-3.6	4.4	4.0	2.0	3.0	7.4
Bloomberg High Yield	5.9	-9.8	-9.1	-8.0	2.0	3.1	4.9	7.7	4.7
JPM GBI-EM Global Diversified (USD)	0.3	-8.6	-14.3	-18.7	-6.0	-2.7	-1.7	7.3	5.0

Fixed Income: The Bloomberg Universal gained 2.5% in July.

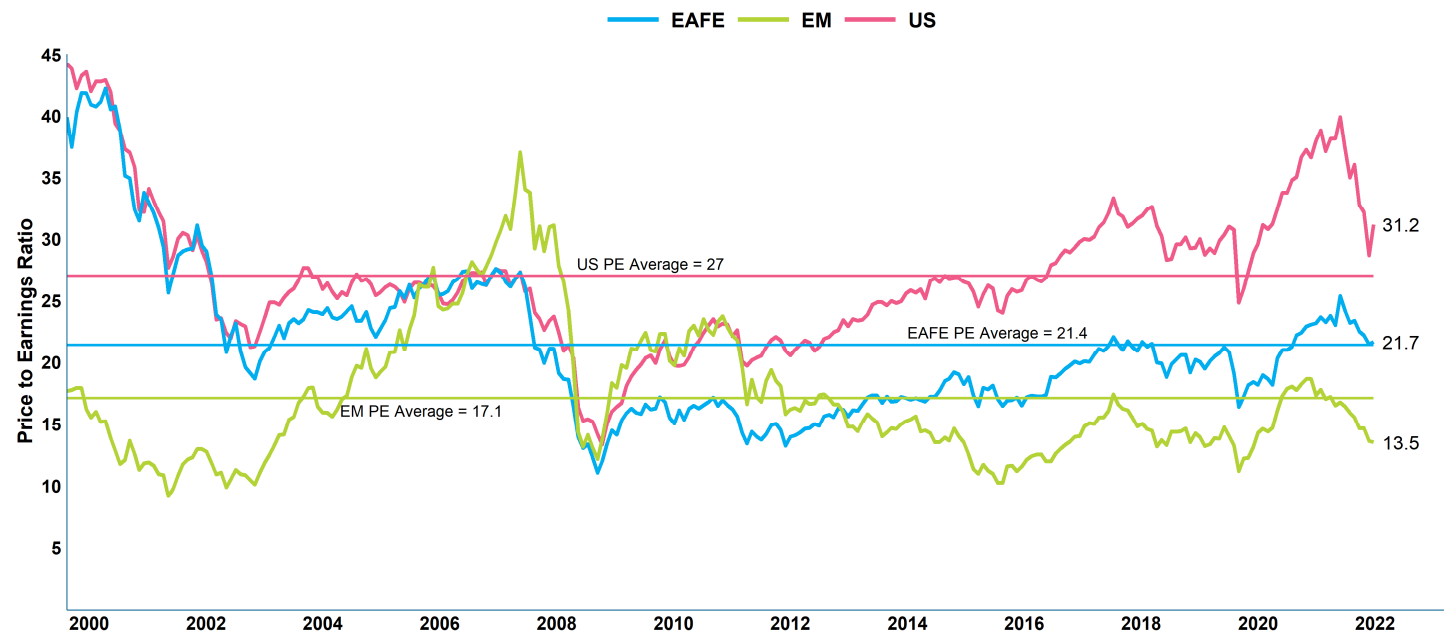
- Fixed income indices broadly benefited from yields declining across the curve. During July, the US 10-year Treasury note yield fell 36 basis points, from 3.01% on June 30th to 2.65% on July 31.
- The high yield index was one of the best performers in July as yields declined along with tightening spreads supported by a historic drop in high yield issuance to the lowest July issuance since 2006.

¹ Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of July 31, 2022.

Equity and Fixed Income Volatility¹

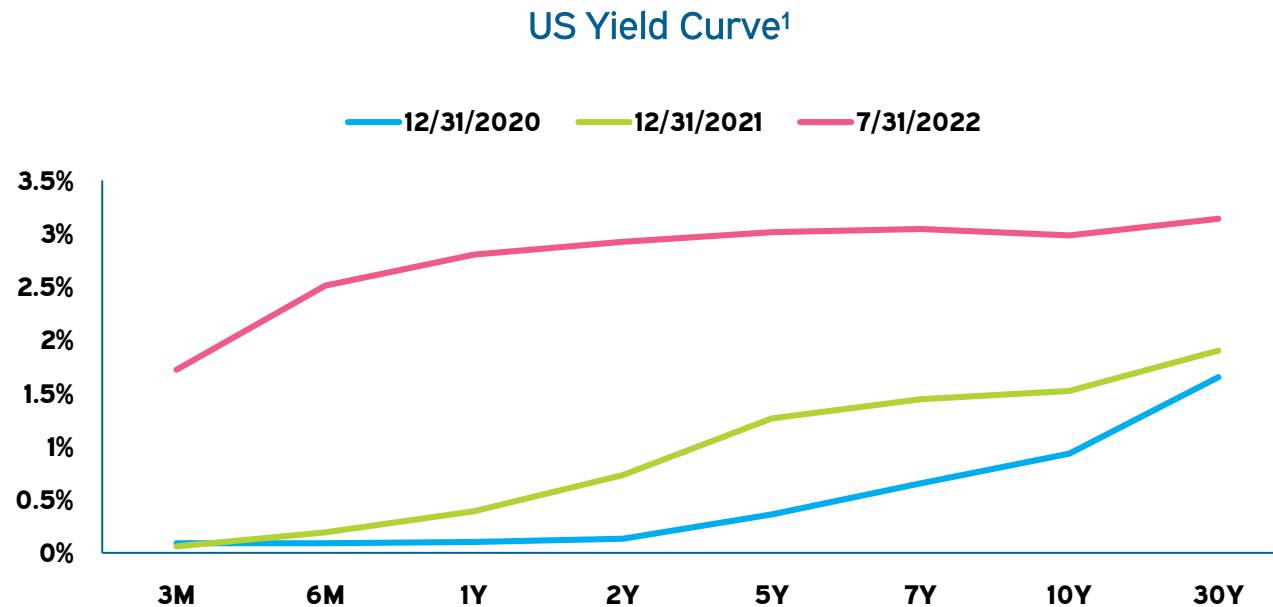
- Volatility in equities (VIX) and fixed income (MOVE) declined in July based on potentially peaking monetary policy and possible rate cuts in 2023.
- Despite the July decline, fixed income volatility remains high due to the uncertain path of short-term interest rates.

¹ Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of July 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the recent month-end respectively.

Equity Cyclically Adjusted P/E Ratios¹

- Strong positive results in July for US equities reversed the recent trend of valuation declines, but they remain well off the peak.
- International developed market valuations remain below the US and are slightly above their own long-term average, with those for emerging markets the lowest and under the long-term average.

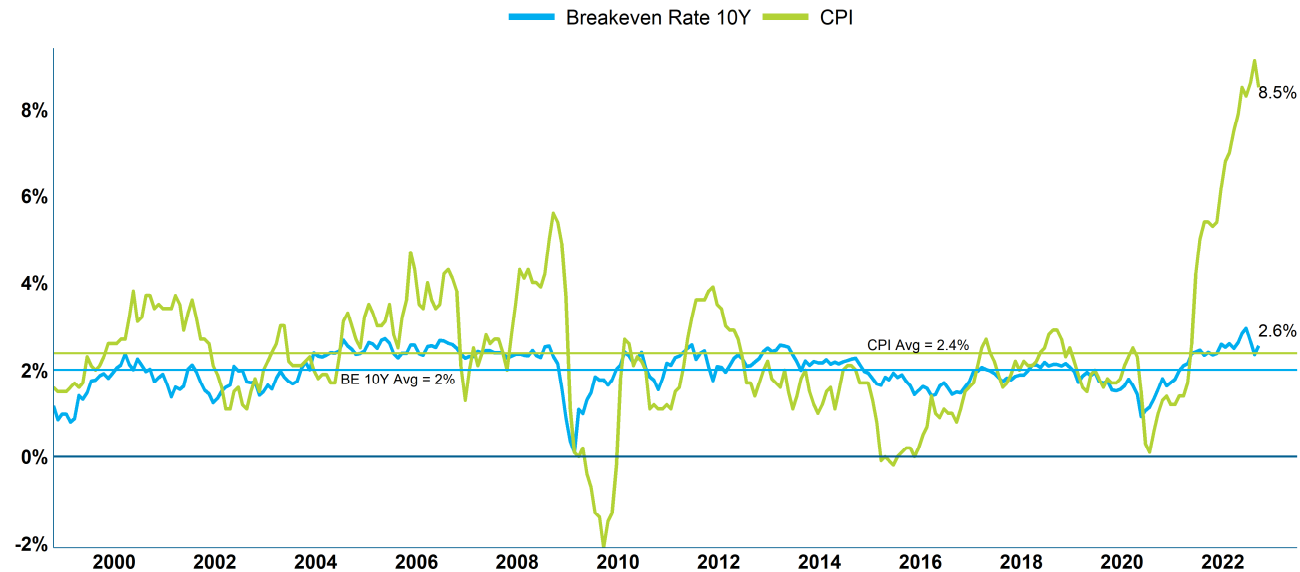
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of July 31, 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



- Rates across the yield curve remain much higher than at the start of the year.
- In July, longer-dated yields declined as investors reconsidered economic growth prospects and the likelihood that yields have reached their peak for this economic cycle. Shorted dated yields rose on near-term policy actions and messaging that policy officials intend to remain aggressive in fighting inflation pressures into early 2023.
- The yield spread between two-year and ten-year Treasuries became negative, finishing July at -0.23%. Inversions in the yield curve have historically often signaled building recessionary pressures.

¹ Source: Bloomberg. Data is as of July 31, 2022.

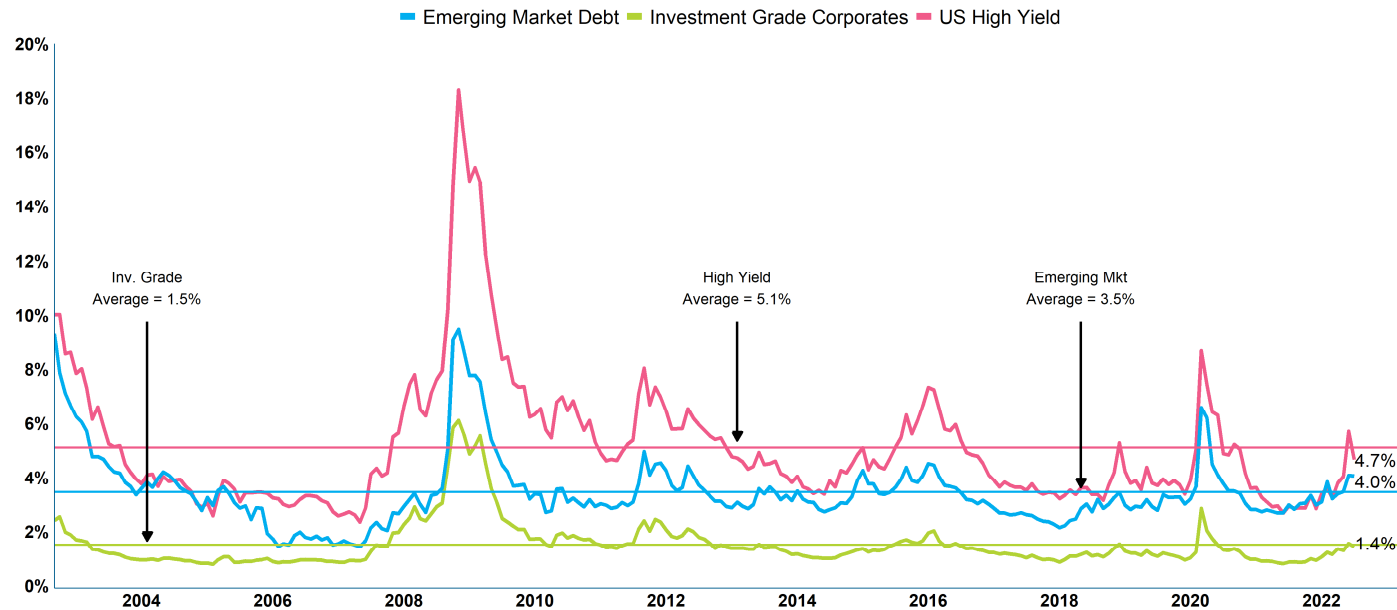
Ten-Year Breakeven Inflation and CPI¹



- In July, inflation expectations (breakevens) rose on the prospects of easing monetary policy next year.
- Trailing twelve-month CPI declined in July (8.5% versus 9.1%) and came in below expectations. Inflation levels in the US remain well above the long-term average of 2.4%.
- Rising prices for energy (particularly oil), food, housing, and for new and used cars, remain key drivers of higher inflation.

¹ Source: Bloomberg. Data is as of July 31, 2022. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end respectively. Breakeven values represent month-end values for comparative purposes.

Credit Spreads vs. US Treasury Bonds¹



- Credit spreads (the spread above a comparable maturity Treasury) declined in July, particularly for high yield, as risk appetite returned.
- In the US, spreads for high yield reversed course, declining from 5.7% to 4.7%, while investment grade (1.6% to 1.4%) and emerging market (4.1% to 4.0%) spreads experienced more modest declines.

¹ Sources: Bloomberg. Data is as of July 31, 2022. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end respectively.

Global Economic Outlook

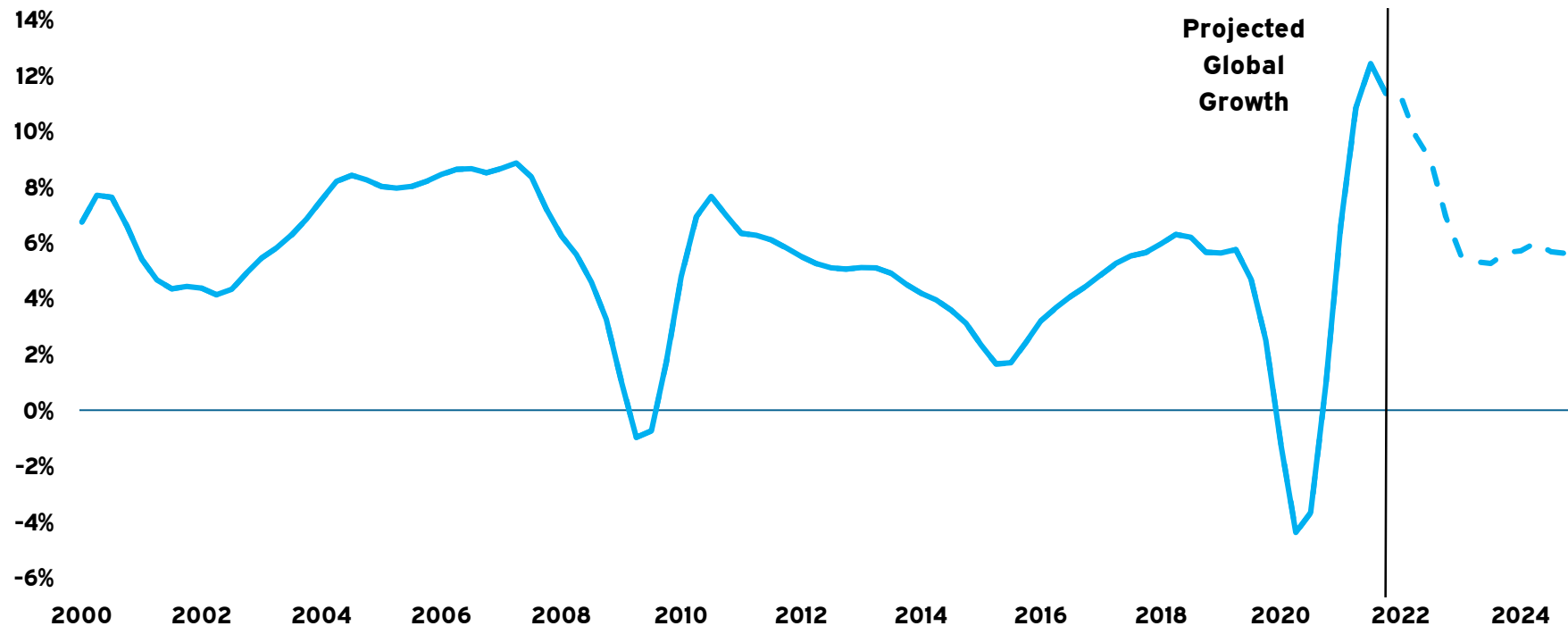
The IMF significantly lowered global growth forecasts again in their latest projections, driven by the economic impacts of persistent inflation in energy and food prices.

- The IMF forecasts global GDP growth to come in at 3.2% in 2022 (0.4% below the prior estimate) and 2.9% in 2023 (0.7% below the prior estimate).
- In advanced economies, GDP is projected to increase 2.5% in 2022 and 1.4% in 2023. The US saw another downgrade in the 2022 (2.3% versus 3.7%) and 2023 (1.0% versus 2.3%) growth forecasts largely due to policy tightening happening faster than previously expected given persistently high inflation. The euro area saw a downgrade too in expected growth (2.6% versus 2.8%) in 2022 and in 2023 (1.2% versus 2.3%) as rising energy prices particularly weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 1.7% this year and next.
- Growth projections for emerging markets are higher than developed markets, at 3.6% in 2022 and 3.9% in 2023. China's growth was downgraded for 2022 (3.3% versus 4.4%) and 2023 (4.9% versus 5.1%) given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (7.4% versus 3.8%).

	Real GDP (%) ¹			Inflation (%) ¹		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.2	2.9	3.0	7.4	4.8	3.5
Advanced Economies	2.5	1.4	1.6	5.7	2.5	1.5
US	2.3	1.0	2.1	7.7	2.9	1.9
Euro Area	2.6	1.2	0.9	5.3	2.3	1.2
Japan	1.7	1.7	0.5	1.0	0.8	0.5
Emerging Economies	3.6	3.9	4.2	8.7	6.5	5.1
China	3.3	4.9	6.7	2.1	1.8	2.1

¹ Source: IMF World Economic Outlook. Real GDP forecasts from July 2022 Update. Inflation forecasts are as of the April 2022 Update.* Actual 10 Year Average* represents data from 2012 to 2021.

Global Nominal Gross Domestic Product (GDP) Growth¹

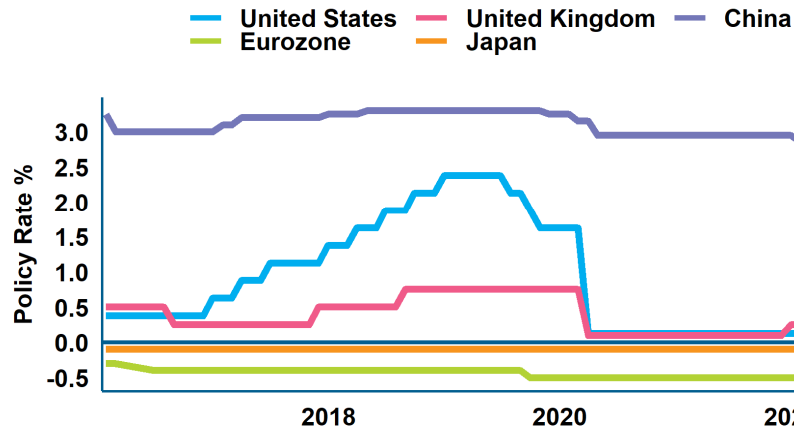


- Global economies are expected to slow in 2022 compared to 2021 with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- Looking forward, the delicate balancing act of central banks trying to reduce inflation without dramatically impacting growth will remain key.

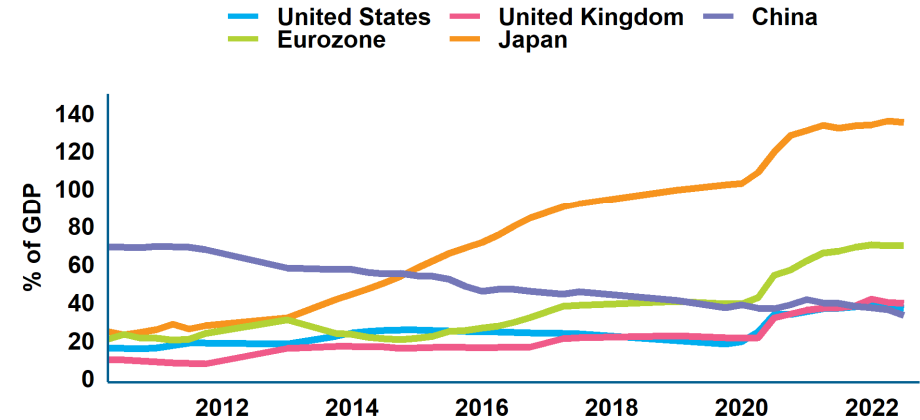
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated July 2022.

Central Bank Response¹

Policy Rates

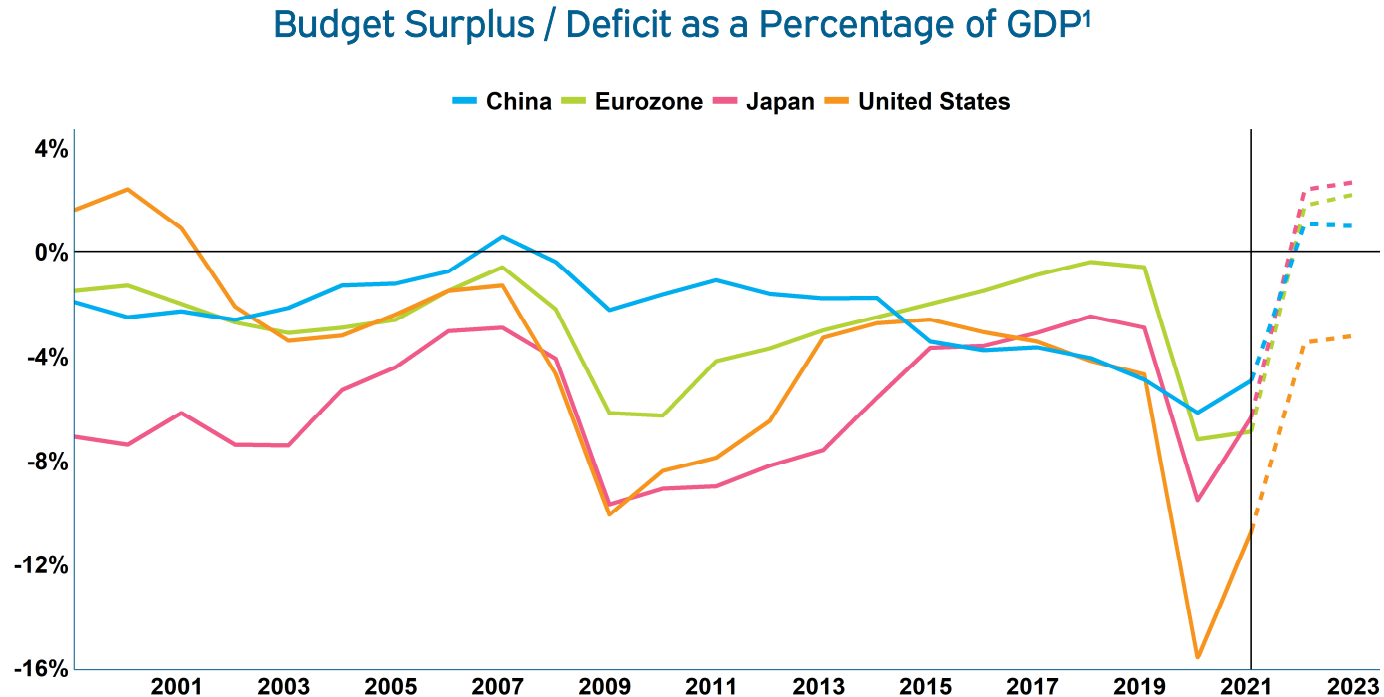


Balance Sheet as % of GDP



- After global central banks took extraordinary action to support economies during the pandemic, including policy rate cuts and emergency stimulus through quantitative easing (QE), many are now aggressively reducing support in the face of high inflation.
- The pace of withdrawing support varies across central banks with the US taking a more aggressive approach. The risk remains for a policy error, particularly overtightening, as record inflation, the war in Ukraine, and a tough COVID-19 policy in China could suppress global growth.
- The one notable central bank outlier is China, where the central bank recently lowered rates and reserve requirements in response to slowing growth.

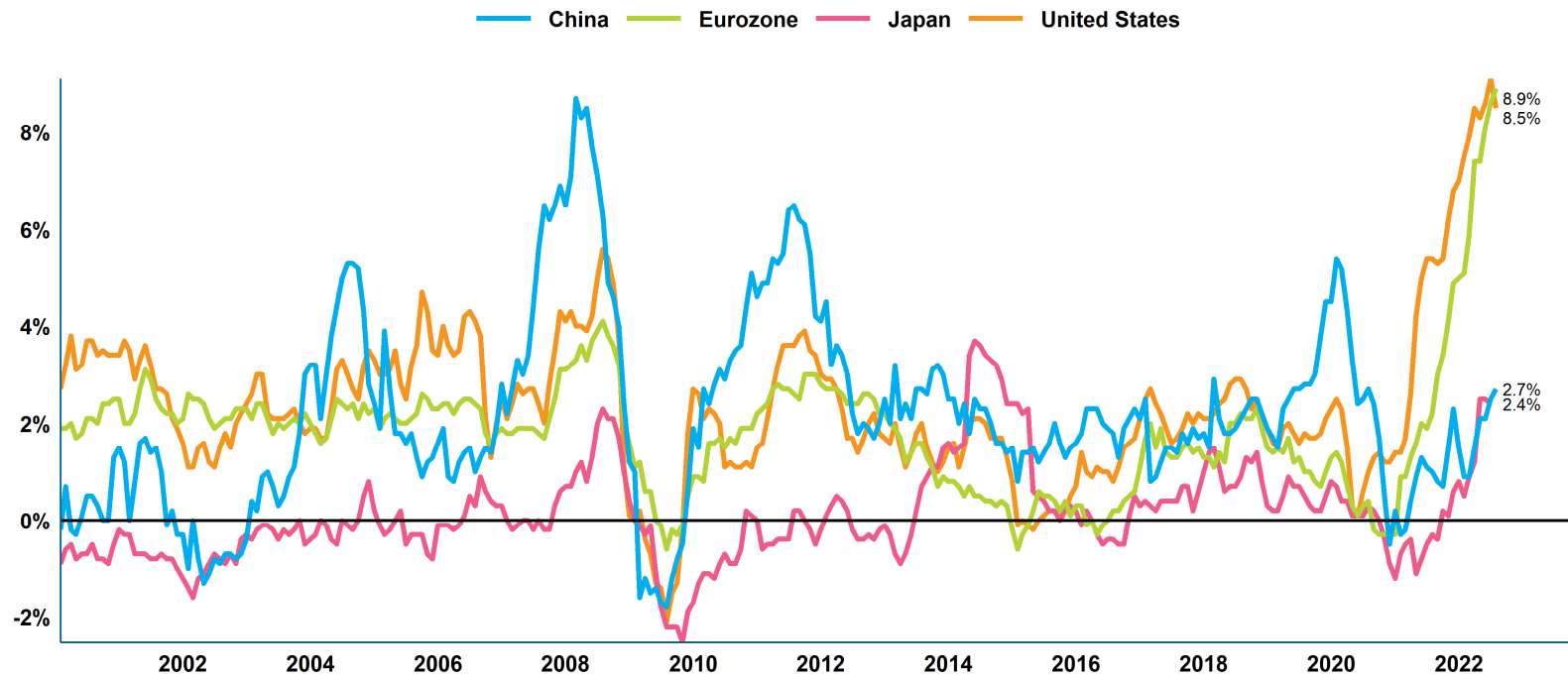
¹ Source: Bloomberg. Policy rate data is as of July 31, 2022. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of June 30, 2022.



- Budget deficits as a percentage of GDP drastically increased for major world economies, particularly the US, due to massive fiscal support and the severe economic contraction's effect on tax revenue in 2020 and 2021.
- As fiscal stimulus programs end, and economic recoveries continue, deficits should improve in the coming years.

¹ Source: Bloomberg. Data is as of July 31, 2022. Projections via IMF Forecasts from April 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

Inflation (CPI Trailing Twelve Months)¹

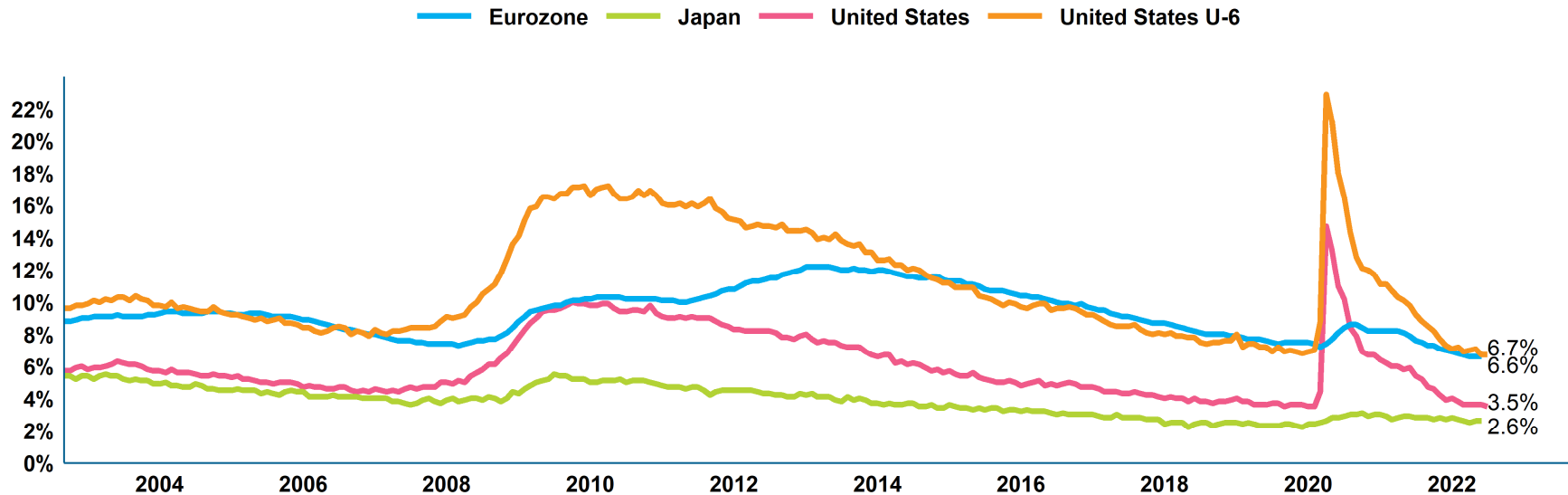


→ Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it has reached levels not seen in many decades.

→ Supply issues related to the pandemic, record monetary and fiscal stimulus, strict COVID-19 restrictions in China, and higher prices in many commodities driven by the war in Ukraine have been key global drivers of inflation.

¹ Source: Bloomberg. Data is as of July 2022. The most recent data for Japan is as of June 30, 2022.

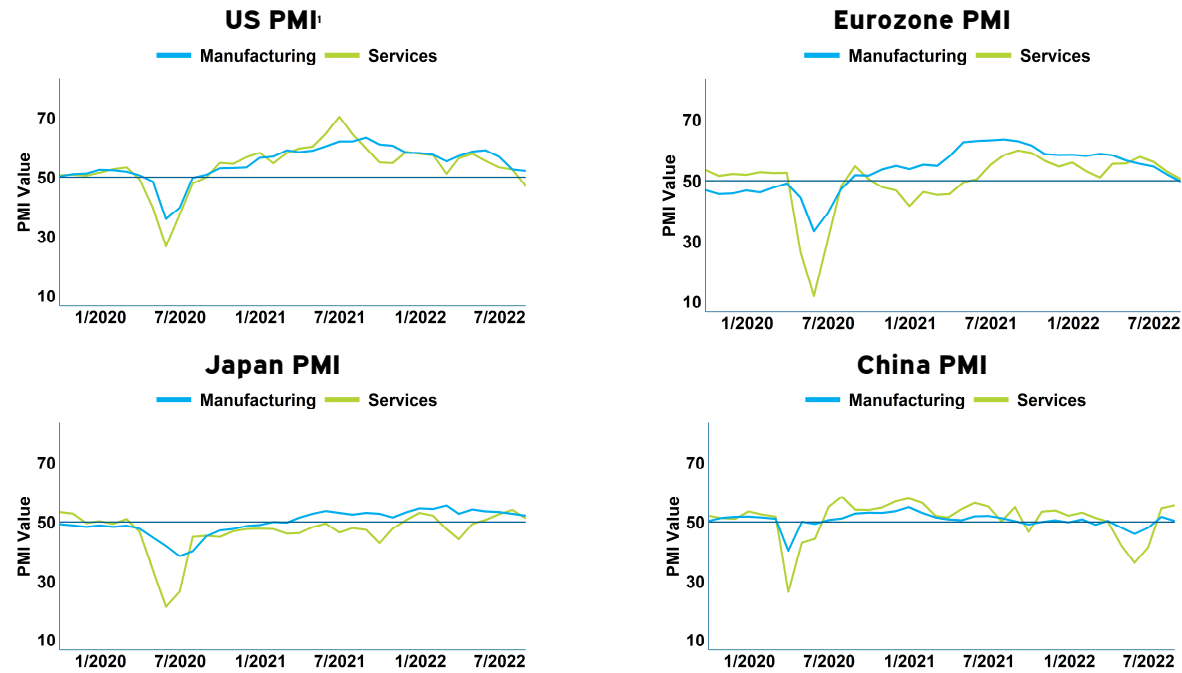
Unemployment¹



- As economies have largely reopened, helped by vaccines for the virus, improvements have been seen in the labor market.
- US unemployment, which experienced the steepest rise from the pandemic, declined back to pre-pandemic levels. The broader measure (U-6) that includes discouraged and underemployed workers declined but is much higher at 6.7%.

¹ Source: Bloomberg. Data is as of July 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of June 30, 2022.

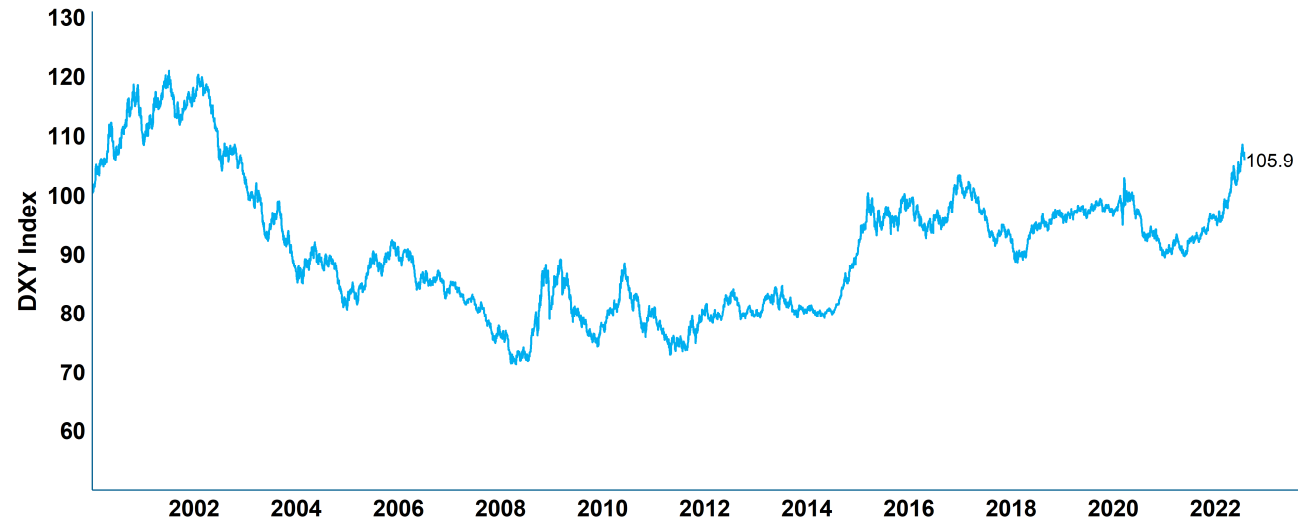
Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have largely experienced some pressures recently.
- Service sector PMIs in the US and Europe have recently declined, with the US slipping into contraction territory, while Japan experienced a decline for the month on rising COVID-19 cases in parts of the country. In China the services PMI remained in positive territory.
- Manufacturing PMIs dropped recently across China and developed markets given declines in demand and inflationary pressures.

¹ Source: Bloomberg. US Market Services and Manufacturing PMI, Caixin Services and Manufacturing PMI, Eurozone Market Services and Manufacturing PMI, Jibun Bank Services and Manufacturing PMI. Data is as of July 2022. Readings below 50 represent economic contractions.

US Dollar versus Broad Currencies¹



- In July, the US dollar overall continued its path higher but finished the month off its peak as expectations on the pace of policy tightening by the Fed fell and safe-haven flows declined.
- The euro, yen, and yuan have all experienced significant declines versus the dollar this year, adding to inflation and slowing growth concerns.

¹ Source: Bloomberg. Data as of July 31, 2022.

Summary

Key Trends in 2022:

- The impacts of record high inflation will remain key going forward, with volatility likely to remain high.
- The war in Ukraine has created significant uncertainty, with a wide range of potential outcomes.
- Expect growth to slow globally in 2022 to the long-term trend or below. Inflation, monetary policy, and the war will all be key.
- The end of many fiscal programs is expected to put the burden of continued growth on consumers. Higher energy and food prices will depress consumers' spending in other areas.
- Monetary policy will likely tighten globally but will remain relatively accommodative. The risk of overtightening policy remains.
- Valuations have significantly declined in the US, approaching long-term averages.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but risks remain, including continued strength in the US dollar, higher inflation particularly weighing on Europe, and China maintaining its restrictive COVID-19 policies.



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Illinois State Universities Retirement System

September 15, 2022

Knight Diversity of Asset Management
Research Series: Industry Overview

Background

- In 2017, the Knight Foundation (“Knight”) began publishing research on the state of diversity in the asset management industry. Updated research was released in 2019.¹
- Both studies concluded that women and racial/ethnic minorities (i.e. Black, Hispanic, and Asian) were dramatically underrepresented in the mutual fund, hedge fund, private equity, and real estate industries.
- In their latest report, released in December 2021, the Knight Foundation builds on the prior two diversity studies, focusing on diverse representation in the U.S. market across four major asset groups: mutual funds, hedge funds, private equity, and real estate.
- The study had two primary goals:
- **Representation:** Assess the representation of diverse ownership² among U.S. asset managers.
 - **Performance:** Examine the performance of diverse-owned asset managers.
- This overview document provides a summary of Knight’s study and its findings.

¹ Knight Diversity of Asset Managers Research Series: Industry. December 2021

² Knight defines a woman- or minority-owned firm to be one that is 50%+ owned by women or minorities and a diverse-owned firm is defined as a firm that is woman-owned, minority-owned, or both.

Representation

- One of the study's primary goals was to assess the representation of diverse ownership among U.S. asset managers.
- Knight's analysis found that minority- and women-owned firms are underrepresented relative to other firms.
- As shown in the graphs below, hedge funds had the highest representation of minority ownership, while women-owned firms were most represented across private equity and mutual funds. Real estate had the lowest representation of diverse-owned firms.¹

Figure 2. Percent (%) of U.S.-based firms owned by minorities and women.

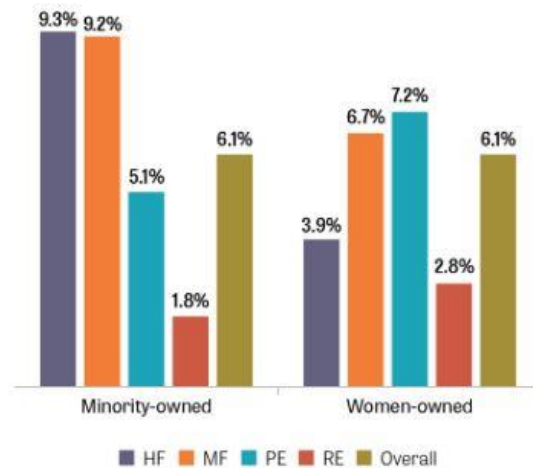
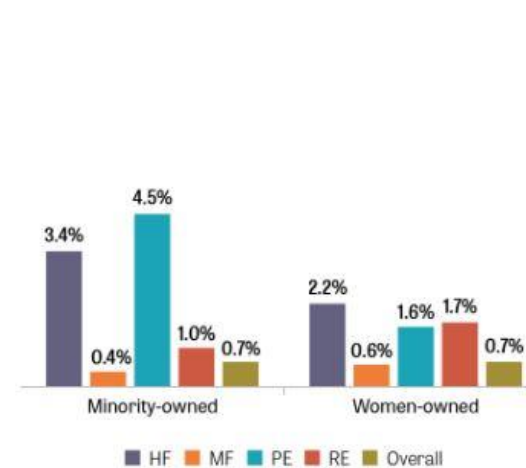


Figure 3. Percent (%) of U.S.-based AUM managed by minorities and women.



¹ From Knight Diversity of Asset Management Research Series, 2021, <https://knightfoundation.org/reports/knight-diversity-of-asset-managers-research-series-industry/>.



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Knight Diversity of Asset Management Overview

Representation (continued)

- Knight's study also found that the *amount of capital* managed by diverse-owned firms is not proportionate to the *number* of diverse-owned firms.
- Although there may be a relatively large number of diverse-owned firms, the size of these firms, as measured by their AUM, is much smaller than majority-owned firms.
- The overall percentage of assets managed by diverse-owned firms in Knight's sample was 1.4%, or ~\$1.19 trillion, out of \$82 trillion.
- Women-owned and minority-owned firms represented 0.7% each in their data sample.
- However, the ownership trends illustrated in the graphs below, show that diverse representation in terms of AUM has increased over time, particularly for hedge funds and private equity.¹

Figure 4. Percent (%) of U.S.-based AUM managed by minority-owned firms.

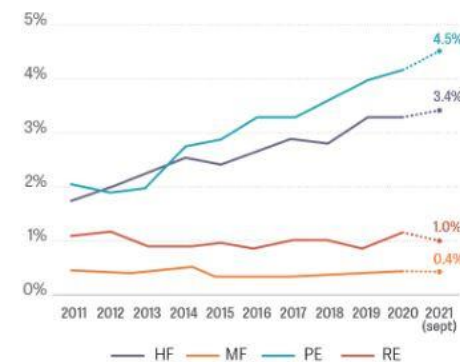
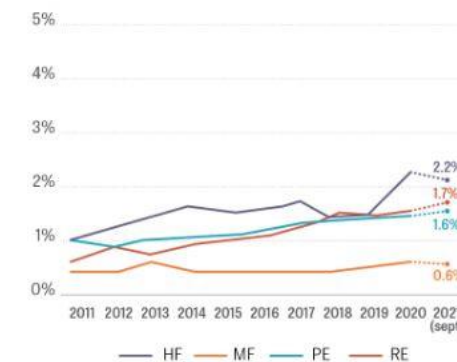


Figure 5. Percent (%) of U.S.-based AUM managed by women-owned firms.



¹ From Knight Diversity of Asset Management Research Series, 2021, <https://knightfoundation.org/reports/knight-diversity-of-asset-managers-research-series-industry/>.

Performance

- The second goal of the Knight study was to identify and quantify any performance differential between diverse-owned firms and their peers.
- To conduct this assessment, Knight used robust statistical techniques, mainly linear regression analysis.
 - This approach allowed them to account for a variety of factors (e.g. fund size, market conditions, time period, etc.) and isolate and quantify the performance differential attributable to the firm being women- or minority-owned specifically.
- Ultimately, Knight's analysis found no statistically significant differences in performance between diverse-owned funds and non-diverse-owned funds across asset classes.
- The study concluded that performance is empirically indistinguishable among minority-owned, women-owned, and other firms.

Conclusions

- Knight's findings are consistent with that of previous studies on diverse-owned funds.
- Knight's study finds that, for most asset classes, women- and minority-owned firms have low levels of representation, but when assessing performance, the study concludes that diverse-owned firms exhibit returns that are not significantly different than that of non-diverse-owned firms.
- Although diverse representation is currently low, there have been some encouraging signs over the last five years of increasing representation across asset classes when looking at the number of funds, number of firms, and the amount of AUM.
- In addition, Knight's study notes that data quality has improved over time as asset managers have become more transparent about their diversity data, likely due to growing investor scrutiny in recent years.

KNIGHT DIVERSITY OF ASSET MANAGERS RESEARCH SERIES: **INDUSTRY**

A study of ownership diversity and performance
in the asset management industry

2021

Bella Private Markets

Abstract

In this update to our 2019 report, we study the representation and performance of minority- and women-owned funds in the hedge fund, mutual fund, private equity and real estate industries. Among our key findings are:

1. Representation of diverse-owned firms across asset classes still lags that of non-diverse-owned firms.
2. There have, however, been improvements in representation over time, as well as in data collection that cover these trends.
3. The differences in representation do not appear to be driven by performance differentials: we find no statistically significant differences in performance between diverse- and non-diverse-owned funds across asset classes.

We hope that our research continues to shed light on this important topic, encourages further progress in diverse representation in the asset management industry and leads to additional improvements in data reporting.

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Executive Summary

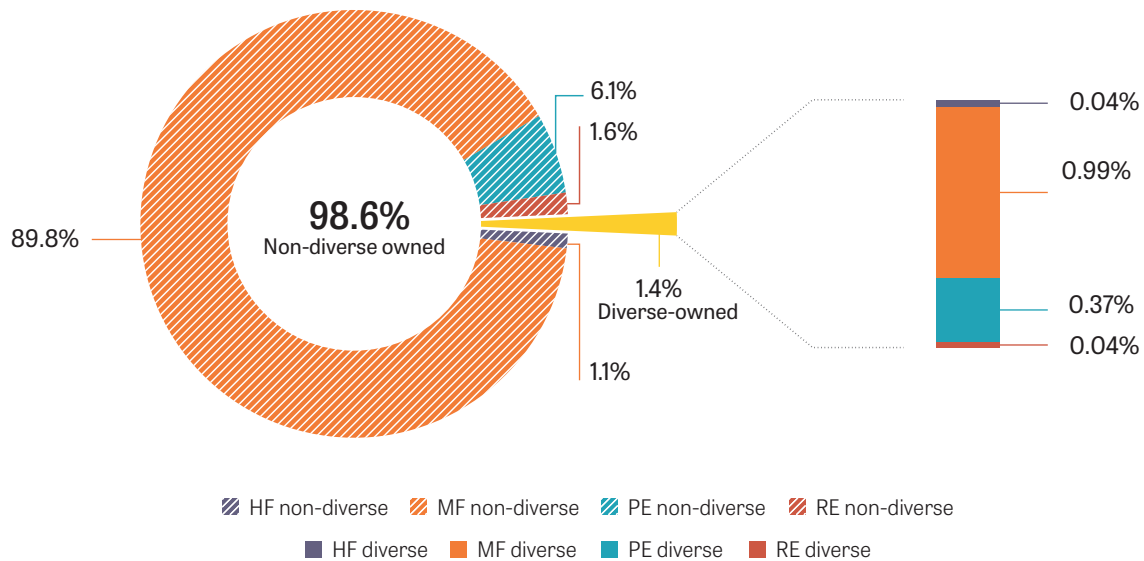
Introduction

The asset management industry is a cornerstone of the economy, facilitating the movement of capital from investors to entrepreneurs, growing ventures and restructuring enterprises. The present report studies diversity in the U.S.-based asset management industry, using a sample representing \$82.24 trillion USD in assets under management (AUM)¹. Our analysis finds that only 1.4% of total U.S.-based AUM in our sample is managed by diverse-owned firms as of September 2021. Despite the size and importance of the industry, many observers have pointed to its lack of diversity². To address this concern, the John S. and James L. Knight Foundation commissioned Bella Private Markets to study diversity within the ownership ranks of U.S. asset managers in previous reports published in [2017](#) and [2019](#). These previous two studies concluded that women and minorities were dramatically underrepresented³ in the mutual fund, hedge fund, private equity and real estate industries.

In this report, the Knight Foundation, along with Professor Josh Lerner of Harvard Business School and Bella Private Markets, builds on these previous studies by using up-to-date data and refined methodologies.

As in our prior studies, we focus on the U.S. market and study four major asset classes: mutual funds, hedge funds, private equity and real estate. A breakdown of our sample by asset class in terms of total firm assets under management (AUM) is provided in Figure 1.

Figure 1. Breakdown of study sample firm AUM by asset class.



1 Note that the purpose of this study was not to size the U.S. asset management industry, and we merely quote here the total value of assets under management (AUM) by active funds in our collective sample comprising mutual funds, hedge funds, private equity funds and real estate funds. In particular, given the large size of the mutual fund industry, it is worth noting that the total AUM represented by mutual funds in our sample may be somewhat overstated given the nature of the data. See the Data sections in the full report and the Appendix for more details on this and our data gathering procedures.

2 See, for example, Daisy Maxey, "Where Are the Female Fund Managers?," *Wall Street Journal*, July 6, 2015; and Joseph De Avila, "NYC Seeks Diversity Among Its Asset Managers," *Wall Street Journal*, April 30, 2015.

3 We use the term "underrepresented" throughout this report to indicate representation that is lower than the proportion of a given group in the overall U.S. population. As of the 2020 United States census, 38.4% of the population were minorities (which corresponds to those not identifying as "White alone, not Hispanic or Latino" in the census), and 50.8% of the population was female. We use these numbers as our benchmarks for defining "underrepresentation." See "U.S. Census Bureau QuickFacts: United States," <https://www.census.gov/quickfacts/fact/table/US/PST045219>.

The study has two primary objectives:

1. Representation

To better understand the representation of ownership diversity among U.S. asset managers and the AUM levels of minority-owned, women-owned and other asset managers.

2. Performance

To examine the impact of diverse ownership on financial performance.

Representation

We find that across asset classes, minority- and women-owned firms are underrepresented relative to other firms. Note that this report uses a definition of “minority” that includes racial/ethnic minorities (i.e., Hispanic, Black, and Asian), but does not include other underrepresented groups such as veterans or disabled persons. Occasionally, we use the term “diverse-owned” to refer to the broader group of women-owned and minority-owned firms. Note that firms may be classified as both women-owned and minority-owned.

First, when looking at the number of U.S.-based minority-owned firms within each asset class, we find the highest representation among hedge funds and mutual funds, in which 9.3% and 9.2% of **firms** are minority-owned, respectively. For women-owned firms, we see the highest representation among private equity and mutual funds at 7.2% and 6.7%, respectively. In real estate, we see the lowest representation of both minority- and women-owned firms. Viewing the data holistically, we find that the overall percentage of U.S.-based **firms** owned by minorities is 6.1%, while women ownership at the firm level is also at 6.1%.

Figure 2. Percent (%) of U.S.-based firms owned by minorities and women.

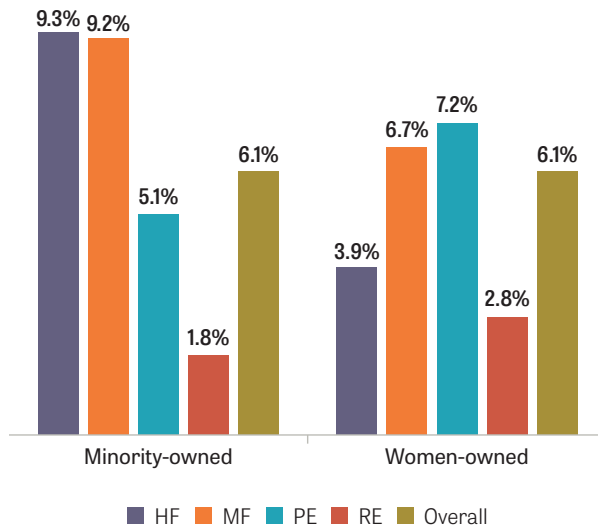
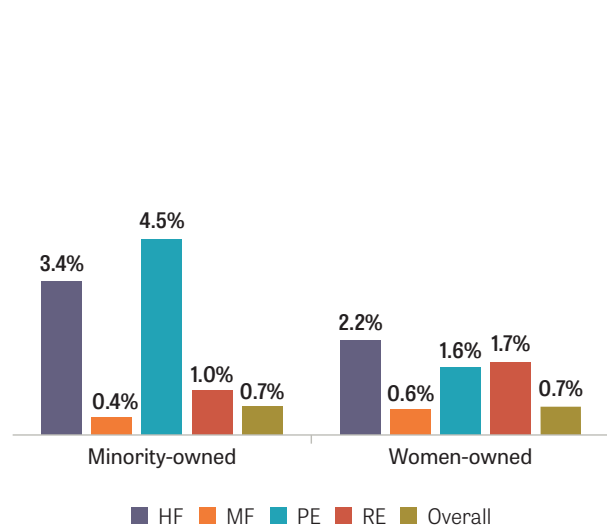


Figure 3. Percent (%) of U.S.-based AUM managed by minorities and women.



Moreover, we find that there is even greater underrepresentation in the amount of capital controlled by these groups. For instance, despite representation of minority-owned firms being relatively high in the mutual fund industry, at 9.2%, when we instead consider **AUM**, we see much lower minority representation in mutual funds—only 0.4%. This would suggest that although there may be a relatively large number of minority-owned firms, the size of these firms (as measured by AUM) is much smaller than their non-diverse-owned peers. In fact, we see the same trend across all asset classes: the amount of capital managed by diverse-owned firms is

not proportional to the *number* of diverse-owned firms. Overall, the percentage of AUM managed by minority-owned firms across the asset classes in our sample is 0.7%, while the percentage for women-owned firms is also 0.7%. The overall percentage of **AUM** managed by **diverse-owned** firms (i.e., firms that are minority-owned, women-owned or both) in our sample is **1.4%**.⁴

We also examine the trends of these ownership metrics over time. In short, although representation still lags across these four asset classes, diverse representation in terms of AUM has increased over time, particularly for private equity and hedge funds.

Figure 4. Percent (%) of U.S.-based AUM managed by minority-owned firms.

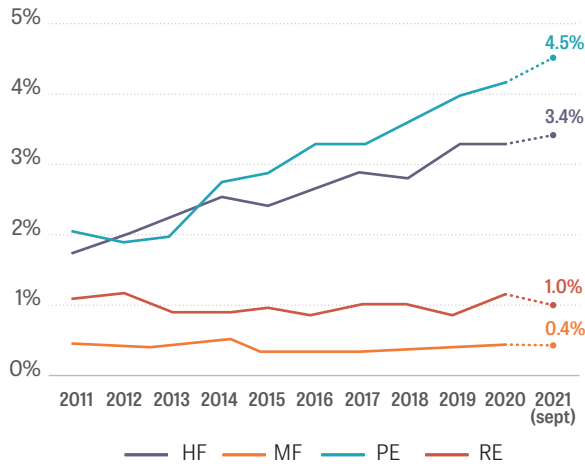
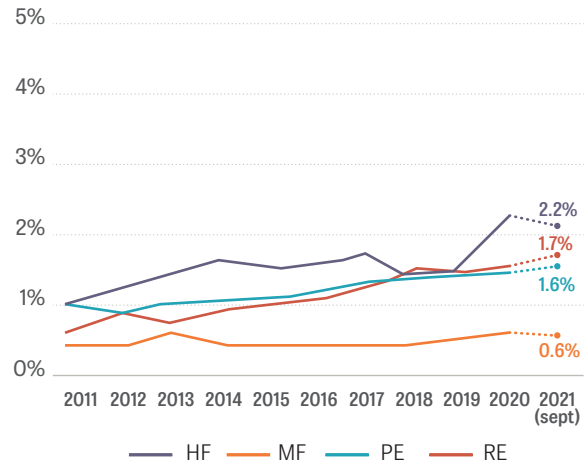
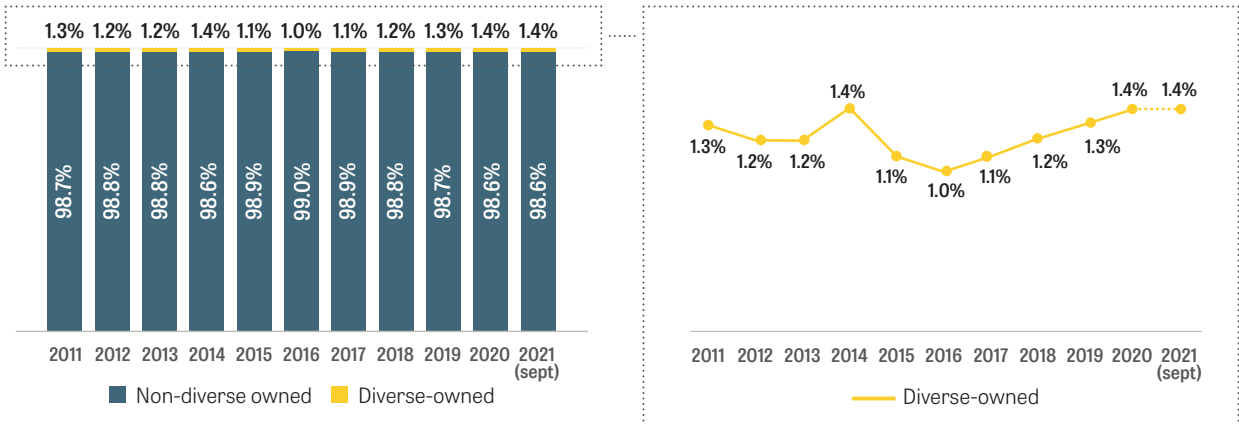


Figure 5. Percent (%) of U.S.-based AUM managed by women-owned firms.



Figures 4 and 5⁵ reveal some promising trends in diverse representation across asset classes. Namely, the representation of minority- and women-owned AUM has generally increased in recent years. This is encouraging, particularly given that the size of these asset classes overall has grown. This suggests that not only is diverse representation improving, but diverse-owned AUM is increasing even *more than* non-diverse-owned AUM across asset classes—a finding we delve into further in the main report.

Figure 6. Percent (%) of U.S.-based AUM managed by diverse-owned firms across asset classes.



4 The definition of a “diverse-owned” firm in this study is one that is *either* minority-owned or women-owned. For this reason, the total number of diverse-owned firms may not match exactly the sum of women-owned and minority-owned firms.

5 The values in time series figures throughout this report will differ slightly from analogous figures retrieved from the 2019 report, given slight changes in data coverage, sample selection, and methodology. Note, in particular, that in this report we simplify the distinction between “majority” (greater than 50%) and “substantial” (between 25% and 50%) ownership for mutual funds and hedge funds that was employed in the 2019 report, and use a 50% threshold throughout to indicate diverse ownership.

Indeed, taking a bird's-eye view and considering the trajectory of AUM managed by diverse-owned firms across all asset classes for the past five years, we can see from Figure 6 that the picture is one of gradual, short-term growth. The percentage of diverse-owned AUM grew from 1.0% to 1.4% between 2016 and September 2021.⁶ However, growth is flatter if we consider the past decade in its entirety, with only a 0.1% increase between 2011 and September 2021. Furthermore, the nominal amount of AUM managed by diverse-owned firms still pales in comparison to that managed by non-diverse-owned firms: as of September 2021, the total AUM of non-diverse-owned firms across these four asset classes amounted to \$81.05 trillion, compared to \$1.19 trillion of capital managed by diverse-owned firms.

Please note that when comparing these figures to those from the previous study, the value for 2017 (when the last data were gathered for the report published in 2019) will be slightly different due to methodological changes. Namely, in this report, we define a woman- or minority-owned firm to be one that is 50%+ owned by women or minorities, respectively, and we define a diverse-owned firm to be one that is women-owned, minority-owned or both.⁷ We use this threshold across all asset classes for consistency. In the previous report, some asset classes used a lower threshold, which made comparisons across asset classes somewhat more difficult. Furthermore, the values in Figure 6 (as well as those throughout the report) were arrived upon using updated databases, and any disparities between the previous and current report will reflect changes to the historical data over time. Such changes may include expanded historical coverage or retroactive updates to the data, a topic we analyze briefly in the **Appendix**.

Performance

One criticism historically raised against minority- and women-owned firms is that there exists a performance differential between these firms and their peers—a potential explanation for the underrepresentation of investing in minority- and women-owned firms. Therefore, this report seeks to identify and quantify any performance differential between minority- and women-owned firms and their peers.

To do this, we employ robust statistical techniques—chiefly, linear regression analysis. Unlike simpler approaches to benchmarking performance (such as comparing simple mean and or median performance metrics), this method allows us to account for a variety of confounding factors—for instance, fund size, market conditions or time period—and thus isolate and quantify the performance difference attributable to a firm being women- or minority-owned specifically.

Using the final specifications of the regression models that we test, we ultimately find no statistically significant differences in performance between diverse- and non-diverse-owned funds across asset classes. While some models will show some differences in performance among groups (with ambiguous directionality) due potentially to random chance or spurious correlation, the central story from these models is that performance is empirically indistinguishable among minority-owned, women-owned and other firms.

6 The values in Figure 6 will differ slightly from analogous figures calculated from the 2019 report, given slight changes in data coverage, sample selection and methodology. Note, in particular, that in this report we simplify the distinction between “majority” (greater than 50%) and “substantial” (between 25% and 50%) ownership for mutual funds and hedge funds that was used in the 2019 report, and use a 50% threshold throughout to indicate diverse ownership. Therefore, aggregate numbers calculated from the 2019 report that used the 25% threshold will appear to be lower than the reported figure for 2017 in this report, for example.

7 Note that the singular exception to the definition of “diverse-owned” is the mutual funds asset class, the more granular data for which allow us to categorize a firm as diverse-owned if the *additive* women and minority ownership percentages are greater than 50%. That is, a firm that is owned 30% by women and 30% by minorities would be classed as diverse under mutual funds, although it is not possible to identify such firms as diverse using the other datasets.

Concluding remarks

Our findings regarding diverse-owned asset managers are broadly consistent with previous research on diverse-owned funds. We find that, for most asset classes, diverse-owned firms have low levels of representation across each asset class; however, they exhibit returns that are not significantly different than non-diverse-owned firms.

Despite lower representation, we do see some encouraging signs of increasing representation across asset classes in terms of number of funds, number of firms and amount of AUM, particularly in the past five years. Moreover, we also find that data quality has improved over time—for example, through more systematic reporting of private equity diversity data—perhaps reflecting a sharper focus being brought to bear upon this important issue.

2021 Knight Diversity of Asset Management Research Series: Industry study

Introduction: Why are diverse managers important?

Much of the focus with regards to racial and gender equality in the finance sector has been on increasing the diversity of asset managers in particular. For instance, the late Chief Investment Officer of Yale University's endowment, David Swensen, sent a letter to the endowment's fund managers in October 2020 that implemented diversity reporting requirements among its fund managers. This letter signified an indication of the increasing scrutiny being paid to diversity in the industry.⁸

Previous scholarship and commentary have focused on the motivations for increasing diversity in the asset management industry, considering, for instance, wealth creation, the role of homophily,⁹ and the benefits of diversity in investment performance¹⁰ and revenue growth.¹¹ However, relatively little work has been done to quantify the level of diversity or identify potential differences in the level of performance. This motivated our first study of diversity in the asset management industry, published in 2017. Recognizing the importance of creating a regularly published benchmark, the study was updated and published in 2019.

Since the 2019 report, there have been significant developments around attitudes toward social justice and racial equality, perhaps best illustrated by the growth of the Black Lives Matter movement. As such, increased attention has been paid to diversity in the asset management industry, and interest in this topic has reached the top policy makers in the country. In June 2019, for example, the U.S. House Committee on Financial Services' Subcommittee on Diversity and Inclusion held a hearing titled *Diverse Asset Managers: Challenges, Solutions and Opportunities for Inclusion*, which included testimony regarding the 2019 version of this report.¹²

However, reports and studies on this topic tend to be more limited in scope, studying a particular asset class. Many of these reports have focused on alternative asset classes, such as the 2020 study by Preqin, which focused on gender diversity in the private capital and hedge fund industries.¹³ Those reports that have considered a large range of asset classes have also tended to focus on specific groups. For example, a 2020 study commissioned by the Association of Asian American Investment Managers (AAAIM) quantified the representation and performance of funds owned by Asian Americans and Pacific Islanders.¹⁴ Given the constraints of these studies, we hope this report serves as a helpful addition to the literature.

Before proceeding, it is important to note that this report uses a definition of "minority" that includes racial/ethnic minorities (i.e., Hispanic, Black, and Asian), but does not include other underrepresented groups such as veterans or disabled persons. Occasionally, we use the term "diverse-owned" to refer to the broader group of women-owned and minority-owned firms. Note that firms may be classified as both women-owned and minority-owned.

8 David Swensen, "Diversity and Inclusion Letter," *Yale Investments Office*, October 2, 2020.

9 Michael Ewens and Richard R. Townsend, "Are Early Stage Investors Biased against Women?," *Journal of Financial Economics* 135, no. 3 (2020): 653–77.

10 Paul Gompers and Silpa Kovvali, "The Other Diversity Dividend," *Harvard Business Review* (July–August 2018): 72–77.

11 Rajalakshmi Subramanian, "Lessons from the Pandemic: Board Diversity and Performance," *BoardReady*, July 13, 2021.

12 *Diverse Asset Managers: Challenges, Solutions and Opportunities for Inclusion*, US House Committee on Financial Services, Subcommittee on Diversity and Inclusion (2019), <https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=403836>.

13 Marissa Lee, Kainoa Blaisdell, Cat Hall, Charlotte Mullen, Milly Rochow, Logan Scales, Tim Short, et al., "Preqin Impact Report: Women in Alternative Assets," Preqin (March 2021).

14 "Representation of AAPIs in Asset Management: Analysis and Strategic Response," AAAIM, Bella Private Markets (November 2020).

The remainder of this report is organized as follows: We first discuss the data sources used in this report as well as the steps taken to create the datasets we ultimately use in this analysis. Next, we describe our methodology and present more detailed results of the representation and performance of funds across each asset class. More detailed descriptive statistics, model specifications and other details are in the **Appendix**.

Data

This study considers four asset classes in the context of the U.S. market:

- **Hedge funds**
Hedge funds use active portfolio management in an attempt to achieve above market returns. As a result, they may adopt aggressive strategies and use financial derivatives or leverage to “hedge” against the rise and fall of the public equity market. Hedge fund investors in the U.S. also generally must be accredited.
- **Mutual funds**
Mutual funds are professionally managed investment vehicles that typically invest in publicly traded securities. In the U.S., many relatively small investors use mutual funds as a means of preserving capital, growing wealth or saving for retirement. Our final mutual fund sample includes vehicles categorized as mutual funds, separately managed accounts (SMAs) and comingled trust funds.
- **Private equity (PE)**
PE firms manage stakes in privately held companies for several years. They raise funds from investors, known as limited partners (LPs), to supply the capital necessary for building young companies and for transforming ailing giants. A typical PE fund has a lifespan of ten years with optional extensions of up to two years. The illiquid nature of PE investments and their long holding periods differentiate PE from other asset classes. PE investors in the U.S. generally must be accredited, meaning that they must meet a minimum threshold for income or assets.¹⁵
- **Real estate**
Real estate is an essential feature of the U.S. economy—consumers and firms rely on real estate properties for housing and production. As such, real estate assets can offer attractive investment opportunities. Unlike PE, however, real estate investing involves a unique set of challenges. Namely, because portfolio properties are durable, investment returns hinge on decisions of location and scale. Consequently, real estate managers require skills specific to their industry.

These analyses rely on a number of public, commercial and hand-compiled datasets focusing on the U.S. market. For mutual funds and hedge funds, we use the commercial databases eVestment and Hedge Fund Research (HFR) to identify women- and minority-owned firms. While these databases do not contain the entire population of mutual funds and hedge funds, they represent the most comprehensive data sources that provide information on diverse ownership. For PE and real estate, we merge commercial datasets from Preqin with hand-compiled lists of diverse managers.

The sample size for each asset class is summarized in the table below. These include active firms and funds as of the time of download, which was September 2021.

¹⁵ See, for example, <https://www.investor.gov/introduction-investing/basics/investment-products/hedge-funds>.

Table 1. **Sample size for each asset class, including all ownership types (i.e., minority-owned, women-owned and non-diverse-owned).** Data as of September 2021.

Asset class	Number of funds	Number of firms	Total firm AUM
Hedge funds	1,968	950	\$949.4 billion
Mutual funds	11,147	2,704	\$74.6 trillion
Private equity	13,988	4,812	\$5.3 trillion
Real estate	4,660	1,542	\$1.4 trillion
Total	31,763	10,008	\$82.2 trillion

Although definitions of diverse-owned firms vary slightly across data sources, this report defines diversity based on the share of equity held by diverse owners. Specifically, firms are considered women-owned or minority-owned if more than 50% of firm ownership is held by women or minorities, respectively. We then define a diverse-owned firm to be one that is women-owned, minority-owned or both.¹⁶

As a final note, data availability and reporting on diversity in the asset management space within the U.S. market continue to evolve. In general, the quality and coverage of data is likely to improve over time, particularly in terms of demographic information on asset managers. As a result, one limitation of the analysis in this report is that a portion of the increase in representation year-to-year could be due to better reporting rather than true increases in women- or minority-owned firms and their AUM. However, our analysis of changes in the databases over time suggests that increased reporting is not a primary driver of the results in this report. This analysis is described in the **Appendix**.

Additional information about these databases and how they were used in this analysis can be found in the **Appendix**.

Current state

The first analysis considers the current state of diversity in the asset management industry as of September 2021. For each asset class, we quantify the representation of minority and women ownership. There are three ways in which we quantify representation:

- Number of firms
- Number of funds
- Amount of AUM

These three statistics allow us to gain a comprehensive understanding of the current state of minority and women ownership in the industry.

First, when looking at the representation of firms, we find the highest representation of minority-owned firms among hedge funds and mutual funds, in which 9.3% and 9.2% of firms are minority-owned, respectively. For women-owned firms, we see the highest representation among private equity and mutual funds at 7.2% and 6.7%, respectively. Real estate, however, has the lowest representation of both minority- and women-owned firms.

¹⁶ Note that the singular exception to the definition of “diverse-owned” is the mutual funds asset class, the more granular data for which allow us to categorize a firm as diverse-owned if the *additive* women and minority ownership percentages are greater than 50%. That is, a firm that is owned 30% by women and 30% by minorities would be classed as diverse under mutual funds, although it is not possible to identify such firms as diverse using the other datasets.

When we instead consider funds, we see generally similar results overall—diverse-owned funds are less represented than their non-diverse-owned peers. Across the board, diverse ownership in terms of *funds* is lower than that by *firms*. As with firms, representation of both women- and minority-owned funds is lowest in the real estate industry, with only 1.1% of funds owned by minorities and 2.9% of funds owned by women. We find a strong discrepancy also between firm and fund representation among mutual funds. For instance, we see that despite 9.2% of firms being minority-owned, only 4.0% of funds are owned by minorities. Similarly, 6.7% of firms in the mutual fund industry are women-owned, but only 3.2% of funds are owned by women. What might be driving this discrepancy? To answer this question, we next look at the assets under management (AUM) of these groups.

Figure 7. Percent (%) of U.S.-based firms owned by minorities and women.

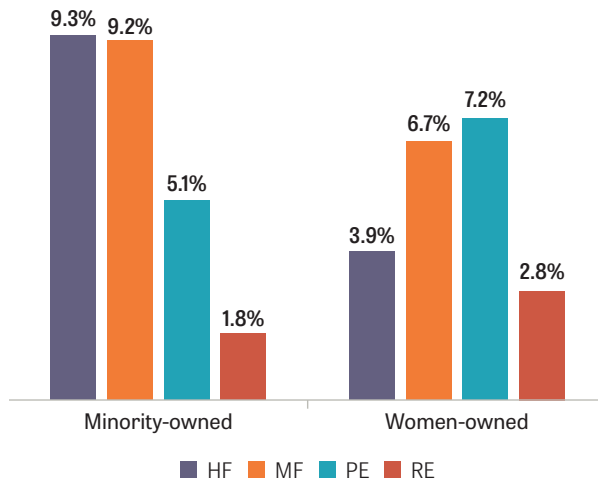
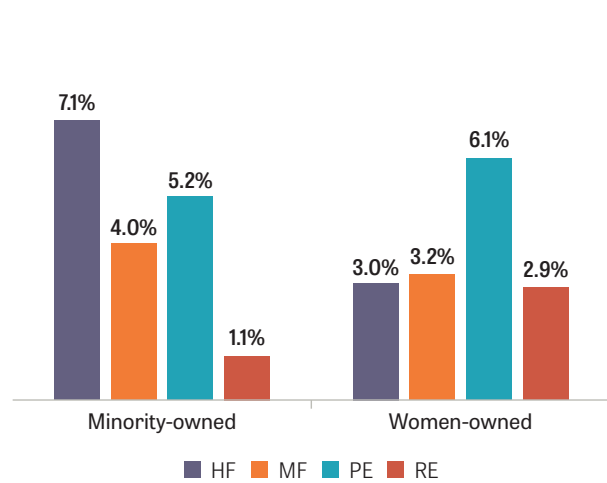
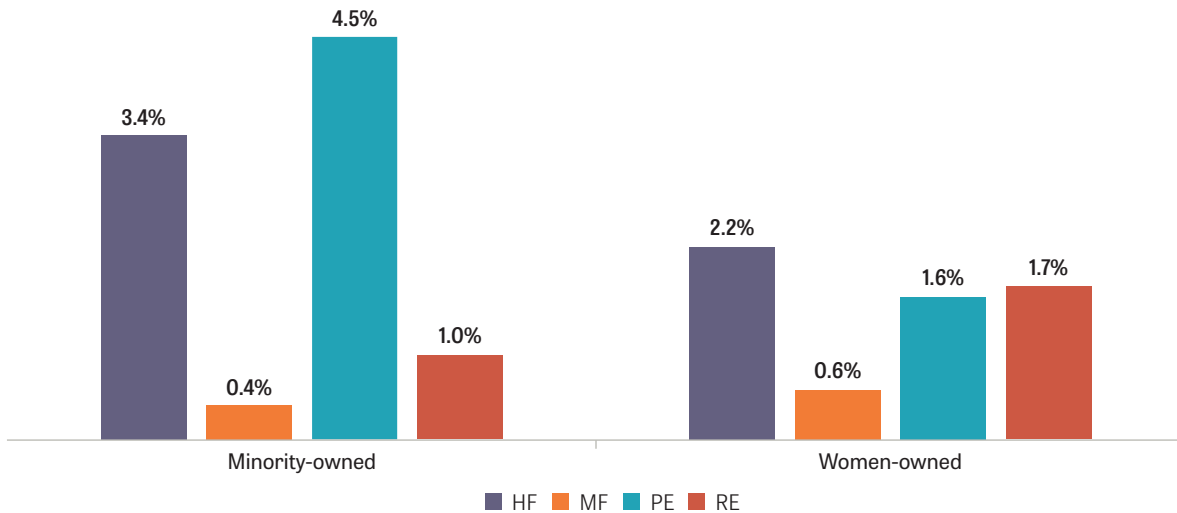


Figure 8. Percent (%) of U.S.-based funds owned by minorities and women.



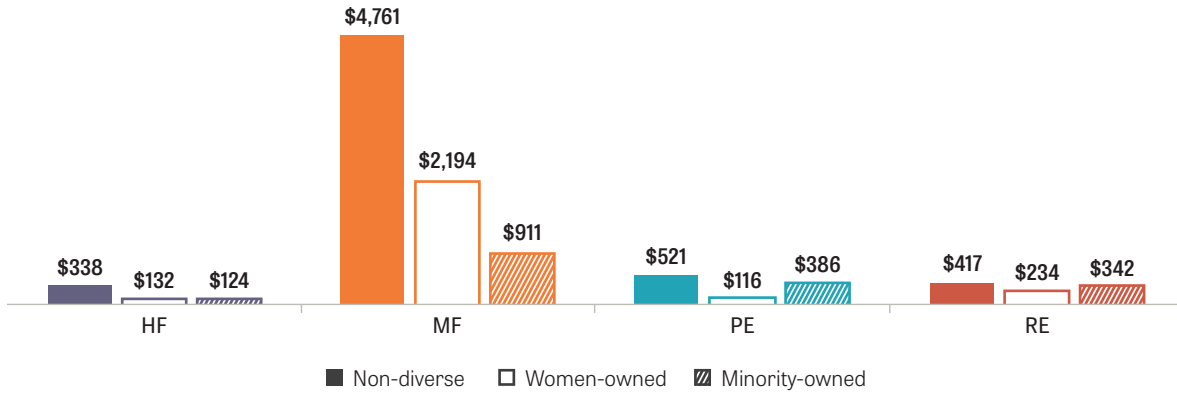
When we consider AUM, minority and women representation both decrease markedly across asset classes. In the case of mutual funds in particular, despite the representation of minority-owned firms being relatively high, at 9.2%, representation when measured by AUM decreases to 0.4%. When we consider this in tandem with our finding above—that the percentage of diverse-owned *funds* is lower than the percentage of diverse-owned *firms*—the story seems to be one in which diverse-owned firms manage fewer, smaller funds than their non-diverse peers. In fact, this is a trend we generally see across each asset class.

Figure 9. Percent (%) of U.S.-based AUM managed by minority- and women-owned firms.



We can examine this directly by considering the typical size (as measured by AUM) of diverse-owned funds compared to non-diverse-owned funds. Here, we do in fact see that the mean size of diverse-owned funds is generally much smaller than their non-diverse-owned peers—a finding that is consistent across each of the four asset classes.

Figure 10. **Average fund size (mn USD), by asset class and ownership type.**

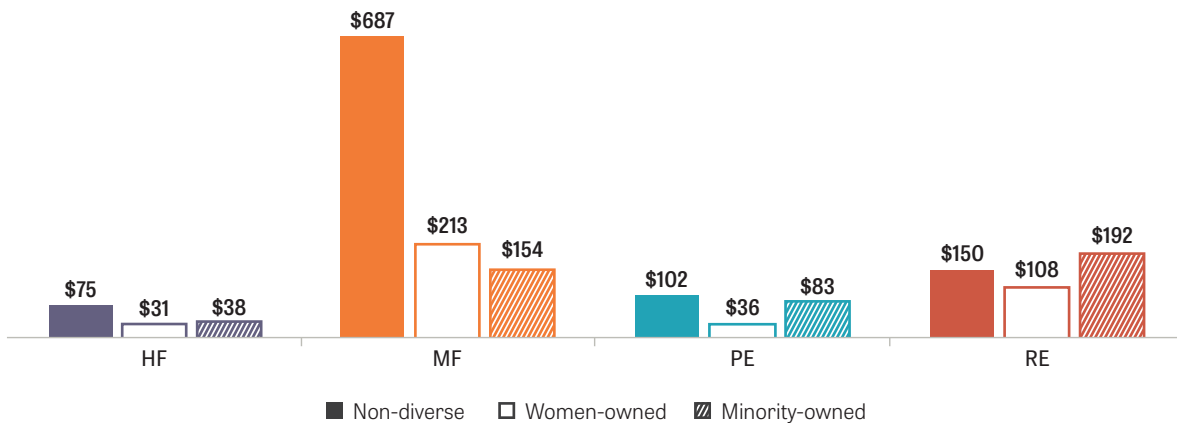


For instance, when considering mutual funds, we see directly what the firms and funds analysis above suggested: non-diverse-owned funds are significantly larger—in fact, more than double the size—of diverse-owned funds. The same is true in the hedge fund industry.

When looking at private equity and real estate, the results are slightly more encouraging, particularly in the case of minority-owned funds. Here we see that the average fund size appears to be nearly as large as that of non-minority-owned funds. However, women-owned funds are on average smaller in these asset classes, particularly in private equity.

One might wonder when considering these results whether they are driven in part by large funds “pulling up” or small funds “dragging down” average fund sizes. To this end, it is worth also examining *median* fund sizes to check whether this effect is simply driven by extreme outliers. However, as shown in Figure 11, this does not appear to be the case.

Figure 11. **Median fund size (mn USD), by asset class and ownership typ**



For the most part, we see nearly identical patterns in median fund size compared to mean fund sizes across asset classes. The one exception is minority-owned real estate funds; here, we see that the median size is larger than the median size of non-diverse-owned real estate funds.

To summarize, the current state of the asset management industry appears to be one in which diverse-owned firms manage far fewer, markedly smaller funds than non-diverse-owned firms. While this finding in and of itself may not be particularly inspiring, it is however important to also consider how the state of the industry has evolved, ultimately arriving at where it is today. Namely, we ask the question: Has progress been made in terms of diverse representation over time? We explore this in depth in the following section.

Trends

Having covered the *current state* of diverse ownership in the asset management industry, we next consider *trends in diverse ownership over time*. The aim of this analysis is to uncover whether there is a general trajectory of more diverse representation in the industry. To this end, we consider three key metrics for each asset class over time:

- AUM of diverse-owned firms as a percentage of total AUM
- AUM of diverse-owned firms in absolute dollar terms
- Fundraising of diverse-owned firms as a percentage of total fundraising

When looking at these three metrics in tandem, we gain important insights into not only how the *relative* representation of diverse-owned firms has changed over time, but how much capital *in total* is being managed and raised by these firms.

We begin by first exploring how the total amount of AUM managed by diverse-owned firms has evolved over time across asset classes. We look at the period between 2011 and September 2021. In short, diverse-owned firm AUM has generally increased over the last decade. For minority-owned firms in the PE and hedge fund space, AUM has been steadily increasing as a percentage of overall AUM since 2012. For minority-owned firms in mutual funds and real estate, the results are less striking; still, there has been some progress, particularly in the last several years. For women-owned firms, relative AUM has been increasing more slowly across these asset classes but is nevertheless on an upward trend on the whole.

Figure 12. **Percent (%) of U.S.-based AUM managed by minority-owned firms.**

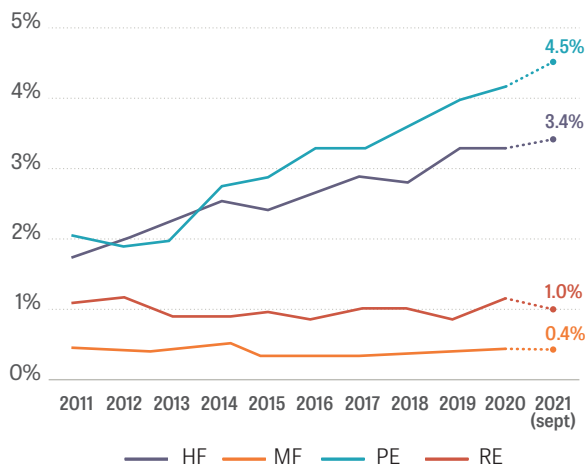
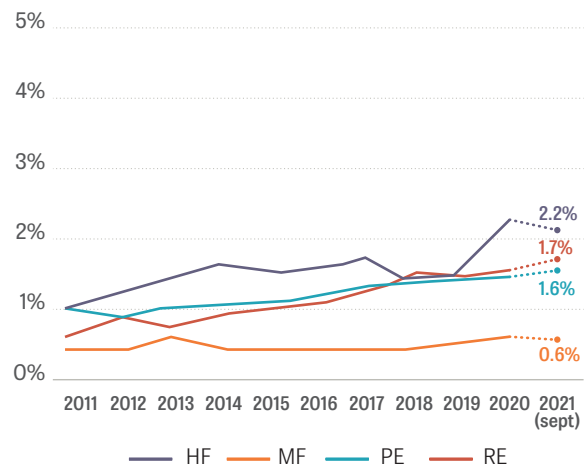


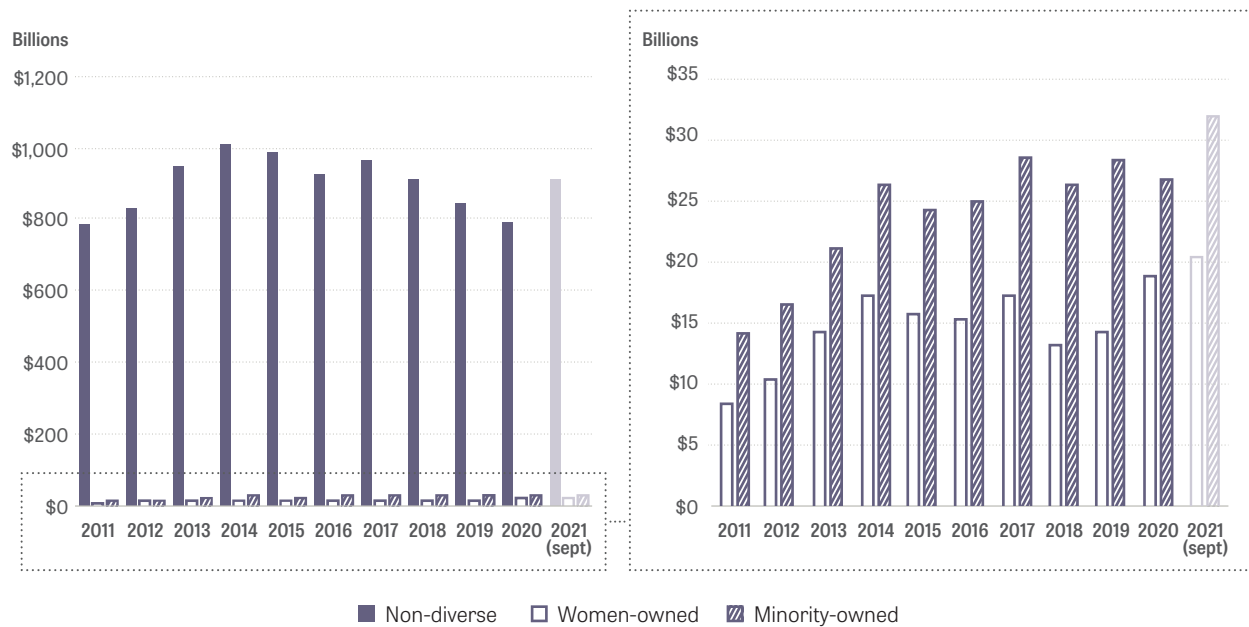
Figure 13. **Percent (%) of U.S.-based AUM managed by women-owned firms.**



These findings are encouraging because they suggest not only that diverse-owned firm AUM itself is increasing, but also that it is increasing *even as these asset classes continue to grow*. Put another way, diverse-owned AUM is generally increasing *faster* than non-diverse-owned AUM in these four industries. Additionally, it might be noted that—given our finding that diverse-owned firms are much smaller than their non-diverse counterparts—the amount and proportion of diverse-owned *firms* are generally increasing at faster rates than the amount of diverse-owned AUM.

To look more explicitly into this point, we can look at the *absolute amount* of AUM managed by these firms, instead of just the proportion of AUM (as shown above).

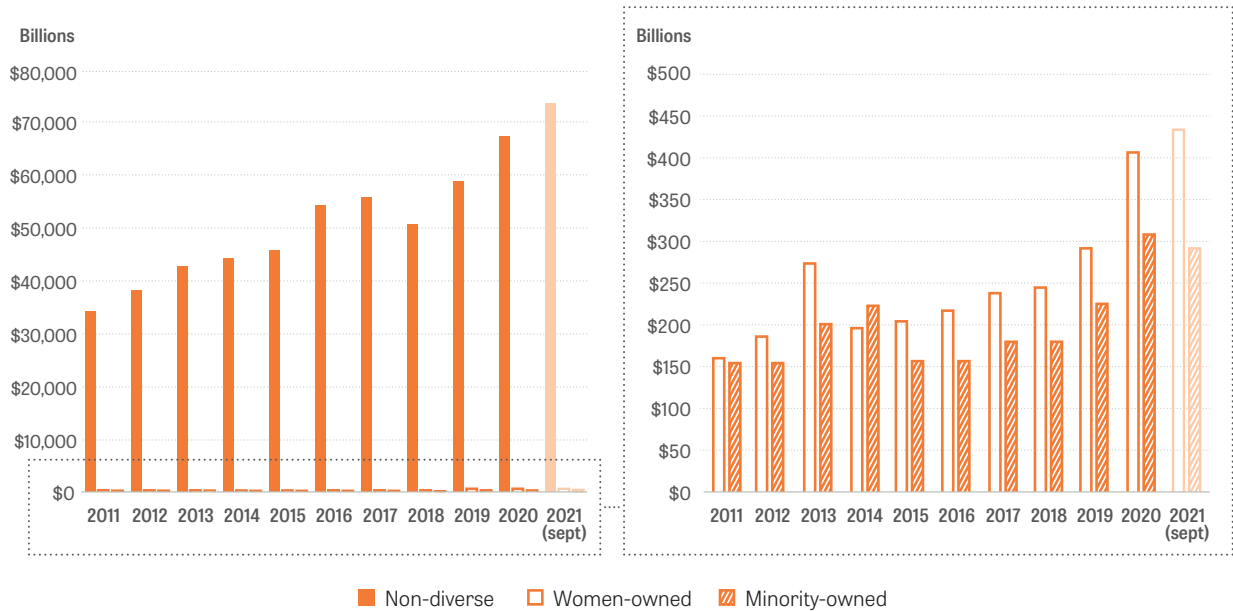
Figure 14. **Non-diverse, women-owned and minority-owned U.S.-based hedge fund AUM.**



For instance, we see in Figure 14 that although diverse hedge fund managers control substantially less AUM than their non-diverse counterparts, the *rate* at which AUM is increasing for diverse managers appears to be greater than that for non-diverse managers. To quantify this, we can compare the compound annual growth rate (CAGR) of women-owned, minority-owned and non-diverse-owned AUM over the past ten years, from 2011 through 2020. As we can see from Figure 18, while the CAGR for women-owned and minority-owned hedge fund AUM was 8.5% and 6.6% respectively, the CAGR for non-diverse firms was only 0.1%.

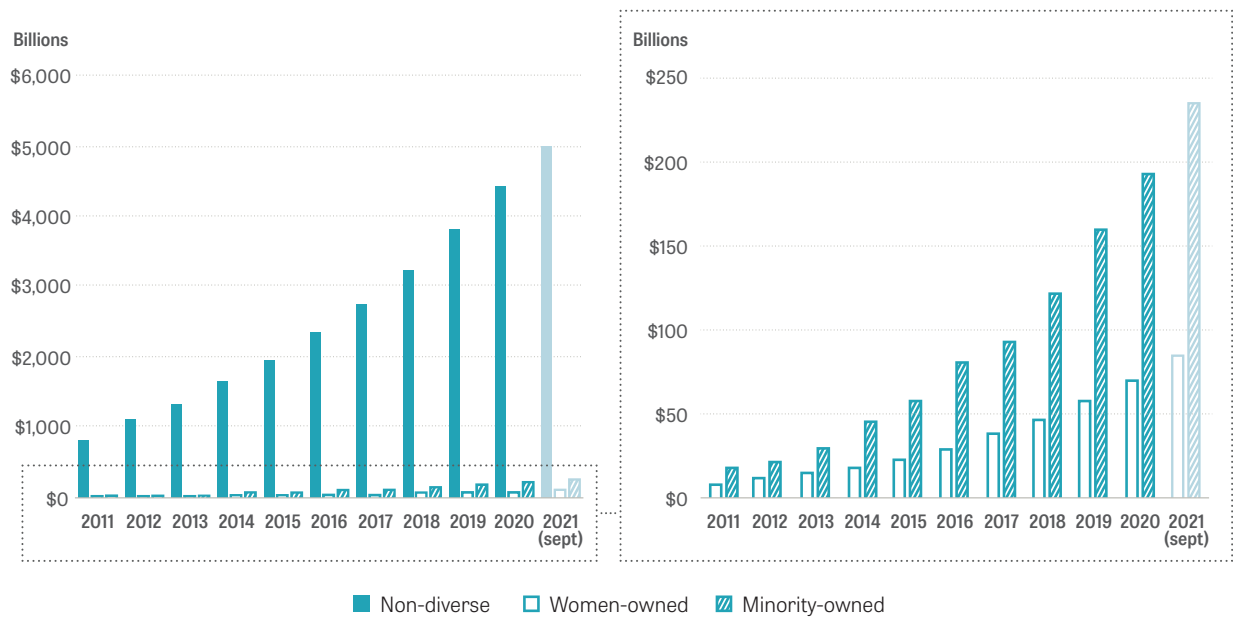
We see generally similar trends across other asset classes. For mutual funds, the trend is less pronounced, but we still see diverse manager AUM—particularly minority-owned AUM—increasing, most notably in the last five years (shown in the following figures).

Figure 15. **Non-diverse, women-owned and minority-owned U.S.-based mutual fund AUM.**



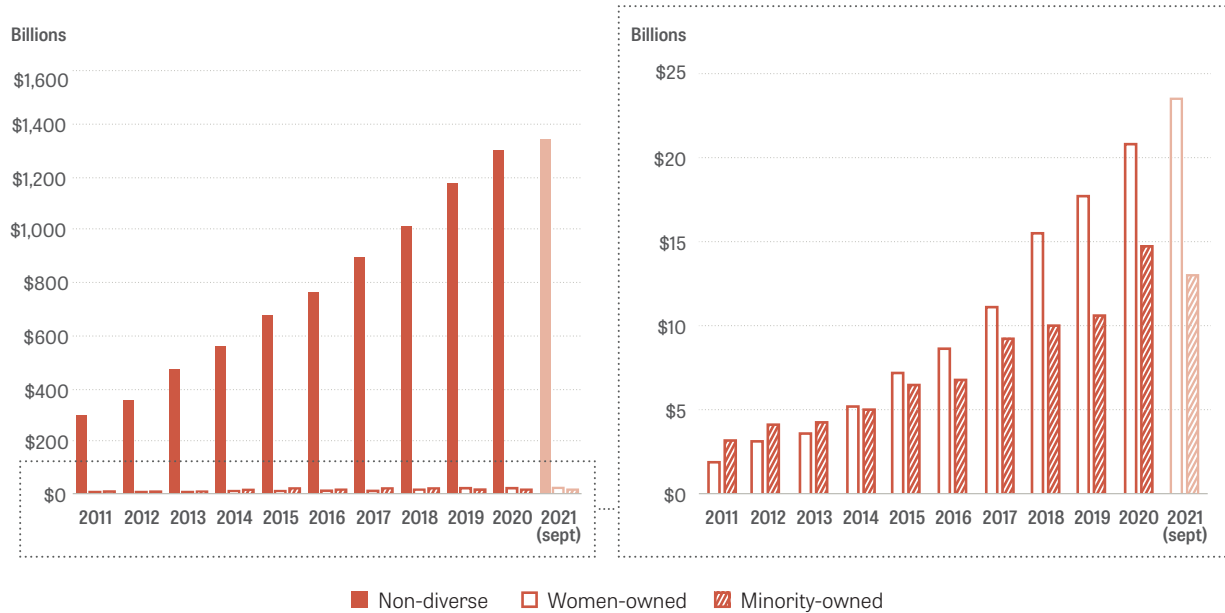
The same is true for private equity, as shown in Figure 16. Despite rapidly increasing overall AUM over the last decade, the *rate* of diverse AUM growth has more than kept pace with the overall industry. Minority-owned funds in particular experienced rapid growth, with a CAGR of 27.4%, far outpacing the growth of non-diverse-owned AUM, as we see in Figure 18.

Figure 16. **Non-diverse, women-owned and minority-owned U.S.-based private equity AUM.**



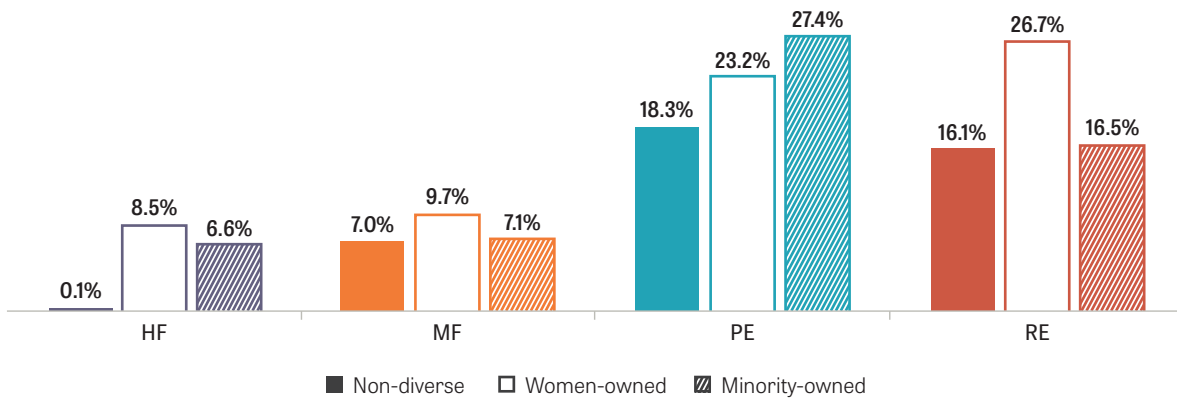
Finally, when looking at the real estate industry, most prominent is the growth in AUM of women-owned firms. Women-owned firm AUM has increased more rapidly than non-diverse real estate AUM, while minority-owned firm AUM has generally kept pace with overall industry growth.

Figure 17. **Non-diverse, women-owned and minority-owned U.S.-based real estate AUM.**



These relative growth trends are shown in Figure 18 below. Across each asset class, we see directly what earlier findings hinted at—women- and minority-owned firms are growing faster than their peers in terms of AUM. Although the overall trajectory appears to be heading in a promising direction—particularly in the last several years—diverse-owned firms still manage proportionally *much less* than their non-diverse-owned peers.

Figure 18. **Comparison of 10-year growth (CAGR) in U.S.-based AUM by asset class and ownership type, 2011–2020.**¹⁷



Although it is impossible to state with certainty where these industries may be headed in terms of diverse representation, one way to get a better sense of their trajectories is to examine fundraising activity—namely, to which types of funds is capital being directed? In this way, fundraising activity may be thought of as a “leading indicator” for the evolution of these asset classes.

¹⁷ Note that this analysis only considers years in which we have data for the entire year. Thus, the data used were from 2011 through to the end of 2020, and data from 2021 were not included.

Below, we look at fundraising activity for diverse-owned firms as a percentage of overall fundraising activity within each industry. Here, we see much higher diverse representation than for AUM. For instance, in 2020, minority-owned hedge funds accounted for 14% of total fundraising. We see similar—though less striking—results in other asset classes, as well, in which minority-owned firm fundraising activity has been proportionally larger than minority-owned AUM.

When looking at women-owned firm fundraising activity, the results are somewhat more muted. Although there have been periods of greater fundraising activity (for instance, in hedge funds in 2019 and mutual funds in 2011), women-owned firm fundraising as a proportion of total fundraising has generally remained less than 5% over the last decade.

Figure 19. Fundraising by U.S.-based minority-owned firms as a percentage (%) of total fundraising.

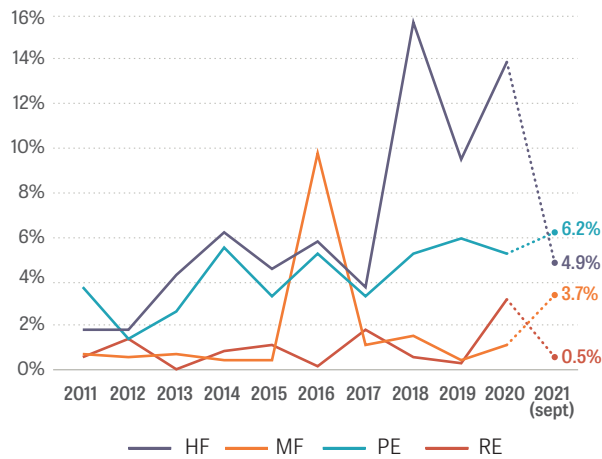
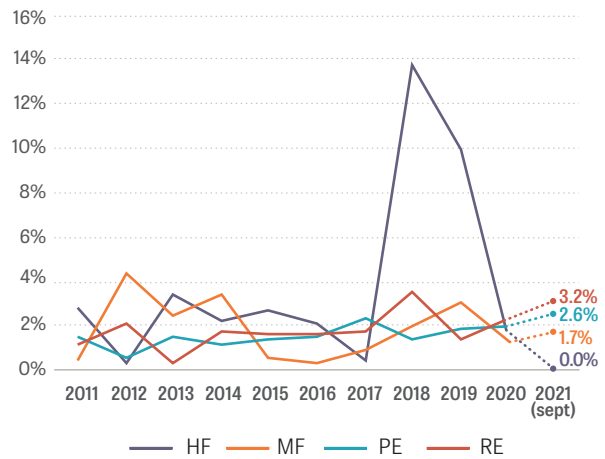


Figure 20. Fundraising by U.S.-based women-owned firms as a percentage (%) of total fundraising.



In summary, the asset management industry has continued to grow dramatically in recent years. Though there are some signs that diverse-owned firms are managing and attracting more capital, they still lag behind their non-diverse peers, whether measured in terms of AUM or fundraising activity.

Performance

From the discussion and results above, it is clear that diverse-owned firms are underrepresented relative to non-diverse firms on both relative and absolute bases. There are many theories as to why this might be the case, but one hypothesis commonly offered is that performance might differ across these groups, resulting in capital being allocated away from diverse managers.

In this section, we explore this hypothesis directly, seeking to identify and quantify any performance differentials between minority- and women-owned firms and their peers. To do this, we employ a number of statistical models.

The simplest of these is a straightforward comparison of mean performance among groups: How does the performance of the average diverse-owned fund compare to that of the average non-diverse-owned fund?

However, simple analyses like this fail to adequately account for many relevant factors, and one may be led to conclude that the difference in mean performance is due to diverse ownership status rather than a host of other factors that may be driving observed differences.

As such, we employ more robust statistical models—chiefly, linear regression analysis—to arrive at more well-founded conclusions. This method allows us to control for a variety of confounding factors—for instance, fund size, market conditions or time period—and thus quantify the true performance difference attributable to a firm being women- or minority-owned.

We do not find any consistent statistically significant differences in performance among diverse- and non-diverse-owned groups across asset classes.

We can also explore the results of various regression analyses in more detail, beyond simply assessing whether or not there is a statistically significant impact of minority- or women-ownership status on investment performance. To do this, we look more closely at the output from our various regressions. Generally speaking, the output of regression analyses consists of a series of “coefficients,” or numeric values that indicate the strength and direction of a relationship between a set of explanatory variables (namely, factors that may reasonably be thought to have an impact on an outcome) and a single outcome variable (for instance, investment performance). To illustrate, if a regression model yields a coefficient of -0.3 for one of the explanatory variables included in the model, one would interpret this finding to mean that there is a negative relationship between the explanatory variable and the outcome variable.

However, regression models are highly dependent upon the data used in an analysis. If there are fewer data points underlying a regression model, there is typically more uncertainty present in the model—one cannot know for certain that results obtained are representative findings, or if the results are simply attributable to idiosyncrasies of the sample used for the analysis.

To account for this, regressions model the coefficients as “ranges” (technically, as distributions), which provide an indication of the degree of precision of these coefficients. The models can provide us with *confidence intervals* to give us a sense of the “spread” of the estimate. So, it might be that a coefficient is estimated to be -0.3 , but the confidence interval around that estimate may reveal that, within a given degree of certainty, the true coefficient might lie anywhere between 0.1 and -0.7 .

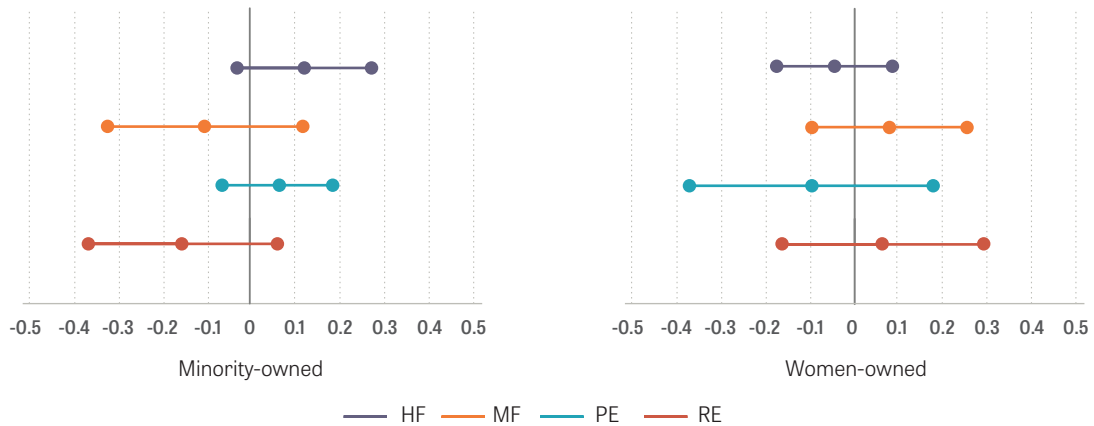
By looking at both coefficient estimates and confidence intervals in tandem, one can thus get a better sense of not only how confident one may be in estimated coefficients (**statistical significance**), but also a sense of the strength of the relationship (**economic significance**).

To this end, we plot below the coefficient estimates from our final regression model specifications for each asset class, as well as the 95% confidence intervals¹⁸ calculated around these estimates. These confidence intervals indicate that with 95% confidence (under the assumptions of the given model), the true coefficient lies within the limits shown. The estimates for the effects of minority ownership are displayed on the left half of the chart, and those for women-ownership on the right. The asset classes are arranged along the vertical axis.

¹⁸ These are 95% confidence intervals. To calculate these intervals for each of the asset classes, we first take our selected regression specification from the corresponding regression table and retrieve the point estimate for the “women-owned” and “minority-owned” coefficient, as well as the standard errors for the coefficient underneath (in brackets). The middle point for each band in the charts corresponds to the point estimate. The lower bound corresponds to the point estimate minus 1.96 (the approximate value of the 97.5 percentile point of the standard normal distribution) multiplied by the standard error. The upper bound corresponds to the point estimate plus 1.96 multiplied by the standard error.

Figure 21. **Coefficient estimates and 95% confidence intervals from our final regression model specifications.**

The confidence intervals for each overlap with 0.0, indicating that there is no statistically significant difference between minority- or women-owned funds and non-diverse-owned funds, across each asset class. The bounds of the confidence interval are calculated by multiplying the standard error by 1.96, and adding (subtracting) this value from the estimate.



When analyzing the chart above, we notice that the confidence intervals all overlap with 0.0. We thus see no statistical evidence for a meaningful relationship between diverse-ownership status and performance. **We therefore cannot conclude with a reasonable degree of certainty that the effect of diverse ownership on performance is different from zero.**

Conclusions

The asset management industry continues to be a pillar of the modern global economy, growing ever larger each year. Yet as the industry has grown and matured, many have pointed to the lack of diverse representation in this critical space.

As a first step toward quantifying the landscape of diversity and representation in the asset management industry, Bella Private Markets has worked with John S. and James L. Knight Foundation over the last several years to develop a series of reports tracking diverse representation in four key industries within the asset management space: private equity, real estate, mutual funds and hedge funds. In this update to our 2019 report, we find that the representation of diverse-owned groups across asset classes as measured by total AUM still lags behind that of non-diverse-owned groups. However, there have been improvements over time in the amount of AUM managed by diverse-owned groups and—perhaps due in part to increased attention paid to this space—improvements in data collection that cover these trends (see the **Appendix** for more detail).

As to *why* diverse representation still lags in the asset management industry, our analyses reveal that the differences in representation do not appear to be driven by performance differentials. We find no consistent, statistically significant differences in performance between diverse- and non-diverse-owned funds across asset classes. This may indicate that the true drivers of the lack of representation of diverse groups in asset management lie elsewhere, and that further research to determine these causes and the impact of the level of diversity in the asset management industry is required. This research may serve as a foundation for such further research.

We hope that our research continues to shed light on this crucial topic, spurs further discussion, research and understanding of diverse representation in the asset management industry, and leads to ongoing improvements in data reporting.

Appendix

Data

Our study relies on several data sources. Three commercial databases—Hedge Fund Research (HFR), eVestment (mutual funds) and Preqin (private equity and real estate)—allow us to identify the diverse ownership status of asset managers. Our hedge fund and mutual fund data provide information on the share of equity held by diverse owners. Private equity (PE) and real estate data are less detailed, but still indicate whether at least 50% of a firm's equity is held by women or minorities. We should note, however, that data collection on PE and real estate diversity is still in its infancy and may not include every diverse manager. Therefore, for PE and real estate, we combine commercially available datasets with hand-compiled lists of diverse-owned firms to improve data reliability.

Throughout the report we characterize differences between diverse and non-diverse asset managers using a number of firm- and fund-specific variables. Some of our datasets include historical, performance and investor information, which we utilize to study diversity trends, the financial performance of diverse managers and the composition of institutional investors supplying capital to diverse asset managers. In this section, we briefly summarize each major data source.

Hedge Funds

For hedge funds, we use Hedge Fund Research (HFR) data, a leading provider of hedge fund data. Our final dataset comprises 950 firms and 1,968 funds in the *active* category, and 3,556 firms and 9,133 funds reporting *historical* between January 2005 to September 2021. These data include variables such as strategy, geographic location and fund size.

The standard commercial database also includes a diversity variable to indicate whether the fund is substantially owned by women or minorities. HFR has provided supplemental proprietary data for this project that include diverse ownership type (women vs. minority) and level of ownership (substantial vs. majority). The HFR range for substantial ownership is 25–50% ownership, and the threshold for majority ownership is 50%+ ownership. Unlike our mutual fund data, firm-level diversity indicators for hedge fund managers do not change over time. For this analysis, we assume that any firm identified as diverse in the HFR database has always been diverse. While this may appear to be a strong assumption, it seems unlikely that diverse ownership of a given firm would change frequently over time.

HFR has good coverage of hedge funds relative to other commercial databases and is frequently used for academic research on the hedge fund industry.¹⁹ It does not, however, capture the total universe of hedge funds.²⁰ Hence, we almost surely do not capture the entire population of diverse-owned hedge funds in our study. Although it would be preferable to combine multiple hedge fund databases for this analysis, we use the HFR database exclusively because it provides identifiers for diverse-owned firms. To our knowledge, no other hedge fund database provides similar data on diverse ownership.

19 See, for example, Juha Joenväärä, Robert Kosowski, and Pekka Tolonen, "Hedge Fund Performance: What Do We Know?," *SSRN* working paper (March 2016).

20 See, for example, Andrew J. Patton, Tarun Ramadorai, and Michael Streatfield, "Change You Can Believe In?: Hedge Fund Data Revisions," *SSRN* working paper (March 2013).

We make several adjustments to prepare the HFR data for analysis:

- HFR separates fund characteristics, performance and assets into active and dead databases, with funds grouped by their reporting status. We utilize data for both **active and dead** funds when examining trends and evaluating fund performance.
- When analyzing the current state of hedge fund diversity, we only include **active funds** and exclude any funds that are no longer reporting.
- We restrict our sample to U.S.-based firms (including U.S. territories).
- While all firms are U.S.-based, some report assets denominated in foreign currencies. Assets denominated in foreign currencies are converted to USD based on monthly exchange rates provided by S&P Capital IQ.
- HFR distinguishes between majority-diverse-owned (i.e., 50%+) and substantially-diverse-owned (i.e., 25–50%) for women- and minority-ownership. Because most diverse firms are classified as majority-diverse-owned and few firms are classified as substantially-diverse-owned, and also for the sake of consistency across asset classes, **we consider only the “majority” categories to constitute women- or minority-ownership.** This stands in contrast with our 2019 report, in which, for some analyses, we broke out the two categories, and for others, we used the 25%+ threshold to indicate diverse ownership. The “timeline” analysis in the 2019 report, therefore, will not align exactly with the “trends” analysis in the current one.
- The fund characteristics and diversity data are merged with the monthly asset data. For a fund to be included in the trends analysis, it must have data available on its characteristics (e.g., industry focus, manager location, AUM, etc.), the diversity of its ownership and its assets in a given month.
- Similarly, for a fund to be included in the performance analysis, it must have data available on its characteristics and monthly performance. For this analysis, we rely on self-reported monthly returns data.

In addition to analyzing the data by diverse group, the HFR database allows us control for other important factors in the performance analysis. These variables include regional investment focus, manager location and fund strategy:

- Regional investment focus has three categories—North American, global, and other—based on where the manager targets investments.²¹
- We group firms into four U.S. regions by manager location using the same definitions as for mutual funds: Northeast, South, Midwest and West.
- Fund strategies include equity hedge, event driven, macro, relative value, and other.²²

In this analysis, we do not consider funds of hedge funds since they typically have a distinct structure, size, fee arrangement and performance profile compared to direct investments. In addition, any AUM with fund of funds (FoF) will be double counted if the sub-fund investments are also in the dataset. This could overstate the amount of capital in the industry and skew the results, misrepresenting the AUM allocated to diverse versus non-diverse firms. For these reasons, we drop any observations that list FoF as the strategy type.

For the current state analysis, we use all hedge funds tagged as active as of September 2021. For the trends analyses, we use data from January 2011 through to September 2021. Finally, for the performance analysis, we use data from January 2005 (the earliest extent of diversity data for this asset class) to December 2020, so as to capture full-year returns.

²¹ “Other” focus category includes funds targeting Latin America, Asia, Europe, the Middle East, emerging markets or Pan-American investments.

²² “Other” strategy category includes blockchain and risk-parity funds.

Mutual Funds

For mutual funds, we use the Traditional Database from eVestment, a leading commercial data provider for institutional investors frequently used in academic research.²³ The database covers investment vehicles including mutual funds, separately managed accounts (SMAs), comingled trust funds and exchange-traded funds (ETFs); together, mutual funds and SMAs comprise the vast majority of database observations. eVestment collects quarterly data on firms and funds, including AUM, fund performance, fund strategy and firm location. Starting in Q1 2011, eVestment provides firm-reported data on the share of firm ownership held by women and the following minority groups: African American, Asian and Hispanic.

We use eVestment data through September 2021 and restrict our sample to U.S.-based asset managers.²⁴ We make several other sample restrictions:

- To examine the current state of diversity, we are interested in the level of diverse ownership among *current* asset managers. Therefore, we restrict the data to *active* funds for the current state of diversity section.
- We consider products whose asset class is listed as equity, fixed income or balanced/multi-asset.
- We drop the small number of vehicles tagged as exchange-traded funds (ETFs) and life policies.

After these restrictions, our sample of active U.S.-based asset managers for mutual funds includes approximately 1,223 firms and over 11,000 funds. Note that the total AUM represented by this sample, \$74.6 trillion, may be somewhat overstated, as the data for total assets a firm in the database manages may include non-mutual fund vehicles. The eVestment platform provides data on various indicators for diverse ownership reported on a *quarterly* basis—this allows us to identify subsets of women- and minority-owned firms with majority ownership (50%+) across time.

For the current state analysis, we use all firms tagged as active as of September 2021 (the date of our receipt of the data).

For the trends analysis, we use quarterly data starting in Q1 2011, the first quarter that diverse ownership is reported, through September 2021. For each quarter, we identify all active funds and firms. Among the active funds and firms each quarter, we identify funds and firms with women ownership (50%+) or minority ownership (50%+). Again, in any given quarter, there may be some overlap between the categories of women-owned and minority-owned firms, as these are not mutually exclusive definitions.

For the performance analysis, we use the same dataset to analyze the effect of diverse ownership on quarterly returns. In order to make full use of the data available, we also include the numeric percentages of women and minority ownership in the regressions. We estimate a number of regression models to evaluate performance, controlling for ownership type as well as other relevant variables that may be correlated with performance. We use complete case analysis, and only include fund-quarter observations with non-missing data for performance, firm and fund characteristics, and ownership type.

²³ See, for example, Jennifer Bender, P. Brett Hammond, and William Mok, "Can Alpha Be Captured by Risk Premia?," *Journal of Portfolio Management* 40, no. 2: 18-29 (Winter 2014).

²⁴ Throughout our study we use a broad definition of the term "mutual fund" for ease of exposition. Our mutual fund sample consists of all funds in the eVestment Traditional Database. While many eVestment observations are institutional mutual funds, the sample also includes some SMAs, trusts and ETFs.

Private Equity and Real Estate

Our research on PE and real estate managers relies on data from Preqin, a commercial data provider for the alternative asset industry. Preqin is among the top sources of data for the alternative assets industry and is one of the two databases most often used in PE research.²⁵ We downloaded the data from Preqin in September 2021.

Preqin's databases provide access to a number of variables of interest and boast coverage over a relatively long time period, with particularly strong coverage from 2000 onward.

In addition, Preqin identifies diverse ownership for PE and real estate firms listed in its databases. It should be noted, however, that data collection on diversity is a relatively recent development. As a result, we cannot guarantee that our study has identified every diverse-owned PE or real estate manager. Nevertheless, we supplement Preqin's diversity identifiers with our own hand-compiled lists of diverse asset managers. These lists were gathered by searching through publicly available records from pension funds, government agencies and nonprofit organizations. These sources include:

- Illinois Municipal Retirement Fund 2019 Diversity Report
- New York State Common Retirement Fund MWBE Report 2018–2019
- Maryland Governor's Office of Minority Affairs 2013 and 2014 Report
- ABFE Directory of Minority and Women-Owned Investment 2016
- 2013 and 2015 NYS Office of the Comptroller Report on MWBE
- Shoppe Black
- Kevin T. Payne
- Shop Katika
- Bauce
- Black Enterprise's List of Private Equity Firms

The lists of diverse PE and real estate firms from the sources above were matched to demographic and fundraising data from Preqin based on firm name. We made a number of adjustments to both the PE and real estate databases from Preqin before merging them with our list of diverse-owned firms:

- Funds of funds are dropped from our datasets, for the reasons discussed in previous sections.
- Managers based outside the U.S. are dropped.
- For the PE database, Preqin classifies fund types into a number of different categories. For the performance analysis, we regroup these funds into two broad groups: PE and VC.²⁶

For the PE performance analysis, we use net multiples and net IRRs, sourced from Preqin's database, as our outcome variables. It should be noted that more funds report net multiples than net IRRs, which was one motivation for using net multiples in our final specification. Similarly, for real estate funds, we use net multiples and net IRRs from Preqin's database.

²⁵ Gregory W. Brown, Robert S. Harris, Tim Jenkinson, Steven N. Kaplan, and David Robinson, "What Do Different Commercial Data Sets Tell Us About Private Equity Performance?," SSRN 2706556 (December 2015).

²⁶ PE includes buyout, growth, mezzanine, co-investment multi-manager, co-investment, balanced, direct secondaries, distressed debt, hybrid, PIPE, natural resources, timber, special situations, turnaround, secondaries, infrastructure and infrastructure secondaries. VC includes early stage, early stage: seed, early stage: start-up, expansion/late state, venture (general) and venture debt. Real Estate includes real asset, real estate, real estate co-investment, real estate fund of funds and real estate secondaries.

General Data Limitations

At this point, it is worth mentioning several of the data limitations and potential biases that may be present in our databases. The first, backfill bias occurs when a fund starts contributing to a database and reports its past performance.²⁷ Only funds with strong historical performance have incentives to report retroactive data. Sometimes, a firm will have multiple funds and will selectively report only the funds with strong returns. Therefore, “backfilling” will overstate the overall level of performance in the database and will make it look as though most funds perform very well in their early years. Survivorship bias is another well-documented bias in commercial databases and occurs when lower performing funds are abandoned by the asset management firm, leaving only high performing funds.²⁸ As a result, the overall level of performance is biased upward by the “survivors” that remain in the database.

Furthermore, data providers rely, at least in part, on voluntary reporting by the funds, and there are a number of factors that may influence a fund’s decision to contribute data to a provider. For example, funds that underperform have less incentive to make their performance data public, which biases the overall level of performance upward in most databases. Similarly, funds that are accepting new capital or firms that are raising a new fund may report data as a way of advertising, particularly if recent performance has been strong. Further, anecdotal evidence suggests that some of the top hedge funds that are closed to new assets will not bother reporting to databases.

Finally, biases can result from the burden of reporting. There are a number of commercial databases for each asset class, and many small firms may not have the resources to report to all of them. Most databases therefore do not represent the full universe of funds, and they may be biased toward larger firms.

While these data limitations are areas of potential weakness, it must be noted that there are no immediately identifiable systematic biases that would result from these *general* data limitations. Recall that the three primary objectives of this analysis are (1) quantifying the current level of diverse ownership in the asset management industry, (2) identifying relative trends over time in diverse ownership and (3) assessing whether there is any statistical evidence for differences in performance between diverse-owned and non-diverse-owned funds.

Given that our report is concerned with the level of diverse representation *relative* to non-diverse representation, or performance of diverse-owned funds *relative* to non-diverse-owned funds, there is no immediate cause for concern unless there is evidence for *relative* differences (between diverse- and non-diverse-owned firms) in propensity to report or backfill data (in particular, AUM or performance data for a given fund or firm, or the existence of the fund or firm itself).

However, there may be some cause for concern if the data indicating whether or not a firm is diverse-owned are themselves systematically flawed or changing over time. In particular, we identify two particular avenues through which our results may be biased:

1. Retroactive backfilling of diversity data

If backfilling of whether or not a firm is women- or minority-owned were to occur, this may be a cause for concern for a few reasons. First, this would make it difficult to make accurate statements about trends in representation, as the data on whether or not a firm is diverse-owned would be retroactively updated. Generally, were this to happen, we would expect a firm tagged as non-diverse to be retroactively re-tagged as diverse, as firms are assumed (across asset classes) to be non-diverse unless tagged otherwise. There would be greater cause for concern if this backfilling was contingent in some way upon the performance of the firm, as this would have the potential to bias our performance analysis.

27 Mila Getmansky, Peter A. Lee, and Andrew W. Lo, “Hedge Funds: A Dynamic Industry in Transition,” working paper, July 28, 2015.

28 Rajesh K. Aggarwal and Philippe Jorion, “Hidden Survivorship in Hedge Fund Returns,” *Financial Analysts Journal* 66, no. 2 (March 2010): 69–74.

2. Increasing propensity to report *diversity data over time*

If firms are increasingly likely to report their diversity status over time *relative* to their propensity to report their existence, AUM and performance, this may weaken the conclusions from our analysis on trends. For example, our finding that the level of diverse-ownership in the asset management industry is increasing over time may instead be chiefly driven by the increasing likelihood that a diverse firm in fact *reports* its diverse status.

While a thorough analysis of (2) is beyond the scope of the current report, it may be an interesting avenue for future research. We do, however, carry out an analysis to assess the relevance of (1)—that is, whether there is evidence for significant retroactive backfilling of diversity data.

To perform this analysis, we make use of the raw datasets used in the 2019 report and compare them to the data we use in the current report. We take firms that overlap between the two samples and assess to what degree the reported diversity variable for each firm has changed between the 2019 and 2021 sample. The results are reported below.

Percent (%) of Diversity Data Backfilled by Asset Class			
HF	MF	PE	RE
0.4%	0.4%	5.8%	0.0%

The results indicate that the overall level of backfilling of diversity data is low—particularly for hedge funds, mutual funds and real estate. For private equity, the level of backfilling is higher, at 5.8%, but still within a range that would not deter us from drawing conclusions from our analyses for this asset class. Still, to mitigate the issue in private equity, we use several other data sources to corroborate or supplement Preqin's classifications, as described earlier in the **Appendix**.

Regression tables

Hedge Funds

Table 2. **Performance regressions for U.S.-based hedge funds (excluding FoFs).**

The sample includes fund-month observations from January 2005 through December 2020. Each regression controls for region, strategy, month and strategy-month fixed effects. Reported standard errors are clustered by firm. Model used in the main report is highlighted and in bold.

	Dependent variable									
	Monthly Returns		Market Adjusted Monthly Returns	Three-Factor Risk-Adjusted Monthly>Returns	Five-Factor Risk-Adjusted Monthly>Returns	Monthly Returns		Market Adjusted Monthly Returns	Three-Factor Risk-Adjusted Monthly>Returns	Five-Factor Risk-Adjusted Monthly>Returns ²⁹
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
25-50% Women-Owned	-0.006 (0.129)	0.053 (0.078)	0.083 (0.074)	0.096 (0.082)	0.151 (0.095)	0.012 (0.131)	0.054 (0.086)	0.051 (0.084)	0.051 (0.083)	0.108 (0.098)
Women-Owned	-0.034 (0.056)	-0.015 (0.053)	0.010 (0.055)	0.045 (0.057)	0.031 (0.059)	-0.039 (0.058)	-0.057 (0.047)	-0.058 (0.056)	-0.022 (0.056)	-0.041 (0.058)
25-50% Minority-Owned	0.428** (0.215)	0.365* (0.212)	0.351 (0.271)	0.356 (0.289)	0.364 (0.340)	0.365* (0.206)	0.287 (0.203)	0.252 (0.246)	0.246 (0.272)	0.235 (0.318)
Minority-Owned	0.224*** (0.058)	0.189*** (0.059)	0.143* (0.073)	0.141* (0.075)	0.116 (0.076)	0.213*** (0.061)	0.156*** (0.052)	0.142** (0.070)	0.135* (0.074)	0.120 (0.076)
Fund Assets (mn USD), Lagged	0.051*** (0.007)	0.056*** (0.007)	0.058*** (0.007)	0.060*** (0.008)	0.062*** (0.008)					
Active		0.263*** (0.023)	0.235*** (0.024)	0.260*** (0.026)	0.262*** (0.027)		0.294*** (0.023)	0.280*** (0.026)	0.305*** (0.028)	0.311*** (0.028)
Beta		0.280*** (0.057)					0.372*** (0.074)			
Constant	0.986	0.107	0.214	0.162	0.15	1.23	0.486	0.63	0.588	0.661
Weighted	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Observations	497,360	290,782	290,782	290,782	290,782	497,360	290,782	290,782	290,782	290,782
R²	0.190	0.235	0.093	0.114	0.107	0.212	0.257	0.105	0.128	0.123
Adjusted R²	0.188	0.232	0.090	0.111	0.104	0.210	0.255	0.102	0.125	0.120
Residual Std. Error	4.625 (df = 496144)	4.265 (df = 289774)	3.737 (df = 289775)	4.537 (df = 289775)	5.033 (df = 289775)	8.527 (df = 496145)	8.046 (df = 289775)	7.078 (df = 289776)	8.632 (df = 289776)	9.577 (df = 289776)

Note: *p<0.1; **p<0.05; ***p<0.01

29 The 10th model in this regression table was the one selected and referred to in the main report. The key reasons for doing so included the use of a weighted regression and the use of the full 5-factor risk-adjusted returns as the outcome variable.

Mutual Funds

Table 3. Performance regressions using for mutual funds.

The sample includes fund-month observations for U.S.-based asset managers from the eVestment Traditional Database for Q1 2011 through Q4 2020 (excluding FoFs). We control for month, region and asset class fixed effects. Reported standard errors are clustered by firm. Model used in the main report is highlighted and in bold.

	Dependent variable									
	Monthly Returns		Market Adjusted Monthly Returns	Three-Factor Risk-Adjusted Monthly>Returns	Five-Factor Risk-Adjusted Monthly>Returns	Monthly Returns		Market Adjusted Monthly Returns	Three-Factor Risk-Adjusted Monthly>Returns	Five-Factor Risk-Adjusted Monthly>Returns ³⁰
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
% Women-Owned	0.048 (0.090)	0.049 (0.086)	0.014 (0.082)	0.046 (0.107)	0.025 (0.104)	0.099 (0.099)	0.087 (0.096)	0.041 (0.091)	0.070 (0.119)	0.053 (0.115)
% Minority-Owned	0.023 (0.104)	0.055 (0.104)	0.037 (0.099)	0.028 (0.140)	0.030 (0.139)	0.021 (0.108)	0.055 (0.108)	0.066 (0.110)	0.065 (0.149)	0.065 (0.146)
Women-Owned	0.016 (0.063)	0.036 (0.061)	0.070 (0.057)	0.080 (0.074)	0.091 (0.072)	-0.015 (0.070)	0.010 (0.068)	0.047 (0.062)	0.063 (0.081)	0.070 (0.079)
Minority-Owned	-0.057 (0.082)	-0.078 (0.080)	-0.067 (0.079)	-0.078 (0.107)	-0.082 (0.106)	-0.054 (0.083)	-0.078 (0.082)	-0.086 (0.087)	-0.098 (0.112)	-0.099 (0.110)
Log Firm Assets (mn USD), Lagged	-0.005** (0.002)	-0.004* (0.002)	-0.005** (0.002)	-0.009*** (0.003)	-0.009*** (0.003)	-0.001 (0.003)	-0.001 (0.002)	-0.002 (0.002)	-0.003 (0.003)	-0.004 (0.003)
Log Fund Assets (mn USD), Lagged	0.007*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.008*** (0.003)	0.007** (0.003)					
Beta		0.374*** (0.027)					0.365*** (0.029)			
Active		0.094*** (0.011)	0.093*** (0.011)	0.101*** (0.013)	0.098*** (0.013)		0.083*** (0.010)	0.082*** (0.011)	0.088*** (0.012)	0.085*** (0.012)
Constant	0.961	0.517	-0.296	-0.27	-0.252	0.966	0.541	-0.288	-0.266	-0.248
Weighted	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Observations	1,060,370	946,057	946,057	946,057	946,057	1,060,370	946,057	946,057	946,057	946,057
R²	0.573	0.575	0.138	0.123	0.133	0.557	0.560	0.146	0.125	0.135
Adjusted R²	0.573	0.575	0.138	0.123	0.132	0.557	0.560	0.145	0.125	0.134
Residual Std. Error	2.507 (df = 1060238)	2.513 (df = 945923)	1.713 (df = 945924)	2.426 (df = 945924)	2.600 (df = 945924)	6.203 (df = 1060239)	6.312 (df = 945924)	4.224 (df = 945925)	5.953 (df = 945925)	6.387 (df = 945925)

Note: *p<0.1; **p<0.05; ***p<0.01

30 The 10th model in this regression table was the one selected and referred to in the main report. The key reasons for doing so included the use of a weighted regression and the use of the full 5-factor risk-adjusted returns as the outcome variable.

Private Equity

Table 4. Performance regressions for U.S.-based PE funds in Preqin with vintage years 2008 through 2019 (excluding FoFs).

The coefficients for the variable "Fund Type = VC" represent the difference in performance for venture capital funds compared to the subset of non-venture PE funds. Model used in the main report is highlighted and in bold.

	Dependent variable							
	Multiple		Net IRR		Multiple		Net IRR	
	(1)	(2)	(3)	(4)	(5)	(6) ³¹	(7)	(8)
Minority-Owned	0.205** (0.087)	0.154* (0.089)	0.430 (2.614)	-0.167 (2.747)	0.099 (0.065)	0.061 (0.062)	2.950 (2.307)	1.296 (2.162)
Women-Owned	-0.181* (0.109)	-0.184* (0.111)	-4.504 (3.242)	-1.829 (3.359)	-0.185 (0.133)	-0.085 (0.124)	-2.809 (4.223)	-2.099 (3.807)
Log Final Fund Size	-0.048*** (0.017)	-0.034* (0.017)	-0.787 (0.486)	-0.568 (0.526)	-0.005 (0.012)	-0.004 (0.013)	-0.259 (0.405)	-0.219 (0.409)
Fund Type = VC	0.391*** (0.057)	-2.027 (1.293)	2.898* (1.692)	-26.595 (35.814)	0.351*** (0.057)	-1.960 (1.730)	4.734** (2.035)	-25.798 (50.365)
Constant	1.986*** (0.135)	3.151*** (0.924)	16.126*** (3.901)	23.966 (25.639)	1.670*** (0.113)	2.880*** (0.536)	13.565*** (3.678)	21.171 (15.689)
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy FE	No	Yes	No	Yes	No	Yes	No	Yes
Vintage x Strategy FE	No	Yes	No	Yes	No	Yes	No	Yes
Industry FE	No	Yes	No	Yes	No	Yes	No	Yes
Weighted	No	No	No	No	Yes	Yes	Yes	Yes
Observations	1,861	1,858	1,550	1,547	1,861	1,858	1,550	1,547
R²	0.123	0.272	0.032	0.167	0.144	0.376	0.054	0.354
Adjusted R²	0.115	0.178	0.023	0.050	0.137	0.296	0.045	0.264
Residual Std. Error	0.948 (df = 1845)	0.914 (df = 1645)	25.637 (df = 1535)	25.310 (df = 1356)	21.824 (df = 1845)	19.719 (df = 1645)	652.983 (df = 1535)	574.020 (df = 1356)
F Statistic	17.187*** (df = 15; 1845)	2.903*** (df = 212; 1645)	3.637*** (df = 14; 1535)	1.427*** (df = 190; 1356)	20.610*** (df = 15; 1845)	4.678*** (df = 212; 1645)	6.272*** (df = 14; 1535)	3.916*** (df = 190; 1356)

Note: *p<0.1; **p<0.05; ***p<0.01

31 The 6th model in this regression table was the one selected and referred to in the main report. The key reasons for doing so included the use of return multiple as the outcome variable, the regression being weighted and the use of additional controls compared to other regressions.

Real Estate

Table 5. Performance regressions for U.S.-based real estate funds in Preqin with vintage years 2008 through 2018 (excluding FoFs).

The variable "Debt Focused" indicates whether the real estate fund falls into the debt sub-asset class. Model used in the main report is highlighted and in bold.

	Dependent variable							
	Multiple		Net IRR		Multiple		Net IRR	
	(1)	(2)	(3)	(4)	(5)	(6) ³²	(7)	(8)
Minority-Owned	-0.295*** (0.107)	-0.287*** (0.110)	-8.889*** (2.616)	-8.128*** (2.673)	-0.134 (0.108)	-0.150 (0.107)	-5.442 (3.896)	-4.110 (3.115)
Women-Owned	0.226* (0.120)	0.229* (0.124)	7.275*** (2.729)	6.814** (2.783)	0.069 (0.102)	0.061 (0.101)	7.974** (3.623)	4.891* (2.835)
Log Final Fund Size	-0.061*** (0.011)	-0.062*** (0.012)	-1.126*** (0.246)	-1.138*** (0.254)	-0.039*** (0.009)	-0.036*** (0.011)	-0.056 (0.349)	0.318 (0.292)
Debt Focused	-0.206*** (0.080)	0.375 (0.480)	-4.362** (1.820)	9.577 (10.588)	-0.065** (0.029)	0.382 (0.417)	-5.489** (2.245)	7.086 (11.306)
Constant	1.830*** (0.106)	1.299*** (0.475)	16.660*** (2.396)	5.624 (10.449)	1.514*** (0.072)	1.222*** (0.418)	10.185*** (3.316)	-2.464 (11.302)
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategy FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vintage x Strategy FE	No	Yes	No	Yes	No	Yes	No	Yes
Region FE	No	Yes	No	Yes	No	Yes	No	Yes
Weighted	No	No	No	No	Yes	Yes	Yes	Yes
Observations	963	963	916	916	963	963	916	916
R²	0.188	0.238	0.132	0.219	0.255	0.387	0.206	0.575
Adjusted R²	0.171	0.167	0.114	0.142	0.244	0.330	0.189	0.533
Residual Std. Error	0.467 (df = 943)	0.468 (df = 880)	10.471 (df = 896)	10.303 (df = 833)	8.414 (df = 948)	7.926 (df = 880)	282.549 (df = 896)	214.522 (df = 833)
F Statistic	11.469*** (df = 19; 943)	3.344*** (df = 82; 880)	7.176*** (df = 19; 896)	2.844*** (df = 82; 833)	23.237*** (df = 14; 948)	6.771*** (df = 82; 880)	12.250*** (df = 19; 896)	13.721*** (df = 82; 833)

Note: *p<0.1; **p<0.05; ***p<0.01

32 The 6th model in this regression table was the one selected and referred to in the main report. The key reasons for doing so included the use of return multiple as the outcome variable, the regression being weighted and the use of additional controls compared to other regressions.

MEKETA

INVESTMENT GROUP

MAY 2022 | ISSUE TWO | 2021 RESULTS

DIVERSITY EQUITY & INCLUSION annual questionnaire

**PUBLIC AND
PRIVATE MARKETS
RESEARCH TEAMS**



INTRODUCTION

Meketa launched a formal initiative to gather 2020 data from public and private markets asset managers within our proprietary database. The initiative focused on evaluating asset manager efforts more thoroughly to have a deeper understanding of Diversity, Equity, & Inclusion (“DEI”) within their organizations. For the second year in a row, we sent our Annual Diversity, Equity & Inclusion Questionnaire to asset managers to report on their 2021 work in this area.

* Information regarding the methodology and DEI-related terms specific to this questionnaire can be found in the appendix.

In this summary, we discuss the results of the second annual DEI questionnaire. Out of 803 firms who received the questionnaire, 420 responded. This is a 50% response rate increase from managers compared to 2021. (Please note, not every firm responded to every question.) The questionnaire was constructed in three sections: (1) Transparency and Reporting, (2) Policies and Initiatives, and (3) Employee Conduct. In this report, we will summarize our findings from the questionnaire and conclude with recommendations for asset managers that could serve as differentiators in the future.

**Note that respondent bias is likely in the results, with firms more focused on DEI initiatives opting to respond to the questionnaire. The following analysis summarizes key findings from the responses received.



SECTION I TRANSPARENCY AND REPORTING

KEY TAKEAWAYS

Firm Composition by Race and Gender	New Hires, Promotions, and Turnover Rates	Reporting
<ul style="list-style-type: none"> → 389 organizations reported total firm diversity statistics, while only 227 reported diversity statistics for the Board, and 241 reported diversity statistics for equity ownership. It is worth noting that not all firms have a Board in place. → Decision making levels (equity ownership and senior management) are the least diverse both in racial and gender diversity. → On trend with 2020, women continue to be least represented in portfolio management positions, while diverse employees are least represented in equity ownership. → Lower-level positions are the most diverse by both racial and gender measures. (Operations top quartile ≥ 54% minority and ≥65% female. Admin top quartile ≥66% minority and 83% female.) → Veteran and disabled employee representation was <2% across all categories. → Female representation is slightly higher comparing all portfolio managers (15%) versus lead portfolio managers (12%). 	<ul style="list-style-type: none"> → In 2021, 42% of new employees were either female hires, diverse hires, or both. → 59% of promotions were given to males and over two-thirds were given to non-racially diverse people. → The turnover rate was 4% higher for women than men. Over half of resignations were non-racially diverse people (52%). 	<ul style="list-style-type: none"> → In terms of reporting, 52% of asset managers released annual diversity statistics to their clients, followed closely by the consultants covering them at 49%, their prospects by 39% and regulators at 23%.

FIGURE 1

KEY TAKEAWAYS

Source: Meketa Investment Group 2022 Questionnaire.

FIRM COMPOSITION BY RACE AND GENDER

The chart below summarizes diversity statistics in quartile ranges for total firm, equity ownership, senior management, and portfolio management roles. The top quartile represents the highest percentage of minority and female employees.

The below table depicts the mean, median, and cutoff point between the second and top quartile and the cutoff point between the third and bottom quartile. To interpret this data, let's use the Total Firm - Female category as an example of how the table should be read. If more than 42% of your firm identifies as female, you would be in the top quartile of questionnaire results. Conversely, if you have less than 29% of your firm identifying as female, you would be in the bottom quartile of questionnaire results.

Interesting to note, the increase in manager responses for the 2021 data had increased dispersion compared to last year. Relative to the 2020 data, top quartile and mean percentages experienced either no change or decreased across all categories excluding total firm.

	Total Firm				% Equity Ownership			
	Female	% Change	Minority	% Change	Female	% Change	Minority	% Change
Top Quartile	>42%	→0%	>39%	↑4%	>21%	↓-9%	>17%	↓-9%
Median	35%	↓-1%	25%	→0%	7%	↓-8%	0%	↓-13%
Mean	37%	↑1%	28%	→0%	12%	↓-8%	12%	↓-9%
Bottom Quartile	<29%	↓-1%	<15%	↓-2%	0%	→0%	0%	→0%

	Senior Management				All Portfolio Managers			
	Female	% Change	Minority	% Change	Female	% Change	Minority	% Change
Top Quartile	>29%	↓-4%	>24%	↓-3%	>20%	→0%	>26%	↓-8%
Median	19%	↓-2%	11%	↓-5%	9%	↓-2%	14%	↓-5%
Mean	18%	↓-5%	16%	↓-7%	13%	→0%	18%	↓-8%
Bottom Quartile	<8%	↓-3%	0%	↓-5%	0%	→0%	0%	↓-7%

FIGURE 2
FIRM COMPOSITION BY RACE AND GENDER QUARTILE RANGES
 Source: Meketa Investment Group 2022 Questionnaire.

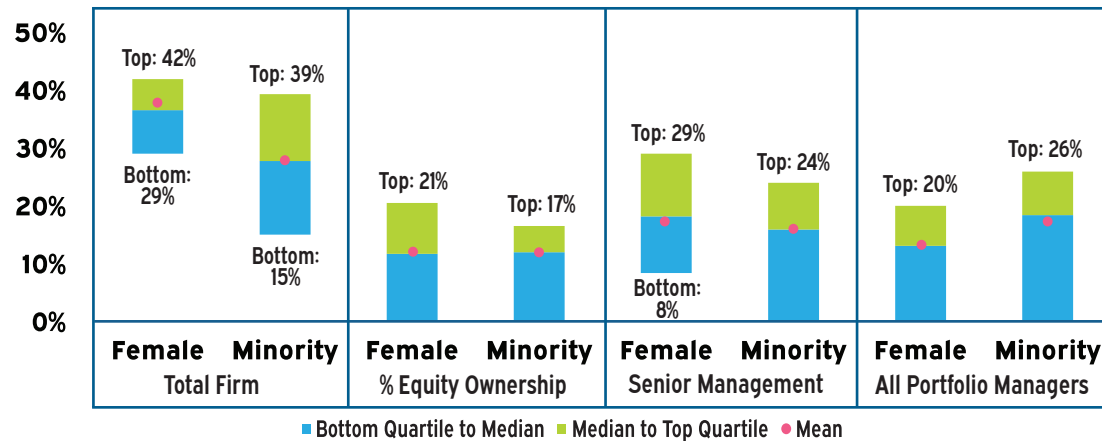


FIGURE 3
FIRM COMPOSITION BY RACE AND GENDER QUARTILE RANGES
 Source: Meketa Investment Group 2022 Questionnaire.

NEW HIRES, PROMOTIONS, AND TURNOVER RATES

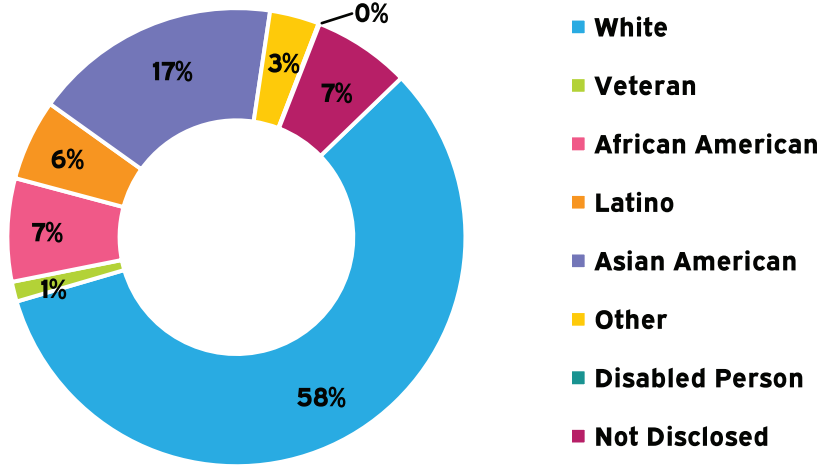


FIGURE 4
2021 NEW HIRES BY DIVERSITY
 Source: Meketa Investment Group 2022 Questionnaire.

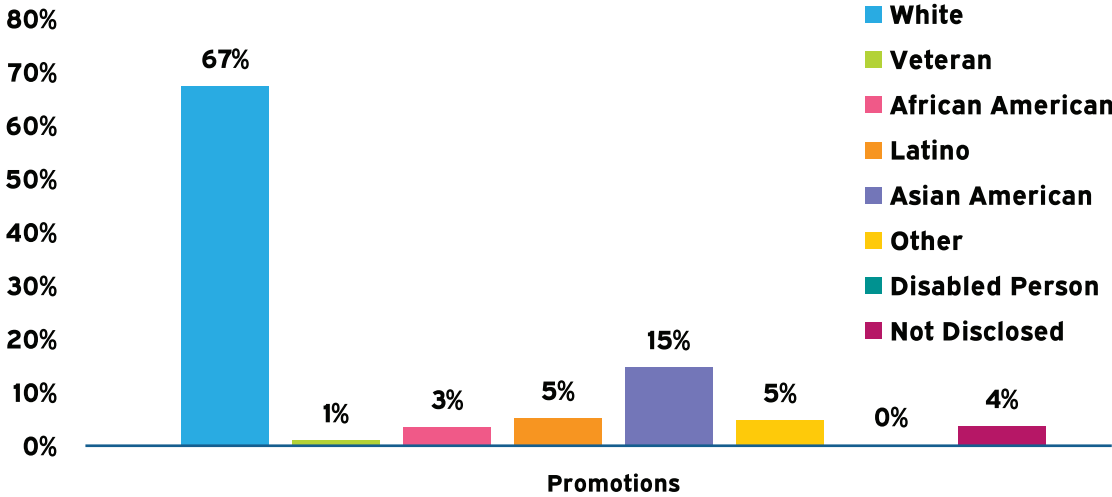


FIGURE 5
2021 PROMOTIONS BY DIVERSITY
 Source: Meketa Investment Group 2022 Questionnaire.

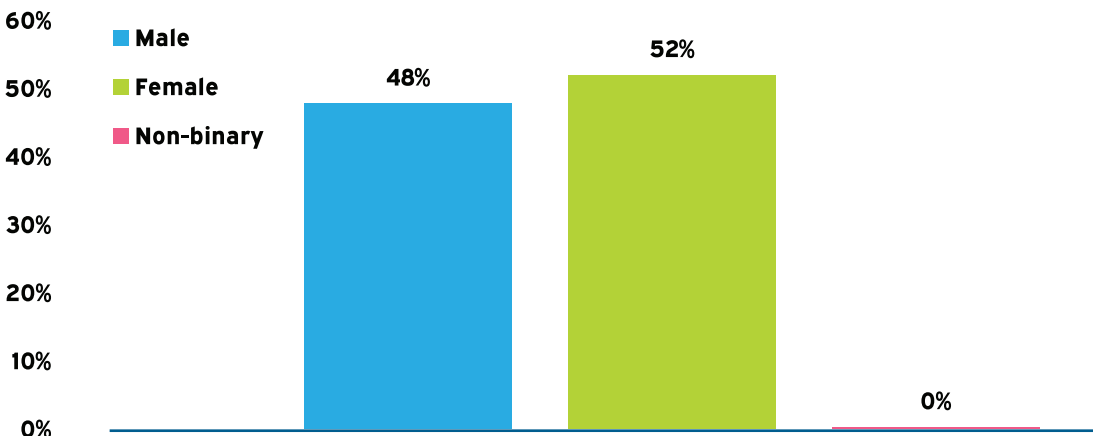


FIGURE 6
2021 TURNOVER RATE BY GENDER
 Source: Meketa Investment Group 2022 Questionnaire.

REPORTING

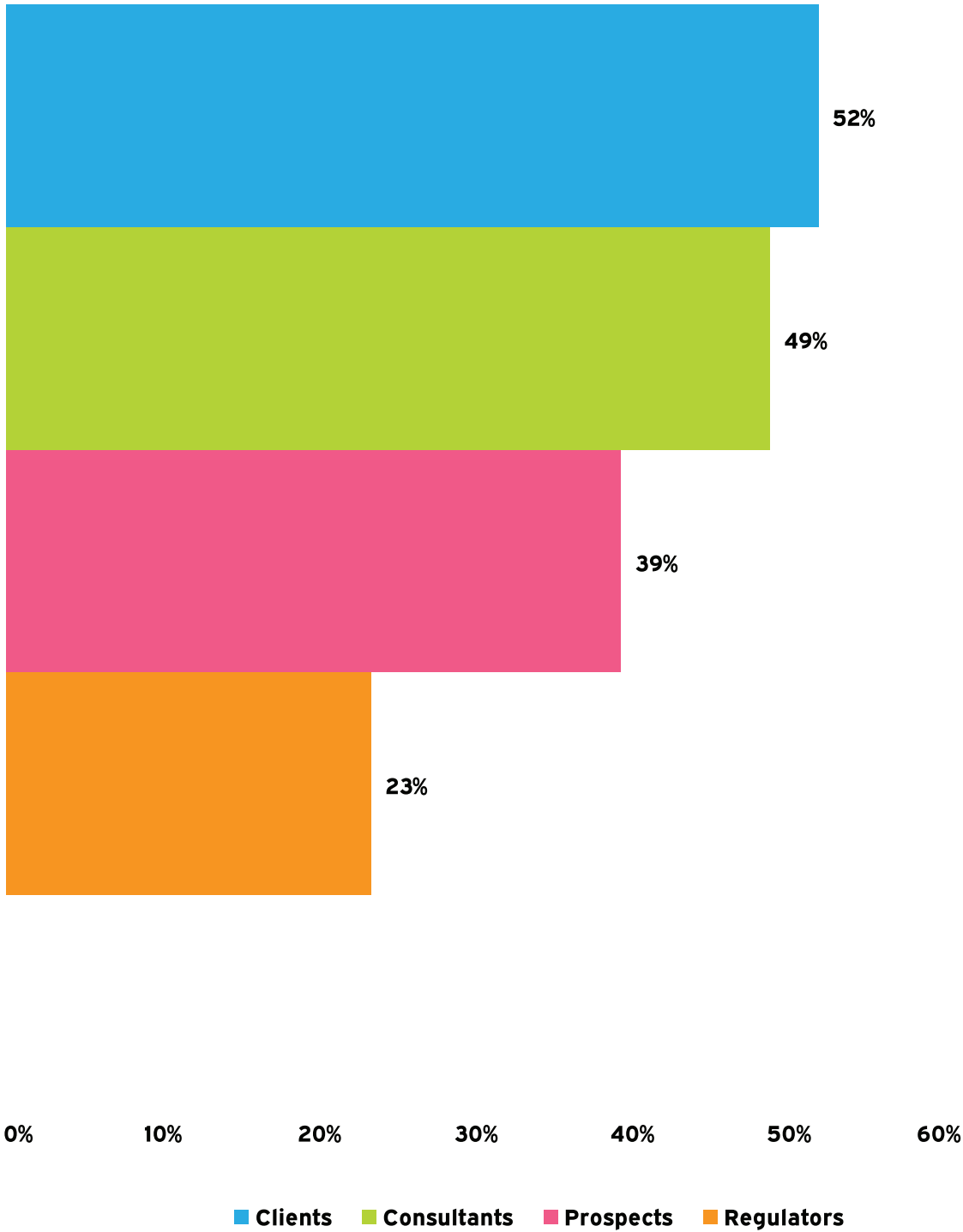


FIGURE 7
RECIPIENTS OF ANNUAL DIVERSITY STATISTICS REPORT FROM ASSET MANAGERS

Source: Meketa Investment Group 2022 Questionnaire.



SECTION II POLICIES AND INITIATIVES

KEY TAKEAWAYS

- An effective DEI strategy requires policies and human resources support within the organization to effectively promote efforts related to DEI. From our research, we found that 78% of managers have a formal DEI policy in place, with an additional 6% of managers planning to implement a policy in the next year.
- Importantly, roughly two-thirds of managers reported that their firm’s senior management had made public statements in support of DEI initiatives. In addition, 72% reported their executive committee or Board regularly reviews or has in the last 12 months reviewed diversity statistics.
- Unfortunately, less than half have DEI included in the executive committee’s or Board of Director’s terms of reference and only one-third have DEI included as a performance objective for senior management.
- With the 2020 data, we noted that very few companies extend their DEI efforts to service providers (18% include DEI policy reviews in their evaluation of service providers, and only 29% partner with Minority, Women, and Disadvantaged Business Enterprise (“MWDBE”) service providers). Over the last year, there was an increase in companies extending their DEI efforts to include an evaluation of service providers’ DEI policies (increase of 6%) as well as asset managers partnering with MWDBE service providers (increase of 3%).

The first chart below shows the breakdown of managers that have diversity targets in place. Over two-thirds of the respondents do not have set diversity targets. However, most of them would agree that building an inclusive workplace is important enough to garner the attention and support of senior management. Currently 63% of managers have a diversity and inclusion committee or group within their organization that includes members of senior management, with another 4% of respondents due to implement such a group within the next 12 months.

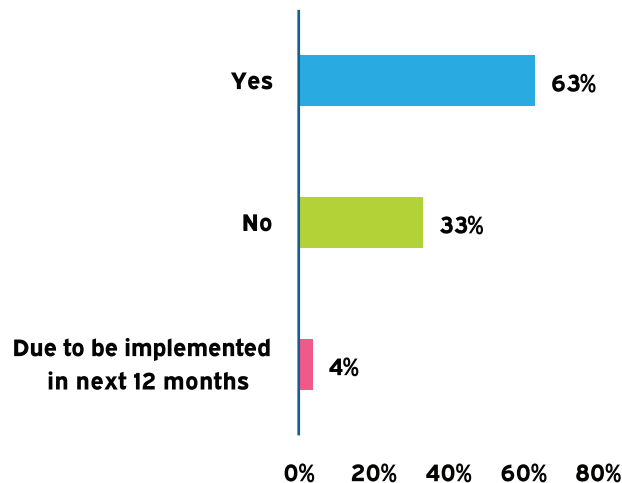
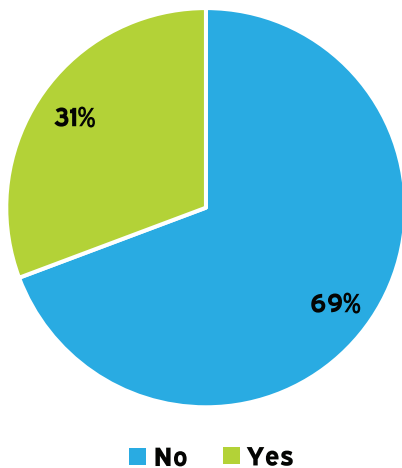


FIGURE 8 (LEFT)
DO YOU HAVE DIVERSITY TARGETS?
 Source: Meketa Investment Group 2022 Questionnaire.

FIGURE 9 (RIGHT)
DOES THE FIRM HAVE A DIVERSITY AND INCLUSION COMMITTEE OR GROUP WITHIN THE ORGANIZATION THAT INCLUDES MEMBERS OF SENIOR MANAGEMENT?
 Source: Meketa Investment Group 2022 Questionnaire.

EQUAL PAY

When asked about a written policy to ensure that equal pay is provided for comparable performance in equivalent roles regardless of gender and minority categorization, 60% of managers responded yes. In addition, results were reported from asset managers as to whether pay gaps by gender or ethnicity were measured.

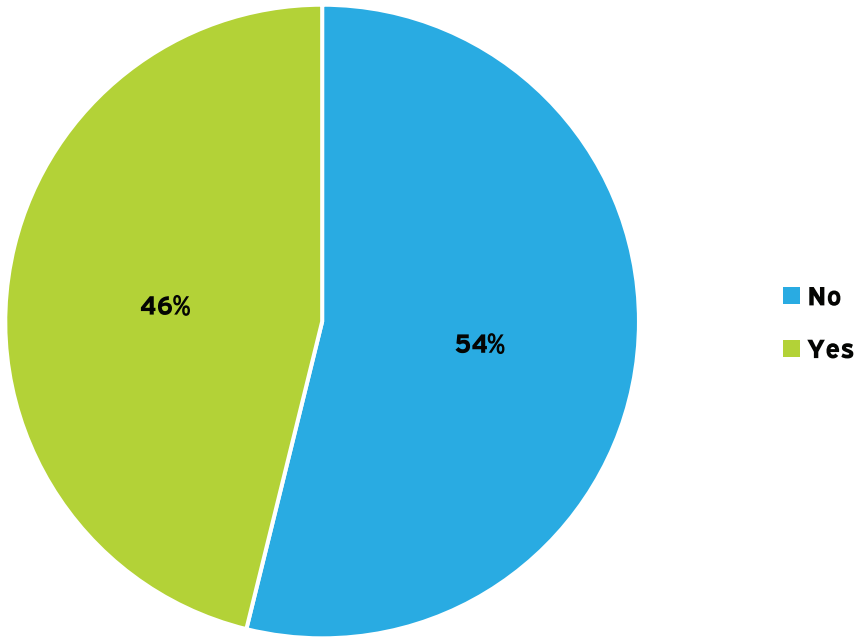


FIGURE 10
DO YOU MEASURE GENDER PAY GAP?

Source: Meketa Investment Group 2022 Questionnaire.

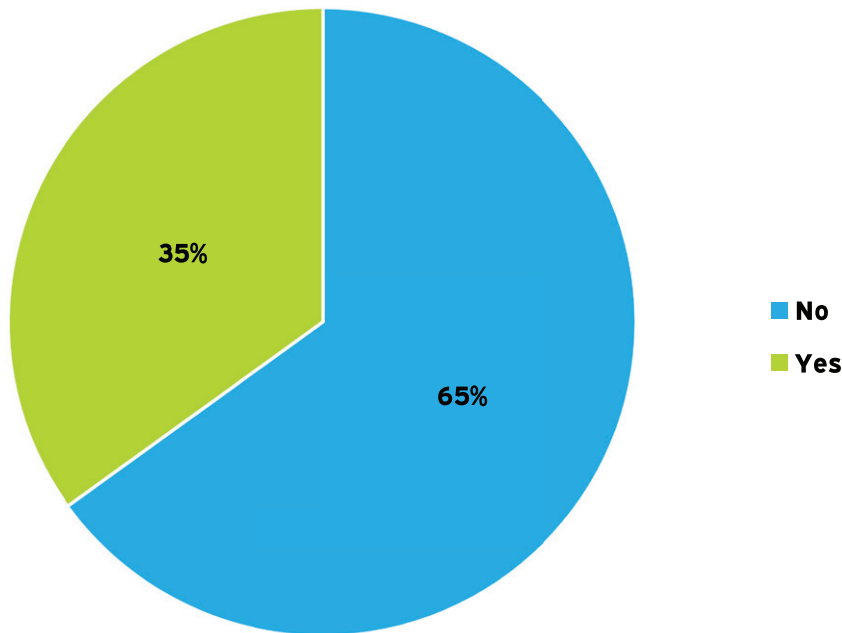


FIGURE 11
DO YOU MEASURE ETHNICITY PAY GAP?

Source: Meketa Investment Group 2022 Questionnaire.

DEI INITIATIVES

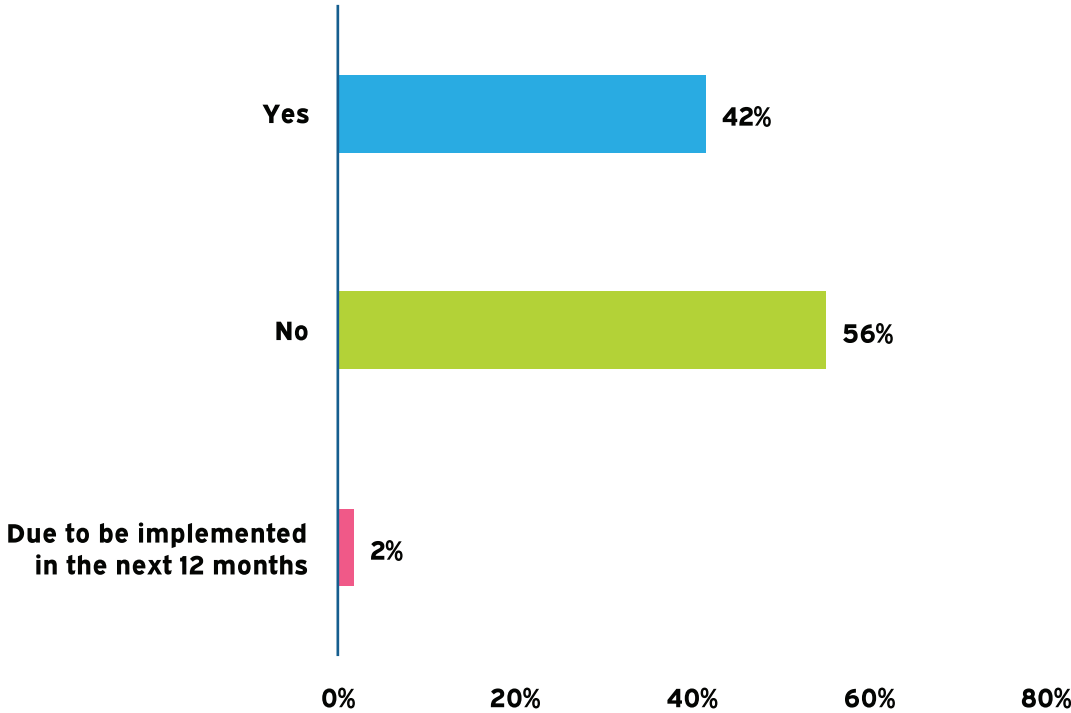


FIGURE 12
IS DIVERSITY & INCLUSION INCLUDED IN THE EXECUTIVE COMMITTEE OR BOARD OF DIRECTOR'S TERMS OF REFERENCE?

Source: Meketa Investment Group 2022 Questionnaire.

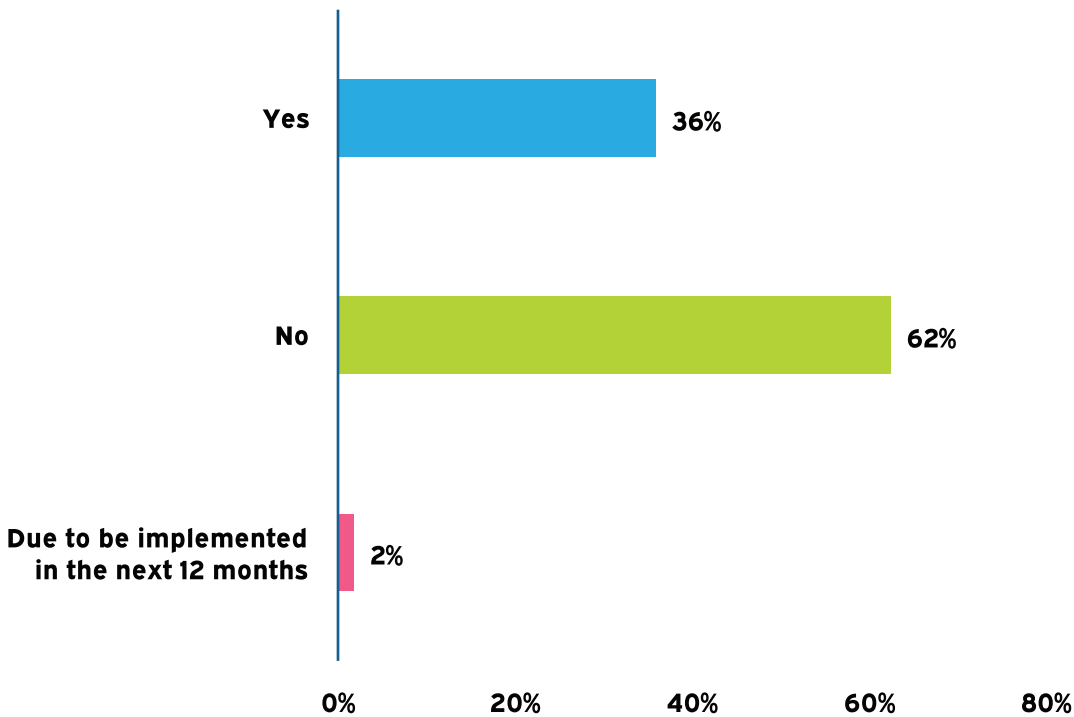


FIGURE 13
HAVE DIVERSITY AND INCLUSION BEEN INCLUDED WITHIN THE PERFORMANCE OBJECTIVES FOR SENIOR MANAGEMENT IN THE LAST 12 MONTHS?

Source: Meketa Investment Group 2022 Questionnaire.

SERVICE PROVIDERS AND DEI

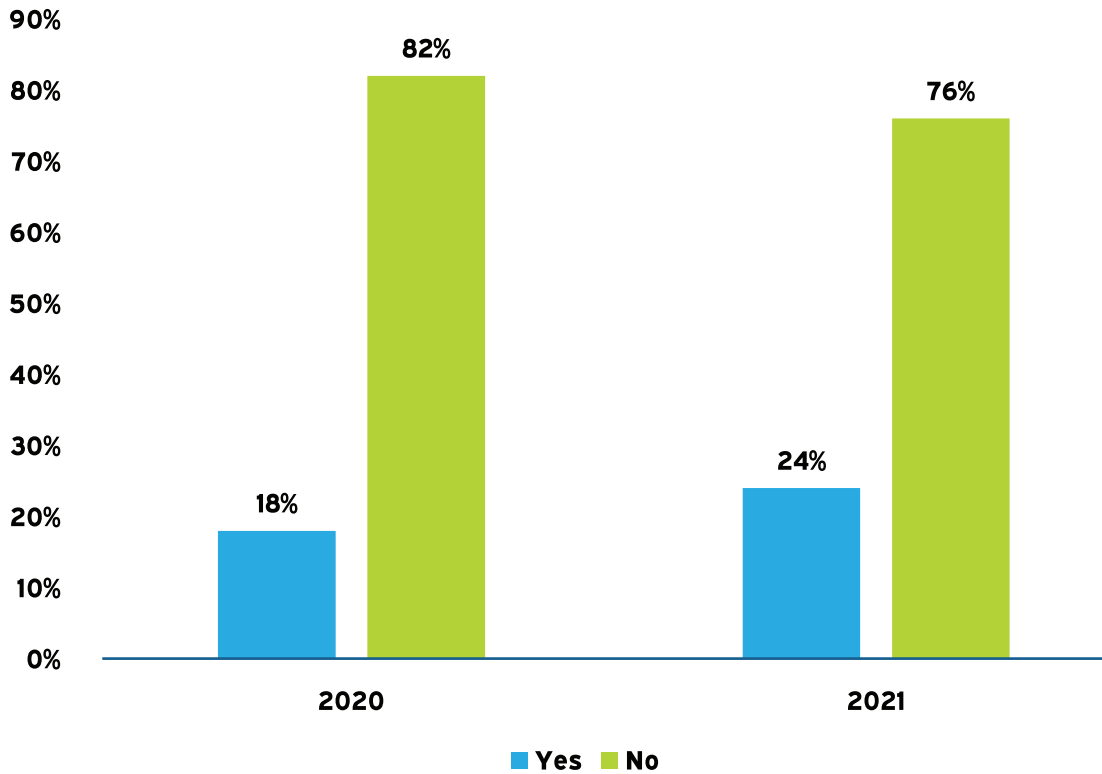


FIGURE 14
WHEN SELECTING SERVICE PROVIDERS, DOES THE FIRM FORMALLY ASSESS EACH PROVIDER'S DEI POLICIES?

Source: Meketa Investment Group 2022 Questionnaire.

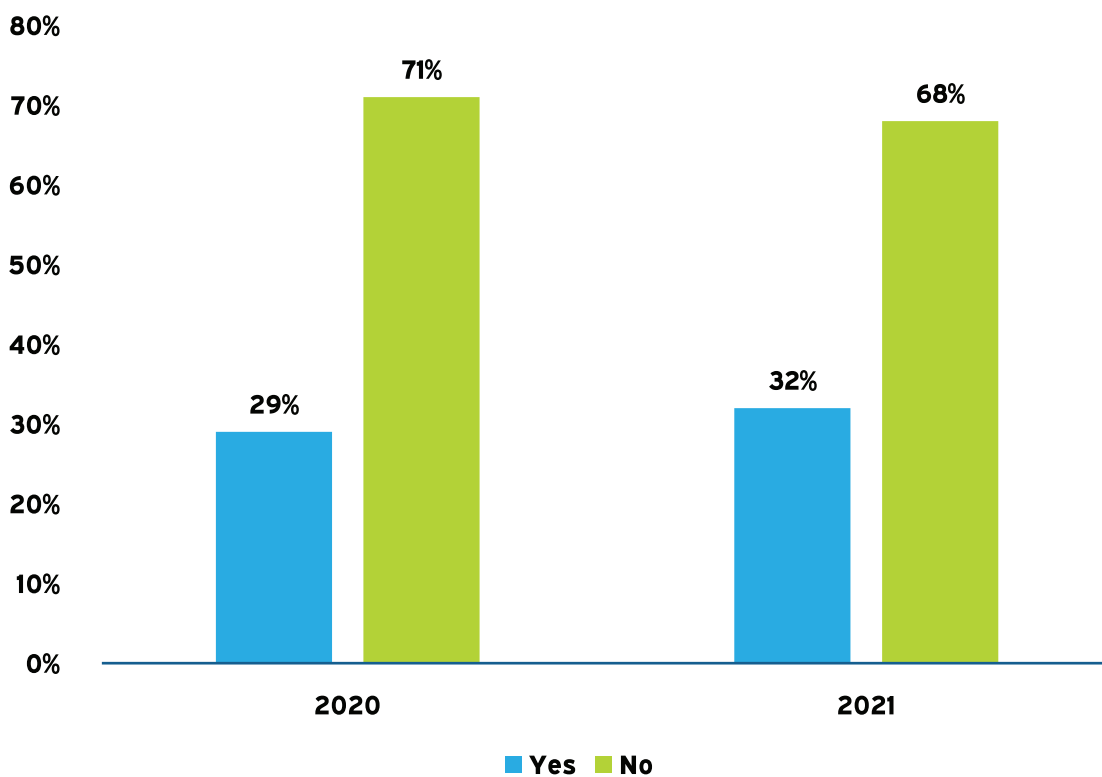


FIGURE 15
DOES THE FIRM UTILIZE MINORITY, WOMEN, AND DISADVANTAGED BUSINESS ENTERPRISE (MWD BE) INVESTMENT BANKS FOR CAPITAL MARKETS SERVICES, MERGERS AND ACQUISITIONS SERVICES AND/OR OTHER ADVISORY SERVICES?

Source: Meketa Investment Group 2022 Questionnaire.

DEI TRAINING

The chart below highlights the emphasis organizations have put on DEI training. A wide variety of topics such as mental health, hybrid culture, generational differences, and allyship have become a priority for managers.

- **Inclusion Training for Managers**
- **Unconscious Bias**
- **Other Training (mental health, etc.)**

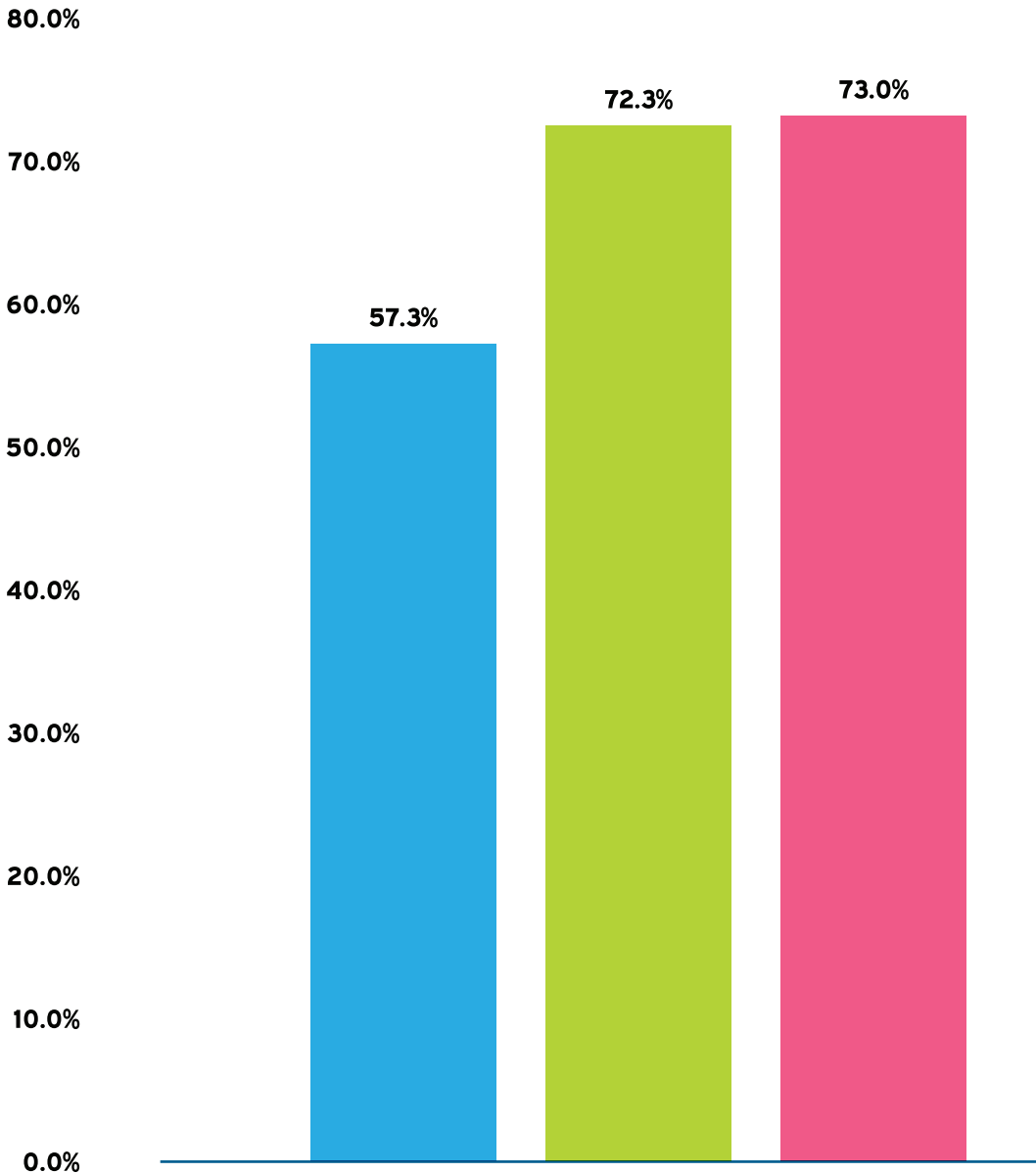


FIGURE 16
PLEASE SELECT WHICH OF
THE BELOW DEI TRAINING YOU
HAVE PROVIDED IN THE LAST 12
MONTHS

Source: Meketa Investment Group 2022
Questionnaire.



SECTION III EMPLOYEE CONDUCT

KEY TAKEAWAYS

Almost all firms, 96%, reported having a code of conduct that addresses harassment, discrimination, and workplace violence, regardless of whether the conduct takes place in the formal workspace.

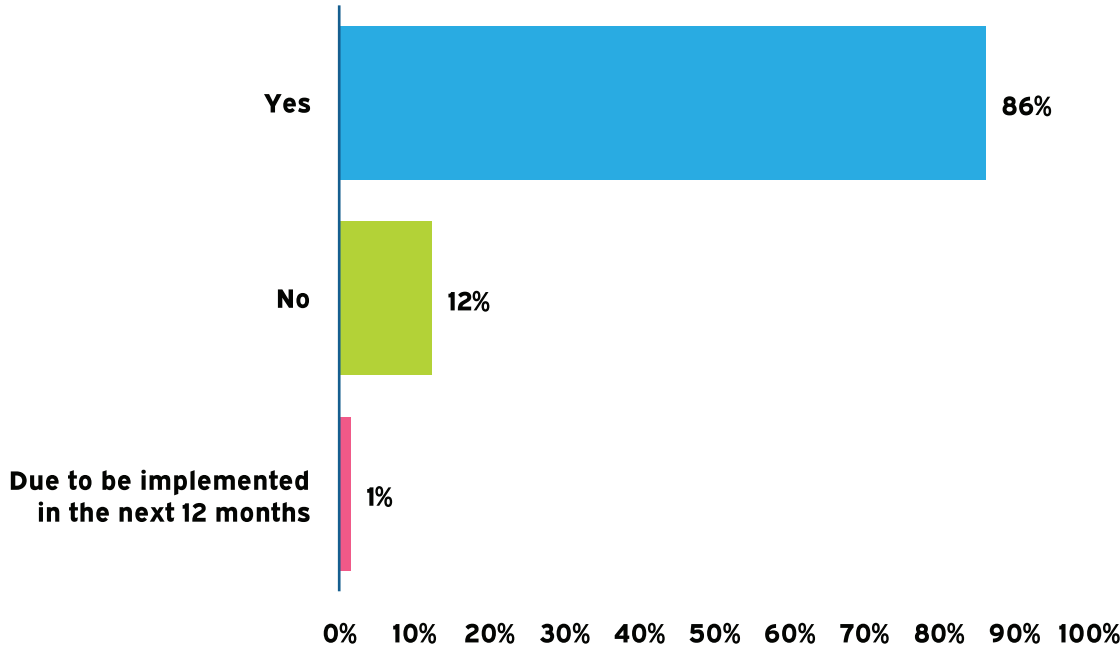


FIGURE 17
DOES THE FIRM HAVE WRITTEN PROCEDURES IN PLACE FOR THE ANONYMOUS REPORTING AND INVESTIGATION OF HARASSMENT, DISCRIMINATION AND/OR WORKPLACE VIOLENCE?

Source: Meketa Investment Group 2022 Questionnaire.

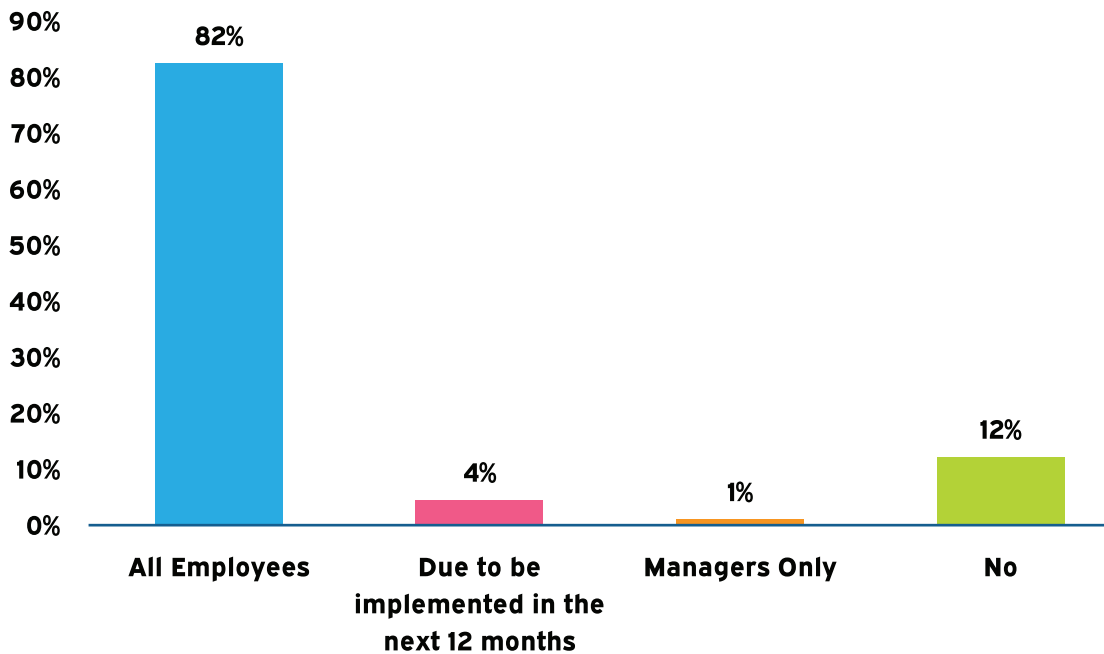


FIGURE 18
DOES THE FIRM PROVIDE MANDATORY ANTI-HARASSMENT AND NON-DISCRIMINATION TRAINING TO ALL EMPLOYEES OR MANAGERS ONLY?

Source: Meketa Investment Group 2022 Questionnaire.

SUMMARY CONCLUSIONS

While we did not see any notable changes from the previous year, we are thrilled and encouraged by the increase of almost 50% of managers participating in our DEI questionnaire in 2022. Compared to last year, our 2022 questionnaire was more extensive and asked more clarifying questions on employee composition, promotions, turnover, and policies and procedures. Going forward we expect to see more progress in DEI efforts and look forward to even higher participation in the questionnaire from all surveyed managers.

We acknowledge DEI is a journey and recognize committed managers will need time to progressively evolve their organizations to become more diverse. However, it is important to keep in mind that those that move too slowly may be rapidly outpaced. That said, asset managers may continue to differentiate themselves by focusing on the following areas:

- Diversify their Board or establish a plan to create diversity over time.
- Develop a plan to expand ownership to staff that enhances diversity.
- Ensure the firm has policies and committees in place to support DEI at all levels of the firm.
- Set corporate diversity goals and seek continual progress.
- Establish mentorship opportunities for staff that promote diversity.
- Evaluate the DEI policies of service providers.
- Partner with MWDBE service providers.

APPENDIX

Asset Manager: Includes public and private managers in Meketa's database as of January 2022.

Clients: Current clients of asset managers who responded to the questionnaire.

Consultants: Oversee asset managers who responded to the questionnaire.

Prospects: Potential clients of an asset manager who responded to the questionnaire.

Regulators: Bodies established by governments or other organizations that oversee the functioning and fairness of financial markets and the firms that engage in financial activity.

Service Providers: Third-party suppliers, vendors, or subcontractors of asset managers who responded to the questionnaire.

Definitions: Below are definitions of the DEI-related terms specific to this questionnaire:

- Minorities or minority groups are defined on the basis of the following factors: race/ethnicity, LGBTQ+ identity, veteran status and disability.
- Racial/ethnic minorities are defined as non-white minorities.
- Other minority groups refer to those who identify as LGBTQ+, veterans and persons with disabilities.
- Diversity is defined as the inclusion of women and minority groups, while Inclusion is defined as the practice of equal recognition, respect, and merit-based evaluation.
- The use of the term minority is meant to represent a numerical minority.

Methodology: The questionnaire was distributed to all asset managers in January 2022. Asset managers completed the questionnaire with best available data. All responses were collected from January 29, 2022 through April 4, 2022.

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If you want to learn more, or access Meketa's library of white papers and economic research, please contact us or visit <https://meketa.com/thought-leadership/>.

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DISCLOSURE

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Diversity Update

September 15, 2022



Investment Beliefs - Diversity

- SURS is committed to enhancing diversity by incorporating emerging (minority, woman-owned and disability-owned) investment managers into the portfolio.

Established in September 2018 and reviewed in Jan 2022.



Diversity Initiatives

- Diverse Manager Week
 - Staff, consultants and manager of managers

	Diverse Managers	
Year	Participated	Requests
2019	29	51
2020	30	101
2021	21	144
2022	21	70

- Diversity-Themed Conferences



Diversity Data

- Data requested at time of search and annually thereafter
 - Quantitative data on employees and vendors
 - Qualitative information on diversity initiatives
- Year over year changes
 - Consistent data collection established in 2021 - Morningstar
- Universe data for comparison



Staff Diversity – Public Equity

	Male	Female	Hispanic or Latino	White	Black or African American	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Asian	Two or more races	Person with a Disability	No Response
Ariel Investments *	50.0%	50.0%	9.5%	49.1%	28.5%	0.0%	0.0%	11.2%	0.9%	0.0%	0.9%
% Change	1.9%	-1.9%	4.7%	-1.9%	-5.3%	0.0%	0.0%	1.6%	-0.1%	0.0%	0.9%
Xponance *	58.5%	41.5%	0.0%	26.8%	61.0%	0.0%	0.0%	12.2%	0.0%	0.0%	0.0%
% Change	-2.5%	2.5%	0.0%	-2.5%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Channing *	71.4%	28.6%	14.3%	28.6%	42.9%	0.0%	0.0%	14.3%	0.0%	0.0%	0.0%
% Change	6.7%	-6.7%	2.5%	-12.6%	-4.2%	0.0%	0.0%	14.3%	0.0%	0.0%	0.0%
T Rowe Price	55.6%	44.4%	3.7%	68.5%	12.6%	0.1%	0.2%	10.8%	2.5%	0.0%	1.6%
% Change	0.4%	-0.4%	-0.3%	-1.9%	0.8%	0.0%	0.0%	0.4%	0.0%	0.0%	1.0%
BlackRock	58.5%	41.5%	6.8%	57.8%	6.9%	0.2%	0.1%	26.0%	2.3%	0.8%	0.0%
% Change	-1.0%	0.9%	0.7%	1.0%	1.3%	0.0%	0.0%	-0.1%	0.3%	-0.3%	-2.0%
Ativo *	80.0%	20.0%	20.0%	40.0%	6.7%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%
% Change	5.0%	-5.0%	1.2%	2.5%	0.4%	0.0%	0.0%	-4.2%	0.0%	0.0%	0.0%
Earnest Partners *	59.5%	40.5%	0.0%	59.5%	19.1%	0.0%	2.4%	19.1%	0.0%	0.0%	0.0%
% Change	-3.9%	3.9%	0.0%	5.8%	-5.4%	0.0%	0.0%	-0.5%	0.0%	0.0%	0.0%
Solstein *	42.9%	57.1%	14.3%	85.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Change	2.9%	-2.9%	-5.7%	5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Xpon-Denali *	50.0%	50.0%	0.0%	50.0%	8.3%	8.3%	0.0%	33.3%	0.0%	0.0%	0.0%
% Change	-7.1%	7.1%	0.0%	-7.2%	1.2%	1.2%	0.0%	4.7%	0.0%	0.0%	0.0%
Xpon-Fithian**	60.0%	40.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Xpon-Maytech**	60.0%	40.0%	0.0%	90.0%	0.0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%

As a percentage of total professionals

• Diverse owned

** New manager: % change data is not yet available.

Positive (negative) changes in excess of 2% highlighted in green (red)



Staff Diversity – Public Equity (cont.)

	Male	Female	Hispanic or Latino	White	Black or African American	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Asian	Two or more races	Person with a Disability	No Response
Wellington	55.4%	44.6%	3.6%	58.8%	4.9%	0.1%	0.0%	26.8%	1.8%	1.9%	4.1%
<i>% Change</i>	<i>-1.4%</i>	<i>1.4%</i>	<i>0.3%</i>	<i>-3.1%</i>	<i>1.3%</i>	<i>-0.1%</i>	<i>0.0%</i>	<i>1.1%</i>	<i>0.3%</i>	<i>1.1%</i>	<i>0.2%</i>
GQG Partners *	63.7%	36.3%	8.9%	70.2%	5.7%	0.0%	0.0%	14.5%	0.8%	0.0%	0.0%
<i>% Change</i>	<i>-1.7%</i>	<i>1.7%</i>	2.2%	<i>2.9%</i>	-2.1%	<i>0.0%</i>	<i>0.0%</i>	<i>-0.9%</i>	-2.1%	<i>0.0%</i>	<i>0.0%</i>
Xpon-Frontier *	70.0%	30.0%	40.0%	40.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%
<i>% Change</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
Rhumblin *	53.6%	46.4%	10.7%	82.2%	3.6%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%
<i>% Change</i>	<i>-8.9%</i>	8.9%	2.4%	<i>-1.2%</i>	<i>-0.6%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>-0.6%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
GlobeFlex *	59.3%	40.7%	3.7%	74.1%	3.7%	0.0%	0.0%	14.8%	3.7%	0.0%	0.0%
<i>% Change</i>	<i>-1.4%</i>	<i>1.4%</i>	<i>0.1%</i>	<i>2.7%</i>	<i>0.1%</i>	-3.6%	<i>0.0%</i>	<i>0.5%</i>	3.7%	<i>0.0%</i>	<i>0.0%</i>
Xpon-Arga *	74.7%	25.3%	0.0%	18.4%	1.2%	0.0%	0.0%	80.5%	0.0%	0.0%	0.0%
<i>% Change</i>	<i>-4.6%</i>	4.6%	<i>0.0%</i>	<i>-16.1%</i>	-2.4%	<i>0.0%</i>	<i>0.0%</i>	18.4%	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
Xpon-Martin *	54.6%	45.5%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%
<i>% Change</i>	<i>-5.5%</i>	5.5%	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>-0.9%</i>	<i>0.0%</i>
SGA *	67.9%	32.1%	3.6%	71.4%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%
<i>% Change</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
Mondrian	67.8%	32.2%	0.0%	81.4%	2.8%	0.0%	0.0%	13.6%	1.7%	0.0%	0.0%
<i>% Change</i>	<i>1.1%</i>	<i>-1.1%</i>	<i>-1.3%</i>	<i>-0.3%</i>	<i>-0.5%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>1.8%</i>	<i>0.4%</i>	<i>0.0%</i>	<i>0.0%</i>
Xpon-Foresight *	66.7%	33.3%	0.0%	66.7%	16.7%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%
<i>% Change</i>	<i>-16.6%</i>	16.6%	<i>0.0%</i>	<i>-16.6%</i>	16.7%	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>

As a percentage of total professionals

• Diverse owned

Positive (negative) changes in excess of 2% highlighted in green (red)



Staff Diversity – Public Fixed Income

	Male	Female	Hispanic or Latino	White	Black or African American	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Asian	Two or more races	Person with a Disability	No Response
Garcia Hamilton *	36.1%	63.9%	30.6%	38.9%	30.6%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%
<i>% Change</i>	8.3%	-8.3%	-2.7%	2.8%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pugh Capital *	50.0%	50.0%	7.7%	23.1%	53.9%	0.0%	0.0%	15.4%	0.0%	0.0%	0.0%
<i>% Change</i>	0.0%	0.0%	3.5%	-6.1%	3.9%	0.0%	0.0%	-1.3%	0.0%	0.0%	0.0%
Bivi-GIA *	53.9%	46.2%	15.4%	30.8%	7.7%	0.0%	0.0%	46.2%	0.0%	0.0%	0.0%
<i>% Change</i>	-0.1%	-0.1%	0.0%	-7.7%	0.0%	0.0%	0.0%	7.7%	0.0%	0.0%	0.0%
LM Capital *	63.2%	36.8%	52.6%	31.6%	0.0%	0.0%	5.3%	10.5%	0.0%	0.0%	0.0%
<i>% Change</i>	3.2%	-3.2%	2.6%	1.6%	-5.0%	0.0%	0.3%	0.5%	0.0%	0.0%	0.0%
Bivium *	60.0%	40.0%	0.0%	20.0%	10.0%	0.0%	0.0%	70.0%	0.0%	0.0%	0.0%
<i>% Change</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Ramirez *	69.2%	30.8%	19.2%	53.9%	11.5%	0.0%	0.0%	15.4%	0.0%	3.9%	0.0%
<i>% Change</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bivi-RVX *	70.0%	30.0%	30.0%	50.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%
<i>% Change</i>	-6.9%	6.9%	-0.8%	3.8%	-7.7%	0.0%	0.0%	4.6%	0.0%	0.0%	0.0%
Pimco	63.6%	36.4%	9.1%	54.0%	3.5%	0.1%	0.4%	30.0%	3.0%	0.0%	0.0%
<i>% Change</i>	-0.7%	0.7%	0.4%	-0.2%	-0.1%	-0.1%	-0.1%	0.1%	0.0%	0.0%	0.0%
Neuberger Berman	63.5%	36.5%	6.5%	66.3%	6.0%	0.2%	0.1%	18.8%	2.1%	0.8%	0.0%
<i>% Change</i>	-0.5%	0.4%	-0.1%	-1.0%	1.0%	0.0%	0.0%	0.4%	-0.3%	0.3%	0.0%
Bivi-New Century *	50.0%	50.0%	0.0%	75.0%	8.3%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%
<i>% Change</i>	-13.2%	13.2%	0.0%	-9.2%	-2.2%	0.0%	0.0%	11.4%	0.0%	0.0%	0.0%
Bivi-Integrity *	37.5%	62.5%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>% Change</i>	-12.5%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

As a percentage of total professionals

• Diverse owned

Positive (negative) changes in excess of 2% highlighted in green (red)



Staff Diversity – Alternatives

	Male	Female	Hispanic or Latino	White	Black or African American	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Asian	Two or more races	Person with a Disability	No Response
Aspect	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Change	-16.7%	16.7%	0.0%	-16.7%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Versor *	60.0%	40.0%	10.0%	40.0%	10.0%	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%
% Change	-15.0%	15.0%	10.0%	-22.5%	-2.5%	0.0%	0.0%	15.0%	0.0%	0.0%	0.0%
Parametric	64.7%	35.3%	3.7%	69.3%	3.9%	0.4%	0.1%	17.9%	3.4%	0.0%	1.2%
% Change	0.3%	-0.3%	1.0%	-2.2%	1.4%	0.1%	-0.4%	0.5%	3.4%	0.0%	-0.4%
Gladius *	84.6%	15.4%	0.0%	76.9%	0.0%	0.0%	0.0%	23.1%	0.0%	7.7%	0.0%
% Change	1.3%	-1.3%	0.0%	15.8%	0.0%	0.0%	0.0%	-15.8%	0.0%	2.1%	0.0%
Longtail Alpha *	58.3%	41.7%	0.0%	33.3%	0.0%	0.0%	0.0%	66.7%	0.0%	0.0%	0.0%
% Change	-23.5%	23.5%	0.0%	-30.3%	0.0%	0.0%	0.0%	30.3%	0.0%	0.0%	0.0%
Campbell	75.0%	25.0%	1.7%	91.7%	1.7%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%
% Change	-3.0%	3.0%	0.0%	-1.5%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%

As a percentage of total professionals

• Diverse owned

Positive (negative) changes in excess of 2% highlighted in green (red)



Average of Firm Percentages

	Male	Female	Hispanic or Latino	White	Black or African American	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Asian	Two or more races	Person with a Disability	No Response
<u>2021</u>											
SURS Portfolio	63.60%	36.40%	8.20%	58.80%	11.30%	0.30%	0.20%	19.40%	0.50%	0.30%	0.30%
Morningstar: 204 Firm	79.50%	20.50%	3.90%	69.70%	4.00%	0.10%	0.00%	16.80%	0.60%	0.30%	4.70%
<u>2022</u>											
SURS Portfolio	60.19%	39.81%	8.28%	57.50%	12.01%	0.23%	0.20%	19.78%	0.55%	1.72%	0.66%
Morningstar: 351 Firm	66.09%	33.91%	4.25%	67.40%	4.91%	0.27%	0.31%	13.37%	0.96%	0.52%	7.64%

As a percentage of total professionals



Percentage of Total Professionals

	Male	Female	Hispanic or Latino	White	Black or African American	American Indian or Alaska Native	Native Hawaiian or Pacific Islander	Asian	Two or more races	Person with a Disability	No Response
<u>2021</u>											
SURS Portfolio	70.50%	29.50%	4.90%	65.20%	3.50%	0.10%	0.20%	22.90%	2.10%	0.40%	1.20%
Morningstar: 17,645 prof	73.10%	26.90%	4.80%	62.80%	3.80%	0.10%	0.10%	18.30%	1.30%	0.60%	8.80%
<u>2022</u>											
SURS Portfolio	58.18%	41.82%	5.58%	62.67%	8.27%	0.14%	0.11%	19.85%	2.19%	0.68%	1.16%
Morningstar: 101,583 prof	63.21%	36.79%	4.27%	54.67%	4.78%	0.08%	0.17%	12.55%	1.54%	0.71%	21.68%



Qualitative Data

- DEI policies and programs
 - Employee code of conduct, reporting and investigation
- Equitable hiring and training practices
- Employees
 - Mentorships, resource groups, inclusive culture
 - Investment code of conduct
- External
 - Affiliations and diverse vendors



Scoring of Qualitative Data

Scoring - Based on Responses	
5	Yes
4	No - but working on policy
3	No
2	Unavailable
1	Did not respond



Qualitative Scores – Public Equity

	DEI Policy	Empl Code of Conduct	Misconduct Reporting	Formal Investigation Procedures	Misconduct Claims	Equitable Hiring Practices	External Affiliations	Mentorship	Employee Resource Groups	Inclusive Culture	Investment Code of Conduct	Hiring Diverse Vendors	Additional Initiatives	Total Score
Channing *	5	5	5	5	5	5	5	5	4	5	5	5	5	64
Wellington	5	5	4	5	5	5	5	5	5	5	5	5	5	64
Xpon-Applied Rese *	5	5	5	5	5	5	5	5	4	5	5	5	5	64
Ariel*	5	5	5	5	5	5	5	4	4	5	5	5	5	63
GQG Partners *	5	5	5	5	5	5	4	5	5	5	5	4	5	63
T Rowe Price	5	5	5	5	5	5	5	5	5	5	5	3	5	63
BlackRock	5	5	5	5	2	5	5	5	5	5	5	5	5	62
Xponance *	5	5	5	5	5	5	4	5	4	5	2	5	5	60
GlobeFlex *	5	5	5	5	5	5	4	4	4	5	1	4	5	57
Xpon-Arga *	5	5	5	5	5	5	4	4	4	5	3	5	2	57
Xpon-Denali *	4	5	5	5	5	5	4	4	4	5	4	2	5	57
Rhumblin *	5	4	4	4	5	4	4	4	5	5	2	5	5	56
Ativo *	4	5	5	5	5	5	4	4	5	5	5	2	2	56
SGA *	4	5	4	4	5	5	4	5	5	5	3	2	5	56
Earnest Partners *	5	5	5	5	5	2	5	5	5	2	5	5	2	56
Xpon-Foresight *	4	4	5	5	5	5	4	4	4	4	5	2	2	53
Mondrian	5	5	4	5	5	5	5	4	1	5	1	5	2	52
Xpon-Martin *	5	5	5	5	5	5	4	5	1	2	3	5	2	52
Xpon-Solstein *	4	5	5	5	5	2	4	4	4	2	5	2	2	49
Xpon-Frontier *	3	5	5	5	5	2	4	4	4	2	3	2	2	46

* Diverse owned



Qualitative Scores – Public Fixed Income

	DEI Policy	Empl Code of Conduct	Misconduct Reporting	Formal Investigation Procedures	Misconduct Claims	Equitable Hiring Practices	External Affiliations	Mentorship	Employee Resource Groups	Inclusive Culture	Investment Code of Conduct	Hiring Diverse Vendors	Additional Initiatives	Total Score
Garcia Hamilton *	5	5	5	5	5	5	5	5	5	5	5	5	5	65
PGIM	5	5	5	5	3	5	5	5	5	5	5	5	5	63
LM Capital *	5	5	5	5	5	5	4	4	4	5	5	5	2	59
Pugh Capital *	5	5	5	5	5	5	4	4	4	5	3	4	5	59
Bivi-New Century *	3	5	5	5	5	5	4	4	4	5	5	2	5	57
PIMCO	5	5	5	5	1	5	5	5	5	5	1	5	5	57
Ramirez *	5	5	5	5	5	5	5	5	5	2	2	5	2	56
Bivi-RVX *	3	5	5	5	5	5	4	4	4	5	4	2	2	53
Bivium *	5	5	5	5	5	5	2	2	2	2	5	5	2	50
Bivi-GIA *	3	5	5	5	5	2	4	4	4	2	5	2	2	48
Bivi-Integrity *	1	5	5	5	5	2	4	4	4	2	1	2	2	42
Neuberger Berman	1	1	1	1	1	1	1	1	1	1	1	1	1	13

* Diverse owned



Qualitative Scores – Alternatives

	DEI Policy	Empl Code of Conduct	Misconduct Reporting	Formal Investigation Procedures	Misconduct Claims	Equitable Hiring Practices	External Affiliations	Mentorship	Employee Resource Groups	Inclusive Culture	Investment Code of Conduct	Hiring Diverse Vendors	Additional Initiatives	Total Score
Parametric	5	5	5	5	5	5	5	5	5	5	3	5	5	63
Credit Suisse	5	5	5	5	2	5	5	5	5	5	3	5	5	60
Aspect	5	5	5	5	5	5	5	5	5	5	2	4	2	58
Longtail *	5	5	5	5	5	5	4	4	4	5	3	5	2	57
Campbell	5	5	5	5	5	5	4	5	5	5	1	1	5	56
Versor *	5	5	5	5	5	2	4	4	4	2	5	4	2	52
Gladius *	5	5	2	2	2	2	2	2	2	2	5	5	2	38



MWDBE Investment Managers - Goals

	Minorities	Non-Minority Women	Persons with a Disability	Overall Goal
% of Total Assets				
Goal	20%	14%	1%	35%
Actual	21.9%	19.0%	0.1%	40.9%

	Goal	Actual
% by Manager Count	35%	40.2%
% by Manager Fees	25%	26.5%



Emerging Investment Managers* - Goals

Asset Class	Minorities	Non-Minority Women	Persons with a Disability	Overall Utilization/Goal
Total Fund				
Goal	16%	8%	1%	25%
Actual	14.6%	4.7%	0.1%	19.3%
Equities				
Goal	16%	8%	1%	25%
Actual	6.8%	12.3%	0%	19.1%
Fixed Income**				
Goal	16%	8%	1%	25%
Actual	21.4%	1.7%	0%	23.1%
Alternatives***				
Goal	10%	9%	1%	20%
Actual	16.1%	2.1%	0.4%	18.6%

Data as of June 30, 2022

* MWDBE ownership of over 50% and assets under management below \$10 billion

** Includes allocation to Principal Protection, Credit, TIPS and Long Duration

*** Includes private markets, options, alternative risk premia and trend following strategies



Appendix



Data from the ICI/McLagan US Asset Management Diversity and Inclusion Survey

Data as of November 1, 2020

	Count	Male	Female	Hispanic or Latino	White	Black or African American	Native Hawaiian or Pacific Islander	Asian	American Indian or Alaska Native	Two or more races
Executive	3,674	74.6%	25.4%	2.6%	83.7%	2.2%	0.1%	10.4%	0.1%	0.9%
Manager	21,102	62.4%	37.6%	4.0%	75.8%	3.9%	0.2%	14.9%	0.1%	1.3%
Professional	49,638	58.4%	41.6%	5.6%	66.5%	6.0%	0.2%	19.8%	0.2%	1.6%
Sales	4,368	74.3%	25.7%	5.7%	82.0%	3.8%	0.1%	6.5%	0.2%	1.7%
Technician	288	75.0%	25.0%	4.4%	57.0%	7.4%	0.7%	28.5%	0.4%	1.5%
Admin	12,620	38.2%	61.8%	10.4%	61.4%	14.8%	0.4%	9.8%	0.3%	2.9%
Other	1,132	78.7%	21.3%	4.7%	84.3%	3.1%	0.7%	5.5%	0.0%	1.7%
TOTAL	92,822	58.2%	41.8%	5.8%	69.5%	6.5%	0.2%	16.2%	0.2%	1.7%

Note: Sixty-five asset management firms, representing \$21.9 trillion of assets under management, or 84 percent of US fund industry assets, completed the survey. Fifty-six firms offered EEO-1 data—the metric used by the Securities and Exchange Commission’s Office of Minority and Women Inclusion. More than 92,000 employees were counted in the EEO-1 data.

Source: McLagan



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 www.surs.org

Investment Department

To: Investment Committee
 From: Investment Staff
 Date: September 6, 2022
 Re: Recommendations for Changes to Investment Policy Statement & Procurement Policy

Summary & Recommendation

Staff and Meketa are recommending policy language changes to both the SURS Investment Policy Statement and the SURS Procurement Policy. Many of the suggested changes are non-substantive in nature and are designed to standardize the two policies into a format similar to that used in other SURS policy documents. The proposed changes have been reviewed by internal counsel and external fiduciary counsel. Both Staff and Meketa recommend that the Investment Committee/Board approve the requested changes to SURS Investment Policy Statement and Investment Procurement Policy.

Proposed Changes to SURS Investment Policy Statement

- **Description of Historical Changes, Table of Contents, & Compliance Directives**

A section was added at the front of the document to summarize the historical edits made to the document since December 8, 2006. A table of contents was also added for ease of reference, as was a compliance directives section to identify to whom the policy applies.

- **Section 5A – Role Definitions**

Delegates authority to staff to approve premium spend for Tail Risk strategies with consultant approval and in accordance with the spend range approved by the Board (15 basis points per quarter was approved in June). Also, the suggested changes revise the nomenclature of the Master Trustee/Custodian role to Master Custodian to reflect the new agreement with Northern Trust.

- **Section 5B – Procurement Procedures and Schedule**

Amends Section 5B(8) to raise the mandate size limit from \$50 million to \$100 million for which investment managers have to appear before the Board. As proposed, for allocations of \$100 million or less, managers make written submissions to the Investment Committee but are not required to appear before the Board.

- **Section 5C – Investment Risk Management**

Revises the Risk Monitoring section to reflect the change in the risk reporting source, moving from Northern Trust to the Aladdin system.

- **Section 5D(6) – Crisis Risk Offset Class Structure**

Adds information on new Long Volatility and Tail Risk Strategies in the CRO Portfolio.

- **Section 5E – Selection and Retention**
Revises the manager evaluation section to remove reference to Manager Evaluation Reports and note that staff will communicate significant concerns to the Board, consistent with current practice.
- **Section 5K(3) – Manager Diversity Program**
Removes language describing MDP manager evaluation process. Language is redundant since MDP managers are evaluated in the same manner as other investment managers.
- **Section 5L – Reporting Requirements**
Adds section to delineate reporting requirements.
- **Exhibits**
Proposed changes in the exhibits include removal of the glossary from the Appendix, update of policy targets to reflect current portfolio allocations, and benchmark edits to include adding new strategies (Long Volatility/Tail Risk) and eliminating timberland (not in portfolio currently).

Proposed Changes to SURS Investment Procurement Policy

- **Description of Historical Changes & Compliance Directives**
Adds a section at the front of the document to summarize the historical edits made to the document. In addition, a compliance directives section was included to identify to whom the policy applies.
- **Section 5A – Applicability of RFP Procedures**
In 5A(1), language is added to identify two additional allowable exceptions as written in statute. These exceptions were previously included in multiple sections of the document but were moved to this section to cover all RFP procedures in a single section. In section 5A(2), reference to fund of funds is deleted as no longer relevant since SURS has moved away from this approach. Other language in the section mentioned elsewhere in the document is being deleted to avoid redundancy.
- **Section 5B(9) – Applicability of RFP Procedures**
Deletes the item noting the Board may approve or disapprove the recommendation of the Investment Committee. Earlier this year, the definition of Investment Committee was changed to encompass the entire Board. As a result, Investment Committee actions are no longer ratified by the Board.
- **Section 5E – Procurement Requirements for Recommendations by a Specialty Consultant**
Amends Section 5E(2)c to recognize that specialty consultants use an ongoing search process rather than a technical RFP process. Language is also added to formalize the importance of emerging firm representation. In Section 5E(2)d, language is proposed to raise the mandate size limit from \$50 million to \$100 million for which investment managers have to appear before the Board. As proposed, for allocations of \$100 million or less, managers make written submissions to the Investment Committee but are not required to appear before the Board.

- **Section 5F – Additional Compliance Detail**

Adds this section detailing statutorily required actions related to procurement.

Conclusion and Recommendation

SURS staff and Meketa jointly recommend:

- **That the revised Investment Policy document for the defined benefit plan be approved, as presented.**
- **That the revised Investment Procurement Policy document be approved, as presented.**



OFFICIAL POLICY

Defined Benefit Investment Policy

Policy Register Part: VI – Investments		Policy Number: 6. <u>1</u>
Approval Authority: <u>Board of Trustees</u>		Originating Department: Investments Responsible Executive Staff Member: <u>Chief Investment Officer</u>
Version:	Effective Date:	Description of Changes and Link(s) to Earlier Version(s):
1	December 8, 2006	N/A – Original
2	April 26, 2007	<u>Updated to indicate that domestic proxy voting will be completed by a proxy voting service.</u>

3	September 21, 2007	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Expand ability of Executive Director to execute Investment Management Agreements or Board-approved service providers</u> • <u>Allow board to retain third party firms to provide Securities Lending services</u> • <u>Define a benchmark for the Global Real Estate securities portfolio</u> • <u>Add an Investment Manager Watchlist</u> • <u>Allow the electronic transfer of funds to be completed by an authorized staff member</u> • <u>Redefine Minority and Women Owned brokerage usage policy for Global Equity Investment Managers.</u> • <u>Amend the predatory lending policy due to new legislation (PA 95-0521).</u>
4	September 12, 2008	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Expand ability of Executive Director to delegate duties to the Associate Executive Director</u> • <u>Reflect new asset allocation targets and rebalancing language</u> • <u>Change global equity benchmark</u> • <u>Clarify that additional authorization to participate in securities litigation that has already been approved by the Executive Committee is not necessary. Additionally, staff are authorized to file an objection to attorneys' fees/expenses if the objection is determined appropriate by General Counsel and Executive Director</u> • <u>Define Emerging Manager goals and total fund and major asset classes.</u>
5	September 11, 2009	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Include interim asset allocation targets</u> • <u>Implement a 5% rebalancing trigger on aggregate equity and fixed income allocations</u> • <u>Update benchmarks for Equity, Fixed Income, and Real Estate asset classes</u> • <u>Redefine Emerging Manager definitions and update utilization goals due to legislation. Minority-owned broker usage policy expectations were updated.</u>

6	December 2, 2009	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Incorporate the 1% allocation to PPIP into the strategic policy targets</u> • <u>Add language to strongly encourage the use of direct trade execution with minority- and women-owned brokers.</u>
7	September 3, 2010	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Allow the Board governance policies to address issues with third parties regarding corporate governance or other initiatives rather than the Executive Director</u> • <u>Allow staff to complete miscellaneous duties related to the operation of the investment program</u> • <u>Added a risk management section</u> • <u>Revise process for how emerging managers are included in manager searches due to legislation</u> • <u>More accurately portray retention decisions involving private fund managers</u> • <u>Clarify that investment managers may be added to the Manager Watch List at any time</u> • <u>Limit the size of assets invested with any one firm and update the list of people authorized to make transfers between funds</u> • <u>Allow managers to continue to hold a security after it has been downgraded below the minimum credit quality if it is in SURS best interest</u> • <u>Establish goals for the management of assets of each major asset class by minorities, women, and persons with disabilities in line with PA 96-0006. Additionally, investment managers should not use indirect methods to achieve Minority-Owned Broker/Dealer goals. Minority-owned broker/dealer goals were also updated to include REIT managers</u> • <u>Rename Manager Development Program as Manager Diversity Program</u>

8	September 16, 2011	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Reflect new SURS mission statement</u> • <u>Include General Counsel -in the modification of approval requirements for revisions to investment manager guidelines</u> • <u>Reflect passage of “pay to play” legislation (SEC Rule 206(4)-5)</u> • <u>Reflect new Strategic policy targets and adjusted (interim) targets</u> • <u>Revise risk management framework</u> • <u>Revise benchmarks in Real Estate Structure section</u> • <u>Reflect PA 96-0006 in which SURS is to encourage investment managers to use emerging investment managers as subcontractors when possible.</u> • <u>Review MWDBE goals and add new minority-owned brokerage targets for TIPS managers</u>
9	October 25, 2012	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Reflect strategic objectives as outlined in the SURS Strategic Plan</u> • <u>Authorize staff to serve on advisory boards for fund investments and vote on issues to promote best interests of SURS</u> • <u>Delete internal management of TIPS</u> • <u>Reflect adjusted strategic (interim) targets</u> • <u>Change private equity benchmarks and specify the overall benchmark for non-core direct real estate</u> • <u>Implement Investment Manager Evaluation language; if no changes are recommended, formal action by the board each year will not be necessary; Action to terminate a manager will continue to require Board action.</u> • <u>Delete permissible investments section.</u> • <u>Increase goals for MWDBE firms of actively managed assets.</u> • <u>Increase goals for the utilization of MWDBE broker/dealers to US and non-US equity and Fixed Income. Additionally, a new minimum brokerage expectation for non-US and US equity managers was established</u>

10	September 13, 2013	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Revise Strategic Policy allocation targets</u> • <u>Update language to be consistent with legislation (40 ILCS 5/1-113.14) about when a search for investment managers is deemed necessary. Contracts for follow-on funds with the same fund sponsor through closed-end funds are exempted from the customary proposal process.</u> • <u>Fulfill statutory requirement to review goals for the utilization of MWDB managers and broker/dealers.</u>
11	September 19, 2014	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Reflect new Strategic policy targets and adjusted (interim) targets</u> • <u>Note the disclosure requirements for prospective consultants, investment management, and private market candidates set forth in PA 98-1022.</u> • <u>Reflect the completion and liquidation of the Public/Private Investment Program investments.</u> • <u>Reflect changes to the Securities Litigation Policy due to ongoing involvement of the Illinois Attorney General's office in security litigation matters.</u> • <u>Increase the goals of MWDBE firms and brokerages in light of passage of P.A 98-1022.</u>

12	September 11, 2015	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Clarify role definitions and responsibilities for manager monitoring.</u> • <u>Reflect new Strategic policy targets and adjusted (interim) targets</u> • <u>Accurately describe the role, investment structure, diversification, and benchmarks of each asset class.</u> • <u>No longer require annual investment manager approval by the Board. The Board will continue to approve the hiring/termination of investment managers, and staff will continue to conduct annual manager reviews and bring any significant issues/changes to the Board's attention.</u> • <u>Note the statutory exclusions to the search process requirements for qualified fund of funds management services and investments in follow on funds to closed end funds</u> • <u>Eliminate the use of an Investment Manager Watch List.</u> • <u>Increase goal of MWDBE firms for Alternative Investments</u>
13	December 9, 2016	<p><u>Updated to:</u></p> <ul style="list-style-type: none"> • <u>Formalize performance targets for investment managers</u> • <u>Re-institute Manager Watch List as well as clarification on manager termination processes</u> • <u>Define process for decision making related to the use of active management in asset classes and/or sub-asset classes</u> • <u>Specify requirements for quarterly and annual reporting</u> • <u>Revise corporate governance section to reflect recent change in practice regarding proxy voting of domestic securities and clarification of authority to settle claims and lawsuits</u> • <u>Create several appendices for items that are periodically revised as well as the addition of a glossary of defined terms</u> • <u>Adjust goals for MWDBE firms and broker/dealers</u>

14	June 9, 2017	<u>Updated:</u> <ul style="list-style-type: none"> • <u>Board shall periodically establish Performance Targets for each Manager.</u>
15	December 8, 2017	<u>Updated: Manager Utilization Goals for Minority-owned Broker/Dealers</u>
16	March 9, 2018	<u>Removed procurement related portions of Section VII Selection and Retention Investment Policy into a new Procurement Policy</u>
17	April 18, 2019	<ul style="list-style-type: none"> • <u>Reframing the allocation IPS framework from “asset” classes to “strategic” classes.</u> • <u>Substantially re-writing the Portfolio Construction and Performance Benchmarks section.</u> • <u>Making major edits to the Real Assets and Opportunity Fund class structure (Infrastructure out Opportunity Fund class).</u> • <u>Updating Appendices 4 with new strategic allocation as an outcome of 2018 Asset-Liability Study and 5 (updated to reorganize the key asset classes under their broader strategic classes; also adjusts policy benchmarks for several class portfolios.</u>
18	June 7, 2019	<u>Updated Section VI Portfolio Construction and Performance Benchmarks</u>

19	September 13, 2019	<ul style="list-style-type: none"> • <u>Renaming the Public Equity Structure section to “Traditional Growth” and revising policy language pertaining to this class. Provide Staff with flexibility to allocate assets across U.S., Non-U.S., and Global regional mandates and (ii) to adopt a broad Global Equity benchmark, presented in Appendix 5.</u> • <u>Re-organizing Section VI of the IPS to completely reflect the new strategic allocation structure. Appendix 4 reflects implementation of the new strategic structure, to begin 4Q 2019(10/01/2019).</u> • <u>Updating Appendices 6-8 of the IPS to reflect updated diversity goals.</u>
20	October 17, 2019	<u>Updated the Inflation Sensitive functional class structure to remove commodities</u>
21	December 6, 2019	<p><u>Updates for:</u></p> <ul style="list-style-type: none"> • <u>Sustainability Investing Act (40 ILCS 5/1-113.17) to integrate sustainability factors in the investment decision-making processes.</u> • <u>Clarifying definitions and the use of leverage and diversification in Real Assets.</u> • <u>Private Equity changes reflect the change from investing predominately in fund of funds to direct investments via separate accounts and allowing for co-investments and secondaries. The benchmark for the Private Equity was changed to MSCI ACWI IMI plus 2%.</u> • <u>MWDBE Goals</u> • <u>Committing to a goal for minorities and females of 20% for new allocations in private alternative investments instead of a range of 0-20%.</u>
22	January 30, 2020	<u>Updated to remove reference to Performance Targets, Active Manager Premiums and Manager Status.</u>
23	December 4, 2020	<u>Review and update of Diversity Goals</u>

24	January 29, 2021	<p><u>Updated to</u></p> <ul style="list-style-type: none"> • <u>Reflect the addition of private credit within the Stabilized Growth Asset Class.</u> • <u>Specify the benchmark for private credit and update the benchmark for Options Strategies.</u>
25	September 10, 2021	<p><u>Updates to Corporate Governance section</u></p> <p><u>Adds language to reflect recently approved legislation (P.A. 102-97) that exempts contracts for investment services with an emerging investment manager provided through a qualified manager of emerging investment managers from certain requirements under the Illinois Pension Code.</u></p> <p><u>Updates to Appendix 1 and 4 to reflect updated assumed rates of return and strategic policy targets</u></p>
26	November 17, 2021	<p>Updated to amend the Investment Committee definition to include all members of the Board</p>
27	April 21, 2022	<p><u>Updated to reflect Strategic Policy Targets in Appendix 4</u></p> <p><u>Updates benchmarks within the public credit portfolio</u></p>

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Formatted into template and amended as follows:

- Amended Section 5.A. to delegate authority to staff to approve premium spend for Tail Risk strategies and revise nomenclature of the Master Trustee/Custodian role to “Master Custodian”
- Amended Section 5.B.8 to raise the mandate limit requiring manager appearance before the Board from \$50 million to \$100 million
- Revised Section 5.C. to reflect change risk reporting source from Northern Trust to the Aladdin system
- Information added to Section 5.D.6 on new Long Volatility and Tail Risk Strategies in the CRO Portfolio
- Updated Section 5.E manager evaluation section to remove reference to Manager Evaluation Reports and require that staff communicate significant concerns to the Board, consistent with current practice
- Revised Section 5.K.3 to remove redundant language describing MDP manager evaluation process
- Exhibits amended to remove glossary, update policy targets to reflect current portfolio allocations, and edit benchmarks to include adding new strategies (Long Volatility/Tail Risk) and eliminating timberland (no longer in portfolio)

Table of Contents

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1. Policy Statement

- A.** This document specifically outlines the investment philosophy and practices of the State Universities Retirement System (“**SURS**” or the “**System**”) and has been developed to serve as a reference point for the management of the Defined Benefit Plan.
- B.** The Strategic Objectives of this Policy are as follows:
1. Achieve long-term, sustainable, investment performance necessary to meet or exceed the System’s Assumed Rate of Return (set forth in Exhibit 12Appendix 4, net of investment management fees;
 2. Manage the risk and volatility of financial assets in the Portfolio;
 3. Control fees and expenses related to managing the Portfolio;
 4. Manage Staff operational expense at a prudent level;
 5. Manage the System’s Liquidity, in order to meet Member and other System obligations in a timely manner;
 6. Provide ongoing financial education to the Board and Staff in order for them to carry out their responsibilities; and
 7. Comply with all applicable laws and regulations applicable to the investment of the Portfolio.

2. Departments and/or Staff Positions Required to Comply with Policy:

All Investment Department Staff, Legal Staff, Executive Director, and Trustees are required to read and comply with this Policy.

3. Directives

Is Policy internal only?	Does Policy Include any Reporting Requirements for Spotlight Report?	Citation to Statutory Mandates, if applicable
<u>No</u>	<u>Investment Information Report must be posted monthly on SURS’ website and updated at least monthly by the 15th of each month</u>	<u>Accountability for the Investment of Public Funds Act, 30 ILCS 237/10</u> <u>*Also applies to DC Policy</u>

<u>No</u>	<u>Adviser/consultant fees, commissions, penalties, and other compensation must be disclosed to the board of trustees quarterly</u>	<u>Pension Code, 40 ILCS 5/1-113.14(e)</u> <u>*Also applies to DC Policy</u>
<u>No</u>	<u>SURS must develop, and quarterly post to website, uniform documents to be used for the solicitation, review, and acceptance of all investment services.</u>	<u>Pension Code, 40 ILCS 5/1-113.14(f)</u> <u>*Also applies to DC Policy</u>
<u>No</u>	<u>Investment services contract descriptions must be updated on SURS website quarterly</u>	<u>Pension Code, 40 ILCS 5/1-113.14 (g)</u> <u>*Also applies to DC Policy</u>
<u>No</u>	<u>Annually by April 1, SURS must provide the Illinois Investment Policy Board with information regarding investments sold, redeemed, divested, or withdrawn in accordance with Section 5/1- 110.16 prohibited transactions</u>	<u>Pension Code, 40 ILCS 5/1-110.16 (g)</u>
<u>No</u>	<u>Updates or changes to Policy must be filed with the Illinois Department of Insurance within 30 days of adoption</u>	<u>Pension Code, 40 ILCS 5/1-113.17</u> <u>*Also applies to DC Policy</u>
<u>No</u>	<u>Economic Opportunity Investments report must be submitted by September 1 to the Governor and the General Assembly</u>	<u>Pension Code, 40 ILCS 5/1A-108.5</u>
<u>No</u>	<u>By January 1, SURS must make an Emerging Investment Managers Report to the Governor and General Assembly</u>	<u>Pension Code, 40 ILCS 5/1-109.1</u> <u>*Also applies to DC Policy</u>

<u>No</u>	<p><u>No later than January 1 annually, the following Consultant Disclosures must be made to the Board:</u></p> <ul style="list-style-type: none"> • <u>Manager search information</u> <p style="text-align: center;"><u>and</u></p> <ul style="list-style-type: none"> • <u>Compensation and economic opportunity received</u> 	<p><u>Pension Code, 40 ILCS 5/1-113.22</u></p> <p><i><u>*Also applies to DC Policy</u></i></p> <p><u>Pensions Code, 40 ILCS 5/1-113.23</u></p> <p><i><u>*Also applies to DC Policy</u></i></p>
<u>No</u>	<u>SURS must provide Illinois finance entity annual certification to the Public Pension Division of the Department of Financial and Professional Regulation</u>	<u>Pension Code, 40 ILCS 5/1-110.10 and High-Risk Home Loan Act,</u>
<u>No</u>	<u>Annual submission of ADV Form by Investment Advisors</u>	<u>Securities and Exchange Commission Rule</u>
<u>Yes</u>	<u>Investment Update Report must be posted online within 75 days after months' end</u>	<u>N/A</u> <i><u>*Also applies to DC Policy</u></i>
<u>Yes</u>	<u>Managers' annual certification of fiduciary duty and proof of insurance (as required by SURS contracts)</u>	<u>N/A</u> <i><u>*Also applies to DC Policy</u></i>

4. Definitions

N/A

5. The Policy

A. Role Definitions

The following sections outline the roles of the principal parties involved, their responsibilities and performance evaluation.

Board of Trustees

The Board is responsible for establishing the Policy for the System and overseeing the investment of the Portfolio and the expenditures required to

meet System obligations. Specifically with regard to investments, the Board takes action based on information presented at Board and/or Investment Committee meetings and after considering recommendations made by Staff or Consultants. The Board maintains a long-term investment focus and has adopted a formal review schedule, as set forth in [Exhibit 1, which is attached hereto and incorporated herein. Appendix 2.](#)

Investment Committee

The Investment Committee shall be comprised of all of the members of the Board, and shall be empowered to act as the Board with respect to the broad range of issues covered by this Policy including, but not limited to, those set forth in this Investment Policy.

Executive Director

The Executive Director, in connection with such person's duties regarding this Investment Policy, shall be responsible for the following, among other things:

1. Execution of agreements and contracts, and amendments thereto, with Board-approved Managers, Consultants, Custodians and Vendors;
2. Ensuring that funds are invested in accordance with Board policies;
3. Communicating with the Board, its Officers and Investment Committee chair;
4. Studying, recommending, and implementing policy and operational procedures that will enhance ~~SURS~~the investment program ~~of SURS~~;
5. Monitoring the performance of the Portfolio and the Staff; and
6. Ensuring that proper internal controls are developed to safeguard the assets of the System.

Internal Investment Staff

The internal investment staff ("Staff") provides internal investment management and/or consulting services to the Board and Investment Committee, implements Board decisions and manages the Portfolio, consistent with this Policy. Staff is expected to provide written recommendations to the Board and Investment Committee on investment related matters.

The Chief Investment Officer (“CIO”) heads the Staff and oversees the performance of its members. The CIO reports to the Executive Director, but works directly with the Board and the Investment Committee on Policy-related issues.

The primary functions delegated by the Board to the CIO and the Staff may include, but are not limited to, working with the Executive Director and the Board to implement this Investment Policy and Board decisions made in connection with the Investment Policy. In connection therewith, Staff will be expected to manage cash-flow and liquidate assets, as necessary to pay benefits and other System obligations; to approve premium renewal costs for the Tail Risk program, with approval of the Consultant and in accordance with Board-approved premium spend ranges; to approve revisions to Manager Guidelines, with the approval of the Consultant and General Counsel; to serve on advisory boards where in the best interests of the System; to respond to inquiries relating to the Portfolio in accordance with SURS’ communications policies; and to complete other administrative duties related to the operation of the Portfolio, not inconsistent with this Investment Policy.

External Investment Consultants

The Board may retain an investment advisor who is a paid, professional consultant (“**General Consultant**”) and who is qualified to provide the Board with investment advice by academic and professional training and experience and is considered an expert in the field of investment and finance. The Board may also elect to retain one or more additional Consultants (“**Specialty Consultants**,” ~~and~~ together with the General Consultant, the “Consultant”) that specialize in specific areas of asset consulting. Each Consultant’s relationship with the Board shall be that of a fiduciary under 40 ILCS 5/1-101.2(2)-.

Consultants are hired by, and report directly to, the Board. Their duties are to work with the Board, Investment Committee and its chair, and Staff in the management of the investment process. Consultants are expected to provide written recommendations to the Board and Investment Committee on investment related matters.

An annual review of each Consultant will be conducted by the Board, with input from the Staff.

External Investment Managers

External investment managers (“**Managers**”) are selected by, and serve at the pleasure of, the Board. Staff implements the Board’s decisions through negotiation, execution and enforcement of Investment Management

Agreements, including Manager Guidelines. Staff works with Consultants to design Manager Guidelines specific to Board-approved assignments. Duties of Managers include, but may not be limited to, those set forth in [Exhibit 3, attached hereto and incorporated herein.](#)~~Appendix 3~~. Each Manager's relationship with the Board shall be that of a fiduciary under 40 ILCS 5/1-101.2(2).

Criteria for selection, retention and termination of Managers are covered in Sections [5.E. and 5.F. hereinafter](#).

Master Trustee / Custodian

The Master ~~Trustee~~/Custodian ("**Custodian**") is selected by, and serves at the pleasure of, the Board. The Custodian will, among other duties, collect income and keep safe all cash and securities, and will regularly summarize these holdings, along with both their individual and collective performance, for Staff's review. The Custodian will provide data and performance reports to the Staff and Consultants at requested intervals. In addition, a bank or trust depository arrangement will be utilized to and hold cash prior to allocating it to Managers and to invest such cash in liquid, short-term securities in accordance with Manager Guidelines. Pursuant to approved Strategic Policy Targets, Staff will direct the Custodian to allocate cash and/or securities to the System's Managers as necessary. The Custodian may also, with the approval of the Board and at the direction of the Staff, engage in a Securities Lending program. Alternatively, the Board may choose to retain a third-party firm to provide Securities Lending services.

General Counsel's Office

The role of the General Counsel's office is to oversee internal and external legal services provided to the System in connection with this Policy and to ensure compliance with all applicable legal requirements.

External Counsel

External Counsel may be retained to provide legal services in connection with the review and negotiation of Investment Management Agreements or investment transactions where specialized experience is required, or General Counsel Office resources are unavailable.

B. Strategic Allocation and Rebalancing Strategy

Purpose

The purpose of the Strategic Allocation and Rebalancing Strategy is to establish a framework that has a high likelihood, in the judgment of the Board, of realizing the System's long-term funding success.

Targets and Ranges

Strategic Allocation involves establishing Target Allocation Percentages for each approved Strategic Class and their sub-class components. Target Allocation Percentages are established and amended from time-to-time by the Board, based on recommendations from the General Consultant. Target Allocation Percentages are selected based upon a review of various combinations of Strategic Classes and their respective Components designed to sustain the System's funding progress while incurring an acceptable level of risk.

In developing its recommendation, the General Consultant takes into consideration Expected Returns, Volatility of Returns and Covariance of Returns, and certain scenario and liquidity risks. SURS' current Strategic Policy Target and Interim Policy Target Percentages are set forth in [Exhibit 4EAppendix 4](#).

The Interim Policy Target may change over time and reflects the necessity of a gradual shift of assets to the Strategic Policy Target, due to practical implementation considerations and Liquidity constraints. Staff has discretion to gradually adjust the Interim Policy Targets toward the Strategic Policy Targets.

Rebalancing

Investment returns on each Strategic Class in the portfolio (both positive and negative) cause the balance of each such Strategic Class to increase/decrease. Such changes cause the resultant Strategic Class Percentages to deviate from the Strategic Policy Target, potentially requiring Rebalancing.

Rebalancing shall automatically occur whenever a Strategic Class is three (3) percentage points greater or lesser than the Strategic Policy Target level or when the overall Broad Growth allocation deviates from the aggregate Broad Growth target by more than five (5) percentage points. Rebalancing may also be initiated by the Staff as part of its annual review or at any time when Strategic Class Percentages deviate significantly from Strategic or Interim Policy Targets, as applicable. Rebalancing may also occur in the event of a change in the Strategic Policy Target mix by the Board.

Rebalancing, when required, shall occur as soon as practical and may be facilitated by the use of a Cash Overlay Manager approved by the Board. In the event of extraordinary market events that (i) result in Strategic Class Percentages deviating significantly from Strategic Policy Targets or Interim Policy Targets, as applicable, but (ii) prevent the implementation of Rebalancing activities, Staff may request from the Board temporary exceptions to these guidelines.

Because certain Strategic Classes and sub-class Components are illiquid or less liquid than others, it may be costly or impractical to rebalance in the short term. Accordingly, qualitative considerations (e.g., transaction costs, liquidity needs, investment time horizons, etc.) will be considered in determining the potential timing and extent of Rebalancing to the extent illiquid/less liquid Strategic Classes/Components require adjustment.

The Target Allocation Percentages shall be established at a reasonable cost, recognizing that overly precise administration of policy targets can result in transaction costs that are not economically justified.

Consequently, the Board accords the Staff discretion to take those actions which, in the judgment of the Staff, are within the spirit of these guidelines and in the best interest of SURS. Staff will report the results of Rebalancing activity to the Investment Committee at the next regular Investment Committee meeting.

Periodic Review

The Target Allocation Percentage will be reviewed annually for reasonableness relative to changes in the General Consultant's recommendation. The Board will undertake a comprehensive review of the Strategic Allocation policy every three to five years, or to the extent there are any significant changes made to the System's Strategic Objectives. This review will take into consideration the ongoing effectiveness of the Consultant's recommendation, an updated Asset/Liability Study, System Liquidity and other factors that may influence the Strategic Policy Target or Rebalancing strategies.

C. Investment Risk Management

Risk Oversight

Investment risk shall be undertaken in order to achieve long-term investment objectives. The Board shall monitor investment risk and set guidelines for the Staff to manage such risk within acceptable tolerance levels.

Portfolio Risk

Risk levels within the Portfolio will evolve over time for various reasons, including (but not limited to) changes in: (i) Strategic Allocation; (ii) volatility in Strategic Class/Component returns; (iii) Strategic Class/Component relationships; and (iv) portfolio Liquidity.

Other System Risks

The System also incurs risks associated with: (i) amount and timing of Appropriation payments; (ii) the amount and timing of Member benefits and other System obligations; and (iii) changes in the System's Asset/Liability Position.

Risk Monitoring

Portfolio risk shall be monitored through multiple forms of analysis. Analysis will occur at various levels of detail, including individual Manager, Strategic Class and Total Portfolio.

For ~~Marketable Securities'~~ public market portfolios, individual Managers will be reviewed quarterly using risk measures that may include: (i) Beta; (ii) Standard Deviation; (iii) Tracking Error and (iv) R-squared. For private markets, individual Managers will be periodically reviewed using risk measures tailored for each Asset Class.

For major Strategic Classes and their Components, the Board will review quarterly risk measures that may include Standard Deviation.

For the Portfolio as a whole, the Board will review on a quarterly basis various risk measures that may include: (i) Actual vs. Target Allocation Percentages; (ii) Total Portfolio Risk; (iii) ~~M~~market Risk Volatility Levels Index; (iv) Market Sentiment Indicators Standard Deviation; (v) Value at Risk; (vi) Portfolio, Benchmark, and Active Risk Sharpe Ratios; and (vii) Liquidity Profile.

Other system risk metrics may include: (i) System Cash Flow analysis and (ii) Asset/Liability gap analysis.

To the extent that risk thresholds at the individual Manager, Strategic Class or Portfolio level exceed those established by the Board, Staff will recommend remedial action for Board approval at the next scheduled Board Meeting.

Reporting

Reports will be assembled on a quarterly basis by Staff, Consultant or Custodian, as applicable and provided to the CIO for review. Summary reports will be assembled and presented to the Investment Committee on a quarterly basis.

D. Portfolio Construction and Performance Benchmarks

The Board has adopted Target Allocation Percentages in accordance with its Strategic Allocation and Rebalancing strategy described in Section 5.B. V. hereinabove. Within each Strategic Class, the Board will determine (i) the amount of such class that will be managed internally vs. externally; (ii) managed actively vs. passively; (iii) allocated to a particular sub-class, sector or style, if any, and (iv) allocated to each approved Manager. Strategic Class allocations will be reviewed annually in connection with the Target Allocation Percentage review.

The choice of internal vs. external management shall be based on a periodic comparison of (i) the cost and availability of qualified Staff and systems support and (ii) the cost and availability of Managers. Currently, the Board makes exclusive use of external Managers.

The portfolio will be managed in a combination of active and passive management. Active management will be used to a greater extent in less efficient markets while passive management will be used more heavily in more efficient markets.

Amounts allocated to each Manager, within a Strategic Class, sub-class, sector or style shall be based on: (i) the total dollar amount to be allocated to such category; (ii) the relative ongoing performance of applicable Managers; (iii) the unique attributes of such Manager's investment style and potential benefits from diversification; and (iv) the overhead cost of managing the number of Managers within such category. Subject to SURS' MWDBE Manager Utilization Goals and Manager Diversity Program, the Board has a bias toward fewer Managers and more meaningful allocations.

Managers selected by the Board will be given specific roles within each Strategic Class, sub-class, sub-sectors, and styles, as applicable. These roles are specifically set forth for each firm as Manager Guidelines, established at the beginning of the relationship with SURS as part of the contract negotiation process. These guidelines cover such items as Benchmarks, permissible investments, use of leverage, obligor concentrations, currency denomination, etc. Staff and Consultant will be responsible for implementation of these guidelines, supervision of the Managers, performance monitoring and reporting. Updates will be provided to the Board or Investment Committee as requested, or as deemed necessary by Staff and Consultant.

Broad Growth Class and Its Underlying Components

A. Role

The Broad Growth Class is expected to generate relatively high levels of absolute and real (i.e., inflation-adjusted) returns, net of all costs. The Broad Growth Class is considered the main return driver of the overall/aggregate total SURS investment portfolio. While over time volatility is expected, the Broad Growth class must achieve its relatively high returns on a sustainable basis in order for the overall SURS pension plan to achieve its long-term objectives. In addition, each of the three Broad Growth components (described below) are expected to produce relatively high returns when compared to other SURS class portfolios.

B. Investment Structure

The Broad Growth class consists of three components:

- Traditional Growth,
- Stabilized Growth, and
- Non-Traditional Growth.

The structures and roles of these three components are described in detail below. Allocation levels to the Broad Growth Class and its three components are set forth in [ExhibitAppendix 4](#). The structure of each major components should cause

investment performance outcomes to be complementary of the respective outcomes of the other two components, allowing for a more robust and sustainable long-term growth path for the combined SURS growth-oriented assets.

~~C. Benchmark~~

~~Benchmarks for the overall Broad Growth Class and its three components are set forth in Exhibit F Appendix 5.~~

1. Traditional Growth Component Structure

a. Role

The Traditional Growth portfolio is expected to generate attractive absolute returns in a relatively low-cost manner. The Traditional Growth portfolio also typically invests in securities that exhibit reasonable levels of Liquidity.

b. Investment Structure

i. The Traditional Growth allocation consists of a highly diversified mix of publicly traded global Equities. Common stocks, preferred stocks, or other Equity securities are typically utilized.

ii. The public Equity portfolio is composed of U.S., non-U.S. and global Equity segments.

o U.S. Equities

Managers invest primarily in publicly traded Equity securities of U.S. companies.

o Non-U.S. Equities

Managers invest primarily in publicly traded Equity securities of non-U.S. companies, in both developed and emerging markets.

o Global Equities

Managers invest primarily in publicly-traded Equity securities ~~make the allocation decisions between~~ across the U.S. and non-U.S. markets, in both developed and emerging markets ~~and invest in publicly-traded securities of U.S. and Non-U.S. companies, in both developed and emerging markets.~~

iii. Allocation

The allocations to the above subcomponents of Traditional Growth portfolio are overseen and managed by Staff. To ensure consistency with investment policy, overall regional allocations (e.g., the allocation proportion to the U.S. versus non-U.S. regions and/or developed vs. emerging markets, etc.) of the Traditional Growth portfolio will be

assessed versus the commensurate proportional allocation levels exhibited within the MSCI ACWI IMI Index, the Benchmark for the overall Traditional Growth portfolio. Taking these considerations into account, Staff has discretion to manage the allocation levels among the above three portfolio segments.

- iv. Assets may be held in Commingled Funds or privately managed Separate Accounts.
- v. Use of leverage will be controlled as appropriate in the Manager's Guidelines.
- vi. Implementation of the Traditional Growth portfolio is via a combination of Active Management and Passive Management. Allocation to active and passive mandates takes market efficiency into account across and/or within the above three major Traditional Growth segments.

c. Benchmarks

Benchmarks for the Traditional Growth portfolio and its three subcomponents are set forth in [Exhibit 5Appendix](#). Benchmarks for specific subcomponent, sector, style, and/or manager portfolios will be established to ensure consistency with both the overall Traditional Growth benchmark as well as the specific subcomponent Benchmark under which the portfolio resides.

2. Stabilized Growth Component and Its Underlying Sub-Components

~~a. Role~~

The Stabilized Growth Component is expected to earn Risk-Adjusted returns in excess of the Traditional Growth Component, primarily as a result of (i) achieving absolute return levels that are near-or-equivalent to those achieved by the Traditional Growth component while also (ii) achieving lower volatility (risk) over a full investment cycle, particularly during Traditional Growth bear markets.

~~b. Investment Structure~~

The Stabilized Growth component consists of ~~three~~four sub-components:

- Options Strategies,
- Public Credit,
- Private Credit, and
- Real Assets.

The structures of these ~~three~~four sub-components are described below. Allocation levels to the Stabilized Growth component and its ~~three~~ sub-components are set forth in Exhibit 4. Appendix.

a. Options Strategies Structure

i. Role

The Options Strategies portfolio is expected to provide similar, but higher Risk-Adjusted Returns than public equity. This expectation should be due to these strategies (i) producing compound returns that are modestly below traditional long-only public equities over a full investment cycle while (ii) also incurring significantly lower volatility than long-only public equity. In addition, Options Strategies produce a return pattern that is significantly different from traditional public equity over time – specifically, periodic outlying returns should be reduced. In summary, Options Strategies are utilized to achieve downside protection and risk mitigation to the overall SURS Portfolio (and, in particular the traditional public equity portfolio).

i.ii. Investment Structure

- SURS has implemented its initial Options Strategies through direct allocations to multiple managers that exhibit specific expertise in this strategy.
- The aggregate Options Strategies portfolio consists of managers that apply a limited range of collateral-supported options selling programs (i.e., (i) writing call options associated with a specified long position in an equity index fund or long positions of specified equity securities or (ii) writing index put options associated with a commensurate level of cash or very-near-cash collateral).
- The Options Strategies portfolio may seek to invest globally across U.S. and non-U.S. markets, replicating the general risk characteristics of industry-standard equity market indices.
- Within the portfolio, the account structure utilized may be a blend of separate account(s) and fund(s), depending on the assigned strategy/mandate.
- Leverage is not typically employed in Options Strategies. Any degree of leverage requires SURS Board approval.

- Implementation of the Options Strategies portfolio is via Active Management.

ii.iii. Benchmarks

Benchmarks for the Hedged-Options Strategies portfolio are set forth in Appendix 5 Exhibit 5.

b. Public Credit Structure

i. Role

The public credit portfolio is expected to provide income, yield and diversification to the total Portfolio due to a moderate correlation with other Asset Classes. In addition, the public Credit portfolio is expected to provide return, a source of Liquidity, and positive returns relative to an appropriate performance Benchmark.

ii. Investment Structure

1. The Credit allocation consists of a diversified mix of publicly traded Credit securities, invested across multiple asset types.
 - Quality standards, such as credit, concentration, duration, liquidity, etc., will be specifically set forth in each Manager's Guidelines, as applicable. In the event a security no longer meets the quality standards referenced above, the Manager may continue to hold such security if it believes doing so is in the best interest of SURS. The Manager shall provide written justification of the action to Staff ~~{and Consultant}~~ as soon as practicable.
2. The public credit portfolio is composed of Global Investment Grade, High Yield, Global Bank Loans and Emerging Market Debt ("**EMD**") segments.
 - Global Investment Grade
 - Managers may invest primarily in global investment grade securities of corporation and governmental agencies.
 - Global Investment Grade is defined as those with a rating of at least "BBB-" or equivalent by two or more of the credit rating agencies.

- High Yield
 - Managers are permitted to invest in high yield bonds with an understanding that these bonds provide greater risk, potential for capital loss but with greater potential yield/return.
 - High Yield bonds are defined as those that are rated lower than “BBB-” by at least one of the credit rating agencies.
- Global Bank Loans
 - Managers may invest in global bank loan debt
- EMD
 - Managers invest in Investment Grade corporate and high yield debt securities of emerging market countries, in both U.S. dollar and local currency terms, providing additional diversification and opportunities for higher yield.

3. Allocation

- The policy targets for the subcomponents of the portfolio are set forth in ~~Exhibit 4. Appendix~~.
4. Assets may be held in Commingled Funds or privately managed Separate Accounts.
 5. Use of leverage and short sales will be controlled as appropriate in the Manager’s Guidelines.
 6. Implementation of the Credit portfolio is via Active Management.

iii. Benchmarks

Benchmarks for subcomponents of the Fixed Income portfolio are set forth in ~~Exhibit 54 Appendix 5~~.

c. Private Credit Structure

i. Role

The Private Credit portfolio is expected to earn absolute returns in excess of the Public Credit markets over time, reflecting a modest illiquidity premium. The Private Credit portfolio is also expected to produce stable income and downside collateral protection.

ii. Investment Structure

1. The Private Credit allocation is generally defined as non-bank financing and/or private placements while incorporating multiple collateral types (including but not limited to corporate credit, mortgage credit, structured credit, specialty finance, asset-based, and consumer credit) and strategies.
2. The Private Credit portfolio is composed of two major subcomponents.
 - Yield-Oriented
 - Yield-Oriented investment strategies target primary/origination-based transactions that focus on generating returns through performing cash flows.
 - Opportunistic
 - Opportunistic investment strategies target secondary/asset purchases that rely more heavily on generating returns through appreciation.
3. Allocation
 - The Private Credit portfolio shall be diversified by time, subclass, manager, collateral, and geography [Appendix 4](#).
 - Such diversification is expected to enhance returns and control risk.
4. The account structure is typically in commingled Closed-end Funds, but may utilize other structures such as evergreen vehicles including Separate Accounts and/or Fund of Ones.
5. Leverage may be utilized by some Private Credit strategies.
6. Implementation of the Private Credit portfolio is via Active Management.

iii. Benchmarks

Benchmarks for the Private Credit portfolio are set forth in [Exhibit 5](#)~~Appendix 5~~.

d. Real Assets Structure

i. Role

The Real Asset portfolio is expected to generate attractive Risk-Adjusted Returns through stable income and the opportunity for capital appreciation, while providing diversification to the overall Portfolio.

ii. Investment Structure

1. The Real Asset allocation consists of Core/Core-Plus Real Estate and Core/Core-Plus Infrastructure.
 - Core Real Estate
 - Core Real Estate Managers typically invest in properties that are well located and well leased with strong quality tenants. Core investments provide stable income with lower volatility.
 - Core-Plus Real Estate
 - Core-Plus Real Estate Managers typically invest in properties that are well located and may have re-financing, re-leasing or re-furbishment requirements. Core-Plus strategies may have modestly higher leverage than Core strategies. Core-Plus investments should provide moderate income. Core-Plus Real Estate may have modestly higher return expectations than Core Real Estate.
 - Core Infrastructure
 - Managers typically invest in a variety of assets in the transportation, power/utilities, midstream energy, renewables, communications, and waste management sectors globally. Core investments should exhibit low-to-moderate levels of leverage, as well as income and appreciation return orientation. Core investments should provide stable income with lower volatility.

- Core-Plus Infrastructure
 - Managers typically invest in a variety of assets in the transportation, power/utilities, midstream energy, renewables, communications, and waste management sectors. Core-plus investments typically exhibit moderate levels of leverage, as well as income and appreciation return orientation. Core-plus infrastructure may have modestly higher return expectations than Core infrastructure

2. Allocation

- The policy allocation for the Core/Core-Plus Real Estate is 85% of the Real Assets component, with a range of 75-100% [Appendix 4](#).
3. The account structure for Core/Core-Plus Real Estate and Infrastructure is typically either Open-end Funds or Closed-end Funds. SURS may also participate through Fund-of-Funds structures, which provide further Manager diversification and the opportunity for co-investment and secondary fund opportunities.
 4. Leverage is an inherent component of Real Assets investing and levels are generally determined on a fund-level basis. Leverage levels in Core/Core-Plus Real Assets are typically lower than those for Non-Core Real Assets.
 - Core/Core-Plus Real Estate: funds may have up to 40% leverage, maximum of 50%
 - Core/Core-Plus Infrastructure: funds generally do not have stated leverage limitations

5. Diversification

- Core/Core-Plus Real Estate: Portfolio will be broadly diversified and measured against the NCREIF Fund Index - Open End Diversified Core Equity (“NFI-ODCE”) Value Weighted Index property type weightings (office, retail, industrial, apartment, other)
- Core/Core-Plus Real Estate: Portfolio will be broadly diversified and measured against the NFI-ODCE Value

Weighted Index regional weightings (East, South, West, Midwest)

- Infrastructure: Minimum 75% invested in Organisation for Economic Co-operation and Development (“OECD”) countries
 - Up to 25% of the Real Asset allocation may be invested outside the U.S.
6. The Real Assets portfolio is implemented via Active Management. SURS will seek to diversify the portfolio by utilizing various Managers and limiting a Manager’s concentration within the portfolio. Subject to Emerging Investment Manager and ~~MFDBMWDBE~~ Utilization Goals and Board exception, concentration limits are set forth in ~~Appendix–Exhibit 4E4~~. The optimal number of investment vehicles in the portfolio and their vintage year exposure varies with market opportunities and will be evaluated as part of the Real Assets Strategic Plan and Pacing Model developed by Staff and Consultants.

iii. Benchmarks

Benchmarks for subcomponents of the Real Assets portfolio are set forth in ~~Exhibit 5F~~Appendix.

3. Non-Traditional Growth Component and its Underlying Sub-Components

The Non-Traditional Growth Component is expected earn Risk-Adjusted returns in excess of the Traditional Growth Component, primarily due to the Liquidity Premium demanded by investors across various types of private markets.

The Non-Traditional Growth component consists of two sub-components:

- Private Equity and
- Non-Core Real Assets.

The structures of these two sub-components are described below. Allocation levels to the Non-Traditional Growth component and its two sub-components are set forth in ~~Appendix–Exhibit E44~~. Specific manager/partnership investments and allocations are overseen by SURS’ specialty consultants.

a. Private Equity Structure

i. Role

The Private Equity portfolio is expected to earn Risk-Adjusted Returns in excess of the public Equity markets, primarily due to the Liquidity Premium demanded by investors. The Private Equity portfolio is also expected to decrease the volatility of the Portfolio, through the diversification benefits of having lower correlations with other Asset Classes.

ii. Investment Structure

1. The Private Equity allocation generally consists of investments into private companies, either directly or through limited partnership interests of pooled vehicles covering the broad spectrum of private investments as follows in Bii(2).
2. The Private Equity portfolio is composed of three major subcomponents.
 - Venture Capital/Growth
 - Venture capital partnerships primarily invest in businesses still in the conceptual stage (start-up or seed) or where products may not be fully developed, and where revenues and/or profits may be several years away.
 - Growth/late-stage venture capital partnerships typically invest in more mature companies in need of growth or expansion capital.
 - Buyout
 - These partnerships provide the equity capital for acquisition transactions either from a private seller or the public, which may represent the purchase of an entire company, or a refinancing or recapitalization transaction where Equity is purchased.
 - Other
 - Mezzanine/subordinated debt partnerships provide the intermediate capital between Equity and senior debt in a buyout or refinancing transaction.
 - Restructuring/distressed debt partnerships typically make new investments in financially or operationally troubled companies, often for a control position, with a view to improving the balance sheet and operations for a subsequent sale.
 - Special situations partnerships include organizations with a

specific industry focus or transaction type not covered by the other subclasses mentioned above, or unique opportunities that fall outside such subclasses.

3. Allocation

- The Private Equity portfolio shall be diversified by time, subclass, and geography.
 - Such diversification is expected to enhance returns, control risk, and reduce volatility.
4. SURS currently participates in Private Equity through various structures including commingled Fund-of-Funds, Separate Accounts, and primary fund commitments.
 5. In addition to limited partnership interests, SURS may participate in co-Investments, which are direct investments alongside a general partner.
 6. Leverage may be present in Private Equity investments, most commonly in buyout partnerships. Levels are generally determined on a fund-level basis.
 7. Implementation of the Private Equity portfolio is via Active Management
 8. To manage private equity exposure or to rebalance the portfolio, SURS may consider a sale of private equity interests on the secondary market.

iii. Benchmarks

Benchmarks for the Private Equity portfolio are set forth in [Exhibit 5Appendix](#).

b. Non-Core Real Asset Structure

i. Role

The Non-Core Real Asset portfolio is expected to earn Risk-Adjusted Returns in excess of the public Equity markets, primarily due to re-positioning and development of real asset projects, the use of leverage, and to a Liquidity Premium demanded by investors. At the margin, the

Non-Core Real Asset portfolio is also expected to diversify the broader Non-Traditional Growth Portfolio, which also includes Private Equity (see above).

ii. Investment Structure

1. Non-Core Real Asset investments provide access to opportunities for higher returns by investing (typically with the use of leverage) in assets in need of re-tenanting, development, re-development, operational improvements, or renovation, or are otherwise in some form of distress, exhibit sub-optimal capital structures, or experiencing market dislocation(s). They may also be located in emerging/non-institutional market segments and/or product/asset types. Such investment may utilize more aggressive financial structures in order to raise the return/risk profile, emphasize capital appreciation, and exhibit relatively high return objectives.
2. The Non-Core Real Asset portfolio may consist of equity or debt investments in real estate, infrastructure, or agriculture, ~~energy-related investments, or timberland.~~
3. Allocation
 - The Non-Core Real Asset portfolio shall be diversified by time, subclass, and geography.
 - Such diversification is expected to enhance returns, control risk, and reduce volatility.
4. The account structure is typically in funds. SURS may also consider investments through a Fund-of-Funds structure, which provides Manager diversification and the opportunity for co-investment and secondary fund opportunities.
5. Leverage is typically present in Non-Core Real Asset investments. Levels are generally determined on a fund-level basis.
6. Up to 25% of the Real Asset allocation may be invested outside the U.S.
7. Implementation of the Non-Core Real Asset portfolio is via Active Management.

iii. Benchmarks

Benchmarks for the Non-Core Real Asset portfolio are set forth in [Exhibit 5Appendix](#).

4. Principal Protection Class Structure

a. Role

The principal protection portfolio is expected to provide a modest absolute return, be an anchor to the overall portfolio and significant diversification to the total Portfolio due to low correlation with other Asset Classes. In addition, the principal protection portfolio is expected to provide capital preservation, a source of Liquidity, lower volatility and competitive returns relative to an appropriate performance Benchmark.

b. Investment Structure

i. The principal protection allocation consists of a diversified mix of publicly traded Fixed income securities, invested across multiple asset types.

1. Quality standards, such as credit, concentration, duration, liquidity, etc., will be specifically set forth in each Manager's Guidelines, as applicable. In the event a security no longer meets the quality standards referenced above, the Manager may continue to hold such security if it believes doing so is in the best interest of SURS. The Manager shall provide written justification of the action to Staff [and Consultant] as soon as practicable.

i.ii. The principal protection portfolio is composed largely of Treasuries, Agency backed mortgage securities, and other agency backed bonds.

1. Mortgage Backed Securities – Agency

- Managers invest primarily in Mortgage backed Securities (MBS) issued by the U.S. government agencies (Fannie Mae, Freddie Mac, or Ginnie Mae).

2. Treasuries

- Managers invest in treasury securities of the U.S. government.

3. Other

- Managers may invest in other high quality segments as clarified in manager specific guidelines, however these must be Investment Grade credit that is rated “BBB” or higher by two or more of the credit rating agencies.

~~ii.~~iii. Allocation

1. The policy targets for the subcomponents of the portfolio are set forth in ~~Exhibit E4~~Appendix 4.

~~iii.~~iv. Assets may be held in Commingled Funds or privately managed Separate Accounts.

~~iv.~~v. Use of leverage and short sales will be controlled as appropriate in the Manager’s Guidelines.

~~v.~~vi. Implementation of the Principal Protection portfolio is primarily via Active Management.

c. Benchmarks

Benchmarks for subcomponents of the Fixed Income portfolio are set forth in ~~Exhibit 5~~Appendix.

5. Inflation Sensitive Class Structure

a. Role

The Inflation Sensitive portfolio is expected to provide the portfolio with a hedge against structural inflation. In addition, the inflation sensitive portfolio is expected to provide competitive returns relative to an appropriate performance Benchmark.

- i. Quality standards, such as credit, concentration, duration, liquidity, etc., will be specifically set forth in each Manager’s Guidelines, as applicable. In the event a security no longer meets the quality standards referenced above, the Manager may continue to hold such security if it believes doing so is in the best interest of SURS. The Manager shall provide written justification of the action to Staff and Consultant as soon as practicable.

b. Investment Structure

- i. The Inflation Sensitive Class consists solely of Treasury Inflation Protected Securities:
- ii. Implementation of the TIPS portfolio is currently via Passive Management.

c. Benchmarks

Benchmarks for the Inflation Sensitive Class are set forth in [Exhibit 5. Appendix.](#)

6. **Crisis Risk Offset Class Structure**

a. Role

The Crisis Risk Offset (“CRO”) portfolio is expected to produce significant positive returns during an extended recessionary-type equity market crisis, while maintaining purchasing power during more normal market environments. In this respect, the CRO portfolio is expected to enhance the long-term risk-adjusted performance of the Total Portfolio, by substantially mitigating significant drawdowns that the Total Portfolio might experience.

b. Investment Structure

- i. The CRO allocation generally consists of investments in highly-liquid portfolios that are meant to capture key risk premia [and market participant behavior](#) that should prove largely beneficial during an equity-related market crisis. Along these lines, the underlying investments and strategies may utilize both long positions and short-selling positions to capture the desired return patterns/behavior.
- ii. The CRO portfolio is composed of [three-four](#) major subcomponents.
 1. Long U.S. Treasury Duration
 - U.S. Treasuries represent the leading “flight-to-quality” investment since they are backed by the U.S. Government. The U.S. Dollar (the base denomination of U.S. Treasuries) is also considered the world’s highest-quality reserve currency.
 - Exposure to U.S. Treasury Duration can take place via cash markets (i.e., actual bonds) or the futures markets (virtual bond proxies).

2. Systematic Trend Following

- Long-short portfolios utilizing derivatives-based instruments to capture both periodic appreciation and periodic depreciation trends that evolve and dissipate across a very wide array of liquid global markets. Risk/volatility is calibrated to a pre-determined level derivatives-based leverage.
- Assets will be invested in highly liquid underlying securities (cash, futures, forwards, etc.), allowing for relatively rapid access for rebalancing and liquidity purposes.
- In order to appropriately calibrate the expected volatility of this component and the overall CRO class, significant levels of derivatives-based leverage may be applied. Effects of leverage are adjusted daily through market-based exchanges/facilities, ensuring appropriate and timely mark-to-market valuations.

3. Alternative Risk Premia

- Long-short portfolios utilizing both cash and derivatives-based instruments to capture well-researched/documented non-market risk premiums (e.g., momentum, carry, value, low-volatility, etc.) on a continuous basis, utilizing an array of liquid global markets. Risk/volatility is calibrated to a pre-determined level utilizing cash and derivatives-based leverage.
- Assets will be invested in highly liquid underlying securities (cash, stocks, futures, forwards, etc.), allowing for relatively rapid access for rebalancing and liquidity purposes.
- Strategies should be designed to exhibit “market-neutral” outcomes, exhibiting lack of relationship with the major market-based risk premia (e.g., equity risk premia, duration risk premia).

4. Long Volatility and Tail Risk

- Derivative-based strategies that invest in instruments that have structural or explicit inverse relationships with global Equity markets.

- Assets will be invested in highly liquid underlying securities, such as put options, call options, or index futures on Equity and Volatility indices in order to monetize gains and rebalance into Growth assets during periods of appreciation within the Long Volatility and Tail Risk strategies.
- Long Volatility strategies are expected to decline by a marginal amount (e.g., -4% per annum) during benign or bull market periods.
- Tail Risk strategies are expected to expend a pre-approved premium level (i.e., insurance cost) each renewal period with the assumption that the premium/NAV may decline to zero if no major event occurs.

iii. Allocation to Subcomponents

- ~~1. Capital allocation ranges to the various subcomponents will be as follows:~~
- ~~2. The policy targets for the subcomponents of the portfolio are set forth in Exhibit 4. 30%-40%—Long Duration
30%-40%—Systematic Trend Following (“STF”)~~
- ~~3.1. 25%-35%—Alternative Risk Premia (“ARP”)~~
- 4.2. Assuming the capital weights above are consistently maintained, it is highly likely that the volatility associated with the Systematic Trend Following component will contribute the most to overall CRO class volatility over time.

- iv. Fund account structures (versus separate accounts) will be emphasized in the STF—Systematic Trend Following, Alternative Risk Premia, and Long Volatility strategies~~ARP subcomponents~~. Use of fund account structures will likely reduce the monitoring, accounting, and administrative burdens of these relatively unconstrained and dynamic strategies.
- v. Derivatives-based leverage will be utilized significantly across these strategies. Leveraged positions are typically adjusted on a daily basis to conform to pre-established guidelines (see below).
- vi. Implementation of the CRO portfolio will utilize both replication (passive) and active management where deemed appropriate and prudent within each subcomponent.

c. Risk Profile of CRO Class and its Subcomponents

- i. The aggregate CRO class has a total risk (standard deviation) range/budget set at a level to effectively counterbalance the volatility experienced in the SURS portfolio's major growth-oriented components:

1. Lower risk level limit (annualized standard deviation): 8%
2. Upper risk level limit (annualized standard deviation): 15%

If the behavior of the CRO class causes its recent historical volatility to deviate significantly beyond these limits, then a rebalancing process and/or target volatility adjustment should occur among the CRO managers based on recent risk profiles of each manager/component as well as on prospective risk views for each manager/component.

- ii. The expected volatility ranges for the three components are shown below:

Risk Budget Ranges – CRO Components (% of Net Asset Value)

Component	Annualized Volatility Expectation
Long Duration Capture	12% - 20%
Systematic Trend Following	10% - 20%
Alternative Risk Premia	8% - 12 %
<u>Long Volatility</u>	<u>8% - 30%</u>

While the expected volatility ranges for each subcomponent are high relative to the expected risk budget level of the aggregate CRO class, the diversifying aspects of each subcomponent (and its underlying manager(s)) will combine to reduce volatility at the aggregate class level.

d. Benchmarks

Benchmarks for the CRO portfolio are set forth in [Exhibit 5Appendix](#).

7. Opportunity Fund Structure

a. Role

The Opportunity Fund portfolio is designed to allow flexibility for opportunistic investment. Investments in the Opportunity Fund may be a one-time

occurrence, such as investments capitalizing on a market dislocation. Successful investments that evolve into a more permanent opportunity may ultimately be transitioned into another Strategic Class with similar characteristics.

b. Investment Structure

The structure of the Opportunity Fund is not fixed and may vary considerably over time.

c. Benchmark

Benchmarks for the Opportunity Fund portfolio will be established and set forth in [Exhibit 5 Appendix 5](#) prior to implementation.

E. Selection and Retention

Introduction

The processes used for selection and hiring of Consultants, Managers and Custodians are set forth in the ***SURS Investment Procurement Policy***. In general, the criteria used to determine the minimum qualifications of firms to be selected for an assignment are shown below:

Selection Criteria

1. Registration with the Securities and Exchange Commission (SEC) under the Investment Advisers Act of 1940, or otherwise qualified under the Illinois Pension Code.
2. Experience of the firm in the management of institutional portfolios operated under prudent person standards, as well as related investment management experience.
3. Qualifications and/or depth of the professional Staff.
4. Soundness of the firm's investment philosophy and process.
5. The investment record of the firm and/or the firm's principals in former associations where that record is verifiable.
6. The adequacy of the firm's trading, back office, accounting and reporting, and client servicing capabilities.
7. Fees.
8. Sustainable Investing Principles, as discussed below.

Sustainable Investing Principles: In accordance with 40 ILCS 5/1-113.17, [as it currently exists or may hereafter be amended](#), the Board will regularly consider material, relevant, and decision-useful sustainability factors, within the bounds of

financial and fiduciary prudence, in evaluating investment decisions. These factors shall be considered in addition to other material risk factors influencing investment decision making. The consideration of sustainability factors will be considered in monitoring SURS's proxy voting, and in the selection and ongoing monitoring of SURS's investment managers and mandates, and other service providers as appropriate.

Such factors include, but are not limited to: (1) corporate governance and leadership factors; (2) environmental factors; (3) social capital factors; (4) human capital factors; and (5) business model and innovation factors. Staff, in conjunction with the General Consultant and any Specialty Consultants, will perform periodic evaluations of these factors to ensure they are relevant to the investment portfolio and the evolving marketplace.

Investment Manager and Fund Monitoring

Monitoring of investment managers and fund investments will take place as described in this [subsection](#).

Marketable Securities Portfolios

An evaluation of each Manager shall be conducted annually by the Staff and the Consultants. The evaluation shall be based on a number of factors, including, but not limited to, organizational and personnel issues and whether the Manager has complied with its Manager Guidelines and met performance objectives. Evaluation will include the results of periodic due diligence meetings and phone calls. ~~Documenting the annual evaluation, Staff and Consultants shall issue Manager Evaluation Reports. Reports shall include a recommendation to: (i) retain the Manager; (ii) retain or change the Manager's funding allocation; or (iii) terminate the Manager~~

To the extent that significant concerns about a Manager arise, the Staff or Consultant shall communicate their concerns to the Investment Committee/Board and recommend available options, including exit strategies (see Section 5.F.VIII, 'Investment Manager Termination Guidelines.'). Between annual reviews, subject to Manager Termination Guidelines, the Staff or Consultants may recommend immediate Termination.

Closed-end Fund and Separate Account Evaluation

Limited partnership interests in private Closed-end Funds and investments in private markets Separate Accounts (i.e., Private Equity, Real Estate, infrastructure, etc.) will be reviewed by Staff and Consultant annually. The evaluation shall be based on a number of factors, including, but not limited to,

organizational and personnel issues and whether the Manager has complied with its Manager Guidelines and met performance objectives. Evaluation will include the results of periodic due diligence meetings and phone calls. ~~Documenting the annual evaluation, Staff and Consultant(s) shall issue Manager Evaluation Reports. Reports will include a recommendation to: (i) retain the Manager; (ii) make follow-on investments or investments in subsequent Closed-end Funds or Separate Accounts, in accordance with the **SURS Investment Procurement Policy**; or (iii) subject to legal review, pursue available exit strategies.~~

To the extent that significant concerns about a Closed-end Fund or Separate Account or material events arise ~~in the interim~~, the Staff or Consultant shall communicate their concerns to the Investment Committee/Board and recommend available options, including exit strategies.

F. Investment Manager Termination Guidelines

Introduction

From time to time it will be necessary for the System to terminate a contractual relationship with a Manager. Pursuant to its fiduciary duties, the Board has established the following guidelines to assist in making these Termination decisions. In establishing these guidelines, it is the Board's intention to carry out these actions using objective evaluation, proper documentation and full disclosure. The overriding consideration with respect to all decisions is that they shall be made solely in the best interest of Members and consistent with all legal requirements.

Clearly Defined Objectives

Any action to terminate a Manager should be based on one or more of the following primary criteria:

- a. Performance of the Manager has been unsatisfactory over a market cycle;
- b. Any other guideline is violated by a Manager and is not remediated to the satisfaction of the Board;
- c. Default under an Investment Management Agreement;
- d. Change in Asset Allocation, which reduces or eliminates the need for all existing Managers; or
- e. Failure to satisfy any other legal or Policy requirements.

Prior to a Termination decision, a thorough evaluation of the relevant criteria supporting such action shall be reviewed by the Board. Documentation regarding any such action shall include the reasons for such decision.

In the event that termination of a Manager is warranted under the Manager Termination Guidelines, and prompt termination of the Manager is necessary to protect and preserve System assets, SURS Staff may, with the prior approval of the Executive Director, terminate the Manager prior to Board action. The Board shall be promptly notified of the decision to terminate the Manager and the decision shall be presented to the Board for ratification at its next meeting.

Notwithstanding this provision, the Board retains the authority, in its sole discretion, to terminate any Manager for any reason, with or without notice, when it determines such action is in the best interests of the Members.

Investment Manager Transition

In the event of the need to transfer the management of assets from one Manager to another, Staff will effect the change in as efficient and prudent a manner as possible. The use of Transition Manager(s), which could include the use of a Cash Overlay Manager or Rebalancing Manager, is permitted when deemed in the best interests of the System. Transition plans may include, but are not limited to, the following: a transfer of securities to an appropriate Passive Investment, crossing securities with other institutional investors, or a transfer of securities to another approved Manager.

G. Performance Evaluation and Reporting

Performance Evaluation

Marketable Securities Portfolios

Rates of Return and Risk-Adjusted Returns, on a net-of-fees basis, shall be calculated quarterly by the Custodian or Consultants to measure the performance of each major Asset Class. Actual Trailing Period returns for fiscal year-to-date, one (1) year, three (3) year, five (5) year, ten (10) year periods will be compared to comparable returns for applicable Policy Portfolio indices.

Rates of Return, on a net-of-fees basis, shall also be calculated quarterly by the Custodian or Consultants to measure the performance of each individual Manager. Other measures may also be used, including Risk-Adjusted Returns, peer group performance, Risk Statistics and Performance Statistics.

Private Markets Portfolios

For Private Equity, Direct Real Estate and Infrastructure portfolios, Internal Rates of Return shall be calculated quarterly by the Custodian. These returns will be used to measure performance of the portfolios in comparison with Policy Portfolio indices and Benchmarks for Asset Classes and individual Managers. Returns are calculated quarterly in arrears. Other more tailored performance measures may also be used for absolute and peer group comparisons.

Total Portfolio

Actual returns for the total Portfolio are compared to returns on the Policy Portfolio. Returns are calculated quarterly by the Custodian.

Style Analysis

Staff and Consultants will periodically analyze Manager portfolios, as well as the aggregate Strategic Class and Component portfolios, to confirm that such portfolios conform to individual Manager style Benchmarks and aggregate Strategic Class and Component indices. Metrics such as Active Share will be used in this analysis. Significant deviations shall cause individual Managers to be considered for Termination.

Performance Reporting

Performance reports shall be prepared by the Staff and/or Consultant quarterly and provided to the Investment Committee and Board at regularly scheduled meetings.

Consultants will analyze the system's performance and periodically provide the Board with a detailed report on the total Portfolio, Strategic Classes and individual Managers.

Annually, Staff and Consultants will prepare and present a comprehensive review of the fiscal year results.

Market Values

All assets in the Portfolio will be Marked-to-Market at least quarterly, to provide an estimate of the price at which they could be sold. Following is a description of this process.

Marketable Securities

The Custodian provides price indications for stocks, bonds, warrants, futures, options, etc. traded on public exchanges.

Private or Illiquid Securities

For private and illiquid securities, each individual Manager or Fund-of-Funds Manager has the responsibility for estimating and publishing the market value of

these investments. The valuation and appraisal methods used should be consistent with current CFA Institute and industry standards.

H. Safeguard of Assets

- Qualification of Service Providers

Any firm which SURS retains to manage, control or have custody of assets shall be and shall remain qualified by thorough on-going due diligence. Appropriate agreements with the firms and trust agreements shall minimize any risk of loss of assets or income.

- Asset Limits

There are cost and service advantages in firms managing or having custody of large pools of assets so that in the absence of any statutory provision(s) to the contrary, there shall be no specific limit on the size of assets controlled or held in custody by any one firm within the asset allocation guidelines. However, limits may be considered on an individual Manager basis and will reflect such issues as type of mandate, strength and stability of organization, risk characteristics, etc.

- Monitoring of Service Providers

There shall be continuous monitoring of firms which manage or have custody of assets to assure the firms continue to be stable and financially secure. Instability of any firm or financial weakness shall be reason to transfer custody and/or management of assets from the firm.

- Authorization to Transfer Funds

Transfer of funds between accounts must be evidenced in writing or conducted electronically by an authorized Staff member and be in compliance with the Custodial bank's procedures. The following positions have been designated by the Board to have the authority to give direction to the Custodian on any and all actions with respect to the Master Trustee relationship between the Board and the Custodian: Executive Director, CIO, and Deputy CIO. The senior investment officers have been designated by the Board to have the limited authority to approve payments initiated through the Trade Order Entry System related to initial or subsequent investments in limited partnerships, real estate, infrastructure, or other investments approved by the Board.

- Insurance Requirements

Managers shall be required to secure and maintain, throughout the term of their Investment Management Agreements, insurance that (i) satisfies the requirements

set forth below and (ii) is provided by insurer(s) rated A- or better by A.M. Best & Company. Specific insurance requirements are set forth in each Manager's Investment Management Agreement. Each Manager shall be required to provide to the Board: (i) evidence of the requisite insurance policies upon initiation of the contract; (ii) an annual certification that the insurance requirements continue to be satisfied; and (iii) evidence of continued satisfaction of the insurance requirements upon request. With the exception of the Manager Diversity Program, the minimum insurance required for each Manager shall include: (i) a bond protecting SURS assets that meets the requirements of, and that is in the amount specified under, ERISA and the regulations thereunder; and (ii) errors and omissions coverage in an amount equal to the greater of: a) \$5 million or, b) 5% of the SURS assets under management, up to a maximum as established in the Investment Management Agreement, but not to exceed \$50 million. For Managers in the Manager Diversity Program, the minimum insurance required for each Manager shall include: (i) a bond protecting SURS assets that meets the requirements of, and that is in the amount specified under, ERISA and the regulations thereunder; and (ii) errors and omissions coverage in an amount not less than \$1 million of coverage. The insurance shall protect SURS against losses from the negligent acts, errors or omissions of the Manager.

- Custodial Credit Risk

Pursuant to ~~the~~ 40 ILCS 5/15-166, the Board has statutory authority to be the custodian of all cash and securities belonging to the System created under Article 15 of the Pension Code. Pursuant to 40 ILCS 5/15-167, the Board may deposit SURS trust funds with one or more banks, savings and loan associations, or trust companies. This subsection policy addresses how SURS will handle custodial credit risk.

Credit risk is the risk that an issuer or other counter-party to an investment transaction will not fulfill its obligations. Custodial credit risk is the risk that, in the event of the failure of a financial institution or counter-party to a transaction, SURS would not be able to recover the value of deposits or investments in the possession of such party. To minimize this risk, SURS takes the following measures:

1. Performs due diligence on Custodians and advisors with which SURS will do business and appropriately documents business relationships with these service providers.
2. Provides investment parameters for the investment vehicles detailed in the specific Investment Management Agreements.
3. Monitors the financial condition of the Custodian. If there is cause for concern, the Board of Trustees will determine appropriate action.
4. Endeavors to have all investments held in custodial accounts

through an agent, in the name of Custodian's nominee¹, or in a corporate depository or federal book-entry system. For those deposits or investment assets held outside of the Custodian, SURS will follow applicable regulatory rules.

5. Requires the Custodian or its sub-Custodians will provide safekeeping of all SURS securities in segregated accounts that reflect the holdings of SURS; and the Custodian will not commingle SURS securities with the Custodian's own securities.

I. General Investment Restrictions and/or Guidelines

- Investment Authorization

No investment or action pursuant to an investment may be taken unless permitted by this Policy or by each Investment Manager's Guidelines. Exceptions may be made subject to prior review by, and express written authorization from, the Board.

J. Corporate Governance

1. Proxy Voting Guidelines

The Board may retain a proxy voting service, pursuant to a contract with SURS, to vote the proxies of U.S. and non-U.S. shares according to the proxy voting service's proxy voting guidelines, as customized for SURS and approved by the Board. All proxy votes not specifically addressed by the proxy voting service's approved proxy voting guidelines, or if the Board determines not to retain a proxy voting service, will be voted on a case-by-case basis by Managers, subject to Staff review and consistent with the fiduciary responsibilities of the Board.

Guidelines will be reviewed annually by Staff in conjunction with the proxy service provider, and recommended changes to the guidelines will be presented to the Board for approval.

The SURS Public Pension Proxy Guidelines, SURS U.S. Proxy Guidelines, and the SURS International Proxy Voting Guidelines will be maintained on the SURS website.

2. Proxy Voting Reports

¹Registered owner of a stock or bond if different from the beneficial owner, who acts as holder of record for securities and other assets. Nominee ownership simplifies the registration and transfer of securities.

The proxy voting service provider shall make regular reports of proxy votes cast on behalf of SURS and, on an ad hoc basis as requested by Staff or the Board, pursuant to the terms of the proxy voting contract with SURS.

3. Securities Litigation Policy

a. Identification Of Potential Claims

- i. In order to weigh the costs and benefits of the various alternatives as specified below, Staff will identify potential claims by determining if it bought or sold the securities of a company during applicable periods.
- ii. Staff will regularly match the SURS portfolios against reports of securities litigation cases obtained from Consultants, law firms engaged for securities litigation, and from other sources deemed reliable by Staff.
- iii. If SURS did not buy or sell securities of a company during the applicable period, the inquiry will end. If SURS had purchases or sales during the period, evaluation of the potential claim will proceed as specified below.

b. Evaluation Of Potential Claims

- i. If SURS bought or sold securities during an applicable period, evaluation of the alternatives available will begin with an initial assessment of the size of the potential claim.
- ii. When potential losses are deemed insignificant, further action will ordinarily be limited to monitoring as specified in [subsection Part 5.J.3.c.](#) below to ensure that class member claims are filed if and when there is a right to do so, unless there are extenuating circumstances that warrant further consideration by Staff and the Board.
- iii. When potential losses are deemed significant, the alternative courses of action available shall be identified by the Staff. Alternatives will likely include several different courses of action, such as:
 1. Monitoring the course of a class action suit and filing a claim at the end to participate in a class payment.
 2. After consultation with the Illinois Attorney General's office, monitoring the course of a class action suit, but objecting to a proposed settlement if there are reasons to object.
 3. After consultation with the Illinois Attorney General's office, seeking to control a class action by seeking designation as lead plaintiff, either singly or with others.

4. After consultation with the Illinois Attorney General's office, opting out of a class action suit and filing a separate suit, either singly or with others.
5. The relative merits of each alternative will be weighed and considered by Staff, as well as by the Illinois Attorney General's Office.
6. Staff and the Illinois Attorney General's office will make a recommendation to the Executive Committee or to the Board of any course of action beyond participating in the litigation as a passive member of the class. The Executive Committee, or the Board, as applicable, will have the authority to approve any course of action beyond monitoring the case. If the Executive Committee, or the Board, approves active participation in the litigation, additional authorization is not necessary to align with other potential plaintiffs in application for named plaintiff status if such an action is agreed appropriate by the General Counsel and the Executive Director. Counsel will be selected by the Executive Committee or the Board, after consultation with the Illinois Attorney General's office.

c. Monitoring

The Staff will utilize the services of the System's Custodian, as well as the services of any consultants, including Securities Litigation counsel, with expertise in this area chosen by the Board, to monitor pending cases which involve securities that SURS bought and sold during the relevant periods to evaluate any settlements proposed and to file claims as necessary for SURS to participate in distributions of funds. To the extent that Staff finds a proposed settlement inadequate to protect the interests of the System, the Executive Committee may authorize action to file legal objections. Authorization is not necessary for Staff to file an objection to attorneys' fees or expenses if an objection is agreed appropriate by the General Counsel and the Executive Director after consultation with the Illinois Attorney General's office.

d. Legal Action

- i. Where the Executive Committee or the Board has determined under Part 2 that the interests of the System will be best served by seeking designation as lead plaintiff, by opting out of a domestic class action to pursue a direct action or by opting into a foreign securities litigation matter, SURS, in consultation with the Illinois Attorney General's Office, will choose appropriate counsel and will negotiate a fee agreement, if necessary, when the Attorney General's Office is unable to represent the System as its legal counsel in any such action. If the Executive Committee or the Board determines that appropriate counsel is a firm not on SURS'

approved list, the recommendation of such firm shall be made to, and approved by, the Executive Committee or the Board.

- ii. Where the Executive Committee and the Illinois Attorney General's office disagree as to the desirability of seeking designation as lead plaintiff or opting out of a class action, the Executive Committee shall act in accordance with its fiduciary obligations in making a final determination.
- iii. Any legal action authorized or taken shall be reported to the Board, who shall also be provided periodic updates on the status of such actions.

e. Approved Law Firms

- i. The Board, or Staff at the Board's direction, will interview and select, through an RFP, a roster of no more than three qualified securities litigation firms. This roster will constitute SURS' "approved list."
- ii. In cases where the initiation of litigation is a formality designed to provide support for another institutional investor, Staff may recommend that the most sensible and cost-effective source of legal representation will be the General Counsel or the legal counsel representing the institutional investor that SURS wishes to support.

f. Authority to Settle Claims and Lawsuits

Staff has the authority to resolve securities related litigation claims with a settlement value of \$250,000.00 or less, with required approval from the Executive Director and General Counsel. This authority includes the ability to settle direct claims and class actions at or below the \$250,000.00 threshold. This authority also includes the ability to resolve said claims by selling them to third parties or by resolving them via auction with a minimum return/guarantee of at least 50% of the potential value of the underlying claim. If SURS wants to settle a direct securities litigation case at a settlement value exceeding \$250,000.00 or wants to settle a class action where SURS is the lead plaintiff, authority to settle must come from the SURS Executive Committee or the Board.

K. Emerging Investment Managers, MWDBE Managers and Minority-Owned Broker/Dealers

SURS is committed to providing opportunities for Emerging Investment Managers and Minority Owned Broker/Dealers. SURS is also committed to providing ongoing opportunities for minority-, ~~female~~woman-, and persons with a disability-owned ("MWDBE") Managers that have advanced beyond the statutory definition of Emerging Investment Managers. In determining the -status- of a business enterprise, SURS will use

the definitions found in the Business Enterprise for Minorities, Women, and Persons with Disabilities Act, 30 ILCS 575/2(A), [and](#) (B).

The Illinois Pension Code, in 40 ILCS 5/1-109.1, encourages the Board to use Emerging Investment Managers in managing the System's assets to the greatest extent feasible within the bounds of financial and fiduciary prudence, and to take affirmative steps to remove any barriers to the full participation of Emerging Investment Managers in investment opportunities afforded by the System. Furthermore, in accordance with the Illinois Pension Code, SURS encourages its Fund-of-Fund Managers to use Emerging Investment Managers as subcontractors when the opportunity arises.

1. Goals for Utilization of Emerging Investment Managers and MWDBE Managers

Beginning January 1, 2016, the Illinois Pension Code, in 40 ILCS 5/1-109.1, established aspirational goals of 20% for pension funds, with respect to assets under management by Emerging Investment Managers and the percentage number of MWDBE Managers.

In December of 2019, the Board (subject to its fiduciary responsibility) established goals for the percent of assets under management for MWDBE managers, Emerging Investment Managers as defined by Illinois statute, the percent of fees paid to MWDBE managers, and the percent of managers that are MWDBE. Furthermore, with the intent of having MWDBE Managers significantly represented in each broad Asset Class and not concentrated in any particular Asset Class, the Board has established additional goals for emerging managers in each asset class.

A summary of the Board's goals is set forth in [Exhibit 6Appendix](#). These goals shall be reviewed annually.

2. Goals for Utilization of Minority-Owned Broker/Dealers

The Board has set minimum expectations for the use of qualified Broker/Dealers that meet the definition of a minority-owned business, ~~female~~woman-owned business or a business owned by a person with a disability ("Minority-owned Broker/Dealer") by the System's Managers. Only trades executed directly with Minority-owned Broker/Dealers will be considered in the achievement of these goals.

Goals for Minority-owned Broker/Dealer Utilization have been established for the various public equity and fixed income classes as set forth in [Exhibit Appendix-7](#). SURS seeks to have its Managers consistently meet or exceed these goals, while achieving best execution.

In order to achieve the goals, minimum expectations have been established for individual Managers within a number of Sub-Asset Classes. Subject to best

execution, SURS requires its Managers to meet the minimum expectations set forth in [ExhibitAppendix 7](#) for each rolling twelve (12) month period.

Reporting Guidelines

Each Manager will submit a compliance report within 30 days after March 31, June 30, September 30, and December 31 of each year. Reporting will be monitored over a rolling twelve-month period.

Consequences of Non-Compliance

Repeated failure to meet Minority-owned Broker/Dealer Utilization Goals will lead to the following:

- 1) Staff notification to the non-compliant Manager;
- 2) Staff examination of reasons for non-compliance;
- 3) Invitation to the non-compliant Manager to appear before Staff and/or the Board; and
- 4) Remediation plan acceptable to the Staff or recommendation to the Board to Terminate.

3. Manager Diversity Program

Program Description

SURS has implemented a Manager Diversity Program (“MDP”) to identify highly successful MWDBE firms. The process used for selection of investment managers is set forth in the [Policy No. 6.3, SURS Investment Procurement Policy](#). Manager Benchmarks are identified in the Manager Guidelines for each Manager in the program. ~~Benchmarks for the MDP for each applicable Asset Class are the same as those set forth in the applicable Appendix. Managers in the MDP will be evaluated in the same manner as that set forth in Section VII (‘Selection and Retention’). Termination decisions will follow the guidelines set forth in Section VIII (‘Investment Manager Termination Guidelines’). An evaluation of each Manager shall be conducted annually.~~

4. Manager-of-Managers Program

Program Description

SURS utilizes a “Manager-of-Managers” program, overseen by SURS Staff. The program’s primary goal is to identify MWDBE Managers that will be initially

awarded smaller allocations within the program. Staff may recommend, for the Board's approval, one or more Manager-of-Managers to play an active role in identifying emerging MWDBE Managers and maintain an ongoing involvement in the evaluation and performance oversight of such Managers. Staff shall work with the Manager-of-Managers to identify, recruit, and monitor Managers in the program.

Graduation Program

On an annual basis, SURS Staff and the Manager-of-Managers will identify one underlying Manager to be considered for a meaningful, direct allocation. The following factors are considered in determining when an underlying Manager should be awarded a larger allocation in the SURS Portfolio:

- Acceptable measure of performance over a three-to-five-year period;
- Stability in Manager's organization;
- Institutional quality infrastructure;
- Growth in Assets Under Management;
- Confidence in Manager's investment process; and
- Product Fit.

In addition to the factors mentioned above, the needs of the overall SURS investment program will be considered.

Notwithstanding this provision, the Board, in its sole discretion, may decide not to make any award in any given year, if it determines that such an allocation would not be in the best interests of the Members.

Beginning January 1, 2022, if an investment adviser acting in its capacity as an investment manager of a multimanager portfolio made up of emerging investment managers (an "EIM Manager") provides a written recommendation to SURS for its selection or appointment of an emerging investment manager, and such emerging investment manager has been providing investment services in such multimanager portfolio for at least 24 months, then the Board may select or appoint such emerging investment manager as a direct Manager for SURS. Any emerging investment manager appointed pursuant to the immediately preceding sentence shall be disclosed on the SURS website as an appointment per the exception provided in 40 ILCS 5/113.24 to the requirements of 40 ILCS 5/1-113.14 as it currently exists or may be amended (and such disclosure shall include the name of the EIM Manager, a statement that the Board has authorized selection or appointment of such emerging investment manager as a Manager for SURS, and

a brief explanation of the reason such emerging investment manager was selected or appointed as an exception to 40 ILCS 5/1-113.14.

L. Reporting and Other Compliance Requirements

1. Compliance Reporting

a. Website

1. Investment Information Report (30 ILCS 237/10) must be posted to SURS website by the 15th of each month, identifying the following:
 - (a) the amount of funds held by SURS on the last day of the preceding month or the average daily balance for the preceding month;
 - (b) the total monthly investment income and yield for all funds invested;
 - (c) the asset allocation of the investments;
 - (d) a complete listing all approved depository institutions, commercial paper issuers, and broker-dealers approved to do business with SURS.
2. Procurement Policy (40 ILCS 5/1-113.14(b)) must be posted to SURS website.
3. Investment services contract description (40 ILCS 5/1-113.14 (g)) must be updated on SURS website quarterly
4. Procurement exception (40 ILCS 5/1-113.14) for follow-on commitments with the same fund sponsor must be posted to SURS website.
5. The retirement system shall develop uniform documents (40 ILCS 5/1-113.14 (f)) that shall be used for the solicitation, review, and acceptance of all investment services, and shall contain all the terms contained in 40 ILCS 5/1-113.14(c).
6. A description of every contract for qualified fund-of-fund management (40 ILCS 5/1-113.15) must be posted, in a conspicuous manner, on SURS' website, and should include

the name of the fund-of-funds, the name of its investment adviser, the total investment commitment of the retirement system, pension fund, or investment board to invest in such fund-of-funds, and a disclosure approved by the Board describing the factors that contributed to the investment in such fund-of-funds.

7. To contribute to Investment Transparency (40 ILCS 5/1-113.16), SURS shall maintain an official website and make available in a clear and conspicuous manner, and update at least quarterly, all of the following information concerning the investment of funds:

- (a) The total amount of funds held by the retirement system.
- (b) The asset allocation for the investments made by the retirement system.
- (c) Current and historic return information.
- (d) A detailed listing of the investment advisers for all asset classes.
- (e) Performance of investments compared against established benchmarks.
- (f) A detailed list of all consultants doing business with the retirement system.
- (g) A detailed list of all contractors, other than investment advisers and consultants, doing business with the retirement system.
- (h) Any requests for investment services.
- (i) The names and email addresses of all board members, directors, and senior staff.
- (j) The report required under Section 1-109.1 of the Code (Annual Report to the Governor).
- (k) The description of each contract required under subsection (g) of Section 1-113.14 of the Code.

8. All exceptions to 40 ILCS 5/1-113.14 granted under the Procurement exception for contracts with emerging investment managers through a qualified manager of emerging managers must

be published on the SURS' website, and naming the person authorizing the procurement and a brief explanation of the reason for the exception, 40 ILCS 5/1-113.24.

b. Report Submissions

1. The retirement system shall provide by April 1 (40 ILCS 5/1-110.16 (g)) the Illinois Investment Policy Board with information regarding investments sold, redeemed, divested, or withdrawn.
2. Investment Policy (40 ILCS 5/113.17) must be filed with the Illinois Department of Insurance within 30 days of an update
3. An Economic Opportunity Investments report that identifies the economic opportunity investments made by the fund, the primary location of the business or project, the percentage of the fund's assets in economic opportunity investments, and the actions that the fund has undertaken to increase the use of economic opportunity investments. (40 ILCS 5/1A-108.5) shall be submitted by September 1 to the Governor and the General Assembly
4. SURS must submit a Report to the Governor and General Assembly by January 1 (40 ILCS 5/1-109.1) regarding Emerging Investment Managers

c. Reports Received

1. Diversity disclosure (40 ILCS 5/1-113.21) - No contract for investment services, consulting services, or commitment to a private market fund shall be awarded unless the investment advisor, consultant, or private market fund first discloses: the number of its investment and senior staff, and the percentage of its investment and senior staff who are (i) a minority person, (ii) a woman, and (iii) a person with a disability; and the number of contracts, oral or written, for investment services, consulting services, and professional and artistic services that the investment advisor, consultant, or private market fund has with (i) a minority-owned business, (ii) a women-owned business, or (iii) a business owned by a person with a disability; and the number of contracts, oral or written, for investment services, consulting services, and professional and artistic services the investment advisor, consultant, or private market fund has with a business other than (i) a minority-owned business, (ii) a women-owned

business or (iii) a business owned by a person with a disability, if more than 50% of services performed pursuant to the contract are performed by (i) a minority person, (ii) a woman, and (iii) a person with a disability.~~without an appropriate disclosure.~~

2. Consultant Disclosures to the Board are required no later than January 1, as follow:

(a) 40 ILCS 5/1-113.22 – specified manager search information shall be disclosed~~manager search information~~

(b) 40 ILCS 5/1-113.23 - compensation and economic opportunity received in the prior 24-month period

3. An Illinois finance entity (40 ILCS 5/1-110.10) must annually certify that it complies with the requirements of the High-Risk Home Loan Act and the rules adopted pursuant to that Act that are applicable to that Illinois finance entity. Certification must be completed before the retirement system may invest or deposit assets. -The certification must be submitted to the Public Pension Division of the Department of Financial and Professional Regulation .

2. Investment Reporting

a. Per 40 ILCS 5/1-111, Ten Per Cent Limitation of Employer Securities, (40 ILCS 5/1-111) A a plan may not acquire a security issued by an employer of employees covered by the retirement system, if, immediately after such acquisition, the aggregate fair market value of such employer securities exceedexceed 10 per cent of the fair market value of the assets of the retirement system.

b. Annual Certification of Fiduciary Duty and Insurance - SURS contractual provisions may require managers to annually certify that they are aware of their fiduciary duties, and to provide proof of insurance.

c. Investment Advisors aAnnual submission of ADV Form - Managers are required to publish ADV Forms for registration with SEC; SURS must confirm filing by either receiving copy of ADV or checking and confirming status on SEC website

6. Exhibits

Attached hereto and incorporated herein are the following Exhibits:

- A. Exhibit 1 - System Assumed Rates of Return**
- B. Exhibit 2 - Formal Board Review Schedule**
- C. Exhibit 3 - Manager’s Roles and Responsibilities**
- D. Exhibit 4 - Asset Allocation Policy Mix**
- E. Exhibit 5 - -Benchmarks**
- F. Exhibit 6 - SURS Utilization Goals for Emerging Investment Managers**
- G. Exhibit 7 - SURS Utilization Goal for Minority-Owned Broker/ Dealers**
- H. Exhibit 8 – Manager Utilization Goals for Minority-Owned Broker/Dealers**

7. Staff Approval

Name	
Title	
Signature	
Date	

THIS POLICY WAS APPROVED BY THE SURS BOARD OF TRUSTEES

on _____.

Exhibit A Glossary of Terms

Active Management means the style of fund management whereby Managers attempt to outperform a given Benchmark, after fees, through superior security or sector selection, market timing, technical modeling or other active technique.

Active Share means a measure of how the security holdings of a given portfolio differ from the holdings of an index or Benchmark.

Alternative means an investment in an Asset Class, other than public Equities, public Fixed Income and Cash.

Annualized Alpha means a measure of the relationship between a Fund performance and the performance of a Benchmark and equals the excess return where the Benchmark return is zero.

Annualized Return means the return realized over a period of time, expressed as a time-weighted annual percentage.

Appropriation means to set aside money for a specific purpose. A company or a government appropriates funds in order to delegate cash for the necessities of its business operations.

Asset Allocation means an investment portfolio technique that aims to balance risk and create diversification by dividing assets among major Asset Classes, such as Equities, Fixed Income, Cash and Alternatives.

Asset Class means a group of securities that exhibits similar characteristics, behaves similarly in the marketplace and is subject to the same laws and regulations. Major Asset Classes include Equities, Fixed Income, Cash and Alternatives.

Asset Class Percentage means, with respect to the Strategic Policy Target, Interim Policy Target or Policy Portfolio, the percentage that a given Asset Class represents of the total.

Asset/Liability Position means a measurement, as of a point in time, of the System's ability to meet its future obligations with available assets and future cash inflows.

Asset/Liability Study means an analysis of the System's available assets and future cash flow (including Appropriations) and its ability to meet current and future Member benefits and other System obligations.

Assets Under Management means the market value of assets that a Manager manages on behalf of investors.



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~~**Assumed Rate of Return** means the Expected Rate of Return adopted by the Board as one of the actuarial assumptions used to determine the System's net pension liability in accordance with GASB Statement No. 67.~~

~~**Board** means the SURS Board of Trustees.~~

~~**Broker/Dealer** means a firm in the business of buying and selling securities that may act as either an agent or a principal in a transaction.~~

~~**Benchmark** means a standard against which the performance of a Manager can be measured and usually consists of a market index or market segment index representative of a Manager's investment style.~~

~~**Beta** means a measure of volatility, or systematic risk, of a security or portfolio in comparison to the market as a whole.~~

~~**Calendar Year Returns** means trailing period returns ending on the last day of the calendar year.~~

~~**Cash Flow** means the net amount of cash moving into and out of an account or an entity.~~

~~**Cash Overlay Manager** means a Manager that is used to minimize an unintended cash position in a portfolio or to transition a portfolio in need of Rebalancing.~~

~~**Cash Overlay Services** means various financial techniques such as Futures and Options to achieve a given overlay strategy.~~

~~**Chief Investment Officer or CIO** means the executive position responsible for SURS' investment portfolio.~~

~~**Closed-end Fund** means an investment company that raises a fixed amount of capital, through an initial public offering, by issuing a fixed number of shares.~~

~~**Commingled Fund** means an institutional fund which invests in a portfolio of assets and is funded by pooling the investments of multiple investors.~~

~~**Commodity** means a basic good, most often used as an input into the production of other goods or services.~~

~~**Consultant** means any General Consultant or Special Consultant retained or employed by the Board to perform some or all of the roles set forth in Section IV.~~

~~**Core Fixed Income** means a Sub-Asset Class consisting of Traditional Fixed Income, Core Plus Fixed Income and Unconstrained Fixed Income securities.~~



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~~**Core Plus Fixed Income** means a Sub-Asset Class consisting of Traditional Fixed Income securities plus other instruments such as high yield, global or emerging market debt and asset-backed securities.~~

~~**Core Real Estate** means a Sub-Asset Class consisting of real estate assets that are well located and well leased with strong quality tenants and which provide stable income with low volatility.~~

~~Core Plus Real Estate means a Sub-Asset Class consisting of real estate assets that are well located and may require re-tenanting, re-leasing and/or re-furbishment to increase income. Returns, leverage and volatility may be higher than Core Real Estate.~~

~~**Covariance of Returns** means the measure of the degree to which returns on two risky assets move in tandem, with positive covariance describing two asset returns that move together and negative covariance describing two asset returns that move inversely.~~

~~**Custodian** means an organization that meets the requirements set forth in Section IV.~~

~~**Defined Benefit Plan** means the SURS' Traditional Benefit Package and the Portable Benefit Package that provide retirement, disability, death and survivor benefits to eligible participants and annuitants.~~

~~**Defined Contribution Plan** means the SURS' Self-Managed Plan.~~

~~**Derivative** means a security or contract with a price that is dependent upon, or derived from, one or more underlying assets, financial indices, or other standards of measurement.~~

~~**Direct Real Estate** means a Sub-Asset Class consisting of both Core Real Estate and Non-core Real Estate.~~

~~**Down-Capture Ratio** means the percentage of the market's Downside movement 'captured' or achieved by a Fund.~~

~~**Emerging Investment Manager** means, as defined by 40 ILCS 5/1-109.1(4), "a qualified investment adviser that manages an investment portfolio of at least \$10,000,000 but less than \$10,000,000,000 and is a 'minority owned business', 'female owned business' or 'business owned by a person with a disability' as those terms are defined in the Business Enterprise for Minorities, Women, and Persons with Disabilities Act."~~

~~**Emerging Markets Debt or EMD** means a Sub-Asset Class consisting of Fixed Income securities of emerging market countries.~~

~~**Employee** means a person employed for wages or salary, especially at a nonexecutive level.~~



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~~**Equity** means a stock or other security representing an ownership interest in an entity.~~

~~**Excess Return** means the difference between the Rate of Return on a Fund, Asset Class or the Portfolio and the Rate of Return of the applicable Benchmark, as applicable.~~

~~**Excess Risk-Adjusted Return** means the difference between the Risk-Adjusted Return on a Fund, Asset Class or the Portfolio and the Rate of Return of the applicable Benchmark.~~

~~**Executive Director** means the chief executive officer of SURS.~~

~~**Existing Service Provider** means a Service Provider that is currently under contract with SURS to provide a given investment related service.~~

~~**Expected Rate of Return** means a probability weighted estimate of a range of future rates of return.~~

~~**External Counsel** means a law firm that is engaged by SURS, from time to time, to provide legal services in connection with its investment activities.~~

~~**Farmland** means a Sub-Asset Class of real estate that consists of agricultural land and its related infrastructure.~~

~~**Fixed Income** means, as related to securities, an investment that provides a return in the form of a fixed periodic payment, with the eventual return of principal over time or at maturity.~~

~~**Fund** means a securities portfolio, that may take various legal forms and that is designed to meet various investor requirements.~~

~~**Fund-of-Funds** means a multi-manager investment, in which a single Manager manages a fund that invests in multiple underlying funds, each managed by a separate Manager.~~

~~**Fund-of-One** means an investment structure where an investor is the sole investor in a specific fund or vehicle.~~

~~**Future** means a legal agreement to buy or sell a Commodity or financial instrument at a predetermined price at a specified time in the future.~~

~~**General Consultant** means an investment advisor hired by the Board to provide a broad range of investment advice.~~

~~**General Counsel** means the chief legal officer of SURS.~~

~~**Hedged Strategies** means the range of Hedge Fund styles included in the Portfolio.~~



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~~**Hedge Fund** means an Alternative investment designed either to generate above market returns (through Active Management) or more moderate returns (with a reduction in downside risk), while generating low correlation with other Asset Classes.~~

~~**Hedge Fund of Funds** means a Fund-of-Fund structure with Hedge Funds as the underlying funds.~~

~~**Illinois Compiled Statutes** means the codified statutes of a general and permanent nature of Illinois. The compilation organizes the general Acts of Illinois into 67 chapters arranged within 9 major topic areas.~~

~~**Illinois Pension Code** means a Code that determines how pension funds in Illinois operate. The Pension Code also administers pension funds benefit plans.~~

~~**Information Ratio** means a measure of the degree to which a Fund has outperformed its Benchmark to the consistency by which the Fund has outperformed the Benchmark, defined as the Fund's Excess Return (relative to its Benchmark) divided by the Fund's Tracking Error.~~

~~**Infrastructure** means the physical structures, networks and other facilities that provide services essential to economic productivity, including transportation, communication, power (including renewables), midstream, utilities and social assets such as schools, hospitals and public buildings.~~

~~**Interim Policy Target** means the intermediate Target Allocation Percentages for each Asset Class, reflecting the necessity of a gradual shift of assets to the Strategic Policy Target, due to practical implementation considerations and Liquidity constraints.~~

~~**Investment Committee** means a committee consisting of all of the members of the Board and exercising the authority of the Board in the development of investment strategies and the review of prospective investments with the goal of supporting the System in prudent investment and expenditure of System assets.~~

~~**Investment Management Agreement** means the legal contract between SURS and a Manager, setting forth the duties and obligations of the parties with respect to the Manager's investment management engagement.~~

~~**Investment Manager Termination Guidelines** means those guidelines set forth in Section IX.~~

~~**Investment Risk Management Policy** means the policy set forth in Section VI.~~

~~**Liquidity** means the degree to which an asset or security can be quickly bought or sold in the market for cash, without affecting the asset's or security's price.~~

~~**Liquidity Premium** means a premium demanded by investors to invest in a security that is considered to be illiquid and not easily converted to cash without a loss in value.~~



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~~**Long Only** means an investment style where assets represent only Long Positions.~~

~~**Long Position** means a holding of assets, whereby the value of such position will rise if the price of the security increases.~~

~~**Long/Short** means an investment style that allows for both Long Positions and Short Positions, where the value of 'short positions' rise when the price of the security falls.~~

~~**Marketable Securities** means securities that may be bought or sold, typically on a public exchange, and quickly converted to cash.~~

~~**Manager** means an external investment manager that manages a given portfolio of securities on behalf of SURS under an Investment Management Agreement and pursuant to Manager Guidelines.~~

~~**Manager Diversity Program or MDP** means a program to support Emerging Investment Managers in their early stages of development.~~

~~**Manager Evaluation Report** means a report documenting the annual evaluation of a Manager by the Consultant and Staff, including recommended action to the Board.~~

~~**Manager Guidelines** means a set of investment guidelines that governs a Manager's investment activities.~~

~~**Manager Termination Guidelines** means the set of guidelines set forth in Section IX of this Policy.~~

~~**Member** means an individual that is eligible under the Defined Benefit Plan to receive retirement, disability, death, or refund benefits as authorized under the Illinois Compiled Statutes.~~

~~**MWDBE** means a minority-owned business, a women-owned business or a business owned by a person with a disability as those terms are defined in the Business Enterprise for Minorities, Women and Persons with Disabilities Act.~~

~~**MWDBE Manager Utilization Goals** means those goals, as revised from time to time, set forth in Appendix 8.~~

~~**Minority-owned Broker/Dealer** means, in accordance with 40 ILCS 5/1-109.1, a qualified broker-dealer who meets the definition of 'minority owned business', 'women owned business', or 'business owned by a person with a disability', as those terms are defined in the Business Enterprise for Minorities Women, and Persons with Disabilities Act."~~

~~**Non-Core Real Estate** means a Sub-Asset Class consisting of real estate assets in need of re-tenanting, redevelopment or renovation, or is otherwise in some form of distress.~~



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~~**Open-end Fund** means a Fund that does not have any restrictions on the amount of shares it can issue and that can issue and redeem shares at any time.~~

~~**Opportunity Fund** means an Asset Class consisting of investments that are opportunistic in nature and may or may not transition into a more permanent Asset Class.~~

~~**Option** means a contract between a buyer and a seller that gives the buyer the right, but not the obligation, to buy or sell a particular asset at a later date and at an agreed upon price.~~

~~**Passive Management** means a management style that attempts to replicate a market index or Benchmark.~~

~~**Performance Evaluation** means a measurement of a Manager, Asset Class or the total Portfolio versus various standards of performance.~~

~~**Performance Statistics** means analytical tools such as the Sharpe Ratio, Information Ratio, Annualized Alpha, Treynor Ratio, Sortino Ratio, Up Market Capture and Down Market Capture.~~

~~**Portfolio** means the investment portfolio of the Defined Benefit Plan.~~

~~**Portable Benefit Package** means one of two packages offered under SURS' Defined Benefit Plan that offers a more generous separation refund in exchange for a reduction in retirement and death benefits.~~

~~**Potential Consultant** means a Consultant that is being considered for selection by SURS.~~

~~**Potential Custodian** means a Custodian that is being considered for selection by SURS.~~

~~**Potential Manager** means a Manager that is being considered for selection by SURS.~~

~~**Potential Vendor** means a Vendor that has been previously vetted and/or approved.~~

~~**Potential Service Provider** means a Service Provider that is being considered for selection by SURS.~~

~~**Policy** means this Policy, as amended from time to time.~~

~~**Policy Portfolio** means a portfolio comprised of Asset Class Benchmarks, reflecting a passive implementation of SURS Strategic Policy Target, as amended from time to time.~~

~~**Private Equity** means equity investments in private companies, either directly or through buyouts of public companies that result in a delisting of public Equity.~~



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~~**Qualified Fund-of-Fund Management Services** means, per 40 ILCS 5/113.15, either (i) the services of an investment adviser acting in its capacity as an investment manager of a Fund-of-Funds or (ii) an investment adviser acting in its capacity as an investment manager of a separate account that is invested on a side-by-side basis in a substantially identical manner to a Fund-of-Funds, in each case pursuant to qualified written agreements.~~

~~**Quarterly Investment Update** means a quarterly report generated by Staff and distributed to Members that summarizes investment results for the System.~~

~~**Quarterly Reporting Period** means a three-month period on a financial calendar that acts as a basis for the reporting of investment performance, earnings, the paying of dividends, etc.~~

~~**Rate of Return** means is a profit on an investment over a period of time, expressed as a proportion of the original investment.~~

~~**Real Assets** is an asset class consisting of equity or debt investments in land, buildings, infrastructure, and natural resources..~~

~~**Rebalancing** means the process of adjusting Asset Class Percentages to bring them back into alignment with Target Allocation Percentages.~~

~~**Rebalancing Manager** means a Manager that is used to facilitate a Rebalancing of the Portfolio.~~

~~**Request For Proposal or RFP** means a formal solicitation for a service or Service Provider, made through a competitive bidding process.~~

~~**Risk-Adjusted Return** means the Annualized Alpha for a Fund or Asset Class.~~

~~**Risk Statistics** means analytical tools such as Standard Deviation, Tracking Error, Beta, R-Squared and Active Share.~~

~~**R-Squared** means the percentage of a Fund's movements that can be explained by movement of the Benchmark.~~

~~**Securities Lending** means the temporary loan of a security from an institutional investor's portfolio to a broker/dealer or dealer bank to support that firm's trading activities. These trading activities include short selling, selling on margin or the satisfaction of some other type of transaction. Loaned securities are generally collateralized, reducing the lender's credit exposure to the borrower. Except for the right to vote proxies, the lender retains entitlement to all the benefits of owning the original securities, including the receipt of dividends and interest.~~



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Separate Account means a privately managed investment account that is designed and managed specifically for an investor.

Service Provider means any Consultant, Manager, Custodian or Vendor.

Sharpe Ratio means a measure of a Fund's return or an Asset Class' return (Fund or Asset Class Rate of Return less the return of the risk-free rate) relative to its risk (Standard Deviation of the Fund or Asset Class).

Short Position means a sale of a borrowed security, whereby the value of such position will rise if the price of the security falls.

Special Consultant means an investment advisor hired by the Board to provide a limited range of services.

Sortino Ratio means a measure of a Fund's return or Asset Class' return (Fund or Asset Class Rate of Return less the return of the risk-free rate) relative to its downside risk (downside deviation of Fund or Asset Class).

Staff means the SURS investment staff.

Standard Deviation means a measure of the dispersion of a set of data from its mean, calculated as the square root of variance.

State Universities Retirement System of Illinois or SURS or System means the pension fund established for the benefit of the staff members and employees of the Illinois state universities, community colleges and certain other state educational and scientific agencies, and the survivors, dependents, and other beneficiaries of those employees.

Strategic Plan means SURS' process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy

Strategic Objectives mean the objectives listed in Section II, as amended from time to time.

Strategic Policy Target means the total of all approved Target Allocation Percentages.

Sub-Asset Class means a subset of an Asset Class that shares common characteristics with both the Asset Class and such subset.

Swap means a Derivative contract through which two parties exchange financial obligations.

Target Allocation Percentage means the target percentage of each major Asset Class in the Strategic Policy Target.

Termination means the cancellation of a contract and related obligations.



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~~**Timberland** means a Sub-Asset Class of Real Assets that consists of forestland and its related infrastructure.~~

~~**Tracking Error** means, with respect to a security investment, the Standard Deviation of the Excess Return.~~

~~**Trade Order Entry System** means a web-based program provided by the System's custodian, Northern Trust, to transfer cash from SURS to an external manager.~~

~~**Traditional Benefit Package** means one of two packages offered under SURS' Defined Benefit Plan that offers lifetime retirement benefits, but a limited separation refund.~~

~~**Traditional Fixed Income** means a Sub-Asset Class consisting generally of investment-grade, Fixed Income securities.~~

~~**Trailing Period** means the prior period (months, quarters, years) ending on the date being used for a given analysis.~~

~~**Transition Manager** means a Manager that helps transition a portfolio of securities necessitated by the change in a Manager's funding mandate, a Manager's termination or changes in Asset Allocation.~~

~~**Treasury Inflation Protected Securities or TIPS** means a Treasury security that is indexed to inflation.~~

~~**Treynor Ratio** means a measure of a Fund's return or an Asset Class' return (Fund or Asset Class Rate of Return less the return of the risk-free rate) relative to its risk (Beta of the Fund or Asset Class).~~

~~**Up Capture Ratio** means the percentage of the market's upside movement 'captured' or achieved by a Fund.~~

~~**Unconstrained Fixed Income** means a Sub-Asset Class consisting of Fixed Income securities that would tend to vary from those typically found in Core Fixed Income or Core Plus Fixed Income.~~

~~**Utilization Goals** means the percentage of the total Portfolio or volume of business activity that is to be represented by a specific subset of the Portfolio.~~

~~**Variance** means a measurement of the spread of a set of numbers from the mean of the data set.~~

~~**Vendor** means a supplier of goods or services.~~

~~**Volatility of Return** means a statistical measure of dispersion of returns for a given security, Asset Class or portfolio.~~



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~~**Weighted Expected Rate of Return** means a probability-weighted estimate of a range of future rates of return for a portfolio, with the estimate weighted by the component investments or Asset Classes of the portfolio.~~



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Appendix 1 EXHIBIT 1

System Assumed Rates of Return

Valuation Date	Investment Return Assumption
Prior to June 30, 2010	8.50%
June 30, 2010 through June 30, 2013	7.75%
June 30, 2014 through June 30, 2017	7.25%
June 30, 2018 through June 30, 2020	6.75%
June 30, 2021 and after	6.50%



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Appendix 2 EXHIBIT 2

Formal Board Review

<i>Formal Review Agenda Item</i>	<i>Formal Review Schedule</i>
Total Fund Performance	At least quarterly
Asset Allocation	At least annually
Investment Policy	At least annually
Manager Performance Evaluation	At least annually



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Appendix 3 EXHIBIT 3

Managers' Roles and Responsibilities

1. Selection, purchase and sale of specific securities or investments, within the parameters specified by Staff and Consultants and in adherence to this Policy;
2. Construction and management of investment portfolios that are consistent with their specific Manager Guidelines;
3. Providing performance reporting to the Staff at intervals specified by Staff and sufficient to meet the requirements set forth in this Policy Section X;
4. On an annual basis, as applicable, providing Staff with proof of insurance coverage in an amount and type specified in their Investment Management Agreement;
5. On an annual basis, as applicable, certifying in writing to Staff that they remain a fiduciary to the System and that they have been in compliance with the Manager Guidelines during the past year;
6. Utilizing investment strategies designed to ensure that all securities transactions are executed in such a manner that the total explicit and implicit costs and total proceeds in every transaction are the most favorable under the circumstances;
7. Complying with all applicable laws and regulations, including those of the State of Illinois and the United States of America including, without limitation, the provisions of Rule 206(4)5 under the Investment Advisers Act of 1940, as amended.



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Appendix 4 EXHIBIT 4

Asset Allocation Policy Mix

	Strategic Policy Target as of <u>2/289/1/22</u>		Long-Term Strategic Policy Target
<u>Broad Growth</u>	<u>68%</u>	<u>Broad Growth</u>	<u>68%</u>
<u>Traditional Growth</u>	38 <u>37%</u>	<u>Traditional Growth</u>	<u>35%</u>
US Equity		US Equity	
Non-US Equity		Non-US Equity	
Global Equity		Global Equity	
<u>Stabilized Growth</u>	<u>17%</u>	<u>Stabilized Growth</u>	<u>17%</u>
Core Real Assets*	4.56 <u>4.56%</u>	Core Real Assets*	<u>8%</u>
Options Strategies	2.5 <u>2.5%</u>	Options Strategies	<u>2%</u>
Liquid Credit**	98 <u>98%</u>	Liquid Credit**	<u>2%</u>
Private Credit	<u>1%</u>	Private Credit	<u>5%</u>
<u>Non-Traditional Growth</u>	134 <u>134%</u>	<u>Non-Traditional Growth</u>	<u>16%</u>
Private Equity	110.5 <u>110.5%</u>	Private Equity	<u>11%</u>
Non-Core Real Assets	2.53 <u>2.53%</u>	Non-Core Real Assets	<u>5%</u>
<u>Inflation Sensitive</u>	<u>5%</u>	<u>Inflation Sensitive</u>	<u>5%</u>
TIPS	<u>5%</u>	TIPS	<u>5%</u>
<u>Principal Protection</u>	<u>8%</u>	<u>Principal Protection</u>	<u>8%</u>
<u>CRO</u>	<u>19%</u>	<u>CRO</u>	<u>19%</u>
Long Duration	42 <u>42%</u>	Long Duration	24 <u>24%</u>
Long Volatility	1.7 <u>1.7%</u>	Long Volatility	1.7 <u>1.7%</u>
Tail Risk	0.3 <u>0.3%</u>	Tail Risk	0.3 <u>0.3%</u>
Trend Following	<u>10%</u>	Trend Following	<u>10%</u>
Alt. Risk Premia	<u>5%</u>	Alt. Risk Premia	<u>5%</u>
Opportunity Fund	<u>0%</u>	Opportunity Fund	<u>0%</u>
<u>Total</u>	<u>100%</u>	<u>Total</u>	<u>100%</u>

*Includes Real Assets and Infrastructure investments.

**Liquid Credit includes EMD, HY, Loans, Invest. Grade, and other income-driven strategies.

1. No Open-end Fund may represent more than 30% of Core/Core-Plus Real Estate portfolio.
2. No Non-Core Real Estate Fund may represent more than 10% of the Non-Core Fund commitments.
3. No single manager may represent more than 40% of the combined Real Asset target allocation
4. Allocation to the Opportunity Fund class may not exceed 5%.



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EXHIBIT 5:

Benchmarks

ASSET CLASS POLICY MIX	BENCHMARK	
Total Broad GrowthAggregate	Blend of Blends	
Traditional Growth	MSCI ACWI IMI	
U.S. Equity	Dow Jones U. S. Total Stock Market Index	
Non-U.S. Equity	MSCI ACWI Ex-US IMI	
Global Equity	MSCI ACWI IMI	
Stabilized Growth	Blend	
Real Assets	Blend	
Core/Core-Plus Real Estate	NFI-ODCE Value Weight Net	
Core/Core-Plus Infrastructure	FTSE Developed Core Infrastructure 50/50 Index	
Options Strategies	Blend of two Benchmarks: Bench 1: 22.5% CBOE S&P 500 PutWrite / 22.5% CBOE S&P 500 BuyWrite / 2.5% Russell 2000 PutWrite / 2.5% Russell 2000 BuyWrite / 5% MSCI EM PutWrite / 5% MSCI EM BuyWrite / 20% MSCI EAFE PutWrite / 20% MSCI EAFE BuyWrite Bench 2: CBOE S&P 500 PutWrite	
Total Public Credit	25%IG+30%HY+30%EMD+15%BL Blend	
Investment Grade	BB Global Agg Corporate Index	
High Yield	ICE/BoA Global HY Constrained	
Emerging Market Debt (EMD)	50% JPM EM Bond Index - Global Diversified + 50% JPM Corp. EM Bond Index - Broad	
Bank Loans	S&P U.S. LSTA Leveraged Loan	
Private Credit	50% ICE/BofA Global HY Constrained +50% S&P LSTA Global Leveraged Loan + 1%	
Non-Traditional Growth	Blend	
Private Equity	MSCI ACWI IMI+2.0% Secondary Benchmarks may include: peer group comparison, return multiple or public market equivalent comparisons.	
Non-Core Real Estate	NFI-ODCE Value Weight Net+1.5%	
Farmland	NCREIF Farmland Property Index	
Timberland	NCREIF Timberland Property Index	
Non-Core Infrastructure	Measured by stated- strategy target	
Total Inflation Sensitive	Blend	
TIPS	Barclays Capital U.S. TIPS Index	
Principal Protection	Bloomberg Barclays Intermediate Agg. Ex Credit	
Total Crisis Risk Offset	35%LD+35%STF+30%ARP Blend	
Long Duration	BB Long Government Index	
Long Volatility/Tail Risk*	CBOE EurekaHedge Long Volatility Index	
Systematic Trend Following	CS Managed Futures (15%Vol)	
Alternative Risk Premia	90 Day Treasury Bills + 2.0%	
Grand Total	Policy Portfolio	

*The SURS Tail Risk program is implemented in an overlay/notional fashion and does not have a specific weight in the Total Portfolio benchmark. The 0.3% target allocation (as a % of the Total



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Portfolio) has been added to the 1.7% target allocation for Long Volatility for the purposes of the blended benchmarks



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Appendix 6 EXHIBIT 6

SURS Utilization Goals for Emerging Investment Managers

<u>Asset Class</u>	<u>Goal for Minorities</u>	<u>Goal for Non-Minority Women</u>	<u>Goal for Persons with a Disability</u>	<u>Overall Goal</u>
Equities	16%	8%	1%	25%
Fixed Income *	16%	8%	1%	25%
Alternative Investments**	10%	9%	1%	20%
Total Fund	16%	8%	1%	25%

* Includes allocations to Principal Protection, Credit, TIPS, and Long Duration

**Includes private markets, options, alternative risk premia, and trend following strategies

SURS Utilization Goals for Minority Investment Managers

	<u>Minorities</u>	<u>Non-Minority Women</u>	<u>Persons with a Disability</u>	<u>Overall Goal</u>
Total Fund Goal	20%	14%	1%	35%

<u>Group</u>	<u>Goal</u>
MWDBE Manager Count	Not less than 35% of Managers
MWDBE Manager Fees	Not less than 25% of Total Fees



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Appendix 7 EXHIBIT 7

Manager⁽¹⁾ Utilization Goals for Minority-owned Broker/Dealers

<u>ASSET CLASS</u>	<u>MINIMUM EXPECTATION</u>	<u>ELIGIBLE TRADE VOLUME</u>	<u>ELIGIBLE COMMISSIONS</u>
Equity			
U.S. Equity	35%		X (1)(2)
Non-U.S. Equity	25%		X (1)(2)(3)
Global Equity	22%		X (1)(2)(3)
Fixed Income			
Principal Protection, TIPS, and Long Duration	35%	X(1)(2)(3)	
Credit	5%	X(1)(2)(3)	

(1) Separate account managers.

(2) Exception for electronic trading.

(3) Exception for emerging markets, as defined by Morgan Stanley Capital International.



OFFICIAL POLICY

Investment Procurement Policy

Policy Register Part: VI – Investments		Policy Number: <u>6.3</u>
Approval Authority: Board of Trustees		Originating Department: Investments Responsible Executive Staff Member: Chief Investment Officer
Version:	Effective Date:	Description of Changes and Link(s) to Earlier Version(s):
1	March 9, 2018	N/A – Original
2	March 8, 2019	<u>Clarified that the Quiet Period applies to RFP process, reorganized existing language regarding specialty consultants, and clarified that specialty consultant is required to satisfy procurement diversity requirements</u>
3	September 13, 2019	<u>Updated procurement exceptions to match Pension Code Section 1-113.14(b) and to clarify staff involvement in strategic allocation and periodic search updates to Board</u>
4	June 5, 2020	<u>Added a new section detailing procurement requirements for Opportunistic Investments</u>

5	January 29, 2021	<u>Amended to permit Staff to authorize Specialty Consultant recommendations for commitments of \$50 million or less, to remove requirement of General Partner presentations of follow-on funds, and to require commitments to new General Partners in excess of \$50 million to be presented to the Investment Committee</u>
<u>6</u>		<u>Formatted into template and amended as follows:</u> <ul style="list-style-type: none"> • <u>In Section 5.A., Applicability of RFP Procedures, added 5.A.1.d and e as allowable exceptions per statute</u> • <u>In section 5.B., deleted 5.B.9 to reflect expansion of definition of investment committee to include entire board</u> • <u>Added language to Section 5.E., Procurement Requirements for Recommendations by Specialty Consultant, to document desire to seek emerging firm representation</u> • <u>In Section 5.E, increased size of mandate coming to the Board from \$50m to \$100m. Same change made to 5.E.2.d related to RFPs with the Specialty Consultant</u> • <u>Added new Section 5.F., Reporting Requirements, to include statutorily and/or internally required actions</u>

1. Policy Statement

This policy (the "Policy") addresses the general procedures of the State Universities Retirement System ("SURS") in soliciting bids and surveying the market for Investment Services ~~(the "Policy")~~. The selection and appointment of firms to provide Investment Services shall be made and awarded in accordance with the Illinois Pension Code (the "Code"), 40 ILCS 5/1-101 et seq.,—and all other relevant authority under the Illinois Compiled Statutes.

2. Departments and/or Staff Positions Required to Comply with Policy:

All Investment Department employees are required to read and comply with this Policy.

3. Directives

Is Policy internal only?	Does Policy Include any reporting requirements for Stoplight Report?	Citation to Statutory Mandates, if applicable
<u>No</u>	<u>Procurement Policy must be posted to SURS website and filed with the Illinois Procurement Policy Board</u>	<u>Pension Code, 40 ILCS 5/1-113.14(b)</u>

4. Definitions

As used in this Policy, the following term(s) shall have the meanings indicated.

- A. **“Board”** - ~~means~~ the Board of Trustees of SURS, or the Investment Committee of the Board exercising the authority of the Board pursuant to the Board’s bylaws, as the context may indicate.
- B. **“Consultant”** - ~~means a~~ Any person or entity retained or employed by the Board to make recommendations in developing an investment strategy, assist with finding appropriate investment advisers or monitor the Board’s investments. “Consultant” does not include discretionary Investment Advisers or non-investment related professionals or professionals offering services that are not directly related to the investment of assets, such as legal counsel, actuary, proxy-voting services, services used to track compliance with legal standards and investment in fund of funds where the Board has no direct contractual relationship with the investment advisers or partnerships. A Consultant must be registered as an investment adviser under the federal Investment Advisers Act of 1940 or as a bank, as defined in the federal Investment Advisers Act of 1940. Included in the definition of a Consultant is a **“Specialty Consultant”**. A “Specialty Consultant” ~~is means~~ a Consultant who specializes in one or more investment areas of expertise and is selected by the Board pursuant to a Request for Proposal (“RFP”) process ~~that specializes in one or more investment areas of expertise~~. Also included in the definition of a Consultant is a **“General Investment Consultant.”** A “General Investment Consultant” ~~is means~~ a Consultant selected by the Board pursuant to an RFP process to provide general investment consulting services, including investment manager search and selection, among other things.
- C. **“Chief Procurement Officer”**- ~~is a~~ An individual designated by SURS to oversee and monitor the procurement process consistent with the requirements of this

Policy, the Code and all other relevant authority under the Illinois Compiled Statutes.

D. ~~“Expenditure” means any investment, expense, or cost relating to Investment Services.~~

DE. ~~“Investment Adviser” is a~~Any person or firm who: (1) is a fiduciary appointed by the Board in accordance with Section 1-109.1 of the Code, 40 ILCS 5/1-109.1; (2) has the power to manage, acquire or dispose of any asset of SURS; (3) has acknowledged in writing that he or she is a fiduciary with respect to SURS; and (4) is either registered as an investment adviser under the federal Investment Advisers Act of 1940 or as a bank, as defined in the federal Investment Advisers Act of 1940, 15 U.S. C. 80b-1 et seq. and 40 ILCS 5/1-113.14(b).

EF. ~~“Investment Services” means s~~Services provided by an Investment Adviser or a Consultant pursuant to Section 1-113.14 of the Code, 40 ILCS 5/1-113.14.

FG. ~~“Opportunistic Investment” means a~~An investment opportunity resulting from dramatic market mispricing due to atypical external forces, which is time-sensitive in nature and would be expected to produce either: 1) risk-adjusted investment returns exceeding those found in more typical market environments or 2) enhanced downside protection of SURS assets.

GH. ~~“Quiet Period” means a~~ A period of time during which an RFP for a potential Consultant, custodian, Investment Adviser or vendor is underway and during which a set of guidelines governs any communication by the Board, Consultant or Staff with such parties.

5. The Policy

A. Applicability of RFP Procedures

1. The RFP procedures in this Policy apply to ~~all Expenditures, including~~ but are not limited to, hiring of Consultants, Investment Advisers, custodians, proxy voting service providers and defined contribution ~~service providers~~recordkeepers, other than:

~~(a.i)~~ sole source procurements,

~~(b.ii)~~ emergency procurements, and

~~(c.iii)~~ at the discretion of the Board, contracts that are nonrenewable and one year or less in duration, so long as the contract has a value of less than \$20,000.00. All exceptions granted under this section must be published on the SURS website, shall name the person authorizing the procurement, and shall include a brief explanation of the reason for the exception, and,

~~d. in the discretion of the pension fund, retirement system, or investment board, contracts for follow-on funds with the same fund sponsor through closed-end funds or limited partnerships.~~

~~e. Procurement exception (40 ILCS 5/1-113.24) for contracts with emerging investment managers provided through a qualified manager of emerging managers~~

2. If in any case an “emerging investment manager” (as such term is defined in the Code) submits an RFP response that meets the requirements for a specific search then the “emerging investment manager” shall receive an invitation to present to the Investment Committee/Board. In the case where multiple “emerging investment managers” meet the criteria of the search, the most qualified firm or firms shall be selected to present to the Investment Committee/Board. ~~Unless specifically waived by the Board, effective July 1, 2018, the following expenditures shall be subject to this Policy as proscribed below:~~

~~a. fund-of-funds investments shall be subject to the procurement requirements of this Policy at least once every five years; and~~

~~b. follow-on funds that are managed in distinct entities from prior investments shall be subject to the procurement requirements of this Policy. For the avoidance of doubt, any follow-on fund recommended by a Specialty Consultant shall be subject to Section 5.E. of this Policy.~~

B. Procurement Procedures and Schedule

The following are the general procurement actions that shall be taken by SURS when considering ~~E~~expenditures procurement actions. SURS shall develop and use uniform documents for the solicitation, review and acceptances of all Investment Services. References to actions by the Staff in this Policy shall mean the Staff in consultation with any applicable Consultant retained by SURS.

1. Staff is authorized to issue RFPs as necessary to implement, or maintain, the strategic policy targets established by the Board.
2. Staff is expected to consult with third parties and potential respondents prior to the proposed RFP as necessary to address any inquiries and encourage participation in the procurement process. Members of the Board may communicate with third parties and potential respondents consistent with applicable law and applicable policy.

3. Following initial due diligence, Staff shall prepare the RFP ~~for the Expenditure~~. The RFP shall contain all information statutorily required, as well as such information as necessary for, or related to, any potential ~~Expenditure~~ procurement action. Staff shall provide the Investment Committee with a tentative timeline for all actions relating to the RFP. Such timeline shall include, but not be limited to, the RFP issuance date, the date all responses are due and the date of the expected final decision. The Quiet Period is initiated with the issuance of an RFP.
4. At a minimum, Staff shall post the RFP on the SURS website, and advertise the RFP in a nationally circulated investment publication and any other publication deemed appropriate by Staff or as required by law. Staff additionally may:
 - ~~(a.i)~~ contact potential respondents in order to notify them of the issuance of the RFP, and,
 - ~~(b.ii)~~ disseminate such RFP to potential respondents.
5. The deadline for submission of proposals shall be not less than fourteen (14) days following the posting of the RFP. RFP responses received by the deadline stated in the RFP shall be recorded and receipted by Staff. Staff shall review and analyze the responses to the RFP as expeditiously as reasonably practical within the RFP specifications. Staff shall verify information submitted and resolve or confirm any discrepancies. Staff will eliminate any response that fails to conform to the minimum qualifications outlined in the RFP. Staff will periodically throughout the procurement process provide an update with respect to the RFP process and include such report in Investment Committee materials.
6. Staff and/or Consultants shall meet or conduct telephone or videoconference interviews with representatives of the respondents selected as semi-finalists by Staff and/or Consultants to obtain an independent assessment of the firm's capabilities.
7. Following the interview process, Staff and/or Consultants shall identify qualified firms to recommend to the Investment Committee for possible engagement by the Board. If in any case an "emerging investment manager" (as such term is defined in the Code) submits an RFP response that meets the requirements for a specific search then the "emerging investment manager" shall receive an invitation to present to the Investment Committee/Board. In the case where multiple "emerging investment managers" meet the criteria of the search, the most qualified firm or firms shall be selected to present to the Investment Committee/Board.
8. Following Staff's and/or Consultant's recommendation, if the amount of the contemplated investment or commitment will exceed \$50-100 million, the

Investment Committee shall interview the respondents recommended or direct that additional respondents be invited for interview. If the contemplated investment or commitment is \$~~50-100~~ million or less, the recommended respondents shall be invited to make final written submissions to the Investment Committee, but live interviews shall not be required unless the Investment Committee so directs. The Investment Committee shall approve a recommendation to the Board for selection of a respondent ~~for the Expenditure~~. The Investment Committee may, in good faith, decline to recommend any respondent following such interviews. The Investment Committee may recommend a recommencement of the RFP process ~~for such potential Expenditure~~ or terminate the search entirely.

~~9. The Board may approve or disapprove the recommendation of the Investment Committee with respect to any proposed Expenditure.~~

~~409.~~ Staff and/or Consultants shall, in conjunction with ~~their~~ legal counsel, negotiate the contract with the approved respondent. If required by the Code, such contract must at a minimum contain the specific requirements found in Section 1-113.14 of the Code, 40 ILCS 5/1-113.14. Staff shall promptly provide a report to the Investment Committee in the event Staff is unable to negotiate contract terms with the approved respondent that meet the requirements of the Code. The Quiet Period concludes with the completion of successful contract negotiations. See also, Section 5.C.7 hereinafter.

~~4410.~~ SURS shall post the name(s) of the successful respondent(s) on SURS' web site, along with a disclosure including the total amount applicable to the contract, the total fees paid or to be paid, and a description of the factors that contributed to the selection of the respondent consistent with the requirements of the Code.

C. Other RFP Requirements

1. The RFP process shall comply with all relevant sections of State and Federal law, including the Pension Code and applicable case law.
2. Fees are an important factor when evaluating procurement for Investment Services and will be given full consideration in the procurement process. If a recommended RFP respondent's fees are materially different from other respondents presenting to the Investment Committee, Staff will include the rationale for considering the higher cost option in supporting materials provided to the Investment Committee.
3. SURS shall not enter into a contract with a Consultant that exceeds five (5) years in duration. No contract to provide consulting services may be

renewed or extended. At the end of the term of a contract, however, the Consultant is eligible to compete for a new contract as permitted in the Code.

4. Any report, documentation, or list compiled or received by Staff or a Consultant relating to an RFP or Expenditure procurement action shall be promptly made available to the Board upon request.
5. Nothing in this Policy is meant to prohibit or discourage any Board Member from being involved in any part of the procurement process; provided that such Board Member provides prior notice of his/her intent to participate to Staff in order to ensure such participation is in compliance with applicable law. It is expected that Staff and consultants shall each provide independent recommendations to the Board regarding all such procurements.
6. No Board member, SURS employee or SURS vendor shall knowingly cause or advise the Board to engage in an investment transaction with a vendor when the Board member, SURS employee, SURS consultant or any of their spouses:
 - (a.i) has any direct interest in the income, gains or profits of the investment vendor through which the investment transaction is made or
 - (b.ii) has a relationship with that investment vendor that would result in a pecuniary benefit to the Board member, SURS employee or SURS vendor or any of their spouses as a result of the investment transaction. References to the "investment vendor" include an employee or agent of such firm who has greater than 7.5% ownership of the consulting firm.
7. Quiet Period Policy
 - a. A Quiet Period will commence upon issuance of an RFP and end once a selection has been made by the Board and ~~the completion of successful~~ contract negotiations with the selected a respondent are completed;
 - b. Initiation, continuation and conclusion of the Quiet Period shall be publicly communicated to prevent inadvertent violations;
 - c. All Board members, and Staff other than those directly involved in the search or the Chief Procurement Officer or their designee, shall refrain from communicating with respondents regarding any product or service related to the search in process. All Board members and

Staff shall refrain from accepting meals, travel, hotel, or other value from such respondents;

- d. Throughout the Quiet Period, if any Board member is contacted by a respondent, the Board member shall refer such party to the Chief Procurement Officer;
- e. All authority related to the search process shall be exercised solely by the Investment Committee or Board as a whole, and not by individual Board members;
- f. The Quiet Period does not prevent Board approved due diligence, client conference attendance or communications with an existing vendor; provided, however, that discussions related to the procurement and pending selection shall be avoided during those activities;
- g. The provisions of this Policy shall apply throughout the Quiet Period and shall be communicated to respondents in conjunction with any search; and
- h. A respondent may be disqualified from a search process for a violation of the Quiet Period or any portion of this Policy.

D. Procurement Requirements for Opportunistic Investments

- 1. The Board will not be required to fulfill the RFP procurement requirements of this Policy ~~when considering for~~ Opportunistic Investments as defined at Section ~~4.F2~~ of this Policy, if the requirements of this Section ~~5.D6~~ are complied with.
- 2. The following are the general procurement requirements for an Opportunistic Investment recommended by any Investment Consultant hired by the Board; provided, however, that any procurement or due diligence requirement in the contract between such Investment Consultant and the Board, and any specific directive from the Board to such Consultant regarding a proposed Opportunistic Investment takes precedence over the general requirements of this Section.
 - a. In recommending any Opportunistic Investment to the Investment Committee/Board for consideration, the Investment Consultant shall develop and utilize a consistent and uniform competitive process for analyzing and vetting potential ~~O~~opportunistic ~~I~~investments that shall be substantially similar to the competitive process outlined in Article

35 of the Illinois Procurement Code, 30 ILCS 500/35-1 et seq. if required by the Code.

- b. The Investment Consultant shall ensure that any potential Opportunistic Investment and its terms are in compliance with the Code and any applicable law, regulation or directive of the Board, including SURS' Investment Policy and approved asset allocation.
- c. The Investment Consultant shall conduct such competitive process in a transparent and streamlined manner to ensure potential Opportunistic Investments are recommended to the Board in a timely manner.
- d. In recommending any Opportunistic Investment to the Investment Committee/Board, the Investment Consultant shall prepare a detailed report for the Investment Committee/Board outlining the utilized competitive process and its due diligence ~~on~~ the potential investment. As part of the recommendation process the Investment Consultant and Staff will secure and review all statutorily required disclosures and provide those disclosures to the Investment Committee/Board for consideration prior to taking action on the recommendation.

E. Procurement Requirements for Recommendations by a Specialty Consultant

1. The Board will not be required to fulfill the RFP procurement requirements of this Policy for ~~a follow-on fund or~~ any investment if ~~the follow-on fund or~~ the investment is specifically recommended by a Specialty Consultant and if such Specialty Consultant has adhered to the procurement requirements specifically outlined in this Policy for a Specialty Consultant in formulating the recommendation.
2. The following are the general procurement requirements for any investment recommended by a Specialty Consultant; provided, however that any procurement or due diligence requirement in the contract between such Specialty Consultant and the Board regarding a proposed investment takes precedence over the general requirements of this Section.
 - a. In recommending any investment to the Investment Committee/Board for consideration, the Specialty Consultant shall develop and utilize a consistent and uniform competitive process for analyzing and vetting potential investments that shall be substantially similar to the competitive process outlined in Article 35 of the Illinois Procurement Code, if required by the Code.

- b. The Specialty Consultant shall ensure that any potential investment and its terms are in compliance with the Code and any applicable law, regulation or directive of the Board, including SURS' Investment Policy and approved asset allocation.
- c. The Specialty Consultant shall conduct such competitive process in a transparent and streamlined manner to ensure the Specialty Consultant is recommending potential investments to the Board in a timely manner. Firms meeting the definition in the Code as an "emerging investment manager" are to be actively sought for potential investment in keeping with SURS' utilization goals.
- ~~If in any case an "emerging investment manager" (as such term is defined in the Code) submits a response that meets the requirements for a specific search then the "emerging investment manager" shall receive an invitation to present to the Investment Committee/Board. In the case where multiple "emerging investment managers" meet the criteria of the search, the most qualified firm or firms shall be selected to present to the Investment Committee/Board.~~
- d. In recommending any investment to the Investment Committee/Board, the Specialty Consultant shall prepare a detailed report for the Investment Committee/Board outlining the utilized competitive process and its due diligence of the potential investment. As part of the recommendation process, the Specialty Consultant and Staff will secure and review all statutorily required disclosures and provide those disclosures to the Investment Committee/Board for consideration prior to taking action on the recommendation. If the contemplated investment or commitment is \$50-100 million or less, the recommended respondents shall be invited to make final written submissions to the Investment Committee, but live interviews shall not be required unless the Investment Committee so directs. The Specialty Consultant can recommend a follow-on fund commitment. The General Partner of any follow-on fund previously ~~recommended by the Specialty Consultant and~~ approved by the Board will not be required to present to the Investment Committee.
- e. Where appropriate, ~~t~~The Specialty Consultant should endeavor to recommend one or more qualified firms to the Investment Committee/Board on a quarterly basis, if consistent with SURS' Investment Policy, asset class pacing plan and approved asset allocation.

F. Reporting and Other Compliance Requirements

1. Must be posted to SURS website
 - a. Procurement Policy (40 ILCS 5/113.14(b))
 - b. Procurement exception (40 ILCS 5/113.14) for follow-on commitments with the same fund sponsor
 - c. Procurement exception (40 ILCS 5/113.24) for contracts with emerging investment managers through a qualified manager of emerging managers
 - d. Diversity disclosure (40 ILCS 5/1-113.21) No contract for investment services, consulting services, or commitment to a private market fund shall be awarded without an appropriate disclosure.

2. Investment Procurement Reporting
 - (1) Per 40 ILCS 5/1-109.1(8) SURS shall submit a report to the Governor and the General Assembly by January 1 of each year that includes the following: (i) the emerging investment manager policy adopted, including the names and addresses of the emerging investment managers used, percentage of the assets under the investment control of emerging investment managers for the 3 separate goals, and the actions undertaken to increase the use of emerging investment managers, including encouraging other investment managers to use emerging investment managers as subcontractors when the opportunity arises; (ii) the policy adopted setting forth goals for increasing the racial, ethnic, and gender diversity of SURS' fiduciaries, including its consultants and senior staff; (iii) the policy setting forth goals for utilization of businesses owned by minorities, women, and persons with disabilities for all contracts and services; (iv) the policy adopted setting forth goals for increasing the utilization of minority broker-dealers, including specific actions undertaken to increase the use of minority broker-dealers; and (v) the policy adopted setting forth goals for increasing the utilization of minority investment managers.
 - (2) Per 40 ILCS 5/1-113.22, no later than January 1 annually, each consultant retained by SURS shall disclose to its board of trustees:

the total number of searches for investment services made by the consultant in the prior calendar year; the total number of searches for investment services made by the consultant in the prior calendar year that included (i) a minority-owned business, (ii) a women-owned business, or (iii) a business owned by a person with a disability; the total number of searches for investment services made by the consultant in the prior calendar year in which the consultant recommended for selection (i) a minority-owned business, (ii) a women-owned business, or (iii) a business owned by a person with a disability; the total number of searches for investment services made by the consultant in the prior calendar year that resulted in the selection of (i) a minority-owned business, (ii) a women-owned business, or (iii) a business owned by a person with a disability; and the total dollar amount of investment made in the previous calendar year with (i) a minority-owned business, (ii) a women-owned business, or (iii) a business owned by a person with a disability that was selected after a search for investment services performed by the consultant.

(3) Per 40 ILCS 5/1-113.23, no later than January 1 annually, a consultant retained SURS shall disclose to its board of trustees all compensation and economic opportunity received in the last 24 months from investment advisors retained by the board of a retirement system, board of a pension fund, or investment board. Additionally, each consultant must be disclosed to the Board any compensation or economic opportunity received in the last 24 months from an investment advisor that is recommended for selection by the consultant. A consultant shall make this disclosure prior to the board selecting an investment advisor for appointment.

5. Exhibits

Attached hereto and incorporated herein are the following Exhibits:

N/A

6. Approval

Name	
Title	

Signature	
Date	

THIS POLICY WAS APPROVED BY THE SURS BOARD OF TRUSTEES

on _____.



1901 Fox Drive, Champaign, IL 61820-7333
 800-275-7877 • 217-378-8800 • (Fax) 217-378-9800
 www.surs.org

Investment Department

To: Investment Committee
 From: Investment Staff
 Date: September 2, 2022
 Re: Corporate Governance Update

Below please find a status update of governance activity since our June meeting.

Proxy Voting Provider

- **Quarterly Report**

This summary report offers quarterly analysis of the top agenda items voted against management, top agenda items voted against Glass Lewis standard policy, shareholder proposal trends, and ballot and proposal statistics reports.

Agenda items voted against Glass Lewis standard policy pertain to topics where SURS guidelines – made up by an overlay of U.S., Public Pension, and International proxy voting guidelines, offer a more restrictive directive.

- SURS voted in favor of female representation on companies' boards, as well as, to limit nominees serving on multiple boards and those serving on more than two total boards for directors who serve as executives of a public company.
- SURS voted against the ratification of an auditor when the auditor's tenure has not changed for 20 years or more.
- SURS voted against compensation plans that do not align pay with performance and do not link compensation to sustainability metrics.

There were 733 shareholder proposals (SHP) during the quarter. The five most common SHPs were:

- **SHP Regarding Election of Board Members(s) During a Contested Election – Dissident Nominee:** SURS generally supports a dissident nominee that plans to enhance and protect shareholder value.
- **SHP Regarding Right to Call a Special Meeting:** SURS voted in support shareholders' ability to call a special meeting that enables them to act on important issues that arise between annual meetings.
- **SHP Regarding Misc. Social Issues:** SURS voted in support of increasing a company's disclosure of social issues.

- **SHP Regarding Reviewing Political Spending or Lobbying:** SURS voted in favor of increased disclosure of a company's political or lobbying expenditures, including alignment of political contributions with company values.
- **SHP Regarding Independent Board Chairman/Separation of Chair and CEO:** SURS voted in support of an independent chair to better oversee the executives and promote a pro-shareholder agenda.

The quarterly report is attached to this memo as Exhibit A.

Council of Institutional Investors (CII)

The CII's 2022 Fall Conference will take place on September 21-23 in Boston, MA. Trustee Mitch Vogel and Ms. Kelly Valle, Investment Officer, will attend the conference in person.

Highlight of conference agenda items:

- Responsible Investment in Residential Real Estate
- Decarbonizing Emerging Markets
- Navigating Global Conflict & Geopolitical Risk: Takeaways for Boards and Investors
- The Public/Private Company Divide on Disclosure
- The Materiality of Labor Rights: Research & Experience from the US and Europe
- Shareholder Advocacy Committee: New Research on Engagement to Mitigate Climate Risks

Trustee attendance to CII conferences is complimentary. A summary of important topics will be presented at the next board meeting. Video of sessions will also be available on the CII website.

Ahead of the Fall meeting, as a member of CII, SURS has been asked to submit votes on various items. CII materials and SURS staff recommendations are attached to this memo as Exhibit B.



EXHIBIT A

TO: State Universities Retirement System (SURS)
FROM: Lucas Swertloff, Manager, Custom Policy
DATE: August 8, 2022
RE: Review of Vote Activity Report for Second Quarter 2022

The Voting Activity Report for the Second Quarter 2022 summarizes Glass Lewis' votes for the State Universities Retirement System of Illinois (SURS), of which we highlighted and analyzed the most frequent occurrences of votes against management, votes against Glass Lewis and shareholder proposal trends.



Top Three Agenda Items Against Management – 2Q2022

Votes against management account for 3,545 of the 27,833 proposals, or 12.74% of the votes. The top categories of votes against management are:

- **Election of Directors** – Votes on the election of directors account for 1,891 of the 3,545 votes against management, or about 53.35% of the votes against management, and 6.80% of the total votes.

The top three reasons for votes against management are:

Insufficient female representation on the board of directors accounts for 548 of the votes against management. The Public Pension policy on this issue is to vote against the male members of the nominating committee in instances where the board is comprised of fewer than 30% female directors for large-cap companies, or against the nominating committee when there is not at least one woman on the board at mid- and small-cap companies.

Nominee is the CEO of a for-profit company and serves on more than two public company boards accounts for 373 of the votes against management. The Public Pension policy on this issue is to vote against a director who serves as an executive of a public company and who serves on more than two total boards.

Nominee sits on more than two public company boards while being an executive of a public company or the nominee sits on more than five public company boards accounts for 345 of the votes against management. The Public Pension policy on this issue is to vote against a director if they are an executive and sit on greater than two public company boards or if they are not an executive and sit on greater than five public company boards.

- **Ratification of Auditor** – Votes on the ratification of auditor account for 605 of the 3,545 votes against management, or about 17.07% of the votes against management, and 2.18% of the total votes.

The top reason for votes against management is:

The auditor's tenure is excessive accounts for 596 of the votes against management. The Public Pension policy on this issue is to vote against auditor ratification proposals in instances where a company's auditor has not been changed for 20 or more years.

- **Advisory Vote on Executive Compensation** – Votes on the advisory vote on executive compensation account for 384 of the 3,545 votes against management, or about 10.84% of the votes against management, and 1.38% of the total votes.

The top three reasons for votes against management are:

Concerning pay practices accounts for 118 of the votes against management. The Public Pension policy on this issue is to follow the Glass Lewis standard approach.

The Company has pay for performance issues and does not link any long-term incentive grant to sustainability metrics accounts for 114 of the votes against management. The Public Pension



policy on this issue is vote against when the compensation plan does not align pay with performance and does not link compensation to sustainability metrics.

Pay and performance disconnect accounts for 91 of the votes against management. The Public Pension policy on this issue is to follow the Glass Lewis standard approach.

Top Three Agenda Items Against Glass Lewis – 2Q2022

Votes against the Glass Lewis standard policy account for 1,723 of the 27,833 proposals, or about 6.20% of the votes. The top categories for votes against the Glass Lewis standard policy are:

- **Election of Directors** – Votes on the election of directors account for 837 of the 1,723 votes against Glass Lewis or about 48.58% of the votes against Glass Lewis and 3.01% of the total votes.

The top three reasons for votes against Glass Lewis are:

Insufficient female representation on the board of directors accounts for 452 of the votes against Glass Lewis. The Public Pension policy on this issue is to vote against the male members of the nominating committee in instances where the board is comprised of fewer than 30% female directors for large-cap companies, or against the nominating committee when there is not at least one woman on the board at mid- and small-cap companies.

The nominee is the CEO of a for-profit company and serves on more than two public company boards accounts for 281 of the votes against Glass Lewis. The Public Pension policy on this issue is to vote against directors serving on more than two total boards, for a director who serves as an executive of a public company.

Nominee sits on more than two public company boards while being an executive of a public company or the nominee sits on more than five public company boards accounts for 214 of the votes against management. The Public Pension policy on this issue is to vote against a director if they are an executive and sit on greater than two public company boards or if they are not an executive and sit on greater than five public company boards.

- **Ratification of Auditor** – Votes on the ratification of auditor account for 593 of the 1,723 votes against Glass Lewis or about 34.42% of the votes against Glass Lewis, and 2.14% of the total votes.

The top reason for votes against Glass Lewis is:

The auditor's tenure is excessive accounts for 592 votes against Glass Lewis. The Public Pension policy on this issue is to vote against auditor ratification proposals in instances where a company's auditor has not been changed for 20 or more years.

- **Advisory Vote on Executive Compensation** – Votes on the advisory vote on executive compensation account for 114 of the 1,723 votes against Glass Lewis or about 6.62% of the votes against Glass Lewis, and 0.41% of the total votes.

The top reason for votes against Glass Lewis is:



The Company has pay for performance issues and does not link any long-term incentive grant to sustainability metrics accounts for all 114 votes against Glass Lewis. The Public Pension policy on this issue is vote against when the compensation plan does not align pay with performance and does not link compensation to sustainability metrics.

Shareholder Proposals - 2Q2022

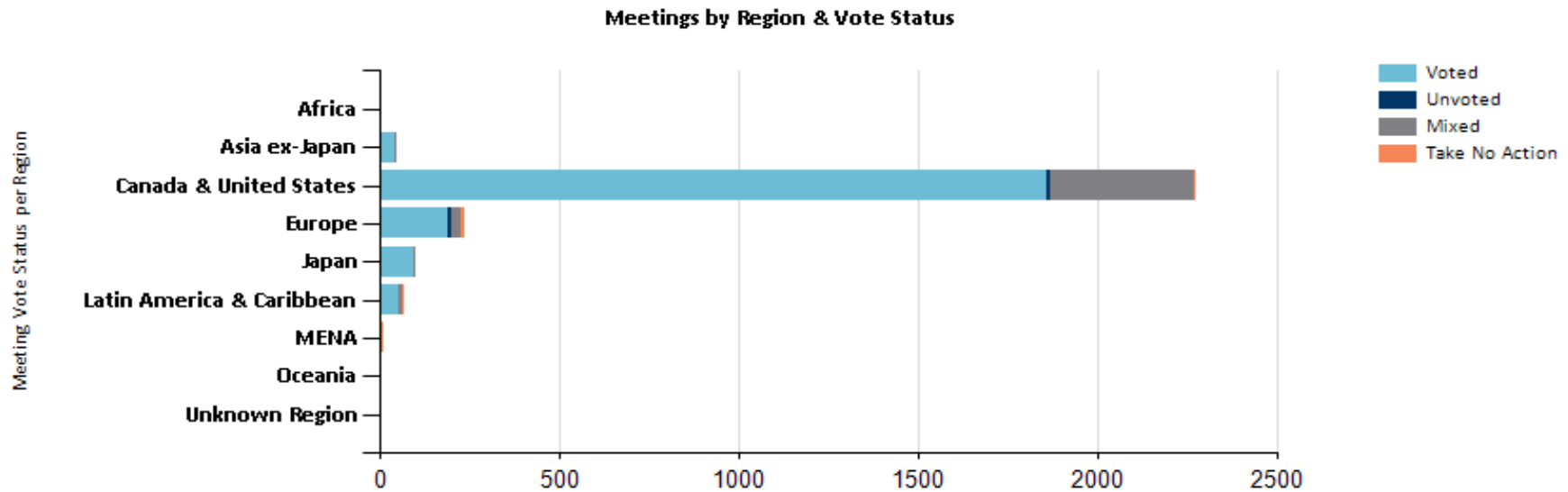
During quarter two there were 733 shareholder proposals (SHPs), accounting for 2.64% of the total proposals. Governance proposals were the most common, accounting for 364 of the 733 SHPs or 49.66% of the SHPs. Overall, SURS voted SHPs against management 271 times, while SURS voted SHPs against Glass Lewis 112 times.

The five most common SHPs are:

- **SHP Regarding Election of Board Member(s) During a Contested Election – Dissident Nominee** – accounts for 115 of the SHPs, or 15.69%. The Public Pension policy follows the Glass Lewis issue on this approach.
- **SHP Regarding Right to Call a Special Meeting** – accounts for 102 of the SHPs or 13.92%. The Public Pension policy supports these proposals since the shareholders' ability to call a special meeting enables them to act on important issues that arise between annual meetings.
- **SHP Regarding Misc. Social Issue** – accounts for 70 of the SHPs or 9.55%. The Public Pension policy will support all social proposals aimed at increasing a company's disclosure or social issues. However, the policy will not support resolutions requesting that companies take specific actions or adopt specific policies.
- **SHP Regarding Reviewing Political Spending or Lobbying** – accounts for 49 of the SHPs or 6.69%. The Public pension policy supports increased disclosure of a company's political or lobbying expenditures, including disclosure of how companies' political contributions align with its corporate values.
- **SHP Regarding Independent Board Chairman/Separation of Chair and CEO** – accounts for 37 of the SHPs or 5.05%. The Public Pension policy supports these proposals because: An independent chair is better able to oversee the executives of a company and set a pro-shareholder agenda.

Meeting Statistics Report

From 4/1/2022 to 6/30/2022

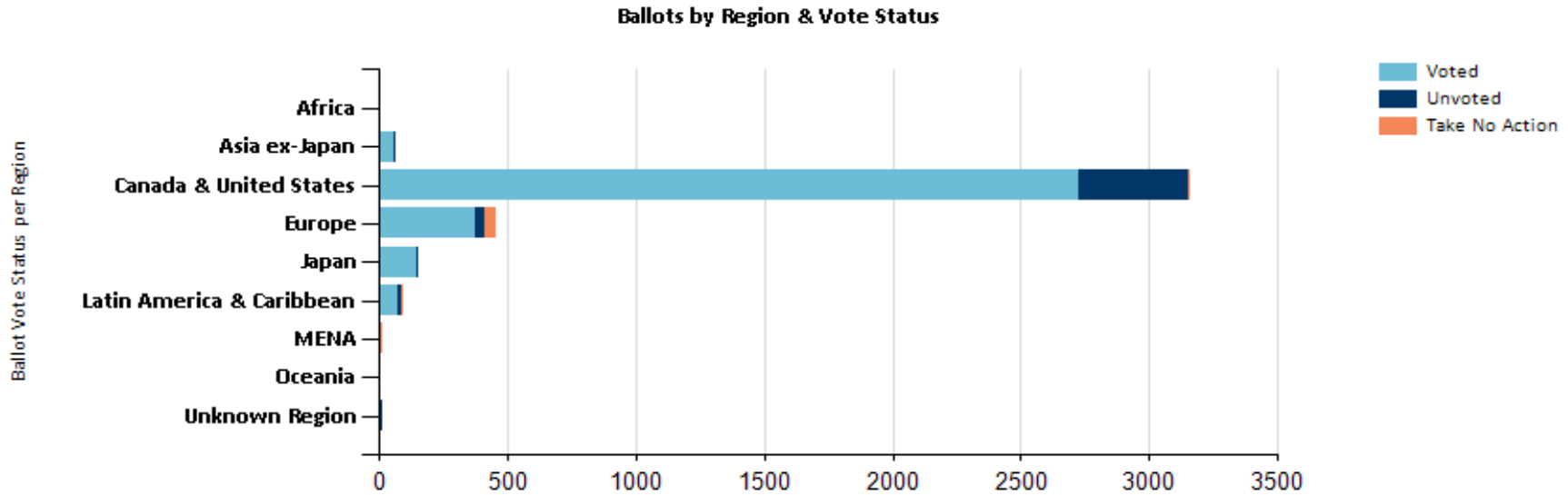


Region	Country Of Origin	Voted	Unvoted	Mixed	Take No Action	Total
Total for all Regions		2235	28	433	19	2715
Africa		3	0	0	0	3
	Liberia	1	0	0	0	1
	South Africa	2	0	0	0	2
Asia ex-Japan		39	0	1	0	40
	China	15	0	0	0	15
	Hong Kong	8	0	1	0	9
	India	1	0	0	0	1
	Singapore	6	0	0	0	6
	Taiwan	8	0	0	0	8
	Thailand	1	0	0	0	1
Canada & United States		1856	13	398	1	2268
	Canada	36	0	1	0	37

	United States	1820	13	397	1	2231
Europe		187	12	23	15	237
	Austria	3	0	0	0	3
	Belgium	7	1	0	0	8
	Denmark	1	0	0	0	1
	Finland	1	0	0	0	1
	France	32	1	6	0	39
	Germany	25	1	4	0	30
	Greece	1	0	0	0	1
	Hungary	0	0	0	2	2
	Ireland	10	1	0	0	11
	ISLE OF MAN	1	0	0	0	1
	Italy	14	1	0	0	15
	Jersey	3	1	0	0	4
	Luxembourg	8	2	0	0	10
	Netherlands	17	0	5	0	22
	Norway	2	1	0	2	5
	Spain	7	0	0	0	7
	Sweden	13	0	0	0	13
	Switzerland	1	2	5	11	19
	United Kingdom	41	1	3	0	45
Japan		94	0	1	0	95
	Japan	94	0	1	0	95
Latin America & Caribbean		48	3	9	1	61
	Bermuda	15	1	1	0	17
	Brazil	15	0	0	1	16
	Cayman Islands	13	0	5	0	18
	Chile	0	1	0	0	1
	Mexico	3	0	0	0	3
	Panama	1	0	0	0	1
	Puerto Rico	0	1	3	0	4
	Virgin Islands (British)	1	0	0	0	1
MENA		3	0	0	2	5
	Egypt	0	0	0	2	2
	Israel	3	0	0	0	3
Oceania		5	0	0	0	5
	Australia	3	0	0	0	3
	Marshall Islands	2	0	0	0	2
Unknown Region		0	0	1	0	1

Ballot Statistics Report

From 4/1/2022 to 6/30/2022



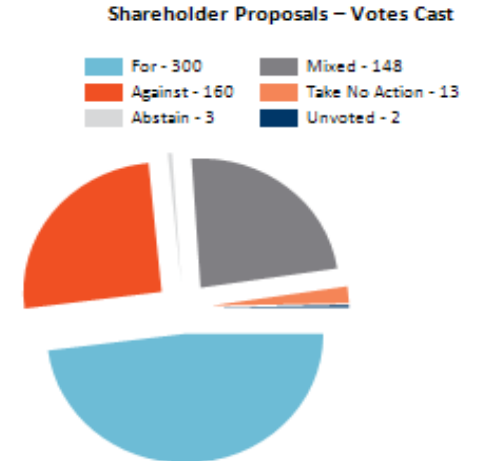
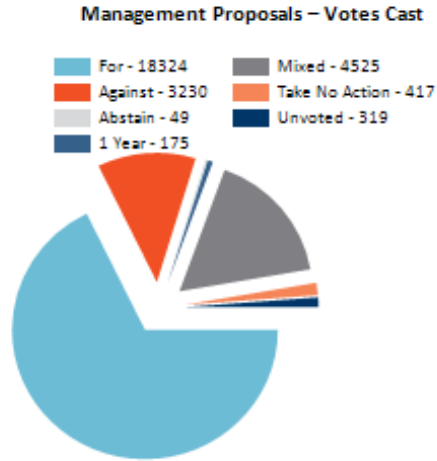
Region	Country Of Origin	Voted	Unvoted	Take No Action	Total
Total for all Regions		3383	486	43	3912
Africa		3	0	0	3
	Liberia	1	0	0	1
	South Africa	2	0	0	2
Asia ex-Japan		53	1	0	54
	China	17	0	0	17
	Hong Kong	13	1	0	14
	India	2	0	0	2
	Singapore	8	0	0	8
	Taiwan	12	0	0	12
	Thailand	1	0	0	1
Canada & United States		2728	428	2	3158
	Canada	40	1	0	41
	United States	2688	427	2	3117
Europe		370	43	38	451
	Austria	5	0	0	5

Belgium	10	1	0	11
Denmark	1	0	0	1
Finland	1	0	0	1
France	79	11	0	90
Germany	50	6	0	56
Greece	2	0	0	2
Hungary	0	0	3	3
Ireland	12	1	0	13
ISLE OF MAN	2	0	0	2
Italy	22	1	0	23
Jersey	4	1	0	5
Luxembourg	10	2	0	12
Netherlands	56	8	0	64
Norway	2	1	4	7
Spain	13	0	0	13
Sweden	19	0	0	19
Switzerland	1	7	31	39
United Kingdom	81	4	0	85
Japan	145	1	0	146
Japan	145	1	0	146
Latin America & Caribbean	73	12	1	86
Bermuda	24	2	0	26
Brazil	15	0	1	16
Cayman Islands	26	5	0	31
Chile	0	1	0	1
Mexico	3	0	0	3
Panama	1	0	0	1
Puerto Rico	3	4	0	7
Virgin Islands (British)	1	0	0	1
MENA	3	0	2	5
Egypt	0	0	2	2
Israel	3	0	0	3
Oceania	5	0	0	5
Australia	3	0	0	3
Marshall Islands	2	0	0	2
Unknown Region	3	1	0	4
Unknown Country	3	1	0	4

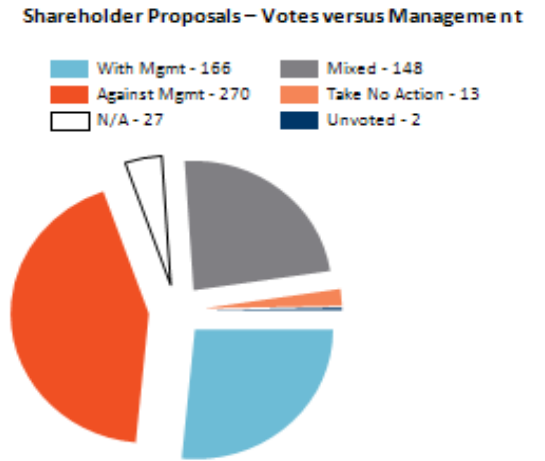
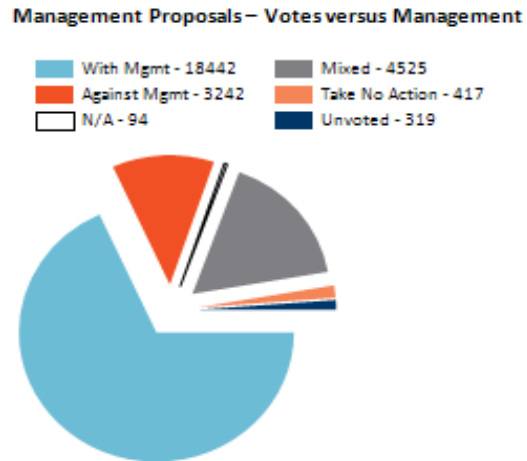
Proposal Statistics Report

From 4/1/2022 to 6/30/2022

	Mgmt Proposals	SHP Proposals	Total Proposals
For	18324	300	18624
Against	3230	160	3390
Abstain	49	3	52
1 Year	175	0	175
2 Years	0	0	0
3 Years	0	0	0
Mixed	4525	148	4673
Take No Action	417	13	430
Unvoted	319	2	321
Totals	27039	626	27665



	Mgmt Proposals	SHP Proposals	Total Proposals
With Management	18442	166	18608
Against Management	3242	270	3512
N/A	94	27	121
Mixed	4525	148	4673
Take No Action	417	13	430
Unvoted	319	2	321
Totals	27039	626	27665

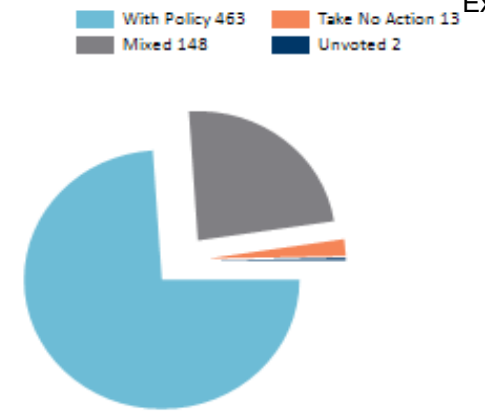
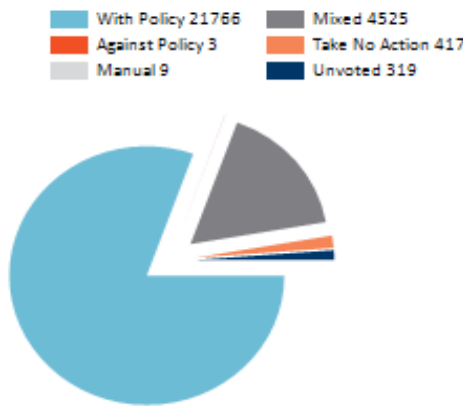


	Mgmt Proposals	SHP Proposals	Total Proposals
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Management Proposals - Votes versus Policy

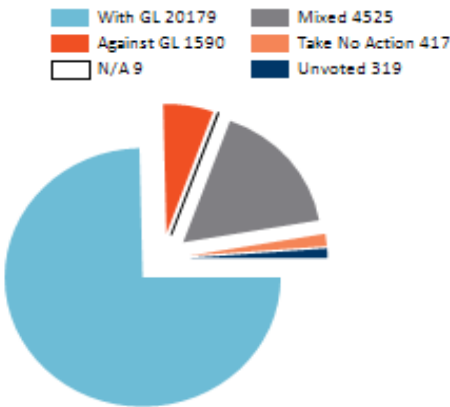
Shareholder Proposals - Votes versus Policy

With Policy	21766	463	22229
Against Policy	3	0	3
Manual	9	0	9
N/A	0	0	0
Mixed	4525	148	4673
Take No Action	417	13	430
Unvoted	319	2	321
Totals	27039	626	27665



	Mgmt Proposals	SHP Proposals	Total Proposals
With Glass Lewis	20179	351	20530
Against Glass Lewis	1590	112	1702
N/A	9	0	9
Mixed	4525	148	4673
Take No Action	417	13	430
Unvoted	319	2	321
Totals	27039	626	27665

Management Proposals - Votes versus Glass Lewis



Shareholder Proposals - Votes versus Glass Lewis

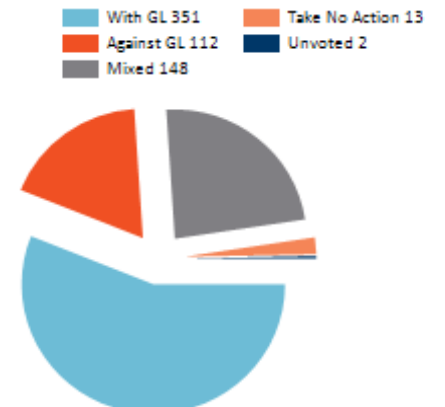


EXHIBIT B

U.S. ASSET OWNER MEMBERS' BUSINESS MEETING

Wednesday, Sept. 21, 2022

11:15 AM – 12:00 PM ET

In-person: Westin Copley Place Adams/Parliament/Baltic Rooms, 7th Floor

Business Meeting Booklet Publication Date: Aug 29, 2022

Business Meeting Agenda

Board Chair Report (Scott Zdrazil)

Staff Report (Amy Borrus)

Ballot Items

- **Ballot Item 1:** Approve bylaw amendment to enable electronic voting (Scott Zdrazil)
Appendix 1, page 4
- **Ballot Item 2:** Approve bylaw amendment to delegate to the CII board the authority to set dues for all members (Scott Zdrazil)
Appendix 2, page 6
- **Ballot Item 3:** Approve 2023 budget; financial report (Katy Hoffman)
Appendix 3, page 9
- **Ballot Item 4:** Approve update to Section 2.11 of CII Corporate Governance Policies on board size and service (Ron Baker)
Appendix 4, page 15

Policies Committee Report (Ron Baker)

Appendix 5, page 18

Shareholder Advocacy Committee Report (Max Dulberger/Renaye Manley)

Appendix 6, page 19

International Governance Committee Report (Glenn Davis)

Appendix 7, page 20

U.S. Asset Owners Advisory Council Report (Thomas Lee)

Appendix 8, page 21

Corporate Governance Advisory Council Report (Tracy Stewart)

Appendix 9, page 23

Markets Advisory Council Report (Jeff Mahoney)

Appendix 10, page 25

Constituency Reports

- Peggy Foran
- Aisha Mastagni
- Thomas McIntyre
- Glenn Davis (for Associate Members)

Comments from the Membership

Any member wishing to speak is invited to address the membership.

Planned CII Conferences

March 5-8, 2023: Washington, D.C., Mandarin Oriental
September 10-13, 2023: Long Beach, CA, The Westin Long Beach

March 4-6, 2024: Washington, D.C., Mandarin Oriental
September 9-11, 2024: Brooklyn, NY, New York Marriott at the Brooklyn Bridge

March 10-13, 2025: Washington, D.C., Mandarin Oriental
September 8-10, 2025: San Francisco, Westin San Francisco

APPENDIX 1

Ballot Item 1: Approve bylaw amendment to facilitate electronic voting

The board recommends minor revisions to the CII bylaws to reflect modernizing and more efficient membership voting via electronic transmission on ballot items presented at U.S. Asset Owners' business meetings. CII staff is considering purchasing software by which CII members could vote electronically in a manner that would (1) improve the ease by which CII members can submit their votes, (2) make the voting process more secure, (3) reduce the risk of human error in tabulating votes, and (4) save staff time in processing the votes. Member representatives could also continue to vote in person at business meetings. Proposed changes are in red font in relevant sections of the bylaws below:

ARTICLE 3 MEMBERSHIPS

A. Voting Members

- (iv) **Membership Rights**. Each U.S. Asset Owner's Membership Representative has the privilege of the floor at U.S. Asset Owner business meetings, is eligible for election to the Board of Directors, and may serve in other Council positions. Each U.S. Asset Owner has one vote at Council business meetings and one vote in Constituency meetings and each U.S. Asset Owner is responsible for resolving any potential conflicts that might arise if more than one Membership Representative casts votes on behalf of the U.S. Asset Owner. Each U.S. Asset Owner may send its Membership Representatives and other employees, directors and trustees to Council conferences and to Council business meetings. Each U.S. Asset Owner Member may participate by proxy on all items submitted for consideration in advance of the Council's regular business meetings or special meetings. Proxies must be submitted by a Membership Representative and received by the Council by mail or electronic transmission within the time period specified in the proxy solicitation for the receipt of the proxy to be counted at the scheduled regular business meeting or special meeting. U.S. Asset Owners may change their votes at U.S. Asset Owners' business meetings when they have previously submitted a proxy in advance of the meetings. A Membership Representative may not vote for, or submit the proxy of, another U.S. Asset Owner.

And:

ARTICLE 4 MEMBER MEETINGS

- D. Action by Written Ballot** Any action that may be taken at a Council business meeting may be taken without a meeting, without prior notice, if the action is submitted to U.S. Asset Owners by mail **or electronic transmission, ~~facsimile or email~~** with a sufficient explanation. The Board of Directors must approve the taking of action by written ballot. U.S. Asset Owners must be given not less than ten (10) business days to respond. All votes are confidential.

And:

ARTICLE 10 AMENDMENTS

These Bylaws may be altered, amended, supplemented or repealed by a two-thirds vote of the U.S. Asset Owners voting **in person or by proxy** at a Council regular business meeting or special meeting or voting in action by written ballot, provided quorum requirements are satisfied.

APPENDIX 2

Approve bylaw amendment to delegate to the board of directors authority to set dues for voting and non-voting members

The CII board recommends member approval of a bylaw amendment to grant the board authority to set dues for voting and nonvoting members. The proposed changes to put that in place are reflected in wording changes to Articles 3, 4 and 5 of the bylaws as indicated below in **red font** (proposed changes also include minor grammatical edits):

ARTICLE 5 BOARD OF DIRECTORS

E. Rights and Responsibilities

- (i) The full Board of Directors is responsible for the oversight of the operations of the Council. The Board may approve changes to the budget and recommend for membership approval any changes or amendments to the budget exceeding (ten) 10 percent of total annual expenditures. The Board approves the agenda for Council business meetings and reviews materials for Council business meetings before they are provided to U.S. Asset Owners. The Board will periodically propose strategic goals (based on input from member surveys) to the U.S. Asset Owners for review and adoption. The Board will develop a plan to implement the approved goals. Board members will act as liaisons to their respective Constituencies and make sure their views are heard in board discussions. The Board may establish and select the members for Council standing or ad hoc committees. The Board will approve minutes of Council U.S. Asset Owners business meetings. The Board is responsible for the hiring, annual evaluation, compensation and termination of the Executive Director. The Board may delegate this function to the officers if it chooses. **The board is responsible for setting dues for U.S. Asset Owners and Associate Members.**

And:

ARTICLE 3 MEMBERSHIPS

B. Nonvoting Members

- (i) **Associate Members.** Any individual, incorporated entity, educational institution, association or other group interested in the work of the Council may become a non-voting Associate Member upon payment of an annual fee established by the ~~voting Membership Board of Directors. The U.S.~~

~~Asset Owners delegate to the Board of Directors responsibility for setting Associate Member annual fees.~~ Associate Members participate on a calendar year basis. The Board may renew or decline an Associate's membership application if it would be in the Council's interest to do so. Associate Members may attend Council conferences and other educational forums by invitation of the U.S. Asset Ownership. Associate Members also receive Council newsletters.

And:

ARTICLE 4 MEMBER MEETINGS

- B. General Powers** ~~The~~ U.S. Asset Owners maintains ultimate authority for the affairs of the Council. The U.S. Asset Owners reserves ~~to themselves itself~~ (i) the power to amend the Bylaws, (ii) the power to dissolve the organization, (iii) the right to approve the Council's annual budget and any changes or amendments to the budget exceeding ten (10) percent of total annual expenditures, (iv) the right to approve Council policies, and (v) the right ~~to set membership dues and~~ to change members' voting rights. The U.S. Asset Owners, through ~~its~~ their Constituencies, elects the Board of Directors.

Discussion

CII's bylaws give U.S. Asset Owners the right to set their own dues. In 2017, U.S. Asset Owners (then known as General Members) voted to give the CII board authority to adjust dues for inflation for members that pay at the ceiling rates only (currently \$30,000 for members that pay dues bundled with conference attendance and \$24,000 for unbundled members that pay separately to attend CII conferences). And in 2018, U.S. Asset Owners approved a bylaw amendment granting the board authority to set dues for Associate Members only.

The board believes it needs delegated authority to determine dues for *all* members for the following reasons:

- Uniformity in the board's delegated authority would enable the board to ensure that dues for all members are set consistently and fairly. Currently, the board has authority to set dues for non-voting members but not voting members, and to adjust dues for inflation for some members but not all.

- Vesting the board with the responsibility for determining dues aligns with the practice of peer organizations to which many members belong. The National Association of State Retirement Administrators (NASRA), the National Council on Teacher Retirement (NCTR), the National Conference on Public Employee Retirement Systems (NCPERS), the International Corporate Governance Network (ICGN) and the Society for Corporate Governance all delegate authority to set member dues to either staff alone or staff and the board.
- The CII board's representative structure ensures the board has avenues for input on dues, as on other matters, from CII's key constituencies.
- CII could respond more nimbly to the need to adjust dues in volatile market conditions. CII currently faces a challenging market environment: The sharp upswing in financial market prices in recent years has boosted member assets under management (AUM), the member-approved yardstick for calculating dues.
- The board is well-positioned to simplify CII's dues structure going forward, in a timely manner. Some members have raised the concern that pegging dues to AUM leads to fluctuations that make it difficult for them to factor CII membership into their own budget planning processes. A streamlined structure that is easier to explain would also enhance membership recruitment efforts.

APPENDIX 3 Proposed budget for 2023 and financial report

The table below shows projected 2022 results against the 2022 budget and staff's proposed budget for 2023. It excludes revenue and expenses for the CII Research and Education Fund (CII-REF), a CII subsidiary. CII-REF's budget is not subject to approval by CII members.

	2022 Budget	2022 projection as of Aug. 18, 2022	2022 projection as % of budget	2023 Budget Proposed
INCOME				
Membership Dues				
Renewing Members (all)	\$ 2,917,675	\$ 2,909,087	100%	\$ 3,051,262
<i>Renewing U.S. Asset Owner (Voting) Members</i>	\$ 1,793,350	\$ 1,779,462	99%	\$ 1,818,289
<i>Renewing Associate Members</i>	\$ 1,124,325	\$ 1,129,625	100%	\$ 1,232,973
New Members (all categories)	\$ 125,000	\$ 213,377	171%	\$ 207,000
<i>New U.S. Asset Owner (Voting) Members</i>	\$ 40,000	\$ 80,490	201%	\$ 83,000
<i>New Associate Members</i>	\$ 85,000	\$ 132,887	156%	\$ 124,000
Total Membership Dues	\$ 3,042,675	\$ 3,122,464	103%	\$ 3,258,262
Other Income				
Interest and dividend income	\$ 55,000	\$ 70,000	100%	\$ 70,000
Conference sponsorship/fees/etc.	\$ 605,450	\$ 735,000	121%	\$ 697,000
<i>Sponsorships</i>	\$ 188,000	\$ 250,000	132%	\$ 249,000
<i>Member-hosted meeting fees</i>	\$ 30,000	\$ 45,000	150%	\$ 48,000
<i>Attendance fees</i>	\$ 387,450	\$ 440,000	114%	\$ 400,000
CG Bootcamp	\$ 95,000	\$ 66,000	64%	\$ 66,000
Contributions		\$ 1,000		
Misc				
Total Other Income	\$ 755,450	\$ 872,000	112%	\$ 833,000
Total Income Before Unrealized G/L	\$ 3,798,125	\$ 3,994,464	103%	\$ 4,091,262

	2022 Budget	2022 projection as of July 11, 2022	2022 projection as % of budget	2023 Budget Proposed
OPERATING EXPENSES				
Conference/Meetings	\$ 710,000	\$ 826,000	116%	\$ 805,000
Communication	\$ 60,000	\$ 45,000	75%	\$ 25,000
CG Bootcamp	\$ 50,000	\$ 60,000	102%	\$ 60,000
Depreciation	\$ 22,000	\$ 25,000	100%	\$ 28,000
Dues and Subscriptions	\$ 90,000	\$ 90,000	100%	\$ 85,000
Financial Fees	\$ 40,000	\$ 50,000	125%	\$ 50,000
Insurance/Life/Health	\$ 304,723	\$ 335,000	110%	\$ 355,100
Legal Fees	\$ 70,000	\$ 40,000	57%	\$ 70,000
Maintenance	\$ 2,500	\$ 1,600	64%	\$ 2,500
Marketing	\$ 20,000	\$ 10,000	50%	\$ 10,000
Meals and Entertainment	\$ 10,000	\$ 6,000	60%	\$ 10,000
Office Equipment and Furniture	\$ 8,000	\$ 20,000	250%	\$ 12,000
Office Supplies	\$ 11,000	\$ 6,000	55%	\$ 8,000
Postage and Delivery	\$ 2,000	\$ 1,000	50%	\$ 1,000
Professional services	\$ 130,000	\$ 110,000	85%	\$ 117,000
Rent	\$ 169,781	\$ 174,000	102%	\$ 176,000
Retirement plan	\$ 653,338	\$ 554,230	85%	\$ 515,000
Salaries/Payroll Taxes	\$ 1,889,125	\$ 1,887,000	98%	\$ 1,998,500
Travel	\$ 40,000	\$ 28,000	70%	\$ 40,000
Total Operating Expenses	\$ 4,282,467	\$ 4,268,830	100%	\$ 4,368,100
Operating Gain/Loss (Before Investments, Pension Plan Changes, Special Items)	\$ (484,342)	\$ (274,366)	57%	\$ (276,838)

2022 Projection

Staff projects an operating loss of almost \$275,00, nearly 60% of the budgeted loss of \$484,342.

Total revenues are projected to be 103% of budget at \$3,994,464, buoyed by robust membership dues and conference income. Membership renewal revenues are on track to end the year on budget, while new-member dues revenues are expected to be 171% of the budgeted amount. Conference revenues are projected to total \$735,000, which is 121% of budget. Sponsorship, attendance fees and member-hosted meeting fees for the

spring conference were all higher than anticipated and staff expects similar, if slightly lower (due to employer travel curbs), totals for the fall conference.

Expenses are expected to be marginally under budget overall at \$4,268,830. Payroll, our largest expense, is projected to be on or just under budget at \$1.887 million. Three staffers departed this year, but new hires and promotions for some long-time staffers offset savings from periods of vacancies.

Many expense categories are running below budget, largely because of the pandemic. But a few, especially larger expense items, are projected to end the year above budget. These include conference/meetings expense, at 116% of the budgeted amount, in large part because of the high audio-visual costs of hosting a hybrid conference in the spring. Insurance expense also rose, particularly for medical coverage.

Staff expects a break on retirement expense, though. This has been one of the largest and fastest-growing expense categories in recent years. Preliminary data from Principal, our staff pension plan administrator, indicating contributions to the plan (under the funding plan the board approved in 2015) will decline 12%, largely because of the higher discount rate (note: We have not yet received final numbers). Total projected retirement expense is \$554,230, about \$100,000 below the budgeted amount.

CII has ample reserves to withstand an operating loss. As of Dec. 31, 2021, CII had a board-designated reserve of \$3,877,634. Total financial assets then available to use for general expenditures within one year stood at \$8,346,990. For CII's consolidated balance sheet as of Dec. 31, 2021, see our audited financial statements for 2021 [here](#).

The unaudited CII balance sheet for July 31, 2022 appears on the next page.

Balance Sheet in U.S. \$ as of July 31, 2022 (unaudited)

ASSETS		LIABILITIES & EQUITY	
Current Assets		Liabilities	
Bank Accounts	\$ 2,570,599	Current Liabilities	
Accounts Receivable	\$ 6,370	Total Accounts Payable	\$ 3,503
		Total Credit Cards	\$ 15,365
Other Current Assets			
Equity Funds	\$ 1,376,692	Other Current Liabilities	
Treasury Bills	\$ 1,724,844	Accrued Pension Liability	\$ 225,817
Bond Funds	\$ 759,145	Accrued Vacation	\$ 134,370
Interest Receivable	\$ 4,125	Deferred Leasehold Improvement	\$ 2,009
Prepaid Expense	\$ 51,740	Deferred Rent	\$ 29,041
Escrow Funds	\$ 12,876	Deferred Revenue	\$ 178,105
Total Other Current Assets	\$ 3,929,420	Total Other Current Liabilities	\$ 569,341
Total Current Assets	\$ 6,506,389	Total Current Liabilities	\$ 588,209
		Total Liabilities	\$ 588,209
Fixed Assets			
Accumulated Depreciation	\$ (169,037)	Equity	
Furniture & Equipment	\$ 197,753	Board Designated for Reserve	\$ 3,877,634
Leasehold Improvements	\$ 9,925	Unrestricted Net Assets-General	\$ 1,682,106
Total Fixed Assets	\$ 38,641	Net Income	\$ 889,258
		Total Equity	\$ 6,448,998
Other Assets			
Total CDs	\$ 492,176		
Total Other Assets	\$ 492,176		
TOTAL ASSETS	\$ 7,037,206	TOTAL LIABILITIES & EQUITY	\$ 7,037,206

Discussion of the proposed 2023 budget is on the next page.

2023 Proposed budget

The proposed budget for 2023 anticipates an operating loss of just under \$277,000, based on total revenues of approximately \$4,100,000 and total expenses of about \$4,368,000. It assumes CII will host two in-person conferences. A new, vaccine-resistant Covid-19 variant could upend that, but at this time that does not seem likely.

On the revenue side, membership renewals typically generate 75%-80% of total revenues. The proposed budget assumes \$3.05 million in renewal revenues, based on: 1) a 4% increase in dues for U.S. Asset Owners and a 7% increase in dues for Associate Members. The board understands that any increase in dues may be problematic for some members. But the board and staff believe the modest increase is appropriate for the following reasons:

- CII's costs have been rising steadily, in part due to inflation, but also because of expanding services for members. Over the past eight years, CII has added: three advisory councils, the Proxy Voting Group, the Engagement Exchange, podcasts, trustee events, Corporate Governance Bootcamp and sponsorship.
- Most members have not had an increase in dues in years, even decades. CII *lowered* dues for many members in 2018, after members approved the current dues structure.
- 4% is less than half of the Consumer Price Index for All Urban Consumers (the CPI-U was 8.5% in July).
- Other organizations that many members belong to have raised dues: For example, the National Conference on Teacher Retirement (NCTR) raised dues 3% for 2022, while the National Conference on Public Employee Retirement Systems (NCPERS) raised dues 4% for 2022. Both organizations and the National Association of State Retirement Administrators (NASRA) have told us they will decide on 2023 dues this fall.

On the expense side, conference expenses are budgeted slightly lower, at \$805,000, mainly because CII will forgo the high audio-visual expense of hosting a hybrid (in-person and interactive virtual) conference that we incurred for the 2022 spring conference. New hires, promotions and raises for CII staffers whose 2022 compensation has not kept pace with inflation will increase payroll expense overall by about 6%. Due to the pandemic, several staffers did not get a raise in 2021 and raises for 2022 were modest, except for a few linked to promotions.

Below is a summary of the assumptions underlying the proposed 2023 budget:

	Assumptions for 2023 Proposed Budget
INCOME	
Membership Dues	
Renewing Members (all)	
<i>Renewing U.S. Asset Owner (Voting) Members</i>	4% increase over 2022, 94% renewal of expected amount invoiced (differs from budget)
<i>Renewing Associate Members</i>	7% increase over 2022, 92% renewal of expected amount invoiced (differs from budget)
New Members (all categories)	based on 5-year average & 50% of \$400,000 total prospect pipeline
Other Income	
Interest and dividend income	previous two years were at \$80,000
Conference sponsorship/fees/etc.	
<i>Sponsorships</i>	based on 2022 w/5% increase in pricing
<i>Member-hosted meeting fees</i>	9 per conference; 10% fee increase (\$3,850-AMs, \$1,100-USAOs)
<i>Attendance fees</i>	similar to expected for 2022 but 10% less due to travel cutbacks by member organizations
CG Bootcamp	assumes same as expected for 2022: 35 total in-person@ early bird rate
OPERATING EXPENSES	
Conference/Meetings	\$390,000 each spring & fall conferences--in-person, AV-\$90K, prof services-38K; \$25K for 2 in-person board mtgs
CG Bootcamp	Fall event in NYC, in-person: \$25K ICGF membership; \$12K faculty, \$10K staff travel, \$10K Food & Beverage, \$3K misc.
Depreciation	similar to expected for 2022; includes moving network to the cloud
Dues and Subscriptions	similar to 2022
Insurance/Life/Health	6% increase overall, most due to higher health premiums
Legal Fees	Potential for amicus briefs
Retirement Plan	We typically receive a report in late July or August from our pension plan provider, Principal, which will provide the basis for calculating this under a board-approved formula. We expect a decrease due to the rise in the discount rate. But we do not have good information on this, so this is a guesstimate.
Salaries/Payroll Taxes	Assumes 10 FTE, \$50K for possible freelance marketer. CII-REF covering \$35K. Significant raises for staff whose 2022 compensation did not keep pace with inflation.

APPENDIX 4

Approve update to Section 2.11 of CII's Corporate Governance Policies concerning board service

The board recommends approval of the proposed update shown below, which the Policies Committee adopted on August 2, 2022, and the board approved on August 3, 2022. The committee's review included an all-CII member comment period.

Proposed revised wording in red font below:

2.11 Board Size and Service: Absent compelling, unusual circumstances, a board should have no fewer than five and no more than 15 members (not too small to maintain the needed expertise and independence, and not too large to function efficiently). Shareowners should be allowed to vote on any major change in board size.

Boards are well positioned to evaluate the unique needs of their companies and evaluate each director's aggregate time commitments. Nominating committees should establish and disclose their director service policies to investors. Companies should establish and publish guidelines specifying on how many other boards their directors may serve. Absent unusual, specified circumstances, CII recommends limiting for-profit, corporate board service as follows: Directors who are employed full-time by a for-profit corporation should serve on no more than two total for-profit boards. All other directors should serve on no more than four total for-profit boards. Companies should disclose all board members' for-profit, corporate directorships.
~~, directors with full-time jobs should not serve on more than two other boards. Currently serving CEOs should not serve as a director of more than one other company, and then only if the CEO's own company is in the top half of its peer group. No other director should serve on more than five for-profit company boards.~~

Background & Intent

Over time, estimates of the number of hours of board work per member at U.S. public companies have increased to more than 260 hours annually, and duties are acknowledged by board members and investors alike to have become more complex. We are proposing changes to the director service policy because 1) the commitment of time and resources required by corporate boards is very different today relative to when CII members approved this policy originally, and 2) the Covid-19 pandemic raised investor awareness that systemic challenges can force boards broadly into simultaneous "crisis modes" that put special stress on directors serving on multiple boards.

We surveyed the policies of CII members and found many members have continued to refine their policies to limit outside or overall board memberships for various types of professionals. As noted in a 2021 report by Spencer Stuart, companies have also further limited their board service policies. New practices at many CII member organizations have set limits on directorships based on the employment status of directors and extended more stringent restrictions for CEOs to other NEOs. Most members do not cite performance criteria in their board service policies, and most are written to apply to directors of publicly traded companies. CII has received proactive feedback from members requesting that the Council update its policy as well.

Current CII policies state that directors with “full-time jobs” should serve on no more than three total boards; the maximum otherwise for any director is five “for-profit” boards; and CEOs should serve on no more than one “other” company board, assuming they serve on their own board, and with a top-half peer group performance condition (though no performance measure is specified). Current CII policy on board service does not distinguish between public and private board membership.

Many members have adopted a 2-4 model of board service policy, whereby CEOs/NEOs are limited to two total board seats, and all other directors are allowed a maximum of four. These levels seek to align existing professional commitments of varying degree with maximum levels of board service. This amendment seeks to update CII policy to account for employment and commitment factors.

The SEC requires publicly traded companies to disclose their board members' current public company board memberships and any public company board memberships from the past five years. Disclosure of private company board seats is optional. This amendment to CII policy seeks to retain a long-standing focus on “for-profit” board service, but adds disclosure of this information so that shareowners have a clearer picture of the overall obligations and commitments of directors to public and private companies. Board service at for-profit, private companies can have similar demands on a director's time and be equally complex, making disclosure of this service relevant to investors evaluating a director's existing commitments.

Comments received from members during the solicitation period indicated that some investors are interested in nominating committees' oversight of board member commitment levels. Company boards and, in particular, nominating and governance committees, are well-placed to understand individual commitment levels and capacities in coordination with the needs of the company. Still, most CII commenters agreed that it was reasonable to continue to espouse numerical limits that should be in effect for maximum board service in all but rare cases. The rare-case exception is preserved in the policy

amendment and retains the expectation that the factors behind exceptions be articulated to investors.

APPENDIX 5 Policies Committee Report

The Policies Committee, comprised of the non-officer members of CII's board, reviews and recommends updates to CII's official positions on corporate governance and other matters of importance to institutional investors. These positions serve as a foundation for CII's advocacy work with policymakers and market participants. Colorado Public Employees Retirement Association Executive Director Ron Baker serves as the current chair of the committee.

At the 2022 Fall conference, U.S. Asset Owner members will vote on a proposed revision to CII's corporate governance policies concerning board service, in Section 2.11, Board Size and Service.

Since March, the committee has discussed the evolving market expectations of for-profit corporate board service, reviewed CII's statement on Best Disclosure Practices for Institutional Investors, considered transparency of compensation plan recipients, discussed proxy disclosure of the identity of proponents of shareowner resolutions, and further discussed the transparency of large private companies, particularly those with securities that actively trade on secondary markets, in light of expected SEC proposed rulemaking. The discussion of board service led to the amendment offered for membership approval at this meeting. The topic of private company transparency will be revisited in 2023 as legal and regulatory developments continue to unfold.

The committee welcomes U.S. Asset Owner members' input on topics that are important to them, whether through participation in comment periods, involvement in the U.S. Asset Owners Advisory Council, or informal outreach to the chair, the committee as a whole and/or CII staff.

APPENDIX 6 Shareholder Advocacy Committee Report

The Shareholder Advocacy Committee is a conduit for members to discuss and recommend activities that promote effective corporate governance, increase participation in the advocacy of corporate governance and enhance the value of CII membership. The committee fosters member dialogue through in-person and electronic meetings and email communication.

In the past several months, the committee hosted:

- A July 11, 2022, proxy season wrap-up webinar during which 15 CII members shared their accomplishments on topics ranging from civil rights audits to lobbying disclosure, and revealed their plans for the 2023 season.
- A March 9, 2022, plenary session during CII's spring conference featuring Josh Zinner, CEO of the Interfaith Center on Corporate Responsibility, discussing key initiatives of faith-based investors with Louis Malizia, former assistant director of capital strategies for the International Brotherhood of Teamsters. At the popular lightning round that followed the plenary, 12 CII members shared their 2022 proxy season initiatives.
- A January 12, 2022 proxy season preview webinar during which eight CII members discussed their plans for the 2022 proxy season, covering topics ranging from disclosure of Scope 3 emissions to Covid-19 vaccine availability. More than 150 CII members participated virtually.

At the committee's September 23 plenary session during the fall conference, Lisa Beauvilain from Impax Asset Management, Max Dulberger from the Office of the Illinois State Treasurer, Michael Garland from the Office of the New York City Comptroller and Lakshmi Naaraayanan of the London Business School, will examine research indicating that corporate engagement is an effective means for long-term shareholder to address climate change-related risks. The panel will discuss these findings, as well as other strategies deployed to address the risks of climate change, including policy advocacy, proxy voting, screening and divestment.

APPENDIX 7

International Governance Committee Report

The International Governance Committee supports efforts to expand CII's geographic scope by educating members and coordinating globally on non-U.S. corporate governance issues. The committee brings CII members global perspectives on areas such as investor-company engagement, shareholder rights, governance codes, exchange listing standards, executive compensation and other market-specific dynamics. Michael Herskovich, global head of stewardship at BNP Paribas Asset Management, chairs the committee.

The committee's fall plenary session will explore investment and governance trends in emerging markets. Speakers include Brian Christiansen, senior portfolio manager and director of stewardship at Sands Capital; Julia Hermann, multi-asset portfolio strategist at New York Life Investments; and Teresa Barger, co-founder and CEO of Cartica.

The committee's spring plenary session focused on a broad range of international issues. David Sheasby, head of stewardship and ESG at Martin Currie, discussed European sustainability regulation and takeaways for investors in different markets. Catherine McCall, executive director of the Canadian Coalition for Good Governance, discussed dual-class shares in Canada and related developments at Rogers. Amit Tandon, SEBI research analyst at IIAS Advisory, discussed Indian market updates, including rising shareholder activism.

Recent international developments followed by the committee and covered in CII's *Alert* newsletter include: Disclosure proposals at the International Sustainability Standards Board; developments in the U.K. to overhaul audit oversight and limit the use of unequal voting structures in a single segment regime on the London Stock Exchange; regulatory pressure for greater transparency of investor risks related to global conflicts; and divergent approaches among developed markets on ways to ensure board gender diversity.

The committee thanks Lucy Nusbaum, former CII senior research analyst, who served as staff liaison until her departure from CII in June. Research Director Tracy Stewart is the committee's current staff liaison, supported by Emmanuel Tamrat, CII's new research analyst.

APPENDIX 8

U.S. Asset Owners Advisory Council Report

The U.S. Asset Owners Advisory Council advises the CII board and staff on issues, trends, proposed policy development, topics and speakers for CII events and membership benefits and services. CII's board of directors appoints up to 20 members, with a mix of representation from the following constituencies:

- Corporate Fund Asset Owner Members
- Labor Fund Asset Owner Members
- Public Fund Asset Owner Members
- Other Asset Owner Members

Members are appointed for one-year terms, generally in the spring, with a limit of three consecutive one-year terms.

At the advisory council's March 3 meeting, guest speaker Keir Gumbs, chief legal officer, Broadridge Financial Solutions, briefed members on the process by which investors would be able to confirm their proxy votes were (or were not) counted fully and accurately at 2022 shareholder meetings. The process was the product of a working group of proxy service providers and other intermediaries that is co-chaired by Darla Stuckey, president of the Society for Corporate Governance, and CII Executive Director Amy Borrus.

Also at the March 3 meeting, advisory council members Tom Robinson, State of Wisconsin Investment Board, and Gianna McCarthy, New York State Common Retirement Fund, discussed their engagement priorities for the 2022 proxy season. Amy Borrus summarized CII's advocacy priorities for the year.

In April, the CII board appointed advisory council members for 2022-2023. The board then also appointed Thomas Lee, executive director and CIO, New York State Teachers' Retirement System, as chair. When the CII board met in August, it appointed one more member to the advisory council, Edgar Hernandez, assistant director, Service Employees International Union.

At its first meeting, in June, the new U.S. Asset Owners Advisory Council heard from Courteney Keating, senior director, environmental, social & governance research at Glass Lewis, about proxy season trends. After, another guest speaker, Christopher Cafiero, executive director at JPMorgan, discussed the SEC's proposed ESG disclosure rules. Ms. Borrus summarized CII's comment letter on the SEC's proposed climate disclosure rules and the Index Act, a bill introduced by 18 Republican senators that would curb proxy voting by the largest asset managers and their index funds. She also provided an

overview of topics and speakers for CII's fall conference in Boston. Lastly, Tracy Stewart, CII's director of research, briefed advisory council members on the Policies Committee's proposed update to CII policy on board size and service limits for corporate directors.

The members of the U.S. Asset Owners Advisory Council are:

Public Funds

Tracy Harris, District of Columbia Retirement Board

Thomas Lee, New York State Teachers' Retirement System, (chair)

Gianna McCarthy, New York State Common Retirement System

John Mule, Minnesota State Board of Investment

Andrew Palmer, Maryland State Retirement and Pension System

Leola Ross, Seattle City Employees' Retirement System

Jeffrey Warshauer, State of New Jersey Division of Investment

Corporate Funds

Joseph Bolling, Equifax

Kevin Coleman, Huntington Bancshares

Labor Funds

Jennifer Dodenhoff, International Brotherhood of Electrical Workers

Jeffrey Dokho, UAW Staff Retirement Income Plan

Edgar Hernandez, Service Employees International Union Pension Fund

Jim Kane, National Education Association

Brandon Rees, AFL-CIO

Other U.S. Asset Owner Member Funds

Laura Campos, Nathan Cummings Foundation

Chloe Moss, Casey Family Programs

Wendy Pulling, University of California Office of the CIO

Amy Borrus and CII Executive Assistant Allie Kunc support the work of the U.S. Asset Owners Advisory Council.

APPENDIX 9

Corporate Governance Advisory Council Report

CII's Corporate Governance Advisory Council (CGAC) provides insight and advice to the CII board and staff on key developments in corporate governance and CII activities that promote effective corporate governance. The council also advises on ways to enhance the value of CII membership.

All of the members of the Corporate Governance Advisory Council are representatives of non-U.S. asset owner Associate Members or asset manager Associate Members.

In January, the CII board appointed members of the Corporate Governance Advisory Council for 2022, and named Drew Hambly, executive director of corporate governance at Morgan Stanley Investment Management, as chair (see roster of members below). Tracy Stewart, CII's director of research, is the staff liaison to the advisory council. At the U.S. Asset Owners Members' Business Meeting, she will report on the CGAC's September 12 meeting.

At its June meeting, the CGAC met virtually to discuss topics including recent ESG fund marketing and regulatory developments in the EU; member proxy voting issues and season updates; recent CII comments to the SEC on Rule 13D, climate disclosure and cybersecurity proposals; expected proposed rulemaking from the SEC on private company disclosures; China's rules on foreign fund managers incorporating Communist Party representatives; and proposed amendments to CII's corporate governance policies on board service limits.

At its August meeting, the CGAC met virtually to discuss topics including two recent SEC proposals on ESG fund marketing, a rulemaking petition recently filed at the SEC concerning human capital management and disclosures of workforce investment, and end-to-end vote confirmation processes.

The members of the Corporate Governance Advisory Council for 2022 are:

Drew Hambly, Morgan Stanley Investment Management (chair)

Lisa Beauvilain, Impax Asset management
Benjamin Colton, State Street Global Advisors
Sara Donaldson, Voya
Kristin Drake, Dimensional Fund Advisors
John Galloway, Vanguard
Kellie Huennekens, Capital Group

Adam Kanzer, BNP Paribas Asset Management
Gwen LeBerre, Parametric
Diana Lee, AllianceBernstein
Brittini Levinson, ValueAct
Caitlin McSherry, Neuberger Berman
Peter Reali, Nuveen
John Roe, BlackRock
Britt Sahi, Charles Schwab
Brian Schorr, Trian Partners
David Shammai, Allianz
Andrew Shapiro, Lawndale Capital Management
Miekela Singh, Ontario Teachers' Pension Plan Board
Jen Sisson, Goldman Sachs Asset Management
Geoffrey Sorbello, Elliott Management Corporation
Rosa van den Beemt, BMO Global Asset Management
Jake Walko, Thornburg Investment Management
Ted White, Legion Partners Asset Management

APPENDIX 10

Markets Advisory Council Report

CII's Markets Advisory Council (MAC) provides insight and advice to the CII board and staff on legal, financial reporting and investment market trends, topics and potential speakers for CII meetings and webinars/podcasts. It also recommends current and future CII activities that promote CII's mission and enhance the value of CII membership.

In January, the CII board appointed members of the Markets Advisory Council for 2022, and appointed Stephen Deane, senior director, capital markets policy for the Americas, at CFA Institute, as chair (see roster below). Jeff Mahoney and Allie Kunc are CII staff liaisons to the MAC. At the U.S. Asset Owner Members' business meeting, staff will report on the MAC's September 13 meeting.

The MAC has met twice since the Spring U.S. Asset Owner Members' business meeting. At the MAC meeting in May, we had presenters lead discussions on two topics. First, Professor Elisabeth de Fontenay of Duke University School of Law led a discussion on what the SEC can or should do to address issues relating to the regulatory divide between the public and private financial markets. Second, MAC member Harlan Tufford, vice president of MSCI Research, led a discussion on the topic of governance and war. Of note, the level of interest in Professor Fontenay's MAC presentation led CII staff to invite her to discuss the public/private divide in a breakout session at the fall conference, joined by former SEC Commissioner Elad Roisman.

At the MAC meeting in July, guest speakers led a discussion of two SEC proposed rules issued in May: (1) Investment Company Names; and (2) Environmental, Social, and Governance Disclosures for Investment Advisors and Investment Companies. The presenters were Mara Shreck, managing director, head of regulatory affairs, J.P. Morgan Asset & Wealth Management, and Chris Fidler, senior director on the codes & standards team at CFA Institute. Those presentations and related discussions were critical to informing CII staff on its decision whether to devote resources to submitting comment letters in response to the proposals (ultimately, staff decided not to comment).

MAC members for 2022 are:

Stephen Deane, CFA Institute (chair)

Frederick Alexander, The Shareholder Commons

Claudia Allen, KPMG

Nathan Bear, Robbins Geller Rudman & Dowd

Maureen Bujno, Deloitte & Touche

Sydney Carlock, Teneo Holdings
Darren Check, Kessler Topaz Meltzer & Check, LLP
Susan Choe, Morrow Sodali
Matt DiGuseppe, PwC
Adam Foulke, ISAF Management Company
Fred Fox, Kaplan Fox & Kilsheimer
Bruce Goldfarb, Okapi Partners LLC
Keir Gumbs, Broadridge
Tom Jenkins, FTSE Russell
Jim Kroll, Aon
Sheila Lewis, Segal Marco Advisors
Rob Main, Sustainable Governance Partners
Bob McCormick, PJTCamberView
Michael McCreesh, Battea Class Action Services
Fassil Michael, ISS
Hannah Orowitz, Georgeson
John Ramsay, IEX Group
Sherri Rossoff, RockCreek
Delilah Rothenberg, Predistribution Initiative
Eric Shostal, Glass Lewis & Co.
Jamie Smith, EY
Harlan Tufford, MSCI, Inc.
Gabby Wolf, Innisfree



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Investment Department

To: Investment Committee
 From: Investment Staff
 Date: September 1, 2022
 Re: CII Fall Conference 2022 Proxy Vote

As a member of CII, SURS has been asked to submit a proxy vote at the CII Fall Conference 2022 to take place from September 21 to September 23 in Boston, MA.

Staff has made the following proxy voting recommendations:

Ballot Item 1: Approve bylaw amendment to enable electronic voting

Summary: The committee proposes the addition of language to three sections of the bylaws to allow electronic votes to (1) *improve the ease by which CII members can submit their votes*, (2) *make the voting process more secure*, (3) *reduce the risk of human error in tabulating votes*, and (4) *save staff time in processing the votes*. CII staff is considering purchasing specialized software to collect vote submissions.

Staff Recommendation: SURS staff recommends voting **FOR** the approval of bylaw amendment to enable electronic voting. CII currently allows members to request a ballot via DocuSign to submit proxy votes electronically. Electronic voting allows CII members to limit their dependence on in-person voting, which can be affected by negative factors such as traveling conflicts, timing, and risk of human error.

Ballot Item 2: Approve bylaw amendment to delegate to the CII board the authority to set dues for all members

Summary: Currently:

- *Non-voting Associate Member fees are established by the voting Membership.*
- *U.S. Asset Owners delegate to the Board of Directors responsibility for setting Associate Member annual fees.*
- *U.S. Asset Owners reserve (v) the right to set membership dues and to change members' voting rights.*

The committee proposes adding language to the bylaws that delegate to the CII Board of Directors the authority to set dues for all members – voting, non-voting, U.S., and non-U.S.

Staff Recommendation: SURS staff recommends voting **FOR** the approval of ballot item 2. This amendment will allow uniformity amongst CII members, alignment with peer organizations' practices, the opportunity to adjust dues in a volatile market, and to simplify the dues structure.

Ballot Item 3: Approve 2023 Budget

Summary: *The proposed budget anticipates an operating loss of just under \$277,000, based on total revenues of approximately \$4,100,000 – generated mainly by membership renewals, and total expenses of about \$4,368,000. It assumes two in-person conferences. CII also expects an increase in dues for U.S. Asset Owners and Associate members. Expenses are expected to include lower conference expenses, new hires, promotions, and raises.*

Staff Recommendation: SURS staff recommends voting **FOR** the approval of the 2023 CII Budget. CII is taking a conservative stand on revenues and losses while continuing to prioritize corporate governance endeavors, staff stability and benefits, and member education.

Ballot Item 4: Approve update to Section 2.11 CII Corporate Governance Policies on board size and service

Summary: The committee proposes changes to the director service policy to address the increasing commitment of time and resources required to operate an effective board, and to address the stress on directors serving on multiple boards when faced with challenges such as the COVID-19 pandemic. The amendment places limits on directors employed full-time by a for-profit corporation to serve on no more than two for-profit boards, and on other directors to serve on no more than four total for-profit boards. Additionally, companies should disclose all for-profit directorships of their board members.

Staff Recommendation: SURS staff recommends voting **FOR** the approval of update to Section 2.11 CII Corporate Governance Policies on board size and service. Staff believes that the proposed changes address the importance of maintaining a healthy, effective, and efficient board of directors, especially during turbulent and fast-changing times.



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Investment Department

To: Investment Committee
 From: Ellen Hung, CFA
 Date: September 2, 2022
 Subject: Upcoming consultant searches

Summary

In accordance with the Illinois Pension Code, 40 ILCS 5/1-113.14, a consultant contract cannot exceed five years. SURS currently has three consultants: Meketa, CAPTRUST and Callan, with investment consulting services agreements expiring in 2023. Staff is working on three consultant searches and will be presenting results to the Board during the following meetings.

Search Type	RFP Issued	Board Meeting
General Consultant	July 5, 2022	December 2022
Defined Contribution	August 1, 2022	January 2023
Private Real Assets	Winter 2022	June 2023

Search Update

General Consultant

A general consultant RFP was issued on July 5, 2022. The RFP was developed by SURS Staff and advertised on the website of *Pensions & Investments* and in its July 5, 2022, print edition. In addition, the search was noticed, as required, in the State newspaper, and posted to the SURS website beginning July 5, 2022.

The timeline for the search process was as follows:

Schedule of Events	
Quiet Period Begins	July 5, 2022
RFP Issued	July 5, 2022
Deadline for Responder Questions	July 15, 2022
Response to Questions	July 29, 2022
RFP Responses due 4:30pm CT	August 31, 2022
Evaluations	September-October 2022
Interviews	November 2022
Board Meeting	December 8, 2022

Staff received responses from three general consultants by the August 31, 2022 deadline.

- Meketa

- RVK
- Verus

Staff is reviewing the RFP responses and expect to interview semi-finalists in early November.

Defined Contribution Consultant

A defined contribution consultant RFP was issued on August 1, 2022. The RFP was developed by SURS Staff and advertised on the website of *Pensions & Investments* and in its August 1, 2022, print edition. In addition, the search was noticed, as required, in the State newspaper, and posted to the SURS website beginning August 1, 2022.

The timeline for the search process was as follows:

Schedule of Events	
Quiet Period Begins	August 1, 2022
RFP Issued	August 1, 2022
Deadline for Responder Questions	August 16, 2022
Response to Questions	August 25, 2022
RFP Responses due 4:30pm CT	September 22, 2022
Evaluations	October-November 2022
Interviews	December 2022
Board Meeting	February 2, 2023

Real Assets Consultant – Callan

Staff is working on the real assets consultant RFP and expects to issue the RFP in the 4th quarter of 2022.

Quiet Period Policy Guidelines

The Quiet Period Policy is intended to establish guidelines by which Board Members and Staff will communicate with prospective service providers during the search process. The objectives of the policy are to ensure that prospective service providers competing to become employed by SURS have equal access to information regarding the search parameters; communications related to the selection are consistent and accurate; and the process of selecting service providers is efficient, diligent, and fair.

The following guidelines will be instituted during the search process for the various service providers:

1. A quiet period will commence upon issuance of an RFP and end once a selection has been made by the board and the completion of successful contract negotiations with a respondent;
2. Initiation, continuation and conclusion of the quiet period shall be publicly communicated to prevent inadvertent violations;
3. All board members, and staff other than those directly involved in the search or the Chief Procurement Officer or their designee, shall refrain from communicating with respondents regarding any product or service related to the search in process. All board

members and staff shall refrain from accepting meals, travel, hotel, or other value from such respondents;

4. Throughout the quiet period, if any board member is contacted by a respondent, the board member shall refer such party to the Chief Procurement Officer;
5. All authority related to the search process shall be exercised solely by the Investment Committee or board as a whole or its designee(s), and not by individual board members;
6. The quiet period does not prevent board approved due diligence, client conference attendance or communications with an existing vendor; provided, however, that discussions related to the procurement and pending selection shall be avoided during those activities;
7. The provisions of this policy shall apply throughout the quiet period and shall be communicated to respondents in conjunction with any search; and
8. A respondent may be disqualified from a search process for a violation of the quiet period or any portion of this policy.



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Investment Department

To: Investment Committee
 From: Investment Staff
 Date: September 2, 2022
 Re: Summary Risk Report

Attached is the Summary Risk Report for the quarter ending June 30, 2022. Highlights for the quarter include:

- Appropriation Summary – FY 2022 state appropriations received were approximately \$2.1 billion, or 100% of the anticipated \$2.1 billion FYTD appropriations due, as of June 30, 2022. The total FY 2022 appropriation is \$2,101,279,000. The actuarial benefit payment projection for FY 2022 is \$3,045,764,000. The total FY 2022 appropriation was paid in full as of June 27, 2022.
- Cash Account Summary – Ending cash on hand was approximately \$396.3 million as of June 30, 2022. Net private partnership cash flows during the quarter were negative and approximately \$82.8 million.
- SURS Risk Exposures – 90% of Total Risk comes from the Non-Traditional Growth, Traditional Growth, and CRO classes as of June 30, 2022.
- Total portfolio risk decreased from 15.38% to 13.83%.
 - Benchmark Risk increased from 8.89% to 11.47%.
 - Active Risk decreased from 13.23% to 11.67%.
- Liquidity – Assets in Principal Protection, TIPS, CRO, Overlay, Cash, and Transition, the most liquid categories, amount for 33.8% of assets. Assets in these classes would allow the fund to cover 2.3 years of benefits assuming no contributions to the System or 8.2 years assuming contributions from the state and members. SURS projected annual net cash outflows are between \$750 million and \$1.2 billion over the next 5 years.
- Risk Environment & Sentiment:
 - Market risk levels are high for Equity Volatility, Fixed Income Volatility, and Systemic Risk
 - Market valuations are high for U.S. Equity and Private Equity
 - Market sentiment towards economic growth turned negative
- Operational Risk Summary: Shows a snapshot of key contracts and procedures to be reviewed periodically. No issues to report.



Summary Risk Report

Quarter Ending June 30, 2022



Appropriation Summary

Month	Amount Due	Amount Received	(Under)/Over	% Received
July	\$175,106,583	\$175,106,583	-	100.0%
August	\$175,106,583	\$9,200,000	(\$165,906,583)	5.3%
September	\$175,106,583	\$341,013,167	\$165,906,583	194.7%
October	\$175,106,583	\$131,721,687	(\$43,384,896)	75.2%
November	\$175,106,583	\$104,315,896	(\$70,790,687)	59.6%
December	\$175,106,583	\$116,450,583	(\$58,656,000)	66.5%
January	\$175,106,583	\$347,938,167	\$172,831,584	198.7%
February	\$175,106,583	\$1,120,000	(\$173,986,584)	0.6%
March	\$175,106,583	\$349,093,167	\$173,986,583	199.4%
April	\$175,106,583	\$271,106,583	\$96,000,000	154.8%
May	\$175,106,583	\$79,106,583	(\$96,000,000)	45.2%
June	\$175,106,583	\$175,106,583	-	-
FYTD	\$2,101,279,000	\$2,101,279,000	-	100%

Total FY 2022 Appropriation of \$2,101,279,000 was paid in full as of June 27, 2022

Actual benefit payments projection for FY 2022: \$3,045,764,000

Average yearly benefit payments projection over next five years: \$3,319,000,000



Cash Account Summary

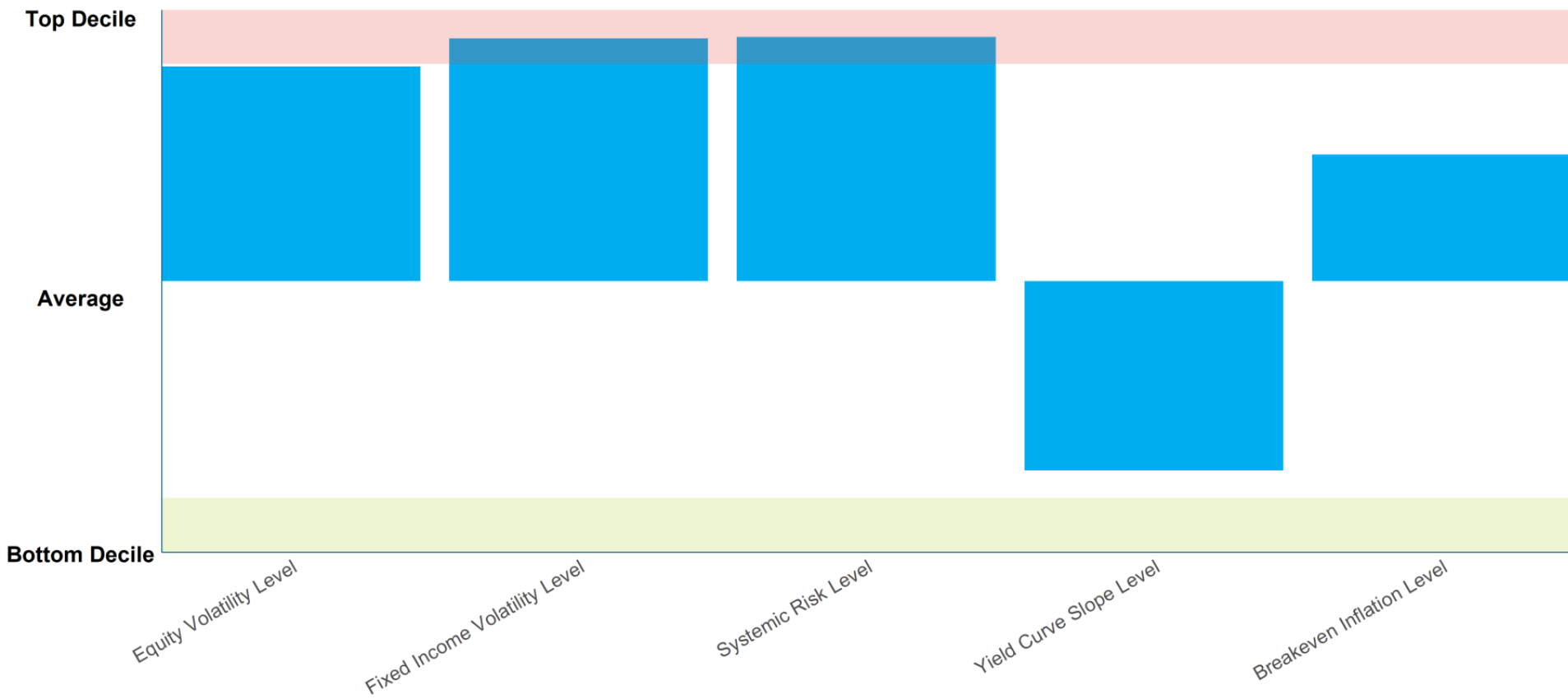
July 1, 2021 – June 30, 2022s				
	Jul 1 – Sep 30	Oct 1 – Dec 31	Jan 1 – Mar 31	Apr 1 – Jun 30
Beginning Balance	\$167,773,565	\$353,303,017	\$129,653,589	\$402,610,004
Cash In:				
Partnership Distributions	94,014,553	264,675,952	161,126,077	140,160,145
Transfers	<u>1,355,911,402</u>	<u>565,527,148</u>	<u>931,044,033</u>	<u>242,549,670</u>
Total Cash In:	1,449,925,955	830,203,100	1,092,170,110	382,709,815
Cash Out:				
Partnership Capital Calls	(113,908,404)	(367,942,406)	(815,671,708)	(223,003,649)
Transfers	(998,248,579)	(166,411,691)	(205,000,532)	(60,000,000)
Net Contributions (Contributions less Benefit Payments)	<u>(154,059,233)</u>	<u>(519,498,430)</u>	<u>(201,458,544)</u>	<u>(106,008,995)</u>
Total Cash Out:	(1,266,216,216)	(1,053,852,528)	(819,213,696)	(389,012,645)
Ending Balance	\$353,303,017	\$129,653,589	\$402,610,004	\$396,307,175

Net private partnership cash flows were negative \$82.8 million for the quarter

Net contributions (contributions less benefit payments) were negative \$106 million for the quarter



Today's Risk Environment – Risk & Valuation

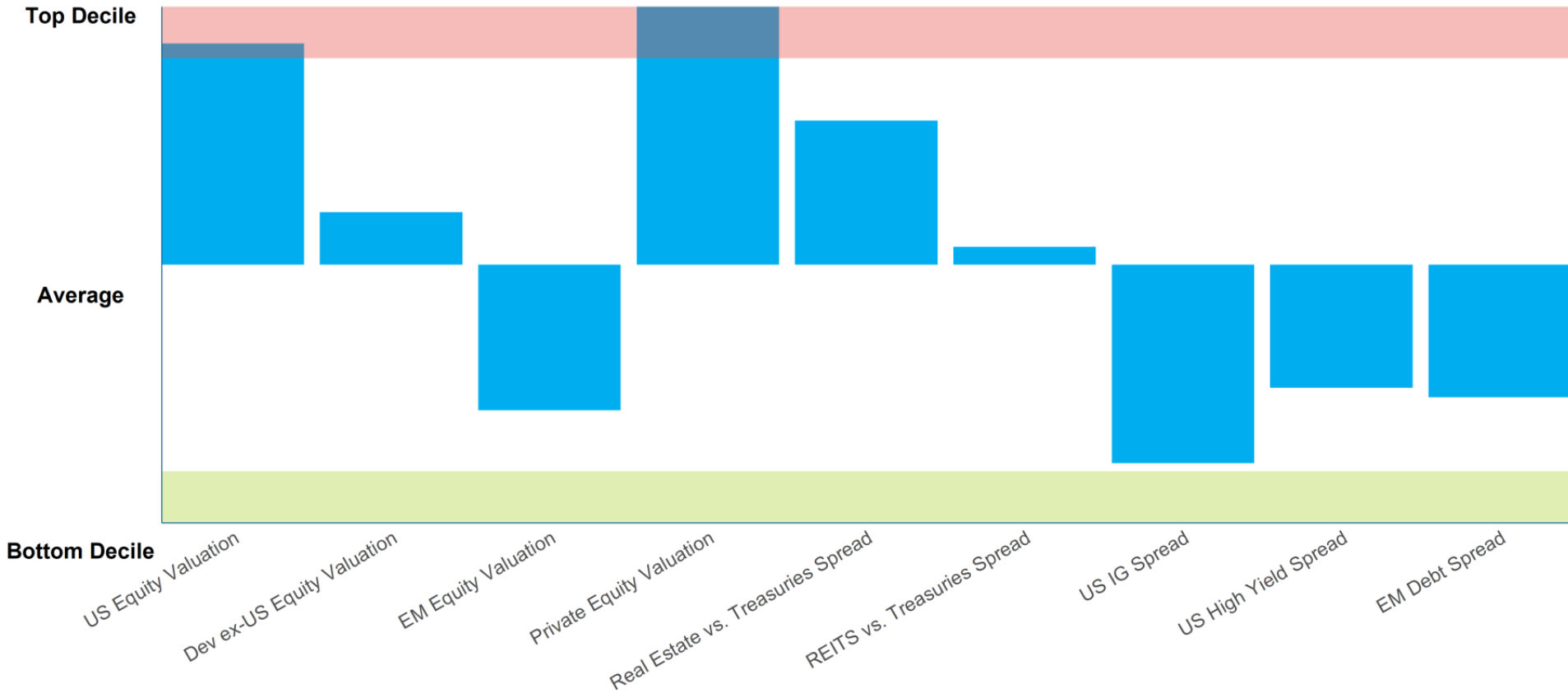


Market Risk Levels: Current level of each indicator compared to its history.
 Increase from last quarter in Equity Volatility Level, Fixed Income Volatility Level, and Breakeven Inflation Level.
 Decrease from last quarter in Yield Curve Slope Level and Systemic Risk Level.

Data as of June 30, 2022



Today's Risk Environment – Risk & Valuation



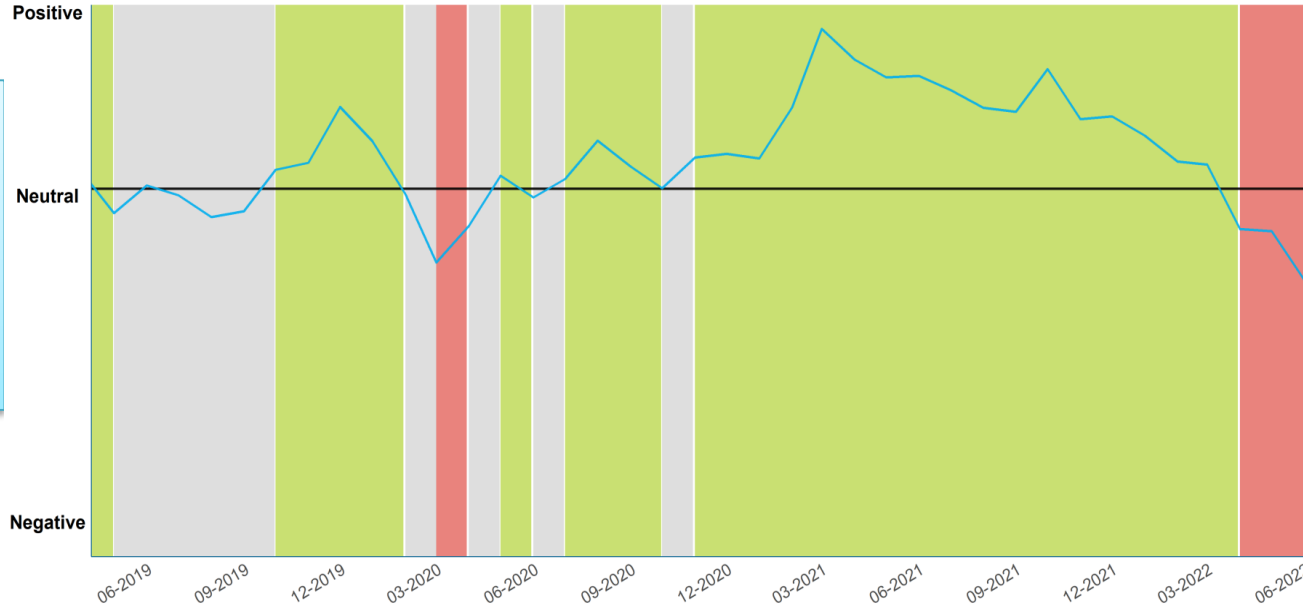
Market Valuations: Current state of valuation metrics per asset class relative to their own history.
 U.S. Equity Valuation and Private Equity Valuation are very high. Other valuations remain attractive.

Data as of June 30, 2022



Today's Risk Environment – Sentiment/Concern

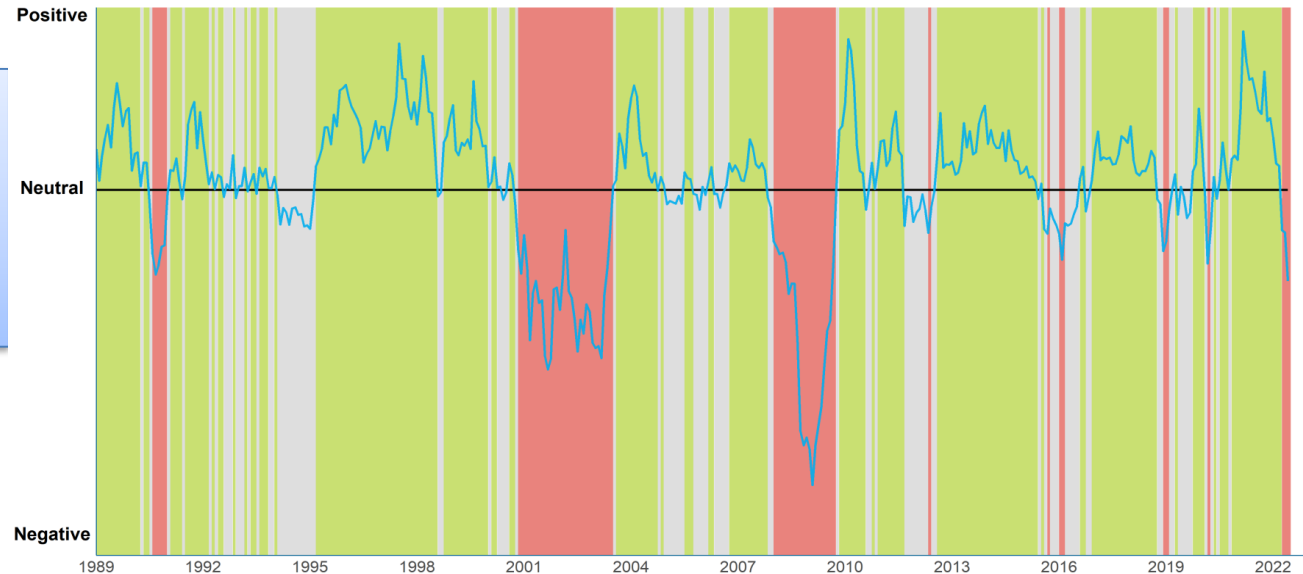
Market Sentiment Indicator (Last three years)



Red indicator indicates that market's sentiment towards growth risk is negative



Market Sentiment Indicator (All History)

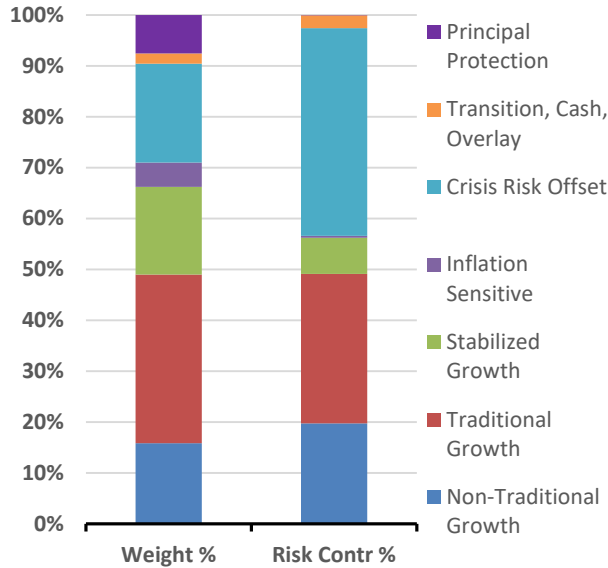


Market's sentiment towards growth risk is negative

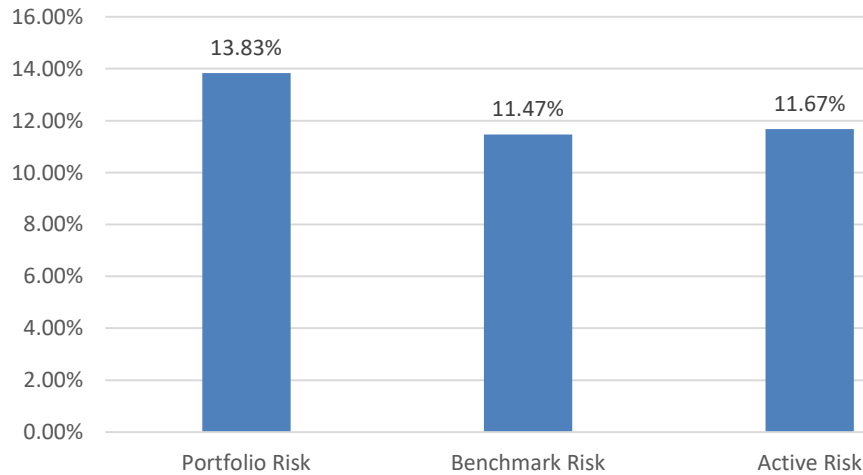


SURS Risk Exposures

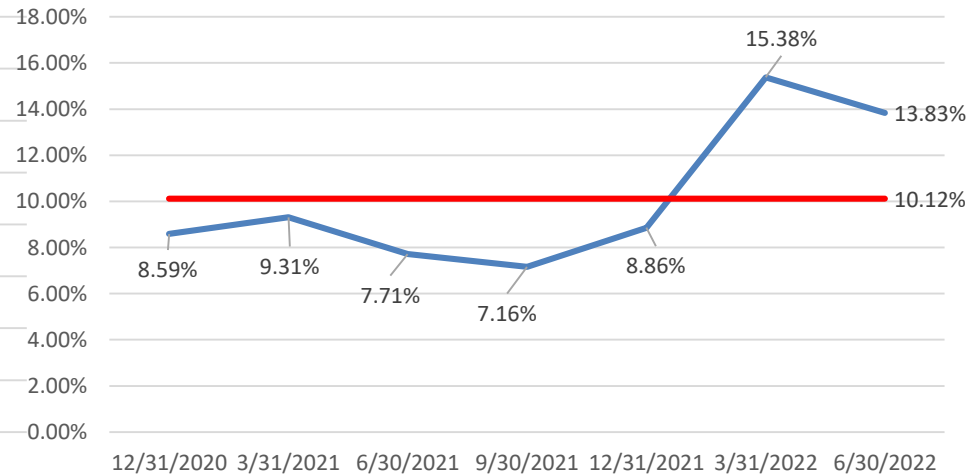
- Total Portfolio Risk comes primarily from the CRO, Traditional Growth, and Non-Traditional Growth asset classes
- Portfolio Risk and Active Risk decreased during the quarter. Benchmark Risk increased.
- Portfolio Risk decreased from 15.38% to 13.80% over the past quarter, higher than the 10.12% average over time



Plan Level Risk Overview



Portfolio Risk Over Time





Scenario Analysis

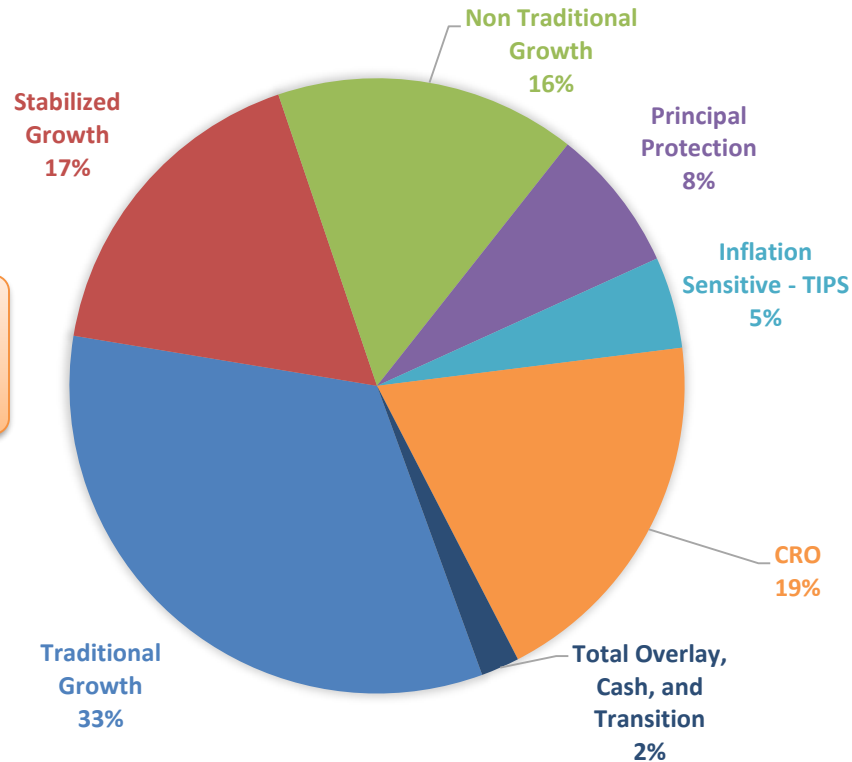
Scenario	Description	% Loss
Credit '07	Credit & liquidity crisis stemming from a severe slowdown in the housing market causing significant widening of credit spreads and increased implied volatility.	(19.75%)
Crash '08	Credit & liquidity crisis and equity market crash set off by Lehman Brothers bankruptcy. Significant credit spreads widening caused by massive deleveraging.	(10.47%)
Fed Policy at Growth Inflection – Growth Disappoints	Reopening of the US economy is put on hold as COVID 19 variants drive infection rates up, resulting in another round of lockdowns.	(8.04%)
Fed Policy at Growth Inflection – Economy Overheats	The US economy recovers sharply following a successful vaccine rollout, leading to elevated risk asset valuations and unexpectedly high inflation. Faced with apparent economic overheating, the Fed hastens its tapering of asset purchases and pulls rate hike expectations forward to early 2022.	(0.28%)
Stock Market Drop Global	1% probability movement of MSCI World Market Down	(2.96%)

Current portfolio stress tested using historical scenarios.



Liquidity Profile

SURS TOTAL PORTFOLIO



Prefer Not to Liquidate

Liquid/Stable /Accessible

8.2 years of net cash outflows
2.3 years of benefits

Liquid/Stable group consists of Principal Protection, Inflation Sensitive – TIPS, CRO and Total Overlay which constitute for 33.8% of SURS portfolio.

SURS Projected Annual Net Contributions: -\$750M to -\$1.2B over next 5 years



Operational Risk Summary

Operational Risk	Target Review Cycle	Last Reviewed	Comments
Asset Allocation	3-5 Years	June 2021	
Investment Beliefs	3-5 Years	January 2020	
Investment Policy	Annual	September 2021	Scheduled for September 2022
Investment Procurement Policy	Annual	January 2021	Scheduled for September 2022
Private Real Assets Pacing and Strategic Plan	Annual	December 2021	
Private Equity Pacing and Strategic Plan	Annual	December 2021	
Private Credit Pacing and Strategic Plan	Annual	February 2022	
Capital Market Assumptions Review	Annual	March 2022	
Custodial Review	Annual	August 2022	Search completed in October 2021
Securities Lending Review	Annual	March 2022	
Proxy Voting Guidelines	Annual	January 2022	2020 U.S., Public Pension and International Guidelines published on SURS website



Operational Risk Summary

Relationships with Contract Terms	Contracted To	Comments
Northern Trust - Custodian	December 2026	
Meketa - General Consultant	February 28, 2023	
CAPTRUST - DC Specialty	March 31, 2023	
Callan - Real Assets Specialty	September 29, 2023	Search Scheduled for January 2023
Meketa – Private Credit	December 10, 2025	Private Credit Advisor
Aksia TorreyCove	September 1, 2024	Private Equity Advisor
Glass Lewis - Proxy Voting Services	October 1, 2024	
ISBI, TRS, SURS Agreement - Quarterly Restricted Securities	October 31, 2022	ISBI negotiated an annual contract with MSCI to provide the quarterly restricted securities list to October 2022. An agreement with Glass Lewis is still in place to provide the expatriated companies list. Costs for these services are shared equally between SURS, ISBI and TRS.

SURS FY 2022 Private Equity & Private Credit Commitment Activity

Date Closed	Fund	Vintage Year	Strategy	Sub-Strategy	Geography	Commitment (USD)
Private Equity Commitments						
8/20/2021	Inflexion Buyout Fund VI	2021	Buyout	Mid-Market	Europe	\$ 24,480,000
8/31/2021	Nautic Partners X	2021	Buyout	Mid-Market	North America	\$ 25,000,000
9/24/2021	Harvest Partners IX	2021	Buyout	Mid-Market	North America	\$ 50,000,000
9/30/2021	Clearlake Capital Partners VII*	2021	Buyout	Mid-Market	North America	\$ 50,000,000
01/21/2022	Base10 Partners III*	2022	Venture Capital	Early Stage VC	North America	\$ 20,000,000
01/28/2022	Great Hill Equity Partners VIII	2022	Growth Equity	Mid-Market Growth	North America	\$ 25,000,000
02/03/2022	Thoma Bravo Fund XV	2022	Buyout	Large	North America	\$ 25,000,000
02/18/2022	One Equity Partners VIII	2022	Buyout	Mid-Market	North America	\$ 25,000,000
02/25/2022	HgCapital Saturn 3A	2022	Buyout	Large	Europe	\$ 35,000,000
03/26/2022	PAI Partners VIII	2022	Buyout	Mid-to-Large	Europe	\$ 49,956,176
04/14/2022	HgCapital Genesis 10A	2022	Buyout	Mid-Market	Europe	\$ 12,993,600
05/10/2022	Oak HC-FT Partners V*	2022	Venture Capital	Late / Growth	North America	\$ 40,000,000
05/11/2022	Advent International GPE X	2022	Buyout	Large	Global	\$ 25,000,000
05/13/2022	Nordic Capital XI	2022	Buyout	Mid-to-Large	Europe	\$ 50,095,256
05/17/2022	Bregal Sagemount IV-B	2022	Growth Equity	Mid-Market Growth	North America	\$ 25,000,000
05/31/2022	Rubicon Technology Partners IV	2023	Buyout	Mid-Market	North America	\$ 32,500,000
FY 2022 Private Equity Commitments						\$ 515,025,031
Private Credit Commitments						
9/30/2021	Neuberger Berman Private Debt Fund IV	2021	Private Debt	Direct Lending	North America	\$ 150,000,000
11/1/2021	Silver Rock Co-Invest Fund (Share Class B)	2019	Private Debt	Special Situations	North America	\$ 50,000,000
1/31/2022	Turning Rock Fund II*	2021	Private Debt	Special Situations	North America	\$ 50,000,000
2/28/2022	Fortress Lending Fund III	2022	Private Debt	Direct Lending	North America	\$ 50,000,000
3/31/2022	Ares Pathfinder Core Fund	2022	Private Debt	Specialty Lending	North America	\$ 100,000,000
5/3/2022	Neuberger Berman Private Debt Fund IV	2021	Private Debt	Direct Lending	North America	\$ 25,000,000
FY 2022 Private Credit Commitments						\$ 425,000,000

*MWDBE-owned firm

Illinois State Universities Retirement System

September 15, 2022

Second Quarter 2022
Supplement to the Board Report



Illinois State Universities Retirement System

Agenda

1. Performance Results
2. Diverse Manager Performance Summary
3. Private Markets
4. Capital Markets Outlook & Risk Metrics
5. Appendix

Performance Results



Illinois State Universities Retirement System

US Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
US Equity	1,689,491,493	-15.7	-12.3	9.7	10.2	10.0	12.3	10.9	Oct-80
<i>Dow Jones U.S. Total Stock Market</i>		<i>-16.8</i>	<i>-14.2</i>	<i>9.6</i>	<i>10.5</i>	<i>10.3</i>	<i>12.5</i>	--	<i>Oct-80</i>
Excess Return		1.1	1.9	0.1	-0.3	-0.3	-0.2		
Passive Large US Equity	1,580,749,043	-16.7	-12.9	10.1	10.8	10.6	12.7	11.1	Oct-80
<i>Dow Jones U.S. Total Stock Market</i>		<i>-16.8</i>	<i>-14.2</i>	<i>9.6</i>	<i>10.5</i>	<i>10.3</i>	<i>12.5</i>	--	<i>Oct-80</i>
Excess Return		0.1	1.3	0.5	0.3	0.3	0.2		
Rhumblin	1,580,749,043	-16.7	-12.9	10.2	10.9	10.8	12.8	9.0	Feb-05
<i>Rhumblin Equity Index</i>		<i>-16.8</i>	<i>-13.2</i>	<i>10.2</i>	<i>10.8</i>	<i>10.7</i>	<i>12.7</i>	<i>9.0</i>	<i>Feb-05</i>
Excess Return		0.1	0.3	0.0	0.1	0.1	0.1	0.0	
Mid Cap	108,742,445	-17.2	-15.4	8.8	8.2	8.0	--	8.6	Dec-13
<i>Russell MidCap</i>		<i>-16.8</i>	<i>-17.3</i>	<i>6.6</i>	<i>8.0</i>	<i>8.0</i>	--	<i>8.7</i>	<i>Dec-13</i>
Excess Return		-0.4	1.9	2.2	0.2	0.0		-0.1	
Channing Capital Management- SMID	108,742,445	-17.2	-15.4	4.7	--	--	--	1.7	Feb-18
<i>Russell 2500 Value</i>		<i>-15.4</i>	<i>-13.2</i>	<i>6.2</i>	--	--	--	<i>4.1</i>	<i>Feb-18</i>
Excess Return		-1.8	-2.2	-1.5				-2.4	



Illinois State Universities Retirement System

Non US Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non US Equity	1,420,915,183	-14.8	-18.5	0.9	2.1	2.8	5.1	5.7	May-86
<i>SURS Non US Equity Blend</i>		<i>-14.3</i>	<i>-19.9</i>	<i>1.5</i>	<i>2.6</i>	<i>3.0</i>	<i>4.9</i>	<i>--</i>	<i>May-86</i>
Excess Return		-0.5	1.4	-0.6	-0.5	-0.2	0.2		
Active Non-US Equity	1,062,380,664	-15.6	-17.7	0.9	2.0	2.9	6.3	--	Jul-92
<i>MSCI EAFE</i>		<i>-14.5</i>	<i>-17.8</i>	<i>1.1</i>	<i>2.2</i>	<i>2.7</i>	<i>5.4</i>	<i>--</i>	<i>Jul-92</i>
Excess Return		-1.1	0.1	-0.2	-0.2	0.2	0.9		
Strategic Global Advisors	295,054,798	-16.0	-19.1	-0.7	0.4	1.8	6.1	4.4	Sep-08
<i>MSCI EAFE</i>		<i>-14.5</i>	<i>-17.8</i>	<i>1.1</i>	<i>2.2</i>	<i>2.7</i>	<i>5.4</i>	<i>2.9</i>	<i>Sep-08</i>
Excess Return		-1.5	-1.3	-1.8	-1.8	-0.9	0.7	1.5	
Ativo	261,418,781	-17.5	-18.0	-1.2	1.2	1.8	4.9	2.9	Aug-08
<i>MSCI ACWI ex US</i>		<i>-13.7</i>	<i>-19.4</i>	<i>1.4</i>	<i>2.5</i>	<i>2.9</i>	<i>4.8</i>	<i>2.5</i>	<i>Aug-08</i>
Excess Return		-3.8	1.4	-2.6	-1.3	-1.1	0.1	0.4	
GlobeFlex Capital	315,482,819	-14.3	-15.5	3.5	2.9	4.0	6.5	6.5	Dec-11
<i>MSCI ACWI ex USA</i>		<i>-13.7</i>	<i>-19.4</i>	<i>1.4</i>	<i>2.5</i>	<i>2.9</i>	<i>4.8</i>	<i>4.7</i>	<i>Dec-11</i>
Excess Return		-0.6	3.9	2.1	0.4	1.1	1.7	1.8	
Solstein Capital	83,529,522	-14.9	-20.9	2.8	--	--	--	3.2	Nov-17
<i>MSCI EAFE</i>		<i>-14.5</i>	<i>-17.8</i>	<i>1.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.9</i>	<i>Nov-17</i>
Excess Return		-0.4	-3.1	1.7				2.3	
Xponance - Arga	16,013,855	-11.0	-14.0	6.5	5.6	--	--	7.6	Aug-16
<i>MSCI EAFE</i>		<i>-14.5</i>	<i>-17.8</i>	<i>1.1</i>	<i>2.2</i>	<i>--</i>	<i>--</i>	<i>4.3</i>	<i>Aug-16</i>
Excess Return		3.5	3.8	5.4	3.4			3.3	
Xponance - Denali	15,889,952	-14.6	-18.3	-2.9	-0.7	--	--	2.2	Mar-17
<i>MSCI EAFE</i>		<i>-14.5</i>	<i>-17.8</i>	<i>1.1</i>	<i>2.2</i>	<i>--</i>	<i>--</i>	<i>3.3</i>	<i>Mar-17</i>
Excess Return		-0.1	-0.5	-4.0	-2.9			-1.1	
Xponance - Martin Investors	21,536,710	-14.6	-16.3	--	--	--	--	7.1	May-20
<i>MSCI EAFE</i>		<i>-14.5</i>	<i>-17.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>7.7</i>	<i>May-20</i>
Excess Return		-0.1	1.5					-0.6	



Illinois State Universities Retirement System

Non US Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Xponance - Foresight GL	27,481,051	-13.5	-15.4	--	--	--	--	8.7	May-20
<i>MSCI EAFE</i>		<i>-14.5</i>	<i>-17.8</i>	--	--	--	--	<i>7.7</i>	<i>May-20</i>
Excess Return		1.0	2.4					1.0	
Xponance - Redwood	25,852,050	-17.8	--	--	--	--	--	-17.8	Apr-22
<i>MSCI EAFE</i>		<i>-14.5</i>	--	--	--	--	--	<i>-14.5</i>	<i>Apr-22</i>
Excess Return		-3.3						-3.3	
Passive Non-US Equity	358,516,091	-12.4	-19.9	0.2	1.9	2.7	4.6	--	Apr-86
<i>MSCI ACWI ex USA</i>		<i>-13.7</i>	<i>-19.4</i>	<i>1.4</i>	<i>2.5</i>	<i>2.9</i>	<i>4.8</i>	--	<i>Apr-86</i>
Excess Return		1.3	-0.5	-1.2	-0.6	-0.2	-0.2		
NTAM ACWI Ex-US IMI	244,765,040	-13.3	-19.4	--	--	--	--	3.3	Jul-20
<i>MSCI ACWI ex USA IMI</i>		<i>-14.3</i>	<i>-19.9</i>	--	--	--	--	<i>2.7</i>	<i>Jul-20</i>
Excess Return		1.0	0.5					0.6	
State Street MSCI EM	113,301,797	-10.5	--	--	--	--	--	-20.8	Nov-21
<i>MSCI Emerging Markets</i>		<i>-11.4</i>	--	--	--	--	--	<i>-19.5</i>	<i>Nov-21</i>
Excess Return		0.9						-1.3	



Illinois State Universities Retirement System

Global Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Global Equity	4,445,562,778	-14.0	-14.6	8.7	9.4	9.3	10.6	7.6	May-02
<i>SURS Global Equity Blend</i>		<i>-15.8</i>	<i>-16.5</i>	<i>6.0</i>	<i>6.9</i>	<i>6.9</i>	<i>8.7</i>	<i>6.7</i>	<i>May-02</i>
Excess Return		1.8	1.9	2.7	2.5	2.4	1.9	0.9	
Global Equity - Active	2,347,500,932	-13.1	-14.3	--	--	--	--	7.0	Nov-20
Wellington	501,856,099	-16.6	-16.3	6.7	7.8	7.7	10.3	7.6	May-02
<i>MSCI ACWI</i>		<i>-15.7</i>	<i>-15.8</i>	<i>6.2</i>	<i>7.0</i>	<i>7.0</i>	<i>8.8</i>	<i>6.8</i>	<i>May-02</i>
Excess Return		-0.9	-0.5	0.5	0.8	0.7	1.5	0.8	
Mondrian	518,867,342	-8.7	-9.5	5.7	6.4	6.7	8.0	7.9	Dec-11
<i>MSCI ACWI</i>		<i>-15.7</i>	<i>-15.8</i>	<i>6.2</i>	<i>7.0</i>	<i>7.0</i>	<i>8.8</i>	<i>8.8</i>	<i>Dec-11</i>
Excess Return		7.0	6.3	-0.5	-0.6	-0.3	-0.8	-0.9	
T. Rowe Price Global	306,113,961	-21.2	-29.3	9.6	11.4	11.9	14.0	12.8	Nov-08
<i>MSCI ACWI</i>		<i>-15.7</i>	<i>-15.8</i>	<i>6.2</i>	<i>7.0</i>	<i>7.0</i>	<i>8.8</i>	<i>9.2</i>	<i>Nov-08</i>
Excess Return		-5.5	-13.5	3.4	4.4	4.9	5.2	3.6	
Ariel Investments	222,056,062	-5.8	-3.2	--	--	--	--	9.7	Jul-20
<i>MSCI ACWI</i>		<i>-15.7</i>	<i>-15.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>5.8</i>	<i>Jul-20</i>
Excess Return		9.9	12.6					3.9	
Earnest Global	237,958,480	-13.8	-14.8	--	--	--	--	10.6	Jul-20
<i>MSCI ACWI IMI Net USD</i>		<i>-15.8</i>	<i>-16.5</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>6.0</i>	<i>Jul-20</i>
Excess Return		2.0	1.7					4.6	
GQG Partners	269,447,622	-8.1	-1.0	--	--	--	--	8.2	Jul-20
<i>MSCI ACWI</i>		<i>-15.7</i>	<i>-15.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>5.8</i>	<i>Jul-20</i>
Excess Return		7.6	14.8					2.4	
Strategic Global Advisors	151,037,635	-14.8	-13.4	--	--	--	--	6.7	Jul-20
<i>MSCI World</i>		<i>-16.2</i>	<i>-14.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>6.9</i>	<i>Jul-20</i>
Excess Return		1.4	0.9					-0.2	



Illinois State Universities Retirement System

Global Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Arga Inv ACWI	19,861,767	-13.0	-16.1	--	--	--	--	1.1	Jan-21
<i>MSCI ACWI</i>		<i>-15.7</i>	<i>-15.8</i>	--	--	--	--	<i>-3.6</i>	<i>Jan-21</i>
Excess Return		2.7	-0.3					4.7	
Channing GL AD	22,189,162	-16.0	-22.3	--	--	--	--	-8.0	Jan-21
<i>MSCI ACWI</i>		<i>-15.7</i>	<i>-15.8</i>	--	--	--	--	<i>-3.6</i>	<i>Jan-21</i>
Excess Return		-0.3	-6.5					-4.4	
Frontier GL AC	22,265,980	-15.4	-21.0	--	--	--	--	-9.3	Jan-21
<i>MSCI ACWI</i>		<i>-15.7</i>	<i>-15.8</i>	--	--	--	--	<i>-3.6</i>	<i>Jan-21</i>
Excess Return		0.3	-5.2					-5.7	
Fithian	21,070,519	-19.1	--	--	--	--	--	-17.8	Mar-22
<i>MSCI ACWI</i>		<i>-15.7</i>	--	--	--	--	--	<i>-13.8</i>	<i>Mar-22</i>
Excess Return		-3.4						-4.0	
Foresight	21,418,619	-10.6	--	--	--	--	--	-9.3	Mar-22
<i>MSCI ACWI</i>		<i>-15.7</i>	--	--	--	--	--	<i>-13.8</i>	<i>Mar-22</i>
Excess Return		5.1						4.5	
Martin	20,650,763	-16.5	--	--	--	--	--	-14.3	Mar-22
<i>MSCI ACWI</i>		<i>-15.7</i>	--	--	--	--	--	<i>-13.8</i>	<i>Mar-22</i>
Excess Return		-0.8						-0.5	



Illinois State Universities Retirement System

Global Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Maytech	12,701,535	-26.2	--	--	--	--	--	-24.8	Mar-22
<i>MSCI ACWI</i>		<i>-15.7</i>	--	--	--	--	--	<i>-13.8</i>	<i>Mar-22</i>
Excess Return		-10.5						-11.0	
Global Equity - Passive	2,098,061,846	-14.9	-15.0	--	--	--	--	--	
BTC Global Alpha Tilts	2,098,061,846	-14.9	-15.0	--	--	--	--	7.8	Jul-20
<i>MSCI ACWI IMI Net USD</i>		<i>-15.8</i>	<i>-16.5</i>	--	--	--	--	<i>6.0</i>	<i>Jul-20</i>
Excess Return		0.9	1.5					1.8	



Illinois State Universities Retirement System

Option Strategies (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Option Strategies	511,676,958	-8.7	-6.8	5.8	--	--	--	5.4	Apr-18
<i>SURS Options Strategies Blend</i>		<i>-8.9</i>	<i>-0.6</i>	<i>6.0</i>	--	--	--	<i>5.0</i>	<i>Apr-18</i>
Excess Return		0.2	-6.2	-0.2				0.4	
Neuberger Berman S&P 500	323,785,287	-9.3	-6.0	7.3	--	--	--	6.8	Apr-18
<i>CBOE S&P 500 PutWrite Index USD</i>		<i>-8.8</i>	<i>1.0</i>	<i>6.6</i>	--	--	--	<i>5.3</i>	<i>Apr-18</i>
Excess Return		-0.5	-7.0	0.7				1.5	



Illinois State Universities Retirement System

Stabilized Real Assets (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Stabilized Real Assets	1,383,214,204	6.9	31.6	12.6	9.6	9.2	--	9.8	Jun-13
<i>SURS Stabilized Real Assets Blend</i>		<u>6.9</u>	<u>26.9</u>	<u>10.2</u>	<u>8.9</u>	<u>9.2</u>	<u>--</u>	<u>9.9</u>	<u>Jun-13</u>
Excess Return		0.0	4.7	2.4	0.7	0.0		-0.1	
Core	913,033,946	6.7	32.8	12.9	9.7	9.2	--	9.6	Jun-13
<i>NCREIF ODCE Net 1 Qtr Lag</i>		<u>7.1</u>	<u>27.4</u>	<u>10.3</u>	<u>8.9</u>	<u>9.2</u>	<u>--</u>	<u>10.0</u>	<u>Jun-13</u>
Excess Return		-0.4	5.4	2.6	0.8	0.0		-0.4	
UBS Trumbull Property Fund	107,010,978	3.9	25.0	7.1	5.6	6.1	7.4	5.5	May-06
<i>SURS Real Estate Blend</i>		<u>7.1</u>	<u>27.3</u>	<u>10.3</u>	<u>8.9</u>	<u>9.2</u>	<u>9.9</u>	<u>6.7</u>	<u>May-06</u>
Excess Return		-3.2	-2.3	-3.2	-3.3	-3.1	-2.5	-1.2	
JP Morgan Strategic	309,192,921	4.5	27.7	11.1	8.9	8.8	--	9.4	Jun-14
<i>SURS Real Estate Blend</i>		<u>7.1</u>	<u>27.3</u>	<u>10.3</u>	<u>8.9</u>	<u>9.2</u>	<u>--</u>	<u>9.6</u>	<u>Jun-14</u>
Excess Return		-2.6	0.4	0.8	0.0	-0.4		-0.2	
Heitman Hart Fund	310,939,069	4.4	32.3	12.0	9.4	9.4	--	9.7	Jul-14
<i>SURS Real Estate Blend</i>		<u>7.1</u>	<u>27.3</u>	<u>10.3</u>	<u>8.9</u>	<u>9.2</u>	<u>--</u>	<u>9.6</u>	<u>Jul-14</u>
Excess Return		-2.7	5.0	1.7	0.5	0.2		0.1	
Prologis Target US Logis	185,846,011	16.7	48.9	--	--	--	--	42.5	Oct-20
<i>SURS Real Estate Blend</i>		<u>7.1</u>	<u>27.3</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>16.9</u>	<u>Oct-20</u>
Excess Return		9.6	21.6					25.6	
Core Plus	445,988,733	7.7	30.3	12.6	--	--	--	10.4	Sep-18
<i>SURS Real Estate Blend</i>		<u>7.1</u>	<u>27.3</u>	<u>10.3</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>9.5</u>	<u>Sep-18</u>
Excess Return		0.6	3.0	2.3				0.9	
Blackstone Property Partners	268,106,697	9.3	27.5	10.3	--	--	--	9.2	Feb-19
<i>SURS Real Estate Blend</i>		<u>7.1</u>	<u>27.3</u>	<u>10.3</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>9.8</u>	<u>Feb-19</u>
Excess Return		2.2	0.2	0.0				-0.6	



Illinois State Universities Retirement System

Stabilized Real Assets (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Carlyle Property Investors	164,137,626	6.2	36.6	17.2	--	--	--	14.1	Sep-18
<i>SURS Real Estate Blend</i>		<u>7.1</u>	<u>27.3</u>	<u>10.3</u>	--	--	--	<u>9.5</u>	<i>Sep-18</i>
Excess Return		-0.9	9.3	6.9				4.6	
GI Partners ETS FUND	13,744,410	--	--	--	--	--	--	0.0	May-22
Core Infrastructure	24,191,525	0.0	7.8	--	--	--	--	-12.7	Feb-21
<i>FTSE Dev Core Infra 50/50</i>		<u>-7.1</u>	<u>4.9</u>	--	--	--	--	<u>10.0</u>	<i>Feb-21</i>
Excess Return		7.1	2.9					-22.7	
Blackrock GL Renewable	24,191,525	0.0	7.8	--	--	--	--	-12.7	Feb-21
<i>FTSE Dev Core Infra 50/50</i>		<u>-7.1</u>	<u>4.9</u>	--	--	--	--	<u>10.0</u>	<i>Feb-21</i>
Excess Return		7.1	2.9					-22.7	



Illinois State Universities Retirement System

Public Credit (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Public Credit	1,751,530,688	-9.0	-13.3	--	--	--	--	-1.9	Sep-19
<i>SURS Credit Fixed Income Blend</i>		<i>-7.8</i>	<i>-14.2</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-2.2</i>	<i>Sep-19</i>
Excess Return		-1.2	0.9					0.3	
Diversified Credit	1,410,181,632	-9.3	-12.5	-1.1	0.9	1.5	--	1.6	Jun-13
<i>SURS Credit ex EMD Blend</i>		<i>-8.7</i>	<i>-12.9</i>	<i>-0.6</i>	<i>1.1</i>	<i>1.6</i>	<i>--</i>	<i>1.7</i>	<i>Jun-13</i>
Excess Return		-0.6	0.4	-0.5	-0.2	-0.1		-0.1	
PIMCO Global Credit	480,548,168	-8.8	-11.9	--	--	--	--	-1.6	Sep-19
<i>SURS Credit ex EMD Blend</i>		<i>-8.7</i>	<i>-12.9</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.5</i>	<i>Sep-19</i>
Excess Return		-0.1	1.0					-0.1	
Neuberger Berman	929,618,892	-9.5	-12.8	--	--	--	--	-1.2	Sep-19
<i>SURS Credit ex EMD Blend</i>		<i>-8.7</i>	<i>-12.9</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.5</i>	<i>Sep-19</i>
Excess Return		-0.8	0.1					0.3	



Illinois State Universities Retirement System

Public Credit (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Bivium Credit	341,349,057	-8.0	-14.1	--	--	--	--	3.3	Mar-20
<i>Bivium Credit Blend</i>		<i>-7.2</i>	<i>-15.8</i>	--	--	--	--	<i>-0.1</i>	<i>Mar-20</i>
Excess Return		-0.8	1.7					3.4	
BiviumEMD - LM Capital Group	65,435,313	-6.3	-9.6	-0.2	1.8	2.9	--	2.8	Apr-15
<i>JP Morgan Corporate EMBI Broad TR USD</i>		<i>-5.4</i>	<i>-15.9</i>	<i>-1.9</i>	<i>0.9</i>	<i>2.4</i>	--	<i>2.3</i>	<i>Apr-15</i>
Excess Return		-0.9	6.3	1.7	0.9	0.5		0.5	
BiviumEMD - GIA Partners LLC	57,600,914	-9.0	-15.2	-1.2	1.5	3.0	--	2.8	Apr-15
<i>JP Morgan Corporate EMBI Broad TR USD</i>		<i>-5.4</i>	<i>-15.9</i>	<i>-1.9</i>	<i>0.9</i>	<i>2.4</i>	--	<i>2.3</i>	<i>Apr-15</i>
Excess Return		-3.6	0.7	0.7	0.6	0.6		0.5	
Bivium - RVX Asset Mgmt	56,020,162	-6.5	-16.2	--	--	--	--	-3.8	Dec-19
<i>JP Morgan Corporate EMBI Broad TR USD</i>		<i>-5.4</i>	<i>-15.9</i>	--	--	--	--	<i>-3.8</i>	<i>Dec-19</i>
Excess Return		-1.1	-0.3					0.0	
Bivium - New Century Advisors	48,000,740	-9.2	-16.6	--	--	--	--	-2.7	Nov-19
<i>BBgBC Global Corp Agg Blend</i>		<i>-8.7</i>	<i>-16.5</i>	--	--	--	--	<i>-3.4</i>	<i>Nov-19</i>
Excess Return		-0.5	-0.1					0.7	
Bivium - Integrity	39,078,681	-6.4	-13.0	--	--	--	--	-2.0	Nov-19
<i>Bloomberg US Corporate Inv Grade TR</i>		<i>-7.3</i>	<i>-14.2</i>	--	--	--	--	<i>-2.6</i>	<i>Nov-19</i>
Excess Return		0.9	1.2					0.6	
Bivium - GIA Partners, LLC	75,181,903	-9.8	-14.2	--	--	--	--	-1.1	Nov-19
<i>ICE/BAML GI HY Const Hedge Blend</i>		<i>-9.9</i>	<i>-15.0</i>	--	--	--	--	<i>-1.9</i>	<i>Nov-19</i>
Excess Return		0.1	0.8					0.8	
Bivium Cash	403	0.1	-0.3	--	--	--	--	--	Sep-19
<i>91 Day T-Bills</i>		<i>0.1</i>	<i>0.2</i>	--	--	--	--	--	<i>Sep-19</i>
Excess Return		0.0	-0.5						



Illinois State Universities Retirement System

Public Credit (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Credit	268,031,484	2.7	10.4	--	--	--	--	12.6	Jul-20
<i>SURS Private Credit Blend</i>		<i>-6.8</i>	<i>-8.0</i>	--	--	--	--	<i>2.4</i>	<i>Jul-20</i>
Excess Return		9.5	18.4					10.2	
PIMCO Disco III	34,291,209	1.0	8.5	--	--	--	--	12.1	Jul-20
<i>SURS Private Credit Blend</i>		<i>-6.8</i>	<i>-8.0</i>	--	--	--	--	<i>2.4</i>	<i>Jul-20</i>
Excess Return		7.8	16.5					9.7	
Silver Rock Tactical Allocation Fund, L.P.	120,344,247	1.1	7.1	--	--	--	--	7.1	Feb-21
<i>SURS Private Credit Blend</i>		<i>-6.8</i>	<i>-8.0</i>	--	--	--	--	<i>-3.8</i>	<i>Feb-21</i>
Excess Return		7.9	15.1					10.9	
Crayhill Principal Strategies Fund II	20,152,769	2.6	72.3	--	--	--	--	65.2	Jun-21
<i>SURS Private Credit Blend</i>		<i>-6.8</i>	<i>-8.0</i>	--	--	--	--	<i>-6.8</i>	<i>Jun-21</i>
Excess Return		9.4	80.3					72.0	
NB Private Debt Fund IV	60,928,434	8.1	--	--	--	--	--	8.0	Oct-21
<i>SURS Private Credit Blend</i>		<i>-6.8</i>	--	--	--	--	--	<i>-8.8</i>	<i>Oct-21</i>
Excess Return		14.9						16.8	
Turning Rock Fund II	14,862,543	1.0	--	--	--	--	--	0.0	Feb-22
<i>SURS Private Credit Blend</i>		<i>-6.8</i>	--	--	--	--	--	<i>-8.4</i>	<i>Feb-22</i>
Excess Return		7.8						8.4	
Fortress Lending Fund III	17,452,282	-0.5	--	--	--	--	--	-0.5	Mar-22
<i>SURS Private Credit Blend</i>		<i>-6.8</i>	--	--	--	--	--	<i>-7.2</i>	<i>Mar-22</i>
Excess Return		6.3						6.7	



Illinois State Universities Retirement System

Non-Core Real Estate (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non-Core Real Estate	466,865,769	6.3	29.0	8.1	9.1	--	--	9.6	Aug-15
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	--	--	<i>10.7</i>	<i>Aug-15</i>
Excess Return		-1.2	-0.2	-3.9	-1.4			-1.1	
Blackstone RE EU VI	28,054,656	-8.1	19.4	--	--	--	--	6.5	Nov-19
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	--	--	--	--	<i>12.9</i>	<i>Nov-19</i>
Excess Return		-15.6	-9.8					-6.4	
Blue Vista RE Partners IV	16,630,022	24.7	62.2	24.6	19.9	--	--	13.1	Apr-16
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	--	--	<i>10.3</i>	<i>Apr-16</i>
Excess Return		17.2	33.0	12.6	9.4			2.8	
Brookfield Fund III	30,624,691	4.6	19.9	13.2	--	--	--	8.4	Mar-19
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	--	--	--	<i>11.5</i>	<i>Mar-19</i>
Excess Return		-2.9	-9.3	1.2				-3.1	
Brookfield Strategy RE Partners II	34,535,000	8.0	37.3	18.4	15.5	--	--	13.8	Feb-16
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	--	--	<i>10.4</i>	<i>Feb-16</i>
Excess Return		0.5	8.1	6.4	5.0			3.4	
CHC RE Fund VIII	4,794,616	54.0	140.9	48.8	--	--	--	37.2	Sep-18
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	--	--	--	<i>11.1</i>	<i>Sep-18</i>
Excess Return		46.5	111.7	36.8				26.1	
CHC Realty Partners IX	41,974,164	8.9	--	--	--	--	--	25.8	Oct-21
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	--	--	--	--	--	<i>24.1</i>	<i>Oct-21</i>
Excess Return		1.4						1.7	
Crow Holdings Realty Partners VII	2,313,424	22.4	41.5	18.1	17.6	--	--	13.2	Jan-16
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	--	--	<i>10.4</i>	<i>Jan-16</i>
Excess Return		14.9	12.3	6.1	7.1			2.8	



Illinois State Universities Retirement System

Non-Core Real Estate (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Dune Fund III	65,228,982	4.8	13.7	-0.8	4.5	6.3	--	6.3	Jun-13
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	<i>10.8</i>	<i>--</i>	<i>11.6</i>	<i>Jun-13</i>
Excess Return		-2.7	-15.5	-12.8	-6.0	-4.5		-5.3	
Dune Fund II	5,897,119	-2.7	18.4	2.5	5.0	6.8	11.2	6.8	Mar-09
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	<i>10.8</i>	<i>11.6</i>	<i>8.5</i>	<i>Mar-09</i>
Excess Return		-10.2	-10.8	-9.5	-5.5	-4.0	-0.4	-1.7	
Dune Fund IV	22,627,970	-3.3	45.6	--	--	--	--	-3.6	Jul-19
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>12.2</i>	<i>Jul-19</i>
Excess Return		-10.8	16.4					-15.8	
Franklin Templeton EMREFF	4,439,375	-4.3	-10.0	0.1	3.5	7.8	9.8	8.2	Aug-11
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	<i>10.8</i>	<i>11.6</i>	<i>11.8</i>	<i>Aug-11</i>
Excess Return		-11.8	-39.2	-11.9	-7.0	-3.0	-1.8	-3.6	
Franklin Templeton FTPREF	1,524,768	1.3	3.8	-2.9	6.4	10.2	11.2	9.2	May-12
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	<i>10.8</i>	<i>11.6</i>	<i>11.6</i>	<i>May-12</i>
Excess Return		-6.2	-25.4	-14.9	-4.1	-0.6	-0.4	-2.4	
Franklin Templeton MDP RE 2015	50,497,334	-0.2	20.7	2.3	2.4	--	--	-2.2	Aug-15
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	<i>--</i>	<i>--</i>	<i>10.7</i>	<i>Aug-15</i>
Excess Return		-7.7	-8.5	-9.7	-8.1			-12.9	
Long Wharf RE Partners VI	22,437,047	-1.6	46.8	--	--	--	--	25.4	Aug-19
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>12.4</i>	<i>Aug-19</i>
Excess Return		-9.1	17.6					13.0	
Mesirow MFIRE II	19,173,923	13.3	17.8	5.3	5.4	6.8	5.5	5.3	Mar-12
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	<i>10.5</i>	<i>10.8</i>	<i>11.6</i>	<i>11.6</i>	<i>Mar-12</i>
Excess Return		5.8	-11.4	-6.7	-5.1	-4.0	-6.1	-6.3	



Illinois State Universities Retirement System

Non-Core Real Estate (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Cabot Industrial Value VI	44,815,167	8.7	53.7	--	--	--	--	30.3	Aug-20
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	--	--	--	--	<i>17.5</i>	<i>Aug-20</i>
Excess Return		1.2	24.5					12.8	
Westbrook Real Estate Fund XI	26,128,684	10.3	13.4	--	--	--	--	17.5	Nov-20
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	--	--	--	--	<i>20.5</i>	<i>Nov-20</i>
Excess Return		2.8	-15.8					-3.0	



Illinois State Universities Retirement System

Non-Core Real Assets (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non-Core Real Estate Debt	57,679,467	2.0	4.4	6.8	--	--	--	7.3	Nov-17
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>7.5</i>	<i>29.2</i>	<i>12.0</i>	--	--	--	<i>10.8</i>	<i>Nov-17</i>
Excess Return		-5.5	-24.8	-5.2				-3.5	
Basis Investment Group Fund I	22,411,014								
Oaktree RE Debt Fund II	10,522,182								
Basis Investment Group Fund II	9,788,987								
Torchlight Debt Fund VII	14,957,284								

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non-Core Farmland	38,570,500	8.7	14.9	--	--	--	--	-0.6	Nov-20
<i>NCREIF Farmland 1 Qtr Lag</i>		<i>2.6</i>	<i>9.7</i>	--	--	--	--	<i>7.9</i>	<i>Nov-20</i>
Excess Return		6.1	5.2					-8.5	
Homestead Capital	38,570,500	8.7	14.9	--	--	--	--	-0.6	Nov-20
<i>NCREIF Farmland 1 Qtr Lag</i>		<i>2.6</i>	<i>9.7</i>	--	--	--	--	<i>7.9</i>	<i>Nov-20</i>
Excess Return		6.1	5.2					-8.5	



Illinois State Universities Retirement System

Infrastructure (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non-Core Infrastructure	124,235,864	3.7	16.9	14.7	10.5	8.7	10.0	10.2	Dec-09
<i>CPI+5% 1 Qtr Lagged</i>		<i>4.4</i>	<i>13.9</i>	<i>9.4</i>	<i>8.5</i>	<i>8.0</i>	<i>7.4</i>	<i>7.4</i>	<i>Dec-09</i>
Excess Return		-0.7	3.0	5.3	2.0	0.7	2.6	2.8	
Alinda Capital Partners	9,000,294	5.9	7.3	-0.9	-5.2	-4.0	-0.7	1.5	Dec-09
<i>CPI+5% 1 Qtr Lagged</i>		<i>4.4</i>	<i>13.9</i>	<i>9.4</i>	<i>8.5</i>	<i>8.0</i>	<i>7.4</i>	<i>7.4</i>	<i>Dec-09</i>
Excess Return		1.5	-6.6	-10.3	-13.7	-12.0	-8.1	-5.9	
Macquarie Inf Partners Fnd III	44,478,039	3.2	25.4	19.6	17.4	14.4	--	11.1	Oct-14
<i>CPI+5% 1 Qtr Lagged</i>		<i>4.4</i>	<i>13.9</i>	<i>9.4</i>	<i>8.5</i>	<i>8.0</i>	<i>--</i>	<i>7.6</i>	<i>Oct-14</i>
Excess Return		-1.2	11.5	10.2	8.9	6.4		3.5	
Macquarie Infra Partners IV	53,693,320								
Ember Infrastructure Partners	6,704,954	-2.4	--	--	--	--	--	-18.5	Sep-21
<i>CPI-U + 5%</i>		<i>4.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>12.8</i>	<i>Sep-21</i>
Excess Return		-6.7						-31.3	
Pantheon Global Infra Fund IV	10,121,952	0.4	--	--	--	--	--	0.4	Mar-22
<i>CPI+5% 1 Qtr Lagged</i>		<i>4.4</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>5.1</i>	<i>Mar-22</i>
Excess Return		-4.0						-4.7	



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity- Fund of Funds	2,273,153,975	1.9	26.8	27.0	21.6	17.5	15.4	15.8	Jun-90
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>13.7</i>	<i>Jun-90</i>
Excess Return		6.9	18.7	10.5	5.9	2.9	-0.6	2.1	
Pantheon Ventures	12,644,071	-22.0	-28.8	-14.5	-5.7	-3.2	0.9	3.6	Feb-02
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>12.3</i>	<i>Feb-02</i>
Excess Return		-17.0	-36.9	-31.0	-21.4	-17.8	-15.1	-8.7	
Pantheon One Line Asset	196,704	202.3	-27.9	-23.6	-14.7	-13.1	-6.7	-2.2	Dec-07
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>12.7</i>	<i>Dec-07</i>
Excess Return		207.3	-36.0	-40.1	-30.4	-27.7	-22.7	-14.9	
Pantheon 2014 Global Fund	137,384,928	6.3	24.3	24.4	19.1	13.2	--	12.4	Feb-15
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>--</i>	<i>14.5</i>	<i>Feb-15</i>
Excess Return		11.3	16.2	7.9	3.4	-1.4		-2.1	
Pantheon Europe III	1,289,148	-6.6	-14.8	7.0	9.4	8.3	8.6	11.9	Jan-03
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>14.3</i>	<i>Jan-03</i>
Excess Return		-1.6	-22.9	-9.5	-6.3	-6.3	-7.4	-2.4	
Pantheon Europe VI	8,741,301	-31.4	-22.9	10.8	12.8	13.5	12.6	7.8	Sep-08
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>13.5</i>	<i>Sep-08</i>
Excess Return		-26.4	-31.0	-5.7	-2.9	-1.1	-3.4	-5.7	
Pantheon Europe VII	23,088,699	-16.0	0.2	20.0	17.8	16.3	--	12.2	Jan-13
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>--</i>	<i>16.4</i>	<i>Jan-13</i>
Excess Return		-11.0	-7.9	3.5	2.1	1.7		-4.2	
Pantheon USA IX	78,669,669	3.0	23.2	34.8	28.4	23.1	--	19.3	Dec-12
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>--</i>	<i>16.4</i>	<i>Dec-12</i>
Excess Return		8.0	15.1	18.3	12.7	8.5		2.9	



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Pantheon USA VIII	41,808,218	-4.1	11.1	20.2	19.3	17.2	16.4	11.4	Dec-07
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>12.5</i>	<i>Dec-07</i>
Excess Return		0.9	3.0	3.7	3.6	2.6	0.4	-1.1	
Fairview Capital	114,271,166	5.7	36.1	28.0	21.7	16.2	--	8.7	Apr-14
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>--</i>	<i>14.6</i>	<i>Apr-14</i>
Excess Return		10.7	28.0	11.5	6.0	1.6		-5.9	
Fairview Lincoln Fund Series B	26,476,623	7.4	25.0	--	--	--	--	20.5	Mar-21
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>14.6</i>	<i>Mar-21</i>
Excess Return		12.4	16.9					5.9	
M2-EM PE Fund	132,330,719	8.9	43.9	37.2	19.1	--	--	17.4	Oct-16
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>--</i>	<i>--</i>	<i>16.8</i>	<i>Oct-16</i>
Excess Return		13.9	35.8	20.7	3.4			0.6	
Muller and Monroe MPEFF	552,890	6.8	5.7	-6.6	-1.6	0.7	4.5	2.6	Feb-08
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>12.8</i>	<i>Feb-08</i>
Excess Return		11.8	-2.4	-23.1	-17.3	-13.9	-11.5	-10.2	
Progress Venture Capital	763,541	-3.8	-5.7	28.8	16.4	11.4	5.7	3.8	Jun-95
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>13.5</i>	<i>Jun-95</i>
Excess Return		1.2	-13.8	12.3	0.7	-3.2	-10.3	-9.7	
Adams Street 2007	3,927,783	0.0	-45.0	-7.5	-1.7	0.1	3.2	1.5	Jun-07
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>12.7</i>	<i>Jun-07</i>
Excess Return		5.0	-53.1	-24.0	-17.4	-14.5	-12.8	-11.2	
Adams Street 2008	49,022,890	-8.7	5.7	21.5	19.7	17.8	17.0	14.0	Jan-08
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>12.5</i>	<i>Jan-08</i>
Excess Return		-3.7	-2.4	5.0	4.0	3.2	1.0	1.5	



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Adams Street 2009	68,506,064	-3.7	15.3	26.3	22.0	18.6	16.6	14.3	Jan-09
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>15.1</i>	<i>Jan-09</i>
Excess Return		1.3	7.2	9.8	6.3	4.0	0.6	-0.8	
Adams Street 2012	87,115,461	-7.3	20.0	27.9	22.8	18.6	13.1	12.7	Apr-12
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>17.0</i>	<i>Apr-12</i>
Excess Return		-2.3	11.9	11.4	7.1	4.0	-2.9	-4.3	
Adams Street 2013	137,848,811	-6.4	21.6	27.0	22.7	18.7	--	13.3	Mar-13
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>--</i>	<i>16.8</i>	<i>Mar-13</i>
Excess Return		-1.4	13.5	10.5	7.0	4.1		-3.5	
Adams Street 2014	149,488,732	2.4	25.0	28.8	23.7	19.6	--	16.6	May-14
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>--</i>	<i>15.1</i>	<i>May-14</i>
Excess Return		7.4	16.9	12.3	8.0	5.0		1.5	
Adams Street 2015 Global Fund	199,428,531	-2.6	29.5	33.0	27.0	--	--	31.6	Sep-15
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>--</i>	<i>--</i>	<i>14.6</i>	<i>Sep-15</i>
Excess Return		2.4	21.4	16.5	11.3			17.0	
Adams Street 2016 Global Fund	200,981,013	0.0	37.9	30.5	22.8	--	--	27.3	Dec-16
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>--</i>	<i>--</i>	<i>16.3</i>	<i>Dec-16</i>
Excess Return		5.0	29.8	14.0	7.1			11.0	
Adams Street 2017 Global Fund	124,984,182								
Adams Street 2018 Global	93,419,715								
Adams Street Global Op	284,635	-35.1	-17.1	8.9	12.6	13.7	11.2	13.2	Feb-04
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>13.2</i>	<i>Feb-04</i>
Excess Return		-30.1	-25.2	-7.6	-3.1	-0.9	-4.8	0.0	



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Private Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Adams Street Non-US	1,827,785	-1.8	-10.4	-2.0	2.2	3.2	3.1	3.4	Jun-98
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>11.2</i>	<i>Jun-98</i>
Excess Return		3.2	-18.5	-18.5	-13.5	-11.4	-12.9	-7.8	
Adams Street Partners	4,146,762	-5.7	32.3	6.3	4.7	4.6	6.4	--	Jun-90
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>16.0</i>	<i>--</i>	<i>Jun-90</i>
Excess Return		-0.7	24.2	-10.2	-11.0	-10.0	-9.6		
Adams Street Secondary Fund 5	7,231,434	-0.7	11.4	10.0	9.6	8.0	--	6.1	Sep-12
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>8.1</i>	<i>16.5</i>	<i>15.7</i>	<i>14.6</i>	<i>--</i>	<i>16.7</i>	<i>Sep-12</i>
Excess Return		4.3	3.3	-6.5	-6.1	-6.6		-10.6	
Pantheon Multi-Strategy 2017	85,338,420								
Mesirow Private Equity	265,101,585								
Mesirow Co-Inv	74,289,790								
Pantheon Access 2018	141,626,783								



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity- Direct (Aksia)	648,733,513	2.4	26.1	--	--	--	--	--	Sep-19
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	--	<i>Sep-19</i>
Excess Return		7.4	18.0						
Cortec Group Fund VII	32,009,383	-1.0	21.9	--	--	--	--	23.8	Dec-19
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	<i>17.5</i>	<i>Dec-19</i>
Excess Return		4.0	13.8					6.3	
Oceansound Partners Fund	17,768,044	1.4	18.9	--	--	--	--	8.4	Jan-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	<i>16.3</i>	<i>Jan-20</i>
Excess Return		6.4	10.8					-7.9	
Harvest Partners	75,798,783	2.2	27.6	--	--	--	--	19.0	Dec-19
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	<i>17.5</i>	<i>Dec-19</i>
Excess Return		7.2	19.5					1.5	
Bregal Sagemount III	34,601,529	15.2	10.9	--	--	--	--	-30.1	Dec-19
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	<i>17.5</i>	<i>Dec-19</i>
Excess Return		20.2	2.8					-47.6	
Reverence Capital II (TC)	60,864,432	0.0	40.3	--	--	--	--	30.2	Mar-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	<i>15.6</i>	<i>Mar-20</i>
Excess Return		5.0	32.2					14.6	
Clearlake Capital Partners VI	41,615,500	1.6	60.3	--	--	--	--	30.6	May-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	<i>15.6</i>	<i>May-20</i>
Excess Return		6.6	52.2					15.0	
HG Capital Genesis 9 (TC)	4,477,694	-37.1	13.6	--	--	--	--	-100.0	Mar-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	<i>14.6</i>	<i>Mar-21</i>
Excess Return		-32.1	5.5					-114.6	
HG Capital Saturn Fund 2	23,713,471	-9.3	48.5	--	--	--	--	180.2	Jul-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	--	--	--	--	<i>26.1</i>	<i>Jul-20</i>
Excess Return		-4.3	40.4					154.1	



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Private Equity (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Rubicon Tech Partners 3	26,600,548	1.7	14.5	--	--	--	--	10.3	Jul-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>26.1</i>	<i>Jul-20</i>
Excess Return		6.7	6.4					-15.8	
Torrey Cove Co-Investment Fund	134,845,617	11.3	34.4	--	--	--	--	22.3	Sep-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>24.2</i>	<i>Sep-20</i>
Excess Return		16.3	26.3					-1.9	
MBK Partners Fund V (TC)	16,678,195	-13.0	39.4	--	--	--	--	25.0	Mar-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>14.6</i>	<i>Mar-21</i>
Excess Return		-8.0	31.3					10.4	
Altaris Health PTR V	7,589,490	4.5	5.6	--	--	--	--	-4.4	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.1</i>	<i>Apr-21</i>
Excess Return		9.5	-2.5					-15.5	
Avance Inv Partners	8,198,438	7.0	--	--	--	--	--	3.0	Aug-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>3.5</i>	<i>Aug-21</i>
Excess Return		12.0						-0.5	
Base 10 Adv Initiative FD	22,161,096	-1.2	5.6	--	--	--	--	4.5	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.1</i>	<i>Apr-21</i>
Excess Return		3.8	-2.5					-6.6	
GGV Capital VIII	10,939,540	3.3	17.3	--	--	--	--	-7.2	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.1</i>	<i>Apr-21</i>
Excess Return		8.3	9.2					-18.3	
GGV Discovery III	4,799,718	2.8	54.4	--	--	--	--	23.9	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.1</i>	<i>Apr-21</i>
Excess Return		7.8	46.3					12.8	
Oak HC-FT Partners IV	17,485,693	2.2	5.9	--	--	--	--	-5.6	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.1</i>	<i>Apr-21</i>
Excess Return		7.2	-2.2					-16.7	



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	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Stellex Capital Partners II	8,505,713	11.2	-18.9	--	--	--	--	-15.4	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.1</i>	<i>Apr-21</i>
Excess Return		16.2	-27.0					-26.5	
Thoma Bravo Fund XIV	47,596,202	0.6	1.5	--	--	--	--	-1.5	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.1</i>	<i>Apr-21</i>
Excess Return		5.6	-6.6					-12.6	
GGV Capital III Plus	2,276,757								
One Rock Capital III	16,039,500								
Nautic Partners X	3,829,977	-2.5	--	--	--	--	--	-12.6	Jan-22
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>1.3</i>	<i>Jan-22</i>
Excess Return		2.5						-13.9	
Orchid Asia VIII	2,406,735	-6.7	--	--	--	--	--	-6.7	Mar-22
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>-5.0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.1</i>	<i>Mar-22</i>
Excess Return		-1.7						-5.6	
One Equity Partners VIII	6,127,627	-4.9	--	--	--	--	--	-16.6	Mar-22
<i>SURS PE Blend</i>		<i>-5.0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.1</i>	<i>Mar-22</i>
Excess Return		0.1						-15.5	
Base 10 Partners III (TC)	2,784,490	--	--	--	--	--	--	0.0	May-22
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.0</i>	<i>May-22</i>
Excess Return								0.0	
Clearlake Cao Ptrs VII TC	14,938,839	--	--	--	--	--	--	0.0	May-22
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.0</i>	<i>May-22</i>
Excess Return								0.0	
Thoma Bravo Fund XV	4,080,502	--	--	--	--	--	--	-1.7	Jun-22
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>2.2</i>	<i>Jun-22</i>
Excess Return								-3.9	



Illinois State Universities Retirement System

Inflation Sensitive (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Inflation Sensitive	1,096,399,357	-6.2	-5.1	2.8	3.0	2.6	--	2.3	Jun-13
<i>SURS Inflation Sensitive Blend</i>		<i>-6.1</i>	<i>-5.1</i>	<i>2.6</i>	<i>2.5</i>	<i>2.0</i>	<i>--</i>	<i>1.9</i>	<i>Jun-13</i>
Excess Return		-0.1	0.0	0.2	0.5	0.6		0.4	
TIPS	1,096,399,357	-6.2	-5.1	2.9	3.1	2.8	1.7	4.1	Jan-04
<i>Bloomberg US TIPS TR</i>		<i>-6.1</i>	<i>-5.1</i>	<i>3.0</i>	<i>3.2</i>	<i>2.8</i>	<i>1.7</i>	<i>3.9</i>	<i>Jan-04</i>
Excess Return		-0.1	0.0	-0.1	-0.1	0.0	0.0	0.2	
Rhumblin TIPS	1,096,399,357	-6.2	-5.1	2.9	3.2	--	--	2.9	Jun-17
<i>Bloomberg US TIPS TR</i>		<i>-6.1</i>	<i>-5.1</i>	<i>3.0</i>	<i>3.2</i>	<i>--</i>	<i>--</i>	<i>3.0</i>	<i>Jun-17</i>
Excess Return		-0.1	0.0	-0.1	0.0			-0.1	



Illinois State Universities Retirement System

Principal Protection (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Principal Protection	1,723,534,998	-2.3	-6.8	-0.3	1.2	1.6	1.8	2.0	Jun-13
<i>BC US Int Ag x Credit Blend</i>		<i>-2.7</i>	<i>-7.6</i>	<i>-0.4</i>	<i>1.2</i>	<i>1.6</i>	<i>1.7</i>	<i>2.0</i>	<i>Jun-13</i>
Excess Return		0.4	0.8	0.1	0.0	0.0	0.1	0.0	
Garcia Hamilton	456,089,214	-1.7	-5.0	--	--	--	--	-0.8	Sep-19
<i>BC US Int Ag x Credit Blend</i>		<i>-2.7</i>	<i>-7.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.3</i>	<i>Sep-19</i>
Excess Return		1.0	2.6					0.5	
Pugh Capital	419,784,946	-2.7	-7.7	--	--	--	--	-1.5	Sep-19
<i>BC US Int Ag x Credit Blend</i>		<i>-2.7</i>	<i>-7.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.3</i>	<i>Sep-19</i>
Excess Return		0.0	-0.1					-0.2	
LM Capital	423,465,695	-2.2	-7.2	--	--	--	--	-1.3	Sep-19
<i>BC US Int Ag x Credit Blend</i>		<i>-2.7</i>	<i>-7.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.3</i>	<i>Sep-19</i>
Excess Return		0.5	0.4					0.0	
Ramirez	424,195,143	-2.4	-7.3	--	--	--	--	-1.1	Sep-19
<i>BC US Int Ag x Credit Blend</i>		<i>-2.7</i>	<i>-7.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.3</i>	<i>Sep-19</i>
Excess Return		0.3	0.3					0.2	



Illinois State Universities Retirement System

Crisis Risk Offset (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Crisis Risk Offset	4,422,204,211	5.1	12.2	--	--	--	--	5.8	Nov-19
<i>SURS CRO Blend</i>		<u>2.0</u>	<u>8.4</u>	--	--	--	--	<u>7.0</u>	<i>Nov-19</i>
Excess Return		3.1	3.8					-1.2	
Long Duration	567,285,705	-11.9	-18.4	--	--	--	--	-6.2	Dec-19
<i>BBgBarc US Govt Long TR</i>		<u>-11.9</u>	<u>-18.4</u>	--	--	--	--	<u>-6.0</u>	<i>Dec-19</i>
Excess Return		0.0	0.0					-0.2	
Rhumblin Long Duration	567,285,705	-11.9	-18.4	--	--	--	--	-6.2	Dec-19
<i>BBgBarc US Govt Long TR</i>		<u>-11.9</u>	<u>-18.4</u>	--	--	--	--	<u>-6.0</u>	<i>Dec-19</i>
Excess Return		0.0	0.0					-0.2	
Systematic Trend Following	2,642,175,006	10.5	26.0	--	--	--	--	13.1	Nov-19
<i>CS Mgd Futures 15% Vol</i>		<u>8.3</u>	<u>23.6</u>	--	--	--	--	<u>15.5</u>	<i>Nov-19</i>
Excess Return		2.2	2.4					-2.4	
Credit Suisse Asset Mgmt	603,120,284	8.7	27.8	--	--	--	--	19.5	Dec-19
<i>CS Mgd Futures 15% Vol</i>		<u>8.3</u>	<u>23.6</u>	--	--	--	--	<u>16.6</u>	<i>Dec-19</i>
Excess Return		0.4	4.2					2.9	
Campbell & Company	739,007,499	14.1	36.5	--	--	--	--	15.0	Nov-19
<i>CS Mgd Futures 15% Vol</i>		<u>8.3</u>	<u>23.6</u>	--	--	--	--	<u>15.5</u>	<i>Nov-19</i>
Excess Return		5.8	12.9					-0.5	
Aspect Capital	720,291,022	12.8	34.5	--	--	--	--	14.3	Nov-19
<i>CS Mgd Futures 15% Vol</i>		<u>8.3</u>	<u>23.6</u>	--	--	--	--	<u>15.5</u>	<i>Nov-19</i>
Excess Return		4.5	10.9					-1.2	
Longtail Alpha	579,756,201	5.5	5.2	--	--	--	--	5.3	Dec-19
<i>CS Mgd Futures 15% Vol</i>		<u>8.3</u>	<u>23.6</u>	--	--	--	--	<u>16.6</u>	<i>Dec-19</i>
Excess Return		-2.8	-18.4					-11.3	



Illinois State Universities Retirement System

Crisis Risk Offset (Net-of-Fees) | As of June 30, 2022

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Alternative Risk Premia	1,212,743,499	4.8	8.5	--	--	--	--	0.6	Nov-19
<i>90 Day T-Bill + 2%</i>		<i>0.8</i>	<i>2.4</i>	--	--	--	--	<i>2.4</i>	<i>Nov-19</i>
Excess Return		4.0	6.1					-1.8	
PIMCO Commodity Alpha Fund	151,669,363	8.2	12.1	10.3	9.3	--	--	10.5	May-16
<i>PIMCO Commodity Alpha Fund Benchmark</i>		<i>0.8</i>	<i>2.4</i>	<i>-1.8</i>	<i>-1.0</i>	--	--	<i>-1.3</i>	<i>May-16</i>
Excess Return		7.4	9.7	12.1	10.3			11.8	
Versor	363,526,458	3.1	10.5	--	--	--	--	-6.1	Dec-19
<i>90 Day T-Bill + 2%</i>		<i>0.8</i>	<i>2.4</i>	--	--	--	--	<i>2.3</i>	<i>Dec-19</i>
Excess Return		2.3	8.1					-8.4	
Lombard Odier	321,030,068	3.7	-3.0	--	--	--	--	-5.4	Dec-19
<i>90 Day T-Bill + 2%</i>		<i>0.8</i>	<i>2.4</i>	--	--	--	--	<i>2.3</i>	<i>Dec-19</i>
Excess Return		2.9	-5.4					-7.7	
PIMCO Alternative Risk	376,517,610	6.1	15.7	--	--	--	--	6.2	May-20
<i>90 Day T-Bill + 2%</i>		<i>0.8</i>	<i>2.4</i>	--	--	--	--	<i>2.2</i>	<i>May-20</i>
Excess Return		5.3	13.3					4.0	

Diverse Manager Performance Summary



Illinois State Universities Retirement System

Diverse Manager Performance Summary

Traditional Growth

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
US Equity								
Channing Cap SMD Value	108,742,445	-17.2	-15.4	4.7	--	--	1.7	Feb-18
<i>Russell 2500 Value</i>		<u>-15.4</u>	<u>-13.2</u>	<u>6.2</u>	--	--	<u>4.1</u>	
Excess		-1.8	-2.2	-1.5	--	--	-2.4	
Rhumblin S&P Wilshire	1,580,749,043	-16.7	-12.9	10.2	10.9	12.8	9.0	Feb-05
<i>Rhumblin Equity Index</i>		<u>-16.8</u>	<u>-13.2</u>	<u>10.2</u>	<u>10.8</u>	<u>12.7</u>	<u>9.0</u>	
Excess		0.1	0.2	0.1	0.1	0.0	0.0	



Illinois State Universities Retirement System

Diverse Manager Performance Summary

Traditional Growth

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Non US Equity								
Ativo	261,418,781	-17.5	-18.0	-1.2	1.2	4.9	2.9	Aug-08
<i>MSCI ACWI ex US</i>		<u>-13.7</u>	<u>-19.4</u>	<u>1.4</u>	<u>2.5</u>	<u>4.8</u>	<u>2.5</u>	
Excess		-3.8	1.5	-2.6	-1.3	0.1	0.4	
GlobeFlex	315,482,819	-14.3	-15.5	3.5	2.9	6.5	6.5	Dec-11
<i>MSCI ACWI ex USA</i>		<u>-13.7</u>	<u>-19.4</u>	<u>1.4</u>	<u>2.5</u>	<u>4.8</u>	<u>4.7</u>	
Excess		-0.5	3.9	2.1	0.4	1.7	1.8	
Solstein	83,529,522	-14.9	-20.9	2.8	--	--	3.2	Nov-17
<i>MSCI EAFE</i>		<u>-14.5</u>	<u>-17.8</u>	<u>1.1</u>	--	--	<u>0.9</u>	
Excess		-0.3	-3.1	1.7	--	--	2.3	
Strategic Global Advisors	295,054,798	-16.0	-19.1	-0.7	0.4	6.1	4.4	Sep-08
<i>MSCI EAFE</i>		<u>-14.5</u>	<u>-17.8</u>	<u>1.1</u>	<u>2.2</u>	<u>5.4</u>	<u>2.9</u>	
Excess		-1.5	-1.3	-1.8	-1.8	0.7	1.5	
Xponance Non US Equity	106,884,053	-14.7	-19.4	--	--	--	11.1	Apr-20
<i>MSCI EAFE</i>		<u>-14.5</u>	<u>-17.8</u>	--	--	--	<u>10.4</u>	
Excess		-0.2	-1.6	--	--	--	0.7	



Illinois State Universities Retirement System

Diverse Manager Performance Summary

Traditional Growth

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Global Equity								
Ariel Investments	222,056,062	-5.8	-3.2	--	--	--	9.7	Jul-20
<i>MSCI ACWI</i>		<u>-15.7</u>	<u>-15.8</u>	--	--	--	<u>5.8</u>	
Excess		9.9	12.5	--	--	--	3.9	
Earnest Global	237,958,480	-13.8	-14.8	--	--	--	10.6	Jul-20
<i>MSCI ACWI IMI Net USD</i>		<u>-15.8</u>	<u>-16.5</u>	--	--	--	<u>6.0</u>	
Excess		2.1	1.7	--	--	--	4.6	
GQG Partners	269,447,622	-8.1	-1.0	--	--	--	8.2	Jul-20
<i>MSCI ACWI</i>		<u>-15.7</u>	<u>-15.8</u>	--	--	--	<u>5.8</u>	
Excess		7.6	14.7	--	--	--	2.3	
Strategic Global Advisors	151,037,635	-14.8	-13.4	--	--	--	6.7	Jul-20
<i>MSCI World</i>		<u>-16.2</u>	<u>-14.3</u>	--	--	--	<u>6.9</u>	
Excess		1.4	1.0	--	--	--	-0.2	
Xponance Global Equity	140,163,730	-16.3	-21.4	--	--	--	-7.8	Jan-21
<i>MSCI ACWI</i>		<u>-15.7</u>	<u>-15.8</u>	--	--	--	<u>-3.6</u>	
Excess		-0.7	-5.7	--	--	--	-4.2	



Illinois State Universities Retirement System

Diverse Manager Performance Summary

Stabilized Growth

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Options								
Gladius - Options	187,891,671	-7.6	-7.6	3.8	--	--	2.4	May-18
<i>SURS Gladius Benchmark</i>		<u>-9.1</u>	<u>-3.9</u>	<u>4.7</u>	--	--	<u>3.7</u>	
Excess		1.5	-3.7	-0.9	--	--	-1.2	

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Public Credit								
Bivium Credit	341,349,057	-8.0	-14.1	--	--	--	3.3	Mar-20
<i>Bivium Credit Blend</i>		<u>-7.2</u>	<u>-15.8</u>	--	--	--	<u>-0.1</u>	
Excess		-0.8	1.8	--	--	--	3.4	

Inflation Sensitive

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
TIPS								
Rhumblin TIPS	1,096,399,357	-6.2	-5.1	2.9	3.2	--	2.9	Jun-17
<i>Bloomberg US TIPS TR</i>		<u>-6.1</u>	<u>-5.1</u>	<u>3.0</u>	<u>3.2</u>	--	<u>3.0</u>	
Excess		-0.1	0.1	-0.1	-0.1	--	-0.1	



Illinois State Universities Retirement System

Diverse Manager Performance Summary

Principal Protection

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Garcia Hamilton Assoc	456,089,214	-1.7	-5.0	--	--	--	-0.8	Sep-19
<i>BC US Int Ag x Credit Blend</i>		<u>-2.7</u>	<u>-7.6</u>	--	--	--	<u>-1.3</u>	
Excess		1.1	2.6	--	--	--	0.5	
LM Capital	423,465,695	-2.2	-7.2	--	--	--	-1.3	Sep-19
<i>BC US Int Ag x Credit Blend</i>		<u>-2.7</u>	<u>-7.6</u>	--	--	--	<u>-1.3</u>	
Excess		0.5	0.4	--	--	--	0.0	
Pugh Capital	419,784,946	-2.7	-7.7	--	--	--	-1.5	Sep-19
<i>BC US Int Ag x Credit Blend</i>		<u>-2.7</u>	<u>-7.6</u>	--	--	--	<u>-1.3</u>	
Excess		0.0	-0.1	--	--	--	-0.2	
Ramirez	424,195,143	-2.4	-7.3	--	--	--	-1.1	Sep-19
<i>BC US Int Ag x Credit Blend</i>		<u>-2.7</u>	<u>-7.6</u>	--	--	--	<u>-1.3</u>	
Excess		0.3	0.3	--	--	--	0.2	



Illinois State Universities Retirement System

Diverse Manager Performance Summary

Crisis Risk Offset

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Systematic Trend								
Longtail Alpha	579,756,201	5.5	5.2	--	--	--	5.3	Dec-19
<i>CS Mgd Futures 15% Vol</i>		<u>8.3</u>	<u>23.6</u>	--	--	--	<u>15.5</u>	
Excess		-2.8	-18.4	--	--	--	-10.2	
Long Duration								
Rhumblin Long Duration	567,285,705	-11.9	-18.4	--	--	--	-6.2	Dec-19
<i>BBgBarc US Govt Long TR</i>		<u>-11.9</u>	<u>-18.4</u>	--	--	--	<u>-6.0</u>	
Excess		0.0	0.0	--	--	--	-0.2	
Alternative Risk Premia								
Versor	363,526,458	3.1	10.5	--	--	--	-6.1	Dec-19
<i>90 Day T-Bill + 2%</i>		<u>0.6</u>	<u>2.2</u>	--	--	--	<u>2.3</u>	
Excess		2.5	8.3	--	--	--	-8.4	



Illinois State Universities Retirement System

Diverse Manager Performance Summary

Private Credit – IRR

	Market Value	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Private Credit¹						
Crayhill Prin Strategy Fund II	13,602,148	--	--	--	89.4	May-21
Turning Rock Fund II	10,824,662	--	--	--	-1.0	Feb-22

Non Traditional Growth – IRR

	Market Value	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Non Core Real Assets¹						
Basis Inv Group Fund I	23,323,294	9.6	--	--	9.5	Dec-17
Basis Inv Group Fund II	13,691,305	--	--	--	-0.5	Jun-21
Brasa Real Estate Fund II	14,264,901	--	--	--	26.0	Mar-22
Ember Infrastructure	6,481,747	--	--	--	-17.8	Sep-21
Franklin Templeton EMREFF	4,439,375	-11.7	1.9	14.4	12.9	Aug-11
Franklin Templeton MDP RE 2015	64,265,437	6.1	5.2	--	4.5	Aug-15
Long Wharf RE Partners VI	22,939,863	--	--	--	36.0	Aug-19
Longpoint Realty Partners	19,386,165	--	--	--	15.3	Dec-21
New Cap Partners Fund III	2,697,209	--	--	--	4.4	Sep-21

¹ Data is lagged one quarter.



Illinois State Universities Retirement System

Diverse Manager Performance Summary

Non Traditional Growth – IRR

	Market Value	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Private Equity¹						
Legacy Private Equity						
Fairview Capital	139,443,782	28.5	23.6	--	20.1	Apr-14
M2 EM PE Fund	136,086,566	35.7	28.4	--	29.1	Oct-16
M2 MPEFF	552,890	-0.7	3.8	9.4	8.4	Feb-08
Aksia						
Avance Investment Partners, LP	4,491,952	--	--	--	-2.5	Aug-21
Base 10 Adv Initiative FD	19,888,627	--	--	--	7.2	Apr-21
Clearlake Cap Partners VI	39,812,575	--	--	--	61.7	May-20
Oak HC-FT Partners IV	16,164,049	--	--	--	9.5	Apr-21
Oceansound Partners Fund	17,768,044	--	--	--	19.7	Jan-20
One Rock Capital III	16,039,500	--	--	--	40.6	Jun-21
Reverance Capital II	60,864,432	--	--	--	37.2	Mar-20
Stellex Capital Partners II	7,564,363	--	--	--	7.1	Apr-21

¹ Data is lagged one quarter.



Illinois State Universities Retirement System

Overlay Performance Detail¹ | As of June 30, 2022

Asset Class	Overlay Exposure (\$)
Traditional Growth	466,150,116
Non-Traditional Growth	0
Principal Protection	-199,142,837
Stabilized Growth	0
Inflation Sensitive	0
Crisis Risk Offset	0
Net Exposure	267,007,279

Overlay Performance	Incremental Gain/Loss (\$)(Gross)	Return as a % of Total Fund (Gross)
Quarter	-22,573,780	-0.10
Since Inception ²	89,240,170	0.07

Index	QTD	YTD	1 Year
S&P 500	-16.10%	-20.0%	-10.62%
MSCI EAFE	-14.51%	-19.57%	-17.77%
Bloomberg Agg.	-4.69%	-10.35%	-10.30%
Bloomberg Commodity Index	-5.66%	18.44%	24.27%

¹ Data on this page provided by PARAMETRIC

² Inception Date: September 2014

Private Markets



Illinois State Universities Retirement System

Infrastructure & Real Estate Internal Rates of Return Trailing Periods¹ | As of March 31, 2022

Investment Name	Infrastructure Investments ¹		
	3 YR	5 YR	Since Inception
Mature			
Alinda Infrastructure II, L.P.	-1.34%	-9.28%	0.72%
Maturing (5-9 Years)			
Macquarie Infrastructure Partners II	23.50%	11.72%	8.98%
Macquarie Infrastructure Partners III	19.07%	17.35%	15.16%
Macquarie Infrastructure Partners IV	12.95%	--	12.09%
Total	14.35%	9.59%	8.11%

Investment Name	Real Estate Investments			
	3 YR	5 YR	10YR	Since Inception
Liquidated				
RREEF America REIT II	--	--	10.21%	2.97%
Mature (10+ Years)				
Dune Real Estate Fund II	-1.92%	3.33%	15.59%	14.39%
UBS Trumbull Property Fund	3.88%	5.28%	7.89%	6.64%
RREEF America REIT III	0.00%	-4.67%	19.98%	-3.78%
Franklin Templeton EMREFF	-11.74%	1.87%	14.35%	12.89%
Maturing (5-9 Years)				
Dune Real Estate Fund III	-3.73%	3.52%	--	6.56%
Franklin Templeton Private Real Estate Fund	-20.14%	11.16%	--	20.40%
Heitman America Real Estate Trust, L.P.	10.25%	8.76%	--	9.60%
JP Morgan Strategic Property Fund	9.82%	8.24%	--	9.06%
MFIRE Global Partnership Fund II, L.P.	0.36%	2.97%	--	6.96%
Franklin Templeton MDP RE 2015, L.P.	6.10%	5.17%	--	4.48%
Blue Vista Real Estate Partners IV	17.43%	15.85%	--	13.58%
Brookfield Real Estate Partners II	16.37%	14.34%	--	14.07%
Crow Holdings Realty Partners VII	8.66%	13.13%	--	11.42%
Immature (Less than 5 Years)				
Crow Holdings VIII	25.63%	--	--	24.64%
Carlyle Property Investors	17.21%	--	--	16.05
BIG Real Estate Fund I	9.56%	--	--	9.52%
Oaktree Real Estate Debt Fund II	6.05%	--	--	6.82%
Total²	11.61%	9.94%	10.24%	8.13%

¹ Performance data provided by Northern Trust.

² Total includes Infrastructure.



Illinois State Universities Retirement System

Real Estate Tracking Schedule¹ | As of March 31, 2022

Investment Name	Vintage Year	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	ITD IRR (%)
Liquidated							
RREEF America REIT II	2005	160,106,290	160,106,291	188,512,381	--	1.2	3.0
Mature (10+ Years)							
RREEF America REIT III	2006	30,719,155	30,719,155	22,215,109	6,688	0.7	-3.8
UBS Trumbull Property Fund	2006	220,000,000	246,460,568	362,850,430	103,173,966	1.9	6.6
Dune Real Estate Fund II	2009	40,000,000	46,630,360	71,712,495	7,337,370	1.7	14.4
Maturing (5-9 Years)							
Dune Real Estate Fund III	2013	100,000,000	101,622,694	67,854,969	70,504,867	1.4	6.6
Franklin Templeton EMREFF	2011	75,000,000	67,274,994	94,963,991	4,439,375	1.5	12.9
Franklin Templeton Private Real Estate Fund	2012	50,000,000	45,075,523	65,491,952	1,524,768	1.5	20.4
Heitman America Real Estate Trust, L.P.	2014	150,000,000	161,255,230	12,060,473	298,293,252	1.9	9.6
JP Morgan Strategic Property Fund	2014	150,000,000	150,000,000	2,281	295,830,188	2.0	9.1
MFIRE Global Partnership Fund II, L.P.	2012	60,000,000	39,300,000	38,078,439	19,418,549	1.5	7.0
Immature (Less than 5 Years)							
Carlyle Property Investors, L.P.	2018	100,000,000	109,393,836	9,874,717	162,536,774	1.6	16.1
Crow Holdings VIII	2018	20,000,000	19,168,096	23,394,286	6,512,943	1.6	24.6
Crow Holdings Realty Partners VII	2016	35,000,000	34,886,670	45,225,669	2,957,247	1.4	11.4
BIG Real Estate Fund I	2018	30,000,000	23,471,793	6,335,359	23,323,294	1.3	9.5
Blue Vista Real Estate Partners IV	2016	35,000,000	35,000,000	31,995,613	24,826,602	1.6	13.6
Brookfield Strategic Real Estate Partners II	2016	35,000,000	23,937,281	12,275,364	34,535,000	2.0	14.1
Franklin Templeton MDP RE 2015, L.P.	2015	90,000,000	77,208,421	22,931,495	64,265,437	1.1	4.5
Oaktree Real Estate Debt Fund II	2017	30,000,000	19,922,393	12,604,451	10,680,319	1.2	6.8
Blackstone Property Partners L.P.	2019	200,000,000	200,084,987	84,987	268,106,697	1.2	11.8
Brookfield Strategic Real Estate Partners III	2019	35,000,000	24,278,080	--	31,655,139	1.2	14.3
Blackstone Real Estate Partners Europe VI	2019	83,448,752	39,397,386	1,997,392	53,393,342	1.3	29.5
Dune Real Estate Fund IV	2019	50,000,000	22,456,862	--	22,627,970	1.0	0.5
Long Wharf Real Estate VI	2019	40,000,000	25,586,525	9,990,089	22,939,863	1.3	36.0
Cabot Industrial Fund VI	2020	50,000,000	27,886,470	--	38,293,667	1.4	67.6
Prologis Targeted US Logistics Holdings, L.P.	2020	100,000,000	100,000,000	11,088	186,309,414	1.9	53.3
Westbrook Realty Management XI	2020	75,000,000	23,567,590	1,922,354	25,094,293	1.2	27.3
Big Real Estate Fund II, L.P.	2021	48,800,000	17,321,146	3,580,994	13,691,305	1.0	-0.7
Torchlight Debt Fund VII, L.P.	2021	50,000,000	15,000,000	--	14,957,284	1.0	-0.4
Newport Capital Partners Fund III, L.P.	2021	6,055,556	9,843,045	7,407,045	2,697,209	1.0	-8.9%
Total		2,754,783,162	1,736,749,105	924,861,042	1,809,932,822	1.5	8.1

¹ Information provided by Northern Trust.



Illinois State Universities Retirement System

Infrastructure Tracking Schedule¹ | As of March 31, 2022

Investment Name	Vintage Year	Commitment Amount (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	Time Weighted Return (%)	IRR (%)
Liquidated							
<i>None</i>							
Mature (10+ Years)							
Alinda Infrastructure II, L.P.	2009	40,000,000	42,317,898	35,174,504	9,000,294	-0.4	0.7
Macquarie Infrastructure Partners II	2010	40,000,000	48,206,475	77,212,146	237,305	9.1	9.0
Maturing (5-9 Years)							
Macquarie Infrastructure Partners III	2014	50,000,000	43,748,651	35,979,323	46,723,487	7.5	15.2
Immature (Less than 5 Years)							
Macquarie Infrastructure Partners IV	2018	50,000,000	44,530,154	6,591,744	54,088,288	3.1	12.1
Global Renewable Power III	2021	100,000,000	20,232,368	--	18,981,967	-11.5	-8.2
Ember Infrastructure	2021	25,653,409	7,578,038	--	6,481,747	-19.5	-17.8
PGIF IV Feeder, L.P.	2022	100,000,000	2,000,000	--	2,000,000	0.0	0.0
Total Fund Composite		405,653,409	208,613,584	154,957,717	137,513,088	7.9	8.0

¹ Information provided by Northern Trust.



Illinois State Universities Retirement System

Private Equity Tracking Schedule – Grouped by Manager¹ | As of March 31, 2022

Investment Name	Vintage Year	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	ITD IRR (%)
Liquidated							
Adams Street Venture Partnership Acq. Fund II LP	1990	10,000,000	10,000,000	20,658,228	-	2.1	28.1
Muller & Monroe - ILPEFF	2005	25,000,000	21,006,042	18,387,253	-	0.9	-2.5
Private Opportunity Fund	2004	25,000,000	25,000,000	25,050,000	-	1.0	0.4
Mature (10+ Years)							
Adams Street 2007 Global Opportunities Portfolio	2007	100,000,000	91,713,646	146,958,473	3,284,702	1.6	8.1
Adams Street 2008 Global Offering	2008	100,000,000	92,903,014	164,389,877	51,901,631	2.3	15.0
Adams Street 2009 Global Offering	2009	100,000,000	91,572,000	141,036,553	71,780,111	2.3	15.2
Adams Street Global Opportunities Secondary Fund	2009	25,000,000	22,125,000	36,920,455	284,635	1.7	11.7
Adams Street Separate Account	1990	901,378,251	885,278,742	1,687,806,266	3,403,042	1.9	28.2
Brinson Non-US Partnership Fund - 1998	1998	79,405,010	76,288,292	129,128,063	2,699,049	1.7	11.6
Muller & Monroe - MPEFF	2003	25,000,000	24,152,845	35,496,916	552,890	1.5	8.4
Pantheon Europe Fund III LP	2004	87,608,642	83,724,747	151,127,511	1,518,178	1.8	14.6
Pantheon Europe Fund VI LP	2008	39,185,632	37,359,377	57,434,881	10,351,181	1.8	10.5
Pantheon Europe Fund VII LP	2011	36,770,768	33,342,612	40,856,455	28,171,663	2.1	14.8
Pantheon Global Secondary Fund II Ltd	2004	25,000,000	23,750,000	27,354,925	365,258	1.2	3.5
Pantheon Separate Account (SURS) LP	2002	599,121,922	570,781,387	949,297,254	13,930,836	1.7	10.2
Pantheon USA Fund VIII LP	2007	103,188,193	95,816,066	168,794,717	42,007,297	2.2	13.3
Pantheon USA Fund IX LP	2013	85,444,334	77,284,334	116,619,998	81,068,827	2.6	18.7
Progress Venture Capital	1995	19,899,949	19,900,608	17,344,285	275,413	0.9	-2.3
Maturing (5-9 Years)							
Adams Street 2012 Global Fund LP	2012	80,000,000	69,115,609	69,115,609	91,651,625	2.3	16.5
Adams Street Global Secondary Fund 5 LP	2012	20,000,000	15,422,938	14,045,540	7,231,434	1.4	7.2
Adams Street 2013 Global Fund LP	2013	100,000,000	89,349,998	70,534,556	143,272,156	2.4	18.0
Adams Street 2014 Global Fund LP	2014	100,000,000	89,525,893	63,823,281	155,216,819	2.5	20.5
Fairview Capital Lincoln Fund I LP	2014	175,000,000	83,761,933	29,920,198	139,443,782	2.0	20.1
Pantheon Multi-Strat 2014 LP	2014	125,000,000	101,639,358	45,249,999	139,259,850	1.8	18.7
Adams Street 2015 Global Fund LP	2015	125,000,000	104,874,999	61,735,535	204,695,210	2.5	31.4

¹ Information provided by Northern Trust. Nominal IRR reported for funds with less than 1 year of data.



Illinois State Universities Retirement System

Private Equity Tracking Schedule – Grouped by Manager¹ | As of March 31, 2022

Investment Name	Vintage Year	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	ITD IRR (%)
Immature (Less than 5 Years)							
Adams Street 2016 Global Fund LP	2016	150,000,000	107,955,000	31,820,673	205,011,937	2.2	28.6
Adams Street 2017 Global Fund LP	2017	90,000,000	64,902,732	12,739,742	127,352,612	2.2	33.5
Adams Street 2018 Global Fund LP	2018	90,000,000	49,676,766	8,552,664	90,269,715	2.0	40.6
Altaris Health Partners V	2021	25,000,000	6,056,408	--	6,432,445	1.1	7.6
Mesirow Financial Private Equity Fund VII-B LP	2017	40,000,000	39,747,031	28,663,902	74,289,790	2.6	44.1
Mesirow Financial Private Equity Special Fund B, LP	2018	280,000,000	160,760,000	--	246,163,035	1.5	29.0
Muller & Monroe - EPEFF	2016	100,000,000	90,906,525	52,388,232	136,086,566	2.1	29.1
Pantheon Multi-Strat 2017 LP	2017	90,000,000	57,898,643	12,522,415	81,063,420	1.6	28.1
Pantheon Multi-Strat 2018 LP	2018	180,000,000	86,494,011	--	131,296,695	1.5	33.7
Base10 Advancement Initiative I	2021	25,000,000	18,875,000	--	19,888,627	1.1	7.2
Bregal Sagemount III-B, LP	2020	50,000,000	28,337,449	20,161	31,395,884	1.1	16.2
Clearlake Capital Partners VI	2020	30,000,000	24,036,463	696,071	39,812,575	1.7	61.7
Cortec Group Fund VII LP	2019	35,000,000	22,622,021	4,584	32,009,383	1.4	31.1
GGV Discovery III	2021	9,000,000	3,285,000	--	4,484,718	1.4	60.8
Harvest Partners VIII LP	2019	70,000,000	55,247,874	6,131,217	75,798,783	1.5	30.3
Hg Genesis 9A	2021	15,172,501	7,218,591	--	6,867,614	1.0	-9.7
Hg Saturn 2 A	2020	37,500,000	12,626,565	--	24,942,204	2.0	74.8
MBK Partners Fund V	2021	50,000,000	12,604,821	--	14,260,361	1.1	25.6
Oak Hc/FT Partners IV	2021	25,000,000	15,322,401	--	16,164,049	1.1	9.5
OceanSound Partners	2020	25,000,000	12,906,195	403,224	17,768,044	1.4	19.7
One Rock Capital Partners III LP	2021	35,000,000	7,172,468	49,744	10,961,265	1.5	44.7
Reverence Capital Partners Opportunities Fund III	2020	50,000,000	42,021,596	1,978,905	60,864,432	1.5	37.2
Rubicon Technology Partners III LP	2020	32,500,000	23,648,788	--	26,600,548	1.1	13.6
Stellex Capital Partners II	2021	25,000,000	7,328,325	61,202	7,564,363	1.0	7.1
Thoma Bravo Fund XIV	2021	50,000,000	47,072,109	--	47,596,202	1.0	1.8
Torreycove Co-Investment Fund I LP	2020	200,000,000	101,621,937	2,482,292	130,653,555	1.3	42.4
Avance Investment Partners, LP	2022	25,000,000	4,652,777	48,474	4,491,952	1.0	-2.5
GGV Capital VIII	2022	21,600,000	8,640,000	--	10,264,540	1.2	31.3
GGV Capital VIII Plus	2022	5,400,000	2,106,000	--	2,195,757	1.0	6.7

¹ Information provided by Northern Trust. Nominal IRR reported for funds with less than 1 year of data.



Illinois State Universities Retirement System

Private Equity Tracking Schedule – Grouped by Manager¹ | As of March 31, 2022

Investment Name	Vintage Year	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	ITD IRR (%)
Immature (Less than 5 Years)							
Nautic Partners X, LP	2022	25,000,000	2,423,922	--	2,305,342	1.0	-4.9
One Rock Capital Partners III, LP	2022	35,000,000	12,334,514	49,744	16,039,500	1.3	40.6
Orchid Asia VIII, LP	2022	30,000,000	2,957,436	--	2,406,735	0.8	-18.6
Total		5,053,175,202	3,973,829,138	4,448,727,750	2,889,839,799	1.9	20.7

¹ Information provided by Northern Trust. Nominal IRR reported for funds with less than 1 year of data.

Capital Markets Outlook & Risk Metrics

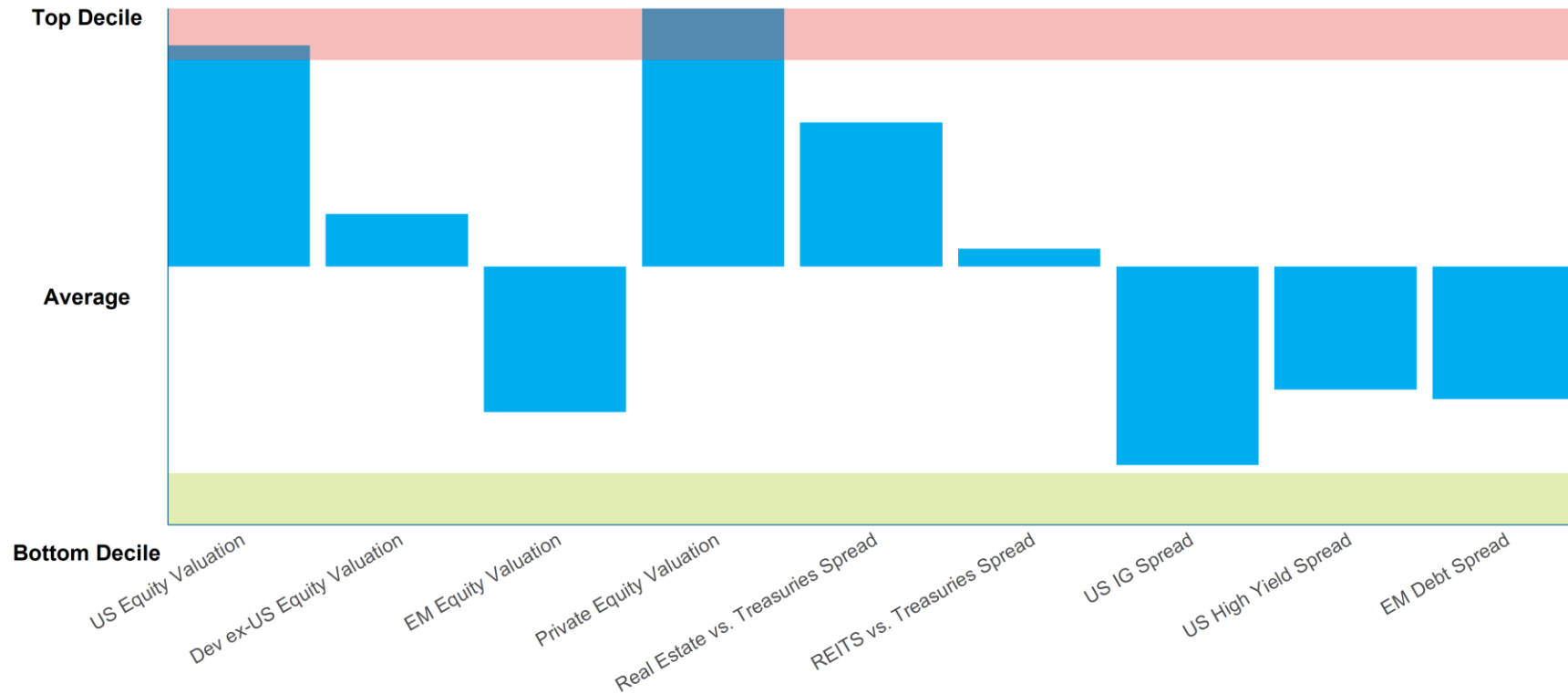
As of June 30, 2022

Capital Markets Outlook

Markets

- June capped off the worst first half performance for US equity markets since the 1970s, as markets reassessed future growth expectations in response to the Fed's 75 bp rate hike in June.
- In the US, small and mid-cap companies lagged large and mega cap stocks in the month of June and value lagged growth stocks.
- While all major equity indices suffered negative returns, emerging markets and China proved to be slightly more resilient than US and non-US developed markets.
- After a strong performance in early 2022, commodities, infrastructure, and public natural resources also suffered negative returns in June.
- Inflation re-accelerated in the US and Europe to new highs in June, reigniting concerns that policy officials may prioritize inflation fighting at the expense of economic growth. Markets repriced inflation expectations higher, and bonds suffered losses across all categories.
- While China continues to ease COVID lockdowns and engage in fiscal and monetary stimulus, concerns persist that China's 2022 GDP will be substantially lower than 2021.

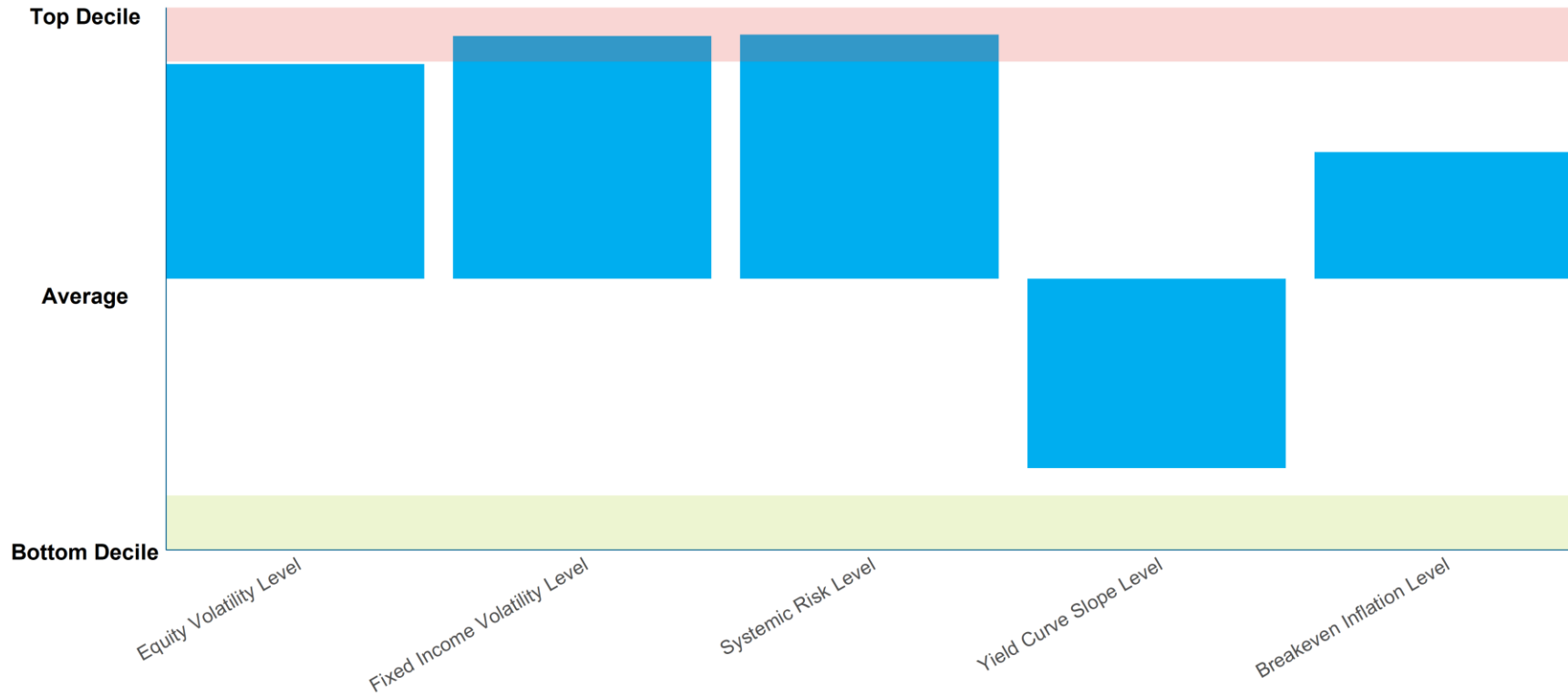
Risk Overview/Dashboard (1) (As of June 30, 2022)¹



→ Dashboard (1) summarizes the current state of the different valuation metrics per asset class relative to their own history.

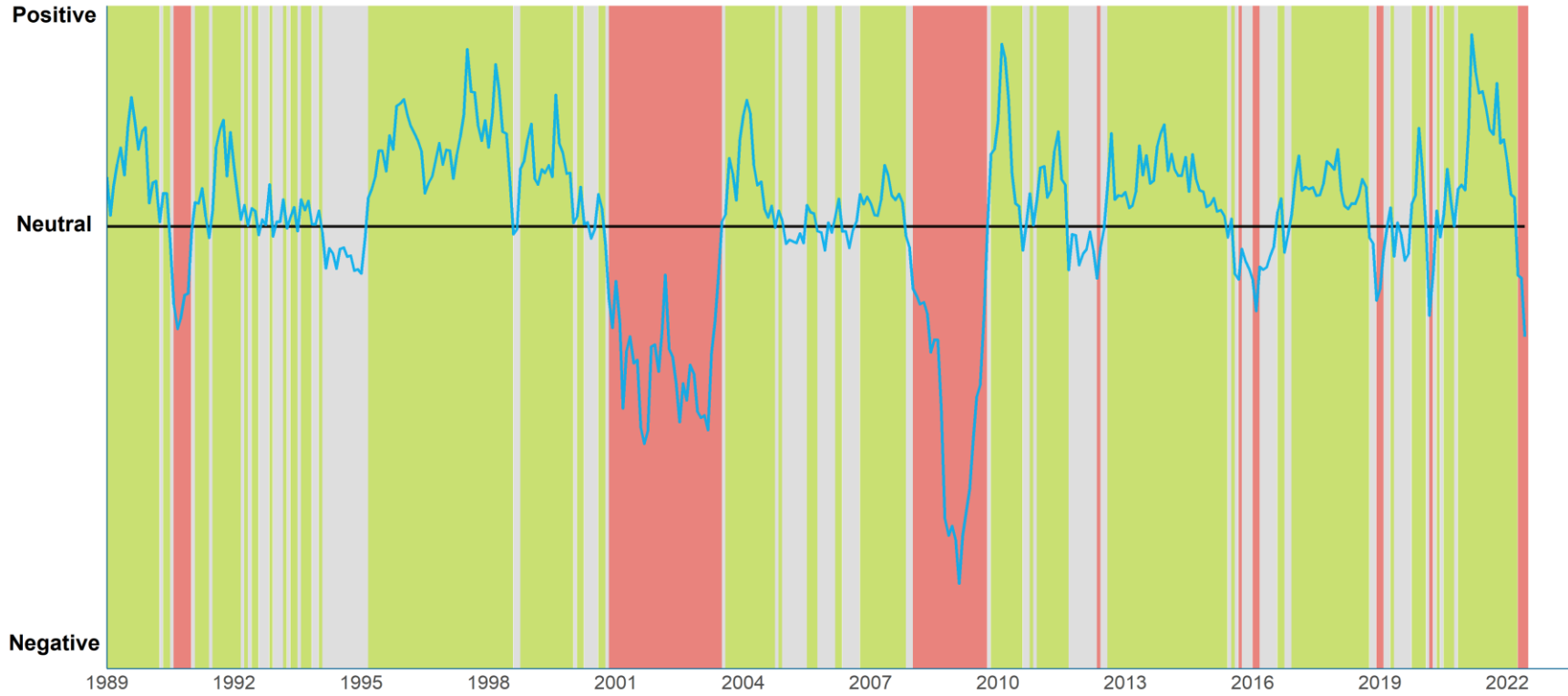
¹ With the exception of Private Equity Valuation, that is YTD as of December 31, 2021.

Risk Overview/Dashboard (2)
(As of June 30, 2022)

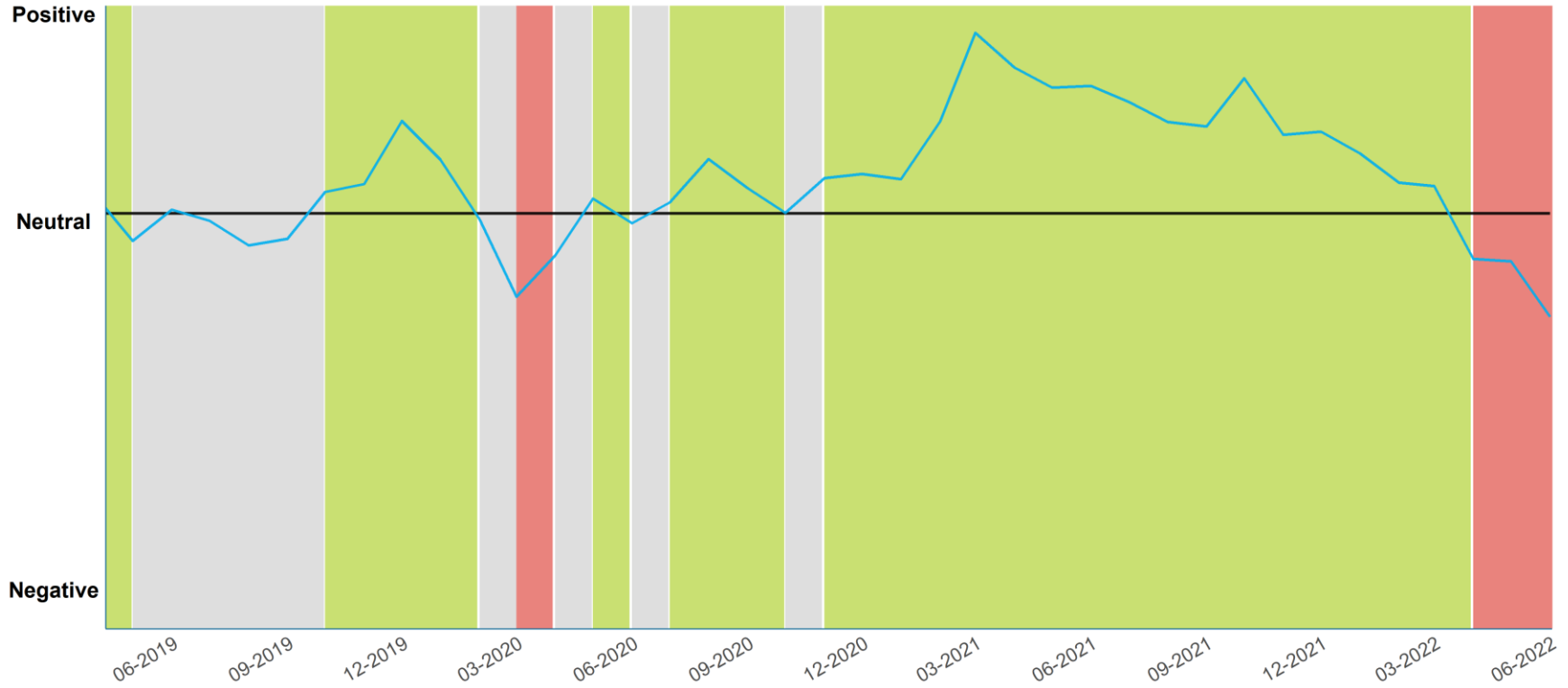


→ Dashboard (2) shows how the current level of each indicator compares to its respective history.

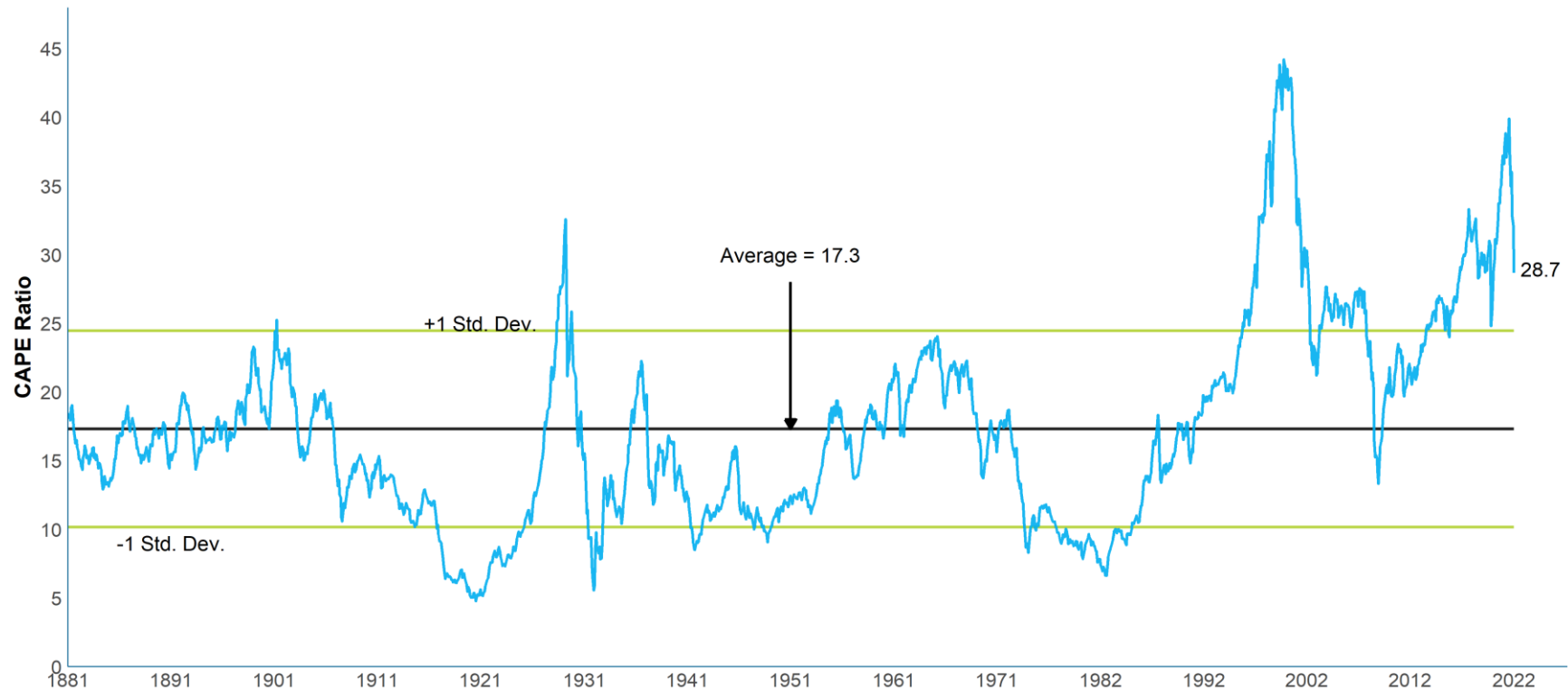
Market Sentiment Indicator (All History)
(As of June 30, 2022)



Market Sentiment Indicator (Last Three Years)
(As of June 30, 2022)



US Equity Cyclically Adjusted P/E¹ (As of June 30, 2022)



→ This chart details one valuation metric for US equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group.

Small Cap P/E vs. Large Cap P/E¹ (As of June 30, 2022)



→ This chart compares the relative attractiveness of small cap US equities vs. large cap US equities on a valuation basis. A higher (lower) figure indicates that large cap (small cap) is more attractive.

¹ Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments. Earnings figures represent 12-month "as reported" earnings.

Growth P/E vs. Value P/E¹ (As of June 30, 2022)



→ This chart compares the relative attractiveness of US growth equities vs. US value equities on a valuation basis. A higher (lower) figure indicates that value (growth) is more attractive.

¹ Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month "as reported" earnings.

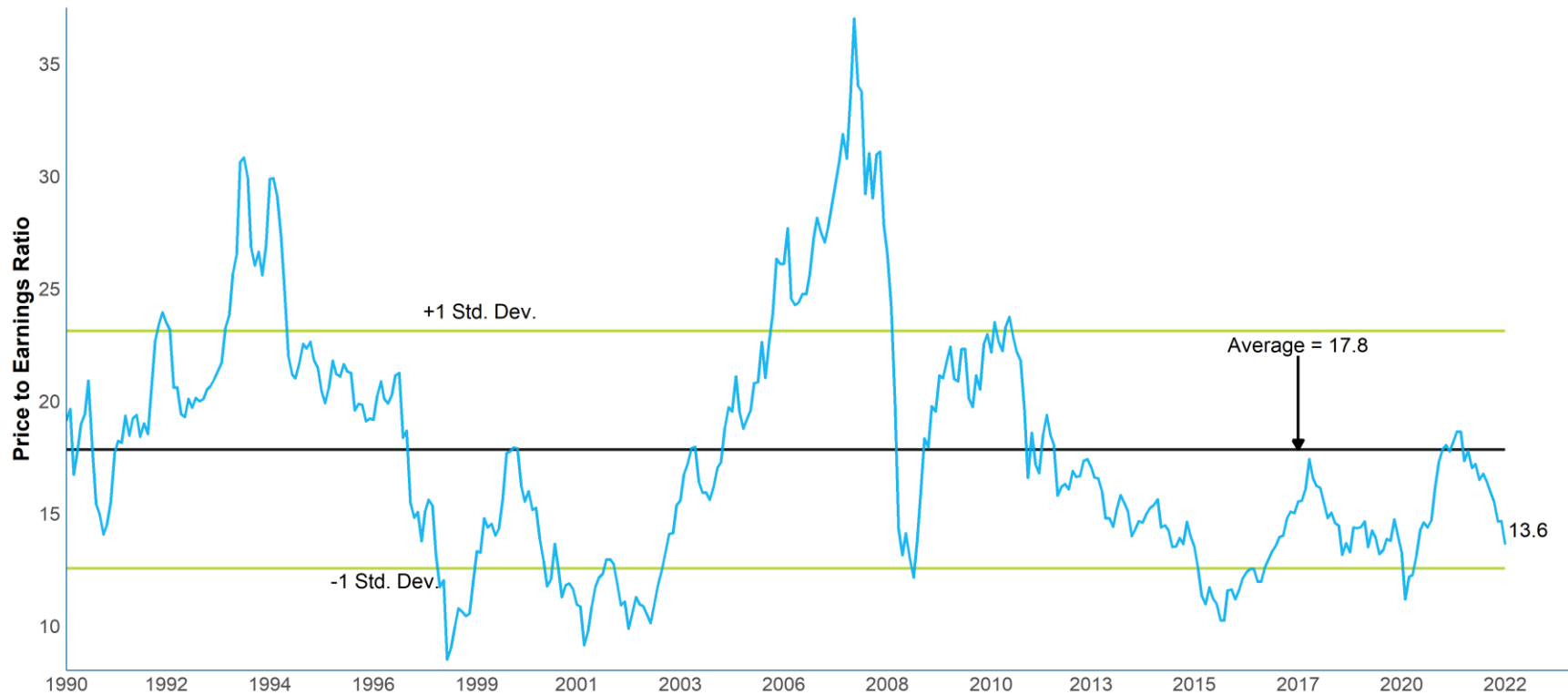
Developed International Equity Cyclically Adjusted P/E¹ (As of June 30, 2022)



→ This chart details one valuation metric for developed international equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

¹ Developed International Equity (MSCI EAFE Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.

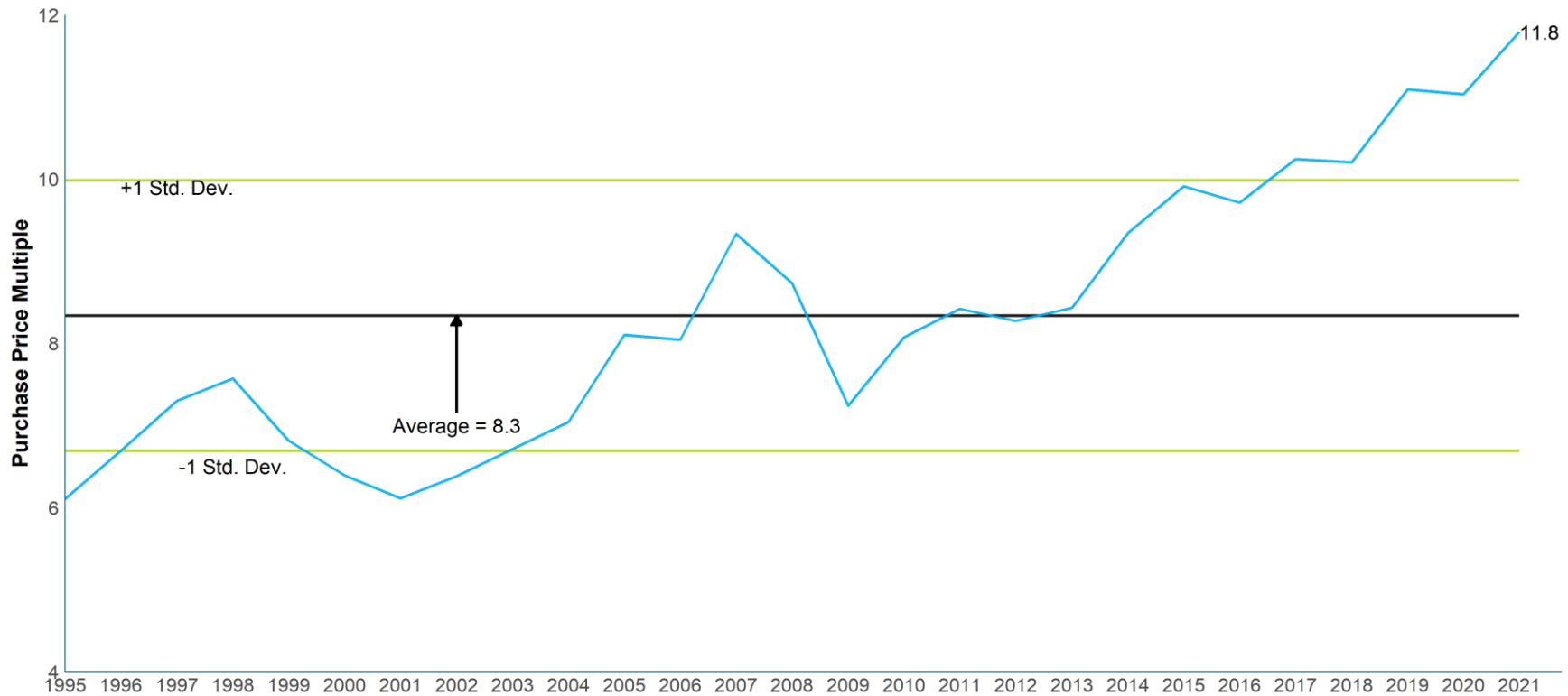
Emerging Market Equity Cyclically Adjusted P/E¹ (As of June 30, 2022)



→ This chart details one valuation metric for emerging markets equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

¹ Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.

Private Equity Multiples¹ (As of June 30, 2022)²

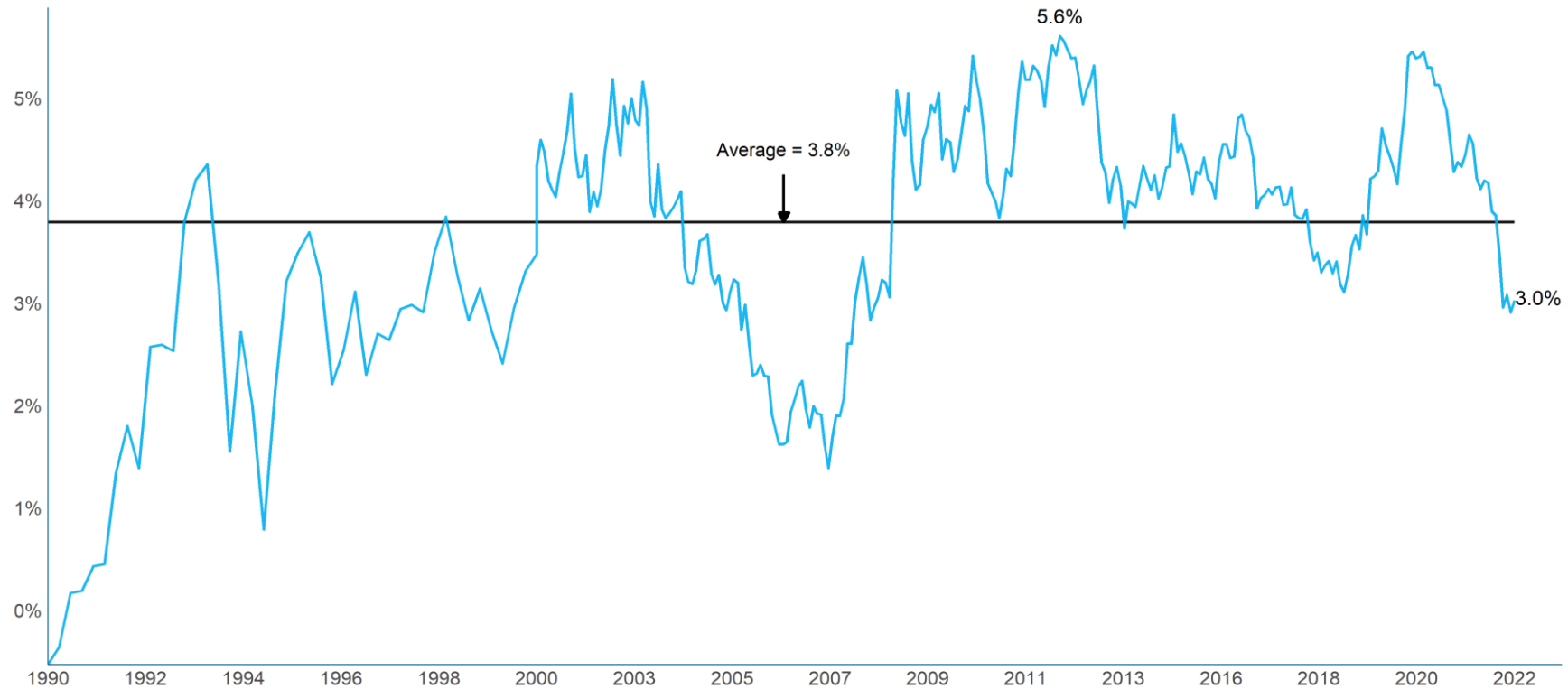


→ This chart details one valuation metric for the private equity market. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

¹ Private Equity Multiples – Source: S&P LCD Average EBITDA Multiples Paid in All LBOs.

² Annual Data, as of December 31, 2021

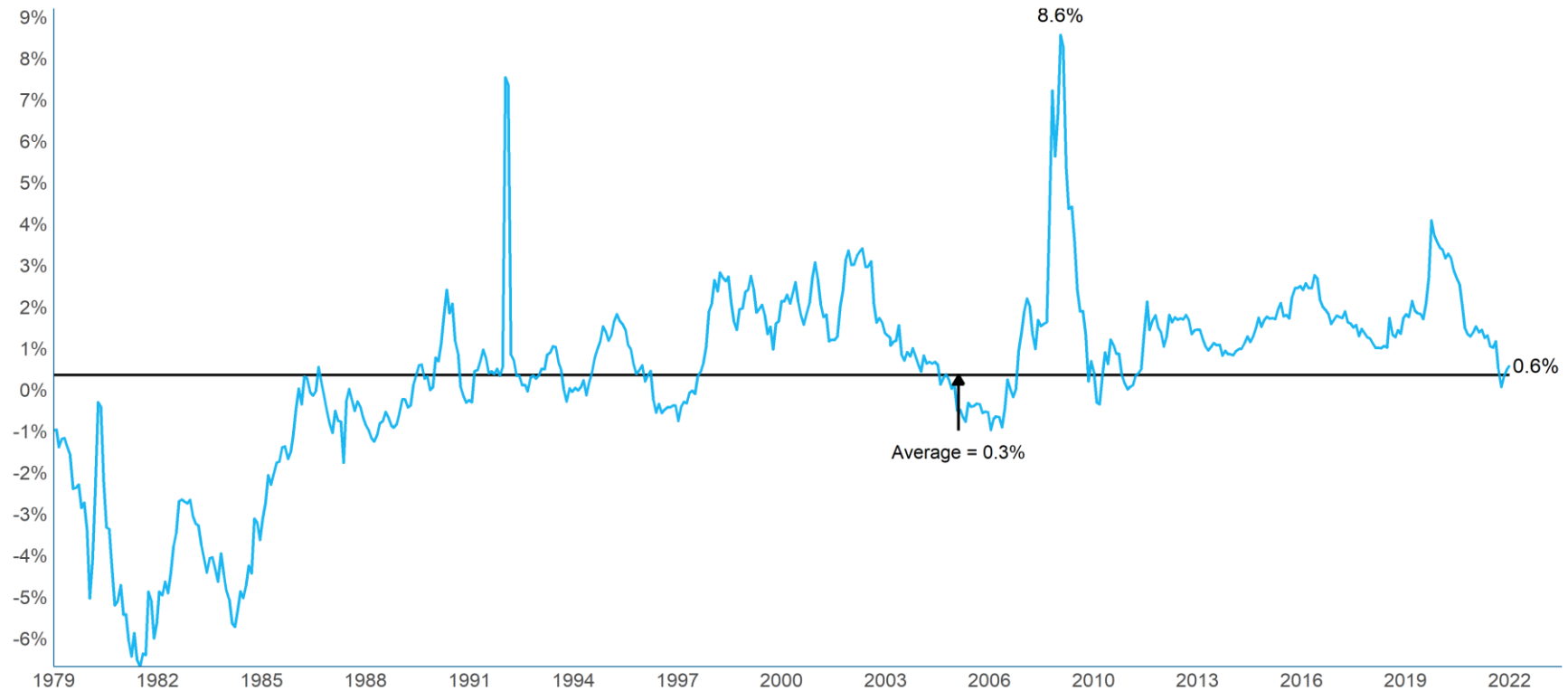
Core Real Estate Spread vs. Ten-Year Treasury¹ (As of June 30, 2022)



→ This chart details one valuation metric for the private core real estate market. A higher (lower) figure indicates cheaper (more expensive) valuation.

¹ Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, US Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction-based indices from Real Capital Analytics and Meketa Investment Group.

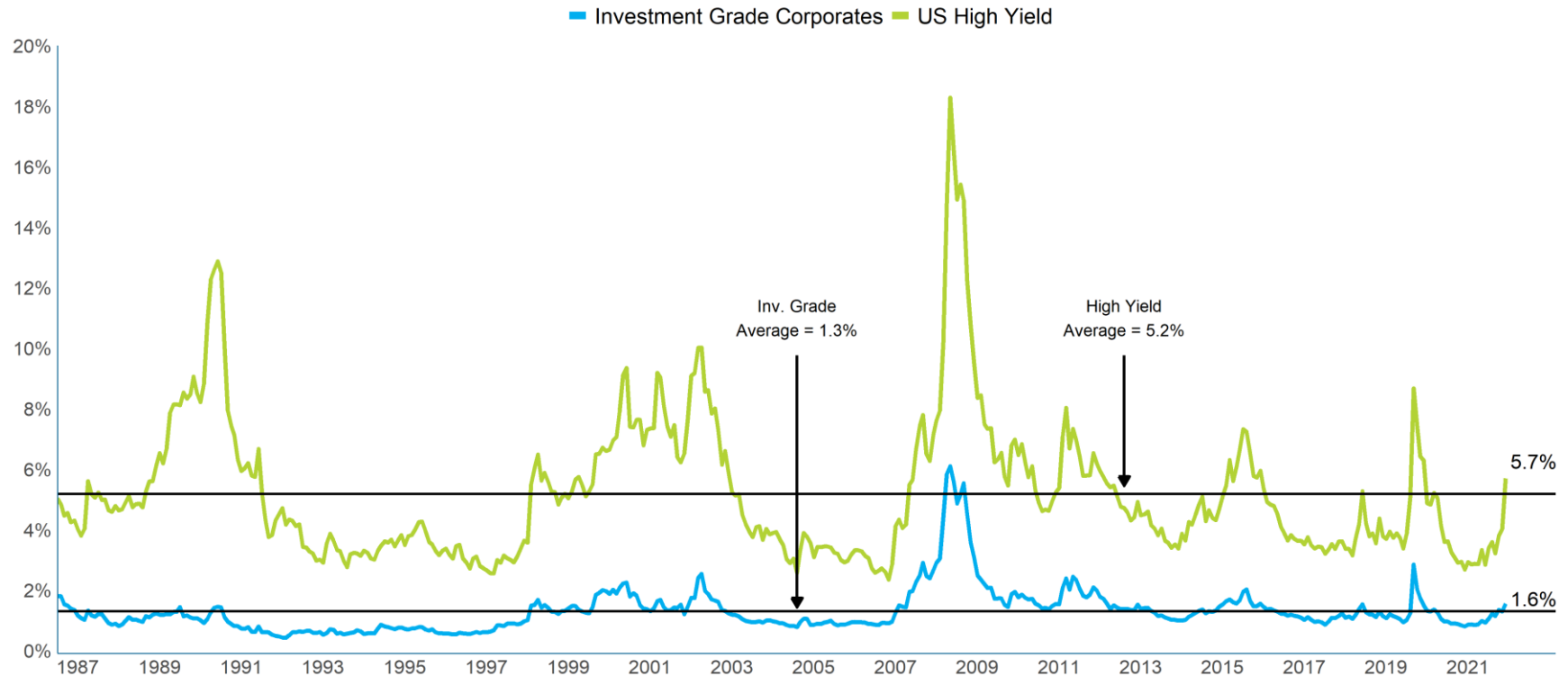
REITs Dividend Yield Spread vs. Ten-Year Treasury¹ (As of June 30, 2022)



→ This chart details one valuation metric for the public REITs market. A higher (lower) figure indicates cheaper (more expensive) valuation.

¹ REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, US Treasury. REITs are proxied by the yield for the NAREIT Equity Index.

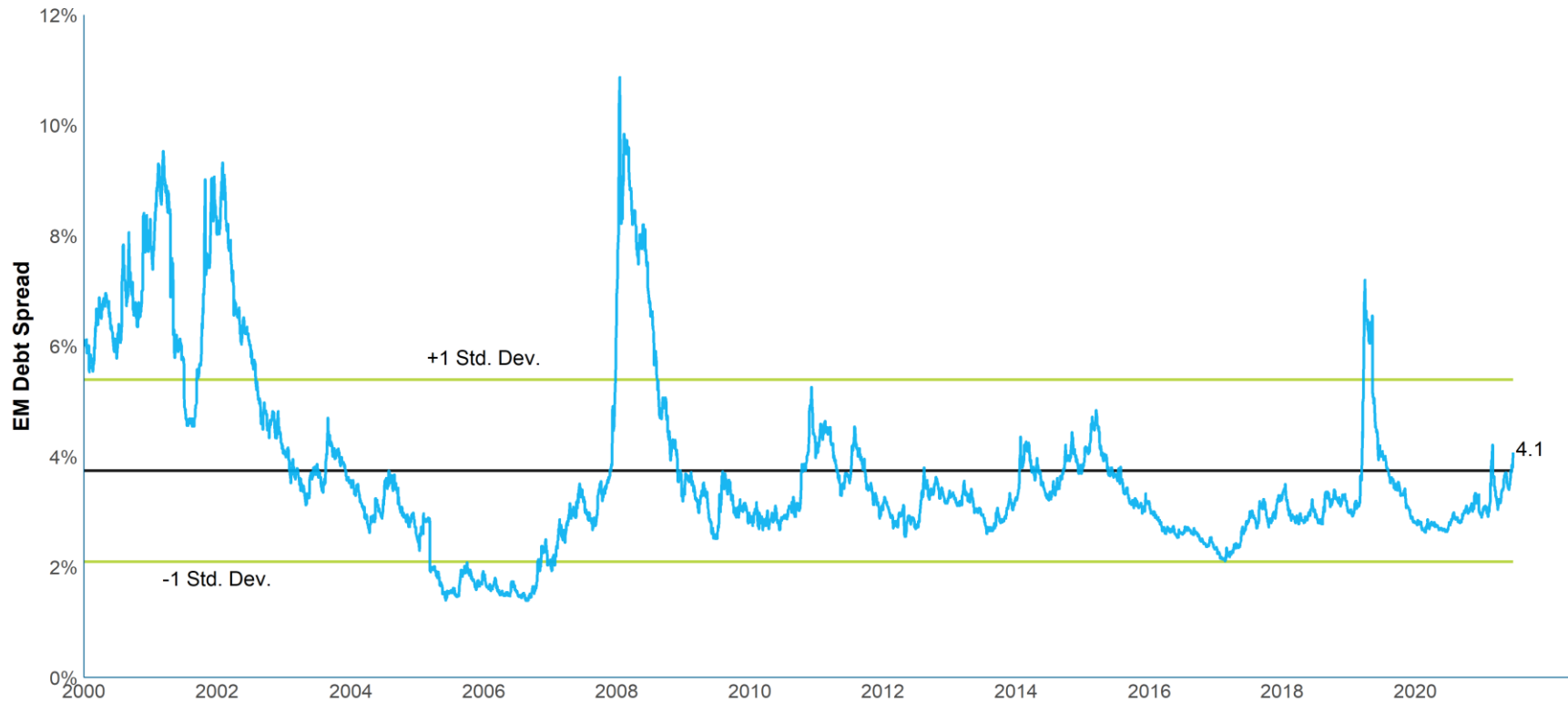
Credit Spreads¹ (As of June 30, 2022)



→ This chart details one valuation metric for the US credit markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

¹ Credit Spreads – Source: Bloomberg. High Yield is proxied by the Bloomberg High Yield Index and Investment Grade Corporates are proxied by the Bloomberg US Corporate Investment Grade Index. Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year US Treasury yield.

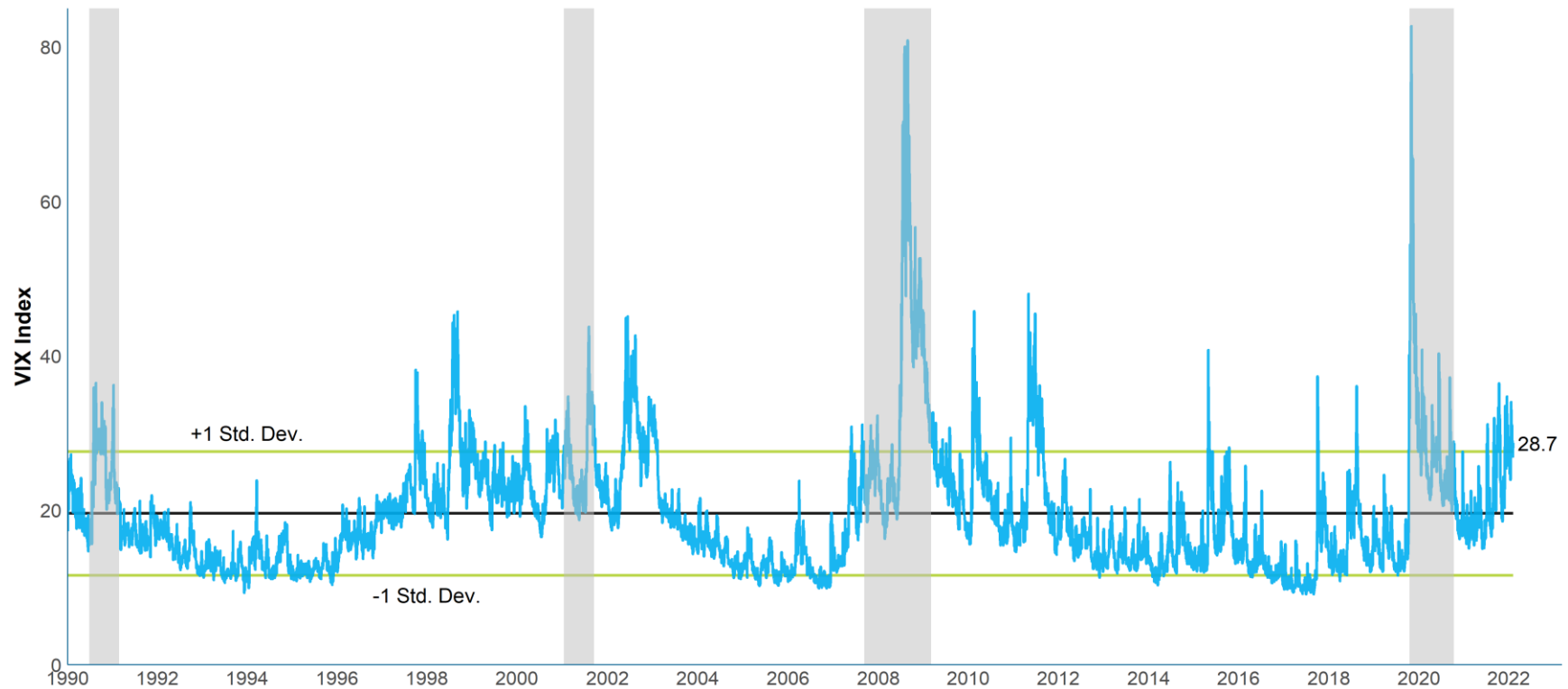
Emerging Market Debt Spreads¹ (As of June 30, 2022)



→ This chart details one valuation metric for the EM debt markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

¹ EM Spreads – Source: Bloomberg. Option Adjusted Spread (OAS) for the Bloomberg EM USD Aggregate Index.

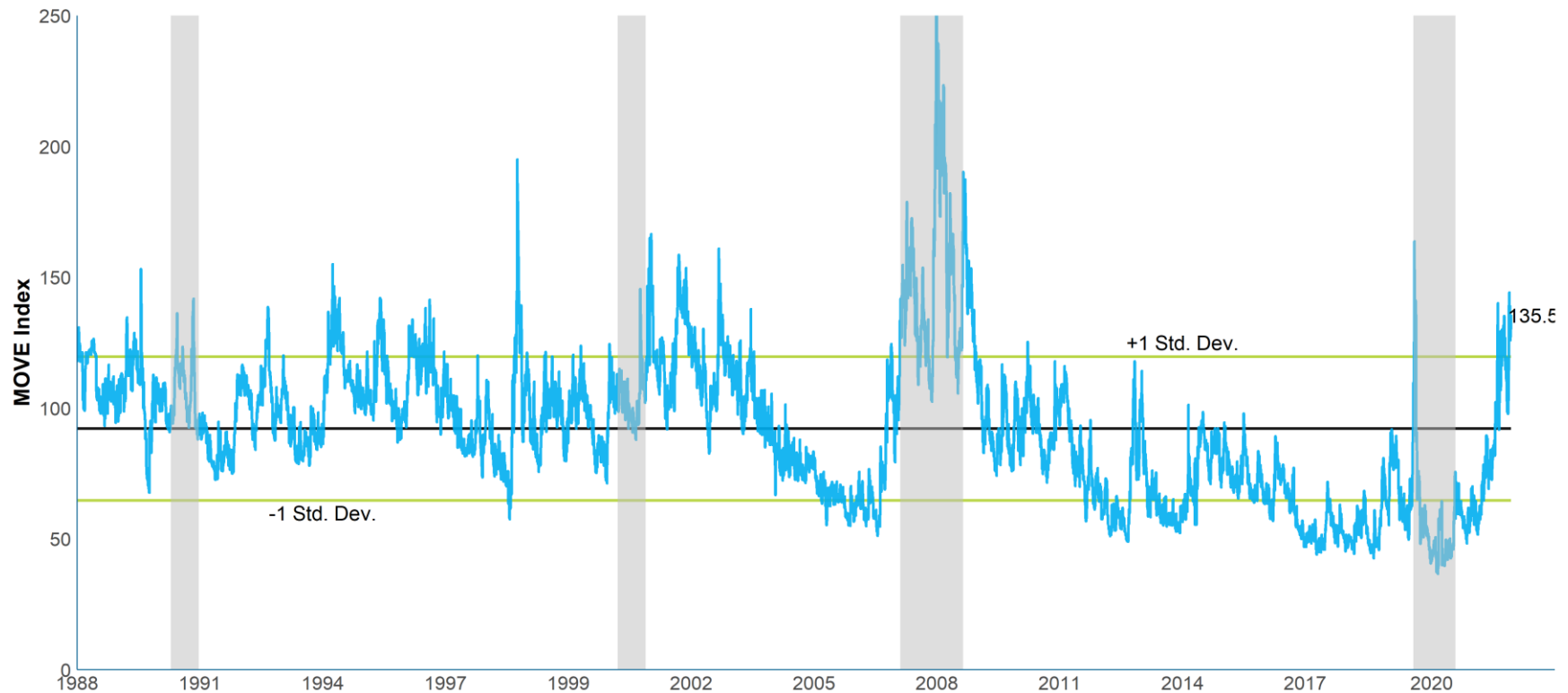
Equity Volatility¹ (As of June 30, 2022)



→ This chart details historical implied equity market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

¹ Equity Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.

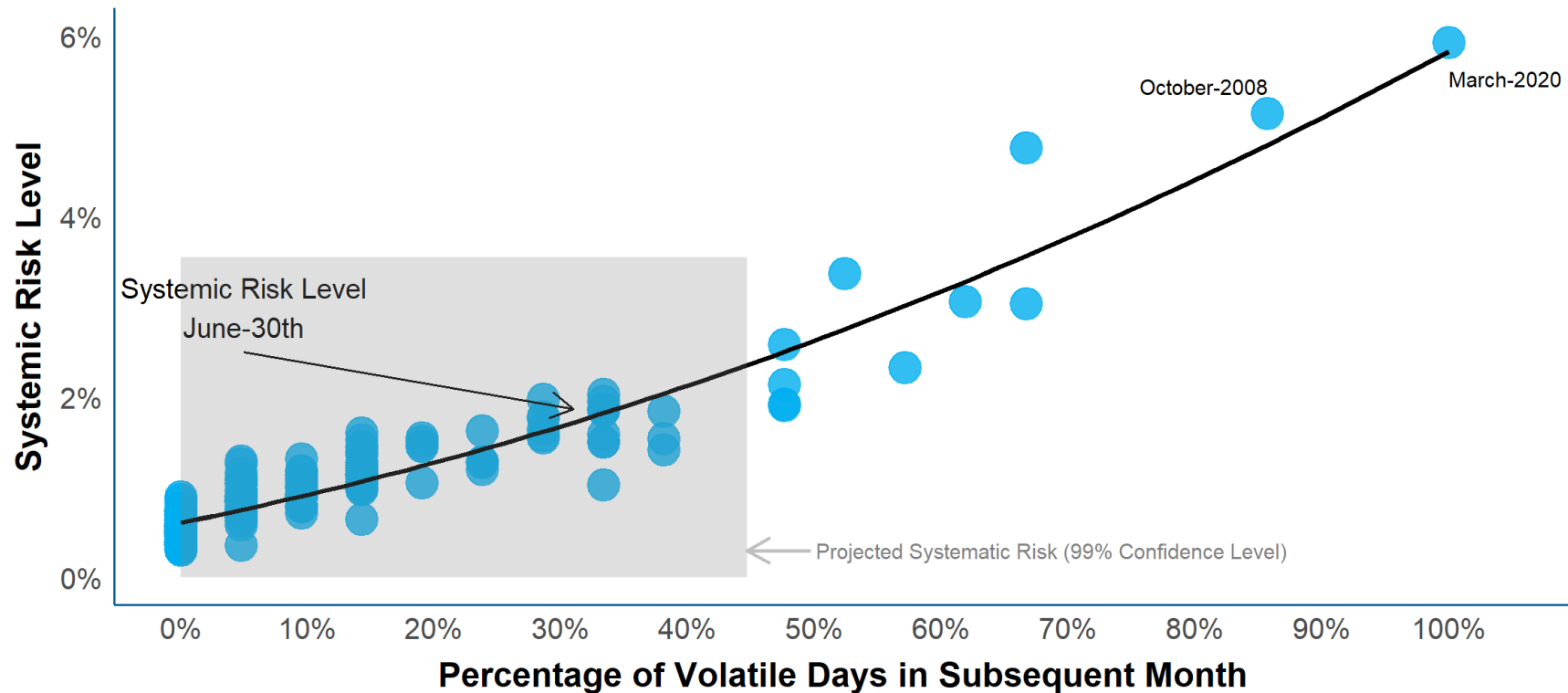
Fixed Income Volatility¹ (As of June 30, 2022)



→ This chart details historical implied fixed income market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

¹ Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Fixed Income Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.

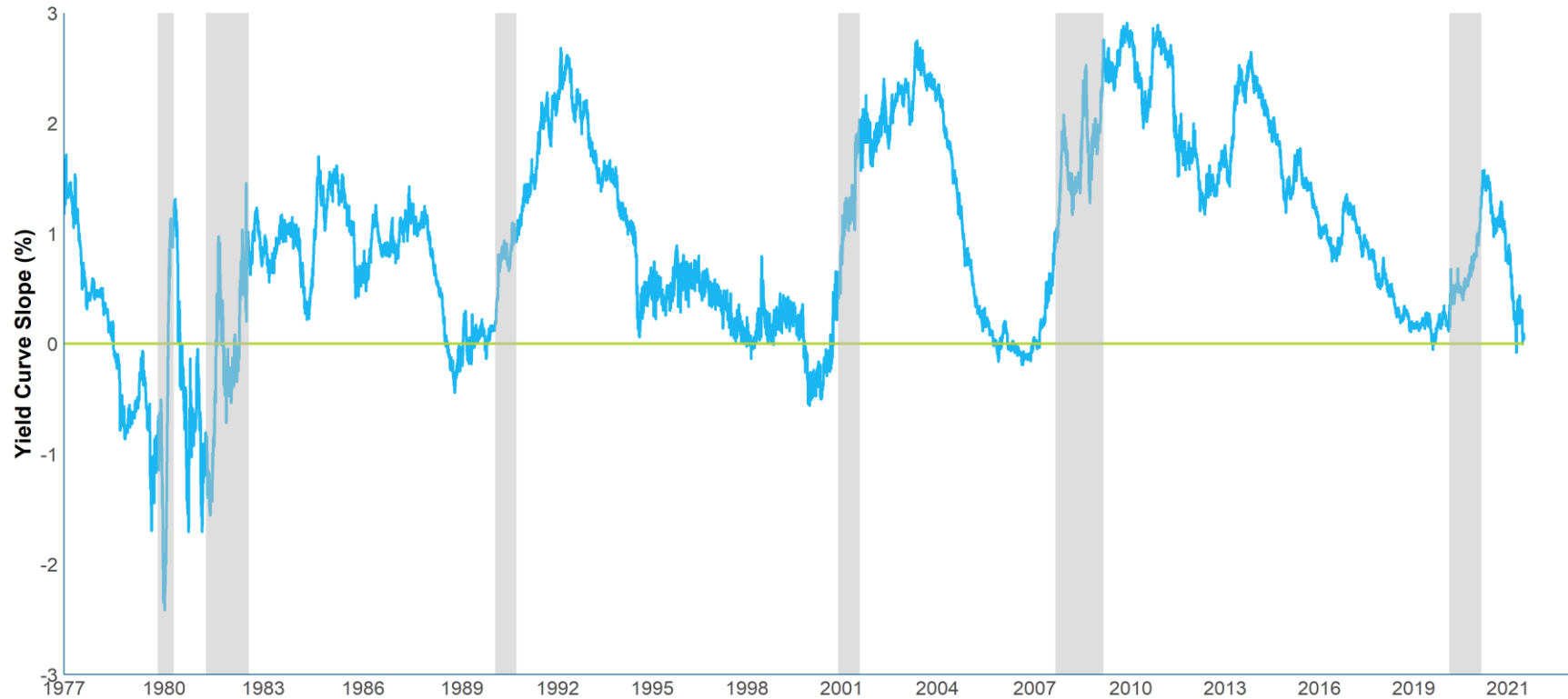
Systemic Risk and Volatile Market Days¹ (As of June 30, 2022)



→ Systemic Risk is a measure of 'System-wide' risk, which indicates herding type behavior.

¹ Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.

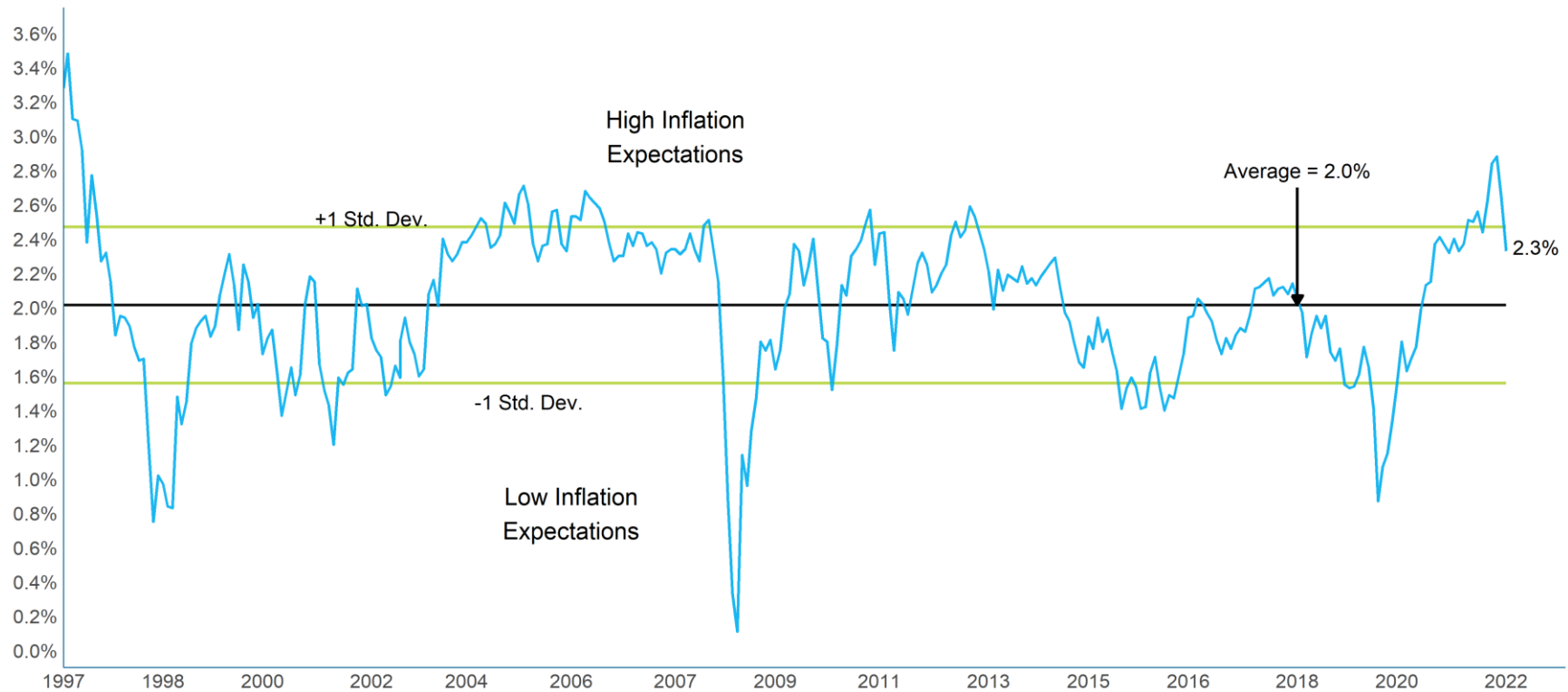
Yield Curve Slope (Ten Minus Two)¹
(As of June 30, 2022)



→ This chart details the historical difference in yields between ten-year and two-year US Treasury bonds/notes. A higher (lower) figure indicates a steeper (flatter) yield curve slope.

¹ Yield Curve Slope (Ten Minus Two) – Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.

Ten-Year Breakeven Inflation¹ (As of June 30, 2022)



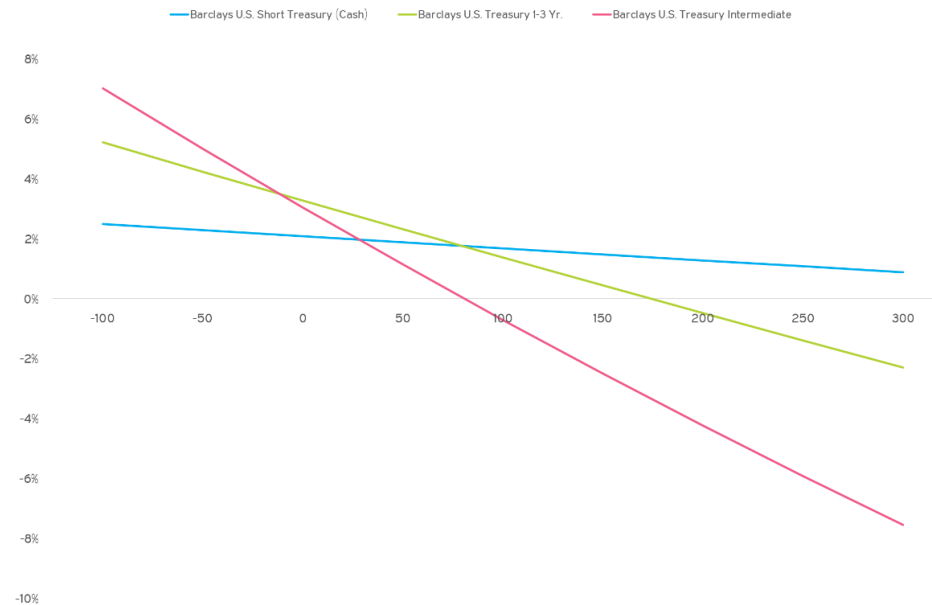
→ This chart details the difference between nominal and inflation-adjusted US Treasury bonds. A higher (lower) figure indicates higher (lower) inflation expectations.

¹ Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).



Capital Markets Outlook & Risk Metrics

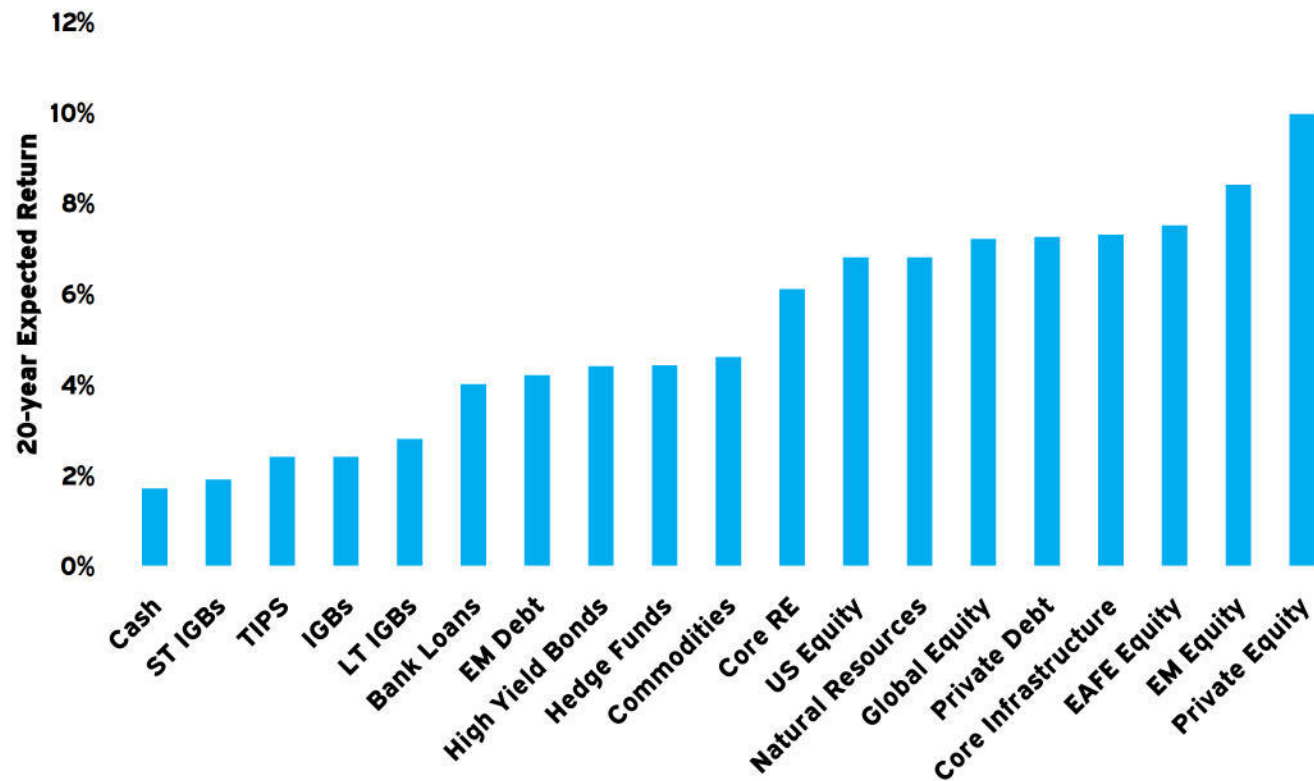
Total Return Given Changes in Interest Rates (bps)¹ (As of June 30, 2022)



	Total Return for Given Changes in Interest Rates (bps)									Statistics	
	-100	-50	0	50	100	150	200	250	300	Duration	YTW
Barclays US Short Treasury (Cash)	2.5%	2.3%	2.1%	1.9%	1.7%	1.5%	1.3%	1.1%	0.9%	0.41	2.08%
Barclays US Treasury 1-3 Yr.	5.2%	4.2%	3.3%	2.3%	1.4%	0.4%	-0.5%	-1.4%	-2.3%	1.92	3.27%
Barclays US Treasury Intermediate	7.0%	5.0%	3.0%	1.1%	-0.7%	-2.5%	-4.2%	-5.9%	-7.6%	3.86	3.04%
Barclays US Treasury Long	22.4%	12.4%	3.3%	-4.8%	-12.0%	-18.2%	-23.5%	-27.9%	-31.3%	17.17	3.33%

¹ Data represents the expected total return from a given change in interest rates (shown in basis points) over a 12-month period assuming a parallel shift in rates. Source: Bloomberg, and Meketa Investment Group.

Long-Term Outlook – 20-Year Annualized Expected Returns¹



→ This chart details Meketa's long-term forward-looking expectations for total returns across asset classes.

¹ Source: Meketa Investment Group's 2022 Annual Asset Study.

Appendix

Data Sources and Explanations¹

- US Equity Cyclically Adjusted P/E on S&P 500 Index – Source: Robert Shiller and Yale University.
- Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments. Earnings figures represent 12-month “as reported” earnings.
- Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month “as reported” earnings.
- Developed International Equity (MSCI EAFE) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.
- Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.
- Private Equity Multiples – Source: S&P LCD Average EBITDA Multiples Paid in All LBOs.
- Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, US Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction-based indices from Real Capital Analytics and Meketa Investment Group.

¹ All Data as of June 30, 2022, unless otherwise noted.

Appendix

Data Sources and Explanations¹

- REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, US Treasury. REITs are proxied by the yield for the NAREIT Equity Index.
- Credit Spreads – Source: Bloomberg High Yield is proxied by the Bloomberg High Yield Index and Investment Grade Corporates are proxied by the Bloomberg US Corporate Investment Grade Index.
 - Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year Treasury Yield.
- EM Debt Spreads – Source: Bloomberg, and Meketa Investment Group. Option Adjusted Spread (OAS) for the Bloomberg EM USD Aggregate Index.
- Equity Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.
- Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.
- Systemic Risk and Volatile Market Days – Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.
- Systemic Risk, which measures risk across markets, is important because the more contagion of risk that exists between assets, the more likely it is that markets will experience volatile periods.

¹ All Data as of June 30, 2022, unless otherwise noted.

Appendix

Data Sources and Explanations¹

- Yield Curve Slope (Ten Minus Two) – Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.
- Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

¹ All Data as of June 30, 2022, unless otherwise noted.

Meketa Market Sentiment Indicator

Explanation, Construction and Q&A

Meketa has created the MIG Market Sentiment Indicator (MIG-MSI) to complement our valuation-focused Risk Metrics. This measure of sentiment is meant to capture significant and persistent shifts in long-lived market trends of economic growth risk, either towards a risk-seeking trend or a risk-aversion trend.

This appendix explores:

- What is the Meketa Market Sentiment Indicator?
- How do I read the indicator graph?
- How is the Meketa Market Sentiment Indicator constructed?
- What do changes in the indicator mean?

Meketa has created a market sentiment indicator for monthly publication (the MIG-MSI – see below) to complement Meketa's Risk Metrics.

→ Meketa's Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk concerns long before a market correction take place. The MIG-MSI helps to address this early-warning bias by measuring whether the markets are beginning to acknowledge key Risk Metrics trends, and / or indicating non-valuation-based concerns. Once the MIG-MSI indicates that the market sentiment has shifted, it is our belief that investors should consider significant action, particularly if confirmed by the Risk Metrics. Importantly, Meketa believes the Risk Metrics and MIG-MSI should always be used in conjunction with one another and never in isolation. The questions and answers below highlight and discuss the basic underpinnings of the Meketa MIG-MSI:

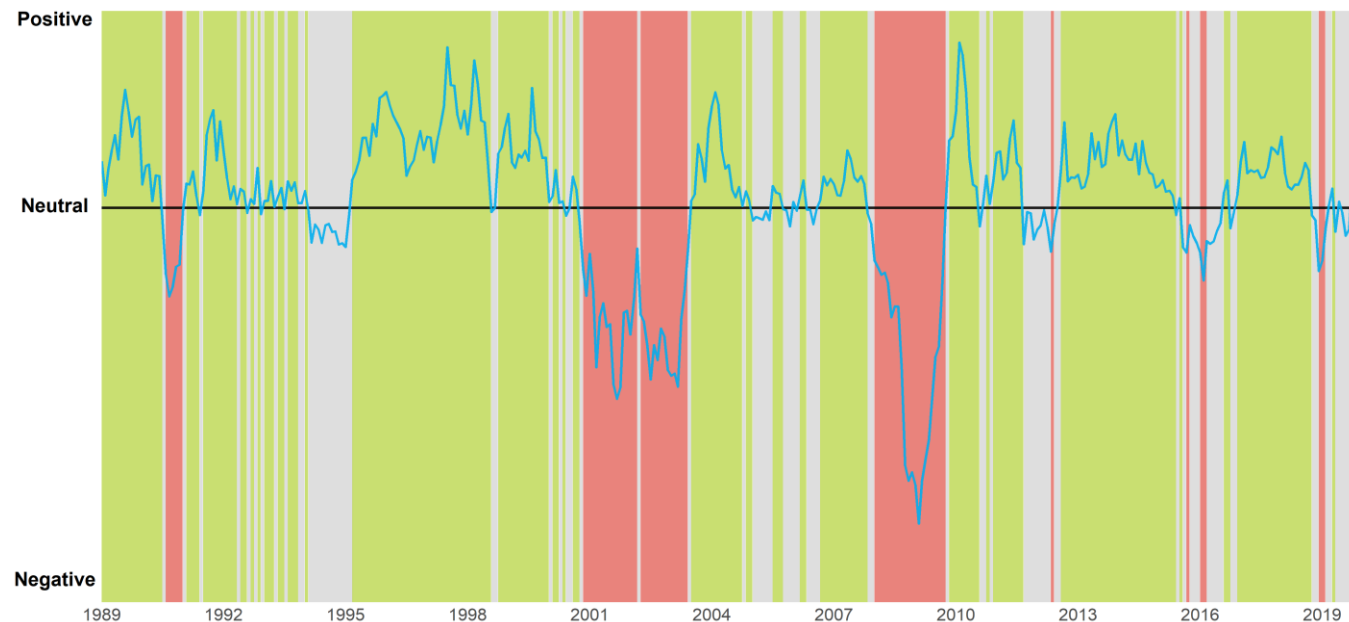
What is the Meketa Market Sentiment Indicator (MIG-MSI)?

→ The MIG-MSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets and is the largest risk exposure that most portfolios bear. The MIG-MSI takes into account the momentum (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

How do I read the Meketa Market Sentiment Indicator graph?

→ Simply put, the MIG-MSI is a color-coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the MIG-MSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is negative. The black line on the graph is the level of the MIG-MSI. The degree of the signal above or below the neutral reading is an indication the signal's current strength.

→ Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.



How is the Meketa Market Sentiment Indicator (MIG-MSI) Constructed?

- The MIG-MSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:
- Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months).
 - Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration US Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight).
 - Both measures are converted to Z-scores and then combined to get an “apples to apples” comparison without the need of re-scaling.
- The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure¹. The color reading on the graph is determined as follows:
- If both stock return momentum and bond spread momentum are positive = GREEN (positive).
 - If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive).
 - If both stock return momentum and bond spread momentum are negative = RED (negative).

¹ Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.
 “Time Series Momentum” Moskowitz, Ooi, Pedersen, August 2010. <http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf>

What does the Meketa Market Sentiment Indicator (MIG-MSI) mean? Why might it be useful?

→ There is strong evidence that time series momentum is significant and persistent. Across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12-month period. The MIG-MSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.



Capital Markets Outlook & Risk Metrics

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Appendix



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SURS Legacy Accounts | As of June 30, 2022

Manager ¹	Market Value
Macquarie	\$237,305
Adams St. Global Op.	\$284,635
Pantheon Global	\$664
Pantheon Global II	\$365,258
Pantheon One Line Asset	\$196,704
RREEF Funds	\$44,966
Muller and Monroe MPEFF	\$552,890
Progress- Venture Capital	\$763,541
PIMCO Total Return	\$14,572
Matarin Small Cap Core	\$5
BlackRock International Index	\$449,253
Fidelity	\$18,428
FIS- Brown Capital	\$10,692
Xponance- Applied Research	\$51,420
Applied Research AC	\$5,386
Sanctioned Asset	\$30,938
New Cap Partners Fund III	\$181,466
Newport Monarch	\$3,191,678
Total	\$5,951,250

¹ Includes legacy managers with less than \$1 million market value and closing accounts.

Glossary Of Terms

Alpha - The premium an investment earns above a set standard. This is usually measured in terms of a common index (i.e., how the stock performs independent of the market). An Alpha is usually generated by regressing a security's excess return on the market's excess return.

Annualized Performance - The annual rate of return that when compounded t times generates the same t-period holding return as actually occurred from period 1 to period t.

Attribution - a means to ascribe values to specific categories based on underlying characteristics.

Batting Average - Percentage of periods a portfolio outperforms a given index.

Beta - The measure of an asset's risk in relation to the Market (for example, the S&P 500) or to an alternative benchmark or factors. Roughly speaking, a security with a Beta of 1.5 will have moved, on average, 1.5 times the market return.

Bottom-up - A management style that de-emphasizes the significance of economic and market cycles, focusing instead on the analysis of individual stocks.

Breakeven Inflation - The difference between the yield of a nominal bond and an Inflation-linked bond of like maturity. It represents the amount of annualized inflation expected over the life of a bond by the marketplace, but it can also be thought of as the amount of annualized inflation required for being indifferent to holding the nominal or the ILB. If actual inflation turns out to be higher (lower) than the breakeven rate, the ILB will have a higher (lower) return than a nominal of like maturity. The market shortcut is to subtract the real yield from the nominal yield: Breakeven Inflation = Nominal Yield - Real Yield.

Breakeven Inflation Curve - The difference between nominal and real yields of like maturities at every available point along the yield curve.

Credit Quality - A measure of a bond issuer's ability to repay interest and principal in a timely manner.

Current Yield - Annual income (interest or dividends) divided by the current price of the security.

Dividend Yield - Annualized dividend rate divided by last closing price.



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Down Market Capture Ratio - Is the portion of the market's performance that was captured by the manager using only periods where the market return is negative. A down market capture of less than 100% is considered desirable.

Duration - A measure of the price sensitivity of a fixed-income security to a change in interest rates. Calculation is based on the weighted average of the present value for all cash flows.

Earnings Growth Rate - rate of change in earnings over the latest 5-year period as expressed in an annual percentage.

Excess Standard Deviation (annualized) - The annualized standard deviation of the difference between the performance of a portfolio and its benchmark. Also referred to as tracking error.

Fair Value Pricing - Is a daily price adjustment made to the value of a security to more accurately reflect the true market value of a security. A fund will use fair value pricing if the value of a security is materially affected by events occurring before the fund's pricing time but after the close of the primary markets or exchanges on which the security is traded. It is an industry-wide practice required by the Securities and Exchange Commission.

Growth Stocks - Common stock of a company that has an opportunity to invest money and earn more than the opportunity cost of capital.

Inflation-linked Bonds (ILBs) - A bond whose principal is increased (decreased) in proportion to the amount of inflation (deflation) from the date of issue to the date of maturity, and whose coupons are paid on the inflation-adjusted principal. At maturity, the inflation-adjusted principal is redeemed. The mechanics of an ILB imply that its cash flows and principal at maturity are unknown and are determined by the path of inflation over its life.

Information Ratio - The ratio of annualized expected residual return to residual risk. A central measurement for active management, value added is proportional to the square of the information ratio.

Market Capitalization - Is calculated as the product of price and shares outstanding.

Median Market Capitalization - The midpoint of market capitalization (market price multiplied by the number of shares outstanding) of the stocks in a portfolio. Half the stocks in the portfolio will have higher market capitalizations; half will have lower.



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Nominal Yield - The interest rate stated on the face of a bond, which represents the percentage of interest to be paid by the issuer on the face value of the bond. (Also known as the coupon rate.)

Price/Book (P/B) Ratio - The price per share of a stock divided by its book value (i.e. net worth) per share. For a portfolio, the ratio is the weighted average price/book ratio of the stocks it holds.

Price/Earnings (P/E) Ratio - The share price of a stock divided by its per-share earnings over the past year. For a portfolio, the weighted average P/E ratio of the stocks in the portfolio. P/E is a good indicator of market expectations about a company's prospects; the higher the P/E, the greater the expectations for a company's future growth.

R-Squared - Square of the correlation coefficient. The proportion of the variability in one series that can be explained by the variability of one or more other series a regression model. A measure of the quality of fit. 100% R-square means perfect predictability.

Real Yield - Return from an investment adjusted for the effects of inflation.

Semi Standard Deviation (Downside) - Is a measure of risk using only the variance of returns below a target rate, such as the benchmark.

Sharpe Ratio - A measure of a portfolio's excess return relative to the total variability of the portfolio. The higher the portfolio's Sharpe Ratio, the better the portfolio's returns have been relative to the risk it has taken on.

Standard Deviation - The square root of the variance. A measure of dispersion of a set of data from its mean.

Style Analysis - A returns-based analysis using a multi-factor attribution model. The model calculates a product's average exposure to particular investment styles over time (i.e., the product's normal style benchmark).

Top-down - Investment style that begins with an assessment of the overall economic environment and makes a general asset allocation decision regarding various sectors of the financial markets and various industries.

Tracking Error - The standard deviation of the difference between the performance of a portfolio and an appropriate benchmark.

Turnover - For mutual funds, a measure of trading activity during the previous year, expressed as a percentage of the average total assets of the fund. A turnover rate of 25% means that the value of trades represented one-fourth of the assets of the fund.



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Up Market Capture Ratio - Is the portion of the market's performance that was captured by the manager using only periods where the market return is positive. An up market capture of greater than 100% is considered desirable.

Unrealized Gain/Loss - The increased or decreased market value of an asset that is still being held compared with its cost of acquisition.

Value Stocks - Stocks with low price/book ratios or price/earnings ratios. Historically, value stocks have enjoyed higher average returns than growth stocks (stocks with high price/book or P/E ratios) in a variety of countries.

Weighted Average Life (WAL) - The average number of years for which each dollar of unpaid principal on a loan or mortgage remains outstanding. Once calculated, WAL tells how many years it will take to pay half of the outstanding principal. The time weightings are based on the principal paydowns - the higher the dollar amount, the more weight that corresponding time period will have. For example, if the majority of the repayment amount is in 10 years the WAL will be closer to 10 years. Let's say there's an outstanding bond with five years of \$1,000 annual payments. The weighted average life would be three years, assuming payment is made at the end of each year. This indicates that after three years over half of the payments will be made.

Yield Curve - A representation on a chart of the [yields](#) on [bonds](#) with identical [credit ratings](#) but different [maturities](#). On the yield curve, the maturities are represented on the x-axis, and the yield is represented on the y-axis. That is, if the yield curve trends upward, it indicates that [interest rates](#) for long-term [debt securities](#) are higher than short-term debt securities; this is called a [normal yield curve](#). A [negative yield curve](#) indicates that interest rates for short-term debt securities are higher, and a [flat yield curve](#) indicates that they are roughly the same. Yield curves are most commonly plotted with [U.S. Treasuries](#) with different maturities; this is used to predict future trends in [interest rates](#).

Yield Curve Management - Any investment strategy that seeks to profit from changes in the yield curve of US Treasury securities. For example, one may buy a bond at a certain interest rate expecting prevailing interest rates to decline. If and when they do, the price of the bond one holds will increase, allowing one to sell the bond for a profit.

Yield to Maturity - The rate of return an investor would receive if the securities held by a portfolio were held to their maturity dates.

Risk Metrics Description – Rationale for Selection and Calculation Methodology**US Equity Markets:**

Metric: P/E ratio = Price / “Normalized” earnings for the S&P 500 Index

To represent the price of US equity markets, we have chosen the S&P 500 index. This index has the longest published history of price, is well known, and also has reliable, long-term, published quarterly earnings. The price=P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the S&P 500 index). Equity markets are very volatile. Prices fluctuate significantly during normal times and extremely during periods of market stress or euphoria. Therefore, developing a measure of earnings power (E) which is stable is vitally important, if the measure is to provide insight. While equity prices can and do double, or get cut in half, real earnings power does not change nearly as much. Therefore, we have selected a well-known measure of real, stable earnings power developed by Yale Professor Robert Shiller known as the Shiller E-10. The calculation of E-10 is simply the average real annual earnings over the past 10 years. Over 10 years, the earnings shenanigans and boom and bust levels of earnings tend to even out (and often times get restated). Therefore, this earnings statistic gives a reasonably stable, slow-to-change estimate of average real earnings power for the index. Professor Shiller’s data and calculation of the E-10 are available on his website at <http://www.econ.yale.edu/~shiller/data.htm>. We have used his data as the base for our calculations. Details of the theoretical justification behind the measure can be found in his book *Irrational Exuberance* [Princeton University Press 2000, Broadway Books 2001, 2nd ed., 2005].



Developed Equity Markets Excluding the US:

Metric: $P/E \text{ ratio} = \text{Price} / \text{"Normalized" earnings for the MSCI EAFE Index}$

To represent the price of non-US developed equity markets, we have chosen the MSCI EAFE index. This index has the longest published history of price for non-US developed equities. The price= P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the MSCI EAFE index). The price level of this index is available starting in December 1969. Again, for the reasons described above, we elected to use the Shiller E-10 as our measure of earnings (E). Since 12/1972, a monthly price earnings ratio is available from MSCI. Using this quoted ratio, we have backed out the implied trailing-twelve month earnings of the EAFE index for each month from 12/1972 to the present. These annualized earnings are then inflation adjusted using CPI-U to represent real earnings in US dollar terms for each time period. The Shiller E-10 for the EAFE index (10 year average real earnings) is calculated in the same manner as detailed above.

However, we do not believe that the pricing and earnings history of the EAFE markets are long enough to be a reliable representation of pricing history for developed market equities outside of the US. Therefore, in constructing the Long-Term Average Historical P/E for developed ex-US equities for comparison purposes, we have elected to use the US equity market as a developed market proxy, from 1881 to 1982. This lowers the Long-Term Average Historical P/E considerably. We believe this methodology provides a more realistic historical comparison for a market with a relatively short history.

Emerging Market Equity Markets:

Metric: Ratio of Emerging Market P/E Ratio to Developed Market P/E Ratio

To represent the Emerging Markets P/E Ratio, we have chosen the MSCI Emerging Market Free Index, which has P/E data back to January 1995 on Bloomberg. To represent the Developed Markets PE Ratio, we have chosen the MSCI World Index, which also has data back to January 1995 on Bloomberg. Although there are issues with published, single time period P/E ratios, in which the denominator effect can cause large movements, we feel that the information contained in such movements will alert investors to market activity that they will want to interpret.



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US Private Equity Markets:

Metrics: S&P LCD Average EBITDA Multiples Paid in LBOs and US Quarterly Deal Volume

The Average Purchase Price to EBITDA multiples paid in LBOs is published quarterly by S&P in their LCD study. This is the total price paid (both equity and debt) over the trailing-twelve month EBITDA (earnings before interest, taxes, depreciation and amortization) as calculated by S&P LCD. This is the relevant, high-level pricing metric that private equity managers use in assessing deals. Data is published monthly.

US quarterly deal volume for private equity is the total deal volume in \$ billions (both equity and debt) reported in the quarter by Thomson Reuters Buyouts. This metric gives a measure of the level of activity in the market. Data is published quarterly.

US Private Real Estate Markets:

Metrics: US Cap Rates, Cap Rate Spreads, and Transactions as a % of Market Value

Real estate cap rates are a measure of the price paid in the market to acquire properties versus their annualized income generation before financing costs (NOI=net operating income). The data, published by NCREIF, describes completed and leased properties (core) on an unleveraged basis. We chose to use current value cap rates. These are capitalization rates from properties that were revalued during the quarter. This data relies on estimates of value and therefore tends to be lagging (estimated prices are slower to rise and slower to fall than transaction prices). The data is published quarterly.

Spreads between the cap rate (described above) and the 10-year nominal Treasury yield, indicate a measure of the cost of properties versus a current measure of the cost of financing.

Transactions as a % of Market Value Trailing Four Quarters is a measure of property turnover activity in the NCREIF Universe. This quarterly metric is a measure of activity in the market.



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Credit Markets Fixed Income:

Metric: Spreads

The absolute level of spreads over treasuries and spread trends (widening / narrowing) are good indicators of credit risk in the fixed income markets. Spreads incorporate estimates of future default, but can also be driven by technical dislocations in the fixed income markets. Abnormally narrow spreads (relative to historical levels) indicate higher levels of valuation risk, wide spreads indicate lower levels of valuation risk and / or elevated default fears. Investment grade bond spreads are represented by the Bloomberg Barclays Capital US Corporate Investment Grade Index Intermediate Component. The high yield corporate bond spreads are represented by the Bloomberg Barclays Capital US Corporate High Yield Index.

Measure of Equity Market Fear / Uncertainty

Metric: VIX – Measure of implied option volatility for US equity markets

The VIX is a key measure of near-term volatility conveyed by implied volatility of S&P 500 index option prices. VIX increases with uncertainty and fear. Stocks and the VIX are negatively correlated. Volatility tends to spike when equity markets fall.

Measure of Monetary Policy

Metric: Yield Curve Slope

We calculate the yield curve slope as the 10 year treasury yield minus the 1 year treasury yield. When the yield curve slope is zero or negative, this is a signal to pay attention. A negative yield curve slope signals lower rates in the future, caused by a contraction in economic activity. Recessions are typically preceded by an inverted (negatively sloped) yield curve. A very steep yield curve (2 or greater) indicates a large difference between shorter-term interest rates (the 1 year rate) and longer-term rates (the 10 year rate). This can signal expansion in economic activity in the future, or merely higher future interest rates.



Measures of US Inflation Expectations

Metrics: Breakeven Inflation and Inflation Adjusted Commodity Prices

Inflation is a very important indicator impacting all assets and financial instruments. Breakeven inflation is calculated as the 10 year nominal treasury yield minus the 10 year real yield on US TIPS (treasury inflation protected securities). Abnormally low long-term inflation expectations are indicative of deflationary fears. A rapid rise in breakeven inflation indicates an acceleration in inflationary expectations as market participants sell nominal treasuries and buy TIPS. If breakeven inflation continues to rise quarter over quarter, this is a signal of inflationary worries rising, which may cause Fed action and / or dollar decline.

Commodity price movement (above the rate of inflation) is an indication of anticipated inflation caused by real global economic activity putting pressure on resource prices. We calculate this metric by adjusted in the Dow Jones UBS Commodity Index (formerly Dow Jones AIG Commodity Index) by US CPI-U. While rising commodity prices will not necessarily translate to higher US inflation, higher US inflation will likely show up in higher commodity prices, particularly if world economic activity is robust.

These two measures of anticipated inflation can, and often are, conflicting.

Measures of US Treasury Bond Interest Rate Risk

Metrics: 10-Year Treasury Forward-Looking Real Yield and 10-Year Treasury Duration

The expected annualized real yield of the 10 year US Treasury Bond is a measure of valuation risk for US Treasuries. A low real yield means investors will accept a low rate of expected return for the certainty of receiving their nominal cash flows. MEKETA estimates the expected annualized real yield by subtracting an estimate of expected 10 year inflation (produced by the Survey of Professional Forecasters as collected by the Federal Reserve Bank of Philadelphia), from the 10 year Treasury constant maturity interest rate.

Duration for the 10-Year Treasury Bond is calculated based on the current yield and a price of 100. This is a measure of expected percentage movements in the price of the bond based on small movements in percentage yield. We make no attempt to account for convexity.



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Definition of "extreme" metric readings

A metric reading is defined as "extreme" if the metric reading is in the top or bottom decile of its historical readings. These "extreme" reading should cause the reader to pay attention. These metrics have reverted toward their mean values in the past.



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Callan

March 31, 2022



**State Universities Retirement
System of Illinois
Real Estate**

**Investment Measurement Service
Quarterly Review**

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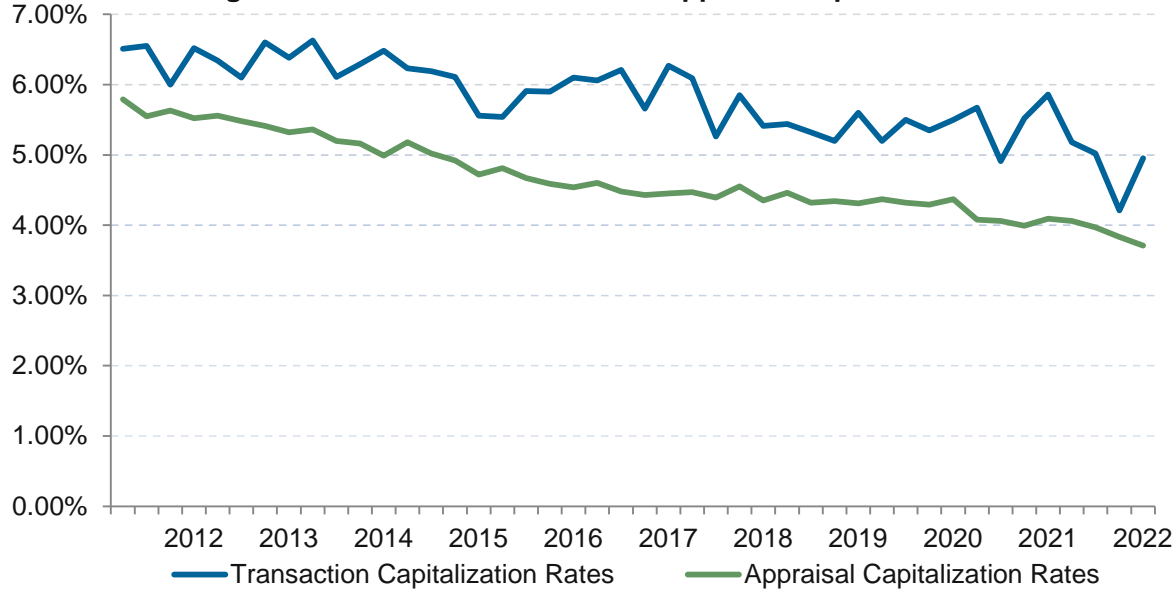
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Commercial Real Estate Market Snapshot First Quarter 2022

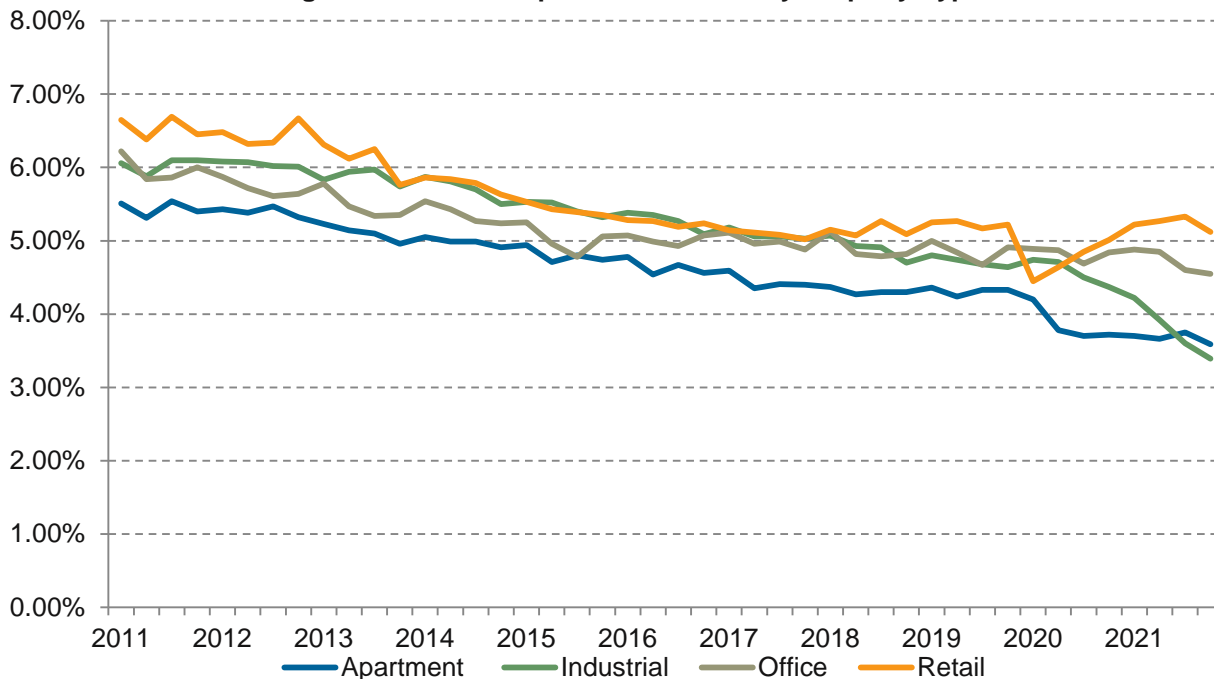
The NCREIF Property Index, a measure of U.S. institutional real estate assets, rose 5.3% during 1Q22. The income return was 1.0% and the appreciation return was 4.3%. Industrial led property sector performance with a gain of 11.0%. Office finished last with an increase of 1.6%. Regionally, the West led with a 6.5% increase, while the Midwest was the worst performer but still gained 3.5%. The NCREIF Open-End Diversified Core Equity Index, representing equity ownership positions in U.S. core real estate, rose 7.4% during the first quarter, with an income return of 0.9% and an appreciation return of 6.4%.

Figure 1: NCREIF Transaction and Appraisal Capitalization Rates



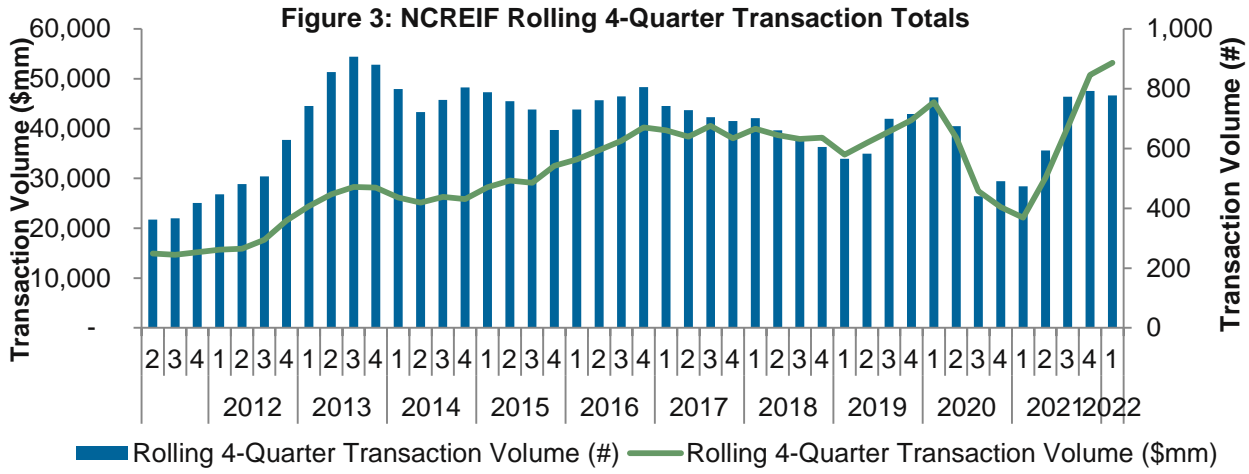
As seen in Figure 1, appraisal capitalization rates decreased slightly from 3.8% to 3.7% during 1Q, and capitalization rates measured in active trades rose sharply from 4.2% to 5.0%. At quarter end, the 10-year average appraisal capitalization rate was 4.6% and the 10-year average transaction capitalization rate was 5.8%. The spread between the two measures, which reflects pricing expectations between buyers and holders of real estate, stayed constant at 116 basis points.

Figure 2: NCREIF Capitalization Rates by Property Type



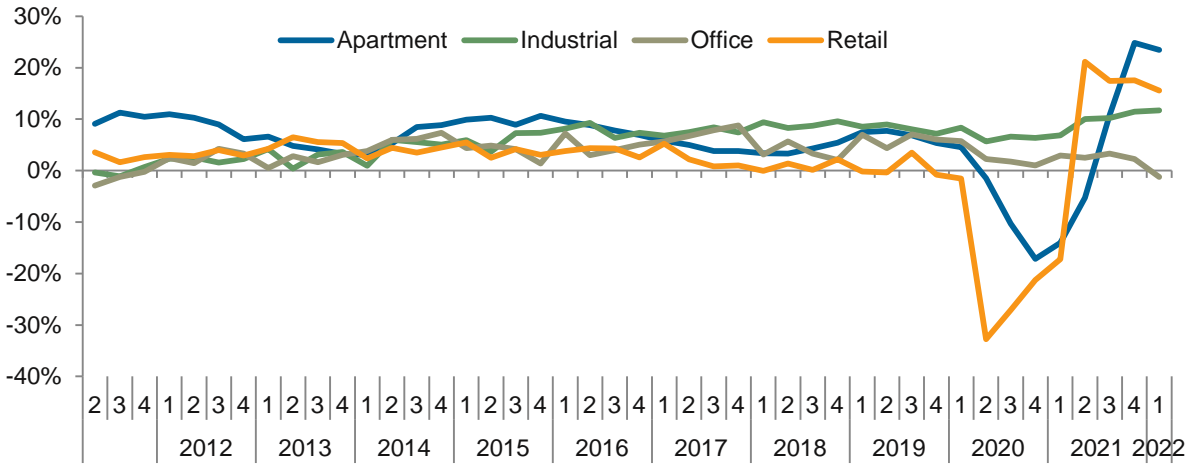
Market-weighted capitalization rates by property type decreased for all property types during the quarter. Capitalization rates were lowest in Industrial (3.4%) and Apartment (3.6%), and slightly higher in Office (4.6%) and Retail (5.1%).

Commercial Real Estate Market Snapshot
First Quarter 2022



As shown in Figure 3, rolling four-quarter transaction volume totaled \$53.2 billion across 778 transactions. NCREIF recorded 116 transactions during 1Q, representing \$9.4 billion of value, compared to \$21.4 billion in 4Q21. The average transaction size was \$81.0 million, compared to \$75.3 million in 4Q.

Figure 4: Rolling 4-Quarter NOI Growth by Property Type



Rolling four-quarter net operating income growth was mixed during the quarter. Rolling four-quarter NOI growth decreased slightly in Apartment (23.5%) and Retail (15.6%), while NOI growth in Industrial (11.7%) increased slightly. NOI growth in Office (-1.2%) decreased sharply and turned negative for the first time in a decade.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2022, with the distribution as of December 31, 2021. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	March 31, 2022			December 31, 2021		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Core Funds	\$1,325,635,197	64.57%	\$251,604	\$105,997,361	\$1,219,386,232	65.63%
BlackRock Global Renewable Power III	18,981,967	0.92%	3,238,357	99,971	15,643,639	0.84%
Blackstone Property Partners	268,106,697	13.06%	(674,630)	23,489,264	245,292,063	13.20%
Carlyle Property Investors	162,536,774	7.92%	(426,853)	11,548,889	151,414,738	8.15%
Heitman America Real Estate Trust (HART)	298,293,252	14.53%	(529,353)	25,508,081	273,314,524	14.71%
JP Morgan Strategic Property Fund (SPF)	295,830,159	14.41%	(514,955)	18,088,702	278,256,412	14.98%
Prologis US Logistics Fund (USLF)	178,712,383	8.71%	(695,784)	20,158,792	159,249,375	8.57%
UBS Trumbull Property Fund (TPF)	103,173,966	5.03%	(145,179)	7,103,663	96,215,481	5.18%
Total Non-Core Funds	\$570,229,269	27.78%	\$41,212,917	\$32,849,403	\$496,166,949	26.71%
Basis Real Estate Debt Fund I	23,323,294	1.14%	(478,638)	429,375	23,372,557	1.26%
Basis Real Estate Debt Fund II	13,691,305	0.67%	2,429,790	174,320	11,087,195	0.60%
Blackstone BREP Europe VI *	53,107,815	2.59%	1,714,046	2,257,567	49,136,202	2.64%
Blue Vista Real Estate IV **	24,826,602	1.21%	(929,993)	187,382	25,569,213	1.38%
Brasa II	14,264,901	0.69%	14,089,397	175,504	-	-
Brookfield Strategic Real Estate II	34,535,000	1.68%	(5,666,546)	2,468,671	37,732,875	2.03%
Brookfield Strategic Real Estate III	31,655,139	1.54%	(113,033)	1,654,050	30,114,122	1.62%
Brookfield Strategic Real Estate IV	260,761	0.01%	(249,660)	1,219,966	-709,545	(0.04%)
Cabot Industrial Value VI (CIVF)	38,293,667	1.87%	6,334,500	3,518,462	28,440,705	1.53%
Crow Holdings Realty VII	2,957,247	0.14%	(839,062)	72,995	3,723,314	0.20%
Crow Holdings Realty VIII	6,512,943	0.32%	(1,743,485)	835,672	7,420,756	0.40%
Crow Holdings Realty IX	41,171,867	2.01%	2,439,872	4,072,555	34,659,440	1.87%
Dune Real Estate Partners II	7,337,370	0.36%	(12,006)	(174,306)	7,523,682	0.40%
Dune Real Estate Partners III	70,504,867	3.43%	(219,167)	3,417,949	67,306,085	3.62%
Dune Real Estate IV	22,627,970	1.10%	3,618,934	(597,984)	19,607,020	1.06%
Franklin Templeton FTPREF	1,524,768	0.07%	(26,450)	45,687	1,505,531	0.08%
Franklin Templeton EMREFF	4,439,375	0.22%	(19,466)	(181,123)	4,639,964	0.25%
Franklin Templeton MDP RE 2015	64,265,437	3.13%	1,860,286	4,906,546	57,498,605	3.09%
Longpoint Realty Fund II	19,386,165	0.94%	4,839,726	3,083,346	11,463,093	0.62%
Long Wharf VI	22,939,863	1.12%	3,412,015	2,492,745	17,035,103	0.92%
Newport Capital Partners Fund III	2,697,209	0.13%	33,549	190,043	2,473,616	0.13%
Oaktree Real Estate Debt Fund II	10,680,319	0.52%	(483,485)	(21,698)	11,185,502	0.60%
StepSt Glb Partner RE II (fka MFIRE) (2)	19,173,809	0.93%	0	0	19,173,809	1.03%
Torchlight Debt VII	14,957,284	0.73%	2,355,570	366,227	12,235,487	0.66%
Westbrook XI	25,094,293	1.22%	8,866,221	2,255,453	13,972,619	0.75%
Total Private Real Estate	\$1,895,864,466	92.35%	\$41,464,521	\$138,846,764	\$1,715,553,181	92.34%
Farmland	\$38,570,500	1.88%	\$4,893,125	\$2,840,590	\$30,836,785	1.66%
Homestead USA Farmland Fund III	38,570,500	1.88%	4,893,125	2,840,590	30,836,785	1.66%
Total Private Infrastructure	\$118,531,121	5.77%	\$2,341,618	\$4,681,660	\$111,507,843	6.00%
Alinda Infrastructure Fund II	9,000,294	0.44%	(16,437)	515,912	8,500,819	0.46%
Ember Infrastructure I	6,481,747	0.32%	1,215,000	(1,967)	5,268,714	0.28%
Macquarie Infrastructure Partners II	237,305	0.01%	0	(5,996)	243,300	0.01%
Macquarie Infrastructure Partners III	46,723,487	2.28%	(120,961)	1,579,937	45,264,511	2.44%
Macquarie Infrastructure Partners IV	54,088,288	2.63%	(735,985)	2,593,774	52,230,499	2.81%
Pantheon Glb Infracr Secondaries IV	2,000,000	0.10%	2,000,000	0	-	-
Total Real Assets	\$2,052,966,087	100.0%	\$48,699,264	\$146,369,014	\$1,857,897,809	100.0%

Values shown are minus accrued incentive fee.

(2) Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

* Reported in Euro's by manager and then converted to US \$.

** Year end figure is based on estimate. YE audit takes 120 days.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2022. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended March 31, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Total Core Funds	8.44%	32.05%	11.53%	9.22%	9.39%
NCREIF NFI-ODCE Val Wt Nt	7.14%	27.26%	10.30%	8.90%	9.91%
Blackrock Global Renewable Power III	(0.42%)	(2.03%)	-	-	-
Blackstone Property Partners	9.30%	27.46%	10.46%	-	-
Carlyle Property Investors	7.43%	36.69%	17.20%	-	-
Heitman America Real Estate Trust (HART)	9.14%	32.01%	10.26%	8.76%	-
JP Morgan Strategic Property Fund (SPF)	6.32%	25.51%	9.83%	8.25%	-
Prologis US Logistics Fund (USLF)	12.34%	60.59%	-	-	-
UBS Trumbull Property Fund (TPF)	7.23%	22.54%	4.46%	4.71%	6.84%
Total Non-Core Funds	5.73%	28.34%	7.53%	9.08%	11.90%
NCREIF ODCE + 1.5%	7.44%	28.76%	11.81%	10.41%	11.42%
Basis Real Estate Debt Fund I	1.48%	8.58%	8.88%	-	-
Basis Real Estate Debt Fund II	0.10%	(0.54%)	-	-	-
Blackstone European VI (3)	3.85%	40.73%	-	-	-
Blue Vista Real Estate IV **	0.49%	49.73%	21.06%	18.09%	-
Brookfield Strategic Real Estate II	6.42%	33.97%	16.00%	14.13%	-
Brookfield Strategic RE III	5.12%	20.49%	13.54%	-	-
Cabot Industrial Value VI (CIVF)	11.25%	86.15%	-	-	-
Crow Holdings Realty VII	1.63%	20.00%	10.81%	12.02%	-
Crow Holdings Realty VIII	12.53%	64.79%	30.00%	-	-
Crow Holdings Realty IX	10.61%	-	-	-	-
Dune Real Estate Partners II	(2.48%)	2.75%	(1.77%)	2.04%	9.53%
Dune Real Estate Partners III	4.81%	13.44%	(2.99%)	3.48%	-
Dune Real Estate Partners IV	(3.43%)	51.47%	-	-	-
Franklin Templeton FTPREF	1.28%	3.85%	(16.74%)	(1.01%)	8.94%
Franklin Templeton EMREFF	(4.32%)	(8.87%)	(12.89%)	(4.85%)	4.92%
Franklin Templeton MDP RE 2015	8.40%	31.03%	4.85%	3.72%	-
Longpoint Realty Fund II	23.91%	(40.27%)	-	-	-
Long Wharf VI	14.06%	67.85%	-	-	-
Newport Capital Partners Fund III	6.94%	-	-	-	-
Oaktree Real Estate Debt Fund II	(0.55%)	4.55%	1.35%	-	-
StepSt Partner RE II (fka MFIRE) (2)	0.00%	3.20%	0.07%	2.00%	5.54%
Torchlight Debt VII	1.48%	(0.93%)	-	-	-
Westbrook XI	11.77%	27.21%	-	-	-
Total Private Real Estate	7.64%	30.94%	10.37%	9.21%	10.04%
Homestead USA Farmland Fund III	8.38%	15.60%	-	-	-
NCREIF Farmland Index	2.63%	9.73%	5.89%	6.17%	9.56%
Total Private Infrastructure	3.66%	16.91%	14.37%	9.32%	8.15%
CPI + 5%	4.49%	14.36%	9.56%	8.57%	7.27%
FTSE Dev Core Inf 50/50 N	3.66%	15.23%	7.97%	8.47%	9.12%
Alinda Infrastructure Fund II	5.88%	7.27%	(1.72%)	(7.61%)	(1.26%)
Macquarie Infrastructure Partners III	3.22%	24.54%	19.48%	17.67%	-
Macquarie Infrastructure Partners IV	4.64%	15.63%	12.33%	-	-
Ember Infrastructure I	(3.67%)	-	-	-	-
Total Real Assets	7.41%	29.84%	11.17%	9.70%	9.69%
Total Real Assets Benchmark*(1)	7.02%	26.65%	10.89%	9.56%	9.34%

* Current Quarter Target = 65.0% NCREIF NFI-ODCE Val Wt Nt, 28.0% NCREIF NFI-ODCE Val Wt Nt+1.5%, 6.0% CPI-W+5.0% and 1.0% NCREIF Farmland Index.

(1) The quarterly Total Real Asset Benchmark returns are calculated by weighting the benchmark return for each asset class.

(2) Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

All returns are shown net of fees.

(3) Reported in Euro's by manager and then converted to US \$.

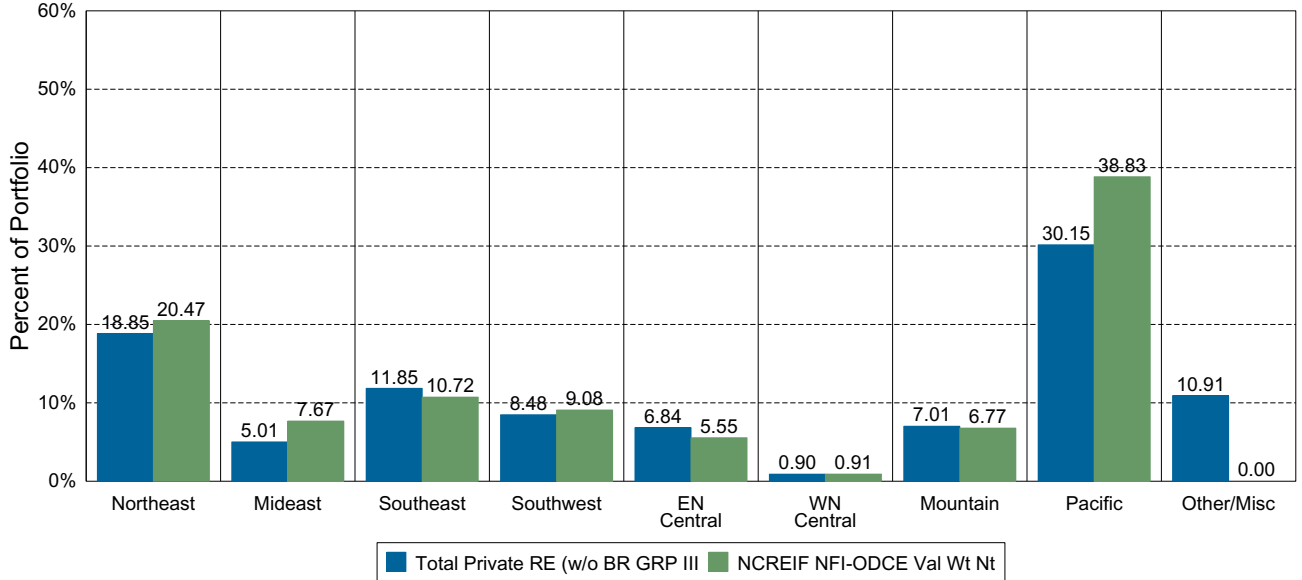
** Year end figure is based on estimate. YE audit takes 120 days.

Total Private RE (w/o BR GRP III) Diversification Analysis as of March 31, 2022

Diversification Analysis

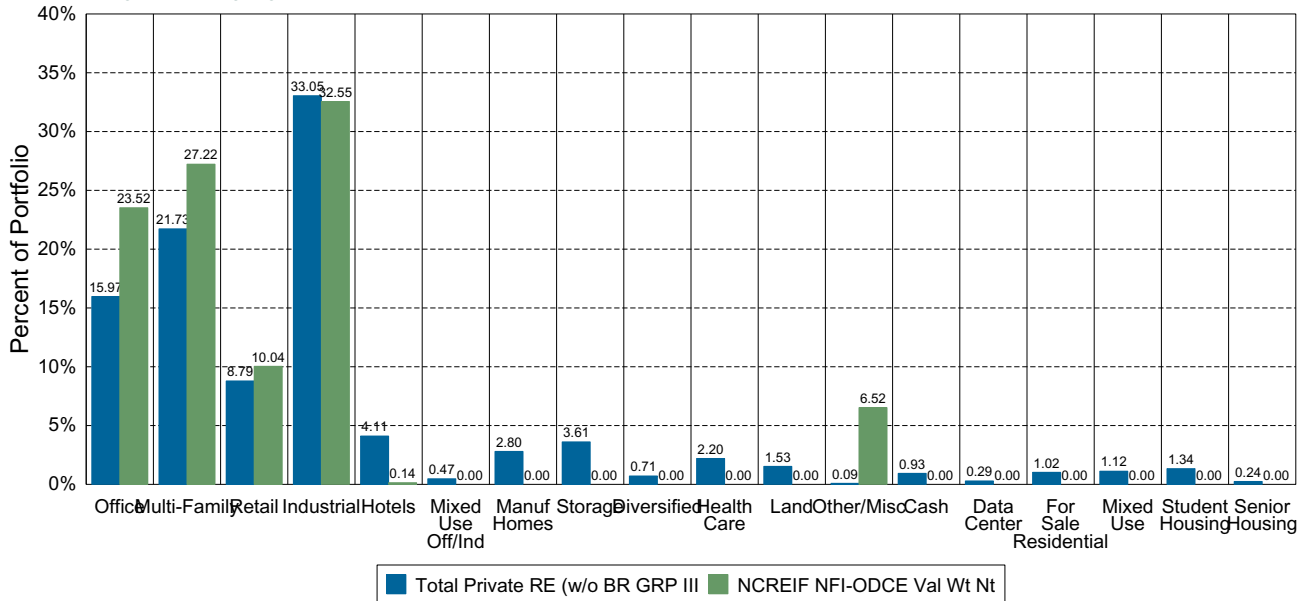
The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of March 31, 2022



Total Private RE (w/o BR GRP III)	18.85%	5.01%	11.85%	8.48%	6.84%	0.90%	7.01%	30.15%	10.91%
NCREIF NFI-ODCE Val Wt Nt	20.47%	7.67%	10.72%	9.08%	5.55%	0.91%	6.77%	38.83%	0.00%

Diversification by Property Type as of March 31, 2022



Total Private RE (w/o BR GRP III)	15.97%	21.73%	8.79%	33.05%	4.11%	0.47%	2.80%	3.61%	0.71%	2.20%	1.53%	0.09%	0.93%	0.29%	1.02%	1.12%	1.34%	0.24%
NCREIF NFI-ODCE Val Wt Nt	23.52%	27.22%	10.04%	32.55%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Total Private Real Estate Real Estate Portfolio Quarterly Changes in Market Value

	<u>Beg. of</u>	<u>Capital</u>	<u>Accounting</u>	<u>Mgmt.</u>	<u>Appre-</u>	<u>Dist. of</u>	<u>Return</u>	<u>Dist. of</u>	<u>End of</u>
	<u>Period</u>	<u>+ Contri-</u>	<u>+ Income</u>	<u>- Fees</u>	<u>+ ciation</u>	<u>- Income &</u>	<u>of</u>	<u>- Recallable</u>	<u>= Period</u>
	<u>Market</u>	<u>butions</u>	<u>Income</u>	<u>Fees</u>	<u>ation</u>	<u>Real. Gains</u>	<u>Capital</u>	<u>Capital</u>	<u>Market</u>
06/2005	0	42,173,431	0	0	(0)	123,467	0	0	42,049,963
09/2005	42,049,963	34,412,979	0	0	2,932,432	852,473	0	0	78,542,902
12/2005	78,542,902	48,535,080	0	0	(2,207,961)	1,217,584	0	0	123,652,438
03/2006	123,652,438	1,679,008	0	0	7,754,988	1,679,008	0	0	131,407,426
06/2006	131,407,426	154,313,912	17,260	0	62,225	1,829,427	0	0	283,971,396
09/2006	283,971,396	6,538,259	1,719,275	0	(379,023)	1,882,915	0	0	289,966,992
12/2006	289,966,992	7,421,001	1,708,539	334,414	6,091,615	1,887,109	0	0	302,966,624
03/2007	302,966,624	6,918,111	1,675,293	348,138	13,086,106	3,690,165	0	2,458,173	318,149,659
06/2007	318,149,659	1,842,480	1,807,242	359,826	14,785,736	1,842,480	0	0	334,382,812
09/2007	334,382,812	2,265,946	1,724,761	380,988	10,156,598	1,826,121	0	0	346,323,006
12/2007	346,323,006	1,956,882	1,690,561	388,418	6,336,475	5,689,851	0	0	350,228,655
03/2008	350,228,655	1,988,386	1,674,352	663,376	1,569,797	1,988,386	0	0	352,809,428
06/2008	352,809,428	8,831,700	1,822,454	128,447	(17,340,577)	2,918,708	0	0	343,075,849
09/2008	343,075,849	3,142,415	1,822,648	376,323	(2,083,408)	3,142,415	0	0	342,438,766
12/2008	342,438,766	3,143,110	1,881,551	286,163	(45,400,090)	3,143,110	0	0	298,634,064
03/2009	298,634,064	3,043,682	1,823,223	273,693	(44,893,159)	4,264,862	0	0	254,069,254
06/2009	254,069,254	3,600,000	1,840,942	592,300	(23,368,122)	1,989,933	0	0	233,559,843
09/2009	233,559,843	0	1,703,642	575,906	(12,246,283)	2,003,491	0	0	220,437,804
12/2009	220,437,804	0	1,788,774	566,083	(10,965,797)	1,965,752	0	0	208,728,946
03/2010	208,728,946	25,000,000	2,015,326	210,612	734,572	2,061,158	0	0	234,207,074
06/2010	234,207,074	27,040,000	3,097,524	239,447	5,875,693	2,456,070	0	0	267,524,774
09/2010	267,524,774	25,000,000	2,907,443	294,552	19,471,475	2,727,021	0	0	311,882,119
12/2010	311,882,119	26,840,000	3,525,226	487,973	8,701,428	3,289,692	0	0	347,171,108
03/2011	347,171,108	6,169,856	3,049,562	672,479	8,721,683	3,328,279	0	0	361,111,450
06/2011	361,111,450	4,373,333	3,139,247	663,418	14,060,049	4,205,243	0	0	377,815,419
09/2011	377,815,419	2,222,095	2,938,893	679,965	15,992,933	3,423,940	0	0	394,865,435
12/2011	394,865,435	16,655,942	2,952,521	703,273	(6,843,995)	3,396,014	0	0	403,530,615
03/2012	403,530,615	5,777,016	3,237,093	712,989	10,670,378	3,528,506	0	0	418,973,609
06/2012	418,973,609	12,851,428	3,070,176	811,541	6,466,680	6,007,837	0	544,391	433,998,123
09/2012	433,998,123	12,453,309	3,465,912	821,801	8,311,113	5,430,310	0	1,560,625	450,415,721
12/2012	450,415,721	21,304,116	2,985,126	836,210	7,740,575	5,848,715	0	1,311,525	474,449,087
03/2013	474,449,087	8,924,696	3,361,755	842,722	9,867,263	4,936,044	0	5,912,217	484,911,819
06/2013	484,911,819	13,690,142	3,408,964	813,391	9,856,009	130,555,101	0	35,883	380,462,559
09/2013	380,462,559	28,876,958	3,159,030	1,277,279	6,839,123	12,324,318	0	1,719,937	404,016,136
12/2013	404,016,136	62,878,607	3,041,081	1,020,951	7,460,729	4,845,993	0	250,445	471,279,164
03/2014	471,279,164	8,361,763	3,496,147	1,123,862	18,364,484	13,093,727	0	1,444,640	485,839,330
06/2014	485,839,330	168,387,475	4,383,107	1,207,697	10,271,773	10,045,299	2,417	20,362,045	637,264,227
09/2014	637,264,227	101,636,642	6,181,480	1,409,298	13,167,818	11,957,185	0	449,945	744,433,739
12/2014	744,433,739	77,116,484	6,866,500	1,267,082	15,668,216	9,096,964	0	22,718,143	811,002,750
03/2015	811,002,750	21,635,146	7,674,697	1,760,301	20,980,550	15,152,959	0	2,674,991	841,704,892
06/2015	841,704,892	22,866,436	7,861,829	1,820,086	22,507,085	12,887,424	0	1,339,019	878,893,713
09/2015	878,893,713	11,216,301	7,918,911	1,780,676	22,613,392	20,089,832	0	827,939	897,943,868
12/2015	897,943,868	20,871,212	7,874,144	2,481,710	21,862,704	13,671,377	0	388,596	932,010,245
03/2016	932,010,245	20,295,944	8,143,230	1,988,116	13,286,274	16,368,188	0	225,653	955,153,736
06/2016	955,153,736	31,896,620	8,292,447	2,190,974	13,707,723	10,963,886	0	183,426	995,712,241
09/2016	995,712,241	14,378,035	8,174,346	2,185,457	15,342,583	24,149,725	0	86,935	1,007,185,087
12/2016	1,007,185,087	27,586,682	8,235,734	2,364,750	15,926,218	28,938,749	0	1,810,102	1,025,820,120

Total Private Real Estate Real Estate Portfolio Quarterly Changes in Market Value

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Dist. of Income & Real. Gains	- Return of Capital	- Dist. of Recallable Capital	= End of Period Market
03/2017	1,025,820,120	11,467,605	8,016,983	2,109,415	6,876,693	11,830,339	0	329,195	1,037,912,453
06/2017	1,037,912,453	18,021,595	8,891,970	2,168,112	11,363,646	22,346,158	0	655,280	1,051,020,114
09/2017	1,051,020,114	15,302,424	8,886,731	2,100,113	12,667,629	8,101,029	0	31,875	1,077,643,881
12/2017	1,077,643,881	17,510,963	9,161,490	2,130,216	19,482,853	19,827,764	0	665,618	1,101,175,590
03/2018	1,101,175,590	33,732,281	9,803,113	2,442,601	13,309,923	16,417,883	930,000	678,961	1,137,551,462
06/2018	1,137,551,462	22,164,160	9,952,779	2,632,871	10,651,214	9,158,610	135,685,504	162,915	1,032,679,716
09/2018	1,032,679,716	28,558,458	9,640,728	2,696,531	10,205,147	13,635,013	64,763,357	3,584,690	996,404,457
12/2018	996,404,457	20,147,456	9,929,615	2,533,802	11,192,031	7,728,893	73,649,942	2,727,413	951,033,509
03/2019	951,033,509	133,117,644	13,792,179	2,593,684	2,441,843	10,093,011	39,731,922	0	1,047,966,557
06/2019	1,047,966,557	206,422,697	10,768,865	2,615,134	(2,815,011)	11,490,391	21,807,071	2,518,787	1,223,911,726
09/2019	1,223,911,726	26,737,418	10,550,915	3,992,533	3,046,783	13,565,961	23,690,852	620,309	1,222,377,188
12/2019	1,222,377,188	19,441,272	12,989,793	3,298,225	276,299	10,011,050	11,871,388	1,980,829	1,227,923,060
03/2020	1,227,923,060	30,094,014	9,862,632	3,273,348	(25,880,195)	10,909,231	17,644,036	1,437,607	1,209,853,520
06/2020	1,209,853,520	20,755,150	7,623,396	3,492,505	(43,120,490)	7,121,328	1,923,758	167,748	1,182,406,237
09/2020	1,182,406,237	21,920,519	8,488,065	4,074,138	4,048,435	8,566,129	7,202,553	983,605	1,196,036,831
12/2020	1,196,036,831	120,614,002	10,407,925	4,402,765	21,776,007	10,379,146	5,891,878	0	1,328,160,976
03/2021	1,328,160,976	40,899,080	10,321,504	5,582,092	29,121,967	15,947,023	15,354,059	0	1,371,620,353
06/2021	1,371,620,353	47,072,652	14,771,997	5,840,394	60,724,304	14,552,671	19,194,335	2,007,955	1,452,593,952
09/2021	1,452,593,952	49,754,843	15,179,732	5,976,957	100,292,821	18,806,319	15,353,164	1,141,075	1,576,543,833
12/2021	1,576,543,833	83,289,038	13,832,213	6,082,374	107,846,155	32,393,777	35,002,390	0	1,715,555,306
03/2022	1,715,555,306	74,059,704	13,226,835	6,609,505	126,017,344	17,102,414	5,722,495	3,561,349	1,895,863,426
		0 2,199,195,599	385,257,426	114,590,003	721,041,478	718,700,951	495,421,122	89,559,839	1,895,863,426

Returns

Net Portfolio Cumulative IRR = 7.66%

Ratios

Capital Account = \$1,895,863,426

Total Value = \$3,199,545,338

Committed Capital = \$2,939,811,102

Paid In Capital = \$2,199,195,599

Remaining Commitment = \$830,175,342

PIC Multiple (Paid In Capital/Committed Capital) = 74.81%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$2,726,038,768

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.45x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.59x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.86x

Working on updating historical cashflows on several managers to include detail cashflows.

Callan data feed at inception of relationship did not include fee amounts and income amounts.

Managers that still need updating: Brookfield II, Crow VII & VIII, Franklin EMREFF, MDP RE 2015, & FTPREF, Macquarie II & III.

Capital commitments reflects the sum of: (i) aggregate capital contributions translated to U.S.

Dollars as of the date of each capital contribution transaction; and (ii) reported uncalled capital commitments translated to U.S. Dollars as of quarter end date.

State Universities Retirement System of Illinois Manager Detail as of March 31, 2022

The following table summarizes changes in each manager's aggregated cash flows and valuation information as of March 31, 2022.

Manager	Vintage Year	Capital Commitments (\$000s)	Paid-In Capital (\$000s)	Uncalled Capital (\$000s)	% Paid-In	Distributed Capital (\$000s)	Net Asset Value (\$000s)	DPI	RVPI	TVPI	Net IRR
Stabilized Growth Funds											
UBS Trumbull Property Fund (TPF)	2006	\$281,470	281,472	-2	100.00%	397,606	103,174	1.41x	0.37x	1.78x	6.61%
Heitman America Real Estate Trust (HART)	2014	\$200,391	200,391	0	100.00%	50,391	298,293	0.25x	1.49x	1.74x	9.54%
JP Morgan Strategic Property Fund (SPF)	2014	\$150,000	150,000	0	100.00%	2	295,830	0.00x	1.97x	1.97x	9.06%
Carlyle Property Investors	2018	\$115,085	115,085	0	100.00%	16,686	162,537	0.14x	1.41x	1.56x	16.46%
Blackstone Property Partners	2019	\$212,337	212,337	-0	100.00%	12,337	268,107	0.06x	1.26x	1.32x	11.08%
Prologis US Logistics Fund (USLF)	2020	\$104,703	104,703	-0	100.00%	5,334	178,712	0.05x	1.71x	1.76x	49.26%
BlackRock Global Renewable Power III	2020	\$100,000	22,157	79,851	22.16%	2,075	18,982	0.09x	0.86x	0.95x	(7.42%)
GI partners ETS fund	2021	\$75,000	0	75,000	0.00%	0	0	-	-	-	0.00%
IFM Glb Infrac Fund (GIF)	2022	\$100,000	0	100,000	0.00%	0	0	-	-	-	0.00%
Non-Traditional Growth Funds											
Mature (10+ years)											
Dune Real Estate Partners II	2008	\$40,000	40,458	0	101.15%	65,578	7,337	1.62x	0.18x	1.80x	14.41%
Macquarie Infrastructure Partners II	2008	\$40,000	48,268	-2,006	120.67%	75,457	237	1.56x	0.00x	1.57x	8.38%
Alinda Infrastructure Fund II	2009	\$40,000	53,084	1,500	132.71%	46,219	9,000	0.87x	0.17x	1.04x	0.83%
Franklin Templeton FTPREF	2010	\$50,000	57,915	5,155	115.83%	78,433	1,525	1.35x	0.03x	1.38x	20.61%
Maturing (5-9 years)											
Franklin Templeton EMREFF	2012	\$75,000	79,890	7,393	106.52%	106,345	4,439	1.33x	0.06x	1.39x	12.32%
StepSt Partner RE II (fka MFIRE) (2)	2012	\$60,000	39,413	20,587	65.69%	38,263	19,174	0.97x	0.49x	1.46x	6.94%
Dune Real Estate Partners III	2013	\$100,000	142,281	-3,240	142.28%	106,483	70,505	0.75x	0.50x	1.24x	6.05%
Crow Holdings Realty VII	2014	\$35,000	32,816	2,184	93.76%	43,018	2,957	1.31x	0.09x	1.40x	11.57%
Blue Vista Real Estate IV **	2015	\$35,000	35,000	-0	100.00%	32,329	24,827	0.92x	0.71x	1.63x	13.79%
Brookfield Strategic Real Estate II	2015	\$35,000	39,444	496	112.70%	26,771	34,534	0.68x	0.88x	1.55x	13.38%
Franklin Templeton MDP RE 2015	2015	\$90,000	77,805	12,195	86.45%	23,342	64,265	0.30x	0.83x	1.13x	4.41%
Macquarie Infrastructure Partners III	2015	\$50,000	51,673	-398	103.35%	43,179	46,723	0.84x	0.90x	1.74x	14.66%

** Year end figures is based on estimate. YE audit takes 120.

(2) Current EMV are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

State Universities Retirement System of Illinois Manager Detail as of March 31, 2022

The following table summarizes changes in each manager's aggregated cash flows and valuation information as of March 31, 2022.

Manager	Vintage Year	Capital Commitments (\$000s)	Paid-In Capital (\$000s)	Uncalled Capital (\$000s)	% Paid-In	Distributed Capital (\$000s)	Net Asset Value (\$000s)	DPI	RVPI	TVPI	Net IRR
Immature (Less than 5 years)											
Crow Holdings Realty VIII	2017	\$20,000	17,483	2,517	87.41%	21,878	6,513	1.25x	0.37x	1.62x	25.07%
Oaktree Real Estate Debt Fund II	2017	\$30,000	22,590	8,848	75.30%	15,366	10,680	0.68x	0.47x	1.15x	6.99%
Basis Real Estate Debt Fund I	2016	\$30,000	42,222	-2,108	140.74%	27,094	23,323	0.64x	0.55x	1.19x	13.58%
Brookfield Strategic Real Estate III	2017	\$35,000	27,424	7,576	78.35%	3,146	31,655	0.11x	1.15x	1.27x	14.29%
Dune Real Estate IV	2018	\$50,000	23,223	26,777	46.45%	758	22,628	0.03x	0.97x	1.01x	0.44%
Macquarie Infrastructure Partners IV	2018	\$50,000	51,278	-1,278	102.56%	12,955	54,088	0.25x	1.05x	1.31x	11.69%
Homestead USA Farmland Fund III	2018	\$60,000	36,825	23,199	61.37%	1,103	38,570	0.03x	1.05x	1.08x	10.66%
Long Wharf VI	2019	\$40,000	25,586	14,414	63.96%	9,990	22,940	0.39x	0.90x	1.29x	35.91%
Blackstone European VI (3)	2020	\$88,697	40,527	48,170	45.69%	3,437	53,108	0.08x	1.31x	1.40x	29.57%
Cabot Industrial Value VI (CIVF)	2019	\$50,000	26,522	23,478	53.04%	375	38,294	0.01x	1.44x	1.46x	75.09%
Crow Holdings Realty IX	2020	\$50,000	35,826	14,174	71.65%	3,739	41,172	0.10x	1.15x	1.25x	82.86%
Longpoint Realty Fund II	2020	\$50,000	17,500	32,500	35.00%	0	19,386	0.00x	1.11x	1.11x	57.10%
Westbrook XI	2020	\$75,000	25,712	49,288	34.28%	5,172	25,094	0.20x	0.98x	1.18x	36.57%
Torchlight Debt VII	2020	\$50,000	15,031	34,969	30.06%	31	14,957	0.00x	1.00x	1.00x	(0.44%)
Brookfield Strategic Real Estate IV	2021	\$75,000	0	75,000	0.00%	0	261	-	-	-	0.00%
Ember Infrastructure I	2021	\$50,000	7,525	42,475	15.05%	0	6,482	0.00x	0.86x	0.86x	(29.51%)
Basis Real Estate Debt Fund II	2021	\$50,000	22,284	31,467	44.57%	8,429	13,691	0.38x	0.61x	0.99x	(2.27%)
Newport Capital Partners Fund III	2021	\$30,000	2,516	27,484	8.39%	80	2,697	0.03x	1.07x	1.10x	10.06%
Pantheon GIB Infrast Secondaries IV	2021	\$100,000	2,000	98,000	2.00%	0	2,000	0.00x	1.00x	1.00x	0.00%
Blackstone RE Partners Asia III	2021	\$50,000	0	50,000	0.00%	0	0	-	-	-	0.00%
Brasa II	2021	\$40,000	14,718	25,282	36.79%	0	14,265	0.00x	0.97x	0.97x	(11.33%)
Crow Holdings Realty X	2022	\$50,000	0	50,000	0.00%	0	0	-	-	-	0.00%
Cabot Industrial Value VII (CIVF)	2022	\$50,000	0	50,000	0.00%	0	0	-	-	-	0.00%
Total Real Assets (3)	2005	\$3,550,182	2,405,935	1,030,951	67.77%	1,482,472	2,052,965	0.62x	0.85x	1.47x	7.68%

(2) Current EMV are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

(3) Capital commitments reflects the sum of: (i) aggregate capital contributions translated to U.S.

Dollars as of the date of each capital contribution transaction; and (ii) reported uncalled capital

commitments translated to U.S. Dollars as of quarter end date. ** Year end figures is based on estimate. YE audit takes 120.

State Universities Retirement System of Illinois Real Estate Portfolio Snapshot - Subreturn Breakdown As of March 31, 2022

Subreturn Breakdown	Last Quarter			Last Year			Last 3 Years			Last 5 Years		
	INC	APP	TNET	INC	APP	TNET	INC	APP	TNET	INC	APP	TNET
Total Core Funds	0.53%	7.91%	8.44%	2.39%	29.16%	32.05%	2.52%	8.84%	11.53%	2.89%	6.19%	9.22%
BlackRock Global Renewable Power (11.03%)	0.62%	(0.42%)	(5.74%)	3.88%	(2.03%)	-	-	-	-	-	-	-
Blackstone Property Partners (0.01%)	9.31%	9.30%	0.14%	27.29%	27.46%	0.35%	10.08%	10.46%	-	-	-	-
Carlyle Property Investors	0.77%	6.66%	7.43%	3.26%	32.66%	36.69%	3.02%	13.56%	17.20%	-	-	-
Heitman America Real Estate Trust	0.76%	8.37%	9.14%	3.53%	27.77%	32.01%	3.62%	6.47%	10.26%	3.66%	4.97%	8.76%
JP Morgan Strategic Property Fund	0.64%	5.67%	6.32%	2.84%	22.22%	25.51%	2.81%	6.87%	9.83%	2.94%	5.19%	8.25%
Prologis US Logistics Fund (USLF)	0.55%	11.79%	12.34%	2.50%	57.09%	60.59%	-	-	-	-	-	-
UBS Trumbull Property Fund (TPF)	0.82%	6.41%	7.23%	3.41%	18.66%	22.54%	3.45%	0.99%	4.46%	3.45%	1.23%	4.71%
Total Non-Core Funds	0.10%	5.63%	5.73%	0.85%	27.31%	28.34%	0.71%	6.79%	7.53%	1.05%	7.96%	9.08%
Basis Real Estate Debt Fund I	2.92%	(1.44%)	1.48%	12.69%	(3.75%)	8.58%	11.28%	(2.27%)	8.88%	-	-	-
Basis Real Estate Debt Fund II	3.01%	(2.91%)	0.10%	3.61%	(4.11%)	(0.54%)	-	-	-	-	-	-
Blackstone European VI (0.58%)	4.43%	3.85%	(3.74%)	45.64%	40.73%	-	-	-	-	-	-	-
Blue Vista Real Estate IV	1.05%	(0.57%)	0.49%	3.73%	44.80%	49.73%	2.65%	18.08%	21.06%	2.70%	15.09%	18.09%
Brookfield Strategic Real Estate II	1.31%	5.11%	6.42%	8.06%	22.56%	33.97%	3.64%	11.46%	16.00%	3.17%	10.34%	14.13%
Brookfield Strategic RE III (0.05%)	5.17%	5.12%	(1.66%)	22.00%	20.49%	(4.41%)	18.40%	13.54%	-	-	-	-
Cabot Industrial Value VI (CIVF) (0.40%)	11.65%	11.25%	(4.79%)	93.97%	86.15%	-	-	-	-	-	-	-
Crow Holdings Realty VII	2.07%	(0.44%)	1.63%	3.91%	15.57%	20.00%	2.93%	7.70%	10.81%	2.19%	9.66%	12.02%
Crow Holdings Realty VIII	1.62%	10.92%	12.53%	4.44%	58.49%	64.79%	1.93%	27.77%	30.00%	-	-	-
Crow Holdings Realty IX (0.15%)	10.76%	10.61%	-	-	-	-	-	-	-	-	-	-
Dune Real Estate Partners II (0.32%)	(2.16%)	(2.48%)	(1.20%)	3.99%	2.75%	(1.10%)	(0.68%)	(1.77%)	(0.84%)	2.90%	2.04%	2.04%
Dune Real Estate Partners III	0.07%	4.74%	4.81%	(0.79%)	14.32%	13.44%	-	-	(2.99%)	-	-	3.48%
Dune RE IV (0.89%)	(2.54%)	(3.43%)	(5.59%)	59.31%	51.47%	-	-	-	-	-	-	-
Franklin Templeton FTPREF	9.18%	(7.90%)	1.28%	24.31%	(17.71%)	3.85%	29.79%	(49.28%)	(16.74%)	24.21%	(30.82%)	(1.01%)
Franklin Templeton EMREFF (0.48%)	(3.84%)	(4.32%)	3.00%	(11.83%)	(8.87%)	6.18%	(18.13%)	(12.89%)	6.52%	(10.87%)	(4.85%)	(4.85%)
Franklin Templeton MDP RE 2015 (0.20%)	8.60%	8.40%	6.22%	23.69%	31.03%	3.05%	1.86%	4.85%	3.31%	0.46%	3.72%	3.72%
Longpoint Realty Fund II (0.68%)	24.60%	23.91%	(64.62%)	44.40%	(40.27%)	-	-	-	-	-	-	-
Long Wharf VI	0.11%	13.95%	14.06%	(1.17%)	69.58%	67.85%	-	-	-	-	-	-
Newport Capital Partners Fund III	1.40%	5.54%	6.94%	-	-	-	-	-	-	-	-	-
Oaktree Real Estate Debt Fund II	1.31%	(1.86%)	(0.55%)	6.51%	(1.86%)	4.55%	7.50%	(5.86%)	1.35%	-	-	-
Torchlight Debt VII	1.28%	0.20%	1.48%	0.95%	(1.85%)	(0.93%)	-	-	-	-	-	-
StepSt Partner RE II (fka MFIRE) (2)	0.00%	0.00%	0.00%	(0.84%)	4.07%	3.20%	(1.00%)	1.07%	0.07%	(1.01%)	3.03%	2.00%
Westbrook XI (0.44%)	12.21%	11.77%	(7.12%)	36.31%	27.21%	-	-	-	-	-	-	-
Total Private Real Estate	0.41%	7.24%	7.64%	1.94%	28.59%	30.94%	2.00%	8.25%	10.37%	2.38%	6.71%	9.21%
Total Non-C w/ Infrastructure	0.04%	5.32%	5.36%	0.87%	25.04%	26.08%	0.47%	8.97%	9.47%	0.73%	8.47%	9.25%
Farmland												
Homestead USA Farmland Fund III	0.59%	7.79%	8.38%	(1.84%)	17.76%	15.60%	-	-	-	-	-	-
Total Private Infrastructure	(0.26%)	3.92%	3.66%	0.85%	15.94%	16.91%	(0.32%)	14.71%	14.37%	(0.35%)	9.68%	9.32%
Alinda Infrastructure Fund II	0.02%	5.86%	5.88%	0.71%	6.51%	7.27%	0.24%	(1.96%)	(1.72%)	0.23%	(7.84%)	(7.61%)
Macquarie Infrastructure Partners III	0.11%	3.12%	3.22%	0.17%	24.32%	24.54%	(0.43%)	19.97%	19.48%	(0.28%)	17.97%	17.67%
Macquarie Infrastructure Partners IV (0.29%)	4.93%	4.64%	3.21%	11.95%	15.63%	(0.20%)	12.48%	12.33%	-	-	-	-
Ember Infrastructure I (2.98%)	(0.68%)	(3.67%)	-	-	-	-	-	-	-	-	-	-
Total Real Assets	0.37%	7.05%	7.41%	1.84%	27.63%	29.84%	1.75%	9.30%	11.17%	2.11%	7.48%	9.70%

State Universities Retirement System of Illinois Real Estate Portfolio Snapshot - Subreturn Breakdown As of March 31, 2022

Subreturn Breakdown	Last 10 Years			NET IRR	TVPI
	INC	APP	TNET		
Total Core Funds	3.29%	5.95%	9.39%	6.93%	1.55x
BlackRock Global Renewable Power III	-	-	-	(7.42%)	0.95x
Blackstone Property Partners	-	-	-	11.08%	1.32x
Carlyle Property Investors	-	-	-	16.46%	1.56x
Heitman America Real Estate Trust	-	-	-	9.54%	1.74x
JP Morgan Strategic Property Fund	-	-	-	9.06%	1.97x
Prologis US Logistics Fund (USLF)	-	-	-	49.26%	1.76x
UBS Trumbull Property Fund (TPF)	3.74%	3.02%	6.84%	6.61%	1.78x
Total Non-Core Funds	(0.16%)	12.06%	11.90%	11.40%	1.31x
Basis Real Estate Debt Fund I	-	-	-	13.58%	1.19x
Basis Real Estate Debt Fund II	-	-	-	(2.27%)	0.99x
Blackstone European VI	-	-	-	29.57%	1.40x
Blue Vista Real Estate IV	-	-	-	13.79%	1.63x
Brookfield Strategic Real Estate II	-	-	-	13.38%	1.55x
Brookfield Strategic RE III	-	-	-	14.29%	1.27x
Cabot Industrial Value VI (CIVF)	-	-	-	75.09%	1.46x
Crow Holdings Realty VII	-	-	-	11.57%	1.40x
Crow Holdings Realty VIII	-	-	-	25.07%	1.62x
Crow Holdings Realty IX	-	-	-	82.86%	1.25x
Dune Real Estate Partners II	(0.57%)	10.15%	9.53%	14.41%	1.80x
Dune Real Estate Partners III	-	-	-	6.05%	1.24x
Dune RE IV	-	-	-	0.44%	1.01x
Franklin Templeton FTPREF	11.45%	(11.80%)	8.94%	20.61%	1.38x
Franklin Templeton EMREFF	3.21%	1.54%	4.92%	12.32%	1.39x
Franklin Templeton MDP RE 2015	-	-	-	4.41%	1.13x
Longpoint Realty Fund II	-	-	-	57.10%	1.11x
Long Wharf VI	-	-	-	35.91%	1.29x
Newport Capital Partners Fund III	-	-	-	10.06%	1.10x
Oaktree Real Estate Debt Fund II	-	-	-	6.99%	1.15x
Torchlight Debt VII	-	-	-	(0.44%)	1.00x
StepSt Partner RE II (fka MFIRE) (2)	(3.25%)	6.89%	5.54%	6.94%	1.46x
Westbrook XI	-	-	-	36.57%	1.18x
Total Private Real Estate	2.42%	7.48%	10.04%	7.66%	1.45x
Total Non-C w/ Infrastructure	(0.14%)	10.81%	10.67%	10.25%	1.33x
Farmland					
Homestead USA Farmland Fund III	-	-	-	10.66%	1.08x
Total Private Infrastructure	(0.40%)	8.57%	8.15%	7.84%	1.39x
Alinda Infrastructure Fund II	0.14%	(1.40%)	(1.26%)	0.83%	1.04x
Macquarie Infrastructure Partners III	-	-	-	14.66%	1.74x
Macquarie Infrastructure Partners IV	-	-	-	11.69%	1.31x
Ember Infrastructure I	-	-	-	(29.51%)	0.86x
Total Real Assets	2.12%	7.45%	9.69%	7.68%	1.44x

State Universities Retirement System of Illinois Real Estate Portfolio Snapshot - Quarterly Cashflows As of March 31, 2022

Quarterly Cash Flow Activity (\$)	Beginning	Capital	Accounting	Mgmt. Fees	Appreciation	Distributions	Ending	LTV
	Market Value	Contribution	Income				Market Value	
BR Glb Renewable Power (GRP) III	\$15,643,639	\$3,413,372	\$-10,379	\$175,015	\$110,349	\$0	\$18,981,967	3.78%
Blackstone Property Partners	\$245,292,063	\$1,504,166	\$651,722	\$674,630	\$22,837,542	\$1,504,166	\$268,106,697	45.00%
Carlyle Property Investors	\$151,414,738	\$1,480,338	\$1,470,810	\$306,339	\$10,078,079	\$1,600,852	\$162,536,774	50.00%
Heitman (HART)	\$273,314,524	\$2,110,189	\$2,617,924	\$529,353	\$22,890,157	\$2,110,189	\$298,293,252	21.51%
JP Morgan (SPF)	\$278,256,412	\$0	\$2,305,900	\$514,955	\$15,782,802	\$0	\$295,830,159	24.25%
Prologis US Logistics Fund (USLFF)	\$159,249,375	\$862,153	\$1,342,370	\$463,403	\$18,816,422	\$1,094,533	\$178,712,383	12.30%
UBS (TPF)	\$96,215,481	\$649,224	\$935,539	\$145,179	\$6,168,125	\$649,224	\$103,173,966	16.70%
Total Core Funds	\$1,219,386,232	\$10,019,442	\$9,313,885	\$2,808,874	\$96,683,476	\$6,958,964	\$1,325,635,197	
Basis Real Estate Debt Fund I	\$23,372,557	\$34,271	\$766,338	\$83,613	\$-336,963	\$429,295	\$23,323,294	42.00%
Basis Real Estate Debt Fund II	\$11,087,195	\$6,364,005	\$520,286	\$162,781	\$-345,966	\$3,771,433	\$13,691,305	42.00%
Blackstone BREP Europe VI	\$49,136,202	\$3,042,179	\$22,073	\$315,984	\$2,235,494	\$1,012,148	\$53,107,815	69.00%
Blue Vista Real Estate IV	\$25,569,213	\$0	\$329,158	\$64,968	\$-141,776	\$865,025	\$24,826,602	63.90%
Brasa II	\$0	\$14,717,863	\$-27,637	\$628,466	\$203,141	\$0	\$14,264,901	-
Brookfield Strategic Real Estate II	\$37,735,000	\$1,441,409	\$575,395	\$621,232	\$2,403,824	\$4,674,885	\$34,533,960	55.00%
Brookfield Strategic RE III	\$30,114,122	\$0	\$98,481	\$0	\$1,442,536	\$0	\$31,655,139	50.00%
Brookfield Strategic RE IV	\$-709,545	\$0	\$-69,661	\$249,660	\$1,289,627	\$0	\$260,761	-
Cabot Industrial Value VI	\$28,440,705	\$6,522,000	\$68,761	\$187,500	\$3,449,701	\$0	\$38,293,667	25.34%
Crow Holdings Realty VII	\$3,723,314	\$19,763	\$87,054	\$19,763	\$-14,109	\$333,384	\$2,957,247	64.98%
Crow Holdings Realty VIII	\$7,420,756	\$0	\$124,783	\$20,395	\$710,839	\$545,909	\$6,512,943	60.60%
Crow Holdings Realty IX	\$34,659,440	\$4,316,731	\$93,900	\$150,000	\$3,978,655	\$902,962	\$41,171,867	46.00%
Dune Real Estate Partners II	\$7,523,682	\$0	\$-11,927	\$12,006	\$-162,379	\$0	\$7,337,370	0.00%
Dune Real Estate Partners III	\$67,306,085	\$0	\$229,299	\$182,639	\$3,188,650	\$36,528	\$70,504,867	-
Dune Real Estate Partners IV	\$19,607,020	\$3,797,303	\$-20,341	\$178,369	\$-577,643	\$0	\$22,627,970	52.30%
Franklin Templeton FTPREF	\$1,505,531	\$0	\$164,571	\$26,450	\$-118,884	\$0	\$1,524,768	50.00%
Franklin Templeton EMREFF	\$4,639,964	\$0	\$-2,649	\$19,466	\$-178,474	\$0	\$4,439,375	56.00%
Franklin Templeton MDP RE 2015	\$57,498,605	\$2,453,737	\$-40,073	\$76,315	\$4,946,619	\$0	\$64,265,437	59.00%
Longpoint Realty Fund II	\$11,463,093	\$5,000,000	\$77,277	\$160,274	\$3,006,069	\$0	\$19,386,165	38.00%
Long Wharf VI	\$17,035,103	\$4,590,684	\$167,452	\$147,945	\$2,325,293	\$657,572	\$22,939,863	44.10%
Newport Capital Partners Fund III	\$2,473,616	\$80,000	\$51,348	\$16,451	\$138,695	\$30,000	\$2,697,209	60.82%
Oaktree Real Estate Debt Fund II	\$11,185,502	\$0	\$179,869	\$37,827	\$-201,567	\$445,658	\$10,680,319	63.90%
StepSt Partner RE II (fka MFIRE)	\$19,173,809	\$0	\$0	\$0	\$0	\$0	\$19,173,809	32.00%
Torchlight Debt VII	\$12,235,487	\$2,530,570	\$340,355	\$175,000	\$25,872	\$0	\$14,957,284	66.52%
Westbrook XI	\$13,972,619	\$9,129,748	\$188,837	\$263,527	\$2,066,616	\$0	\$25,094,293	41.50%
Total Non-Core Funds	\$496,169,074	\$64,040,262	\$3,912,949	\$3,800,631	\$29,333,869	\$13,704,799	\$570,228,229	
Homestead USA Farmland Fund III	\$30,836,785	\$5,480,956	\$375,825	\$187,563	\$2,464,765	\$400,268	\$38,570,500	0.00%
Farmland	\$30,836,785	\$5,480,956	\$375,825	\$187,563	\$2,464,765	\$400,268	\$38,570,500	
Alinda Infrastructure Fund II	\$8,500,819	\$0	\$18,010	\$16,437	\$497,902	\$0	\$9,000,294	45.00%
Macquarie Infrastructure II	\$243,300	\$0	\$-7,495	\$0	\$1,499	\$0	\$237,305	-
Macquarie Infrastructure III	\$45,264,511	\$408,010	\$168,950	\$120,961	\$1,410,987	\$408,010	\$46,723,487	39.00%
Macquarie Infrastructure IV	\$52,230,499	\$0	\$17,246	\$170,481	\$2,576,528	\$565,504	\$54,088,288	35.00%
Ember Infrastructure I	\$5,268,714	\$1,435,518	\$42,218	\$220,518	\$-44,185	\$0	\$6,481,747	0.00%
Pantheon Glb Infrast Secondaries IV	\$0	\$2,000,000	\$0	\$0	\$0	\$0	\$2,000,000	-
Total Private Infrastructure	\$111,507,843	\$3,843,528	\$238,929	\$528,397	\$4,442,731	\$973,514	\$118,531,121	
Total Portfolio	\$1,857,899,934	\$83,384,188	\$13,841,589	\$7,325,464	\$132,924,840	\$22,037,546	\$2,052,965,047	

Total Core Fund Period Ended March 31, 2022

Quarterly Summary and Highlights

- Total Core Fund's portfolio posted a 8.44% return for the quarter placing it in the 1 percentile of the Callan Real Estate ODCE group for the quarter and in the 11 percentile for the last year.
- Total Core Fund's portfolio outperformed the NCREIF NFI-ODCE Val Wt Nt by 1.30% for the quarter and outperformed the NCREIF NFI-ODCE Val Wt Nt for the year by 4.80%.

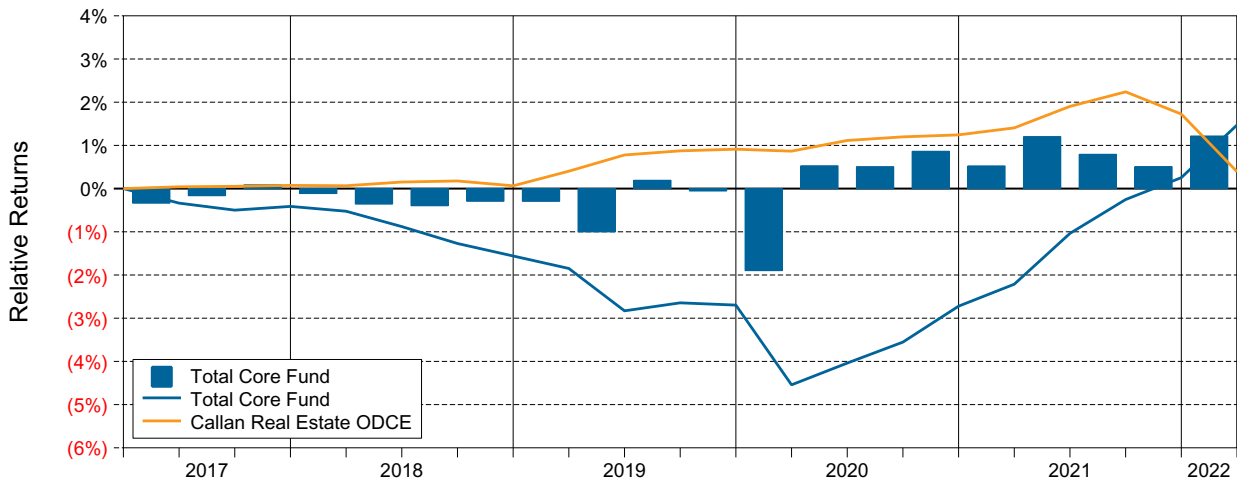
Quarterly Asset Growth

Beginning Market Value	\$1,219,386,232
Net New Investment	\$3,060,477
Investment Gains/(Losses)	\$103,188,488
Ending Market Value	\$1,325,635,197

Performance vs Callan Real Estate ODCE



Cumulative and Quarterly Relative Returns vs NCREIF NFI-ODCE Val Wt Nt

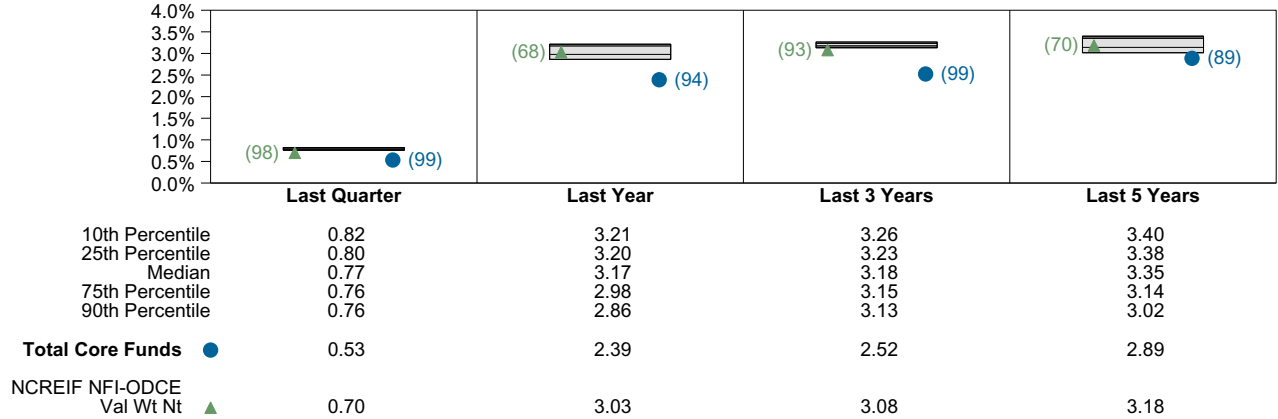


Total Core Funds Return Analysis

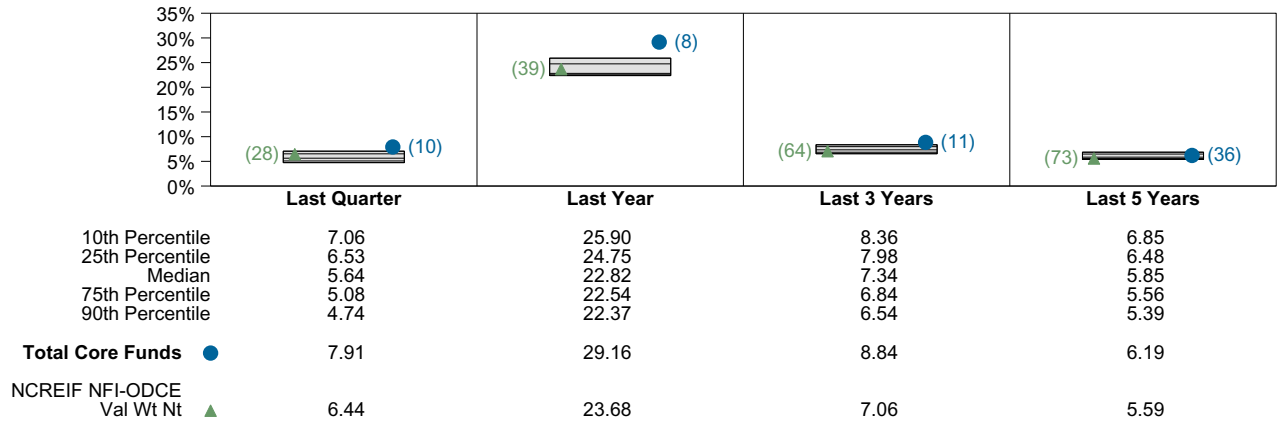
Return Analysis

The graphs below give a detailed analysis of the portfolio's return by decomposing it into component subreturns. The first chart shows the portfolio's income return ranked against the income returns of the appropriate peer group. The second chart performs the same comparison using appreciation returns. The bottom graph illustrates the historical composition of total return on an income versus appreciation basis.

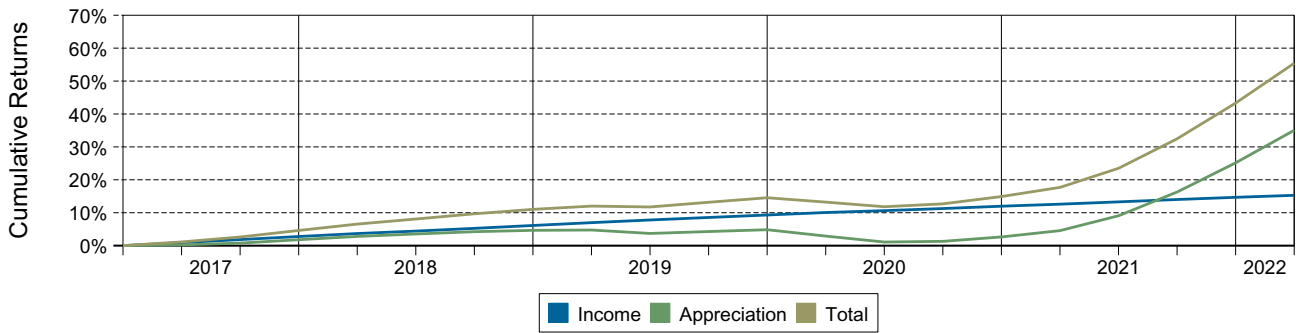
Income Rankings vs Callan Real Estate ODCE Periods ended March 31, 2022



Appreciation Rankings vs Callan Real Estate ODCE Periods ended March 31, 2022



Cumulative Return Composition by Income/Appreciation

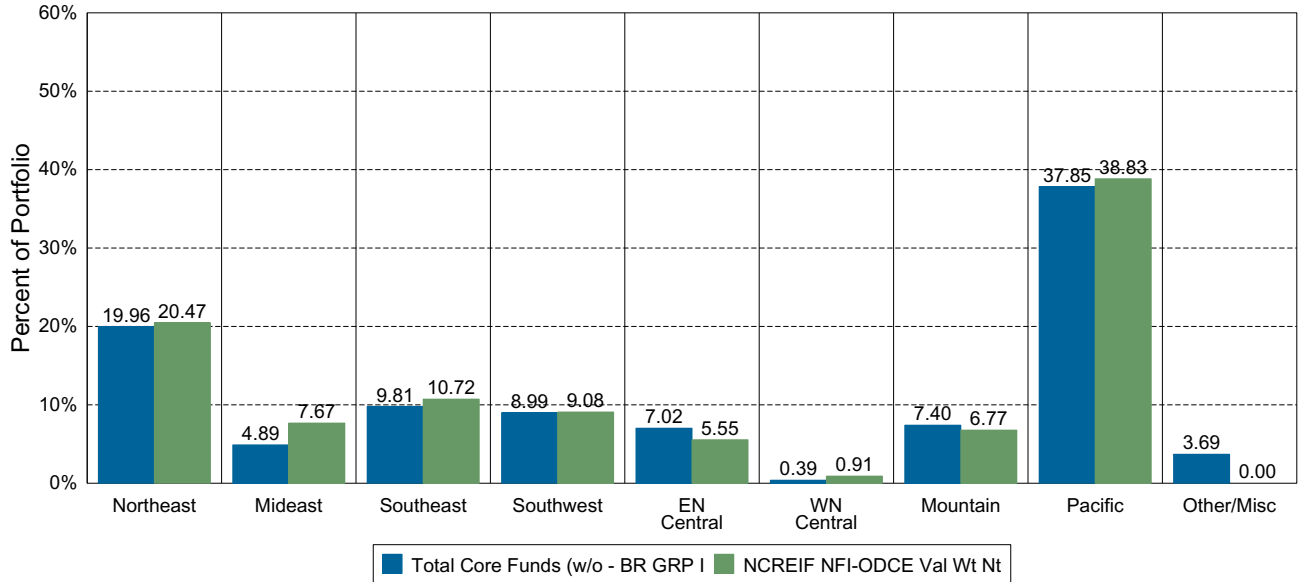


Total Core Funds (w/o - BR GRP III) Diversification Analysis as of March 31, 2022

Diversification Analysis

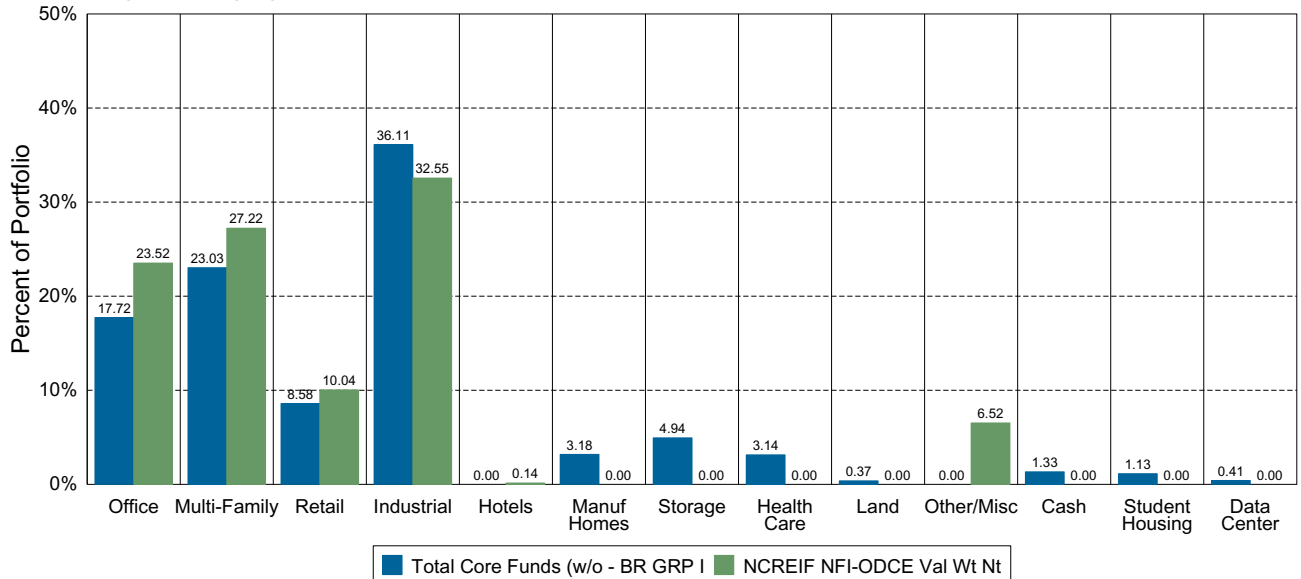
The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of March 31, 2022



Total Core Funds (w/o - BR GRP III)	19.96%	4.89%	9.81%	8.99%	7.02%	0.39%	7.40%	37.85%	3.69%
NCREIF NFI-ODCE Val Wt Nt	20.47%	7.67%	10.72%	9.08%	5.55%	0.91%	6.77%	38.83%	0.00%

Diversification by Property Type as of March 31, 2022



Total Core Funds (w/o - BR GRP III)	17.72%	23.03%	8.58%	36.11%	0.00%	3.18%	4.94%	3.14%	0.37%	0.00%	1.33%	1.13%	0.41%
NCREIF NFI-ODCE Val Wt Nt	23.52%	27.22%	10.04%	32.55%	0.14%	0.00%	0.00%	0.00%	0.00%	6.52%	0.00%	0.00%	0.00%

Total Core Funds Real Estate Portfolio Quarterly Changes in Market Value

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Income & Real. Gains	- Return of Capital	- Dist. of Recallable Capital	= End of Period Market
06/2005	0	42,173,431	0	0	(0)	123,467	0	0	42,049,963
09/2005	42,049,963	34,412,979	0	0	2,932,432	852,473	0	0	78,542,902
12/2005	78,542,902	48,535,080	0	0	(2,207,961)	1,217,584	0	0	123,652,438
03/2006	123,652,438	1,679,008	0	0	7,754,988	1,679,008	0	0	131,407,426
06/2006	131,407,426	154,313,912	17,260	0	62,225	1,829,427	0	0	283,971,396
09/2006	283,971,396	6,538,259	1,719,275	0	(379,023)	1,882,915	0	0	289,966,992
12/2006	289,966,992	7,421,001	1,708,539	334,414	6,091,615	1,887,109	0	0	302,966,624
03/2007	302,966,624	6,918,111	1,675,293	348,138	13,086,106	3,690,165	0	2,458,173	318,149,659
06/2007	318,149,659	1,842,480	1,807,242	359,826	14,785,736	1,842,480	0	0	334,382,812
09/2007	334,382,812	2,265,946	1,724,761	380,988	10,156,598	1,826,121	0	0	346,323,006
12/2007	346,323,006	1,956,882	1,690,561	388,418	6,336,475	5,689,851	0	0	350,228,655
03/2008	350,228,655	1,988,386	1,674,352	663,376	1,569,797	1,988,386	0	0	352,809,428
06/2008	352,809,428	8,831,700	1,822,454	128,447	(17,340,577)	2,918,708	0	0	343,075,849
09/2008	343,075,849	3,142,415	1,822,648	376,323	(2,083,408)	3,142,415	0	0	342,438,766
12/2008	342,438,766	3,143,110	1,881,551	286,163	(45,400,090)	3,143,110	0	0	298,634,064
03/2009	298,634,064	3,043,682	1,823,223	273,693	(44,893,159)	4,264,862	0	0	254,069,254
06/2009	254,069,254	0	1,993,364	245,510	(23,744,888)	1,989,933	0	0	230,082,288
09/2009	230,082,288	0	1,856,064	229,116	(12,623,050)	2,003,491	0	0	217,082,695
12/2009	217,082,695	0	1,941,196	219,293	(10,579,600)	1,965,752	0	0	206,259,246
03/2010	206,259,246	25,000,000	2,015,326	210,612	734,572	2,061,158	0	0	231,737,374
06/2010	231,737,374	25,000,000	3,097,524	239,447	5,875,693	2,456,070	0	0	263,015,074
09/2010	263,015,074	25,000,000	2,907,443	294,552	19,481,662	2,727,021	0	0	307,382,606
12/2010	307,382,606	25,000,000	3,508,214	352,327	8,301,755	3,289,692	0	0	340,550,556
03/2011	340,550,556	729,856	3,075,967	536,833	8,039,725	3,328,279	0	0	348,530,991
06/2011	348,530,991	373,333	3,164,967	532,587	13,112,189	3,312,655	0	0	361,336,239
09/2011	361,336,239	0	2,826,761	548,964	8,061,155	3,423,940	0	0	368,251,251
12/2011	368,251,251	2,742,886	2,951,718	573,696	326,262	3,370,782	0	0	370,327,638
03/2012	370,327,638	0	3,151,595	584,466	10,096,537	3,371,343	0	0	379,619,962
06/2012	379,619,962	0	3,284,552	593,560	5,820,257	3,614,621	0	0	384,516,590
09/2012	384,516,590	0	3,281,072	602,425	7,045,754	3,538,911	0	0	390,702,080
12/2012	390,702,080	0	3,203,843	617,047	5,101,569	3,618,228	0	0	394,772,217
03/2013	394,772,217	1,877,167	3,134,604	623,802	4,126,592	3,511,370	0	0	399,775,408
06/2013	399,775,408	2,020,815	3,306,339	620,069	2,839,703	126,297,490	0	0	281,024,706
09/2013	281,024,706	2,021,583	3,486,244	640,041	4,041,332	2,021,583	0	0	287,912,241
12/2013	287,912,241	2,019,211	3,327,480	662,689	2,876,014	2,019,211	0	0	293,453,046
03/2014	293,453,046	2,026,127	3,498,662	675,676	4,092,666	3,108,944	0	0	299,285,881
06/2014	299,285,881	152,141,703	4,332,981	673,661	6,068,365	5,473,448	2,417	0	455,679,403
09/2014	455,679,403	84,701,781	6,614,316	876,265	9,483,935	2,558,418	0	0	553,044,752
12/2014	553,044,752	70,384,249	7,193,542	1,046,808	8,474,091	4,609,954	0	0	633,439,872
03/2015	633,439,872	3,519,884	7,666,902	1,388,073	13,754,118	4,602,702	0	0	652,390,002
06/2015	652,390,002	3,717,568	7,928,194	1,412,134	15,151,776	6,632,846	0	0	671,142,561
09/2015	671,142,561	3,867,915	8,024,405	1,460,732	14,216,218	6,783,192	0	0	689,007,175
12/2015	689,007,175	4,272,921	8,040,970	1,514,522	14,635,278	5,272,445	0	0	709,169,378
03/2016	709,169,378	4,167,510	8,208,628	1,549,352	6,593,212	4,750,566	0	0	721,838,810
06/2016	721,838,810	4,335,126	8,472,874	1,572,576	5,759,930	4,335,126	0	0	734,499,038
09/2016	734,499,038	4,434,732	8,241,544	1,601,396	5,820,143	5,684,137	0	0	745,709,924
12/2016	745,709,924	4,710,518	8,183,833	1,636,823	6,081,369	4,710,518	0	0	758,338,303

Total Core Funds Real Estate Portfolio Quarterly Changes in Market Value

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Income & Real. Gains	Dist. of Income & Real. Gains	- Return of Capital	Dist. of Recallable Capital	= End of Period Market
03/2017	758,338,303	4,510,381	8,202,553	1,650,585	2,387,989	4,510,381	0	0	767,278,261	
06/2017	767,278,261	4,717,467	8,561,851	1,575,382	1,672,771	4,717,467	0	0	775,937,501	
09/2017	775,937,501	4,811,873	8,668,062	1,517,962	4,301,622	4,811,873	0	0	787,389,223	
12/2017	787,389,223	4,884,337	8,737,135	1,548,066	8,037,307	5,140,413	0	0	802,359,524	
03/2018	802,359,524	5,077,191	8,571,446	1,504,409	7,825,050	5,077,191	0	0	817,251,610	
06/2018	817,251,610	1,549,715	7,467,734	1,596,780	5,913,199	4,879,789	119,628,173	0	706,077,517	
09/2018	706,077,517	1,775,347	6,915,587	1,365,857	4,780,026	4,114,053	50,284,018	0	663,784,548	
12/2018	663,784,548	6,947,898	6,338,602	1,313,594	2,391,377	3,735,032	63,423,650	0	610,990,149	
03/2019	610,990,149	113,654,176	6,846,065	1,423,701	623,660	4,342,627	34,576,819	0	691,770,903	
06/2019	691,770,903	186,146,039	6,736,636	1,420,271	(6,944,894)	4,106,202	7,168,475	0	865,013,736	
09/2019	865,013,736	4,158,572	7,923,305	1,892,184	4,841,562	5,174,187	10,884,652	0	863,986,152	
12/2019	863,986,152	3,933,949	7,829,458	1,892,887	4,499,919	4,918,291	7,853,492	0	865,584,807	
03/2020	865,584,807	4,168,567	7,771,540	1,839,350	(15,901,831)	5,117,692	5,425,695	0	849,240,346	
06/2020	849,240,346	3,989,577	6,171,756	1,809,652	(14,857,456)	4,689,952	0	0	838,044,620	
09/2020	838,044,620	3,218,928	6,672,844	1,837,097	1,702,352	3,881,575	0	0	843,920,072	
12/2020	843,920,072	105,111,015	8,036,584	2,037,822	12,382,967	5,698,577	0	0	961,714,239	
03/2021	961,714,239	14,313,574	8,280,655	3,000,546	18,139,004	5,548,240	0	0	993,898,686	
06/2021	993,898,686	10,013,547	8,463,402	2,307,488	42,933,308	5,759,845	0	2,007,955	1,045,233,656	
09/2021	1,045,233,656	5,952,143	9,097,047	2,432,976	69,286,716	6,028,209	0	0	1,121,108,377	
12/2021	1,121,108,377	12,048,110	9,173,401	2,624,972	85,960,962	6,279,645	0	0	1,219,386,232	
03/2022	1,219,386,232	10,019,442	9,313,885	2,808,874	96,683,476	6,958,964	0	0	1,325,635,197	
	0	1,293,273,115	327,067,828	67,275,292	456,195,174	379,912,109	299,247,391	4,466,128	1,325,635,197	

Returns

Net Portfolio Cumulative IRR = 6.93%

Ratios

Capital Account = \$1,325,635,197

Total Value = \$2,009,260,824

Committed Capital = \$1,446,114,573

Paid In Capital = \$1,293,273,115

Remaining Commitment = \$157,307,586

PIC Multiple (Paid In Capital/Committed Capital) = 89.43%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$1,482,942,783

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.55x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.53x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.03x

Total Non-Core Fund Period Ended March 31, 2022

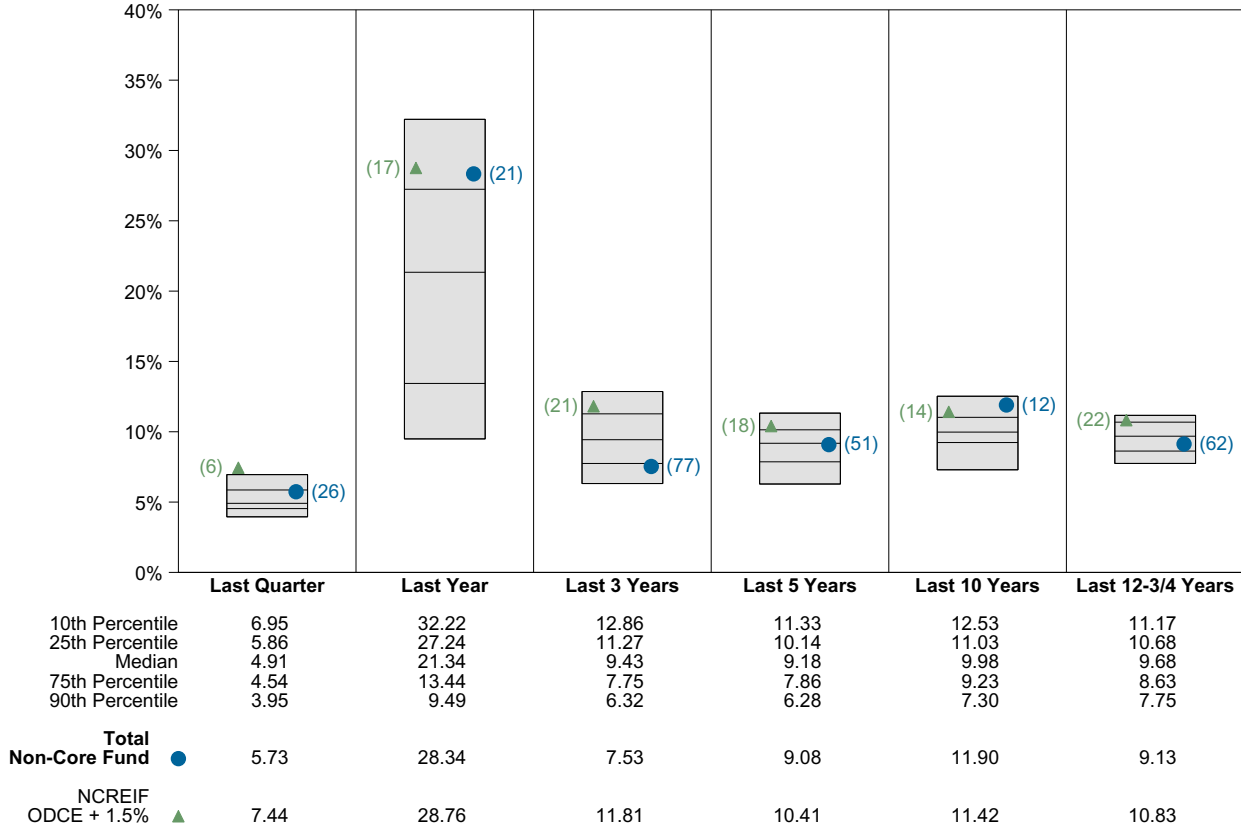
Quarterly Summary and Highlights

- Total Non-Core Fund's portfolio posted a 5.73% return for the quarter placing it in the 26 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 21 percentile for the last year.
- Total Non-Core Fund's portfolio underperformed the NCREIF ODCE + 1.5% by 1.71% for the quarter and underperformed the NCREIF ODCE + 1.5% for the year by 0.42%.

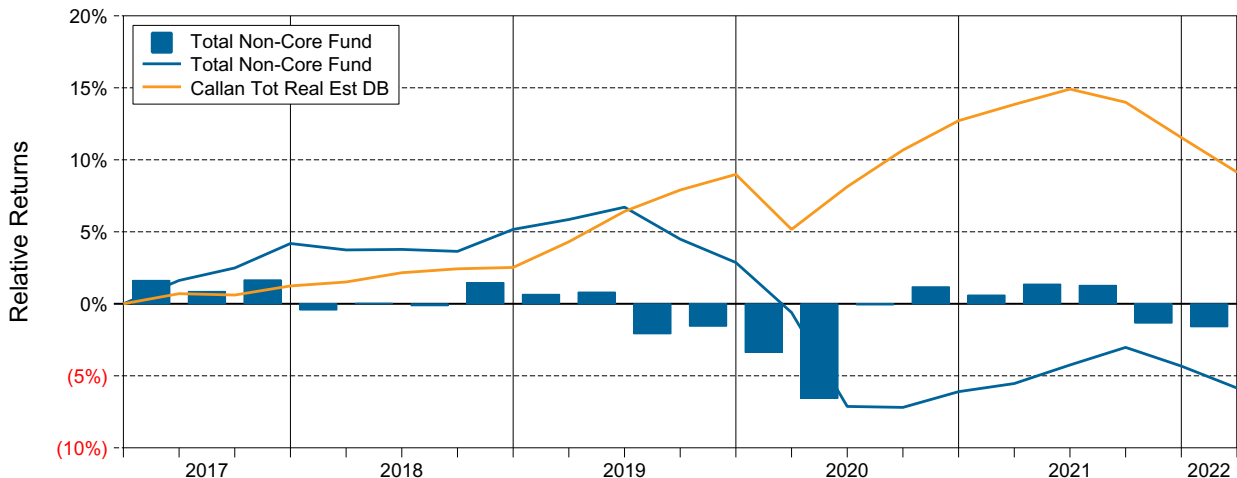
Quarterly Asset Growth

Beginning Market Value	\$496,166,949
Net New Investment	\$44,595,349
Investment Gains/(Losses)	\$29,466,971
Ending Market Value	\$570,229,269

Performance vs Callan Total Domestic Real Estate DB



Cumulative and Quarterly Relative Returns vs NCREIF ODCE + 1.5%

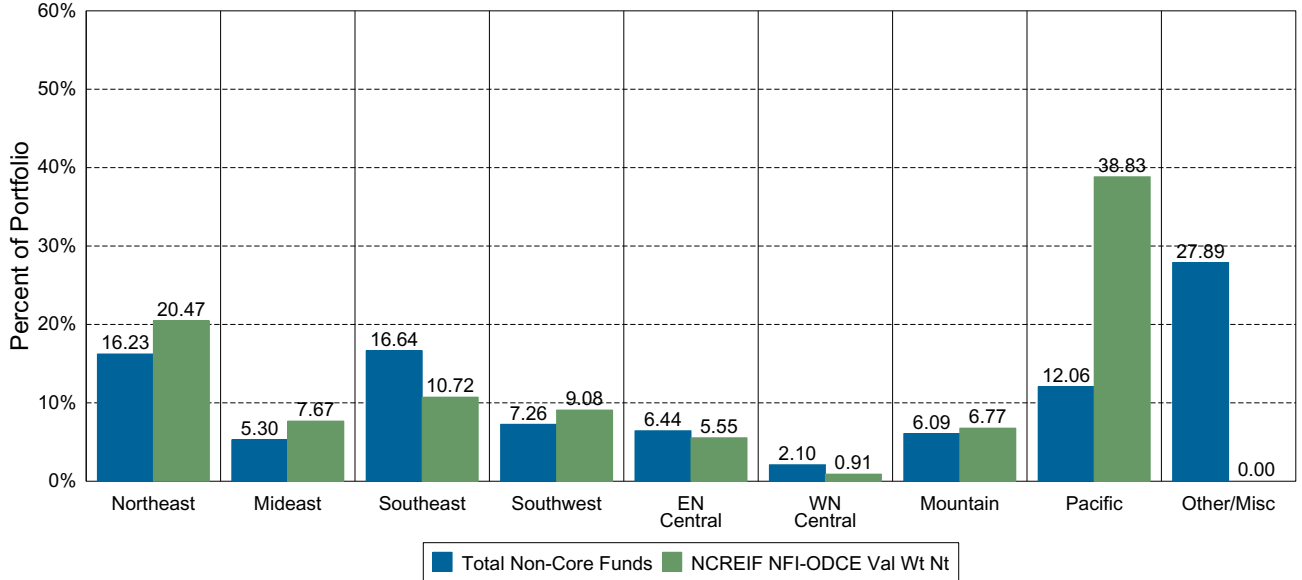


Total Non-Core Funds Diversification Analysis as of March 31, 2022

Diversification Analysis

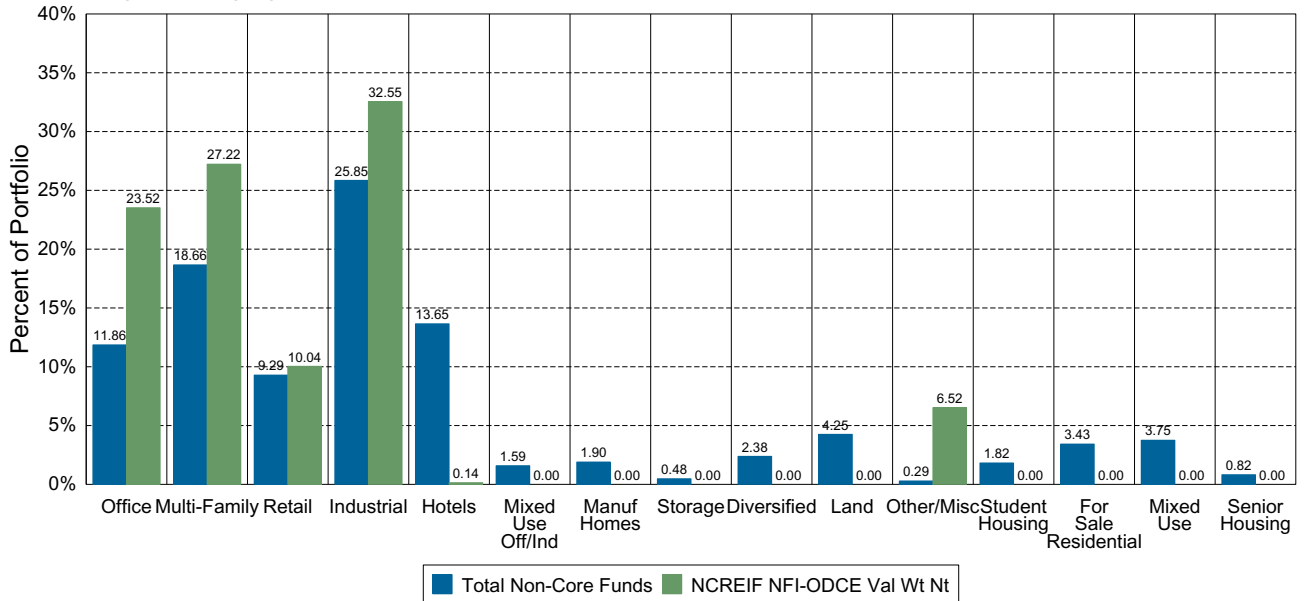
The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of March 31, 2022



Total Non-Core Funds	16.23%	5.30%	16.64%	7.26%	6.44%	2.10%	6.09%	12.06%	27.89%
NCREIF NFI-ODCE Val Wt Nt	20.47%	7.67%	10.72%	9.08%	5.55%	0.91%	6.77%	38.83%	0.00%

Diversification by Property Type as of March 31, 2022



Total Non-Core Funds	11.86%	18.66%	9.29%	25.85%	13.65%	1.59%	1.90%	0.48%	2.38%	4.25%	0.29%	1.82%	3.43%	3.75%	0.82%
NCREIF NFI-ODCE Val Wt Nt	23.52%	27.22%	10.04%	32.55%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	6.52%	0.00%	0.00%	0.00%	0.00%

**Total Non-Core Funds
Real Estate Portfolio
Quarterly Changes in Market Value**

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Income & Real. Gains	- Return of Capital	- Dist. of Recallable Capital	= End of Period Market
06/2009	0	3,600,000	(152,422)	346,790	376,767	0	0	0	3,477,555
09/2009	3,477,555	0	(152,422)	346,790	376,767	0	0	0	3,355,109
12/2009	3,355,109	0	(152,422)	346,790	(386,197)	0	0	0	2,469,700
03/2010	2,469,700	0	0	0	0	0	0	0	2,469,700
06/2010	2,469,700	2,040,000	0	0	0	0	0	0	4,509,700
09/2010	4,509,700	0	0	0	(10,187)	0	0	0	4,499,513
12/2010	4,499,513	1,840,000	17,012	135,646	399,673	0	0	0	6,620,552
03/2011	6,620,552	5,440,000	(26,405)	135,646	681,958	0	0	0	12,580,459
06/2011	12,580,459	4,000,000	(25,720)	130,831	947,860	892,588	0	0	16,479,180
09/2011	16,479,180	2,222,095	112,132	131,001	7,931,778	0	0	0	26,614,184
12/2011	26,614,184	13,913,056	803	129,577	(7,170,257)	25,232	0	0	33,202,977
03/2012	33,202,977	5,777,016	85,498	128,523	573,841	157,163	0	0	39,353,647
06/2012	39,353,647	12,851,428	(214,376)	217,981	646,423	2,393,217	0	544,391	49,481,533
09/2012	49,481,533	12,453,309	184,840	219,376	1,265,359	1,891,400	0	1,560,625	59,713,641
12/2012	59,713,641	21,304,116	(218,717)	219,163	2,639,006	2,230,488	0	1,311,525	79,676,870
03/2013	79,676,870	7,047,529	227,151	218,920	5,740,672	1,424,674	0	5,912,217	85,136,411
06/2013	85,136,411	11,669,328	102,625	193,322	7,016,306	4,257,611	0	35,883	99,437,853
09/2013	99,437,853	26,855,375	(327,214)	637,238	2,797,791	10,302,735	0	1,719,937	116,103,895
12/2013	116,103,895	60,859,397	(286,399)	358,262	4,584,715	2,826,783	0	250,445	177,826,118
03/2014	177,826,118	6,335,636	(2,515)	448,186	14,271,818	9,984,783	0	1,444,640	186,553,449
06/2014	186,553,449	16,245,772	50,126	534,036	4,203,408	4,571,851	0	20,362,045	181,584,824
09/2014	181,584,824	16,934,861	(432,836)	533,033	3,683,883	9,398,767	0	449,945	191,388,987
12/2014	191,388,987	6,732,235	(327,042)	220,274	7,194,125	4,487,010	0	22,718,143	177,562,878
03/2015	177,562,878	18,115,262	7,795	372,228	7,226,431	10,550,257	0	2,674,991	189,314,890
06/2015	189,314,890	19,148,867	(66,365)	407,952	7,355,309	6,254,578	0	1,339,019	207,751,152
09/2015	207,751,152	7,348,386	(105,494)	319,945	8,397,174	13,306,640	0	827,939	208,936,693
12/2015	208,936,693	16,598,291	(166,826)	967,189	7,227,426	8,398,932	0	388,596	222,840,867
03/2016	222,840,867	16,128,434	(65,398)	438,764	6,693,062	11,617,622	0	225,653	233,314,926
06/2016	233,314,926	27,561,495	(180,427)	618,398	7,947,793	6,628,760	0	183,426	261,213,203
09/2016	261,213,203	9,943,302	(67,198)	584,061	9,522,440	18,465,588	0	86,935	261,475,163
12/2016	261,475,163	22,876,164	51,901	727,927	9,844,850	24,228,231	0	1,810,102	267,481,817
03/2017	267,481,817	6,957,225	(185,570)	458,830	4,488,704	7,319,959	0	329,195	270,634,192
06/2017	270,634,192	13,304,128	330,119	592,730	9,690,874	17,628,691	0	655,280	275,082,613
09/2017	275,082,613	10,490,552	218,669	582,151	8,366,006	3,289,156	0	31,875	290,254,658
12/2017	290,254,658	12,626,626	424,355	582,150	11,445,546	14,687,351	0	665,618	298,816,066
03/2018	298,816,066	28,655,090	1,231,667	938,192	5,484,873	11,340,691	930,000	678,961	320,299,852
06/2018	320,299,852	20,614,445	2,485,045	1,036,091	4,738,015	4,278,821	16,057,331	162,915	326,602,199
09/2018	326,602,199	26,783,111	2,725,141	1,330,674	5,425,121	9,520,960	14,479,339	3,584,690	332,619,909
12/2018	332,619,909	13,199,558	3,591,013	1,220,208	8,800,654	3,993,860	10,226,293	2,727,413	340,043,360
03/2019	340,043,360	19,463,468	6,946,114	1,169,984	1,818,183	5,750,384	5,155,104	0	356,195,654
06/2019	356,195,654	20,276,659	4,032,229	1,194,863	4,129,883	7,384,189	14,638,596	2,518,787	358,897,990
09/2019	358,897,990	22,578,846	2,627,610	2,100,348	(1,794,779)	8,391,774	12,806,200	620,309	358,391,036
12/2019	358,391,036	15,507,323	5,160,335	1,405,338	(4,223,619)	5,092,759	4,017,896	1,980,829	362,338,252
03/2020	362,338,252	25,925,447	2,091,093	1,433,998	(9,978,364)	5,791,539	12,218,341	1,437,607	360,613,174
06/2020	360,613,174	16,765,573	1,451,639	1,682,853	(28,263,034)	2,431,376	1,923,758	167,748	344,361,617
09/2020	344,361,617	18,701,590	1,815,221	2,237,042	2,346,083	4,684,554	7,202,553	983,605	352,116,759
12/2020	352,116,759	15,502,987	2,371,341	2,364,943	9,393,040	4,680,569	5,891,878	0	366,446,737

Total Non-Core Funds Real Estate Portfolio Quarterly Changes in Market Value

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Dist. of Income & Real. Gains	- Return of Capital	- Dist. of Recallable Capital	= End of Period Market
03/2021	366,446,737	26,585,506	2,040,849	2,581,546	10,982,963	10,398,783	15,354,059	0	377,721,667
06/2021	377,721,667	37,059,106	6,308,595	3,532,906	17,790,996	8,792,825	19,194,335	0	407,360,296
09/2021	407,360,296	43,802,700	6,082,685	3,543,981	31,006,105	12,778,109	15,353,164	1,141,075	455,435,456
12/2021	455,435,456	71,240,929	4,658,812	3,457,402	21,885,193	26,114,132	35,002,390	0	496,169,074
03/2022	496,169,074	64,040,262	3,912,949	3,800,631	29,333,869	10,143,450	5,722,495	3,561,349	570,228,229
	0	905,922,484	58,189,597	47,314,711	264,846,305	338,788,842	196,173,731	85,093,712	570,228,229

Returns

Net Portfolio Cumulative IRR = 11.40%

Ratios

Capital Account = \$570,228,229

Total Value = \$1,190,284,514

Committed Capital = \$1,433,696,529

Paid In Capital = \$905,922,484

Remaining Commitment = \$612,867,757

PIC Multiple (Paid In Capital/Committed Capital) = 63.19%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$1,183,095,986

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.31x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.68x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.63x

Working on updating historical cashflows on several managers to include detail cashflows.

Callan data feed at inception of relationship did not include fee amounts and income amounts.

Managers that still need updating: Brookfield II, Crow VII & VIII, Franklin EMREFF, MDP RE 2015 & FTPREF, Macquarie II & III.

Capital commitments reflects the sum of: (i) aggregate capital contributions translated to U.S. Dollars as of the date of each capital contribution transaction; and (ii) reported uncalled capital commitments translated to U.S. Dollars as of quarter end date.

Farmland

Period Ended March 31, 2022

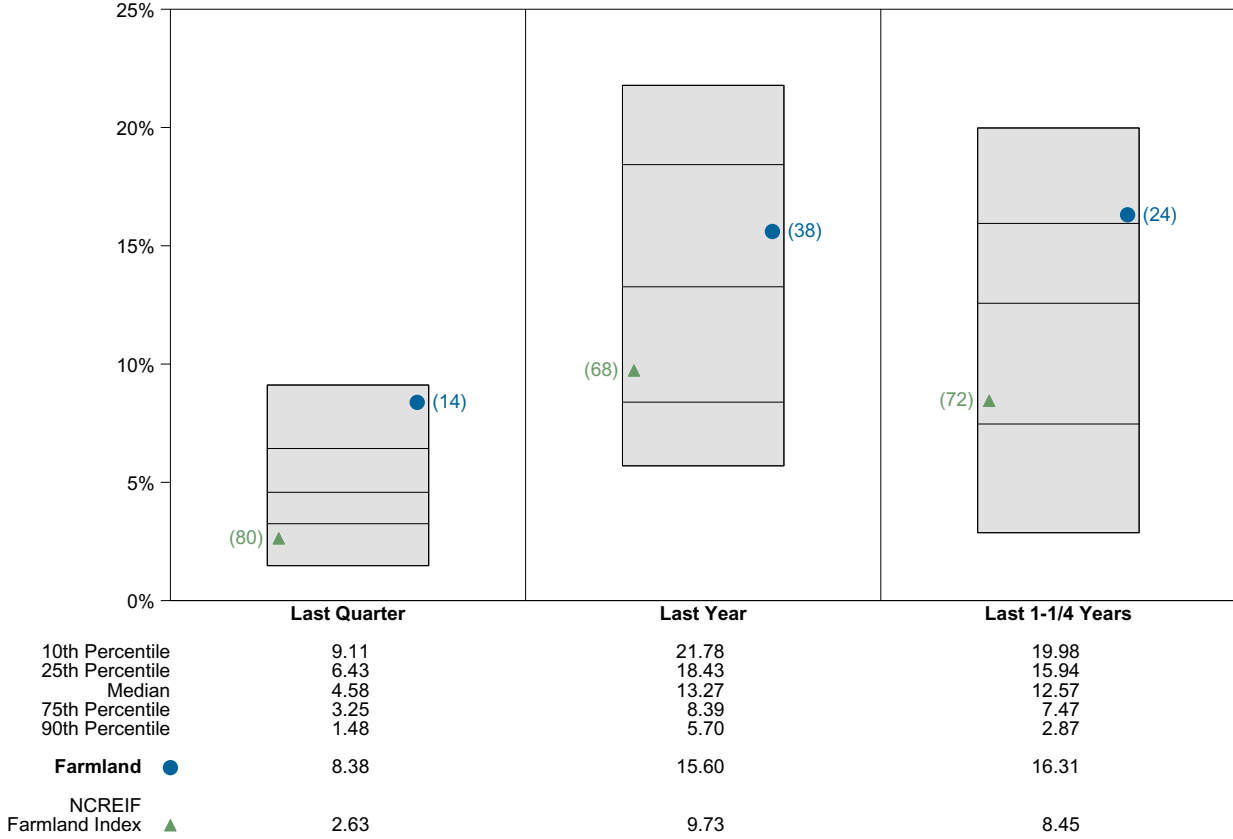
Quarterly Summary and Highlights

- Farmland's portfolio posted a 8.38% return for the quarter placing it in the 14 percentile of the Callan Real Estate Agriculture Funds group for the quarter and in the 38 percentile for the last year.
- Farmland's portfolio outperformed the NCREIF Farmland Index by 5.75% for the quarter and outperformed the NCREIF Farmland Index for the year by 5.88%.

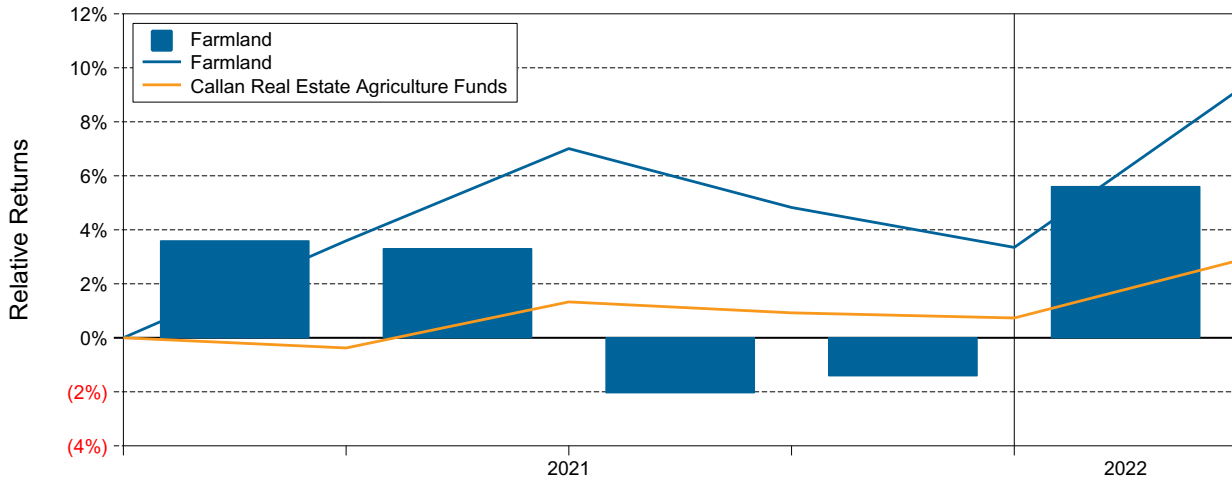
Quarterly Asset Growth

Beginning Market Value	\$30,836,785
Net New Investment	\$5,080,688
Investment Gains/(Losses)	\$2,653,027
Ending Market Value	\$38,570,500

Performance vs Callan Real Estate Agriculture Funds



Cumulative and Quarterly Relative Returns vs NCREIF Farmland Index

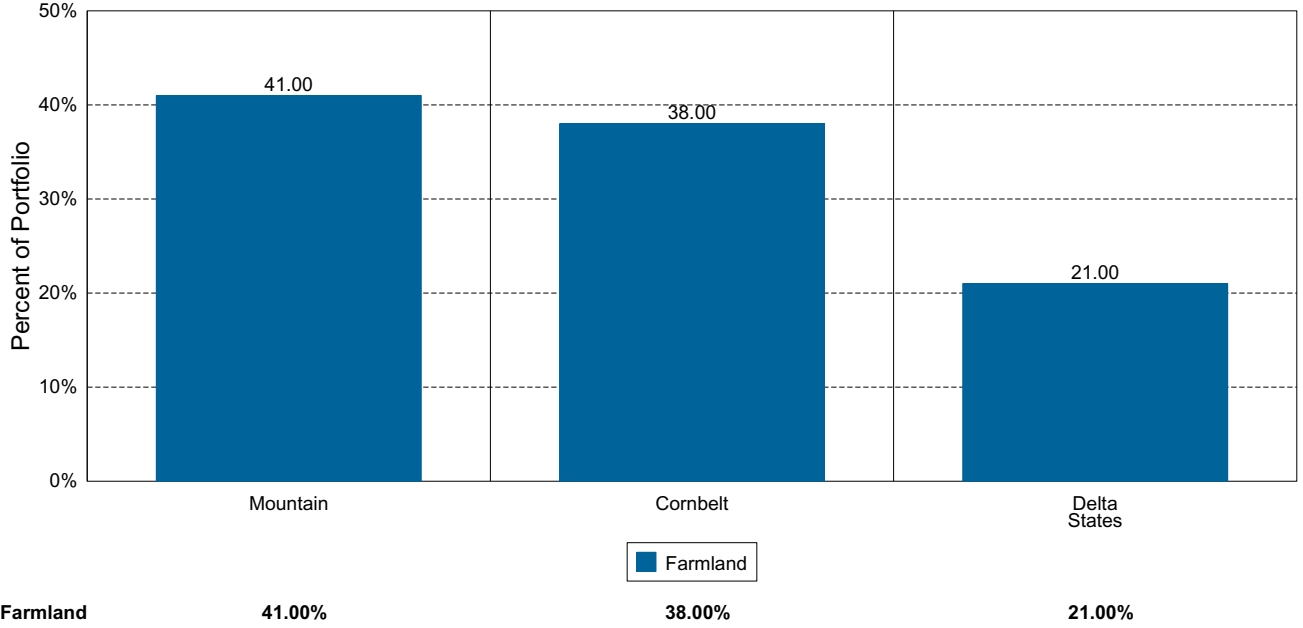


Farmland Diversification Analysis as of March 31, 2022

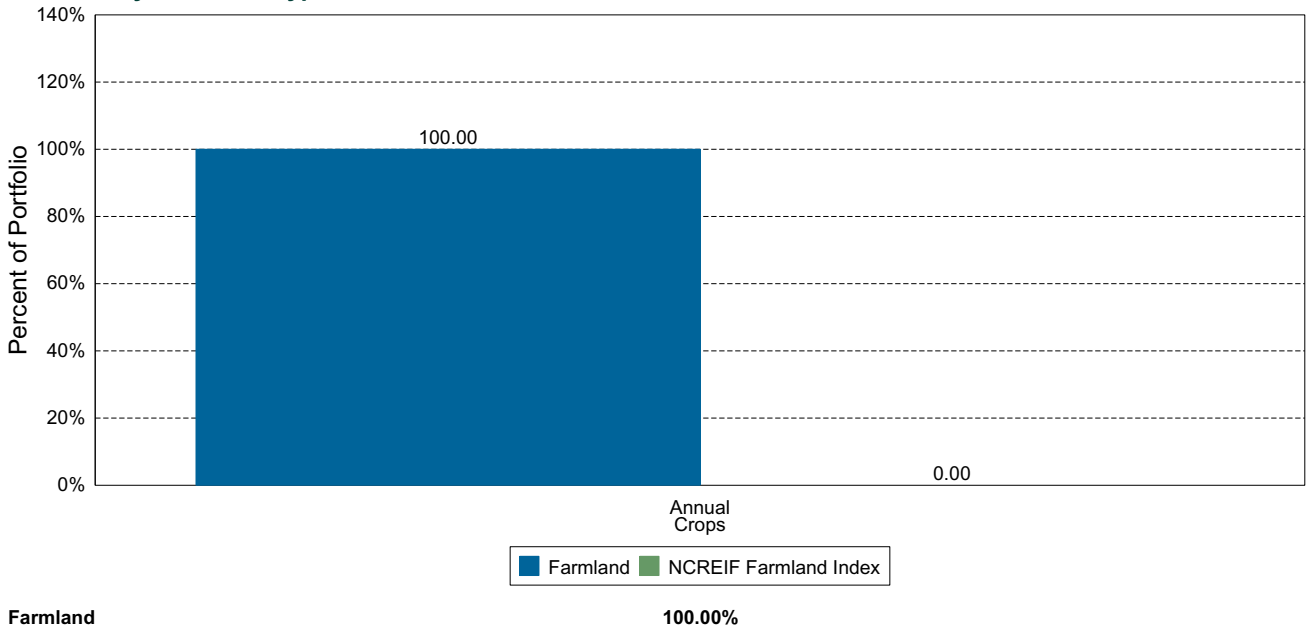
Diversification Analysis

The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Farmland Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of March 31, 2022



Diversification by Farmland Type as of March 31, 2022



Farmland Real Estate Portfolio Quarterly Changes in Market Value

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Dist. of Income & Real. Gains	- Return of Capital	- Dist. of Recallable Capital	= End of Period Market
12/2020	0	12,658,888	157,999	1,526,906	(76,196)	173,154	220,183	23,770	10,796,678
03/2021	10,796,678	1,186,700	(10,200)	208,432	715,874	0	0	0	12,480,620
06/2021	12,480,620	3,377,979	152,390	222,455	739,401	171,141	0	0	16,356,794
09/2021	16,356,794	2,785,988	(16,698)	214,347	138,648	0	0	0	19,050,385
12/2021	19,050,385	11,334,417	86,414	215,619	696,054	114,866	0	0	30,836,785
03/2022	30,836,785	5,480,956	375,825	187,563	2,464,765	400,268	0	0	38,570,500
	0	36,824,928	745,730	2,575,322	4,678,546	859,429	220,183	23,770	38,570,500

Returns

Net Portfolio Cumulative IRR = 10.66%

Ratios

Capital Account = \$38,570,500

Total Value = \$39,673,882

Committed Capital = \$60,000,000

Paid In Capital = \$36,824,928

Remaining Commitment = \$23,198,842

PIC Multiple (Paid In Capital/Committed Capital) = 61.37%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$61,769,342

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.08x

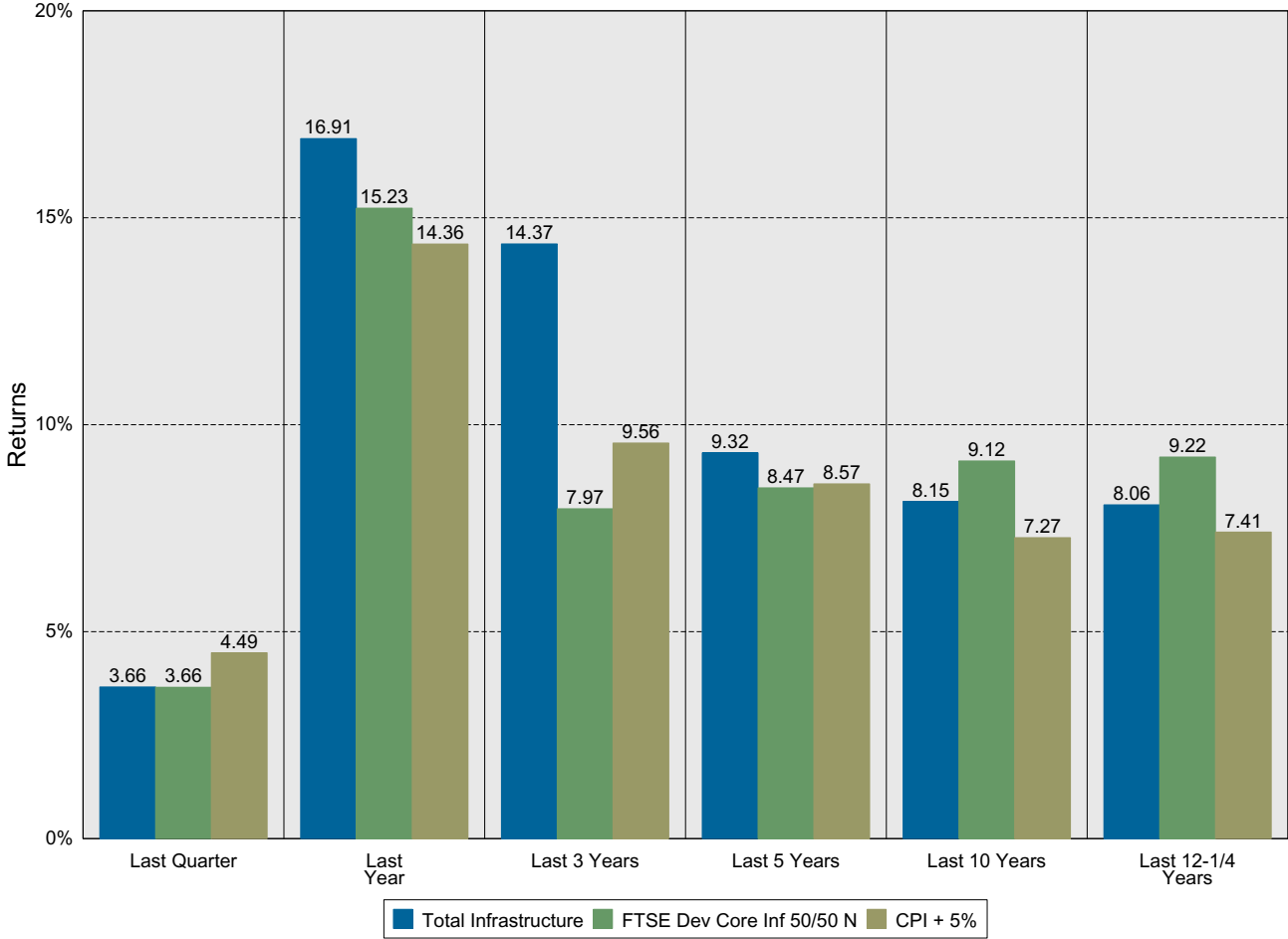
DPI Realization Multiple (Distributions/Paid In Capital) = 0.03x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.05x

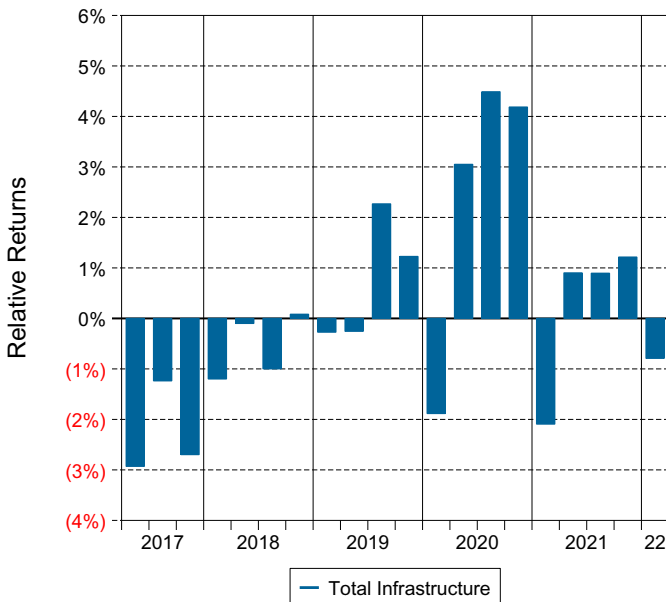
Total Infrastructure Period Ended March 31, 2022

Quarterly Summary and Highlights

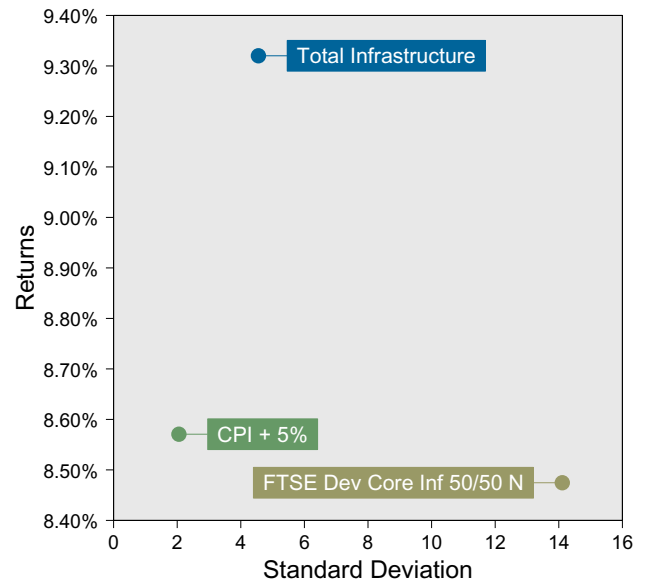
- Total Infrastructure's portfolio underperformed the CPI + 5% by 0.83% for the quarter and outperformed the CPI + 5% for the year by 2.55%.



Relative Return vs CPI + 5%



Annualized Five Year Risk vs Return

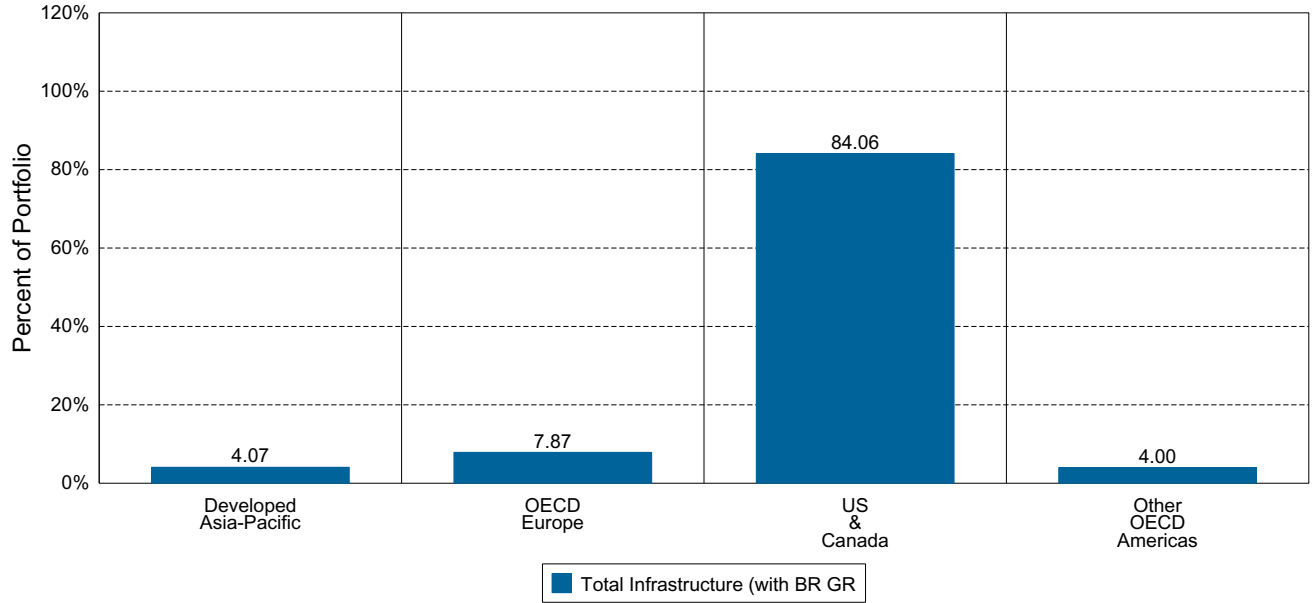


Total Infrastructure (with BR GRP III) Diversification Analysis as of March 31, 2022

Diversification Analysis

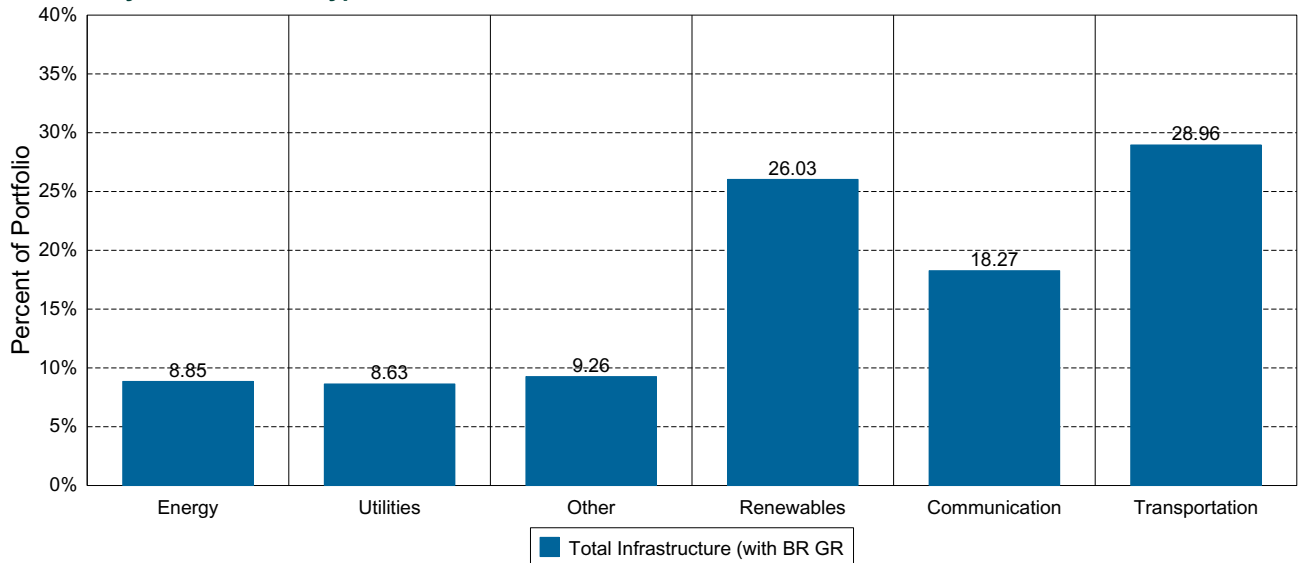
The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Infrastructure Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of March 31, 2022



Geographic Region	Total Infrastructure (with BR GRP III)
Developed Asia-Pacific	4.07%
OECD Europe	7.87%
US & Canada	84.06%
Other OECD Americas	4.00%

Diversification by Infrastructure Type as of March 31, 2022



Infrastructure Type	Total Infrastructure (with BR GRP III)
Energy	8.85%
Utilities	8.63%
Other	9.26%
Renewables	26.03%
Communication	18.27%
Transportation	28.96%

Total Infrastructure Infrastructure Portfolio Quarterly Changes in Market Value

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Income & Real. Gains	- Return of Capital	- Dist. of Recallable Capital	= End of Period Market
12/2009	0	7,848,586	78,175	1,035,616	1,113,909	458,762	0	16,597	7,529,695
03/2010	7,529,695	604,661	2,420	350,000	305,337	0	0	585,224	7,506,889
06/2010	7,506,889	22,373,970	100,792	2,215,084	704,795	0	0	277,003	28,194,359
09/2010	28,194,359	673,974	168,948	161,710	2,260,461	0	0	644,134	30,491,898
12/2010	30,491,898	4,032,951	32,558	161,710	1,186,244	0	0	0	35,581,941
03/2011	35,581,941	3,632,210	145,903	164,100	770,475	0	0	229,698	39,736,731
06/2011	39,736,731	3,161,617	146,130	164,100	934,848	0	0	345,169	43,470,057
09/2011	43,470,057	5,011,352	161,229	132,058	1,237,961	0	0	149,002	49,599,539
12/2011	49,599,539	8,891,407	(42,712)	132,058	1,020,407	0	0	469,436	58,867,147
03/2012	58,867,147	6,731,784	159,082	115,311	478,344	0	0	0	66,121,046
06/2012	66,121,046	47,824	280,821	115,311	1,273,290	0	0	211,978	67,395,692
09/2012	67,395,692	420,388	86,608	173,950	1,640,428	0	0	680,410	68,688,756
12/2012	68,688,756	4,588,704	46,818	170,673	3,330,945	0	0	702,613	75,781,937
03/2013	75,781,937	2,752,906	156,175	312,126	1,265,278	0	0	3,492,782	76,151,388
06/2013	76,151,388	832,318	103,778	319,475	(35,314)	777,982	0	481,746	75,472,967
09/2013	75,472,967	3,105,050	(10,413)	272,070	2,155,584	501,392	0	1,866,413	78,083,313
12/2013	78,083,313	4,420,671	106,410	195,348	(296,065)	22,295,109	0	309,940	59,513,932
03/2014	59,513,932	8,585,708	185,692	166,570	3,186,654	1,489,341	0	2,896,277	66,919,798
06/2014	66,919,798	740,153	126,600	137,238	2,450,569	775,008	0	527,844	68,797,029
09/2014	68,797,029	778,185	17,847	238,275	(800,247)	56,231	0	267,296	68,231,012
12/2014	68,231,012	2,312,635	(195,503)	764,548	826,326	184,720	0	1,046,792	69,178,411
03/2015	69,178,411	8,134,342	94,546	381,562	1,837,269	85,533	0	485,777	78,291,696
06/2015	78,291,696	1,276,086	11,054	340,700	1,558,044	34,806	0	1,253,253	79,508,121
09/2015	79,508,121	458,868	443,191	354,681	1,788,364	427,677	0	431,192	80,984,994
12/2015	80,984,994	1,439,368	435,839	352,106	1,668,634	473,310	0	1,241,461	82,461,958
03/2016	82,461,958	4,006,958	270,850	353,464	1,146,414	149,385	0	212,193	87,171,138
06/2016	87,171,138	10,885,041	750,789	359,408	1,088,386	137,959	0	586,453	98,811,534
09/2016	98,811,534	7,111,855	221,669	425,145	365,192	175,491	0	865,857	105,043,757
12/2016	105,043,757	11,448,295	548,069	414,798	(3,089,524)	1,666,632	64,272	304,620	111,500,276
03/2017	111,500,276	1,853,672	472,995	400,300	6,754,926	1,381,714	0	581,377	118,218,478
06/2017	118,218,478	399,048	755,664	402,809	(1,857,523)	7,967,095	0	260,931	108,884,831
09/2017	108,884,831	213,489	338,024	387,816	926,380	2,679,673	0	161,822	107,133,414
12/2017	107,133,414	454,311	775,254	380,978	(2,160,339)	1,775,100	0	141,874	103,904,688
03/2018	103,904,688	307,740	149,259	751,823	1,448,049	134,276	0	201,398	104,722,238
06/2018	104,722,238	4,992,602	(135,177)	469,301	2,881,352	12,440,017	5,040,451	0	94,511,247
09/2018	94,511,247	2,289,864	117,514	388,630	615,817	409,948	0	0	96,735,863
12/2018	96,735,863	6,472,515	87,866	422,957	939,865	930,019	139,450	0	102,743,683
03/2019	102,743,683	10,733,092	423,561	408,556	2,277,961	719,459	1,519,068	0	113,531,215
06/2019	113,531,215	5,584,716	44,826	380,840	2,127,179	700,080	17,412,920	58,226	102,735,870
09/2019	102,735,870	10,769,066	294,824	423,008	4,057,204	1,704,669	2,226,460	0	113,502,827
12/2019	113,502,827	15,535,595	(279,484)	395,393	3,629,217	3,349,613	11,442,770	127,673	117,072,705
03/2020	117,072,705	1,693,654	253,449	366,811	(274,087)	71,357	138,791	0	118,168,762
06/2020	118,168,762	93,795	12,605	367,804	5,305,358	93,795	0	0	123,118,921
09/2020	123,118,921	2,425,028	146,289	369,830	8,795,977	206,452	368,001	0	133,541,932
12/2020	133,541,932	408,317	28,457	348,985	6,887,031	15,200,971	14,737,219	0	110,578,563
03/2021	110,578,563	711,013	389,784	311,556	900,818	5,155,812	2,319,555	6,606	104,786,648
06/2021	104,786,648	1,585,576	2,229,130	304,619	3,018,540	40,690	8,975,817	0	102,298,769

Total Infrastructure Infrastructure Portfolio Quarterly Changes in Market Value

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Dist. of Income & Real. Gains	- Return of Capital	- Dist. of Recallable Capital	= End of Period Market
09/2021	102,298,769	5,653,567	360,628	765,451	3,573,710	290,390	1,327,832	0	109,503,000
12/2021	109,503,000	1,498,761	(12,281)	406,260	4,987,011	4,062,388	0	0	111,507,843
03/2022	111,507,843	3,843,528	238,929	528,397	4,442,731	973,514	0	0	118,531,121
	0	213,826,814	11,325,481	19,461,316	90,650,182	89,976,370	65,712,605	22,121,067	118,531,121

Returns

Net Portfolio Cumulative IRR = 7.84%

Ratios

Capital Account = \$118,531,121

Total Value = \$296,341,162

Committed Capital = \$180,000,000

Paid In Capital = \$213,826,814

Remaining Commitment = \$(11,705,748)

PIC Multiple (Paid In Capital/Committed Capital) = 118.79%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$106,825,373

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.39x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.83x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.55x

Definitions

Style Groups

Total Domestic Real Estate Database: The Total Domestic Real Estate Funds Database consists of both open and closed-end commingled funds managed by real estate firms that report to the Callan Database and invest in private domestic real estate.

Open-End Core Commingled RE: The Open-End Real Estate Database consists of all open end real estate funds that report to the Callan Database.

Real Estate REIT: The Real Estate REIT Database consists of products investing in domestic equity real estate through portfolios consisting primarily of equity Real Estate Investment Trusts (REIT). The Database is comprised of returns for both separate account composites and commingled vehicles as reported to Callan by the managers of those products.

*The above groups are based on time-weighted returns.

Vintage Year Database Groups: The Vintage Year Groups are comprised of closed end funds that report to the database. The groups are based on IRRs derived from cash flows submitted to the Callan Database by the managers of those funds. A fund is placed in a vintage year based on the year the initial drawdown of capital was made for the fund.

Indices

NAREIT Equity Index: This is an index of Equity Real Estate Investment Trust returns reflecting the stock value changes of REIT issues as determined through public market transactions.

The NFI-ODCE Value-Weight Index is a time-weighted return Index with an inception date of 12/31/1977. The Index is comprised of 33 open-end commingled funds, in which 24 are still actively investing. Inclusion within the Index requires (a) minimum of 80% of net fund assets invested in the multifamily, retail, industrial, office, or hotel property type, (b) maximum of 20% of net fund assets invested in real estate debt or private/public company equity, (c) at least 80% of net assets invested in properties with a minimum occupancy of 60%, (d) no more than 70% of real estate net assets invested in a single property type or region, (e) maximum of 40% leverage, and (f) at least 95% of net real estate assets invested within the U.S. market.

NCREIF Region Map



Notes

Information in the report is based on qualitative and quantitative data submitted to Callan directly by the client's real estate investment managers. It is not based on custodian data nor has it been reconciled to custodian data.

Quarterly Highlights

The Callan Institute provides research to update clients on the latest industry trends and carefully structured educational programs to enhance the knowledge of industry professionals. Visit www.callan.com/research-library to see all of our publications, and www.callan.com/blog to view our blog. For more information contact Barb Gerraty at 415-274-3093 / institute@callan.com.

New Research from Callan's Experts

[Alternatives Focus: Outlook for Hedge Funds](#) | Joe McGuane analyzes hedge fund performance in 2021 and provides his outlook for the asset class in 2022.

[2022-2031 Capital Markets Assumptions](#) | A white paper detailing the process involved in creating our 2022-2031 Capital Markets Assumptions and the reasoning behind them. You can also view our interactive webpage and charticle featuring this year's assumptions.

[2022 Defined Contribution Trends Survey](#) | This survey provides extensive information for DC plan sponsors to use in improving and benchmarking their plans.

[Callan Periodic Table of Investment Returns & Collection](#) | The Periodic Table of Investment Returns depicts annual returns for key asset classes, ranked from best to worst performance for each calendar year. Expanding upon our Classic Periodic Table, the Collection offers additional versions focused on equity, fixed income, institutional investors, and alternatives such as real estate, private equity, and hedge funds. Other tables compare the performance of key indices to zero and to inflation.

Blog Highlights

[DOL Weighs in on Cryptocurrencies in DC Plans](#) | The U.S. Department of Labor issued a compliance assistance bulletin, which does not carry the force of law, regarding offering cryptocurrency investments in a defined contribution plan, with a number of stern warnings about the potential fiduciary challenges.

[Hedge Funds and Ukraine: A Guide for Institutional Investors](#) | This post provides an analysis of the performance of hedge funds through the end of February, categorized by strategy type, and how they have been grappling with the Ukraine crisis.

[Why It Was a Tough 4Q21 for Large Cap Growth Managers](#) |

With rising case counts stemming from the Omicron variant, and concerns about interest rates and inflation, volatility in the markets spiked in 4Q21. For large cap growth investment managers, pro-cyclical positioning generally hurt portfolios given those fears. More than 90% of large cap growth managers underperformed the benchmark for the quarter.

[Risky Business Update: Rising Inflation and Continued Uncertainty Challenge Investors](#) |

Using our proprietary Capital Markets Assumptions, we found that investors in 2022 needed to take on over five times as much risk as they did 30 years ago to earn the same nominal return.

Quarterly Periodicals

[Private Equity Trends, 4Q21](#) | A high-level summary of private equity activity in the quarter through all the investment stages

[Active vs. Passive Charts, 4Q21](#) | A comparison of active managers alongside relevant benchmarks over the long term

[Market Pulse Flipbook, 4Q21](#) | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

[Capital Markets Review, 4Q21](#) | Analysis and a broad overview of the economy and public and private market activity each quarter across a wide range of asset classes

[Hedge Fund Quarterly, 4Q21](#) | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

[Real Assets Reporter, 4Q21](#) | A summary of market activity for real assets and private real estate during the quarter

Events

A complete list of all upcoming events can be found on our website: callan.com/events-education.

Please mark your calendar and look forward to upcoming invitations:

Research Café: How to Navigate Private Equity Fees and Terms (webinar)

May 11, 2022 at 9:30am PT

June Regional Workshop

June 7, 2022 – Atlanta

June 9, 2022 – Portland

For more information about events, please contact Barb Gerraty: 415-274-3093 / gerraty@callan.com

Education: By the Numbers

50+

Unique pieces of research the Institute generates each year

525

Attendees (on average) of the Institute's annual National Conference

3,700

Total attendees of the "Callan College" since 1994

Education

Founded in 1994, the "Callan College" offers educational sessions for industry professionals involved in the investment decision-making process.

Introduction to Investments

July 26-27, 2022 – San Francisco

September 20-22 – Virtual

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. Our virtual session is held over three days with virtual modules of 2.5-3 hours, while the in-person session lasts one-and-a-half days. This course is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Virtual tuition is \$950 per person and includes instruction and digital materials. In-person tuition is \$2,350 per person and includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Additional information including registration can be found at: callan.com/events/



"Research is the foundation of all we do at Callan, and sharing our best thinking with the investment community is our way of helping to foster dialogue to raise the bar across the industry."

Greg Allen, CEO and Chief Research Officer

State Universities Retirement System of Illinois

SURS - Private Equity

Portfolio Report

As Of March 2022

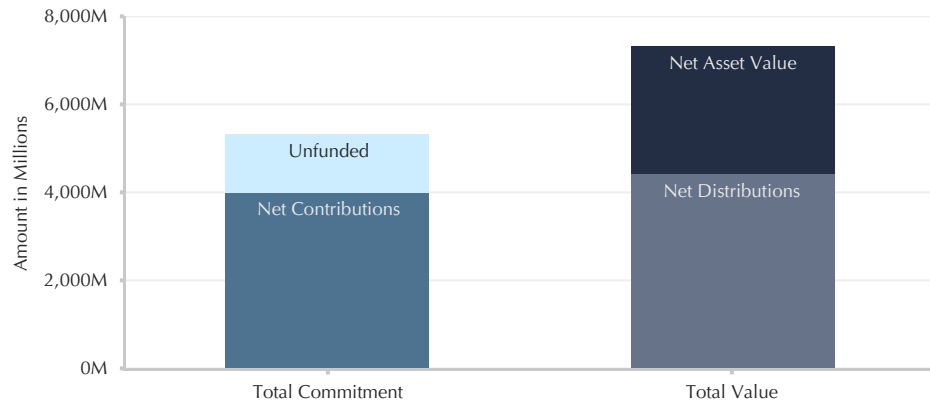
Report created: August 2022

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State Universities Retirement System of Illinois

Summary



Portfolio Summary

Total Pension Assets	\$23.6 bn as of 03/31/2022		
GP Relationships	30		
Holdings	69		
# of New Investments within the quarter*	6		
# of Underlying Active Investments	892		
% of Public Companies	1.1%		
Total Commitment Amount	\$5.3 bn		
Net Contributions	\$4.0 bn		
Net Distributions	\$4.4 bn		
Net Asset Value	\$2.9 bn		
Weighted Average Age	15.3Y		
Unfunded Commitment	\$1.3 bn		
Minimum Annual Pacing	375.0 mm		
Maximum Annual Pacing	525.0 mm		
Minimum Target Allocation	11.0%		
Maximum Target Allocation	11.0%		

1Y IRR	27.0%	2Y IRR	42.0%	3Y IRR	27.6%
5Y IRR	22.6%	7Y IRR	17.9%	10Y IRR	15.0%
ITD IRR**	19.6%	ITD TVPI**	1.8x		

* Jan-2022 - Mar-2022

** Jul-1990 - Mar-2022

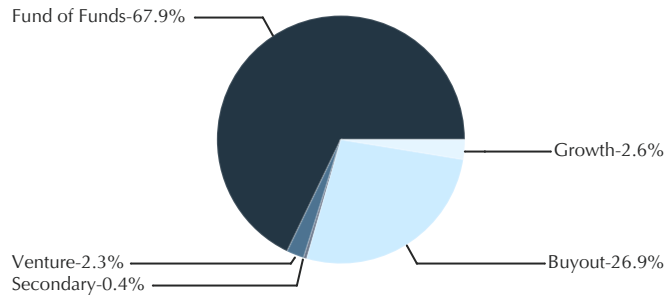
Position Analytics data based on GP provided information as of Mar-2022

IRR not meaningful for investments held less than 36 months

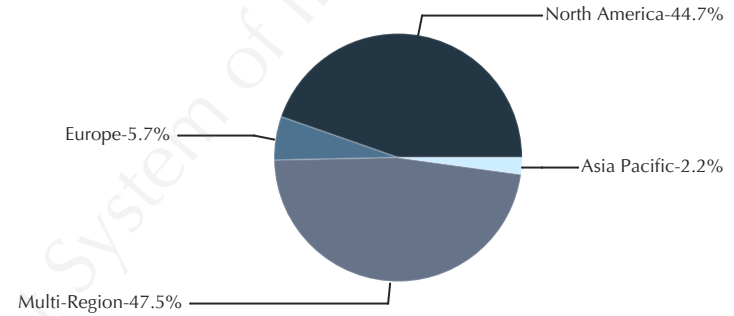
Weighted Average Age (WAA) is based on contributions

WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Unfunded + NAV by Sector



Unfunded + NAV by Region



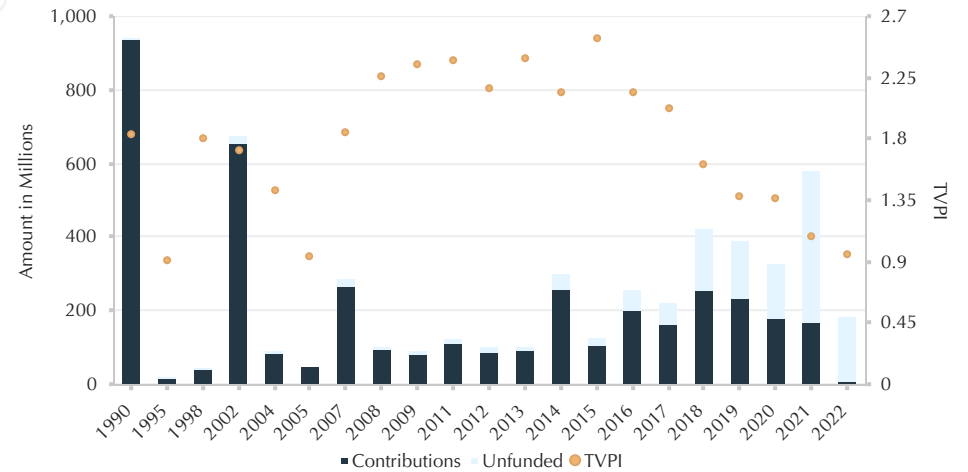
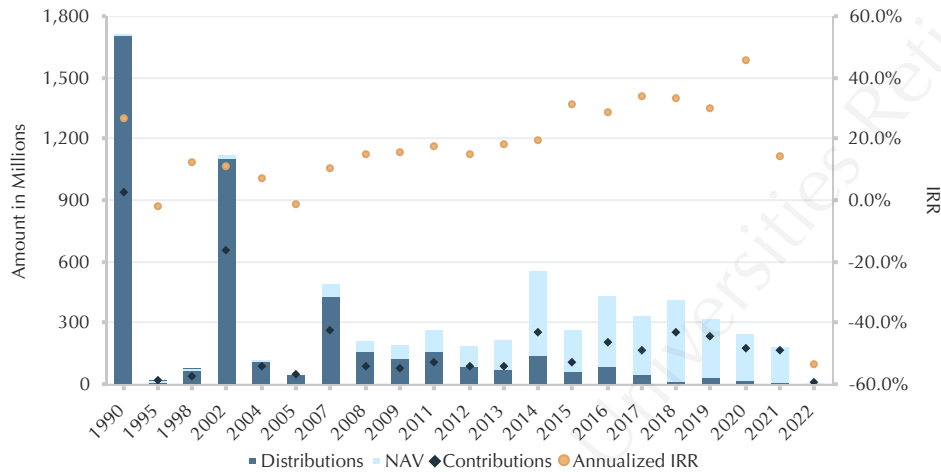
Position Analytics data based on GP provided information as of Mar-2022
 IRR not meaningful for investments held less than 36 months
 Weighted Average Age (WAA) is based on contributions
 WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Sector Portfolio Summary

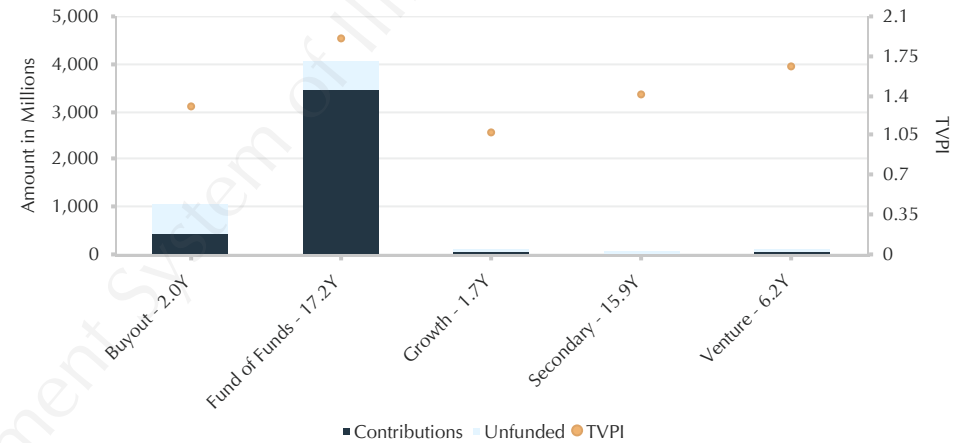
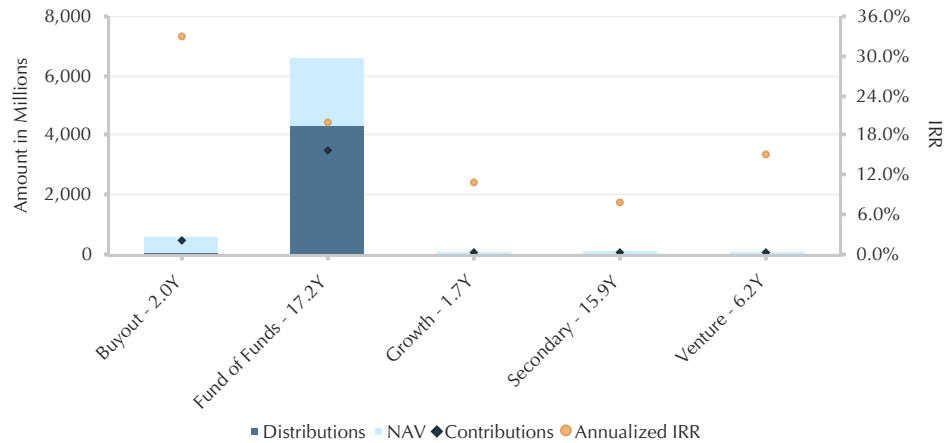
	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Unfunded + NAV (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Annualized IRR	TVPI
Buyout	24	2.0	518.8	1,013.1	617.7	1,136.4	441.6	54.5	n.m. ¹	1.3x
Fund of Funds	32	17.2	2,263.9	4,029.8	603.8	2,867.7	3,467.0	4,323.2	19.8%	1.9x
Growth	3	1.7	53.7	105.0	54.9	108.6	50.3	0.1	n.m. ¹	1.1x
Secondary	3	15.9	7.9	70.0	8.7	16.6	61.3	79.0	7.8%	1.4x
Venture	7	6.2	44.3	101.0	52.1	96.4	49.0	36.6	15.3%	1.7x
SURS - Private Equity	69	15.3	2,888.6	5,318.9	1,337.1	4,225.7	4,069.2	4,493.4	19.6%	1.8x

¹ IRR not meaningful for investments held less than 36 months

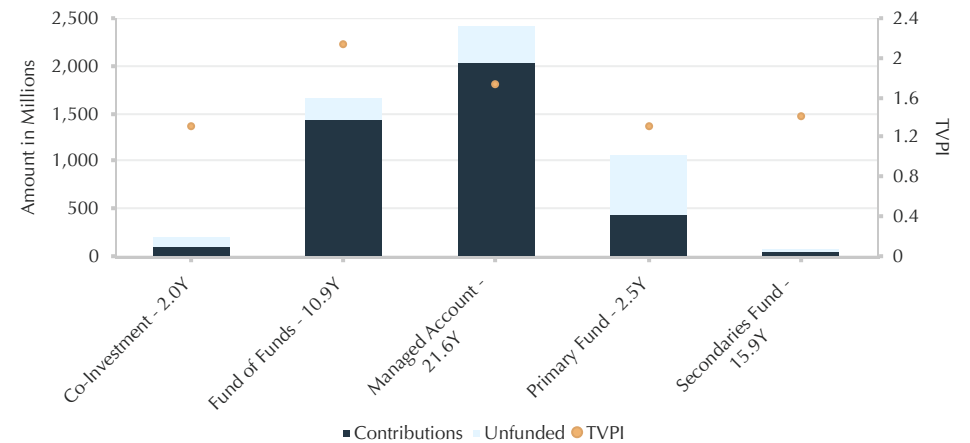
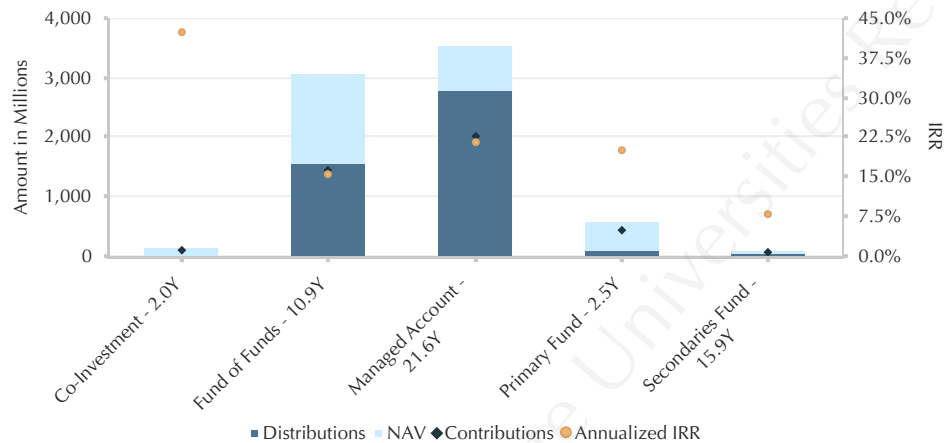
Performance Review by Vintage Year



Performance Review by Sector

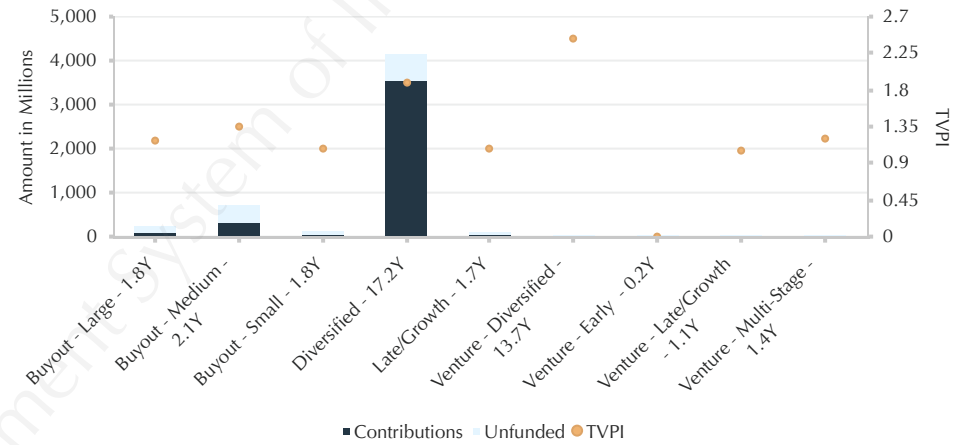
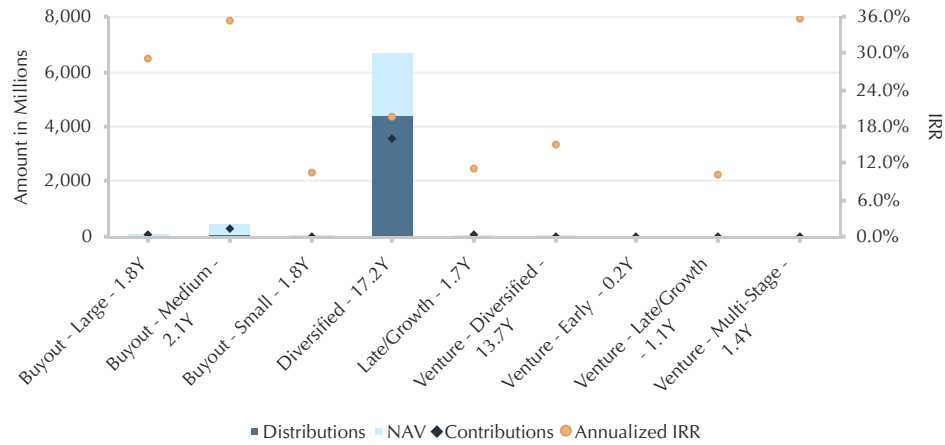


Performance Review by Structure



Weighted Average Age (WAA) is based on contributions
 WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Performance Review by Strategy

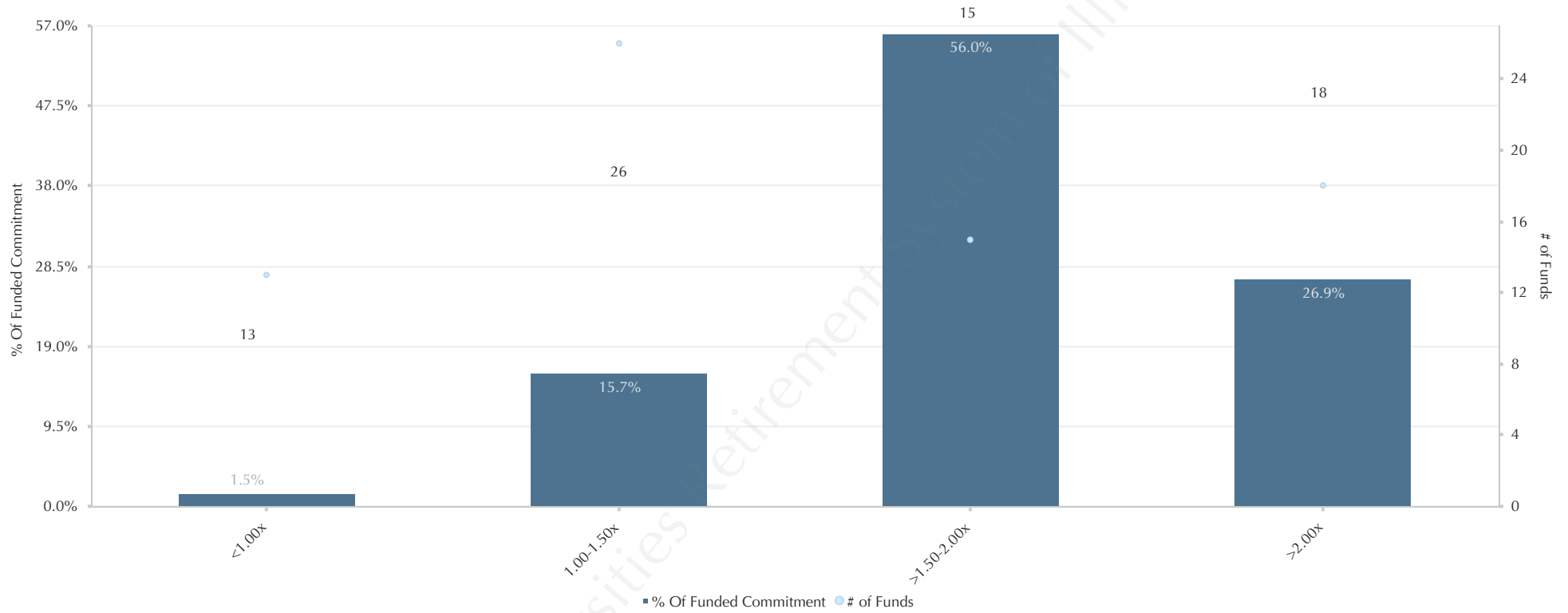


Weighted Average Age (WAA) is based on contributions
 WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

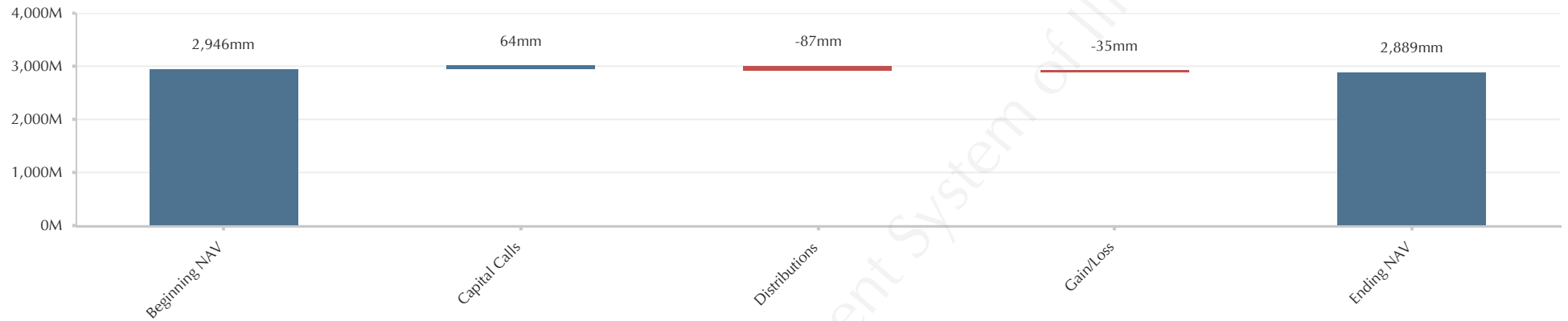
Performance Statistics

As Of Mar-2022	Mar-2021	Jun-2021	Sep-2021	Dec-2021	Mar-2022	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Mar-2022 Active	Mar-2022 Liquidated
Committed Capital	4,909.5	4,989.5	5,138.9	5,138.9	5,318.9	3.5%	3.5%	8.3%	5,258.9	60.0
Unfunded Commitment	1,480.4	1,409.7	1,414.5	1,207.2	1,337.1	10.8%	10.8%	-9.7%	1,337.1	0.0
Net Contributed Capital	3,447.3	3,598.4	3,742.3	3,949.3	3,998.7	1.2%	1.2%	16.0%	3,938.7	60.0
Net Distributed Capital	3,954.1	4,098.6	4,183.3	4,354.3	4,425.3	1.6%	1.6%	11.9%	4,361.7	63.6
Recallable Capital	32.9	41.1	42.8	52.5	68.1	29.7%	29.7%	107.2%	68.1	0.0
Net Asset Value	2,199.2	2,468.4	2,738.8	2,946.1	2,888.6	-2.0%	-2.0%	31.3%	2,888.6	0.0
Net Gain/Loss	2,699.6	2,962.2	3,172.7	3,347.9	3,312.8	-1.0%	-1.0%	22.7%	3,305.7	7.1
Total Value	6,153.3	6,566.9	6,922.1	7,300.5	7,313.9	0.2%	0.2%	18.9%	7,250.3	63.6
Unfunded + NAV (mm)	3,679.6	3,878.1	4,153.3	4,153.3	4,225.7	1.7%	1.7%	14.8%	4,225.7	0.0
DPI	1.1x	1.1x	1.1x	1.1x	1.1x	0.0x	0.0x	0.0x	1.1x	1.1x
Total Value to Paid-In (TVPI)	1.8x	1.8x	1.8x	1.8x	1.8x	0.0x	0.0x	0.0x	1.8x	1.1x
Net Internal Rate of Return (IRR)	19.4%	19.6%	19.7%	19.8%	19.6%	-0.2%	-0.2%	0.2%	19.9%	5.8%

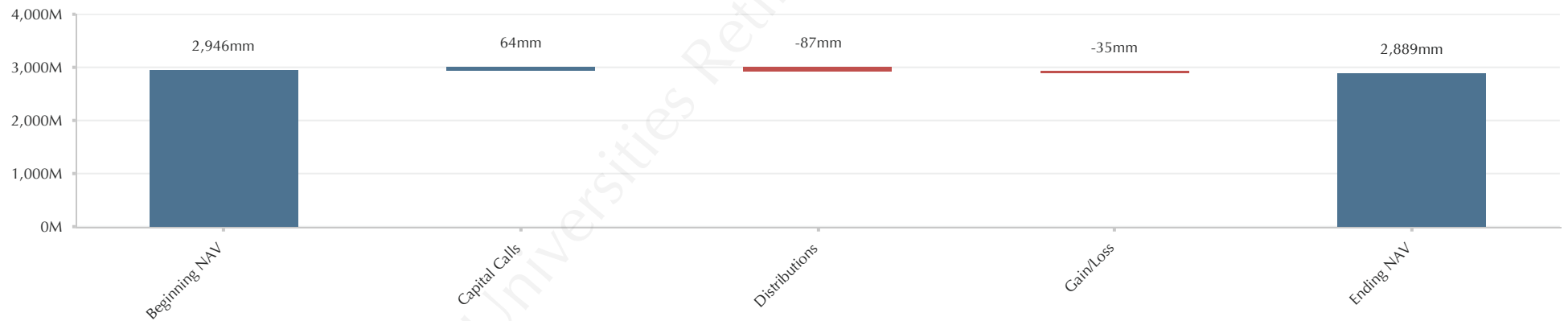
TVPI Distribution



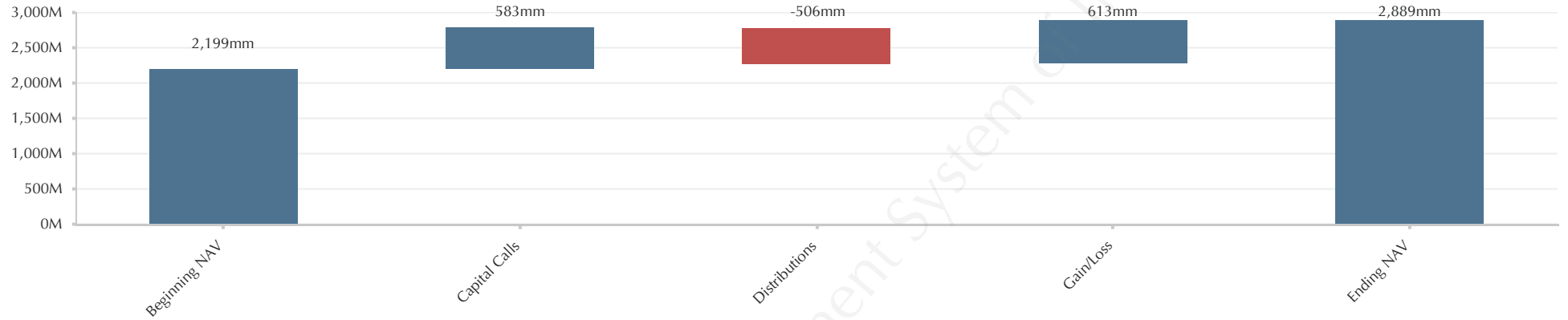
Quarterly Valuation Bridge (Jan-2022 to Mar-2022)



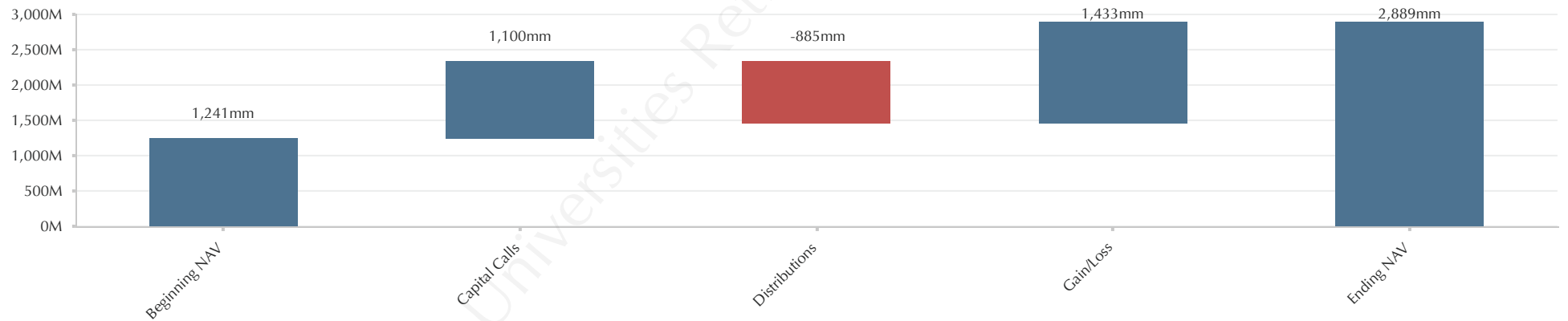
YTD Valuation Bridge (Jan-2022 to Mar-2022)



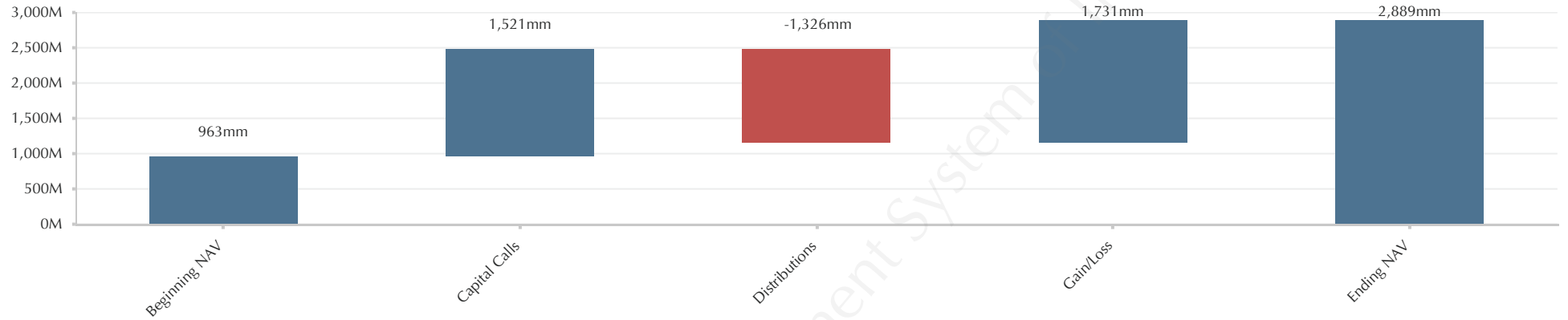
Last 12 Months Valuation Bridge (Apr-2021 to Mar-2022)



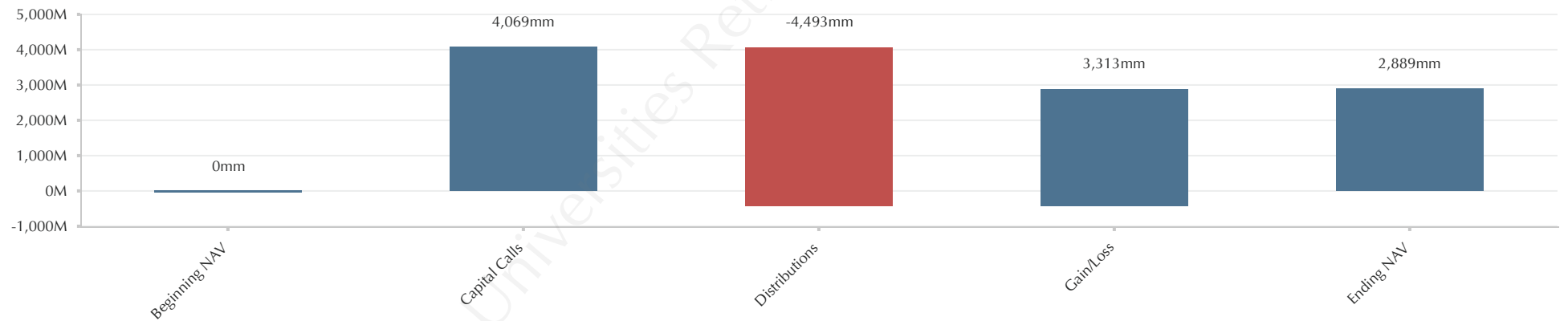
Last 3 Years Valuation Bridge (Apr-2019 to Mar-2022)



Last 5 Years Valuation Bridge (Apr-2017 to Mar-2022)



LTD Valuation Bridge (Jul-1990 to Mar-2022)



SURS - Private Equity

Portfolio Summary

	NAV Weight	Total Commitment (\$mm)	Capital Calls (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Sector										
Buyout	18.0%	1,013.1	441.6	54.5	617.7	1,136.4	131.6	518.8	n.m. ¹	1.3x
Fund of Funds	78.4%	4,029.8	3,467.0	4,323.2	603.8	2,867.7	3,120.2	2,263.9	19.8%	1.9x
Growth	1.9%	105.0	50.3	0.1	54.9	108.6	3.5	53.7	n.m. ¹	1.1x
Secondary	0.3%	70.0	61.3	79.0	8.7	16.6	25.6	7.9	7.8%	1.4x
Venture	1.5%	101.0	49.0	36.6	52.1	96.4	31.9	44.3	15.3%	1.7x
SURS - Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x
Strategy										
Buyout - Large	3.0%	222.5	82.1	9.8	150.5	237.3	14.5	86.8	n.m. ¹	1.2x
Buyout - Medium	13.6%	683.2	323.1	43.9	395.2	788.6	114.2	393.4	n.m. ¹	1.4x
Buyout - Small	1.3%	107.5	36.4	0.8	71.9	110.5	3.0	38.6	n.m. ¹	1.1x
Diversified	78.6%	4,099.8	3,528.3	4,402.2	612.5	2,884.3	3,145.7	2,271.8	19.6%	1.9x
Late/Growth	1.9%	105.0	50.3	0.1	54.9	108.6	3.5	53.7	n.m. ¹	1.1x
Venture - Diversified	0.4%	20.0	19.6	36.5	0.4	11.7	28.2	11.2	15.0%	2.4x
Venture - Early	-	20.0	0.0	0.0	20.0	20.0	0.0	0.0	n.m. ²	0.0x
Venture - Late/Growth	0.6%	25.0	15.4	0.1	9.7	25.8	0.8	16.2	n.m. ¹	1.1x
Venture - Multi-Stage	0.6%	36.0	14.0	0.0	22.0	38.9	2.9	16.9	n.m. ¹	1.2x
SURS - Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x

SubStrategy	NAV Weight	Total Commitment (\$mm)	Capital Calls (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Asian Buyouts	0.5%	50.0	12.6	0.0	37.4	51.7	1.7	14.3	n.m. ¹	1.1x
Asian Growth Equity	0.1%	30.0	3.0	0.0	27.0	29.4	-0.6	2.4	n.m. ¹	0.8x
Diversified	0.8%	100.0	18.1	0.0	81.9	103.9	3.9	22.1	n.m. ¹	1.2x
Early Stage VC	-	20.0	0.0	0.0	20.0	20.0	0.0	0.0	n.m. ²	0.0x
European Buyouts	1.1%	160.6	29.8	11.8	142.8	174.5	13.7	31.7	n.m. ¹	1.5x
Late Stage VC	0.4%	30.0	29.6	56.2	0.4	11.7	37.9	11.2	24.6%	2.3x
Multi Stage VC	1.1%	61.0	29.5	0.1	31.6	64.8	3.8	33.1	n.m. ¹	1.1x
North American Buyouts	15.0%	722.5	374.9	41.7	381.5	815.1	100.3	433.5	n.m. ¹	1.3x
North American Growth Equity	1.8%	75.0	47.3	0.1	27.8	79.1	4.1	51.3	n.m. ¹	1.1x
PE Fund-of-Funds	77.6%	3,919.8	3,438.8	4,303.5	521.9	2,763.8	3,106.5	2,241.9	19.6%	1.9x
PE Secondaries Fund	0.3%	70.0	61.3	79.0	8.7	16.6	25.6	7.9	7.8%	1.4x
PE Special Situations	1.4%	80.0	24.4	1.0	56.0	95.3	16.0	39.3	n.m. ¹	1.7x
SURS - Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x

SURS - Private Equity

Portfolio Summary

Vintage	NAV Weight	Total Commitment (\$mm)	Capital Calls (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2022	0.2%	180.0	5.9	0.0	174.6	180.1	-0.3	5.6	n.m. ¹	1.0x
2021	6.1%	575.5	166.2	4.5	412.9	588.2	13.6	175.3	n.m. ¹	1.1x
2020	7.9%	313.7	179.4	15.3	147.0	375.8	64.8	228.8	n.m. ¹	1.4x
2019	10.0%	360.0	231.4	31.8	156.3	444.6	88.7	288.3	29.9%	1.4x
2018	13.8%	420.0	253.6	11.7	168.5	565.8	155.5	397.3	33.0%	1.6x
2017	9.8%	220.0	162.5	46.4	57.6	341.4	167.7	283.8	33.6%	2.0x
2016	11.9%	250.0	200.6	86.0	55.4	397.9	227.8	342.5	28.9%	2.1x
2015	7.1%	125.0	104.9	61.7	20.1	224.8	161.6	204.7	31.4%	2.5x
2014	14.3%	300.0	256.8	139.0	43.2	455.1	294.1	411.9	19.8%	2.1x
2013	5.0%	100.0	89.3	70.5	10.7	153.9	124.5	143.3	17.9%	2.4x
2012	3.4%	100.0	84.5	84.2	15.5	114.3	98.6	98.9	15.2%	2.2x
2011	3.7%	124.6	110.6	157.4	11.7	118.0	153.1	106.3	17.4%	2.4x
2009	2.3%	90.0	81.8	125.8	8.2	74.6	110.4	66.4	15.4%	2.4x
2008	1.8%	100.0	92.9	158.3	7.1	58.6	116.9	51.5	14.7%	2.3x
2007	2.1%	280.4	266.1	429.7	19.3	80.2	224.6	60.9	10.2%	1.8x
2005	-	50.0	46.5	43.9	0.0	0.0	-2.6	0.0	-1.2%	0.9x
2004	0.1%	90.0	84.0	116.4	6.0	9.1	35.5	3.1	6.9%	1.4x
2002	0.5%	664.1	652.8	1,105.7	20.0	35.3	468.2	15.3	10.8%	1.7x
1998	0.0%	39.4	42.5	76.4	0.5	0.7	34.2	0.3	12.2%	1.8x
1995	0.0%	20.0	19.8	17.2	0.00	0.7	-1.9	0.7	-1.8%	0.9x
1990	0.1%	916.2	937.2	1,711.3	2.6	6.5	778.0	3.9	26.8%	1.8x
SURS - Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x

Reporting Period: Jul-1990 - Mar-2022

[View this portfolio online](#)

SURS - Private Equity

Portfolio Summary

	NAV Weight	Total Commitment (\$mm)	Capital Calls (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Structure										
Co-Investment	4.5%	200.0	101.6	2.5	98.4	229.0	31.5	130.7	n.m. ¹	1.3x
Fund of Funds	52.2%	1,629.4	1,435.3	1,554.5	225.6	1,733.8	1,627.4	1,508.2	15.4%	2.1x
Managed Account	26.2%	2,400.3	2,031.7	2,768.7	378.2	1,133.9	1,492.8	755.7	21.7%	1.7x
Primary Fund	16.8%	1,019.1	439.3	88.8	626.3	1,112.4	135.6	486.1	20.1%	1.3x
Secondaries Fund	0.3%	70.0	61.3	79.0	8.7	16.6	25.6	7.9	7.8%	1.4x
SURS - Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x
Region										
Asia Pacific	0.9%	90.0	24.7	9.0	65.3	91.3	10.3	26.1	10.5%	1.4x
Europe	2.9%	337.4	210.9	298.0	155.2	240.1	172.0	84.9	14.0%	1.8x
Multi-Region	53.8%	1,655.4	1,214.6	777.6	452.3	2,007.1	1,117.9	1,554.9	14.7%	1.9x
North America	42.3%	3,236.1	2,619.0	3,408.8	664.4	1,887.2	2,012.6	1,222.8	21.3%	1.8x
SURS - Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x

SURS - Private Equity

Portfolio Summary

CommitmentYear	NAV Weight	Total Commitment (\$mm)	Capital Calls (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
1990	0.1%	916.2	937.2	1,711.3	2.6	6.5	778.0	3.9	26.8%	1.8x
1995	0.0%	20.0	19.8	17.2	0.00	0.7	-1.9	0.7	-1.8%	0.9x
1998	0.0%	39.4	42.5	76.4	0.5	0.7	34.2	0.3	12.2%	1.8x
2001	-	25.0	25.0	25.1	0.0	0.0	0.05	0.0	0.0%	1.0x
2002	0.5%	664.1	652.8	1,105.7	20.0	35.3	468.2	15.3	10.8%	1.7x
2004	0.1%	115.0	105.5	135.3	6.0	9.1	32.8	3.1	5.3%	1.3x
2007	1.9%	270.4	256.3	408.5	19.1	74.2	207.2	55.1	9.9%	1.8x
2008	1.8%	100.0	92.8	164.3	7.2	59.1	123.4	51.9	14.9%	2.3x
2009	2.5%	100.0	91.6	141.0	8.4	80.2	121.2	71.8	15.2%	2.3x
2012	7.1%	224.6	195.2	241.7	27.2	232.3	251.6	205.1	16.5%	2.3x
2013	5.0%	100.0	89.3	70.5	10.7	153.9	124.5	143.3	17.9%	2.4x
2014	14.3%	300.0	256.8	139.0	43.2	455.1	294.1	411.9	19.8%	2.1x
2015	7.1%	125.0	104.9	61.7	20.1	224.8	161.6	204.7	31.4%	2.5x
2016	11.9%	250.0	200.6	86.0	55.4	397.9	227.8	342.5	28.9%	2.1x
2017	18.3%	500.0	323.3	46.4	176.9	706.8	253.1	530.0	32.0%	1.8x
2018	3.1%	90.0	49.6	8.6	40.4	130.7	49.2	90.3	40.5%	2.0x
2019	11.4%	390.0	255.7	32.8	162.3	490.4	105.2	328.1	32.3%	1.4x
2020	12.4%	554.7	301.2	21.0	271.4	630.1	78.6	358.7	n.m. ¹	1.3x
2021	2.3%	354.5	63.2	0.9	291.3	357.8	4.2	66.5	n.m. ¹	1.1x
2022	0.2%	180.0	5.9	0.0	174.6	180.1	-0.3	5.6	n.m. ¹	1.0x
SURS - Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x

Reporting Period: Jul-1990 - Mar-2022

[View this portfolio online](#)

AssetClass	NAV Weight	Total Commitment (\$mm)	Capital Calls (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x
SURS - Private Equity	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x

¹ IRR not meaningful for investments held less than 36 months

* Total figures take into account all current and closed portfolio positions as at Mar-2022

State Universities Retirement System of Illinois

	Currency	NAV Weight	Total Commitment (mm)	Capital Calls (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2022											
Base10 Partners III	USD	-	20.0	0.0	0.0	20.0	20.0	0.0	0.0 ¹	n.m. ²	0.0x
Great Hill Equity Partners VIII-Pref	USD	0.0%	25.0	0.0	0.0	25.0	24.9	-0.08	-0.08	n.m. ²	0.0x
Hg Saturn 3 A	USD	-	35.0	0.0	0.0	35.0	35.0	0.0	0.0 ¹	n.m. ²	0.0x
One Equity Partners VIII	USD	0.2%	25.0	5.9	0.0	19.2	24.9	-0.2	5.7	n.m. ³	1.0x
PAI Partners VIII-1 SCSp	USD	-	50.0	0.0	0.0	50.3	50.3	0.0	0.0 ¹	n.m. ²	0.0x
Thoma Bravo Fund XV	USD	-	25.0	0.0	0.0	25.0	25.0	0.0	0.0 ¹	n.m. ²	0.0x
Total 2022	USD	0.2%	180.0	5.9	0.0	174.6	180.1	-0.3	5.6	n.m.³	1.0x

	Currency	NAV Weight	Total Commitment (mm)	Capital Calls (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2021											
Altaris Health Partners V	USD	0.2%	25.0	6.1	0.0	18.9	25.4	0.4	6.4	n.m. ³	1.1x
Avance Investment Partners	USD	0.2%	25.0	5.4	0.8	20.4	24.9	-0.1	4.5	n.m. ³	1.0x
Base10 Advancement Initiative I	USD	0.7%	25.0	18.9	0.0	6.1	26.0	1.0	19.9	n.m. ³	1.1x
Clearlake Capital Partners VII	USD	0.0%	50.0	0.0	0.0	50.0	49.5	-0.5	-0.5	n.m. ²	0.0x
GGV Capital VIII	USD	0.4%	21.6	8.6	0.0	13.0	23.2	1.6	10.3	n.m. ³	1.2x
GGV Capital VIII Plus	USD	0.1%	5.4	2.1	0.0	3.3	5.5	0.09	2.2	n.m. ³	1.0x
GGV Discovery III	USD	0.2%	9.0	3.3	0.0	5.7	10.2	1.2	4.5	n.m. ³	1.4x
Harvest Partners IX	USD	0.0%	50.0	0.0	0.0	50.0	49.5	-0.5	-0.5	n.m. ²	0.0x
Inflexion Buyout Fund VI	USD	0.0%	24.5	0.0	0.0	23.6	23.6	-0.09	-0.09	n.m. ²	0.0x
Lincoln Fund I (Series B)	USD	0.8%	100.0	18.1	0.0	81.9	103.9	3.9	22.1	n.m. ³	1.2x
MBK Partners Fund V	USD	0.5%	50.0	12.6	0.0	37.4	51.7	1.7	14.3	n.m. ³	1.1x
Nautic Partners X	USD	0.1%	25.0	2.4	0.0	22.6	25.1	0.1	2.5	n.m. ³	1.1x
Oak HC-FT Partners IV	USD	0.6%	25.0	15.4	0.1	9.7	25.8	0.8	16.2	n.m. ³	1.1x
One Rock Capital Partners III	USD	0.6%	35.0	15.9	3.6	22.7	38.7	3.8	16.0	n.m. ³	1.2x
Orchid Asia VIII	USD	0.1%	30.0	3.0	0.0	27.0	29.4	-0.6	2.4	n.m. ³	0.8x
Stellex Capital Partners II	USD	0.3%	25.0	7.3	0.00	17.7	25.2	0.2	7.6	n.m. ³	1.0x
Thoma Bravo Fund XIV	USD	1.6%	50.0	47.1	0.00	2.9	50.5	0.5	47.6	n.m. ³	1.0x
Total 2021	USD	6.1%	575.5	166.2	4.5	412.9	588.2	13.6	175.3	n.m.³	1.1x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Capital Calls (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2020											
Clearlake Capital Partners VI	USD	1.4%	30.0	24.4	1.0	6.0	45.8	16.5	39.8	n.m. ³	1.7x
Hg Genesis 9	USD	0.2%	13.7	7.3	2.0	8.9	15.7	1.5	6.8	n.m. ³	1.2x
HgCapital Saturn Fund 2	USD	0.9%	37.5	22.5	9.8	24.9	49.8	12.3	24.9	n.m. ³	1.5x
Rubicon Technology Partners III	USD	0.9%	32.5	23.6	0.0	8.9	35.5	3.0	26.6	n.m. ³	1.1x
SURS TorreyCove Co-Investment Fund I	USD	4.5%	200.0	101.6	2.5	98.4	229.0	31.5	130.7	n.m. ³	1.3x
Total 2020	USD	7.9%	313.7	179.4	15.3	147.0	375.8	64.8	228.8	n.m.³	1.4x
2019											
Bregal Sagemount III-B	USD	1.1%	50.0	28.4	0.1	21.7	53.1	3.1	31.4	n.m. ³	1.1x
Cortec Group Fund VII	USD	1.1%	35.0	25.2	2.6	12.4	44.4	9.4	32.0	n.m. ³	1.4x
Harvest Partners VIII	USD	2.6%	70.0	63.4	14.1	17.2	92.9	26.5	75.8	n.m. ³	1.4x
OceanSound Partners Fund	USD	0.6%	25.0	27.8	15.0	11.6	29.4	4.9	17.8	n.m. ³	1.2x
Pantheon Access (US) - SURS 2018	USD	4.5%	180.0	86.5	0.0	93.5	224.8	44.8	131.3	33.7%	1.5x
Total 2019	USD	10.0%	360.0	231.4	31.8	156.3	444.6	88.7	288.3	29.9%	1.4x
2018											
Adams Street 2018 Global Fund	USD	3.1%	90.0	49.6	8.6	40.4	130.7	49.2	90.3	40.5%	2.0x
Mesirow Financial Private Equity Special Fund B	USD	8.5%	280.0	160.8	0.0	119.2	365.4	85.4	246.2	28.9%	1.5x
Reverence Capital Partners Opportunities Fund II	USD	2.1%	50.0	43.2	3.2	8.8	69.7	20.8	60.9	n.m. ³	1.5x
Total 2018	USD	13.8%	420.0	253.6	11.7	168.5	565.8	155.5	397.3	33.0%	1.6x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Capital Calls (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2017											
Adams Street 2017 Global Fund	USD	4.4%	90.0	64.9	12.7	25.1	153.5	76.3	128.4	33.9%	2.2x
Mesirow Financial Private Equity Fund VII-B	USD	2.6%	40.0	39.7	28.7	0.4	74.7	63.2	74.3	43.8%	2.6x
Pantheon Access (US) - SURS 2017	USD	2.8%	90.0	57.9	5.0	32.1	113.2	28.2	81.1	21.7%	1.5x
Total 2017	USD	9.8%	220.0	162.5	46.4	57.6	341.4	167.7	283.8	33.6%	2.0x
2016											
Adams Street 2016 Global Fund	USD	7.1%	150.0	108.0	31.8	42.0	248.4	130.3	206.4	28.8%	2.2x
M2 - SURS Emerging Private Equity Fund-of-Funds	USD	4.7%	100.0	92.7	54.1	13.4	149.5	97.6	136.1	29.0%	2.1x
Total 2016	USD	11.9%	250.0	200.6	86.0	55.4	397.9	227.8	342.5	28.9%	2.1x
2015											
Adams Street 2015 Global Fund	USD	7.1%	125.0	104.9	61.7	20.1	224.8	161.6	204.7	31.4%	2.5x
Total 2015	USD	7.1%	125.0	104.9	61.7	20.1	224.8	161.6	204.7	31.4%	2.5x
2014											
Adams Street 2014 Global Fund	USD	5.4%	100.0	89.5	63.8	10.5	165.7	129.5	155.2	20.5%	2.4x
Lincoln Fund I (Series A)	USD	4.1%	75.0	65.6	29.9	9.4	126.8	81.7	117.4	19.9%	2.2x
Pantheon Multi-Strategy Program 2014 (US) - SURS 2014	USD	4.8%	125.0	101.6	45.2	23.4	162.6	82.9	139.3	18.7%	1.8x
Total 2014	USD	14.3%	300.0	256.8	139.0	43.2	455.1	294.1	411.9	19.8%	2.1x
2013											
Adams Street 2013 Global Fund	USD	5.0%	100.0	89.3	70.5	10.7	153.9	124.5	143.3	17.9%	2.4x
Total 2013	USD	5.0%	100.0	89.3	70.5	10.7	153.9	124.5	143.3	17.9%	2.4x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Capital Calls (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2012											
Adams Street 2012 Global Fund	USD	3.2%	80.0	69.1	70.2	10.9	102.5	92.7	91.7	16.5%	2.3x
Adams Street Global Secondary Fund 5	USD	0.3%	20.0	15.4	14.0	4.6	11.8	5.9	7.2	7.2%	1.4x
Total 2012	USD	3.4%	100.0	84.5	84.2	15.5	114.3	98.6	98.9	15.2%	2.2x
2011											
Pantheon Europe Fund VII	USD	0.9%	39.6	33.3	40.8	3.5	28.7	32.7	25.2	14.0%	2.0x
Pantheon USA Fund IX	USD	2.8%	85.0	77.3	116.6	8.2	89.2	120.4	81.1	18.7%	2.6x
Total 2011	USD	3.7%	124.6	110.6	157.4	11.7	118.0	153.1	106.3	17.4%	2.4x
2009											
Adams Street Partnership Fund - 2009 Non-U.S. Developed Markets Fund	USD	0.6%	30.0	26.7	36.9	3.3	20.7	27.6	17.4	14.0%	2.0x
Adams Street Partnership Fund - 2009 Non-U.S. Emerging Markets Fund	USD	0.3%	10.0	9.2	9.0	0.8	10.2	9.2	9.4	10.2%	2.0x
Adams Street Partnership Fund - 2009 U.S. Fund	USD	1.4%	50.0	45.9	79.9	4.1	43.7	73.5	39.6	17.0%	2.6x
Total 2009	USD	2.3%	90.0	81.8	125.8	8.2	74.6	110.4	66.4	15.4%	2.4x
2008											
Adams Street 2009 Direct Fund	USD	0.2%	10.0	9.8	15.2	0.2	5.6	10.8	5.4	13.8%	2.1x
Adams Street Partnership Fund - 2008 Non-U.S. Fund	USD	0.8%	40.0	36.5	51.6	3.5	25.3	36.9	21.8	11.8%	2.0x
Adams Street Partnership Fund - 2008 U.S. Fund	USD	0.8%	50.0	46.5	91.4	3.5	27.7	69.1	24.2	16.8%	2.5x
Total 2008	USD	1.8%	100.0	92.9	158.3	7.1	58.6	116.9	51.5	14.7%	2.3x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Capital Calls (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2007											
Adams Street 2007 Global Opportunities Portfolio	USD	0.1%	100.0	99.1	147.0	8.7	12.0	51.1	3.3	6.9%	1.5x
Adams Street 2008 Direct Fund	USD	0.2%	10.0	9.7	21.3	0.3	6.1	17.3	5.8	15.8%	2.8x
M2 Private Equity Fund-of-Funds	USD	0.0%	25.0	24.4	35.7	0.8	1.4	11.9	0.6	8.3%	1.5x
Pantheon Europe Fund VI	USD	0.3%	42.1	37.4	57.4	1.8	11.1	29.3	9.3	10.3%	1.8x
Pantheon USA Fund VIII	USD	1.5%	103.3	95.4	168.4	7.7	49.8	115.0	42.0	13.3%	2.2x
Total 2007	USD	2.1%	280.4	266.1	429.7	19.3	80.2	224.6	60.9	10.2%	1.8x
2005											
Liquidated Holdings (2)	USD	-	50.0	46.5	43.9	0.0	0.0	-2.6		-1.2%	0.9x
Total 2005	USD	-	50.0	46.5	43.9	0.0	0.0	-2.6	0.0	-1.2%	0.9x
2004											
Adams Street Global Opportunities Secondary Fund	USD	0.0%	25.0	22.1	36.8	2.9	3.2	15.0	0.3	11.5%	1.7x
Adams Street Partnership Fund - 2004 Non-U.S. Fund	USD	0.1%	40.0	38.1	51.5	1.9	4.3	15.8	2.4	5.8%	1.4x
Pantheon Global Secondary Fund II	USD	0.0%	25.0	23.8	28.1	1.3	1.6	4.7	0.4*	4.3%	1.2x
Total 2004	USD	0.1%	90.0	84.0	116.4	6.0	9.1	35.5	3.1	6.9%	1.4x
2002											
Pantheon Europe Fund III	USD	0.0%	65.0	83.7	151.1	3.8	5.1	68.7	1.4	14.6%	1.8x
Pantheon USA Primary Investments	USD	0.5%	599.1	569.1	954.6	16.2	30.1	399.4	13.9	10.3%	1.7x
Total 2002	USD	0.5%	664.1	652.8	1,105.7	20.0	35.3	468.2	15.3	10.8%	1.7x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Capital Calls (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
1998											
Brinson Non-U.S. Partnership Fund Trust Program	USD	0.0%	39.4	42.5	76.4	0.5	0.7	34.2	0.3	12.2%	1.8x
Total 1998	USD	0.0%	39.4	42.5	76.4	0.5	0.7	34.2	0.3	12.2%	1.8x
1995											
Progress Alternative Investment Program	USD	0.0%	20.0	19.8	17.2	0.00	0.7	-1.9	0.7	-1.8%	0.9x
Total 1995	USD	0.0%	20.0	19.8	17.2	0.00	0.7	-1.9	0.7	-1.8%	0.9x
1990											
Adams Street SMA (1990-2007) - SURS	USD	0.1%	906.2	927.2	1,691.6	2.6	6.5	768.3	3.9	27.0%	1.8x
Liquidated Holdings (1)	USD	-	10.0	10.0	19.7	0.0	0.0	9.7		25.3%	2.0x
Total 1990	USD	0.1%	916.2	937.2	1,711.3	2.6	6.5	778.0	3.9	26.8%	1.8x
SURS - Private Equity	USD	100.0%	5,318.9	4,069.2	4,493.4	1,337.1	4,225.7	3,312.8	2,888.6	19.6%	1.8x

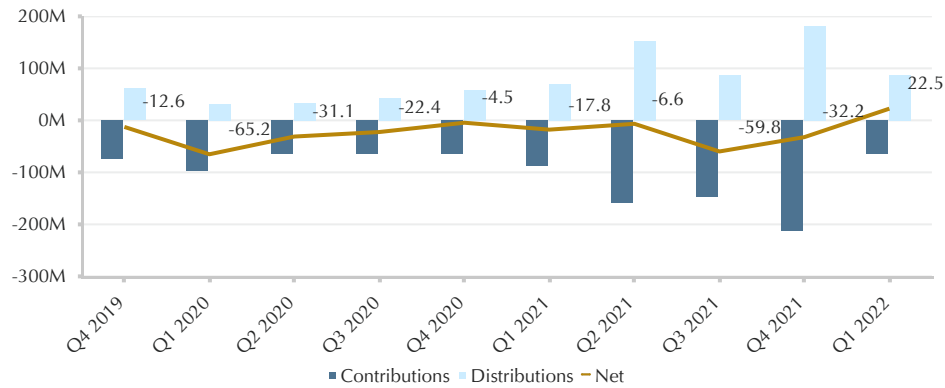
¹ Adjusted for additional contributions and distributions since last valuation

^{2,3} IRR not meaningful for investments held less than 36 months

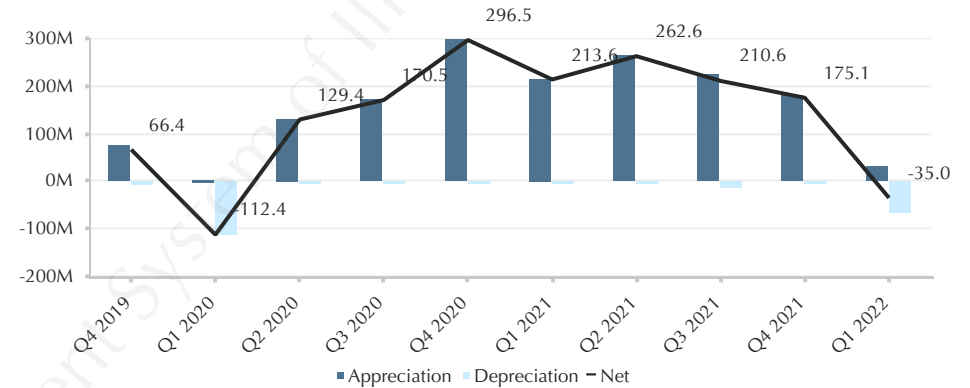
* NAV is provided annually: Pantheon Global Secondary Fund II as of Dec-2021

* Total figures take into account all current and closed portfolio positions as at Mar-2022

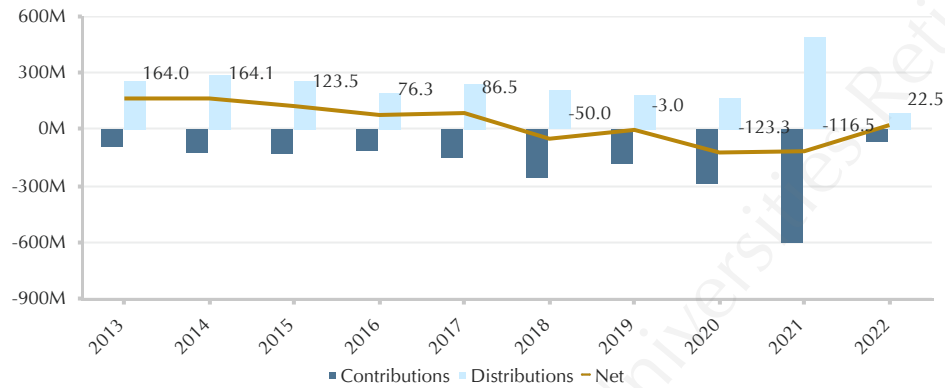
Cash Flows Quarterly



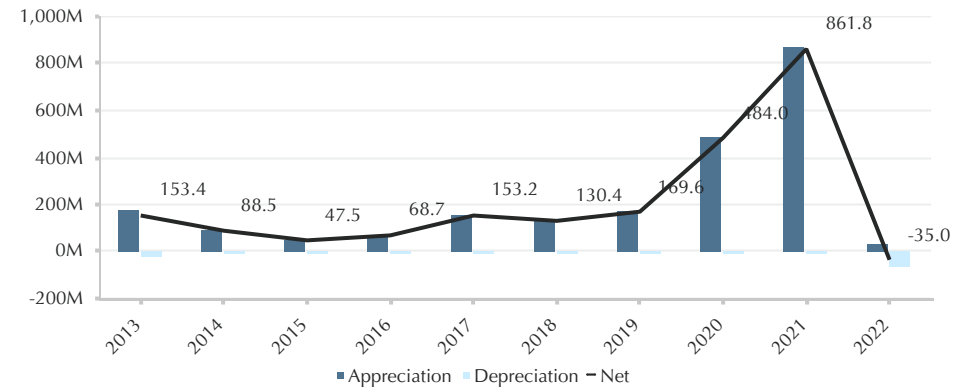
Appreciation/Depreciation Quarterly



Cash Flows Yearly



Appreciation/Depreciation Yearly



	Gain		Loss		NET Gain/Loss		Distributions		Contributions		NAV (mm)
	Total millions	# Of Funds	Total millions	# Of Funds	Net Millions	% Of Total Net	Total millions	%	Total millions	%	
Buyout	11.3	8	-6.1	13	5.1	-14.6%	15.4	17.8%	42.0	65.5%	518.8
Fund of Funds	18.9	6	-56.7	26	-37.8	107.9%	69.6	80.4%	16.3	25.5%	2,263.9
Growth	0.0	0	-1.5	3	-1.5	4.3%	0.0	-	3.0	4.6%	53.7
Secondary	0.0	0	-0.2	2	-0.2	0.6%	1.5	1.8%	0.0	-	7.9
Venture	0.5	4	-1.2	2	-0.7	1.9%	0.0	-	2.8	4.3%	44.3
Total	30.7	18	-65.7	46	-35.0	100.0%	86.6	100.0%	64.0	100.0%	2,888.6

Above reporting references active funds only and funds that liquidated during the period

	Gain		Loss		NET Gain/Loss		Distributions		Contributions		NAV (mm)
	Total millions	# Of Funds	Total millions	# Of Funds	Net Millions	% Of Total Net	Total millions	%	Total millions	%	
Buyout	99.9	15	-1.5	6	98.5	16.1%	45.0	8.9%	281.9	48.4%	518.8
Fund of Funds	518.7	24	-13.0	8	505.7	82.5%	452.6	89.4%	226.6	38.9%	2,263.9
Growth	5.4	2	-0.6	1	4.9	0.8%	0.06	0.0%	44.6	7.6%	53.7
Secondary	1.3	2	0.00	1	1.3	0.2%	6.1	1.2%	0.0	-	7.9
Venture	3.8	5	-0.9	1	3.0	0.5%	2.7	0.5%	29.5	5.1%	44.3
Total	629.1	48	-15.9	17	613.3	100.0%	506.4	100.0%	582.5	100.0%	2,888.6

Above reporting references active funds only and funds that liquidated during the period

Top Contributors

	Vintage	% of Capital Called	Gain (\$K)	NAV (\$mm)	QTD IRR*	ITD IRR*
SURS TorreyCove Co-Investment Fund I	2020	50.8%	6,853	130.7	n.m.*	n.m.*
Pantheon Access (US) - SURS 2018	2019	48.1%	6,027	131.3	4.9%	33.7%
M2 - SURS Emerging Private Equity Fund-of-Funds	2016	86.6%	5,299	136.1	4.0%	29.0%
Adams Street 2017 Global Fund	2017	72.1%	3,345	128.4	2.6%	33.9%
Mesirow Financial Private Equity Special Fund B	2018	57.4%	2,186	246.2	0.9%	28.9%
Gain	-	-	23,709	772.6	3.2%	31.3%
Gain (Remaining)	-	-	6,952	429.4	1.6%	12.5%
Total Gain	-	-	30,661	1,202.1	2.6%	16.5%

* IRR calculated at portfolio currency. IRR not meaningful for investments held less than 36 months

† IRR not meaningful for investments held less than 36 months

Top Detractors

	Vintage	% of Capital Called	Loss (\$K)	NAV (\$mm)	QTD IRR*	ITD IRR*
Adams Street 2013 Global Fund	2013	89.3%	-9,771	143.3	-6.2%	17.9%
Adams Street 2012 Global Fund	2012	86.4%	-7,155	91.7	-7.0%	16.5%
Adams Street 2015 Global Fund	2015	83.9%	-5,440	204.7	-2.5%	31.4%
Adams Street 2014 Global Fund	2014	89.5%	-4,666	155.2	-2.8%	20.5%
Pantheon Europe Fund VII	2011	84.2%	-3,997	25.2	-13.0%	14.0%
Loss	-	-	-31,030	620.0	-4.5%	20.2%
Loss (Remaining)	-	-	-34,664	1,066.5	-3.0%	20.0%
Total Loss	-	-	-65,693	1,686.5	-3.6%	20.0%

* IRR calculated at portfolio currency. IRR not meaningful for investments held less than 36 months

Total Portfolio(69)	-	75.2%	-35,032	2,888.6	-1.2%	19.6%
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State Universities Retirement System of Illinois

Top Contributors

	Vintage	% of Capital Called	Gain (\$K)	NAV (\$mm)	1Y IRR*	ITD IRR*
Adams Street 2016 Global Fund	2016	72.0%	58,532	206.4	37.4%	28.8%
Mesirow Financial Private Equity Special Fund B	2018	57.4%	52,493	246.2	31.0%	28.9%
Adams Street 2015 Global Fund	2015	83.9%	51,227	204.7	29.5%	31.4%
M2 - SURS Emerging Private Equity Fund-of-Funds	2016	86.6%	43,803	136.1	41.4%	29.0%
Adams Street 2017 Global Fund	2017	72.1%	42,344	128.4	47.6%	33.9%
Gain	-	-	248,399	921.8	35.8%	30.3%
Gain (Remaining)	-	-	380,725	1,914.5	25.7%	16.2%
Total Gain	-	-	629,124	2,836.3	28.9%	17.6%

* IRR calculated at portfolio currency. IRR not meaningful for investments held less than 36 months

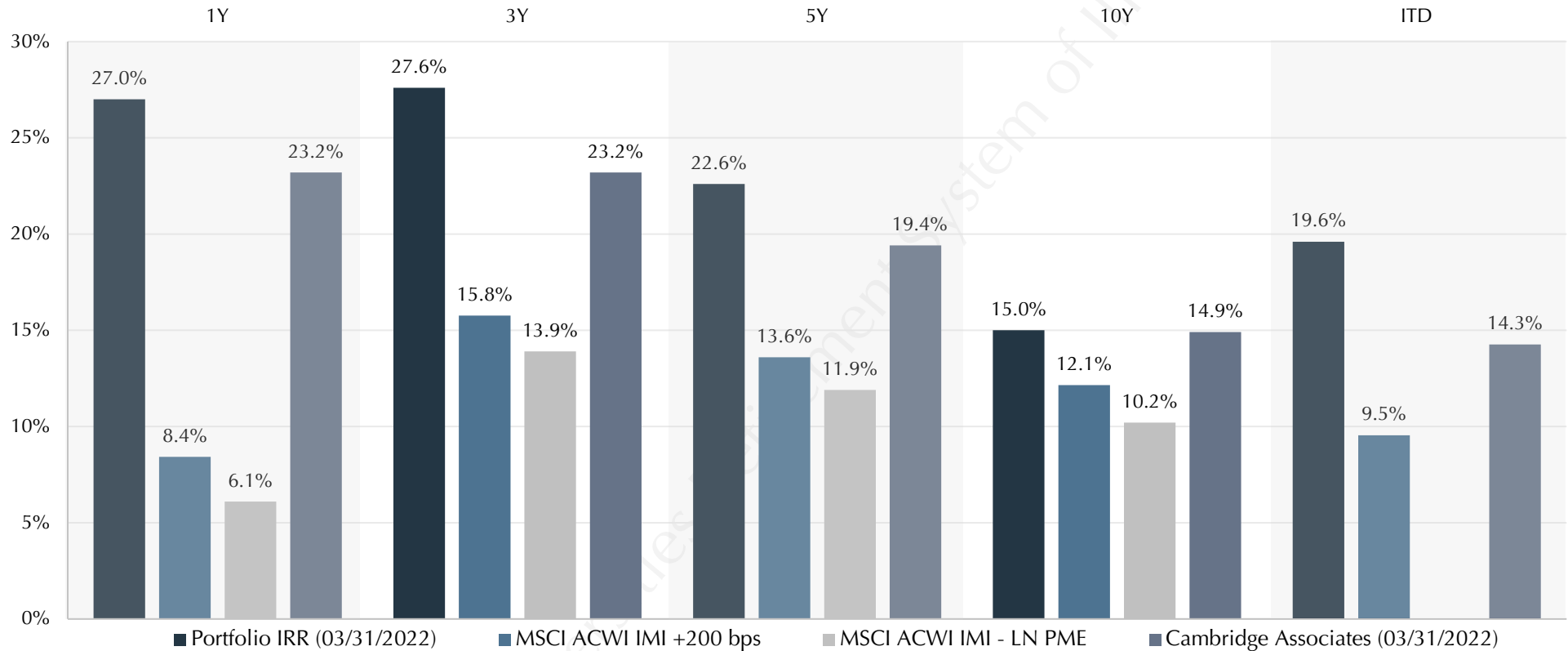
Top Detractors

	Vintage	% of Capital Called	Loss (\$K)	NAV (\$mm)	1Y IRR*	ITD IRR*
Adams Street SMA (1990-2007) - SURS	1990	99.7%	-4,538	3.9	-35.6%	27.0%
Adams Street 2007 Global Opportunities Portfolio	2007	91.3%	-3,223	3.3	-26.1%	6.9%
Pantheon USA Primary Investments	2002	97.3%	-3,001	13.9	-12.5%	10.3%
Pantheon Europe Fund VI	2007	88.7%	-1,577	9.3	-12.0%	10.3%
Adams Street 2009 Direct Fund	2008	98.0%	-865	5.4	-13.3%	13.8%
Loss	-	-	-13,203	35.8	-18.5%	22.4%
Loss (Remaining)	-	-	-2,671	16.5	-18.8%	8.9%
Total Loss	-	-	-15,874	52.3	-18.6%	20.3%

* IRR calculated at portfolio currency. IRR not meaningful for investments held less than 36 months

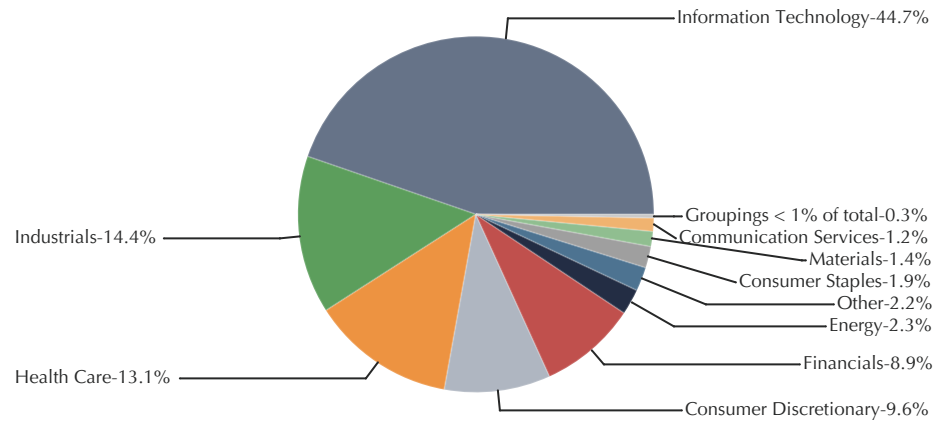
Total Portfolio(69)	-	75.2%	613,251	2,888.6	27.0%	19.6%
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Portfolio IRR vs Benchmarks



MSCI ACWI IMI Net Total Return USD Index is calculated based on performance data starting in May 1994.
 MSCI ACWI IMI - LN PME is a dollar-weighted Long-Nickels calculation of monthly changes in the MSCI ACWI IMI Net Total Return USD Index. SURS Private Equity portfolio was activated in July 1990; therefore, inception to date PME was not calculated.
 Cambridge Associates IRR reflects all Private Equity funds data excluding Real Estate, Timber and Infrastructure.

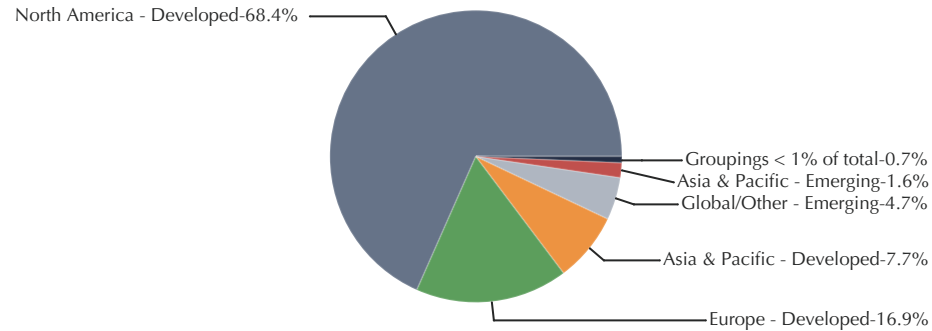
Sector Exposure by NAV



	Total Invested Capital	% of Total	Net Asset Value	% of Total
Information Technology	240,332,997	48.4%	1,304,693,199	44.7%
Health Care	67,453,790	13.6%	381,695,829	13.1%
Financials	66,697,007	13.4%	258,485,170	8.9%
Industrials	62,038,796	12.5%	418,676,991	14.4%
Consumer Discretionary	33,766,801	6.8%	281,227,514	9.6%
Consumer Staples	12,912,561	2.6%	56,821,537	1.9%
Materials	5,079,745	1.0%	39,839,347	1.4%
Energy	-	-	67,919,565	2.3%
Other	-	-	63,497,734	2.2%
Communication Services	-	-	35,149,608	1.2%
Groupings < 1% of total	8,417,787	1.7%	9,200,165	0.3%

Position Analytics data based on GP provided information as of Mar-2022

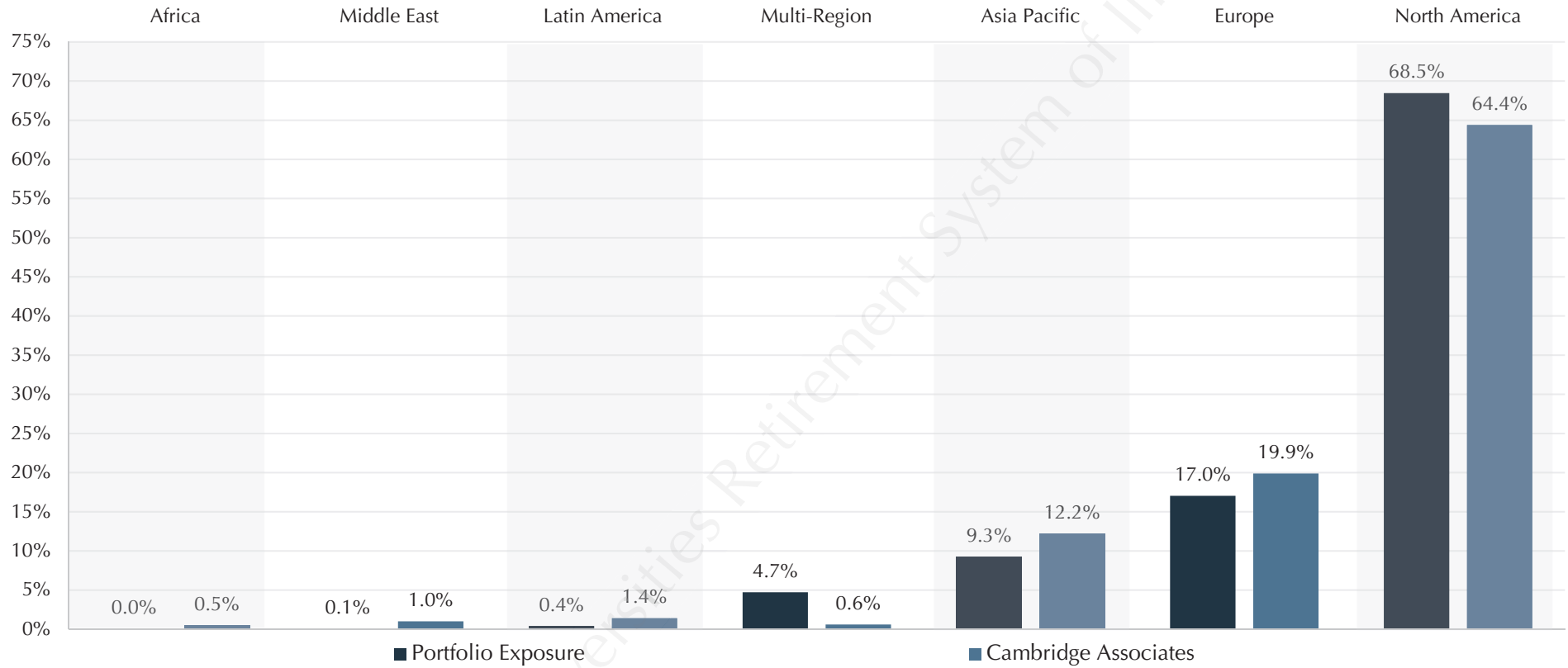
Region Exposure by NAV



	Total Invested Capital	% of Total	Net Asset Value	% of Total
North America - Developed	415,255,857	83.6%	1,994,758,030	68.4%
Europe - Developed	47,852,818	9.6%	492,762,197	16.9%
Asia & Pacific - Emerging	19,745,861	4.0%	47,876,741	1.6%
Asia & Pacific - Developed	6,486,760	1.3%	224,275,649	7.7%
Global/Other - Emerging	-	-	137,508,835	4.7%
Groupings < 1% of total	7,358,187	1.5%	20,025,206	0.7%

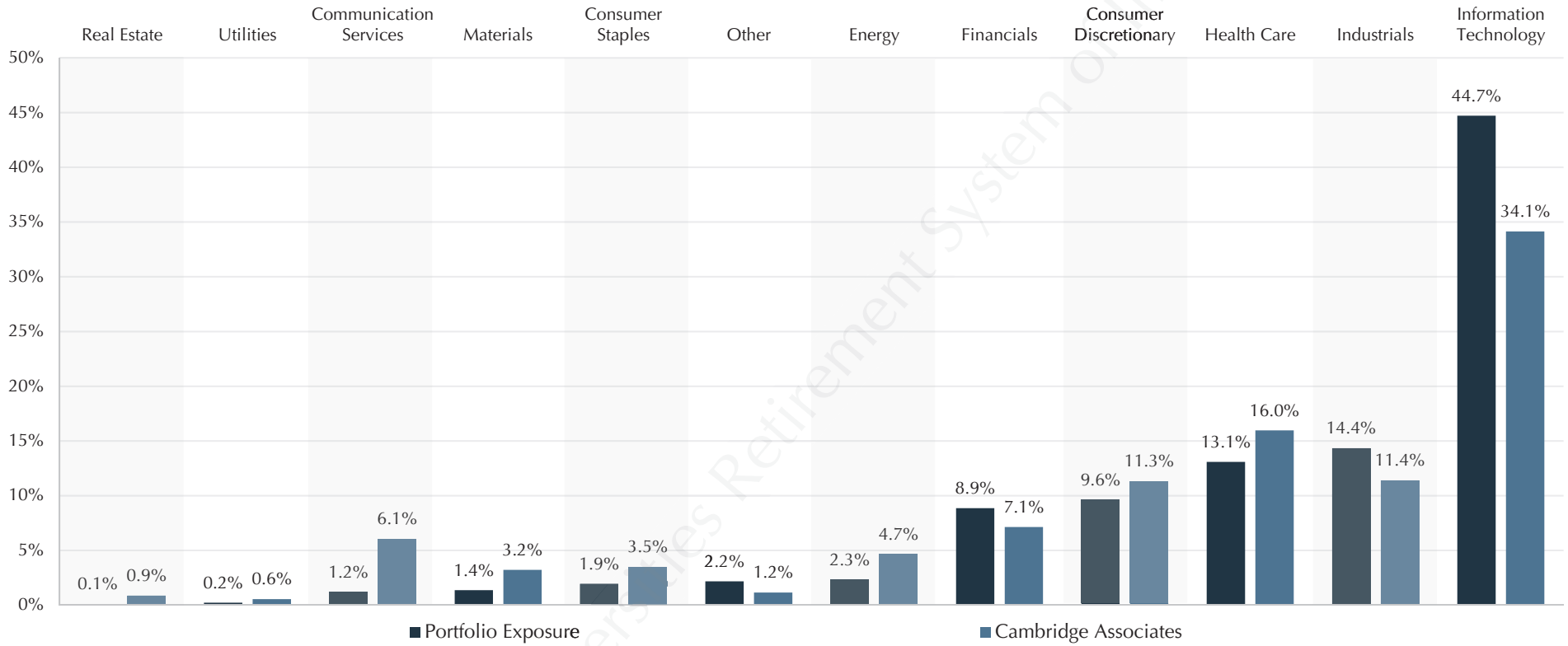
Company headquarters represents location provided by the manager at initial investment date.
Position Analytics data based on GP provided information as of Mar-2022

Portfolio Exposure vs Cambridge Benchmark – Geography



Portfolio Exposure based on Fair Market Value of the portfolio's underlying companies
 Position Analytics data based on General Partner provided information as of Mar-2022

Portfolio Exposure vs Cambridge Benchmark – Industry



Portfolio Exposure based on Fair Market Value of the portfolio's underlying companies
 Position Analytics data based on General Partner provided information as of Mar-2022

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Illinois State Universities Retirement System

August 4, 2022

First Quarter 2022
Private Credit Report

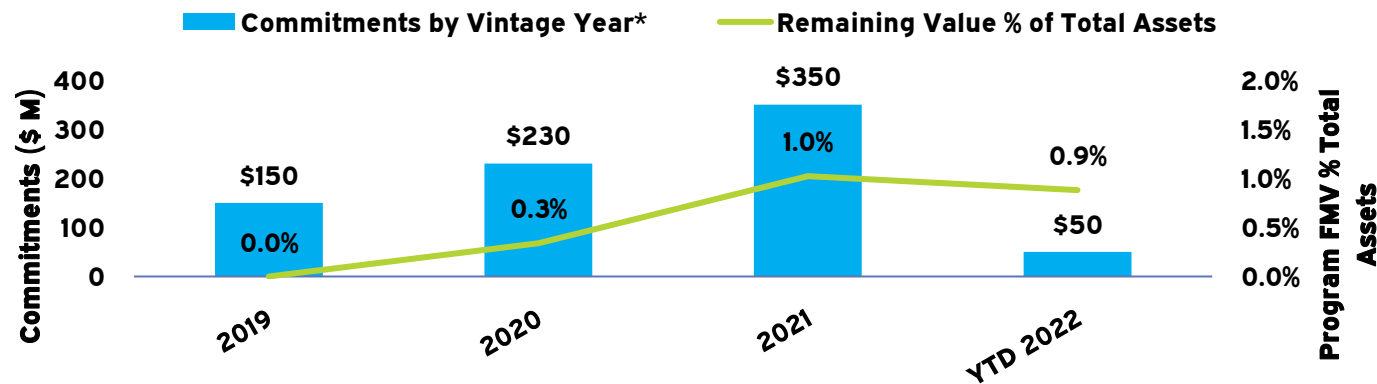


Illinois State Universities Retirement System Private Debt Program

Overview | As of March 31, 2022

Introduction

Illinois State Universities Retirement System (“SURS”) has set a target allocation of 5% of plan net asset value to private credit fund investments within the Stabilized Growth Class. SURS’ private credit program targets a mix of strategies, both yield-oriented and opportunistic, with an emphasis on yield-oriented. The first commitment was approved in June of 2020. As of the end of Q1 2022, eight private credit fund commitments totaling \$780 million have been made to the Program.



*Defined by the date of initial investment

Program Status

No. of Investments	8
Committed (\$ M)	780.0
Contributed (\$ M)	272.6
Distributed (\$ M)	91.2
Remaining Value (\$ M)	212.7

Performance Since Inception¹

	Program	PME ²
DPI	0.33x	---
TVPI	1.11x	---
IRR	14.9%	4.1%

¹ The initial capital call was made on July 9, 2020.

² 50% BB Global High Yield + 50% S&P LSTA Global Leveraged Loan +1%

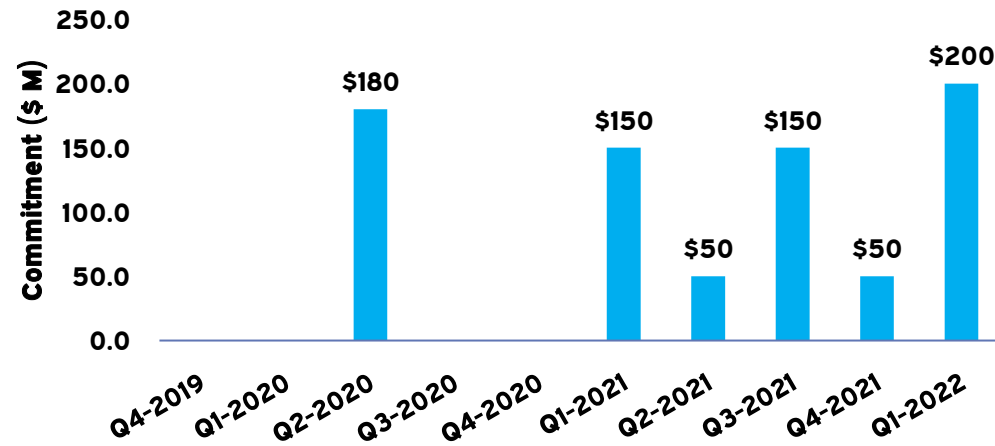


Illinois State Universities Retirement System Private Debt Program

Recent Activity | As of March 31, 2022

Commitments

Recent Quarterly Commitment Closings



Commitments This Quarter

Fund	Strategy	Region	Amount (M)
Turning Rock Fund II	Special Situations	North America	50.00
Fortress Lending III	Multi-Strategy	North America	50.00
Ares Pathfinder Core	Specialty Lending	North America	100.00



Illinois State Universities Retirement System Private Debt Program

Recent Activity | As of March 31, 2022

Aggregate Commitment Activity to Date

Fund	Strategy	Amount (\$M)	Date
PIMCO Distressed Senior Credit Opportunities III	Multi-Strategy	180.00 ¹	Q2 2020
Silver Rock Tactical Allocation Fund	Special Situations	150.00	Q1 2021
Crayhill Principal Strategies Fund II	Specialty Lending	50.00	Q2 2021
Neuberger Berman Private Debt Fund IV	Direct Lending	175.00 ²	Q3 2021
Silver Rock Tactical Allocation Fund Share Class B	Special Situations	50.00	Q4 2021
Turning Rock Fund II	Special Situations	50.00	Q1 2022
Fortress Lending Fund III	Multi-Strategy	50.00	Q1 2022
Ares Pathfinder Core Fund	Specialty Lending	100.00	Q1 2022

Commitments made subsequent to quarter end included:

- a \$200 million commitment to Silver Rock Tactical Allocation Vintage 2022
 - an MWDBE-led special situations fund and re-up opportunity.

¹ 20% of the commitment was released as of September 30, 2021.

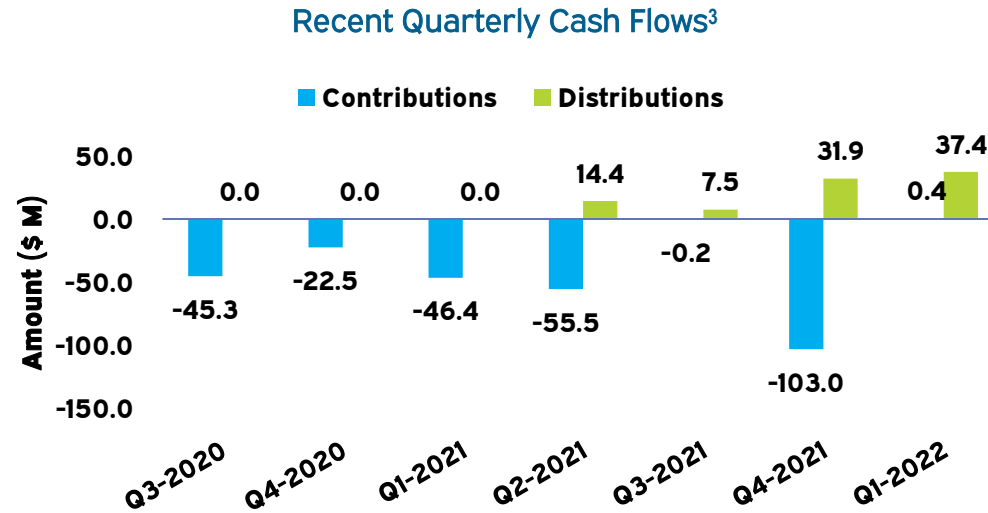
² Increased commitment by \$25 million in Q2 2022.



Illinois State Universities Retirement System Private Debt Program

Recent Activity | As of March 31, 2022

Cash Flows



Largest Contributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$M)
Turning Rock Fund II	2021	Special Situations	North America	10.93
Crayhill Fund II	2020	Specialty Lending	Global: Developed	6.15
Fortress Lending III	2022	Multi-Strategy	North America	5.00

Largest Distributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$M)
Silver Rock Tactical	2019	Special Situations	North America	11.54
PIMCO DISCO III	2020	Multi-Strategy	North America	10.47
Crayhill Fund II	2020	Specialty Lending	Global: Developed	8.60

³ NB Private Debt Fund IV issued a \$22.5 million return of excess during Q1 2022.



Illinois State Universities Retirement System Private Debt Program

Performance Analysis | As of March 31, 2022

By Strategy

Group	Number	Committed (\$ M)	Contributed (\$ M)	Unfunded (\$ M)	Distributed (\$ M)	Remaining Value (\$ M)	Exposure (\$ M)	DPI (X)	TVPI (X)	IRR (%)
Direct Lending	1	150.0	52.5	97.6	1.6	55.2	152.8	0.03	1.08	NM
Multi-Strategy	2	230.0	95.3	197.8	62.8	49.7	247.5	0.66	1.18	NM
Special Situations	3	250.0	104.4	162.4	16.7	93.7	256.1	0.16	1.06	NM
Specialty Lending	2	150.0	20.4	134.4	10.1	14.1	148.6	0.49	1.19	NM
Total	8	780.0	272.6	592.3	91.2	212.7	804.9	0.33	1.11	NM

By Vintage

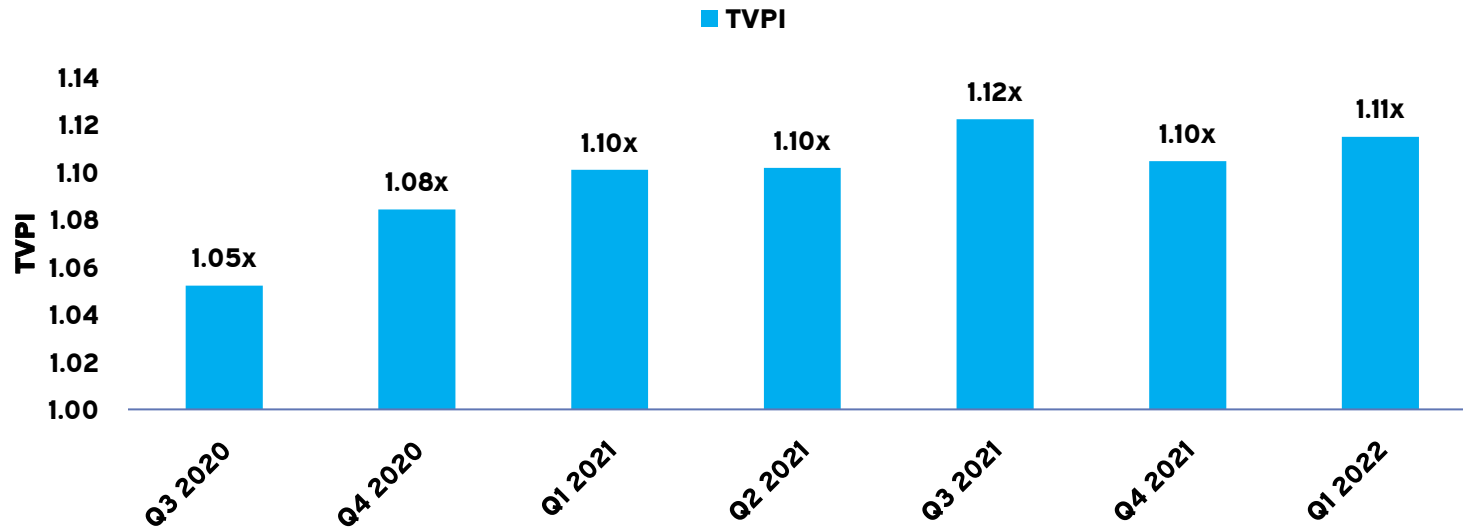
Group	Number	Committed (\$ M)	Contributed (\$ M)	Unfunded (\$ M)	Distributed (\$ M)	Remaining Value (\$ M)	Exposure (\$ M)	DPI (X)	TVPI (X)	IRR (%)
Open-end	1	100.0	0.0	100.0	0.0	0.0	100.0	0.00	NM	NM
2019	1	150.0	80.5	81.0	11.5	74.8	155.8	0.14	1.07	NM
2020	2	230.0	110.7	187.2	72.9	58.9	246.1	0.66	1.19	NM
2021	3	250.0	76.4	179.0	6.8	74.1	253.1	0.09	1.06	NM
2022	1	50.0	5.0	45.0	0.0	5.0	50.0	0.00	0.99	NM
Total	8	780.0	272.6	592.3	91.2	212.7	804.9	0.33	1.11	NM



Illinois State Universities Retirement System Private Debt Program

Performance Analysis | As of March 31, 2022

Since Inception Performance Over Time



Horizon IRRs

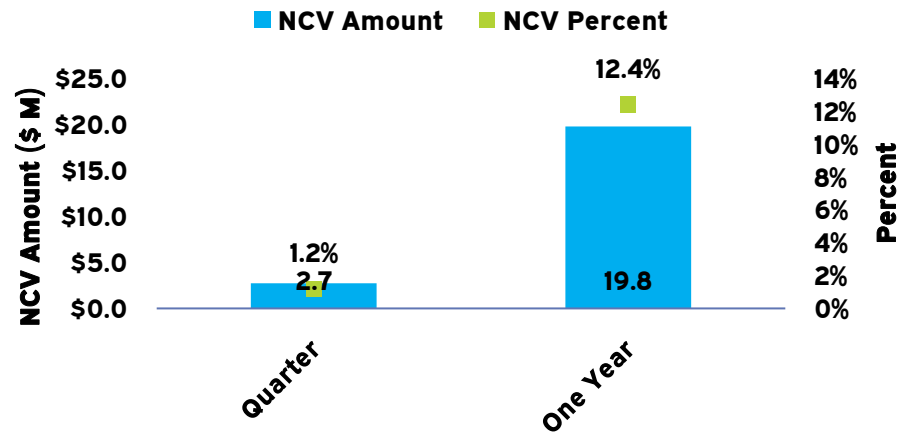
	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)	Since Inception (%)
Aggregate Portfolio	NM	NM	NM	NM	NM



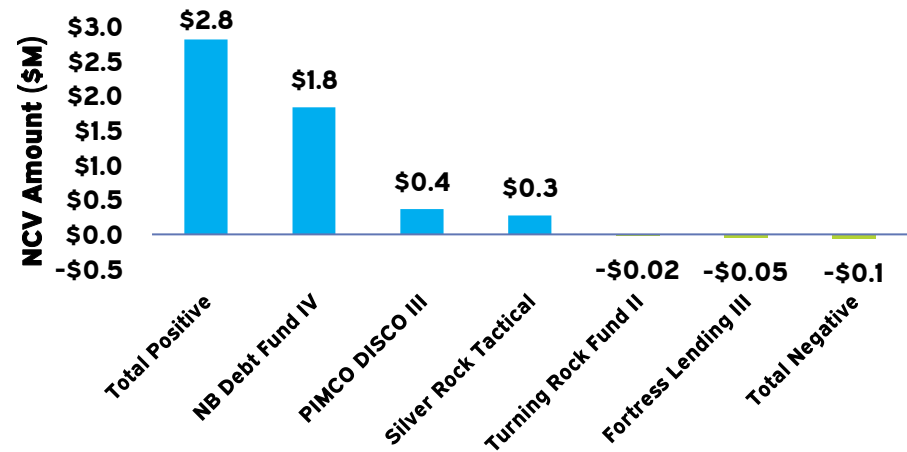
Illinois State Universities Retirement System Private Debt Program

Performance Analysis | As of March 31, 2022

Periodic NCV



1 Quarter Drivers Of NCV





Illinois State Universities Retirement System Private Debt Program

Performance Analysis | As of March 31, 2022

Fund Performance: Sorted By Vintage And Strategy

By Investment	Vintage	Strategy	Committed (\$ M)	Contributed (\$ M)	Unfunded (\$ M)	Distributed (\$ M)	Remaining Value (\$ M)	TVPI (X)	IRR (%)
Ares Pathfinder Core	Open-end	Specialty Lending	100.0	0.0	100.0	0.0	0.0	NM	NM
Silver Rock Tactical	2019	Special Situations	150.0	80.5	81.0	11.5	74.8	1.07	NM
PIMCO DISCO III	2020	Multi-Strategy	180.0	90.3	152.8	62.8	44.8	1.19	NM
Crayhill Fund II	2020	Specialty Lending	50.0	20.4	34.4	10.1	14.1	1.19	NM
NB Debt Fund IV	2021	Direct Lending	150.0	52.5	97.6	1.6	55.2	1.08	NM
Silver Rock Co-Invest	2021	Special Situations	50.0	13.0	42.2	5.1	8.0	1.01	NM
Turning Rock Fund II	2021	Special Situations	50.0	10.9	39.2	0.0	10.9	1.00	NM
Fortress Lending III	2022	Multi-Strategy	50.0	5.0	45.0	0.0	5.0	0.99	NM
Total			780.0	272.6	592.3	91.2	212.7	1.11	NM

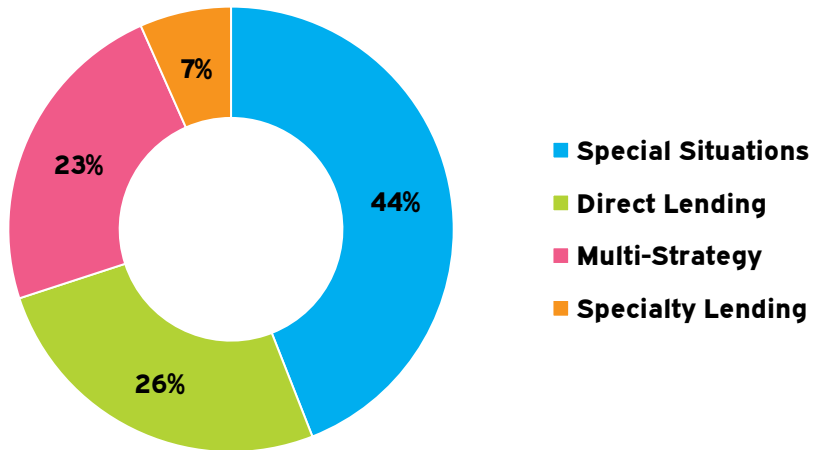


Illinois State Universities Retirement System Private Debt Program

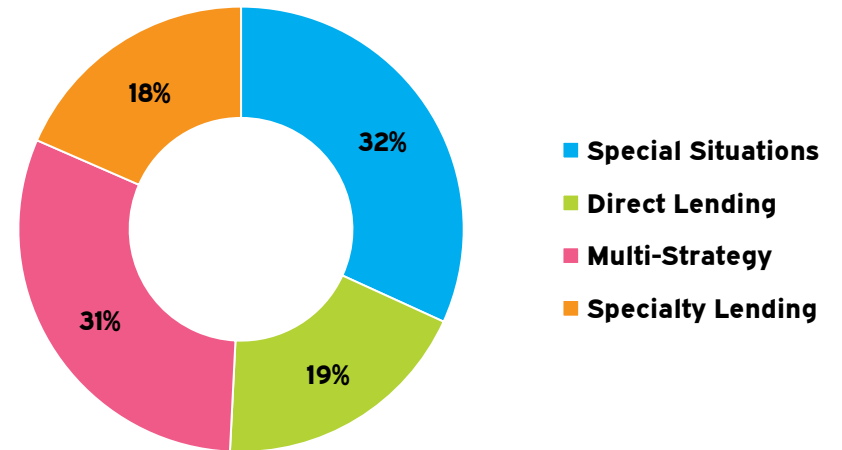
Fund Diversification | As of March 31, 2022

By Strategy

Percent of FMV



Percent of Exposure¹



¹ Represents sum of investor's Unfunded and Remaining Value.

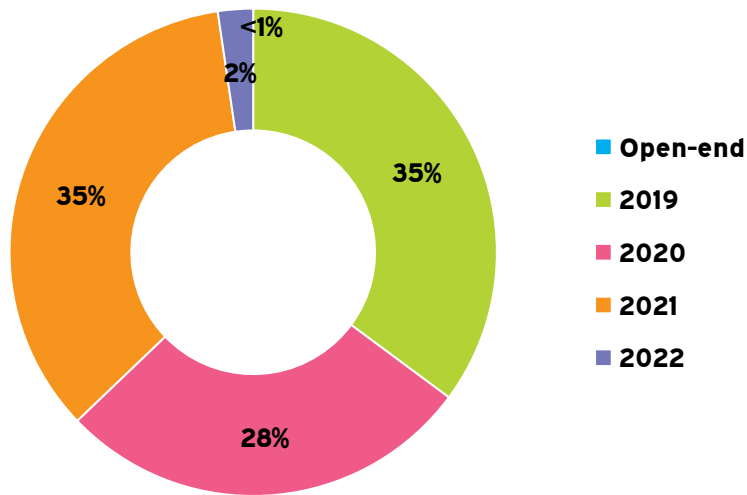


Illinois State Universities Retirement System Private Debt Program

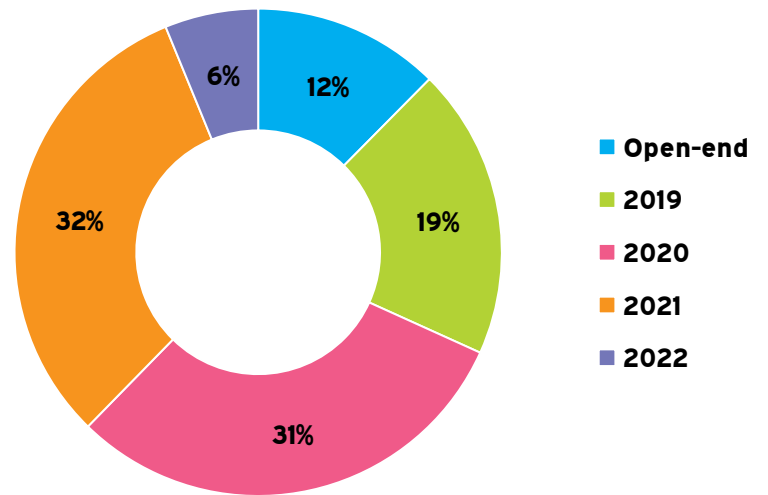
Fund Diversification | As of March 31, 2022

By Vintage

Percent of FMV



Percent of Exposure



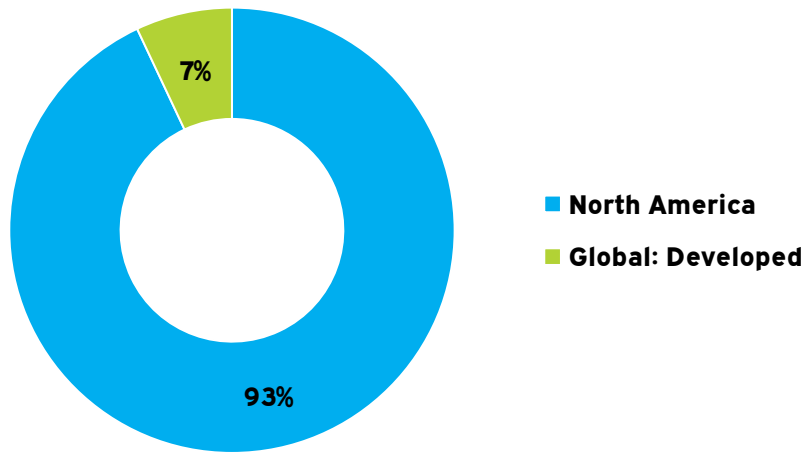


Illinois State Universities Retirement System Private Debt Program

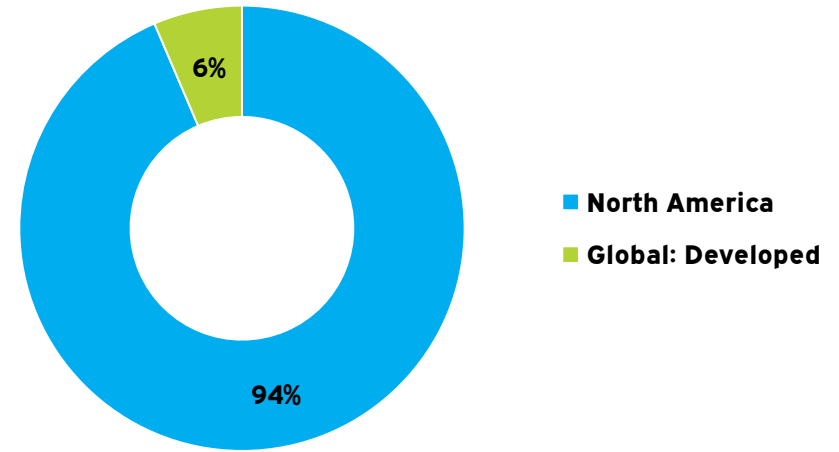
Fund Diversification | As of March 31, 2022

By Geographic Focus¹

Percent of FMV



Percent of Exposure



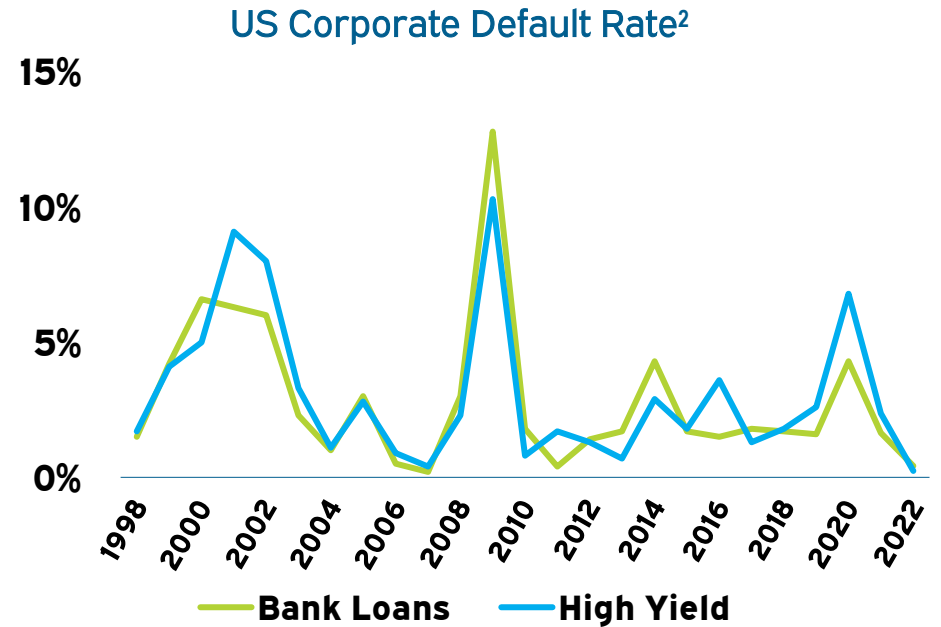
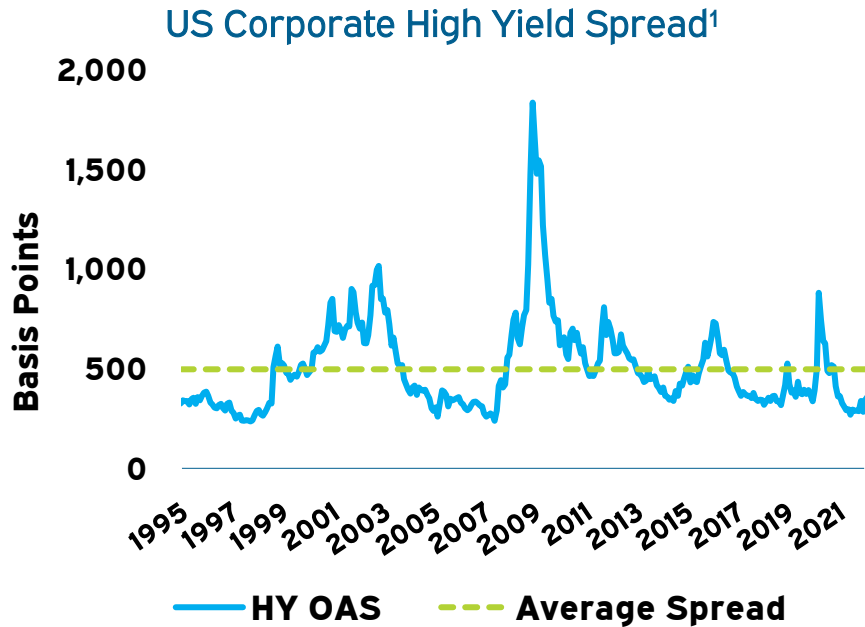
¹ Geography defined at the partnership level.



Illinois State Universities Retirement System Private Markets Program

Market & Industry Analysis | As of March 31, 2022

Private Debt



High spreads remained largely unchanged and default rates also remained muted through the end of Q1 2022. These metrics, however, belie the year-to-date tumult experienced in the broader fixed income markets following multiple interest rate hikes which were initiated by the Federal Reserve in March. Market expectations now are that corporate default rates will likely increase though year-end, although expectations are that default levels are unlikely to reach levels following the Global Financial Crisis.

¹ Source: Barclays Capital
² Source: JP Morgan

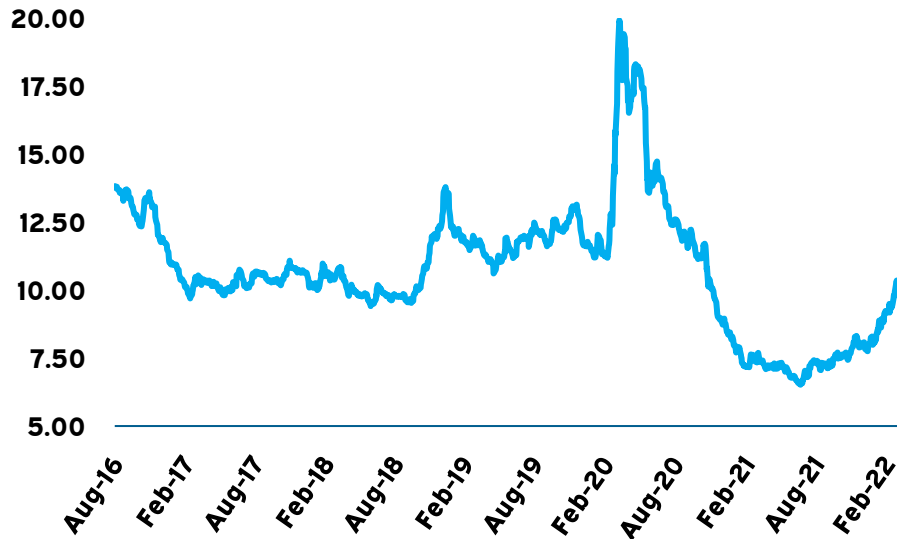


Illinois State Universities Retirement System Private Markets Program

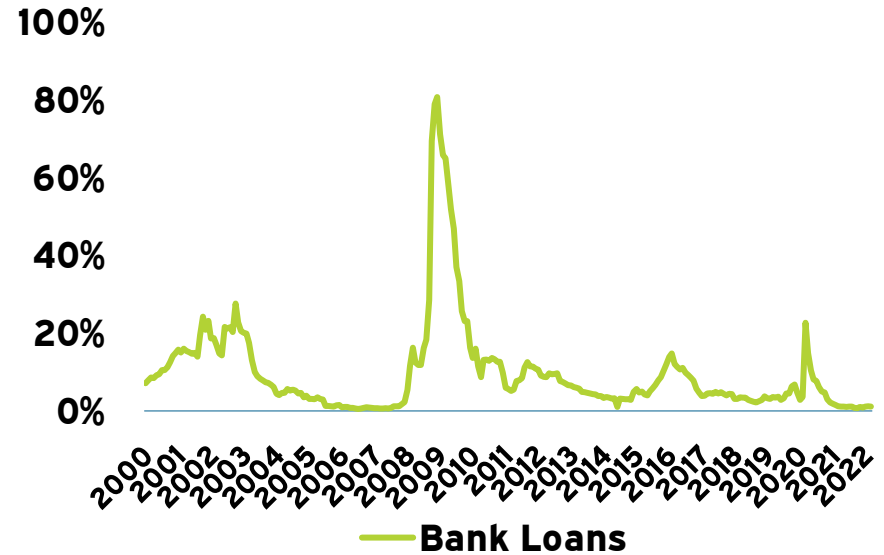
Market & Industry Analysis | As of March 31, 2022

Distressed & Opportunistic Debt

Lower Rated Debt Yield¹



Distressed Ratio²



The yields on lower rated debt continued to trend upward in Q1 2022, ending the quarter above 9%. Following quarter end yields continued to raise meaningfully and were over 2X as high as levels one year ago as of July 2022.

¹ Source: St. Louis FRED data

² Source: Bank Loans trading below \$80, Credit Suisse



Illinois State Universities Retirement System Private Debt Program

Endnotes | As of March 31, 2022

Below are details on specific terminology and calculation methodologies used throughout this report:

Committed	The original commitment amount made to a given fund. Some funds may be denominated in non-USD currencies, and such commitment amounts represent the sum of fund contributions translated to USD at their daily conversion rates plus the unfunded balance translated at the rate as of the date of this report.
Contributed	The amount of capital called by a fund manager against the commitment amount. Contributions may be used for new or follow-on investments, fees, and expenses, as outlined in each fund's limited partnership agreement. Some capital distributions from funds may reduce contributed capital balances. Some funds may be denominated in non-USD currencies, and such aggregate contributions represent the sum of each fund contribution translated to USD at its daily conversion rate.
Distributed	The amount of capital returned from a fund manager for returns of invested capital, profits, interest, and other investment related income. Some distributions may be subject to re-investment, as outlined in each fund's limited partnership agreement. Some funds may be denominated in non-USD currencies, and such aggregate distributions represent the sum of each fund distribution translated to USD at its daily conversion rate.
DPI	Acronym for "Distributed-to-Paid-In", which is a performance measurement for Private Market investments. The performance calculation equals Distributed divided by Contributed. DPIs for funds and groupings of funds are net of all fund fees and expenses as reported to by fund managers to Meketa.
Exposure	Represents the sum of the investor's Unfunded and Remaining Value.
IRR	Acronym for "Internal Rate of Return", which is a performance measurement for Private Market investments. IRRs are calculated by Meketa based on daily cash flows and Remaining Values as of the date of this report. IRRs for funds and groupings of funds are net of all fund fees and expenses as reported by fund managers to Meketa.
NCV	Acronym for "Net Change in Value", which is a performance measurement for Private Market investments. The performance calculation equals the appreciation or depreciation over a time period neutralized for the impact of cash flows that occurred during the time period.
NM	Acronym for "Not Meaningful", which indicates that a performance calculation is based on data over too short a timeframe to yet be meaningful or not yet possible due to inadequate data. Meketa begins reporting IRR calculations for investments once they have reached more than two years since first capital call. NM is also used within this report in uncommon cases where the manager has reported a negative Remaining Value for an investment.



Illinois State Universities Retirement System Private Debt Program

Endnotes | As of March 31, 2022

Peer Universe	<p>The performance for a set of comparable private market funds. The peer returns used in this report are provided by Preqin, based on data as of the date of this report. Fund-level peer performance represents the median return for a set of funds of the same vintage and the program's set of corresponding strategies across all regions globally. Data sets that include less than five funds display performance as "NM". Meketa utilizes the following Preqin strategies for peer universes:</p> <p>Private Credit: Private Debt</p>
Public Market Equivalent ("PME")	<p>A calculation methodology that seeks to compare the performance of a portfolio of private market investments with public market indices. The figures presented in this report are based on the PME+ framework, which represents a net IRR value based on the actual timing and size of the private market program's daily cash flows and the daily appreciation or depreciation of an equivalent public market index. Meketa utilizes the following indices for private market program PME+ calculations:</p> <p>Private Debt: 50% BB Global High Yield + 50% S&P LSTA Global Leveraged Loan +1%</p>
Remaining Value	<p>The investor's value as reported by a fund manager on the investor's capital account statement. All investor values in this report are as of the date of this report, unless otherwise noted. Some funds may be denominated in non-USD currencies, and such remaining values represent the fund's local currency value translated to USD at the rate as of the date of this report.</p>
TVPI	<p>Acronym for "Total Value-to-Paid-In", which is a performance measurement for Private Market investments. The performance calculations represents Distributed plus Remaining Value, then divided by Contributed. TVPIs for funds and groupings of funds are net of all fund fees and expenses as reported to by fund managers to Meketa.</p>
Unfunded	<p>The remaining balance of capital that a fund manager has yet to call against a commitment amount. Meketa updates unfunded balances for funds to reflect all information provided by fund managers provided in their cash flow notices. Some funds may be denominated in non-USD currencies, and such unfunded balances represent the fund's local currency unfunded balance translated to USD at the rate as of the date of this report.</p>



Illinois State Universities Retirement System Private Debt Program

Disclaimer | As of March 31, 2022

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Meketa Investment Group has prepared this report on the basis of sources believed to be reliable. The data are based on matters as they are known as of the date of preparation of the report, and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available.

If we manage your assets on a discretionary basis, please contact us if there are any changes in your financial situation or investment objectives, or if you want to impose any reasonable restrictions on our management of your account or reasonably modify existing restrictions.

In general, the valuation numbers presented in this report are prepared by the custodian bank for listed securities, and by the fund manager or appropriate General Partner in the case of unlisted securities. The data used in the market comparison sections of this report are sourced from various databases. These data are continuously updated and are subject to change.

This report does not contain all the information necessary to fully evaluate the potential risks of any of the investments described herein. Because of inherent uncertainties involved in the valuations of investments that are not publicly traded, any estimated fair values shown in this report may differ significantly from the values that would have been used had a ready market for the underlying securities existed, and the differences could be material.

This document may contain certain forward-looking statements, forecasts, estimates, projections, and opinions ("Forward Statements"). No representation is made or will be made that any Forward Statements will be achieved or will prove to be correct. A number of factors, in addition to any risk factors stated in this material, could cause actual future results to vary materially from the Forward Statements. No representation is given that the assumptions disclosed in this document upon which Forward Statements may be based are reasonable. There can be no assurance that the investment strategy or objective of any fund or investment will be achieved, or that the client will receive a return of the amount invested.

In some cases Meketa Investment Group assists the client in handling capital calls or asset transfers among investment managers. In these cases we do not make any representations as to the managers' use of the funds, but do confirm that the capital called or transferred is within the amounts authorized by the client.

Because there is no readily accessible market for private markets assets (companies and partnerships), the values placed on private markets assets are calculated by General Partners using conservative and industry standard pricing procedures. Annually, an independent auditor reviews the pricing procedures employed by the General Partner of each partnership.

The values of companies and partnerships are audited at year-end, and are not audited at other quarter-end periods. While financial information may be audited, there is some discretion as to the method employed to price private companies and, therefore, private markets partnerships. At all times, Meketa Investment Group expects General Partners to utilize conservative and industry standard pricing procedures, and requires the General Partners to disclose those procedures in their reports. However, because of the inherent uncertainty of valuation, these estimated values may differ from the values that would be used if a ready market for the investments existed, and the differences could be significant.

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
2ND QUARTER, 2022

DEFINED CONTRIBUTION

QUARTERLY REVIEW

CAPTRUST

40 Wall Street, 56th Floor
New York, NY 10005

Our mission is to enrich the lives of our clients, colleagues and communities through sound financial advice, integrity, and a commitment to service beyond expectation.



**SURS Retirement Savings Plan
SURS Deferred Compensation Plan**

2nd Quarter, 2022 Quarterly Review

Executive Summary

Section 1

RETIREMENT INDUSTRY UPDATES

Section 2

MARKET COMMENTARY AND REVIEW

Section 3

PLAN INVESTMENT REVIEW

Section 4

INACTIVE PLAN REVIEW

Section 5

FUND FACT SHEETS

Appendix



EXECUTIVE SUMMARY | PROGRAM OVERVIEW

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

	RETIREMENT SAVINGS PLAN (RSP)	DEFERRED COMPENSATION PLAN (DCP)
Total Program Assets	\$3,293,913,264 (-17% YTD)	\$8,053,527 (+166% YTD)
Voya Assets	\$2,949,465,277	\$8,053,527
Frozen Assets - TIAA	\$344,447,989	N/A
Program Expense Overview		
Voya Recordkeeping Fee / Benchmark ¹	\$30 annual fee per participant (\$7.50/quarter) / \$40.74	
Investment Weighted Average Expense	0.35% (excluding the Voya Fixed Account) 0.11% (excluding the Secure Income Portfolio)	
Lifetime Income Strategy Overview		
Total LIS Participants	20,413	1,337
Total SIP Participants	5,925	227
Activated Participants (Quarter/Inception)	15 / 150	0 / 0
Avg Activated GLWB % (Quarter/Inception)	3.04% / 3.07%	0.00% / 0.00%
Investment Watchlist	<ul style="list-style-type: none"> Janus Henderson Small-Mid Cap Value N (JVSNX) - Pending Replacement 	

¹Based on the 2019 NAGDCA Perspectives in Practice Survey Report for the average annual recordkeeping expense paid by participants in plans with assets over \$2.25B. Survey results include responses from 23 plans with assets over \$2.25B.



EXECUTIVE SUMMARY | 2022 FIDUCIARY CALENDAR

Period Ending 6.30.22 | Q2 22

Review Period	4Q 2021 (February/March)	1Q 2022 (May/June)	2Q 2022 (August/September)	3Q 2022 (November/December)
Standard Topics	<ul style="list-style-type: none"> Industry & Regulatory Trends Fiduciary Training Plan Assets/Allocation Market Update & Investment Analysis 	<ul style="list-style-type: none"> Industry & Regulatory Trends Fiduciary Training Plan Assets/Allocation Market Update & Investment Analysis 	<ul style="list-style-type: none"> Industry & Regulatory Trends Fiduciary Training Plan Assets/Allocation Market Update & Investment Analysis 	<ul style="list-style-type: none"> Industry & Regulatory Trends Fiduciary Training Plan Assets/Allocation Market Update & Investment Analysis
Additional Fiduciary and Educational Topics	<ul style="list-style-type: none"> Fiduciary Document Review <ul style="list-style-type: none"> Investment Policy Statement Committee Charter, as needed Plan Fee Review <ul style="list-style-type: none"> Fee Allocation Philosophy Recordkeeper Fee Benchmarking Annual Summary Report 	<ul style="list-style-type: none"> Investment Menu Review <ul style="list-style-type: none"> Investment Structure Review Investment Expense & Share Class Evaluation SMID Value Asset Class Fund Alternatives 	<ul style="list-style-type: none"> Default Investment Option Evaluation (SURS Lifetime Income Strategy) with Alliance Bernstein 	<ul style="list-style-type: none"> Plan Expense Account Review Recordkeeper Due Diligence <ul style="list-style-type: none"> Plan and Participant Engagement Review Cybersecurity Review and Update Missing Participant Procedure Review Small Balance Cash-outs and RMDs Advisor Year End Disclosures and Certifications

Review Period	Every 1-3 Years (or as needed)	Ad Hoc
Topics	<ul style="list-style-type: none"> Investment Menu Architecture <ul style="list-style-type: none"> Target Date Evaluation (SURS Lifetime Income Strategy) Capital Preservation / Income Solutions Review Comprehensive Fiduciary Training Review 3(38) Investment Manager or 3(21) Investment Advisor Models 	<ul style="list-style-type: none"> New Committee Member Onboarding and Fiduciary Training Recordkeeper RFI/RFP (every 5-7 years) Plan Design Benchmarking Plan Document/Design Changes



SECTION 1: RETIREMENT INDUSTRY UPDATES

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

SECTION 1: RETIREMENT INDUSTRY UPDATES

Industry Updates.....



FIDUCIARY UPDATE

Retirement plan fiduciaries should be mindful of the following items this summer: mandatory arbitration provisions and the use of participant data for non-retirement plan purposes.



MANDATORY ARBITRATION

Some plans include mandatory arbitration clauses to help avoid class-action retirement plan litigation. However, courts are currently split over the enforceability of these provisions in ERISA-covered plans.

Plan sponsors should consider these action items:

- Discuss with retirement plan counsel whether mandatory arbitration and other litigation defense provisions—like class action waivers, venue provisions, and limitation periods—are appropriate in the plan document.
- If appropriate, determine whether your plan document can be amended. Some vendor preapproved documents may not accommodate these provisions and could necessitate an individually designed plan.



PARTICIPANT DATA

A recent topic in retirement plan litigation is whether participant data is considered a plan asset under ERISA. Plaintiffs' attorneys have successfully incorporated restrictions on its use in several lawsuit settlements. However, a few courts have ruled that participant data is not a plan asset. ERISA is silent on the issue.

As more recordkeepers use participant data to market products and services to participants, plan sponsors should take the following steps:

- Understand how your recordkeeper is using participant data.
- Discuss the need for any restrictions on the use of participant data in recordkeeping agreements with plan counsel.

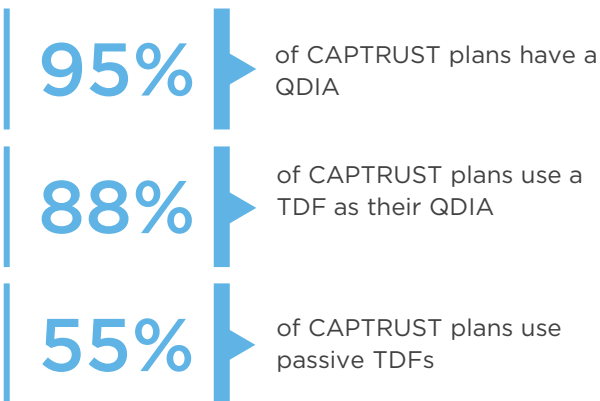
WHAT'S NEXT FOR QDIA?

Following the Pension Protection Act (PPA) in 2006, qualified default investment alternatives (QDIA) and target-date funds (TDFs) became core retirement plan offerings. Fifteen years later, plan sponsors should reassess and understand what's next for QDIAs.

HISTORY OF QDIA

QDIA regulations were issued to encourage the use of autoenrollment features among plan sponsors.

The final regulations allow four types of QDIAs—a lifecycle or target date fund, a professionally managed account, a risk-based fund, or a capital preservation product (with restrictions).¹

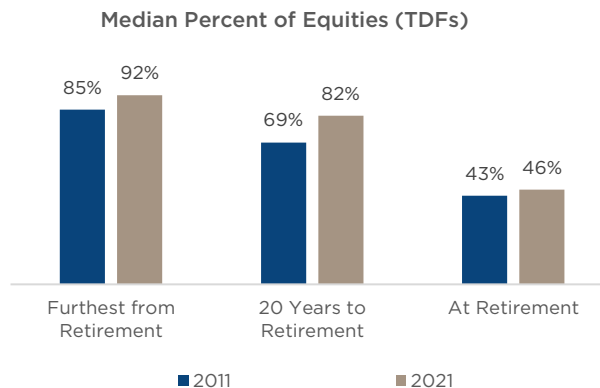


EVOLUTION OF TDFs

Collective investment trust (CIT) strategies made up 86% of all target-date net inflows in 2021 and will soon overtake mutual funds as the most popular target-date vehicle.

The average asset-weighted fee for TDFs was 0.34% in 2021, down from 0.51% five years ago.

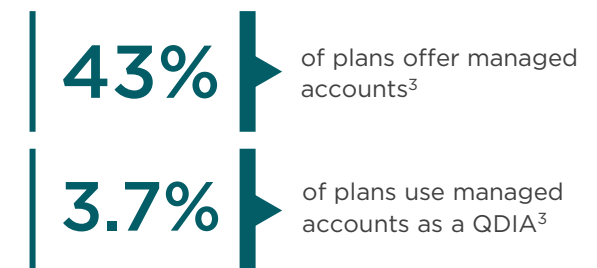
Target-date strategies have adopted more equity-heavy and more gradual glidepaths over the last ten years.²



WHAT'S NEXT?

Managed Accounts - The next generation of QDIA is likely to be a hybrid of TDFs for younger employees and managed accounts for those closer to retirement who may benefit from more customized portfolios. A future state could also incorporate guaranteed annuities.

Target-Date Funds - Some TDF managers have altered their series to be more retirement income-friendly, offering different landing points at retirement, incorporating guaranteed annuities into the glidepath, or launching new series altogether.



¹United States, Department of Labor. "Default Investment Alternatives Under Participant Directed Individual Account Plans." 72 FR 60452

²Morningstar, "Target Date Strategy Landscape" 2022

³Plan Sponsor Council of America's 64th Annual Survey of Profit Sharing and 401(k) Plans, PSCA

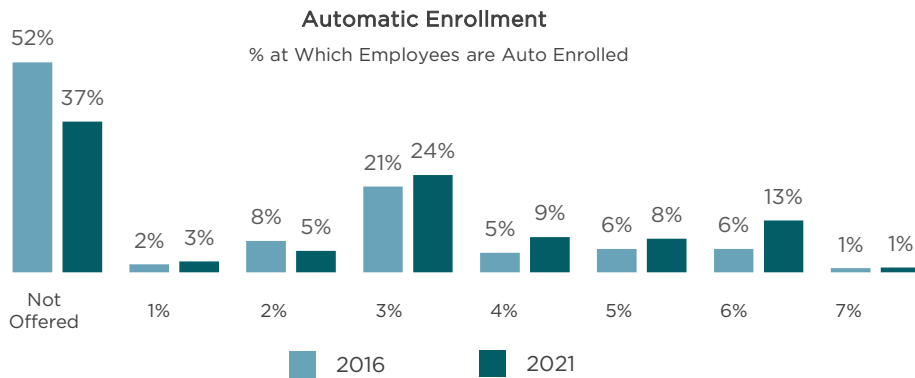


CAPTRUST PLAN DESIGN REVIEW: THEN VS. NOW (>\$250M)

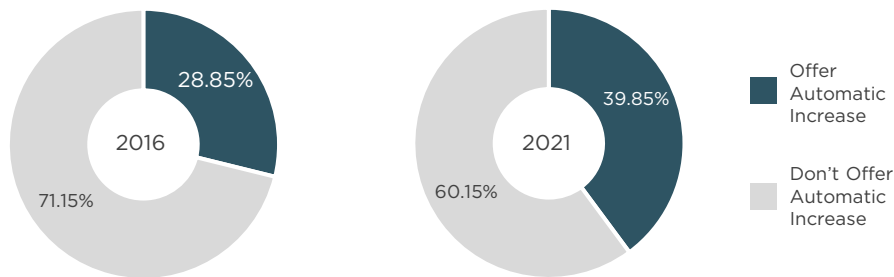
CAPTRUST has gathered and maintained plan design benchmarking information for clients since 2016. Here we take a five-year look-back on what's changed for plan sponsors over that time period.

PLAN AUTOMATION

Plan automation features are an effective way to increase plan participation and increase employee contributions over time.

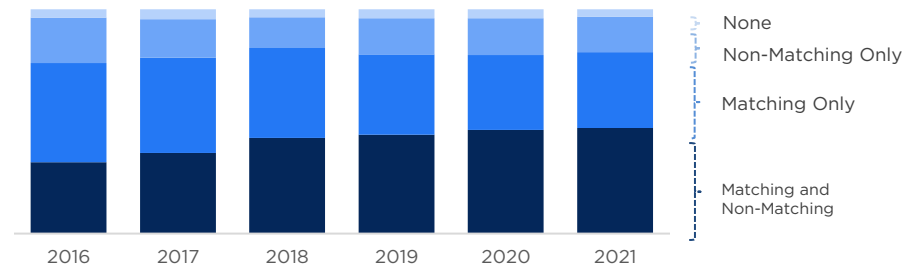


Automatic Annual Increase (% of Plans)



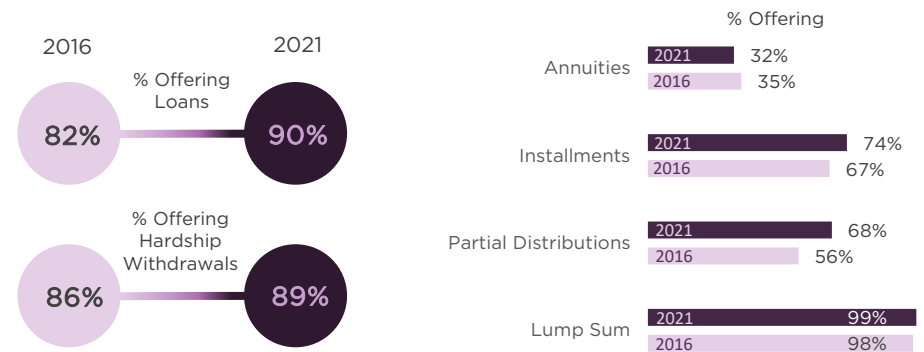
EMPLOYER CONTRIBUTION TYPES

Employer contributions vary by plan and are a benefit provided to employees.



DISTRIBUTION OPTIONS

Distribution options define how participants can withdraw money from the plan.



The CAPTRUST Plan Design Survey includes 401(k), 403(b), 401(a), and profit-sharing plans (PSP). The data reflects plans with \$250 million or more in plan assets based on the following plan count—2016: 104, 2017: 134, 2018: 167, 2019: 173, 2020: 195, 2021: 266.



FIDUCIARY TRAINING - CONDUCTING A COMPLIANCE SELF-REVIEW

Fiduciary training is a critical part of being a fiduciary and a way to minimize risk through education and governance. The DOL views this as an important element to managing a retirement plan and frequently looks for evidence of formal training during plan investigations. A good fiduciary curriculum covers a range of topics—from an overview of ERISA to best practices for monitoring investments. In this installment, we cover the importance of an annual compliance review.

IMPLEMENTING AN ANNUAL COMPLIANCE REVIEW

An annual compliance review process can help minimize risk and create operational efficiency. To begin, compile a plan documentation file with the following information:

Required Plan Documents:

- Plan Document
- Elective and mandatory plan amendments and related projects
- Summary Plan Description

Fiduciary Guidance and Governance Documents:

- Investment policy statement (IPS)
- Investment reports, benchmarking, and meeting minutes
- Bylaws or charters (if used)

Government Reporting:

- Form 5500 and audit (if applicable)
- Summary Annual Report

Once established, the file should be reviewed and updated with current compliance results or updated plan documents and amendments.

An annual compliance checkup can highlight weaknesses or misalignments in the plan, allowing plan sponsors to make corrections before larger deficiencies emerge. Maintaining an updated file also prepares plan sponsors in the event of an IRS or DOL audit.

PLAN SPONSOR ACTIONS

Work with your CAPTRUST advisor to ensure CAPTRUST Direct (or another document repository) is up-to-date with recent plan documents, contracts, and amendments.



SECTION 2: MARKET COMMENTARY AND REVIEW

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

SECTION 2: MARKET COMMENTARY AND REVIEW

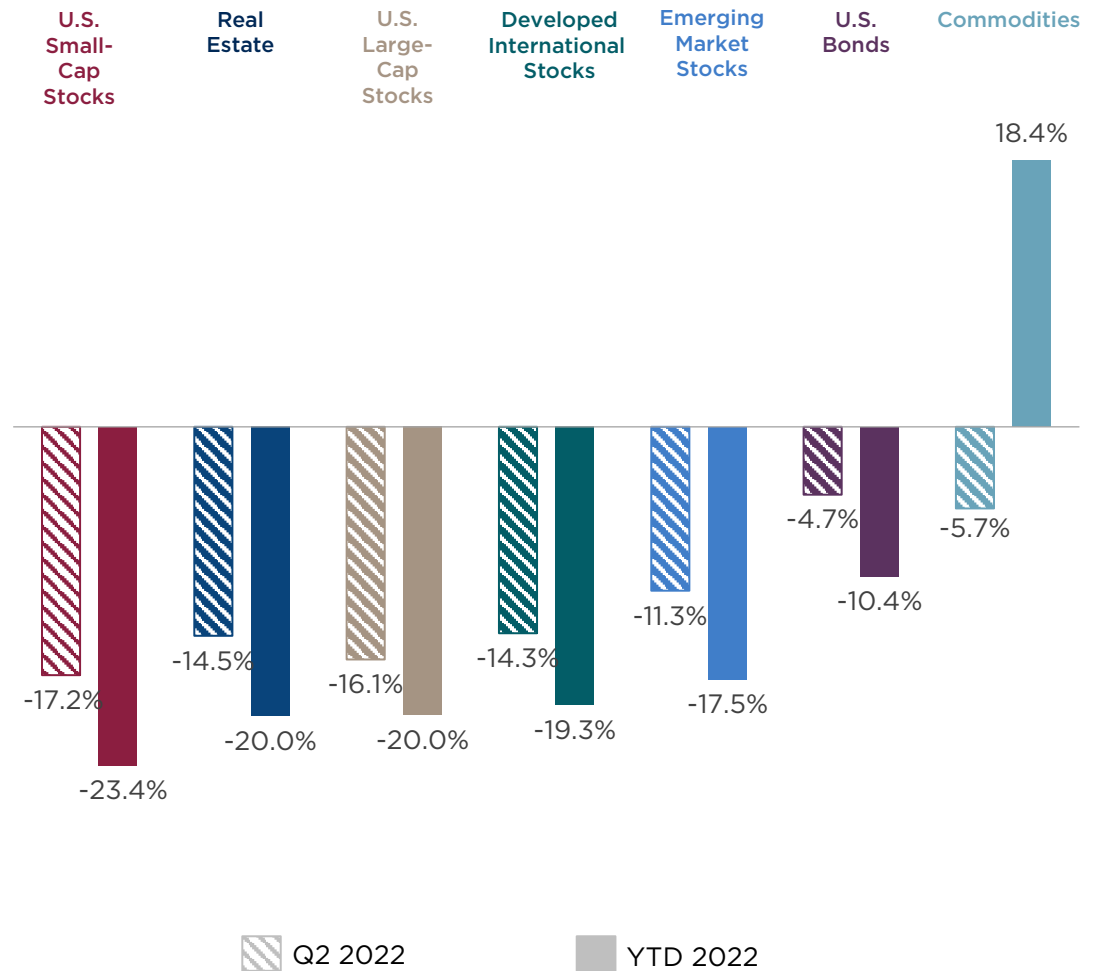
- Market Commentary.....
- Market Review.....
- Asset Class Returns.....
- Index Performance.....



TENSE TIMES TURN TO TOUGH TIMES

As the uncertainty that surrounded the start of 2022 began to clear, investors realized the tense times were likely to be followed by more difficult times going forward. The result was a broad-based repricing of risk, sending stocks and bonds lower during the second quarter.

- U.S. large-cap stocks posted double-digit declines for the period and briefly entered bear market territory in early June. Despite a late-quarter bounce, they ended the second quarter down more than 16%, bringing their year-to-date losses to 20%.
- International stocks fared modestly better than their domestic counterparts. However, the dollar's continued strength offset this relative advantage.
- After their best quarter since 1990, commodities weakened in the second quarter. Ongoing inflation pressures were offset by increasing economic growth concerns. Despite this second quarter breather, commodities have been the outlier during the global market pullback in the first half of 2022.
- Bond prices remained under pressure as interest rates continued their ascent. For the quarter, the Bloomberg U.S. Aggregate Bond Index lost another 4.7%, bringing its decline to 10.3% at mid-year.



Asset class returns are represented by the following indexes: Bloomberg U.S. Aggregate Bond Index (U.S. bonds), S&P 500 Index (U.S. large-cap stocks), Russell 2000® (U.S. small-cap stocks), MSCI EAFE Index (international developed market stocks), MSCI Emerging Market Index (emerging market stocks), Dow Jones U.S. Real Estate Index (real estate), and Bloomberg Commodity Index (commodities).



DIGGING DEEPER: STOCKS AND BONDS

Equities

	Q2 2022	YTD 2022	Last 12 Months
U.S. Stocks	-16.1%	-20.0%	-10.6%
• Q2 Best Sector: Consumer Staples	-4.6%	-5.6%	6.7%
• Q2 Worst Sector: Consumer Discretionary	-26.2%	-32.8%	-24.2%
International Stocks	-14.3%	-19.3%	-17.3%
Emerging Market Stocks	-11.3%	-17.5%	-25.0%

Fixed Income

	6.30.22	3.31.22	6.30.21
1-Year U.S. Treasury Yield	2.80%	1.63%	0.07%
10-Year U.S. Treasury Yield	2.98%	2.32%	1.45%
	QTD 2022	YTD 2022	Last 12 Months
10-Year U.S. Treasury Total Return	-5.20%	-11.71%	-11.18%

Equities – Relative Performance by Market Capitalization and Style

	Q2 2022			YTD 2022			Last 12 Months				
	Value	Blend	Growth	Value	Blend	Growth	Value	Blend	Growth		
Large	-12.2%	-16.1%	-20.9%	Large	-12.9%	-20.0%	-28.1%	Large	-6.8%	-10.6%	-18.8%
Mid	-14.7%	-16.8%	-21.1%	Mid	-16.2%	-21.6%	-31.0%	Mid	-10.0%	-17.3%	-29.6%
Small	-15.3%	-17.2%	-19.3%	Small	-17.3%	-23.4%	-29.5%	Small	-16.3%	-25.2%	-33.4%

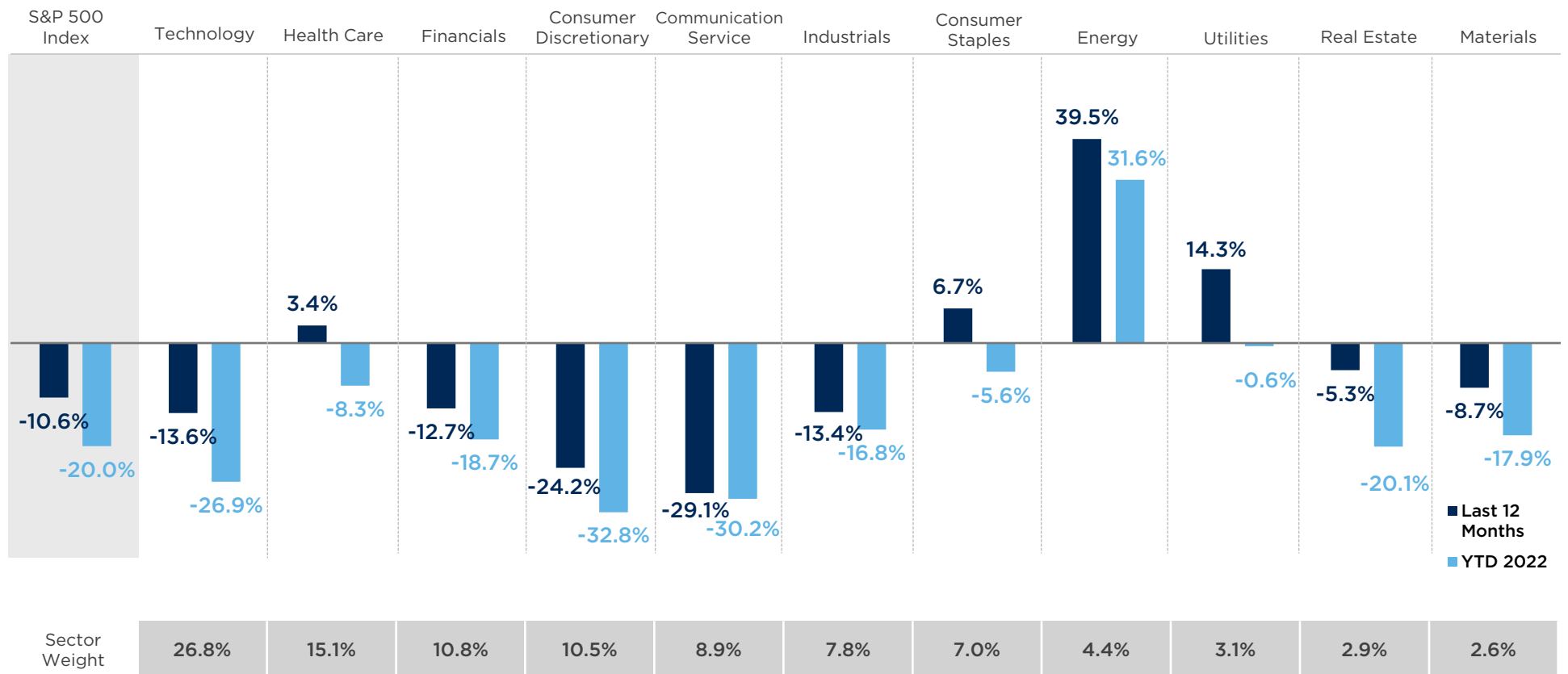
Sources: Bloomberg, U.S. Treasury. Asset class returns are represented by the following indexes: S&P 500 Index (U.S. stocks), MSCI EAFE Index (international developed market stocks), and MSCI Emerging Markets Index (emerging market stocks). Relative performance by market capitalization and style is based upon the Russell US Style Indexes except for large-cap blend, which is based upon the S&P 500 Index.



DIGGING DEEPER: U.S. EQUITY MARKETS

The S&P 500 Index is a market-capitalization-weighted index of U.S. large-cap stocks across a diverse set of industry sectors. The stocks represented in these 11 sectors generated a range of returns for the last 12 months and year to date.

Returns by S&P 500 Sector



Source: Bloomberg. All calculations are cumulative, not annualized, total returns and include dividends for the stated period. Past performance is not indicative of future returns.



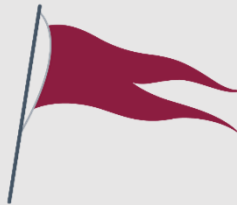
ECONOMIC OUTLOOK

Inflation and recession, two economic challenges that require opposite monetary policy responses, are top of mind for investors. Navigating these opposing paths requires the Federal Reserve to adapt to changing economic data while maintaining transparency to minimize the risk of a policy surprise. Fed policy makers will also need to be lucky enough to clear the supply constraints monetary policy cannot control.

HEADWINDS

Inflation-Fighting Hurdles

- The Federal Reserve continues to be challenged with a moving inflation target as the Russia-Ukraine conflict and global COVID-19 outbreaks compound domestic challenges.
- The Fed has minimal policy tools to combat supply-driven inflation and risks overtightening to bring aggregate demand down to constrained supply levels.



Consumer Spending Under Pressure

- Shifting budgets—Food and energy are taking a greater share of consumers' cash flow. So far, the impact has been limited, but credit card balances are climbing, and the personal savings rate has reached lows not seen since 2008.
- Housing affordability—Rising mortgage rates have increased the monthly payment on the median home by more than 55% in 2022 as the Fed attempts to cool an overheated housing market.
- Negative wealth effect—With stocks and bonds both down double-digits year to date, consumer balance sheets have taken a hit. Will home equity be next?

TAILWINDS

More Attractive Valuations

- While index valuations are in line with longer-term averages, more than 500 companies in the Russell 3000® are trading at forward price-to-earnings ratios below 10x. Historically, this breadth of cheapness has been a rewarding entry point for stock investors.



Strong Profitability Outlook

- Despite an increasing number of forecasts by analysts projecting a recession, estimates for corporate revenue and earnings continue to climb for 2022 and 2023.
- Another potential driver of corporate earnings-per-share growth is the accelerated pace of record-setting stock buyback programs.

Low Expectations

- Both consumer and investor sentiment are near all-time lows. These often-cited data points have proven to be a sound contrarian indicator as excess pessimism gets priced into markets. These low expectations set the stage for positive surprises.

The potential range of future outcomes has narrowed slightly, but monetary policy risks remain high. The initial phase of equity market weakness focused on prices and valuations. However, with rising recession fears, corporate earnings are now in the spotlight.

INFLATION-FIGHTING HURDLES

The Federal Reserve is fighting the inflation battle with an ill-equipped arsenal. Monetary policy is designed to influence aggregate demand to ease inflation pressures, but much of today’s inflation has been driven by constrained supply.

Estimated Impact to Consumer Price Index (CPI) – May 2022

41%

Geopolitical Tensions

The Russian invasion of Ukraine has shocked energy and agriculture prices.

24%

COVID-19 Pandemic

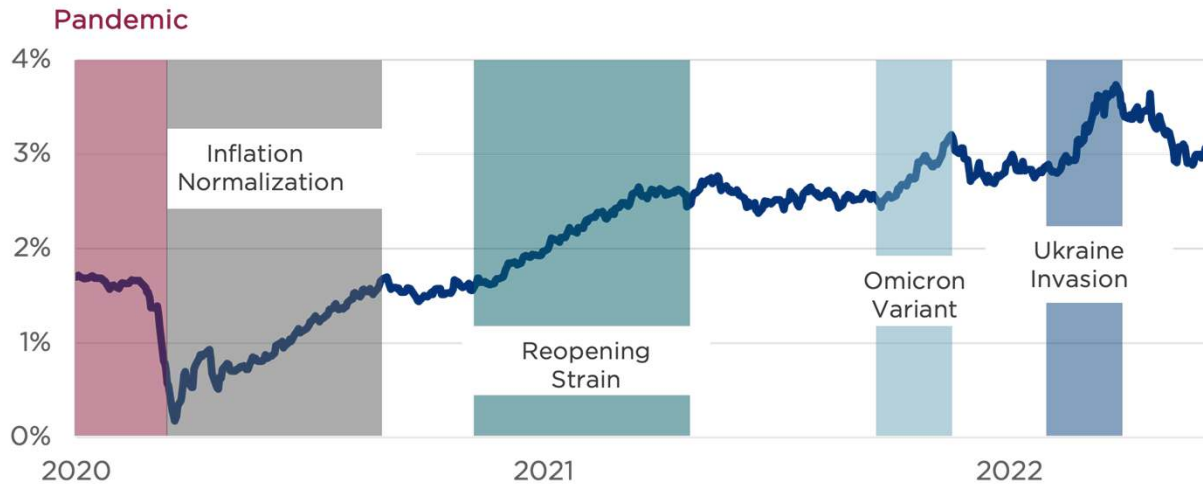
Pandemic effects include supply-chain disruptions, reopening effects, and labor market dynamics.

35%

Demand-Driven Inflation

This includes all other categories such as vehicles, apparel, shelter, transportation, medical care, etc.

Inflation Waves: Five-Year Inflation Expectations



OBSERVATIONS

- Approximately 65% of recent CPI increases have an element of constrained supply as a contributor to inflation pressures, dulling the potential impact of monetary policy actions.
- The Fed initially argued that inflation pressures were transient and would quickly subside. However, as the chart to the left reflects, with each sign of inflation rolling over, a new wave of supply constraints pushed inflation and inflation expectations higher.

Sources: U.S. Bureau of Labor Statistics, Moody’s Analytics, Bloomberg, CAPTRUST Research; Data as of 6.10.2022.



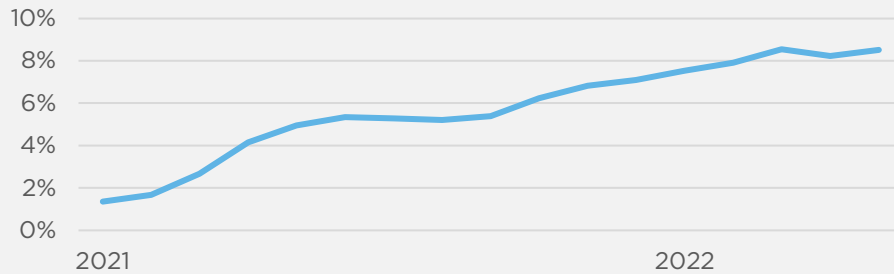
TIPS AND INFLATION

Treasury inflation-protected securities (TIPS) are bonds issued by the United States Treasury intended to offset the negative impacts of inflation on fixed income yields. TIPS funds offer an efficient way to access a diversified portfolio of TIPS bonds. But how effectively do they track inflation?

INFLATION

Rising inflation increases the principal value of TIPS bonds.

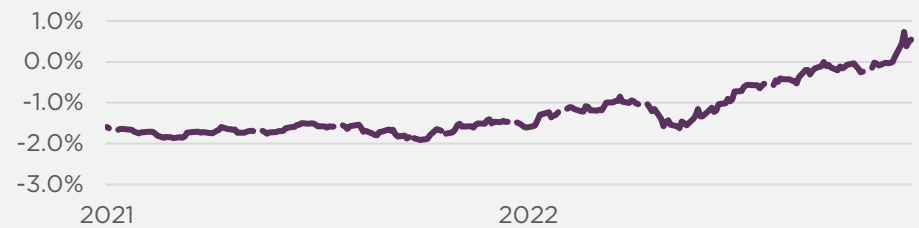
Year-Over-Year Inflation Change



YIELDS

As with other fixed income securities, TIPS have an inverse relationship between yield and market value.

Yield: 5-Year TIPS



Despite historically high levels of inflation, TIPS mutual funds and ETFs—as represented by Morningstar’s peer universe—are down 6.8% through 06.30.22. Increasing yields on newly issued TIPS have driven down the value of TIPS currently held by inflation-protected bond managers. However, rising inflation has made TIPS appealing relative to intermediate core and intermediate core-plus bond strategies.

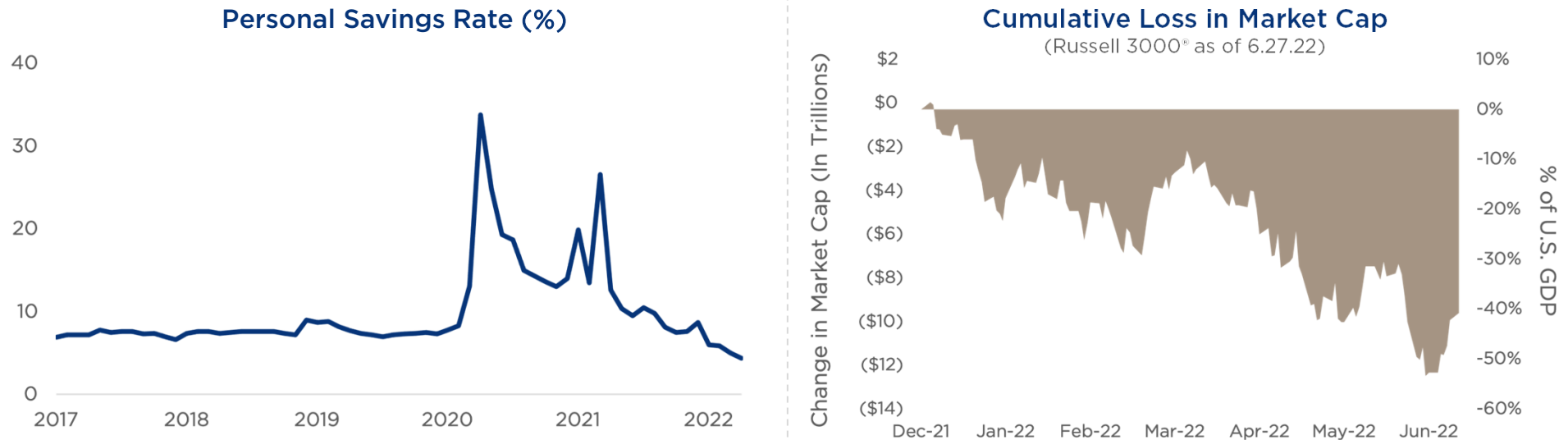
Name	Quarter	YTD	1-Year	3-Year	5-Year	10-Year
Morningstar U.S. Inflation-Protected Bond Universe	-5.12	-6.81	-3.79	2.82	2.85	1.39
Morningstar U.S. Intermediate Core Bond	-5.51	-10.91	-11.10	-0.73	0.94	1.91
Morningstar U.S. Intermediate Core-Plus Bond	-4.93	-10.53	-10.74	-1.00	0.72	1.47

Sources: Morningstar Direct, Federal Reserve Economic Data (FRED)



NEGATIVE WEALTH EFFECT

While the Federal Reserve's direct policies dominate the headlines, the secondary effect that influences consumer wealth can be equally impactful to economic activity. With stocks and bonds both down double-digits, consumer balance sheets have taken a hit. Will home equity be next?



OBSERVATIONS

- The personal savings rate, which peaked during the height of the COVID-19 pandemic, has fallen to lows not seen since the financial crisis in 2008 and 2009.
- The value of the U.S. equity market, as defined by the Russell 3000® Index, has contracted more than \$9 trillion in 2022, or approximately 40% of U.S. gross domestic product (GDP). Additionally, when the double-digit losses in bonds and cryptocurrency are included, the cumulative amount of investment losses easily exceeds 50% of GDP.
- While consumers have not materially changed spending patterns yet, this level of wealth destruction will inevitably ripple through spending activity and could accelerate if housing values come under pressure.

Sources: Federal Reserve Bank of St. Louis, Bloomberg, CAPTRUST Research

ASSET CLASS RETURNS

Period Ending 6.30.22 | Q2 22

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD 2022
Mid-Cap Growth 46.29%	Small-Cap Growth 29.09%	Fixed Income 7.84%	Mid-Cap Value 18.51%	Small-Cap Growth 43.30%	Mid-Cap Value 14.75%	Large-Cap Growth 5.67%	Small-Cap Value 31.74%	Large-Cap Growth 30.21%	Cash 1.87%	Large-Cap Growth 36.39%	Large-Cap Growth 38.49%	Mid-Cap Value 28.34%	Cash 0.14%
Large-Cap Growth 37.21%	Mid-Cap Growth 26.38%	Large-Cap Growth 2.64%	Small-Cap Value 18.05%	Mid-Cap Growth 35.74%	Large-Cap Value 13.45%	Fixed Income 0.55%	Mid-Cap Value 20.00%	International Equities 25.62%	Fixed Income 0.01%	Mid-Cap Growth 35.47%	Mid-Cap Growth 35.59%	Small-Cap Value 28.27%	Fixed Income -10.35%
Small-Cap Growth 34.47%	Mid-Cap Value 24.75%	Large-Cap Value 0.39%	International Equities 17.90%	Small-Cap Value 34.52%	Large-Cap Growth 13.05%	Cash 0.05%	Large-Cap Value 17.34%	Mid-Cap Growth 25.27%	Large-Cap Growth -1.51%	Small-Cap Growth 28.48%	Small-Cap Growth 34.63%	Large-Cap Growth 27.60%	Large-Cap Value -12.86%
Mid-Cap Value 34.21%	Small-Cap Value 24.50%	Cash 0.10%	Large-Cap Value 17.51%	Large-Cap Growth 33.48%	Mid-Cap Growth 11.90%	Mid-Cap Growth -0.20%	Small-Cap Growth 11.32%	Small-Cap Growth 22.17%	Mid-Cap Growth -4.75%	Mid-Cap Value 27.06%	International Equities 8.28%	Large-Cap Value 25.16%	Mid-Cap Value -16.23%
International Equities 32.46%	Large-Cap Growth 16.71%	Mid-Cap Value -1.38%	Mid-Cap Growth 15.81%	Mid-Cap Value 33.46%	Fixed Income 5.97%	International Equities -0.39%	Mid-Cap Growth 7.33%	Large-Cap Value 13.66%	Large-Cap Value -8.27%	Large-Cap Value 26.54%	Fixed Income 7.51%	Mid-Cap Growth 12.73%	Small-Cap Value -17.31%
Small-Cap Value 20.58%	Large-Cap Value 15.51%	Mid-Cap Growth -1.65%	Large-Cap Growth 15.26%	Large-Cap Value 32.53%	Small-Cap Growth 5.60%	Small-Cap Growth -1.38%	Large-Cap Growth 7.08%	Mid-Cap Value 13.34%	Small-Cap Growth -9.31%	International Equities 22.66%	Mid-Cap Value 4.96%	International Equities 11.78%	International Equities -19.25%
Large-Cap Value 19.69%	International Equities 8.21%	Small-Cap Growth -2.91%	Small-Cap Growth 14.59%	International Equities 23.29%	Small-Cap Value 4.22%	Large-Cap Value -3.83%	Fixed Income 2.65%	Small-Cap Value 7.84%	Mid-Cap Value -12.29%	Small-Cap Value 22.39%	Small-Cap Value 4.63%	Small-Cap Growth 2.83%	Large-Cap Growth -28.07%
Fixed Income 5.24%	Fixed Income 5.89%	Small-Cap Value -5.50%	Fixed Income 4.22%	Cash 0.07%	Cash 0.03%	Mid-Cap Value -4.78%	International Equities 1.51%	Fixed Income 3.54%	Small-Cap Value -12.86%	Fixed Income 8.72%	Large-Cap Value 2.80%	Cash 0.05%	Small-Cap Growth -29.45%
Cash 0.21%	Cash 0.13%	International Equities -11.73%	Cash 0.11%	Fixed Income -2.02%	International Equities -4.48%	Small-Cap Value -7.47%	Cash 0.33%	Cash 0.86%	International Equities -13.36%	Cash 2.28%	Cash 0.67%	Fixed Income -1.54%	Mid-Cap Growth -31.00%

Source: Markov Processes, Inc., Bloomberg, Mobius

- Small-Cap Value Stocks (Russell 2000 Value)
- Large-Cap Value Stocks (Russell 1000 Value)
- International Equities (MSCI EAFE)
- Small-Cap Growth Stocks (Russell 2000 Growth)
- Mid-Cap Growth Stocks (Russell Mid-Cap Growth)
- Fixed Income (Bloomberg Barclays U.S. Aggregate Bond)
- Large-Cap Growth Stocks (Russell 1000 Growth)
- Mid-Cap Value Stocks (Russell Mid-Cap Value)
- Cash (Merrill Lynch 3-Month Treasury Bill)

The information contained in this report is from sources believed to be reliable but is not warranted by CAPTRUST to be accurate or complete.



SECTION 3: PLAN INVESTMENT REVIEW

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

SECTION 3: PLAN INVESTMENT REVIEW	
Plan Assets.....	
Investment Monitor.....	
SURS Lifetime Income Solution.....	
Investment Performance Summary.....	



PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 6.30.22 | Q2 22

SURS Retirement Savings Plan

FUND OPTION	CURRENT INVESTMENT NAME	— MARKET VALUE —			
		12.31.2021	(%)	CURRENT	(%)
Money Market	Vanguard Federal Money Market Investor*	\$994,954	0.03%	\$830,876	0.03%
Stable Value	Voya Fixed Plus Account III	\$34,128,867	0.96%	\$51,538,180	1.75%
Inflation Protected Bond	Vanguard Inflation-Protected Secs I	\$18,913,799	0.53%	\$19,932,653	0.68%
Intermediate Core Bond	State Street U.S. Bond Index Securities Lending Series Fund Class XIV	\$44,226,698	1.24%	\$37,667,026	1.28%
Intermediate Core Bond	TIAA-CREF Core Impact Bond Instl	\$3,889,582	0.11%	\$3,865,233	0.13%
Multisector Bond	PIMCO Income Instl	\$12,177,798	0.34%	\$11,717,946	0.40%
High Yield	PGIM High Yield R6	\$8,989,501	0.25%	\$8,662,142	0.29%
Large Company Blend	BlackRock Equity Index F	\$319,733,689	8.97%	\$264,224,374	8.96%
Medium Company Value	Janus Henderson Small-Mid Cap Value N	\$15,908,721	0.45%	\$13,989,767	0.47%
Medium Company Blend	BlackRock Extended Equity Market F	\$61,903,876	1.74%	\$44,820,358	1.52%
Medium Company Growth	Delaware Smid Cap Growth R6	\$53,467,359	1.50%	\$30,386,905	1.03%
Global Large Stock Blend	BlackRock MSCI ACWI ESG Focus Index Fund F	\$19,477,233	0.55%	\$15,674,476	0.53%
Foreign Large Value	Columbia Trust Overseas Value Fund Founders Class	\$5,842,738	0.16%	\$7,139,559	0.24%
Foreign Large Blend	State Street Global All Cap Equity Ex-U.S. Index Securities Lending Series Fund Class II	\$26,962,926	0.76%	\$23,480,666	0.80%
Foreign Large Growth	Vanguard International Growth Adm	\$29,274,559	0.82%	\$20,679,045	0.70%
Specialty-Real Estate	Vanguard Real Estate Index Institutional	\$24,040,469	0.67%	\$18,254,388	0.62%

*This fund is used as the investment for plan-level forfeiture and plan expense amounts. It is not available for participant-directed investment within the core investment array.

CONTINUED...

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 6.30.22 | Q2 22

SURS Retirement Savings Plan

FUND OPTION	CURRENT INVESTMENT NAME	— MARKET VALUE —			
		12.31.2021	(%)	CURRENT	(%)
Target Date	SURS Lifetime Income Strategy Bond Portfolio	\$371,565,828	10.42%	\$305,381,220	10.35%
Target Date	SURS Lifetime Income Strategy Cash Portfolio	\$1,219,321	0.03%	\$1,767,152	0.06%
Target Date	SURS Lifetime Income Strategy Equity Portfolio	\$1,699,679,694	47.67%	\$1,315,991,927	44.62%
Target Date	SURS Lifetime Income Strategy Real Asset Portfolio	\$125,717,056	3.53%	\$91,761,441	3.11%
Target Date	SURS Lifetime Income Strategy Secure Income Portfolio	\$687,060,284	19.27%	\$661,699,943	22.43%
TOTALS		\$3,565,174,953	100%	\$2,949,465,277	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 6.30.22 | Q2 22

SURS Deferred Compensation Plan

FUND OPTION	CURRENT INVESTMENT NAME	— MARKET VALUE —			
		12.31.2021	(%)	CURRENT	(%)
Stable Value	Voya Fixed Plus Account III	\$175,206	5.78%	\$432,876	5.37%
Inflation Protected Bond	Vanguard Inflation-Protected Secs I	\$33,271	1.10%	\$109,189	1.36%
Intermediate Core Bond	State Street U.S. Bond Index Securities Lending Series Fund Class XIV	\$37,638	1.24%	\$97,635	1.21%
Intermediate Core Bond	TIAA-CREF Core Impact Bond Instl	\$6,873	0.23%	\$21,228	0.26%
Multisector Bond	PIMCO Income Instl	\$53,416	1.76%	\$50,612	0.63%
High Yield	PGIM High Yield R6	\$51,623	1.70%	\$71,373	0.89%
Large Company Blend	BlackRock Equity Index F	\$549,611	18.13%	\$1,492,230	18.53%
Medium Company Value	Janus Henderson Small-Mid Cap Value N	\$44,531	1.47%	\$120,577	1.50%
Medium Company Blend	BlackRock Extended Equity Market F	\$157,924	5.21%	\$296,303	3.68%
Medium Company Growth	Delaware Smid Cap Growth R6	\$89,727	2.96%	\$206,047	2.56%
World Large Stock Blend	BlackRock MSCI ACWI ESG Focus Index Fund F	\$41,459	1.37%	\$115,102	1.43%
Foreign Large Value	Columbia Trust Overseas Value Fund Founders Class	\$24,511	0.81%	\$80,848	1.00%
Foreign Large Blend	State Street Global All Cap Equity Ex-U.S. Index Securities Lending Series Fund Class II	\$58,767	1.94%	\$183,767	2.28%
Foreign Large Growth	Vanguard International Growth Adm	\$63,233	2.09%	\$143,704	1.78%
Specialty-Real Estate	Vanguard Real Estate Index Institutional	\$55,088	1.82%	\$187,440	2.33%

CONTINUED...

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 6.30.22 | Q2 22

SURS Deferred Compensation Plan

FUND OPTION	CURRENT INVESTMENT NAME	— MARKET VALUE —			
		12.31.2021	(%)	CURRENT	(%)
Target Date	SURS Lifetime Income Strategy Bond Portfolio	\$295,463	9.75%	\$850,799	10.56%
Target Date	SURS Lifetime Income Strategy Cash Portfolio	\$581	0.02%	\$11,377	0.14%
Target Date	SURS Lifetime Income Strategy Equity Portfolio	\$1,037,405	34.23%	\$2,919,781	36.25%
Target Date	SURS Lifetime Income Strategy Real Asset Portfolio	\$77,365	2.55%	\$202,271	2.51%
Target Date	SURS Lifetime Income Strategy Secure Income Portfolio	\$177,385	5.85%	\$460,369	5.72%
TOTALS		\$3,031,077	100%	\$8,053,527	100%

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INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

INVESTMENT	QUANTITATIVE								QUALITATIVE		TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Style		Confidence		Fund Management	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr				
Inflation Protected Bond Vanguard Inflation-Protected Secs I	●	●	●	●	●	●	●	●	●	●	●	93
Intermediate Core Bond TIAA-CREF Core Impact Bond Instl	●	●	▼	●	●	●	▼	●	●	●	●	88
High Yield PGIM High Yield R6	●	●	●	●	●	●	●	●	●	●	●	100
Medium Company Value Janus Henderson Small-Mid Cap Value N	▼	▼	▼	▼	●	●	▼	▼	●	●	●	59
Medium Company Growth Delaware Smid Cap Growth R6	▼	▼	▼	●	●	●	▼	●	●	●	▼	75
Foreign Large Value Columbia Overseas Value Inst3*	●	●	●	●	●	●	●	●	●	●	●	97
Foreign Large Growth Vanguard International Growth Adm	●	●	●	●	▼	▼	●	●	●	●	●	96

*The mutual fund is shown here for comparative purposes due to the lack of historical data for the Columbia Trust Overseas Value Fund Founders Class CIT which was inception on 10/30/20 and has an expense ratio of 0.30%.

LEGEND

●	IN GOOD STANDING	▼	MARKED FOR REVIEW	●	CONSIDER FOR TERMINATION
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The CAPTRUST Investment Policy Monitor ("Scorecard") is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields for actively managed investment options. Quantitative scoring areas include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; Style Attribution; and Confidence. Qualitative Scoring Areas measure the quality of the Management Team while also considering the stewardship of the investment option's parent company under Investment Family Items. Qualitative areas of analysis are subjective in nature. CAPTRUST typically requires at least 3 months of monitoring before including an investment in this report. Investments that have been added to our system less than 3 months prior to a report being generated may have a Fund Management assessment of '25' as a default, but will be updated, if necessary, after the first quarter of monitoring to more accurately reflect our system. Investments that are not mutual funds or have less than 3 years of performance history may not be scored. This material is for institutional investor use only and is not intended to be shared with individual investors.





INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 6.30.22 | Q2 22


State Universities Retirement System

CAPITAL PRESERVATION INVESTMENTS

INVESTMENT	Overall	Commentary
Vanguard Federal Money Market Investor		This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
Voya Fixed Plus Account III		This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.

*This fund is used as the investment for plan-level forfeiture amounts. It is not available for participant-directed investment within the core investment array.

INVESTMENTS IN DISTINCT ASSET CLASSES

INVESTMENT	Overall	Commentary
Multi-Sector Bond PIMCO Income Instl		This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.

CONTINUED...

The CAPTRUST Financial Advisors Investment Scorecard is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields. Quantitative scoring areas for target date funds include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; and Glidepath. Qualitative Scoring Areas for target date funds measure the quality of the Management Team while also considering the stewardship of the investment option's parent company under Investment Family Items. Qualitative areas of analysis are subjective in nature. Qualitative Scoring for Target Date funds also includes a score for Portfolio Construction and Underlying Investment vehicles to express CAPTRUST's views on the manager or strategy. CAPTRUST typically requires at least 3 months of monitoring before including an investment in this report. Investments that have been added to our system less than 3 months prior to a report being generated may have a Fund Management assessment of '25' as a default, but will be updated, if necessary, after the first quarter of monitoring to more accurately reflect our system. Investments that are not mutual funds or have less than 3 years of performance history may not be scored. Capital Preservation options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics, depending on the type of capital preservation option being evaluated, and may include quantitative criteria such as: Crediting Rate/Yield, Market to Book Ratio, Average Crediting Quality, Insurer Quality/Diversification, Duration, and Sector Allocations, and/or qualitative criteria such as quality and experience of the Management Team and stewardship of the investment option's parent company. Passively Managed options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics and may include quantitative criteria such as: Tracking Error, Fees, and Performance versus relevant peer group, and/or qualitative criteria such as index replication strategy, securities lending practices, and fair value pricing methodology. Distinct investment options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics. This material is for institutional investor use only and is not intended to be shared with individual investors.









INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

PASSIVE INVESTMENTS

INVESTMENT	Overall	Commentary
State Street U.S. Bond Index Securities Lending Series Fund Class XIV		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
BlackRock Equity Index F		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
BlackRock Extended Equity Market F		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
BlackRock MSCI ACWI ESG Focus Index Fund F		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
State Street Global All Cap Equity Ex-U.S. Index Securities Lending Series Fund Class II		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.
Vanguard Real Estate Index Institutional		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.

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INVESTMENT REVIEW | INVESTMENT MONITOR

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

INVESTMENT STATUS

INVESTMENT	TICKER	STATUS	# OF QUARTERS	RATIONALE
Janus Henderson Small-Mid Cap Value N	JVSNX	Pending Replacement	-	<p>We recommend replacing this fund. The strategy is more defensive in nature, focusing on high quality companies with strong management teams, stable balance sheets, and durable competitive advantages that are trading at attractive valuations. Performance has significantly lagged the index and category since the initial COVID market shock of 2020. Short-term underperformance has now impacted the fund's long-term numbers. High-beta stocks and non-earners that drove the market returns during that period was a stylistic headwind for the strategy. The strategy continued to trail the index in 2021 after the market recovery broadened out, as extreme market rotation into more cyclical and commodities-driven companies also did not help the fund's performance. The strategy also failed to protect during Q1 2022's market selloff.</p> <p>The fund was approved for replacement by the Investment Committee during the June 2022 meeting. SURS and CAPTRUST continue to coordinate the fund's replacement with the applicable vendors.</p>
Delaware Smid Cap Growth R6	DFZRX	-	-	<p>Delaware SMID Cap Growth invests heavily within the economy's highest growth segments across both mid and small market capitalizations. This is a high-risk strategy, with a concentrated 30 stock portfolio that has 53% of its portfolio within its top 10 holdings. The majority of the portfolio is allocated towards technology (5% overweight) and healthcare/biotechnology (15% overweight). Against other mid cap peers, this strategy will exhibit far higher risk characteristics due to its small cap exposure and heavier exposure in growth-orientated sectors. The strategy heavily outpaced peers during 2020, where work from home and high innovation stocks performed considerably well. Since then, performance has lagged peers as the market has shifted to a risk off sentiment. The strategy maintains its top 10th percentile performance over the 5-year time period; however, shorter period peer metrics are lagging. Following the end of Q2 2022, growth has outperformed value, with investors feeling optimistic about the slowing rise of inflation. The fund has performed in the top 5th percentile over the past three months as of the end of August 2022.</p>

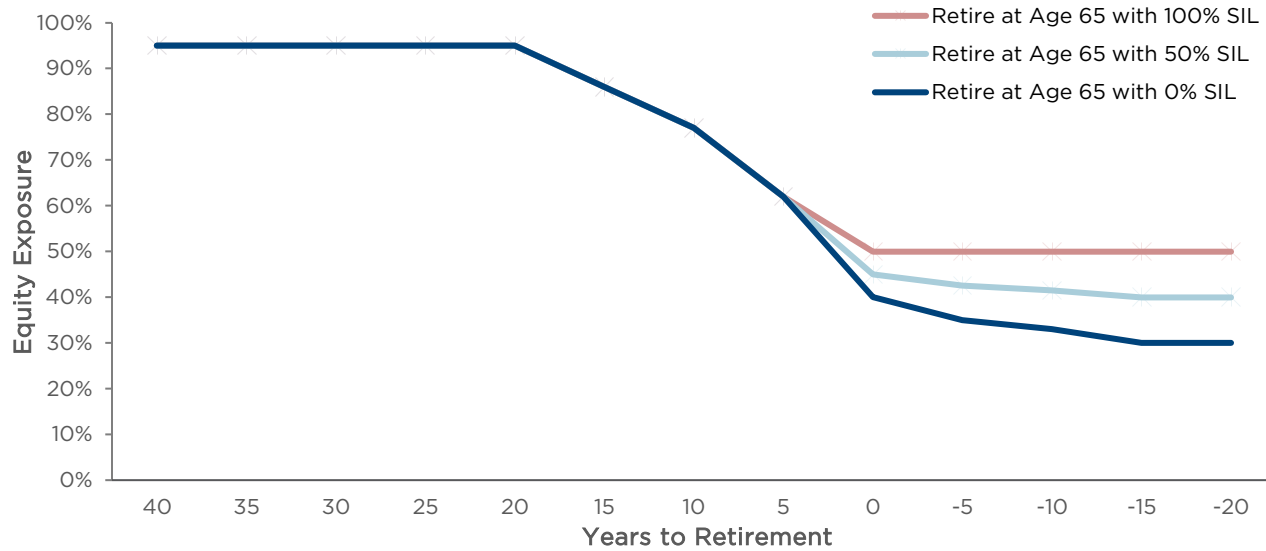


SURS LIFETIME INCOME STRATEGY

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

Target Asset Allocation Glidepath



Dedicated Asset Class/Diversification

Equity

U.S. Large Cap	P
U.S. Mid Cap	P
U.S. Small Cap	P
International Equity	P

Fixed Income

U.S. Fixed Income	P
U.S. TIPs	A
High Yield	
Emerging Markets Debt	
International Fixed Income	

Alternative

Commodities	
Real Estate	P

A = Active Management
P = Passive Management

Component Portfolio Name	Underlying Fund Name	Allocation
SURS Lifetime Income Strategy Equity Portfolio	State Universities Retirement System Extended Equity Market U/A	11%
	State Universities Retirement System Equity Index U/A	49%
	State Street Global All Cap ex-US Index SL CI II	40%
SURS Lifetime Income Strategy Bond Portfolio	State Street US Bond Index SL CI XIV	65%
	Vanguard Inflation-Protected Securities Institutional	35%
SURS Lifetime Income Strategy Real Asset Portfolio	Vanguard Real Estate Index Institutional	100%
SURS Lifetime Income Strategy Cash Portfolio	Vanguard Federal Money Market Investor	100%
SURS Lifetime Income Strategy Secure Income Portfolio	AB Balanced 50/50 Collective Trust	100%

Important Disclosures: This slide is intended solely for institutional use. The opinions expressed in this report are subject to change without notice. The statistics and data have been compiled from sources believed to be reliable but are not guaranteed to be accurate or complete. Any performance quoted represents past performance and does not guarantee future results.



SURS LIFETIME INCOME STRATEGY

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

INVESTMENT NAME	TOTAL RETURN				
	2Q 2022	YTD 2022	1 Year	Since Inception*	
SURS Lifetime Income Strategy Equity Portfolio	(15.58)	(20.39)	(16.44)	3.32	
Custom Benchmark	(15.88)	(20.51)	(16.60)	3.21	
SURS Lifetime Income Strategy Real Asset Portfolio	(15.50)	(20.54)	(8.12)	10.34	
Custom Benchmark	(14.66)	(19.17)	(5.89)	11.19	
SURS Lifetime Income Strategy Bond Portfolio	(5.16)	(9.72)	(8.47)	(4.48)	
Custom Benchmark	(5.17)	(9.84)	(8.50)	(4.43)	
SURS Lifetime Income Strategy Cash Portfolio	0.10	0.10	0.00	0.00	
Custom Benchmark	0.14	0.17	0.19	0.14	
SURS Lifetime Income Strategy Secure Income Portfolio	(10.69)	(15.47)	(12.64)	(0.36)	
Custom Benchmark	(10.56)	(15.11)	(11.73)	0.75	
TOTAL EXPENSE RATIO (in basis points)					
	SURS LIS Equity Portfolio	SURS LIS Real Asset Portfolio	SURS LIS Bond Portfolio	SURS LIS Cash Portfolio	SURS LIS Secure Income Portfolio
Manager Fees	3.47	10.00	4.53	11.00	5.95
Asset Allocation / Implementation / Ongoing Services Fees	5.92	5.92	5.92	5.93	5.88
Custody Account Fee	0.10	0.10	0.10	0.10	0.10
Benefit Admin / Contract Allocation Fees	-	-	-	-	10.00
Insurance Fees	-	-	-	-	95.00
Total	9.49	16.01	10.55	17.03	116.92

*Inception date is 08/26/2020 except for the Secure Income Portfolio which has an inception date of 9/14/2020.

All portfolio performance calculations are net of fees and are expressed as percentages. Periods of more than one year are annualized. The benchmark for a Lifetime Income Strategy Component is a customized benchmark that has the same target asset allocation as the corresponding component strategy's target asset allocation and uses index returns to represent performance of the asset classes. The benchmark returns were calculated by weighting the monthly index returns of each asset class by the corresponding component strategy's monthly target allocation for each asset class.

The Equity Portfolio is benchmarked against a custom fixed-weight benchmark comprising: 49% S&P 500 Index, 11% Dow Jones US Completion Total Stock Market Index and 40% MSCI ACWI Ex USA IMI Index. The Real Asset Portfolio is benchmarked against the FTSE Nareit All Equity REITs Index. The Bond Portfolio is benchmarked against a custom fixed-weight benchmark comprising: 65% Bloomberg Barclays US Global Aggregate Index and 35% Bloomberg Barclays US TIPS Index. The Cash Portfolio is benchmarked against the FTSE 3 Month US T-Bill Index. The Secure Income Portfolio is benchmarked against a custom benchmark comprising: 25% S&P 500 Index, 8% Russell 2000 Index, 17% MSCI EAFE Index, 30% Bloomberg Barclays US Aggregate Bond Index, and 20% Bloomberg Barclays US TIPS Index.



SURS LIFETIME INCOME STRATEGY

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

ACTIVITY SUMMARY - RSP / 401(a) Plan	
Asset Summary	2Q 2022
Total LIS Participants	20,413
Total SIP Participants	5,925
Participant Services	2Q 2022
Estimates - Call Center	282
Estimates - Web	433
SIL Changes	86
Retirement Age Changes	107
Benefit Statistics	2Q 2022 / Since Inception
Activated Participants	15 / 150
Avg Activated GLWB %	3.04% / 3.07%
Avg Activation Age	63.9 / 66.9

ACTIVITY SUMMARY - DCP / 457(b) Plan	
Asset Summary	2Q 2022
Total LIS Participants	1,337
Total SIP Participants	227
Participant Services	2Q 2022
Estimates - Call Center	11
Estimates - Web	53
SIL Changes	5
Retirement Age Changes	5
Benefit Statistics	2Q 2022 / Since Inception
Activated Participants	0
Avg Activated GLWB %	0.00%
Avg Activation Age	0

SIP (Secure Income Portfolio) is the insured portfolio used to fund the Guaranteed Income Withdrawal Amount. Assets in this portfolio are insured through multiple group-insurance contracts. Allocations among the group-insurance contracts are unique to each participant. If your Secure Income Level is greater than 0%, your assets will be gradually allocated to the Secure Income Portfolio, beginning approximately 15 years before you are scheduled to retire. SIL (Secure Income Level) is the target percentage of your SURS LIS account - between 0% and 100% - that you want allocated over time to the Secure Income Portfolio and used to fund your Guaranteed Income Withdrawal Amount. (The default Secure Income Level is 100%.) GLWB (Guaranteed Lifetime Withdrawal Benefit) is the amount you can withdraw monthly from the Secure Income Portfolio during retirement and the amount that participating insurers will pay you annually for the remainder of your lifetime (or for the remainder of your spouse's or civil union partner's lifetime, if applicable) if the Secure Income Portfolio account balance is exhausted because the Guaranteed Income Withdrawal Amount depleted your account. The amount is recalculated each year on your birthday.



SURS LIFETIME INCOME STRATEGY

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

INSURANCE COMPANIES

- LIS uses group contracts to provide guaranteed income withdrawal benefit

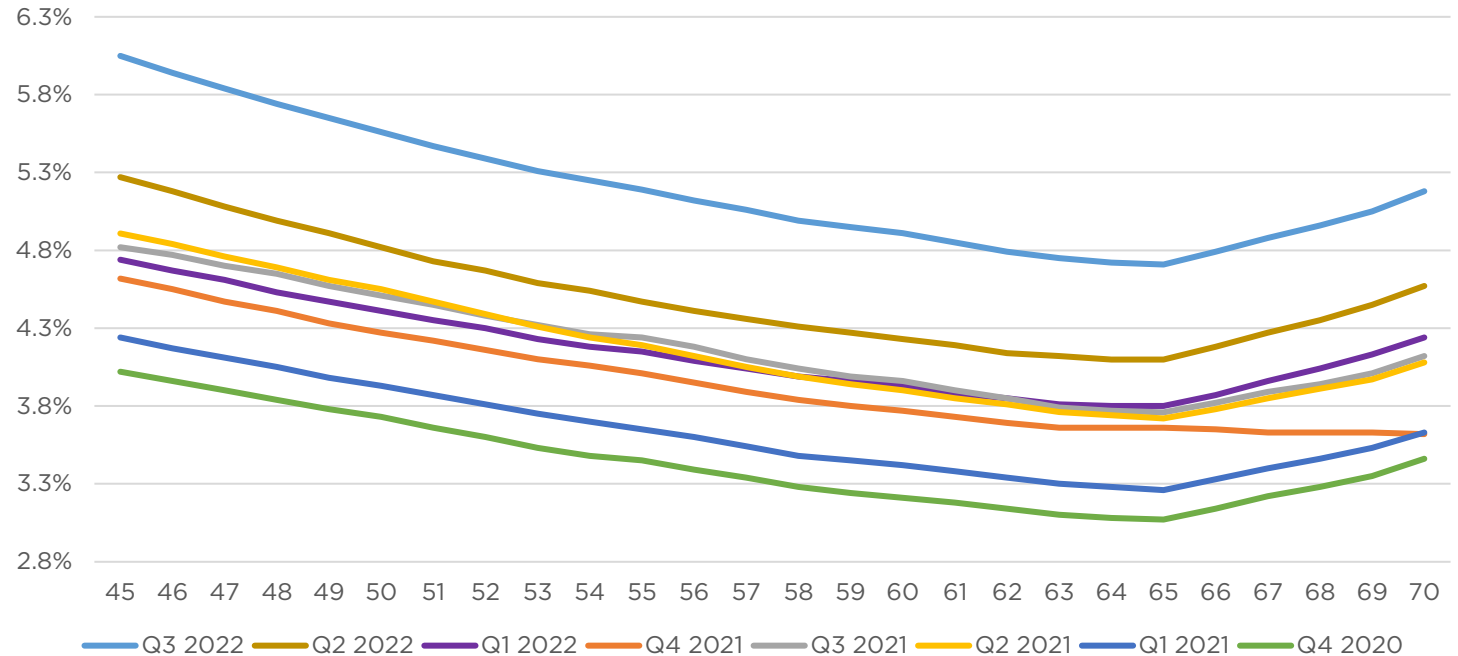
PARTICIPATING COMPANIES

- Jackson National Life Insurance
- Lincoln National Life Insurance Company
- Nationwide Life Insurance Company
- Prudential Retirement Insurance and Annuity Company

LIS RESTRICTIONS

- At least 90 days must pass between changing elections (secure income level and/or retirement age)
- If members transfer money out of SURS LIS, they cannot transfer funds into SURS LIS for 90 days
- New contributions and rollovers are not affected by the 90-day restriction

BLENDING RATES - ROLLING PERIODS*



FINANCIAL STRENGTH RATINGS AND OUTLOOK

	Jackson		Lincoln		Nationwide		Prudential	
S&P	A (6 th of 20)	Stable	AA- (4 th of 20)	Stable	A+ (5 th of 20)	Stable	AA- (4 th of 20)	Watch Negative
Moody's	A2 (6 th of 21)	Negative	A1 (5 th of 21)	Stable	A1 (5 th of 21)	Stable	Aa3 (4 th of 21)	Stable
Fitch	A (6 th of 21)	Stable	A+ (5 th of 21)	Stable	-	Stable	AA- (4 th of 21)	Negative
AM Best	A (3 rd of 15)	Stable	A+ (2 nd of 15)	Stable	A+ (2 nd of 15)	Stable	A+ (2 nd of 15)	Stable

*Blended Rates include Deferred Retirement Bonus. Assumes a retirement age of 65.



PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 6.30.22 | Q2 '22

State Universities Retirement System

INVESTMENT NAME	Q2 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
MONEY MARKET											
Vanguard Federal Money Market Investor	0.16%	0.17%	0.01%	0.45%	2.14%	1.78%	0.81%	0.17%	0.53%	1.01%	0.57%
ICE BofA ML US Treasury Bill 3 Mon USD	0.10%	0.14%	0.05%	0.67%	2.28%	1.87%	0.86%	0.17%	0.63%	1.11%	0.64%
STABLE VALUE											
Voya Fixed Plus Account III	-	-	Crediting Rate as of 6.30.2022: 1.40%					-	-	-	-
ICE BofA ML US Treasury Bill 3 Mon USD	0.10%	0.14%	0.05%	0.67%	2.28%	1.87%	0.86%	0.17%	0.63%	1.11%	0.64%
Morningstar US Stable Value GR USD	0.43%	0.84%	1.74%	2.26%	2.52%	2.26%	1.95%	1.69%	2.04%	2.13%	1.97%
INFLATION PROTECTED BOND											
Vanguard Inflation-Protected Secs I	-5.98%	-8.59%	5.72%	11.05%	8.18%	-1.40%	2.97%	-4.98%	3.05%	3.15%	1.69%
Bloomberg US Treasury US TIPS TR USD	-6.08%	-8.92%	5.96%	10.99%	8.43%	-1.26%	3.01%	-5.14%	3.04%	3.21%	1.73%
Inflation Protected Bond Universe	-5.44%	-7.59%	5.55%	9.75%	7.33%	-1.58%	2.44%	-4.43%	2.83%	2.81%	1.32%
INTERMEDIATE CORE BOND											
State Street U.S. Bond Index Securities Lending Series Fund Class XIV	-4.70%	-10.31%	-1.62%	7.67%	8.74%	0.03%	3.55%	-10.29%	-0.90%	0.90%	1.55%
TIAA-CREF Core Impact Bond Instl	-5.39%	-11.05%	-1.03%	7.45%	8.73%	0.33%	4.51%	-11.14%	-1.02%	0.95%	-
Bloomberg US Agg Bond TR USD	-4.69%	-10.35%	-1.54%	7.51%	8.72%	0.01%	3.54%	-10.29%	-0.93%	0.88%	1.54%
Intermediate Core Bond Universe	-5.01%	-10.63%	-1.49%	8.03%	8.33%	-0.46%	3.44%	-10.85%	-0.96%	0.72%	1.48%
MULTISECTOR BOND											
PIMCO Income Instl	-5.18%	-9.16%	2.61%	5.80%	8.05%	0.58%	8.60%	-8.48%	0.33%	2.04%	5.07%
Bloomberg US Agg Bond TR USD	-4.69%	-10.35%	-1.54%	7.51%	8.72%	0.01%	3.54%	-10.29%	-0.93%	0.88%	1.54%
Multisector Bond Universe	-6.49%	-10.51%	2.47%	5.55%	10.23%	-1.58%	6.58%	-10.17%	-0.25%	1.31%	2.88%

*ANNUALIZED

CONTINUED...

This summary is intended for "Institutional (Plan Sponsor) Use Only" and only includes historical performance of the funds currently in the plan's fund lineup as compared to the peer group (universe) maintained/developed by CAPTRUST (using Morningstar open-end mutual fund data), which may include other investment types such as collective investment trusts. Fund and peer group returns are shown net of investment management fees, unless otherwise indicated, but gross of CAPTRUST advisory fees. The plan's overall performance will be reduced by CAPTRUST's advisory fees and other plan level fees not contemplated in this summary. Therefore, each participant's account performance will differ substantially. Past performance is not indicative of future results. Information from sources believed to be reliable, but not warranted by CAPTRUST to be accurate or complete.



PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 6.30.22 | Q2 '22

State Universities Retirement System

INVESTMENT NAME	Q2 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
HIGH YIELD											
PGIM High Yield R6	-9.24%	-13.48%	6.47%	5.72%	16.26%	-1.18%	7.70%	-11.76%	0.67%	2.79%	4.84%
Bloomberg US Corporate High Yield TR USD	-9.83%	-14.19%	5.28%	7.11%	14.32%	-2.08%	7.50%	-12.81%	0.21%	2.10%	4.47%
High Yield Bond Universe	-9.59%	-13.14%	5.09%	5.17%	13.12%	-2.82%	6.79%	-12.07%	-0.22%	1.53%	3.66%
LARGE COMPANY BLEND											
BlackRock Equity Index F	-16.10%	-19.95%	28.74%	18.48%	31.55%	-4.34%	21.87%	-10.60%	10.65%	11.36%	13.01%
S&P 500 Index	-16.10%	-19.96%	28.71%	18.40%	31.49%	-4.38%	21.83%	-10.62%	10.60%	11.31%	12.96%
Large Blend Universe	-15.16%	-19.56%	26.13%	16.52%	29.36%	-6.20%	20.94%	-11.83%	9.03%	9.64%	11.61%
MEDIUM COMPANY VALUE											
Janus Henderson Small-Mid Cap Value N	-12.32%	-15.94%	16.48%	-3.00%	27.09%	-7.06%	14.08%	-13.48%	1.02%	3.89%	7.97%
Russell Mid Cap Value	-14.68%	-16.23%	28.34%	4.96%	27.06%	-12.29%	13.34%	-10.00%	6.70%	6.27%	10.62%
Mid Value Universe	-12.87%	-13.43%	28.04%	2.85%	26.72%	-13.64%	13.92%	-7.82%	7.11%	6.09%	9.76%
MEDIUM COMPANY BLEND											
BlackRock Extended Equity Market F	-20.64%	-28.00%	12.45%	32.16%	28.23%	-9.15%	18.26%	-29.86%	4.67%	6.54%	10.36%
Russell Mid Cap	-16.85%	-21.57%	22.58%	17.10%	30.54%	-9.06%	18.52%	-17.30%	6.59%	7.96%	11.29%
Mid Blend Universe	-14.73%	-19.14%	22.98%	13.87%	27.88%	-10.74%	15.83%	-14.44%	6.63%	6.85%	10.03%
MEDIUM COMPANY GROWTH											
Delaware Smid Cap Growth R6	-35.06%	-45.87%	-8.12%	94.51%	35.77%	0.44%	35.61%	-50.27%	-0.04%	9.96%	10.32%
Russell Mid Cap Growth	-21.07%	-31.00%	12.73%	35.59%	35.47%	-4.75%	25.27%	-29.57%	4.25%	8.88%	11.50%
Mid Growth Universe	-20.77%	-30.87%	12.05%	41.74%	33.90%	-4.73%	25.30%	-29.42%	4.56%	8.81%	10.86%

*ANNUALIZED

CONTINUED...

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 6.30.22 | Q2 '22

State Universities Retirement System

INVESTMENT NAME	Q2 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
GLOBAL LARGE STOCK BLEND											
BlackRock MSCI ACWI ESG Focus Index Fund F	-15.31%	-20.33%	18.22%	18.99%	26.87%	-	-	-15.86%	7.14%	-	-
MSCI ACWI NR USD	-15.66%	-20.18%	18.54%	16.25%	26.60%	-9.41%	23.97%	-15.75%	6.21%	7.00%	8.76%
Global Large Stock Blend	-13.68%	-18.82%	17.97%	14.01%	25.91%	-9.99%	22.94%	-14.33%	5.67%	6.27%	8.35%
FOREIGN LARGE VALUE											
Columbia Overseas Value CIT Class R	-11.11%	-12.86%	10.92%	-	-	-	-	-12.35%	-	-	-
Columbia Overseas Value Inst3**	-11.22%	-13.47%	10.97%	-0.06%	22.61%	-16.38%	30.24%	-13.13%	1.57%	2.12%	5.95%
MSCI EAFE	-14.29%	-19.25%	11.78%	8.28%	22.66%	-13.36%	25.62%	-17.33%	1.54%	2.69%	5.89%
Foreign Large Value Universe	-11.34%	-14.45%	11.77%	2.68%	18.51%	-16.53%	22.93%	-14.25%	1.59%	1.12%	4.43%
FOREIGN LARGE BLEND											
State Street Global All Cap Equity Ex-U.S. Index Securities Lending Series Fund Class II	-13.53%	-18.78%	8.74%	11.36%	-	-	-	-19.51%	1.83%	-	-
MSCI EAFE	-14.29%	-19.25%	11.78%	8.28%	22.66%	-13.36%	25.62%	-17.33%	1.54%	2.69%	5.89%
Foreign Large Blend Universe	-13.15%	-19.52%	9.40%	11.32%	22.75%	-15.50%	25.87%	-19.24%	1.56%	2.10%	5.11%
FOREIGN LARGE GROWTH											
Vanguard International Growth Adm	-18.13%	-31.60%	-0.74%	59.74%	31.48%	-12.58%	43.16%	-36.18%	6.33%	7.51%	9.17%
MSCI EAFE	-14.29%	-19.25%	11.78%	8.28%	22.66%	-13.36%	25.62%	-17.33%	1.54%	2.69%	5.89%
Foreign Large Growth Universe	-16.44%	-27.84%	7.04%	25.55%	29.04%	-13.83%	32.01%	-27.70%	1.50%	3.47%	6.12%
SPECIALTY-REAL ESTATE											
Vanguard Real Estate Index Institutional	-15.48%	-20.50%	40.41%	-4.67%	29.02%	-5.93%	4.93%	-8.03%	4.78%	5.72%	7.50%
Dow Jones US Select REIT	-18.10%	-21.14%	45.91%	-11.20%	23.10%	-4.22%	3.76%	-6.41%	2.54%	4.28%	6.61%
Specialty-Real Estate Universe	-16.12%	-20.80%	39.97%	-3.29%	28.12%	-6.33%	6.85%	-8.16%	4.72%	5.66%	7.18%

*ANNUALIZED

**The mutual fund is shown here for comparative purposes due to the lack of historical data for the Columbia Trust Overseas Value Fund Founders Class CIT which was inception on 10/30/20 and has an expense ratio of 0.30%.

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SECTION 4: INACTIVE PLAN REVIEW

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

SECTION 4: INACTIVE PLAN REVIEW	
Plan Assets.....	
Investment Monitor.....	
Investment Performance Summary.....	



PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 6.30.22 | Q2 22

SURS Self Managed Plan - Frozen

FUND OPTION	CURRENT INVESTMENT NAME	— MARKET VALUE —			
		12.31.2021	(%)	CURRENT	(%)
Money Market	CREF Money Market R3	\$6,505,022	1.65%	\$6,562,530	1.91%
Stable Value	TIAA Traditional - Retirement Choice	\$150,137,499	37.97%	\$148,712,486	43.17%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$8,943,061	2.26%	\$8,209,064	2.38%
Intermediate Core Bond	CREF Core Bond R3	\$19,578,924	4.95%	\$16,725,567	4.86%
Global Allocation	CREF Social Choice R3	\$25,366,767	6.42%	\$20,582,074	5.98%
Allocation--85%+ Equity	CREF Stock R3	\$94,291,741	23.85%	\$73,355,745	21.30%
Specialty-Private Real Estate	TIAA Real Estate Account	\$3,508,629	0.89%	\$3,712,161	1.08%
Large Company Blend	CREF Equity Index R3	\$56,837,103	14.37%	\$43,228,530	12.55%
Large Company Growth	CREF Growth R3	\$355,606	0.09%	\$245,083	0.07%
Global Large Stock Blend	CREF Global Equities R3	\$29,902,647	7.56%	\$23,114,750	6.71%
TOTALS		\$395,426,999	100%	\$344,447,989	100%

Information provided by Record Keeper. For informational purposes. Not a substitute for official statements produced by the plan custodian. Information has been obtained from sources considered reliable, but its accuracy and completeness are not guaranteed. This report is not an illustration of investment performance, but rather a historical illustration of asset allocation.



INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 6.30.22 | Q2 22

SURS Self Managed Plan - Frozen

INVESTMENT	QUANTITATIVE								QUALITATIVE		TOTALS	
	Risk-Adjusted Performance		vs. Peers Performance		Style		Confidence		Fund Management	Fund Firm	Overall	Total Score
	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr	3 Yr	5 Yr				
Inflation Protected Bond CREF Inflation-Linked Bond R3	●	●	●	●	●	●	●	●	●	●	●	96
Intermediate Core Bond CREF Core Bond R3	●	●	●	●	●	●	●	●	●	●	●	91
Global Allocation CREF Social Choice R3	●	●	●	●	●	●	●	●	●	●	●	99
Large Company Growth CREF Growth R3	▼	●	▼	●	●	●	▼	▼	●	●	▼	79
Global Large Stock Blend CREF Global Equities R3	●	●	●	●	●	●	●	●	●	●	●	93

LEGEND

●	IN GOOD STANDING	▼	MARKED FOR REVIEW	●	CONSIDER FOR TERMINATION
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The CAPTRUST Investment Policy Monitor ("Scorecard") is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields for actively managed investment options. Quantitative scoring areas include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; Style Attribution; and Confidence. Qualitative Scoring Areas measure the quality of the Management Team while also considering the stewardship of the investment option's parent company under Investment Family Items. Qualitative areas of analysis are subjective in nature. CAPTRUST typically requires at least 3 months of monitoring before including an investment in this report. Investments that have been added to our system less than 3 months prior to a report being generated may have a Fund Management assessment of '25' as a default, but will be updated, if necessary, after the first quarter of monitoring to more accurately reflect our system. Investments that are not mutual funds or have less than 3 years of performance history may not be scored. This material is for institutional investor use only and is not intended to be shared with individual investors.





INVESTMENT REVIEW | INVESTMENT POLICY MONITOR


Period Ending 6.30.22 | Q2 22

SURS Self Managed Plan - Frozen



CAPITAL PRESERVATION INVESTMENTS

INVESTMENT	Overall	Commentary
CREF Money Market R3		This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.
TIAA Traditional - Retirement Choice		This Capital Preservation option is in good standing per the guidelines as established by the Investment Policy Statement.

PASSIVE INVESTMENTS

INVESTMENT	Overall	Commentary
CREF Equity Index R3		This fund currently meets the guidelines set forth by CAPTRUST for passively managed investments. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, tracking error, and cost.

INVESTMENTS IN DISTINCT ASSET CLASSES

INVESTMENT	Overall	Commentary
CREF Stock R3		This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.
TIAA Real Estate Account		This fund currently meets the guidelines set forth by CAPTRUST for distinct investments in the Investment Policy Statement. This assessment is based on both quantitative and qualitative data. Examples of quantitative and qualitative items considered include, but are not limited to, quality of management, excess return, and risk-adjusted performance.

The CAPTRUST Financial Advisors Investment Scorecard is an illustration of our monitoring system and is designed to assist our clients in their efforts to provide fiduciary oversight to investment assets. It is not intended as a solicitation to buy any security. The scoring system measures quantitative areas as well as qualitative (or subjective) fields. Quantitative scoring areas for target date funds include Risk Adjusted Performance (3 & 5 yr.); Performance vs. Relevant Peer Group; and Glidepath. Qualitative Scoring Areas for target date funds measure the quality of the Management Team while also considering the stewardship of the investment option's parent company under Investment Family Items. Qualitative areas of analysis are subjective in nature. Qualitative Scoring for Target Date funds also includes a score for Portfolio Construction and Underlying Investment vehicles to express CAPTRUST's views on the manager or strategy. CAPTRUST typically requires at least 3 months of monitoring before including an investment in this report. Investments that have been added to our system less than 3 months prior to a report being generated may have a Fund Management assessment of '25' as a default, but will be updated, if necessary, after the first quarter of monitoring to more accurately reflect our system. Investments that are not mutual funds or have less than 3 years of performance history may not be scored. Capital Preservation options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics, depending on the type of capital preservation option being evaluated, and may include quantitative criteria such as: Crediting Rate/Yield, Market to Book Ratio, Average Crediting Quality, Insurer Quality/Diversification, Duration, and Sector Allocations, and/or qualitative criteria such as quality and experience of the Management Team and stewardship of the investment option's parent company. Passively Managed options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics and may include quantitative criteria such as: Tracking Error, Fees, and Performance versus relevant peer group, and/or qualitative criteria such as index replication strategy, securities lending practices, and fair value pricing methodology. Distinct investment options are evaluated using a comprehensive scoring methodology proprietary to the Investment Consultant. This methodology incorporates both qualitative and quantitative metrics. This material is for institutional investor use only and is not intended to be shared with individual investors.



PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 6.30.22 | Q2 '22

SURS Self Managed Plan - Frozen

INVESTMENT NAME	Q2 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
MONEY MARKET											
CREF Money Market R3	0.10%	0.08%	0.00%	0.38%	2.02%	1.46%	0.50%	0.08%	0.46%	0.85%	-
ICE BofA ML US Treasury Bill 3 Mon USD	0.10%	0.14%	0.05%	0.67%	2.28%	1.87%	0.86%	0.17%	0.63%	1.11%	0.64%
STABLE VALUE											
TIAA Traditional - Retirement Choice	-	-	Crediting Rate as of 6.30.2022 – 5.25% (RC); 4.50% (RCP)					-	-	-	-
ICE BofA ML US Treasury Bill 3 Mon USD	0.10%	0.14%	0.05%	0.67%	2.28%	1.87%	0.86%	0.17%	0.63%	1.11%	0.64%
Morningstar US Stable Value GR USD	0.43%	0.84%	1.74%	2.26%	2.52%	2.26%	1.95%	1.69%	2.04%	2.13%	1.97%
INFLATION PROTECTED BOND											
CREF Inflation-Linked Bond R3	-3.17%	-4.47%	5.28%	8.03%	6.53%	-0.49%	1.85%	-1.55%	3.31%	3.11%	-
Bloomberg US Treasury US TIPS TR USD	-6.08%	-8.92%	5.96%	10.99%	8.43%	-1.26%	3.01%	-5.14%	3.04%	3.21%	1.73%
Inflation Protected Bond Universe	-5.44%	-7.59%	5.55%	9.75%	7.33%	-1.58%	2.44%	-4.43%	2.83%	2.81%	1.32%
INTERMEDIATE CORE BOND											
CREF Core Bond R3	-5.50%	-11.03%	-1.23%	7.92%	9.03%	-0.19%	4.12%	-11.14%	-0.95%	0.93%	-
Bloomberg US Agg Bond TR USD	-4.69%	-10.35%	-1.54%	7.51%	8.72%	0.01%	3.54%	-10.29%	-0.93%	0.88%	1.54%
Intermediate Core Bond Universe	-5.01%	-10.63%	-1.49%	8.03%	8.33%	-0.46%	3.44%	-10.85%	-0.96%	0.72%	1.48%
GLOBAL ALLOCATION											
CREF Social Choice R3	-11.29%	-16.75%	12.64%	13.52%	20.80%	-4.29%	14.27%	-12.93%	4.48%	5.61%	-
60% MSCI World 40% Bloomberg Agg Index	-11.60%	-16.33%	12.34%	13.66%	20.42%	-4.76%	14.90%	-12.29%	4.44%	5.55%	6.83%
Global Allocation Universe	-10.57%	-13.45%	11.29%	7.26%	16.85%	-7.54%	14.39%	-11.17%	2.68%	3.40%	4.90%

*ANNUALIZED

CONTINUED...

This summary is intended for "Institutional (Plan Sponsor) Use Only" and only includes historical performance of the funds currently in the plan's fund lineup as compared to the peer group (universe) maintained/developed by CAPTRUST (using Morningstar open-end mutual fund data), which may include other investment types such as collective investment trusts. Fund and peer group returns are shown net of investment management fees, unless otherwise indicated, but gross of CAPTRUST advisory fees. The plan's overall performance will be reduced by CAPTRUST's advisory fees and other plan level fees not contemplated in this summary. Therefore, each participant's account performance will differ substantially. Past performance is not indicative of future results. Information from sources believed to be reliable, but not warranted by CAPTRUST to be accurate or complete.



PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 6.30.22 | Q2 '22

SURS Self Managed Plan - Frozen

INVESTMENT NAME	Q2 '22	YTD '22	2021	2020	2019	2018	2017	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
ALLOCATION--85%+ EQUITY											
CREF Stock R3	-15.63%	-20.80%	18.92%	17.91%	27.45%	-9.65%	23.43%	-16.99%	6.47%	7.31%	-
85% S&P 500, 15% Bloomberg Agg	-14.44%	-18.52%	23.77%	17.14%	27.97%	-3.58%	18.92%	-10.44%	9.01%	9.87%	11.30%
Allocation--85%+ Equity Universe	-15.33%	-21.18%	17.93%	17.25%	25.48%	-9.10%	20.77%	-17.64%	5.41%	6.19%	8.74%
SPECIALTY-PRIVATE REAL ESTATE											
TIAA Real Estate Account	5.11%	10.82%	17.87%	-0.84%	5.51%	4.79%	4.37%	23.04%	9.87%	7.96%	8.08%
NCREIF Property Index	3.23%	8.73%	17.70%	1.61%	6.42%	6.71%	6.98%	21.46%	10.22%	8.86%	9.67%
NCREIF ODCE Index	4.77%	12.49%	22.18%	1.18%	5.34%	8.35%	7.61%	29.51%	12.67%	10.54%	11.16%
LARGE COMPANY BLEND											
CREF Equity Index R3	-16.71%	-21.10%	25.52%	20.63%	30.73%	-5.37%	20.84%	-13.92%	9.62%	10.42%	-
S&P 500 Index	-16.10%	-19.96%	28.71%	18.40%	31.49%	-4.38%	21.83%	-10.62%	10.60%	11.31%	12.96%
Large Blend Universe	-15.16%	-19.56%	26.13%	16.52%	29.36%	-6.20%	20.94%	-11.83%	9.03%	9.64%	11.61%
LARGE COMPANY GROWTH											
CREF Growth R3	-22.13%	-31.08%	20.43%	40.76%	31.66%	-2.46%	31.83%	-26.60%	8.06%	11.46%	-
Russell 1000 Growth	-20.92%	-28.07%	27.60%	38.49%	36.39%	-1.51%	30.21%	-18.77%	12.58%	14.29%	14.80%
Large Growth Universe	-21.53%	-30.10%	20.31%	38.98%	32.83%	-1.40%	28.93%	-24.93%	7.82%	10.97%	12.56%
GLOBAL LARGE STOCK BLEND											
CREF Global Equities R3	-15.49%	-20.84%	15.65%	22.75%	28.28%	-12.36%	24.81%	-17.49%	7.19%	7.22%	-
MSCI ACWI NR USD	-15.66%	-20.18%	18.54%	16.25%	26.60%	-9.41%	23.97%	-15.75%	6.21%	7.00%	8.76%
Global Large Stock Blend	-13.68%	-18.82%	17.97%	14.01%	25.91%	-9.99%	22.94%	-14.33%	5.67%	6.27%	8.35%

*ANNUALIZED

This summary is intended for "Institutional (Plan Sponsor) Use Only" and only includes historical performance of the funds currently in the plan's fund lineup as compared to the peer group (universe) maintained/developed by CAPTRUST (using Morningstar open-end mutual fund data), which may include other investment types such as collective investment trusts. Fund and peer group returns are shown net of investment management fees, unless otherwise indicated, but gross of CAPTRUST advisory fees. The plan's overall performance will be reduced by CAPTRUST's advisory fees and other plan level fees not contemplated in this summary. Therefore, each participant's account performance will differ substantially. Past performance is not indicative of future results. Information from sources believed to be reliable, but not warranted by CAPTRUST to be accurate or complete.



SECTION 5: FUND FACT SHEETS

Period Ending 6.30.22 | Q2 22

State Universities Retirement System

SECTION 5: FUND FACT SHEETS	
Fund Fact Sheets.....	



INDUSTRY ANALYSIS

With inflation concerns remaining relatively high, the Federal Reserve increased the overnight lending rate to a target range between 0.25% - 0.50% in the first quarter. Guaranteed contract providers continue to operate as expected. Following the Fed’s rate increase and announcement of plans for seven or eight hikes in total for 2022, we can expect guaranteed products to increase crediting rates. When determining the guaranteed rate for a fund, insurance companies use forward-looking projections of the interest rate environment. Rising interest rates present negative pressure on current general account underlying portfolios, in the short-term, as the market value of current holdings decline, but give insurer’s comfort that higher yields will support the ability to offer higher guaranteed rates future quarters.

CAPTRUST ANALYSIS

Scott T. Matheson, CFA, CPA – Sr. Director | Investment Research

The Voya Fixed Account Plus III is a Voya Retirement Insurance and Annuity Company (VRIAC) group fixed unallocated annuity contract. The product is a “general account” product meaning participant assets are commingled within the insurance general account at Voya. All guarantees are ultimately backed by the financial strength and claims-paying ability of VRIAC.

The rate is declared annually with interest credited on a daily basis at an annual effective rate. The product credits interest under a portfolio interest crediting method in which all deposits receive the same return regardless of date of initial deposit. This product is only available to existing clients.

GROSS CREDITING RATE

Current Rate: 1.40%

INVESTMENT DETAILS

Crediting Rate Details:	New and existing money are credited equally, rates are reset monthly.
Competing Options:	Competing options are allowed, but they are subject to a 90-day equity wash.
Minimum Rate:	The minimum crediting rate is 1.00% as of 6/30/2019.

LIQUIDITY PROVISIONS

Plan Sponsor	Participant
Plan sponsor-directed transfers from the Fixed-Interest Option to another investment option would be restricted to 20 percent per year for five years	Benefit Responsive

Important Disclosures: This slide is intended solely for institutional use. The opinions expressed in this report are subject to change without notice. The statistics and data have been compiled from sources believed to be reliable but are not guaranteed to be accurate or complete. Any performance quoted represents past performance and does not guarantee future results. Bloomberg Index averages are derived from Morningstar. This material is not a solicitation or an offer to buy any security or to participate in any investment strategy. Any such solicitation must be made by prospectus only. For more information or to obtain a prospectus, please contact your financial advisor at 800.216.0645. CAPTRUST Financial Advisors.

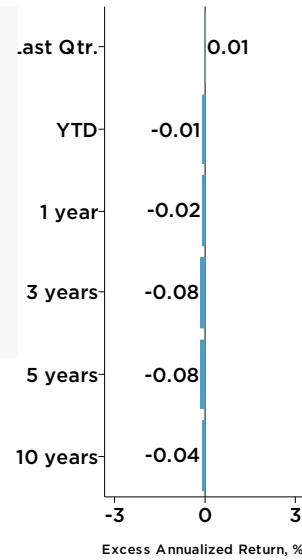


VANGUARD FEDERAL MONEY MARKET INVESTOR

Period Ending 6.30.22 | Q2 22

INDUSTRY ANALYSIS

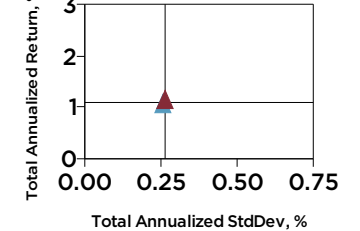
The Federal Reserve increased the overnight lending rate to a target between 1.50% - 1.75%, resulting in an increase in short-term interest rates. As such, yields on money market funds have increased year-to-date and are expected to normalize as rates settle. Inflation levels continue to post record numbers in the second quarter accelerating the Fed's response timeline, with two of the expected seven or eight rate hikes occurring in the second quarter, making it three in total year-to-date. In December 2021, the SEC proposed amendments that would improve the resilience of money market funds through increased transparency and liquidity requirements for money market funds, aiming to provide funds a more substantial liquidity buffer in the event of rapid redemptions. The proposed amendments remain under regulatory review and are susceptible to changes before



INVESTMENT PROFILE

Ticker	VMFXX
Strategy Incept Date	07/13/1981
Prospectus Exp Ratio	0.11%
12 Mo Yield	0.17%

Performance vs Risk - 5 Year

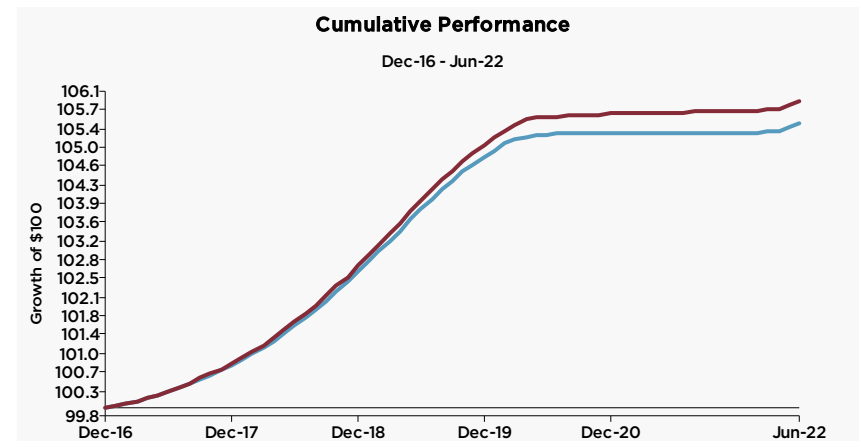
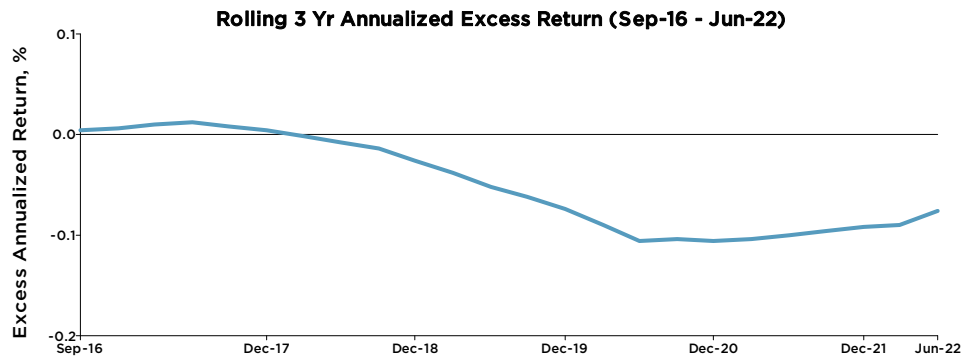


	Vanguard Federal Money Market Investor	FTSE Treasury Bill 3 Mon USD
TRAILING RETURNS		
Last Qtr.	0.16	0.14
YTD	0.17	0.17
1 Year	0.17	0.19
3 Years	0.53	0.61
5 Years	1.01	1.09
10 Years	0.57	0.62
CALENDAR RETURNS		
2021	0.01	0.05
2020	0.45	0.58
2019	2.14	2.25
2018	1.78	1.86
2017	0.81	0.84
KEY MEASURES / 5 YEAR		
5 Year	0.26	0.26

Vanguard Federal Money Market Investor

■ Excess

▲ Vanguard Federal Money Market Investor
▲ FTSE Treasury Bill 3 Mon USD



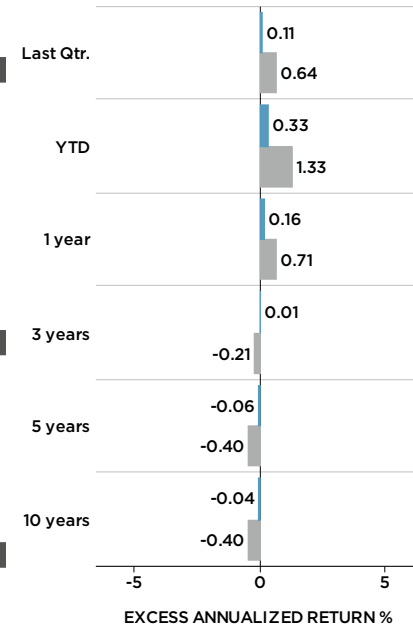
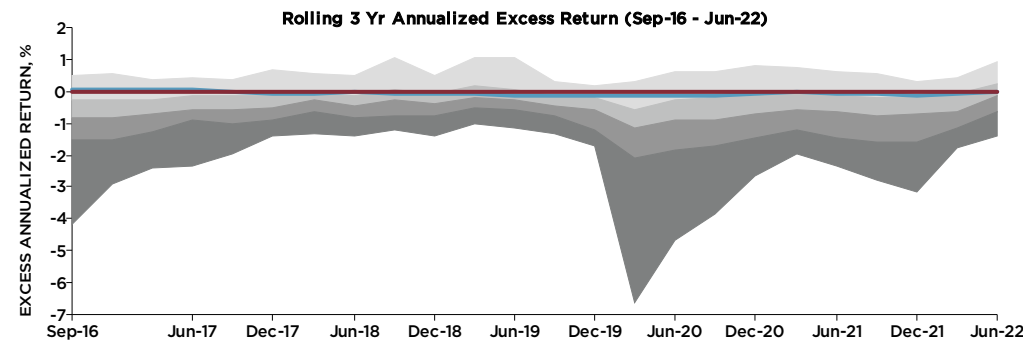
Performance Disclosure: For use with CAPTRUST clients only. Mutual fund investing involves risk. Please visit captrustadvisors.com/risk-disclosures/ for a detailed description of the risks associated with investing by asset class. Statistics and data have been derived from Morningstar and are not guaranteed to be accurate or complete. Performance data included here represents past performance and does not guarantee future results. This is not a solicitation to invest. Each mutual fund has a prospectus with a complete description of the risks associated with investing in the specific fund. To request a prospectus on this fund, please call CAPTRUST at (800)216-0645.



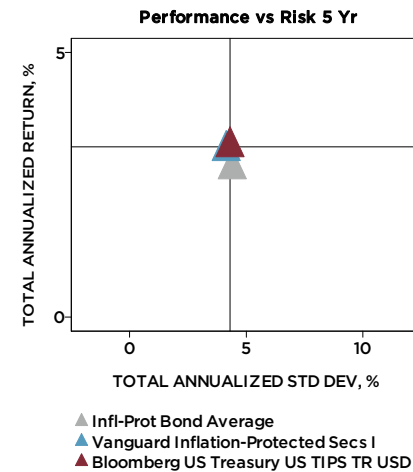
VANGUARD INFLATION-PROTECTED SECS I

Period Ending 6.30.22 | Q2 22

	Vanguard nflation-Protected Secs I	Peer Group Rank	Bloomberg US Treasury US TIPS TR USD	Infl-Prot Bond	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	4.11	35%	4.29	4.35	184
Sharpe Ratio	0.50	28%	0.49	0.43	184
Alpha	0.04	39%	0.00	-0.18	184
Beta	0.95	53%	1.00	0.90	184
R-Squared	98.86	6%	100.00	81.56	184
Up Mkt Capture	96.17	27%	100.00	87.40	184
Down Mkt Capture	95.14	48%	100.00	87.51	184
Information Ratio	-0.12	41%	NA	-0.40	184
TRAILING RETURNS					
Last Qtr.	-5.98	38%	-6.08	-5.44	194
YTD	-8.59	45%	-8.92	-7.59	194
1 Year	-4.98	40%	-5.14	-4.43	192
3 Years	3.05	38%	3.04	2.83	189
5 Years	3.15	23%	3.21	2.81	184
10 Years	1.69	20%	1.73	1.32	149
CALENDAR RETURNS					
2021	5.72	33%	5.96	5.55	191
2020	11.05	27%	10.99	9.75	189
2019	8.18	30%	8.43	7.33	189
2018	-1.40	45%	-1.26	-1.58	184
2017	2.97	28%	3.01	2.44	184



■ Vanguard Inflation-Protected Secs I
■ Infl-Prot Bond Average



▲ Inflation-Protected Bond Average
▲ Vanguard Inflation-Protected Secs I
▲ Bloomberg US Treasury US TIPS TR USD

INVESTMENT PROFILE

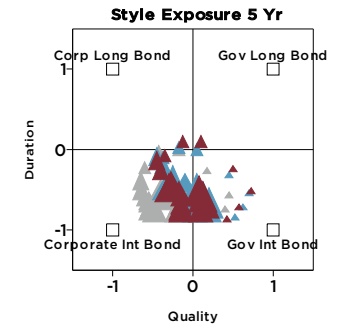
Ticker	VIPIX
CUSIP	922031745
Net Assets \$MM	\$36,669.00
Manager Names	John Madziyire
Manager Tenure	0.6 Years
Prospectus Exp Ratio	0.07%
Cat Median Exp Ratio	0.56%
Current 12b-1	N/A
Annlzd Ret Since Incept	3.79%
Inception Date	12/12/2003
Phone Number	888-809-8102
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	49
% Assets in Top 10 Holdings	35.68%
Avg Mkt Cap \$MM	N/A
Turnover Ratio	24.00%

TOP HOLDINGS

United States Treasury No	6.32%
United States Treasury No	4.11%
United States Treasury No	3.73%
United States Treasury No	3.54%
United States Treasury No	3.33%



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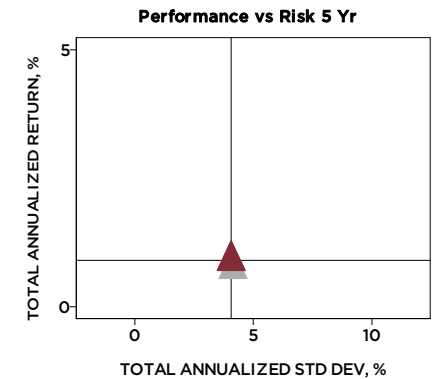
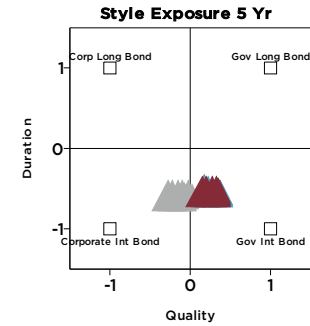
STATE STREET U.S. BOND INDEX SECURITIES LENDING SERIES FUND CLASS

Period Ending 6.30.22 | Q2 22

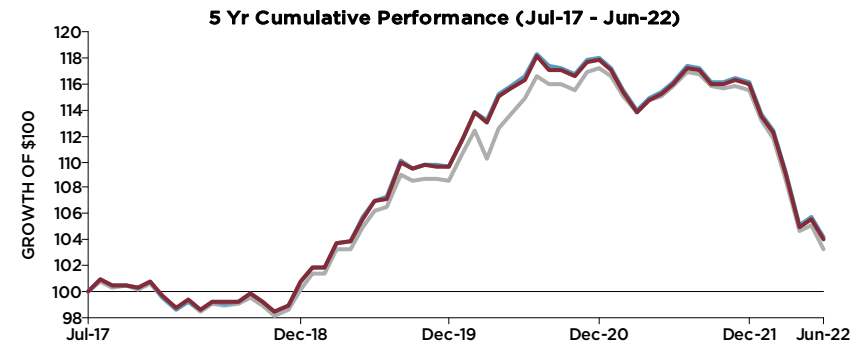
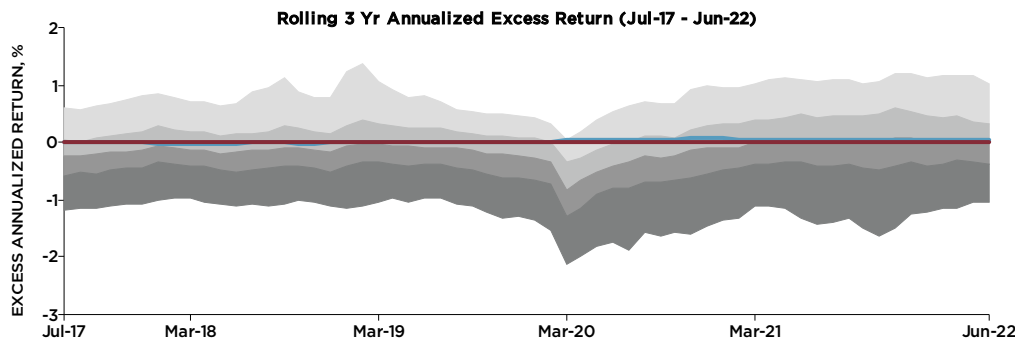
KEY MEASURES / 5 YEAR	State Street U.S. Bond Index Securities Lending Series Fund Class XIV	Peer Group Rank	Bloomberg US Agg Bond TR USD	Intermediate Core Bond	# of Funds
Standard Deviation	4.05	36%	4.04	4.18	386
Sharpe Ratio	-0.05	35%	-0.06	-0.10	386
Alpha	0.03	35%	0.00	-0.16	386
Beta	1.00	55%	1.00	0.99	386
R-Squared	99.98	1%	100.00	90.07	386
Up Mkt Capture	100.71	52%	100.00	98.82	386
Down Mkt Capture	100.22	33%	100.00	101.65	386
Information Ratio	0.54	7%	NA	-0.25	386

TRAILING RETURNS	State Street U.S. Bond Index Securities Lending Series Fund Class XIV	Peer Group Rank	Bloomberg US Agg Bond TR USD	Intermediate Core Bond	# of Funds
Last Qtr.	-4.70	26%	-4.69	-5.01	425
YTD	-10.31	31%	-10.35	-10.63	425
1 Year	-10.29	25%	-10.29	-10.85	424
3 Years	-0.90	44%	-0.93	-0.96	404
5 Years	0.90	35%	0.88	0.72	386
10 Years	1.55	47%	1.54	1.48	354

CALENDAR RETURNS	State Street U.S. Bond Index Securities Lending Series Fund Class XIV	Peer Group Rank	Bloomberg US Agg Bond TR USD	Intermediate Core Bond	# of Funds
2021	-1.62	53%	-1.54	-1.49	419
2020	7.67	58%	7.51	8.03	409
2019	8.74	32%	8.72	8.33	402
2018	0.03	24%	0.01	-0.46	390
2017	3.55	42%	3.54	3.44	384



■ State Street U.S. Bond Index Securities Lending Series Fund Class XIV
■ Intermediate Core Bond Average
▲ Intermediate Core Bond Average
▲ State Street U.S. Bond Index Securities Lending Series Fund Class XIV
▲ Bloomberg US Agg Bond TR USD



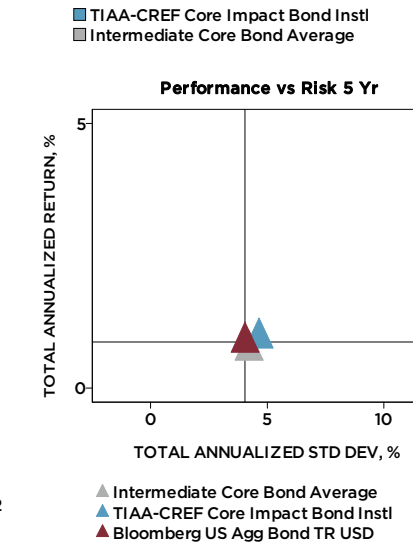
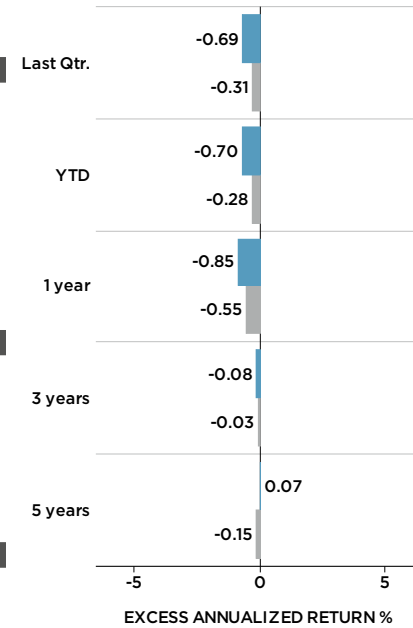
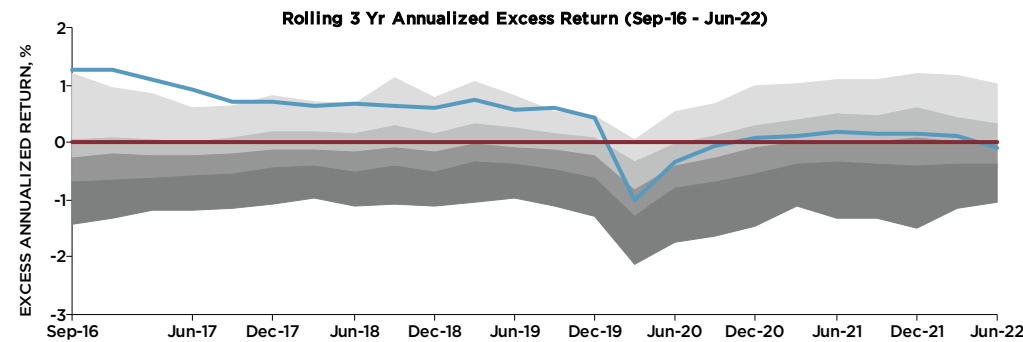
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TIAA-CREF CORE IMPACT BOND INSTL

Period Ending 6.30.22 | Q2 22

	TIAA-CREF Core Impact Bond Instl	Peer Group Rank	Bloomberg US Agg Bond TR USD	Intermediate Core Bond	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	4.63	85%	4.04	4.18	386
Sharpe Ratio	-0.03	30%	-0.06	-0.10	386
Alpha	0.09	30%	0.00	-0.16	386
Beta	1.06	20%	1.00	0.99	386
R-Squared	82.75	79%	100.00	90.07	386
Up Mkt Capture	109.08	17%	100.00	98.82	386
Down Mkt Capture	108.67	72%	100.00	101.65	386
Information Ratio	0.04	33%	NA	-0.25	386
TRAILING RETURNS					
Last Qtr.	-5.39	73%	-4.69	-5.01	425
YTD	-11.05	68%	-10.35	-10.63	425
1 Year	-11.14	64%	-10.29	-10.85	424
3 Years	-1.02	53%	-0.93	-0.96	404
5 Years	0.95	31%	0.88	0.72	386
10 Years	NA	0%	1.54	1.48	354
CALENDAR RETURNS					
2021	-1.03	24%	-1.54	-1.49	419
2020	7.45	65%	7.51	8.03	409
2019	8.73	32%	8.72	8.33	402
2018	0.33	12%	0.01	-0.46	390
2017	4.51	9%	3.54	3.44	384



INVESTMENT PROFILE

Ticker	TSBIX
CUSIP	87245R672
Net Assets \$MM	\$6,386.00
Manager Names	Team Managed
Manager Tenure	9.8 Years
Prospectus Exp Ratio	0.35%
Cat Median Exp Ratio	0.53%
Current 12b-1	N/A
Annldz Ret Since Incept	2.10%
Inception Date	09/21/2012
Phone Number	877-518-9161
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	1088
% Assets in Top 10 Holdings	14.33%
Avg Mkt Cap \$MM	N/A
Turnover Ratio	255.00%

TOP HOLDINGS

United States Treasury Nol	3.41%
United States Treasury Nol	3.00%
United States Treasury Bor	1.55%
State Str Navigator Secs Lt	1.35%
United States Treasury Nol	1.16%

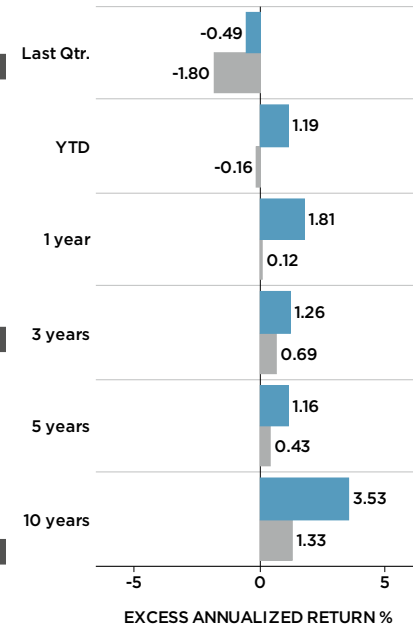
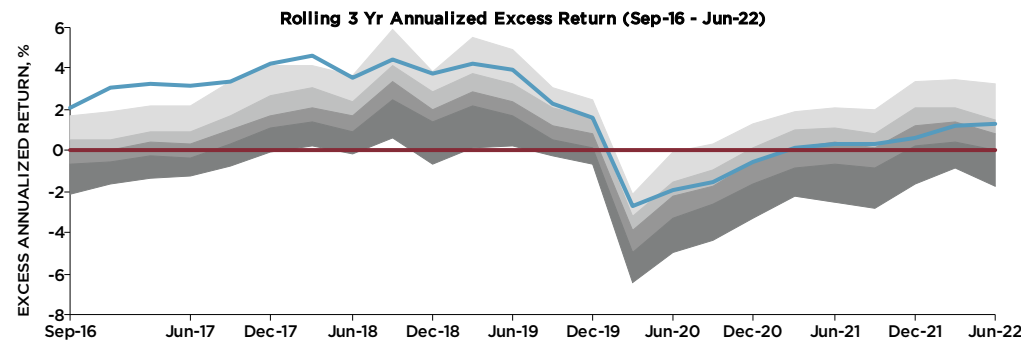
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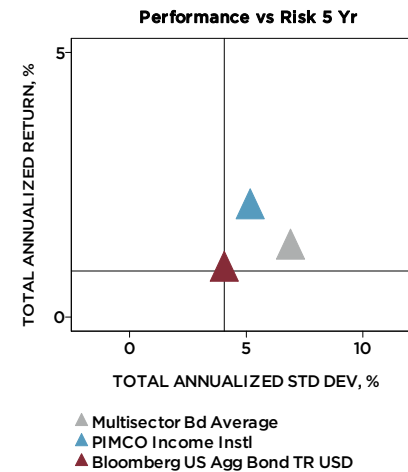
PIMCO INCOME INSTL

Period Ending 6.30.22 | Q2 22

	PIMCO Income Instl	Peer Group Rank	Bloomberg US Agg Bond TR USD	Multisector Bd	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	5.19	15%	4.04	6.89	264
Sharpe Ratio	0.18	18%	-0.06	0.05	264
Alpha	1.06	23%	0.00	0.37	264
Beta	0.58	83%	1.00	0.74	264
R-Squared	19.16	56%	100.00	21.50	264
Up Mkt Capture	82.10	75%	100.00	93.68	264
Down Mkt Capture	56.09	12%	100.00	83.97	264
Information Ratio	0.23	17%	NA	0.09	264
TRAILING RETURNS					
Last Qtr.	-5.18	27%	-4.69	-6.49	339
YTD	-9.16	26%	-10.35	-10.51	333
1 Year	-8.48	26%	-10.29	-10.17	331
3 Years	0.33	33%	-0.93	-0.25	298
5 Years	2.04	22%	0.88	1.31	264
10 Years	5.07	1%	1.54	2.88	182
CALENDAR RETURNS					
2021	2.61	45%	-1.54	2.47	328
2020	5.80	56%	7.51	5.55	313
2019	8.05	80%	8.72	10.23	278
2018	0.58	16%	0.01	-1.58	270
2017	8.60	19%	3.54	6.58	258



■ PIMCO Income Instl
■ Multisector Bd Average



▲ Multisector Bd Average
▲ PIMCO Income Instl
▲ Bloomberg US Agg Bond TR USD

INVESTMENT PROFILE

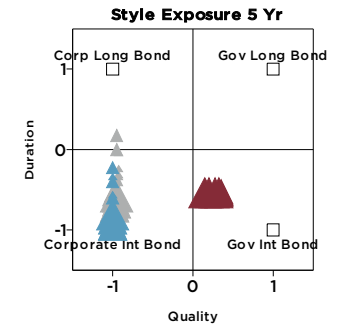
Ticker	PIMIX
CUSIP	72201F490
Net Assets \$MM	\$117,705.00
Manager Names	Team Managed
Manager Tenure	15.3 Years
Prospectus Exp Ratio	0.62%
Cat Median Exp Ratio	0.91%
Current 12b-1	N/A
Annlzd Ret Since Incept	6.75%
Inception Date	03/30/2007
Phone Number	888-877-4626
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	8175
% Assets in Top 10 Holdings	31.33%
Avg Mkt Cap \$MM	\$4,203.46
Turnover Ratio	319.00%

TOP HOLDINGS

10 Year Treasury Note Futu	8.95%
Pimco Fds	5.15%
Federal National Mortgage	2.68%
Federal National Mortgage	2.42%
Federal National Mortgage	2.32%



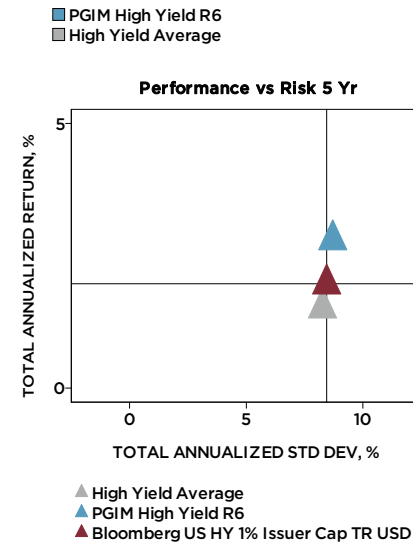
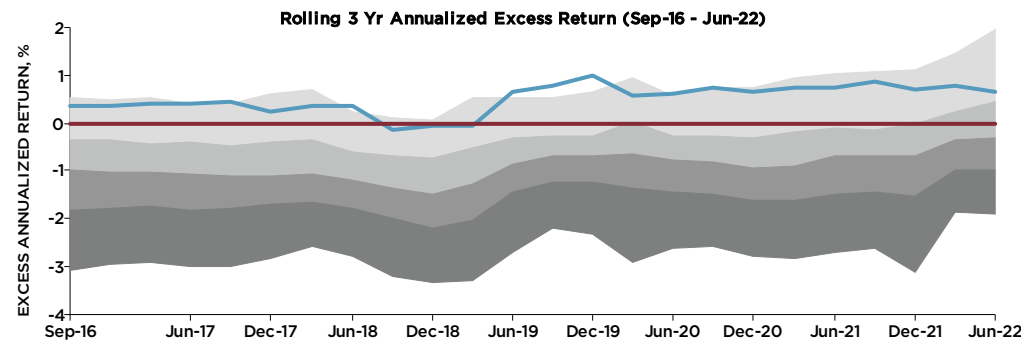
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PGIM HIGH YIELD R6

Period Ending 6.30.22 | Q2 22

	PGIM High Yield R6	Peer Group Rank	Bloomberg US HY 1% Issuer Cap TR USD	High Yield	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	8.72	69%	8.45	8.31	608
Sharpe Ratio	0.19	11%	0.10	0.06	608
Alpha	0.80	10%	0.00	-0.41	608
Beta	1.03	29%	1.00	0.96	608
R-Squared	99.11	7%	100.00	95.12	608
Up Mkt Capture	106.57	8%	100.00	91.72	608
Down Mkt Capture	97.75	44%	100.00	95.59	608
Information Ratio	0.91	2%	NA	-0.28	608
TRAILING RETURNS					
Last Qtr.	-9.24	31%	-9.86	-9.59	642
YTD	-13.48	44%	-14.14	-13.14	642
1 Year	-11.76	35%	-12.82	-12.07	631
3 Years	0.67	21%	0.01	-0.22	615
5 Years	2.79	8%	1.97	1.53	608
10 Years	4.84	6%	4.39	3.66	508
CALENDAR RETURNS					
2021	6.47	17%	5.16	5.09	630
2020	5.72	40%	6.59	5.17	618
2019	16.26	5%	14.27	13.12	614
2018	-1.18	14%	-2.21	-2.82	610
2017	7.70	22%	7.50	6.79	598



INVESTMENT PROFILE

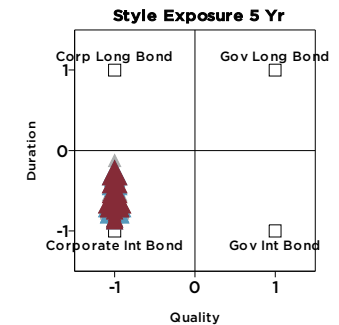
Ticker	PHYQX
CUSIP	74440Y884
Net Assets \$MM	\$19,489.00
Manager Names	Team Managed
Manager Tenure	14.7 Years
Prospectus Exp Ratio	0.38%
Cat Median Exp Ratio	0.85%
Current 12b-1	N/A
Annlzd Ret Since Incept	5.25%
Inception Date	10/31/2011
Phone Number	800-225-1852
Sub Advisor	PGIM Fixed Income/ PGIM Limited

HOLDINGS OVERVIEW

Total Number of Holdings	779
% Assets in Top 10 Holdings	12.06%
Avg Mkt Cap \$MM	\$6,435.38
Turnover Ratio	56.00%

TOP HOLDINGS

Dreyfus Government Cash	2.83%
Chesapeake Energy Corp (2.32%
PGIM Core Short-Term Bon	1.48%
Prudential Invt Portfolios 2	0.99%
Calpine Corporation 5.125%	0.84%



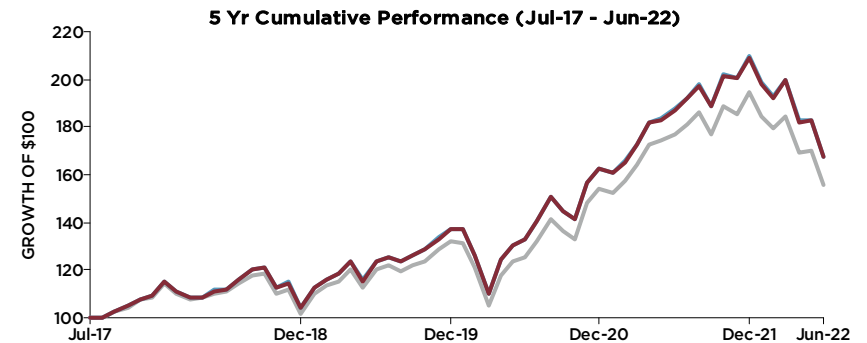
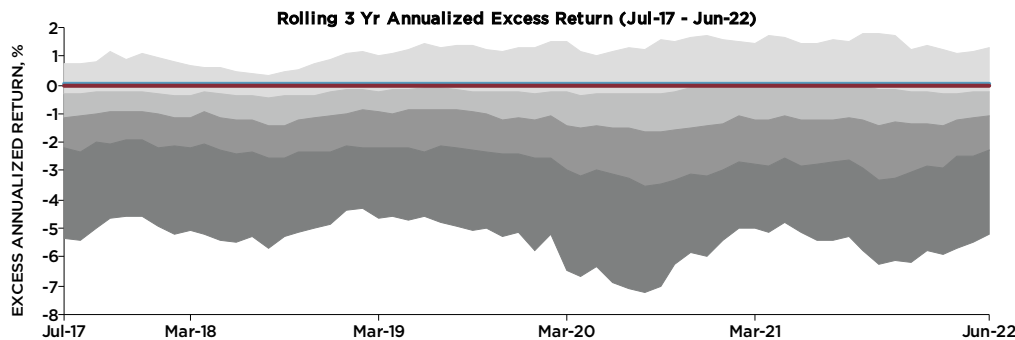
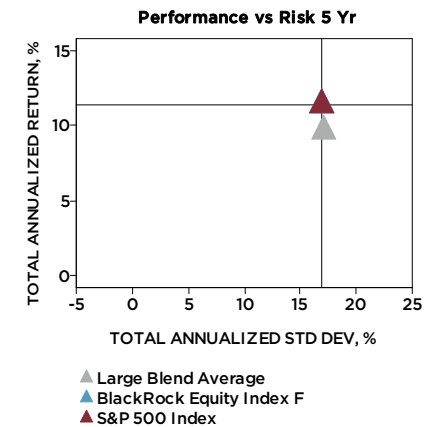
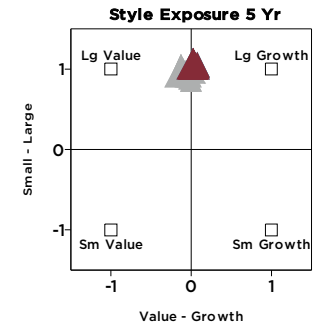
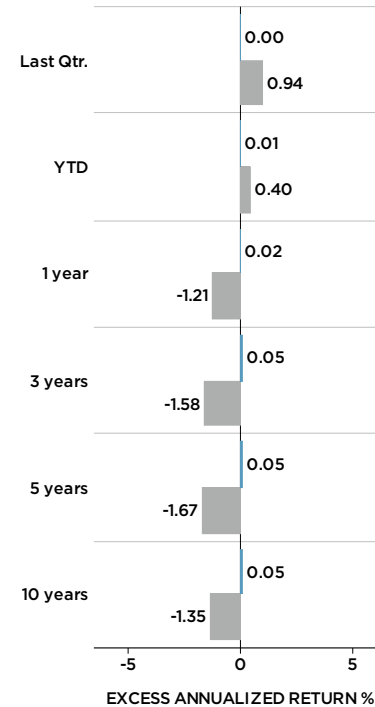
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BLACKROCK EQUITY INDEX F

Period Ending 6.30.22 | Q2 22

	BlackRock Equity Index F	Peer Group Rank	S&P 500 Index	Large Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	16.95	49%	16.95	17.11	1110
Sharpe Ratio	0.60	16%	0.60	0.50	1110
Alpha	0.05	19%	0.00	-1.54	1110
Beta	1.00	43%	1.00	0.99	1110
R-Squared	100.00	1%	100.00	95.79	1110
Up Mkt Capture	100.13	15%	100.00	94.56	1110
Down Mkt Capture	99.94	39%	100.00	100.52	1110
Information Ratio	1.85	1%	NA	-1.03	1110
TRAILING RETURNS					
Last Qtr.	-16.10	58%	-16.10	-15.16	1202
YTD	-19.95	45%	-19.96	-19.56	1200
1 Year	-10.60	33%	-10.62	-11.83	1194
3 Years	10.65	17%	10.60	9.03	1148
5 Years	11.36	12%	11.31	9.64	1110
10 Years	13.01	11%	12.96	11.61	977
CALENDAR RETURNS					
2021	28.74	21%	28.71	26.13	1183
2020	18.48	34%	18.40	16.52	1158
2019	31.55	22%	31.49	29.36	1134
2018	-4.34	23%	-4.38	-6.20	1119
2017	21.87	33%	21.83	20.94	1098



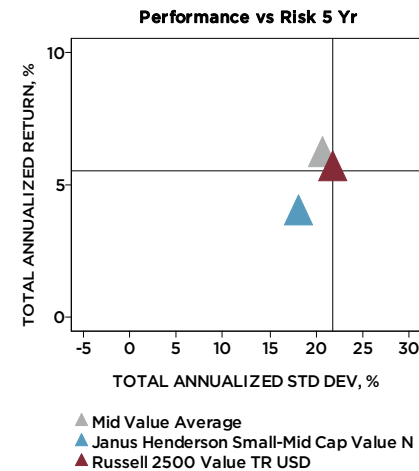
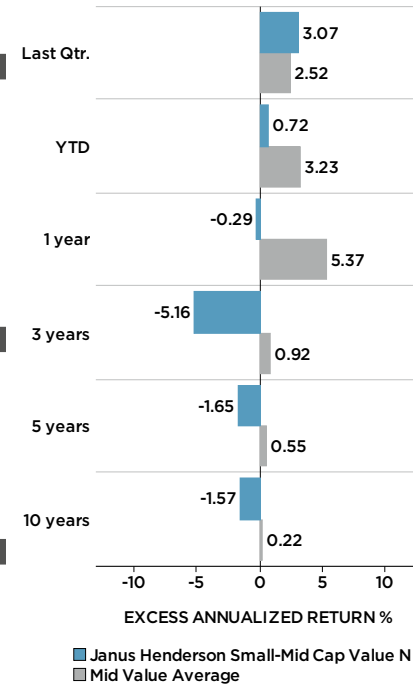
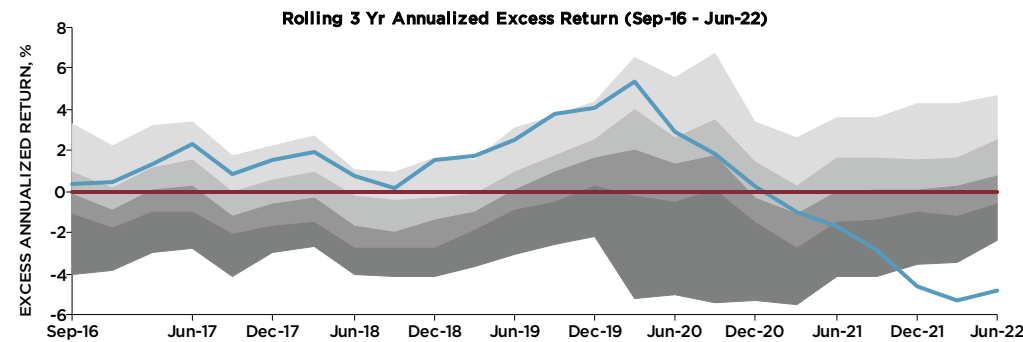
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JANUS HENDERSON SMALL-MID CAP VALUE N

Period Ending 6.30.22 | Q2 22

	Janus Henderson Small-Mid Cap Value N	Peer Group Rank	Russell 2500 Value TR USD	Mid Value	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	18.01	11%	21.72	20.65	364
Sharpe Ratio	0.15	81%	0.20	0.25	364
Alpha	-0.77	79%	0.00	0.89	364
Beta	0.80	88%	1.00	0.92	364
R-Squared	93.41	69%	100.00	94.30	364
Up Mkt Capture	76.58	96%	100.00	92.74	364
Down Mkt Capture	82.80	23%	100.00	90.90	364
Information Ratio	-0.23	84%	NA	0.10	364
TRAILING RETURNS					
Last Qtr.	-12.32	37%	-15.39	-12.87	375
YTD	-15.94	81%	-16.66	-13.43	373
1 Year	-13.48	94%	-13.19	-7.82	372
3 Years	1.02	99%	6.19	7.11	370
5 Years	3.89	86%	5.54	6.09	364
10 Years	7.97	94%	9.54	9.76	326
CALENDAR RETURNS					
2021	16.48	96%	27.78	28.04	372
2020	-3.00	90%	4.88	2.85	371
2019	27.09	48%	23.56	26.72	370
2018	-7.06	3%	-12.36	-13.64	369
2017	14.08	42%	10.36	13.92	360



INVESTMENT PROFILE

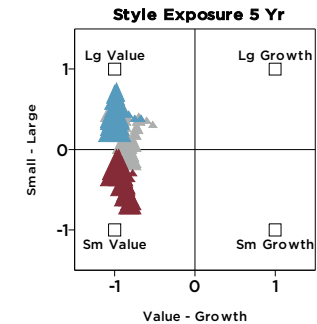
Ticker	JVSNX
CUSIP	47103D736
Net Assets \$MM	\$131.00
Manager Names	Team Managed
Manager Tenure	2.9 Years
Prospectus Exp Ratio	0.76%
Cat Median Exp Ratio	0.97%
Current 12b-1	N/A
Annlzd Ret Since Incept	4.00%
Inception Date	08/04/2017
Phone Number	877-335-2687
Sub Advisor	Perkins Investment Management LLC

HOLDINGS OVERVIEW

Total Number of Holdings	51
% Assets in Top 10 Holdings	27.04%
Avg Mkt Cap \$MM	\$6,448.67
Turnover Ratio	99.00%

TOP HOLDINGS

Nomad Foods Ltd	3.32%
First Interstate BancSystem	3.04%
Commercial Metals Co	2.70%
Globus Medical Inc Class A	2.68%
PotlatchDeltic Corp	2.63%



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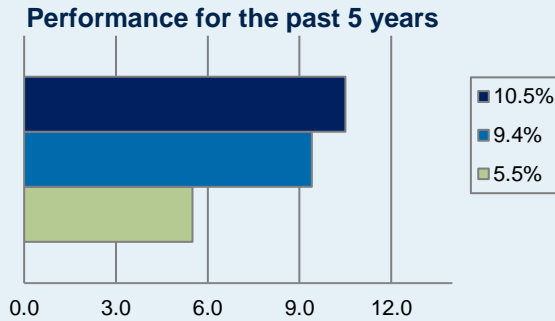
SMID Cap Value Performance Update Second Quarter 2022



Team Approach

- Portfolio managed by a team with industry experience – backgrounds in functional areas such as logistics, credit analysis, investment banking, accounting, and engineering
- Ability to look at potential investments as industry practitioners
- Senior members have an average of 25+ years of industry experience
- Investment team comprised of individuals with a wide range of cultural backgrounds

Long-Term Investors



Consistent Process

- Philosophy and process have been in place since inception
- Utilize an internally-developed screen called *Return Pattern Recognition*[®], along with assessing the risk that we believe matters most to clients – the risk of meaningful underperformance versus the assigned benchmark – using a measure called Downside Deviation
- Spend 95%+ of our time conducting bottom-up, fundamental research focused on the long-term prospects of individual companies

Annualized Performance

	EARNEST Gross	EARNEST Net	Russell 2500 [®] Value
2Q 2022	-15.0%	-15.2%	-15.4%
1 Year	-11.6%	-12.5%	-13.2%
3 Years	11.1%	10.0%	6.2%
5 Years	10.5%	9.4%	5.5%

See Reverse Side For Disclosures

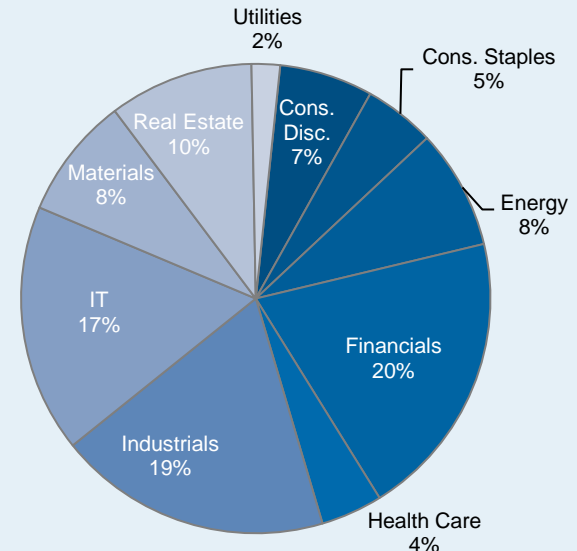
Portfolio Characteristics

- Wtd. Median Market Cap: \$5.9B
- Price to Earnings Ratio: 13.5x
- Earnings Growth Rate: 27.9%
- Debt to Capital Ratio: 35.9%
- Approximately 50-60 securities
- Focus on companies with strong fundamentals and compelling valuation

Available Vehicles

- Separate Account
- Commingled Vehicle

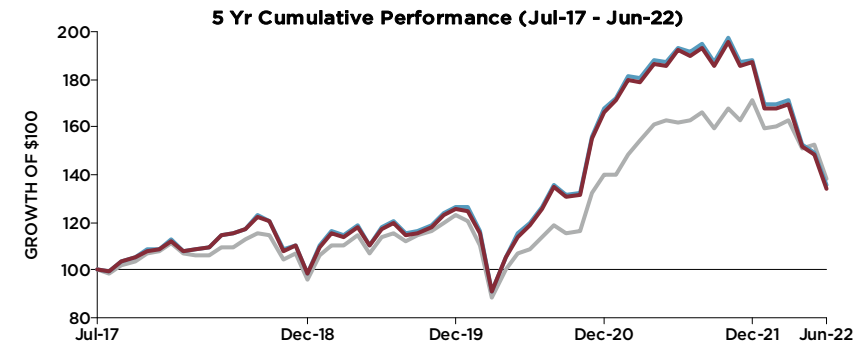
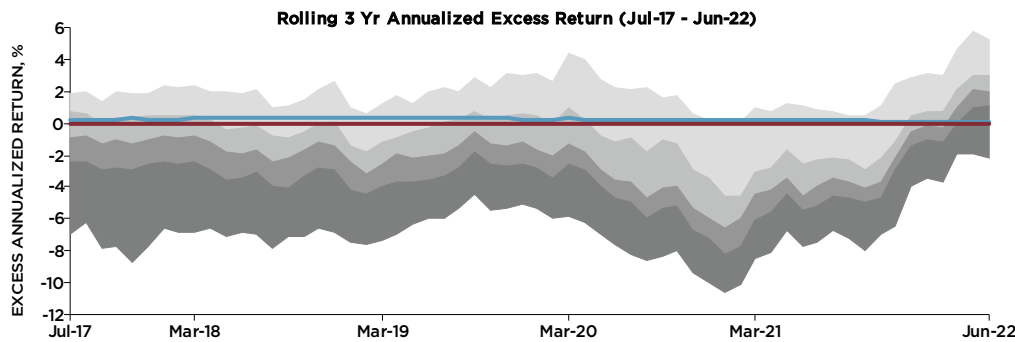
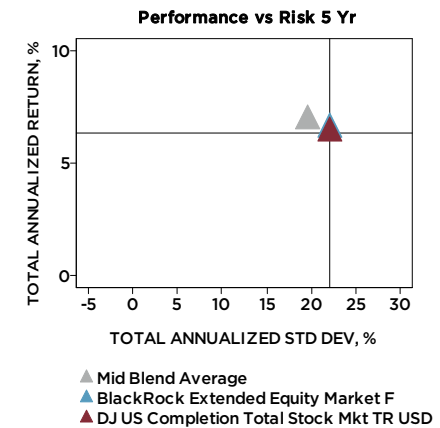
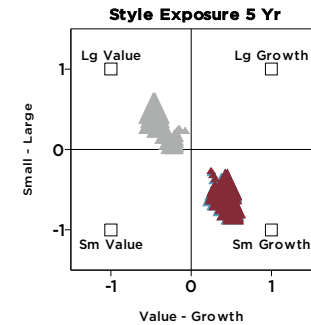
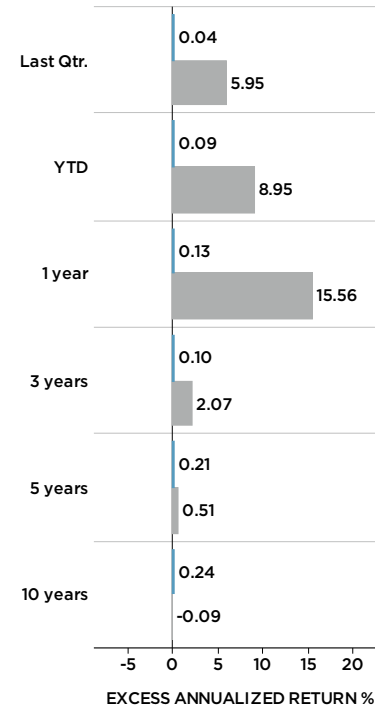
Sector Allocation



BLACKROCK EXTENDED EQUITY MARKET F

Period Ending 6.30.22 | Q2 22

	BlackRock Extended Equity Market F	Peer Group Rank	DJ US Completion Total Stock Mkt TR USD	Mid Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	22.10	95%	22.12	19.63	318
Sharpe Ratio	0.25	73%	0.24	0.30	318
Alpha	0.21	77%	0.00	1.37	318
Beta	1.00	4%	1.00	0.84	318
R-Squared	100.00	1%	100.00	88.18	318
Up Mkt Capture	100.57	3%	100.00	83.18	318
Down Mkt Capture	99.83	98%	100.00	80.95	318
Information Ratio	1.54	1%	NA	0.08	318
TRAILING RETURNS					
Last Qtr.	-20.64	96%	-20.68	-14.73	355
YTD	-28.00	98%	-28.09	-19.14	355
1 Year	-29.86	98%	-30.00	-14.44	351
3 Years	4.67	89%	4.56	6.63	336
5 Years	6.54	59%	6.33	6.85	318
10 Years	10.36	47%	10.12	10.03	266
CALENDAR RETURNS					
2021	12.45	96%	12.35	22.98	346
2020	32.16	3%	32.16	13.87	344
2019	28.23	45%	27.94	27.88	335
2018	-9.15	31%	-9.57	-10.74	323
2017	18.26	29%	18.12	15.83	315



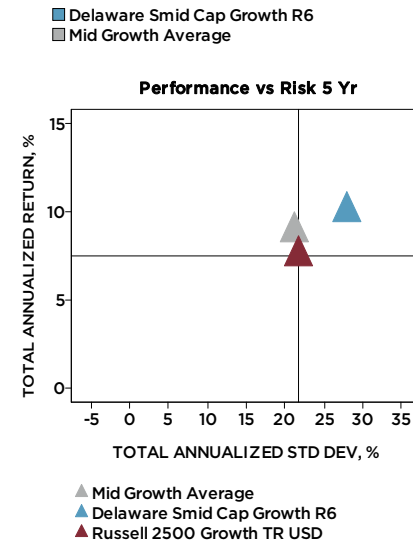
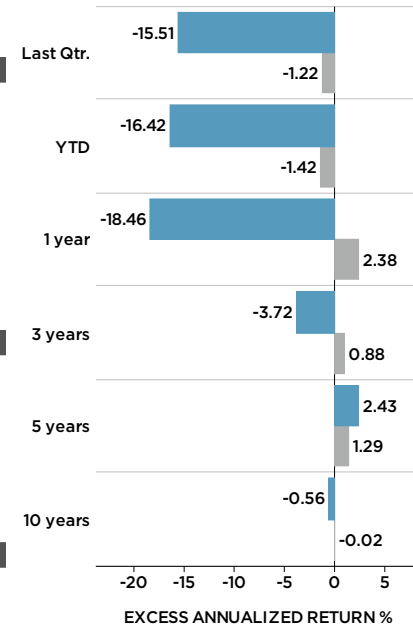
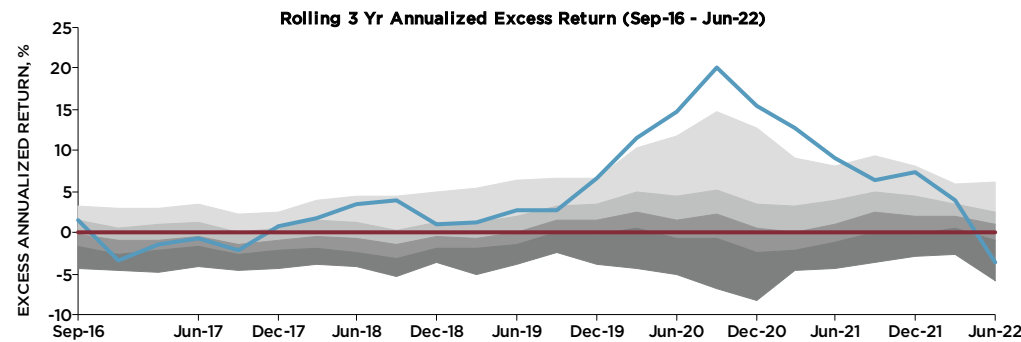
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DELAWARE SMID CAP GROWTH R6

Period Ending 6.30.22 | Q2 22

	Delaware Smid Cap Growth R6	Peer Group Rank	Russell 2500 Growth TR USD	Mid Growth	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	27.98	96%	21.84	21.24	511
Sharpe Ratio	0.32	69%	0.29	0.37	511
Alpha	1.30	61%	0.00	1.84	511
Beta	1.18	3%	1.00	0.91	511
R-Squared	84.60	87%	100.00	89.24	511
Up Mkt Capture	129.62	4%	100.00	92.37	511
Down Mkt Capture	119.34	98%	100.00	87.60	511
Information Ratio	0.19	47%	NA	0.15	511
TRAILING RETURNS					
Last Qtr.	-35.06	98%	-19.55	-20.77	568
YTD	-45.87	98%	-29.45	-30.87	568
1 Year	-50.27	97%	-31.81	-29.42	562
3 Years	-0.04	90%	3.68	4.56	530
5 Years	9.96	29%	7.53	8.81	511
10 Years	10.32	62%	10.88	10.86	480
CALENDAR RETURNS					
2021	-8.12	97%	5.04	12.05	556
2020	94.51	4%	40.47	41.74	534
2019	35.77	35%	32.65	33.90	524
2018	0.44	12%	-7.47	-4.73	517
2017	35.61	4%	24.46	25.30	504



INVESTMENT PROFILE

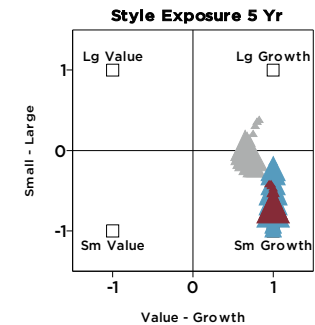
Ticker	DFZRX
CUSIP	24610A505
Net Assets \$MM	\$1,799.00
Manager Names	W. Alexander L. Ely
Manager Tenure	6.0 Years
Prospectus Exp Ratio	0.73%
Cat Median Exp Ratio	1.03%
Current 12b-1	N/A
Annldz Ret Since Incept	8.85%
Inception Date	05/02/2016
Phone Number	800-523-1918
Sub Advisor	Multiple

HOLDINGS OVERVIEW

Total Number of Holdings	30
% Assets in Top 10 Holdings	51.25%
Avg Mkt Cap \$MM	\$5,855.94
Turnover Ratio	81.00%

TOP HOLDINGS

Inari Medical Inc Ordinary	6.39%
Inspire Medical Systems In	6.36%
Pacira BioSciences Inc	6.24%
Progyny Inc	6.01%
Lattice Semiconductor Coi	4.86%



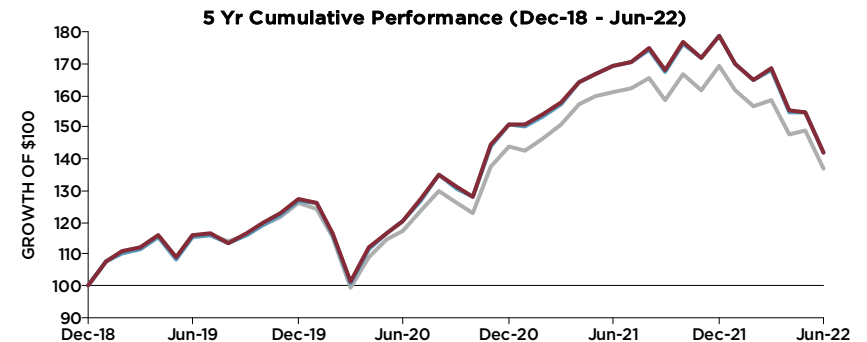
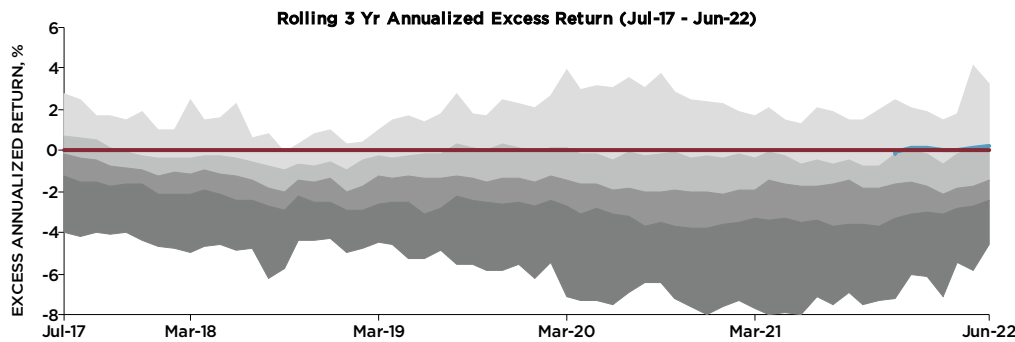
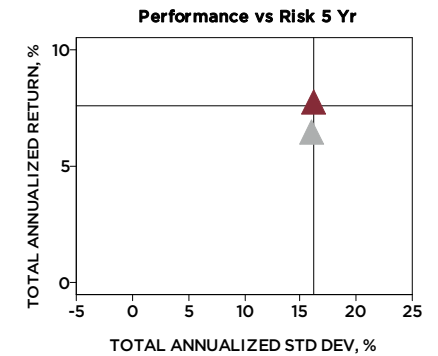
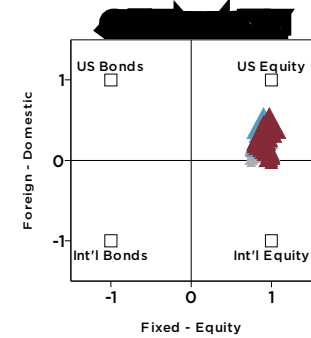
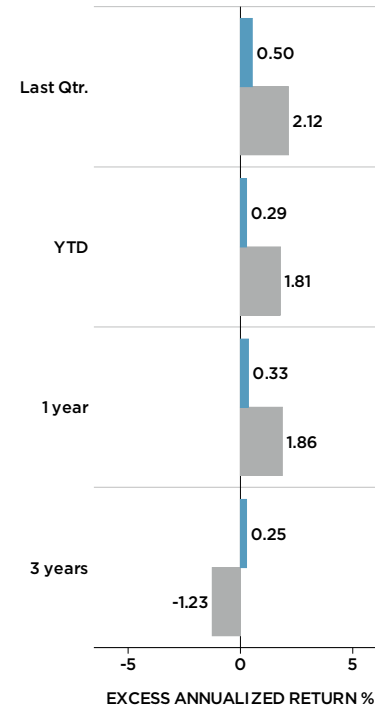
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BLACKROCK MSCI ACWI ESG FOCUS INDEX FUND F

Period Ending 6.30.22 | Q2 22

	BlackRock MSCI ACWI ESG Focus Index Fund F	Peer Group Rank	MSCI ACWI ESG FOCUS NR USD	Global Large Stock Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	NA	0%	16.27	15.97	287
Sharpe Ratio	NA	0%	0.40	0.33	287
Alpha	NA	0%	0.00	-0.98	287
Beta	NA	0%	1.00	0.95	287
R-Squared	NA	0%	100.00	92.90	287
Up Mkt Capture	NA	0%	100.00	90.63	287
Down Mkt Capture	NA	0%	100.00	95.32	287
Information Ratio	NA	0%	NA	-0.32	287
TRAILING RETURNS					
Last Qtr.	-15.31	78%	-15.81	-13.68	332
YTD	-20.33	57%	-20.62	-18.82	331
1 Year	-15.86	54%	-16.19	-14.33	316
3 Years	7.14	25%	6.90	5.67	307
5 Years	NA	0%	7.61	6.27	287
CALENDAR RETURNS					
2021	18.22	47%	18.31	17.97	316
2020	18.99	16%	18.55	14.01	310
2019	26.87	42%	27.45	25.91	299
2018	NA	0%	-8.69	-9.99	289
2017	NA	0%	24.57	22.94	271



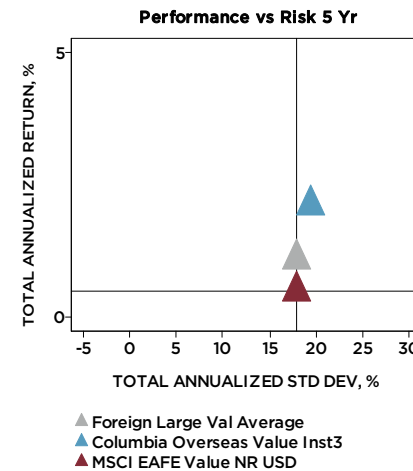
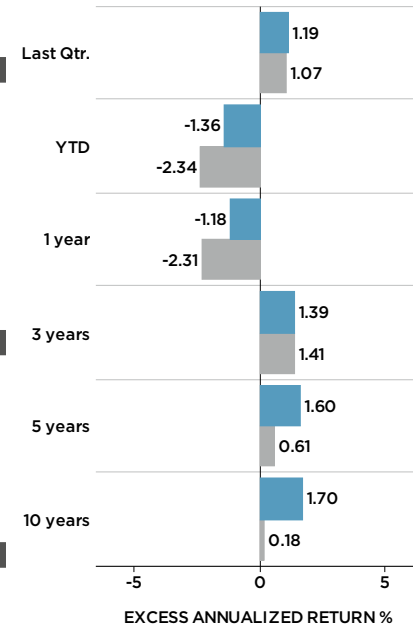
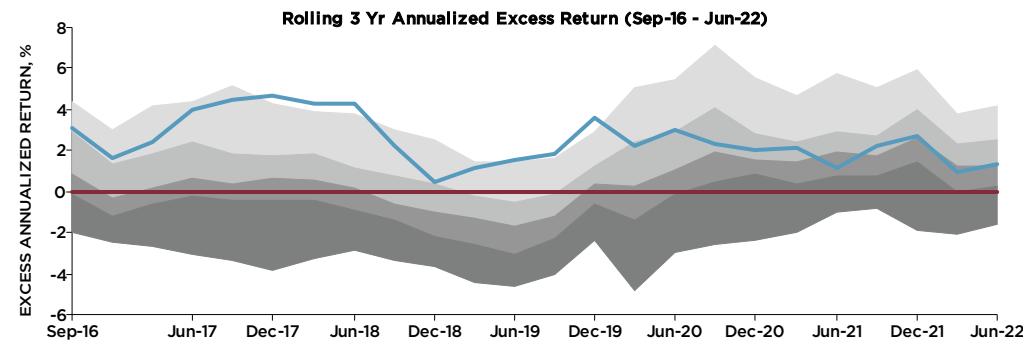
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COLUMBIA OVERSEAS VALUE INST3

Period Ending 6.30.22 | Q2 22

	Columbia Overseas Value Inst3	Peer Group Rank	MSCI EAFE Value NR USD	Foreign Large Val	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	19.37	78%	17.91	17.83	276
Sharpe Ratio	0.05	19%	-0.03	0.00	276
Alpha	1.63	17%	0.00	0.58	276
Beta	1.06	23%	1.00	0.96	276
R-Squared	95.81	26%	100.00	92.37	276
Up Mkt Capture	114.50	11%	100.00	100.24	276
Down Mkt Capture	105.37	73%	100.00	97.50	276
Information Ratio	0.38	13%	NA	0.12	276
TRAILING RETURNS					
Last Qtr.	-11.22	39%	-12.41	-11.34	317
YTD	-13.47	40%	-12.12	-14.45	312
1 Year	-13.13	41%	-11.95	-14.25	310
3 Years	1.57	48%	0.18	1.59	293
5 Years	2.12	19%	0.52	1.12	276
10 Years	5.95	8%	4.25	4.43	240
CALENDAR RETURNS					
2021	10.97	60%	10.89	11.77	305
2020	-0.06	76%	-2.63	2.68	294
2019	22.61	14%	16.09	18.51	293
2018	-16.38	49%	-14.78	-16.53	277
2017	30.24	1%	21.44	22.93	276



INVESTMENT PROFILE

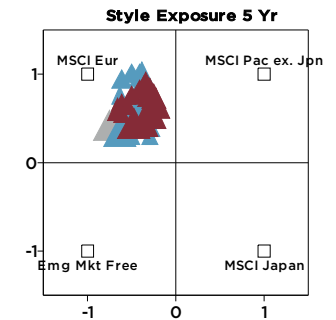
Ticker	COSYX
CUSIP	19766P868
Net Assets \$MM	\$2,339.00
Manager Names	Team Managed
Manager Tenure	14.3 Years
Prospectus Exp Ratio	0.77%
Cat Median Exp Ratio	0.97%
Current 12b-1	0.00%
Annldz Ret Since Incept	3.27%
Inception Date	07/01/2015
Phone Number	800-345-6611
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	126
% Assets in Top 10 Holdings	26.81%
Avg Mkt Cap \$MM	\$19,448.61
Turnover Ratio	43.00%

TOP HOLDINGS

Shell PLC	3.48%
British American Tobacco	3.38%
TotalEnergies SE	3.34%
Vodafone Group PLC	2.55%
AXA SA	2.49%



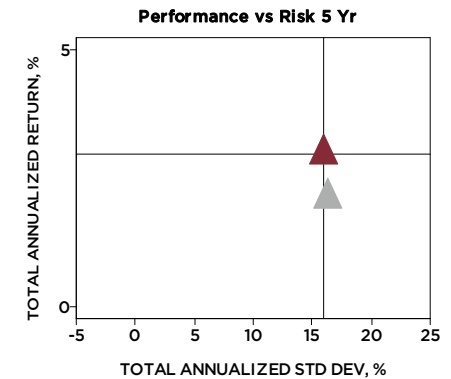
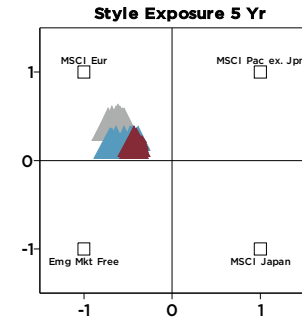
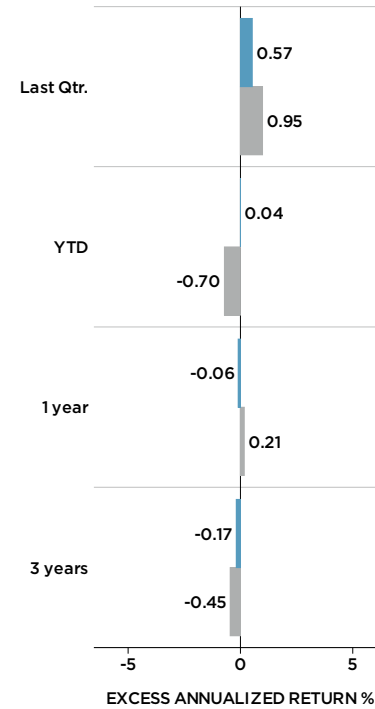
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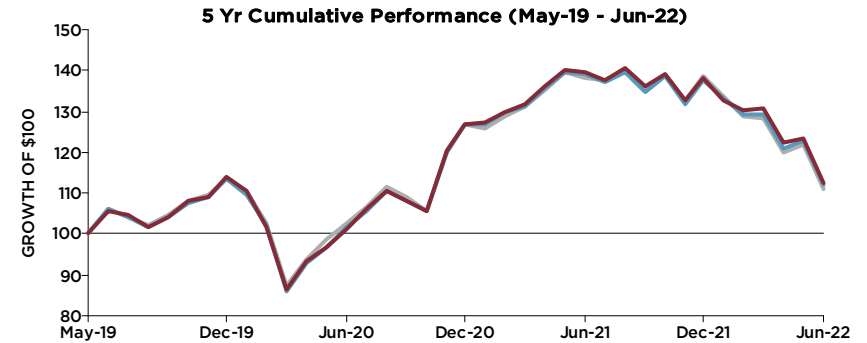
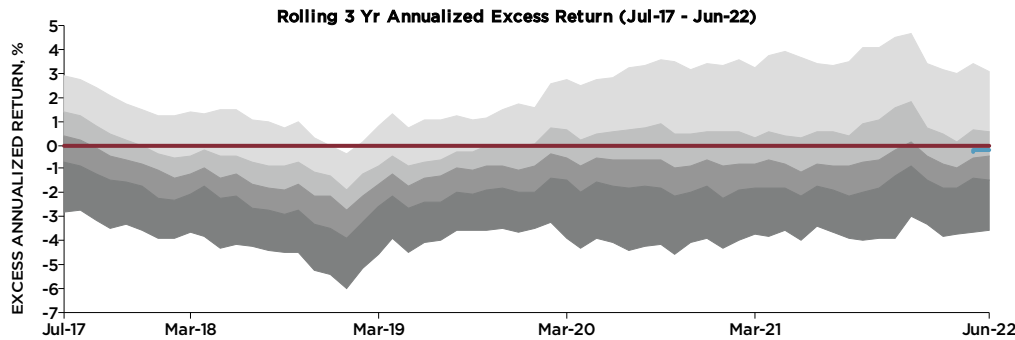
STATE STREET GLOBAL ALL CAP EQUITY EX-U.S. INDEX SECURITIES LENDING

Period Ending 6.30.22 | Q2 22

	e Street Global All Cap Equity Ex- Securities Lending Series Fund C	Peer Group Rank	MSCI ACWI Ex USA IMI GR USD Large Blend	Foreign Large Blend	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	NA	0%	15.99	16.26	634
Sharpe Ratio	NA	0%	0.12	0.06	634
Alpha	NA	0%	0.00	-0.84	634
Beta	NA	0%	1.00	0.99	634
R-Squared	NA	0%	100.00	94.13	634
Up Mkt Capture	NA	0%	100.00	96.43	634
Down Mkt Capture	NA	0%	100.00	100.40	634
Information Ratio	NA	0%	NA	-0.22	634
TRAILING RETURNS					
Last Qtr.	-13.53	60%	-14.10	-13.15	706
YTD	-18.78	34%	-18.82	-19.52	698
1 Year	-19.51	55%	-19.46	-19.24	695
3 Years	1.83	43%	2.01	1.56	672
5 Years	NA	0%	2.97	2.10	634
10 Years	NA	0%	5.48	5.11	541
CALENDAR RETURNS					
2021	8.74	63%	8.99	9.40	693
2020	11.36	42%	11.59	11.32	680
2019	NA	0%	22.24	22.75	663
2018	NA	0%	-14.35	-15.50	638
2017	NA	0%	28.38	25.87	630



■ State Street Global All Cap Equity Ex-U.S. Index Se
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▲ Foreign Large Blend Average
▲ State Street Global All Cap Equity Ex-U.S. Index Securities Lending Series Fu
▲ MSCI ACWI Ex USA IMI GR USD



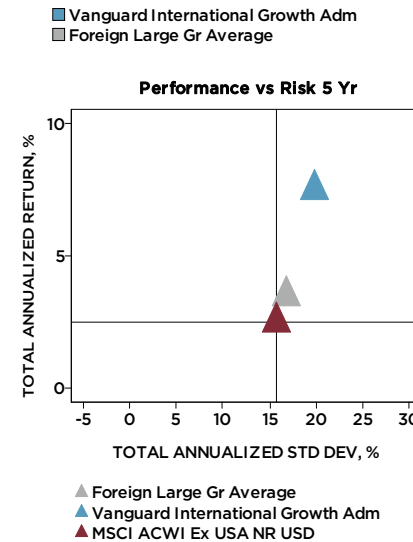
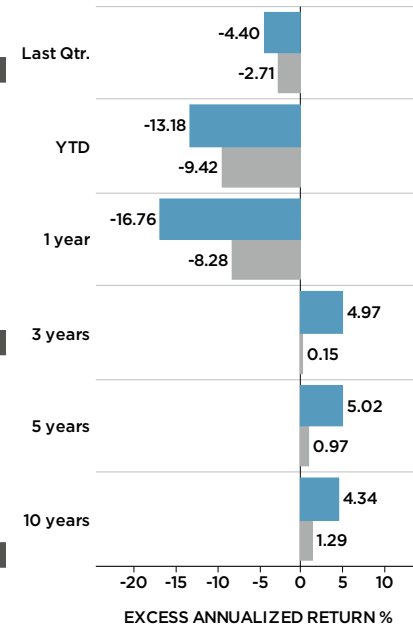
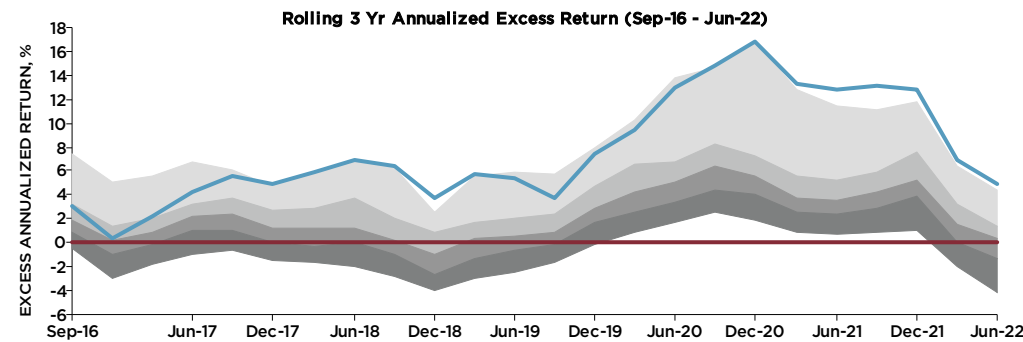
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VANGUARD INTERNATIONAL GROWTH ADM

Period Ending 6.30.22 | Q2 22

	Vanguard International Growth Adm	Peer Group Rank	MSCI ACWI Ex USA NR USD	Foreign Large Gr	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	19.90	93%	15.70	16.75	391
Sharpe Ratio	0.32	7%	0.09	0.14	391
Alpha	4.85	5%	0.00	1.01	391
Beta	1.12	5%	1.00	0.98	391
R-Squared	78.51	79%	100.00	84.38	391
Up Mkt Capture	127.91	1%	100.00	100.70	391
Down Mkt Capture	102.86	69%	100.00	96.20	391
Information Ratio	0.52	8%	NA	0.13	391
TRAILING RETURNS					
Last Qtr.	-18.13	76%	-13.73	-16.44	446
YTD	-31.60	78%	-18.42	-27.84	444
1 Year	-36.18	91%	-19.42	-27.70	440
3 Years	6.33	4%	1.35	1.50	411
5 Years	7.51	5%	2.50	3.47	391
10 Years	9.17	2%	4.83	6.12	325
CALENDAR RETURNS					
2021	-0.74	88%	7.82	7.04	428
2020	59.74	2%	10.65	25.55	413
2019	31.48	24%	21.51	29.04	402
2018	-12.58	35%	-14.20	-13.83	398
2017	43.16	8%	27.19	32.01	385



INVESTMENT PROFILE

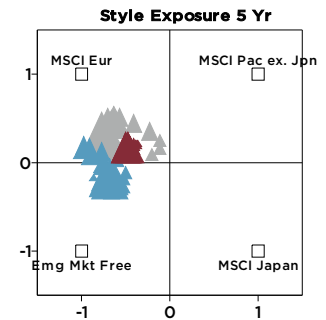
Ticker	VWILX
CUSIP	921910501
Net Assets \$MM	\$42,677.00
Manager Names	Team Managed
Manager Tenure	12.5 Years
Prospectus Exp Ratio	0.32%
Cat Median Exp Ratio	0.99%
Current 12b-1	N/A
Annlzd Ret Since Incept	7.24%
Inception Date	08/13/2001
Phone Number	800-662-7447
Sub Advisor	Multiple

HOLDINGS OVERVIEW

Total Number of Holdings	145
% Assets in Top 10 Holdings	35.56%
Avg Mkt Cap \$MM	\$73,941.16
Turnover Ratio	25.00%

TOP HOLDINGS

ASML Holding NV	5.84%
MercadoLibre Inc	4.56%
Tencent Holdings Ltd	3.88%
Adyen NV	3.55%
Taiwan Semiconductor Mar	3.47%



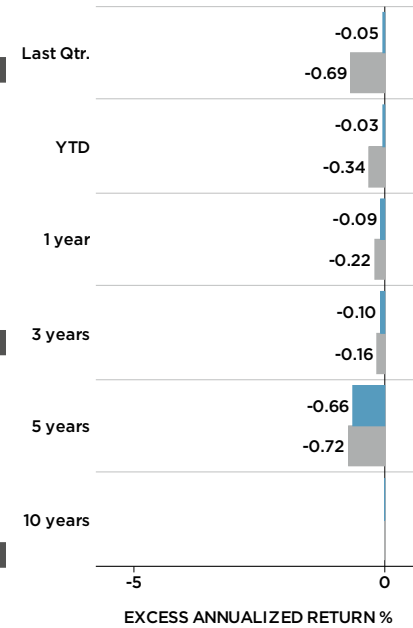
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VANGUARD REAL ESTATE INDEX INSTITUTIONAL

Period Ending 6.30.22 | Q2 22

	Vanguard Real Estate Index Institutional	Peer Group Rank	MSCI US IMI/Real Estate 25-50 GR USD	Sp-Real Estate	# of Funds
KEY MEASURES / 5 YEAR					
Standard Deviation	17.87	70%	17.73	17.68	206
Sharpe Ratio	0.26	57%	0.30	0.26	206
Alpha	-0.69	62%	0.00	-0.55	206
Beta	1.01	21%	1.00	0.97	206
R-Squared	99.67	1%	100.00	94.34	206
Up Mkt Capture	98.74	35%	100.00	95.15	206
Down Mkt Capture	101.54	74%	100.00	97.89	206
Information Ratio	-0.59	86%	NA	-0.14	206
TRAILING RETURNS					
Last Qtr.	-15.48	39%	-15.43	-16.12	224
YTD	-20.50	48%	-20.47	-20.80	224
1 Year	-8.03	72%	-7.94	-8.16	220
3 Years	4.78	57%	4.88	4.72	219
5 Years	5.72	56%	6.38	5.66	206
10 Years	7.50	38%	NA	7.18	184
CALENDAR RETURNS					
2021	40.41	64%	40.56	39.97	220
2020	-4.67	52%	-4.55	-3.29	220
2019	29.02	39%	29.03	28.12	219
2018	-5.93	55%	-4.59	-6.33	215
2017	4.93	71%	9.05	6.85	205



INVESTMENT PROFILE

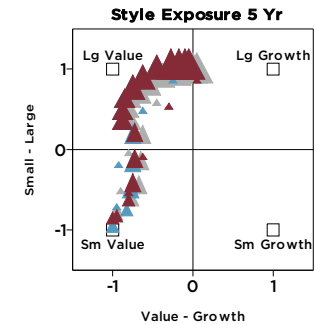
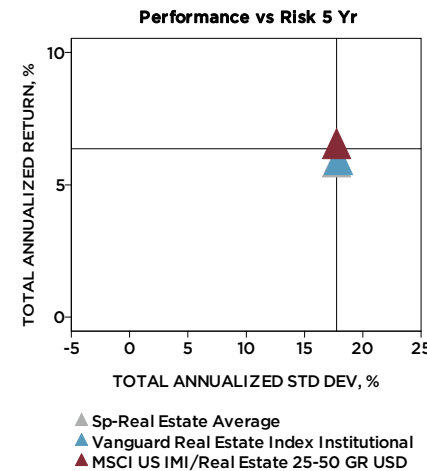
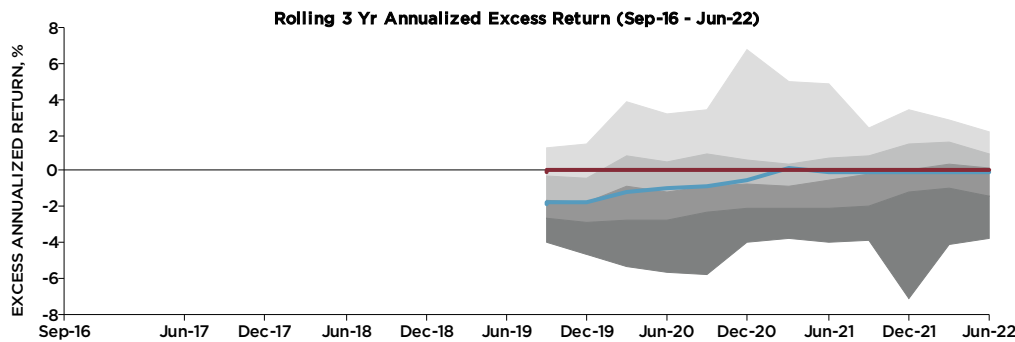
Ticker	VGSNX
CUSIP	921908869
Net Assets \$MM	\$71,147.00
Manager Names	Team Managed
Manager Tenure	26.2 Years
Prospectus Exp Ratio	0.10%
Cat Median Exp Ratio	1.05%
Current 12b-1	N/A
Annldz Ret Since Incept	8.53%
Inception Date	12/02/2003
Phone Number	888-809-8102
Sub Advisor	N/A

HOLDINGS OVERVIEW

Total Number of Holdings	175
% Assets in Top 10 Holdings	44.92%
Avg Mkt Cap \$MM	\$22,137.25
Turnover Ratio	7.00%

TOP HOLDINGS

Vanguard Real Estate II I	11.38%
American Tower Corp	6.95%
Prologis Inc	5.62%
Crown Castle Internation:	4.88%
Equinix Inc	3.71%



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APPENDIX

Glossary of Terms.....

Evaluation Methodology.....



GLOSSARY

Period Ending 6.30.22 | Q2 22

ALPHA

Alpha measures a manager's rate of return in excess of that which can be explained by its systematic risk, or Beta. It is a result of regressing a manager's returns against those of a benchmark index. A positive alpha implies that a manager has added value relative to its benchmark on a risk-adjusted basis.

BATTING AVERAGE

Batting Average, an indicator of consistency, measures the percentage of time an active manager outperformed the benchmark.

BETA

Beta measures a manager's sensitivity to systematic, or market risk. Beta is a result of the analysis regressing a manager's returns against those of a benchmark Index. A manager with a Beta of 1 should move perfectly with a benchmark. A Beta of less than 1 implies that a manager's returns are less volatile than the market's (i.e., selected benchmarks). A Beta of greater than 1 implies that a manager exhibits greater volatility than the market (i.e., selected benchmark).

CAPTURE RATIO

Up Market Capture is the average return of a manager relative to a benchmark index using only periods where the benchmark return was positive. Down Market Capture is the average return of a manager relative to a benchmark index using only periods where the benchmark return was negative. An Up Market Capture of greater than 100% and a Down Market Capture of less than 100% is considered desirable.

INFORMATION RATIO

The Information Ratio measures a manager's excess return over the passive index divided by the volatility of that excess return, or Tracking Error. To obtain a higher Information Ratio, which is preferable, a manager must demonstrate the ability to generate returns above its benchmark while avoiding large performance swings relative to that same benchmark.

PERCENTILE RANK

Percentile Rankings are based on a manager's performance relative to all other available funds in its universe. Percentiles range from 1, being the best, to 100 being the worst. A ranking in the 50th percentile or above demonstrates that the manager has performed better on a relative basis than at least 50% of its peers.

RISK-ADJUSTED PERFORMANCE

Risk-adjusted Performance, or RAP, measures the level of return that an investment option would generate given a level of risk equivalent to the benchmark index.

R-SQUARED

R-squared measures the portion of a manager's movements that are explained by movements in a benchmark index. R-squared values range from 0 to 100. An R-squared of 100 means that all movements of a manager are completely explained by movements in the index. This measurement is identified as the coefficient of determination from a regression equation. A high R-squared value supports the validity of the Alpha and Beta measures, and it can be used as a measure of style consistency.

SHARPE RATIO

Sharpe ratio measures a manager's return per unit of risk, or standard deviation. It is the ratio of a manager's excess return above the risk-free rate divided by a manager's standard deviation. A higher Sharpe ratio implies greater manager efficiency.

STANDARD DEVIATION

Standard Deviation is a measure of the extent to which observations in a series vary from the arithmetic mean of the series. This measure of volatility or risk allows the estimation of a range of values for a manager's returns. The wider the range, the more uncertainty, and, therefore, the riskier a manager is assumed to be.

TRACKING ERROR

Tracking Error is the standard deviation of the portfolio's residual (i.e. excess) returns. The lower the tracking error, the closer the portfolio returns have been to its risk index. Aggressively managed portfolios would be expected to have higher tracking errors than portfolios with a more conservative investment style.

TREYNOR RATIO

The Treynor Ratio is a measure of reward per unit of risk. With Treynor, the numerator (i.e. reward) is defined as the annualized excess return of the portfolio versus the risk-free rate. The denominator (i.e. risk) is defined as the portfolio beta. The result is a measure of excess return per unit of portfolio systematic risk. As with Sharpe and Sortino, the Treynor Ratio only has value when it is used as the basis of comparison between portfolios. The higher the Treynor Ratio, the better.



QUANTITATIVE EVALUATION ITEMS

QUALITATIVE EVALUATION ITEMS



MARKED FOR REVIEW

The following categories of the Investment Policy Monitor appear “Marked For Review” when:

CAPTRUST’s Investment Policy Monitoring Methodology

The Investment Policy Monitoring Methodology document describes the systems and procedures CAPTRUST uses to monitor and evaluate the investment vehicles in your plan/account on a quarterly basis.

Our current Investment Policy Monitoring Methodology document can be accessed through the following link:

captrust.com/investmentmonitoring

3/5 Year Risk- adjusted Performance

The investment option’s 3 or 5 Year Annualized Risk Adjusted Performance falls below the 50th percentile of the peer group.

3/5 Year Performance vs. Peers

The investment option’s 3 or 5 Year Annualized Peer Relative Performance falls below the 50th percentile of the peer group.

3/5 Year Style

The investment option’s 3 or 5 Year R-Squared measure falls below the absolute threshold set per asset class.

3/5 Year Confidence

The investment option’s 3 or 5 Year Confidence Rating falls below the 50th percentile of the peer group.

Glidepath Assessment

% of Equity Exposure: The combined percentage of an investment option’s equity exposure ranks in the top 20th percentile or bottom 20th percentile of the peer group.

Regression to the Benchmark: The investment option’s sensitivity to market risk - as measured by beta relative to a Global Equity Index - is above 0.89.

Fund Management

A significant disruption to the investment option’s management team has been discovered.

Fund Family

A significant disruption to the investment option’s parent company has been discovered.

Portfolio Construction

The investment option’s combined Portfolio Construction score is 6 or below out of a possible 15 points.

Underlying Investment Vehicles

The investment option’s combined Underlying Investment Vehicles score is 6 or below out of a possible 15 points.

