



MINUTES

**Quarterly Meeting of the Investment Committee
of the Board of Trustees of the
State Universities Retirement System
Thursday, June 1, 2023, 9:30 a.m.
Northern Trust - 333 S. Wabash Ave., 44th Floor - Chicago, IL
*Optional Remote Connection for Members of the Public***

The meetings on June 1-2, 2023, were conducted in person at Northern Trust – Chicago, IL. Because an in-person quorum was present, a motion was made at the beginning of the meeting that allowed trustees Lyons and Vasquez to participate in the meetings by electronic means.

The following trustees were present: Mr. John Atkinson; Dr. Andriy Bodnaruk; Ms. Jamie Clare Flaherty, Mr. Scott Hendrie, chair; Mr. John Lyons (via zoom), Dr. Steven Rock; Mr. Collin Van Meter; Mr. Antonio Vasquez (via zoom) and Mr. Mitch Vogel.

Others present: Ms. Suzanne Mayer, Executive Director; Mr. Doug Wesley, Chief Investment Officer (CIO); Ms. Ellen Hung, Deputy CIO; Ms. Kim Pollitt, Mr. Joe Duncan and Mr. Shane Willoughby, Sr. Investment Officers; Mr. Brian Deloria and Mr. Alex Ramos, Investment Officers; Ms. Stephany Brinkman and Mr. Darian Saracevic, Investment Analysts; Ms. Tracy Bennett, Compliance Analyst; Ms. Bianca Green, General Counsel; Ms. Tara Myers, Chief Financial Officer; Ms. Jackie Hohn, Chief Internal Auditor; Ms. Nichole Hemming, Chief Human Resources Officer; Ms. Heather Kimmons, Associate Legal Counsel; Ms. Kristen Houch, Director of Legislative and Stakeholder Relations; Ms. Alicia Route, Legislative Analyst; Ms. Kelly Carson, Ms. Chelsea McCarty and Ms. Annette Ackerman, Executive Assistants; Ms. Jan Mede of Callan; Ms. Ghiané Jones and Mr. Colin Bebee, of Meketa; and Mr. Michael Calabrese of Foley.

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

Trustee Giertz joined the meeting at 9:11 a.m.

Trustee Atkinson joined the meeting at 9:40 a.m.

Prior to any business brought before the committee and after an in-person quorum was established, Trustee Rock moved to allow remaining trustees to participate via video or conference call for the Investment Committee meeting on June 1, 2023, pursuant to Section 7(a) of the Open Meetings Act. The motion was seconded by Trustee Flaherty, and it passed via the following roll call vote:

Trustee Atkinson - absent

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

APPROVAL OF MINUTES

Trustee Hendrie presented the minutes from the Investment Committee meeting of April 20, 2023.

Trustee Rock made the following motion:

- That the minutes from the April 20, 2023 Investment Committee meeting be approved as presented.

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

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

APPROVAL OF CLOSED MINUTES

Trustee Hendrie presented the closed minutes from the Investment Committee meeting of April 20, 2023.

Trustee Rock made the following motion:

- That the closed minutes from the April 20, 2023 Investment Committee meeting be approved and remain closed.

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

Trustee Atkinson	-	absent
Trustee Bodnaruk	-	aye

Trustee Figueroa	-	absent
Trustee Flaherty	-	aye
Trustee Giertz	-	absent
Trustee Hendrie	-	aye
Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vasquez	-	aye
Trustee Vogel	-	aye

CHAIRPERSON’S REPORT

Trustee Scott Hendrie did not have a formal chairperson’s report.

CHIEF INVESTMENT OFFICER REPORT

Mr. Doug Wesley provided an update on action items approved during the April Investment Committee meeting including the restructuring of the traditional growth portfolio and the policy allocation changes. Mr. Wesley reported that the planned changes to the stabilized growth portfolio, the elimination of options strategies and the corresponding increase to public credit exposures will be completed soon.

Copies of the staff memorandums titled “Investment Contracts Approved” and “Report from the April 2023 Investment Committee Meeting” are incorporated as part of these minutes as [Exhibit 1](#) and [Exhibit 2](#).

REAL ASSET MARKET DISCUSSION

Ms. Jan Mende of Callan provided an update regarding real asset returns, real estate market trends, debt market conditions and SURS’ exposure in that area.

A copy of the presentation titled “Real Assets Markets Discussion” is incorporated as part of these minutes as [Exhibit 3](#).

CLOSED SESSION

Trustee Giertz moved that the Investment Committee go into closed session at 10:00 a.m. pursuant to §2(c)(7) of the Illinois Open Meetings Act to consider the sale or purchase of securities or investments or to consider investment contracts. Trustee Vasquez seconded the motion which passed via the following roll call vote:

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

Trustee Lyons	-	aye
Trustee Rock	-	aye
Trustee Van Meter	-	aye
Trustee Vasquez	-	aye
Trustee Vogel	-	aye

RETURN TO OPEN SESSION

The Investment Committee returned to open session at 12:57 p.m.

Trustee Van Meter made the following motion:

- That based on the recommendation of SURS staff, SURS retain Callan as the real assets consultant for a five-year term, subject to successful completion of contract negotiations.

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

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

CRISIS RISK OFFSET CLASS REVIEW

Mr. Alex Ramos, Mr. Brian Deloria, Ms. Stephany Brinkman, and Mr. Collin Bebee presented the CRO asset class review that included policy targets, strategies, accomplishments, and performance summary. Within the presentation, they also discussed Long Duration, Trend Following, Alternative Risk Premia and Long Volatility/Tail Risk.

Copies of the presentations titled “CRO Review 2023” and “CRO Asset Class Review June 2023 Final” are incorporated as part of these minutes as [Exhibit 4](#) and [Exhibit 5](#).

CONSIDERATION OF CONSENT FOR CREDIT SUISSE ORGANIZATIONAL CHANGE

Ms. Ellen Hung stated that SURS staff was notified by Credit Suisse that it had entered into a merger agreement to which UBS will acquire Credit Suisse and its subsidiaries, including SURS investment manager, Credit Suisse Asset Management LLC. Credit Suisse Asset Management informed staff that the merger will not affect the team managing the trend following program or

the investment process for SURS. Staff will continue to monitor the Credit Suisse team for any changes that may result from the change in ownership.

Trustee Rock made the following motion:

- That based on the recommendation of SURS staff and Meketa, SURS consent to the deemed assignment of the Investment Management Agreement dated December 30, 2019, between the State Universities Retirement System and Credit Suisse, resulting from the merger of Credit Suisse Group AG with and into UBS Group AG, subject to legal counsel's approval of the consent documents.

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

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

Copies of the documents titled “Consent for Credit Suisse Org Change Draft,” SURS Assignment Consent Letter” and “Credit Suisse AM Client Letter March 20th” are incorporated as part of these minutes as [Exhibit 6](#), [Exhibit 7](#), and [Exhibit 8](#).

QUARTERLY PERFORMANCE REVIEW

Ms. Ghiané Jones provided a brief update to the board regarding final total fund performance through March 31, 2023.

A copy of Meketa's presentation titled “SURS Q1 2023 Board Report” is incorporated as part of these minutes as [Exhibit 9](#).

CORPORATE GOVERNANCE UPDATE

Ms. Hung presented an update regarding corporate governance activity since March 2023 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 memorandum titled “Corporate Gov. Update” and a copy of the Glass Lewis report are incorporated as part of these minutes as [Exhibit 10](#).

INFORMATIONAL ITEMS NOT REQUIRING COMMITTEE ACTION

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

1. **Exhibit 11** – SURS FY2023 Private Equity and Private Credit Commitments
2. **Exhibit 12** – Executive Summary Risk Report Memo
3. **Exhibit 13** – Executive Summary Risk Report
4. **Exhibit 14** – Supplemental Information

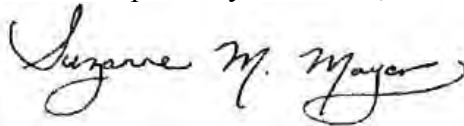
PUBLIC COMMENT

There were no public comments presented to the Investment Committee.

There was no further business brought before the committee and Trustee Atkinson moved that the meeting be adjourned. The motion was seconded by Trustee Giertz which passed via the following roll call vote:

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

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: May 19, 2023
Subject: Investment Contracts Approved

The following investment agreements were approved by the Executive Director subsequent to the mailing for the April 20, 2023, Investment Committee meeting.

Defined Benefit Plan

Long Wharf Capital

Subscription agreement and side letter were fully executed on April 25, 2023.

Dune Continuation Fund

Consent and Election Form was fully executed on April 14, 2023.

Defined Contribution Plan

CAPTRUST

An advisory services agreement with CAPTRUST was fully executed, effective April 1, 2023.



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Investment Department

To: Investment Committee
From: Douglas C. Wesley, CFA
Date: May 19, 2023
Subject: Report from the April 20, 2023 Investment Committee Meeting

Enclosed are the Minutes of the April 20, 2023, Investment Committee Meeting. The purpose of this memorandum is to provide a status report on the action items for Investments.

Five motions were approved during the Investment Committee Meeting. These included the approval of the minutes from the March 9 and April 5, 2023, Investment Committee Meeting, and that the closed session minutes from the March 9 and April 5, 2023, 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 from SURS staff and Meketa, the Investment Committee approve the strategic policy allocation targets as presented, giving staff the discretion to gradually implement the updated policy targets by transitioning assets as needed.**

Staff has partially implemented the updated policy targets and expects to be totally transitioned by the end of May.

- 2. That based on the recommendation from SURS staff and Meketa, the Investment Committee grant authority to staff to restructure the Traditional Growth Portfolio as presented.**

Staff completed the restructuring of the Traditional Growth Portfolio.

- 3. That based on the recommendation from SURS staff and CAPTRUST, the Delaware Small-Mid Cap Growth R6 be replaced with the Fiera Capital Small-Mid Cap Growth separate account, as soon as administratively possible with the replacement to include the mapping of the Plans' current assets and future contributions for both the RSP and DCP.**

Staff is in the process of contract negotiations.

Open item from February 2, 2023

- 4. That based on the recommendation of SURS staff, the Investment Committee approve CAPTRUST to be hired as the defined contribution consultant for a five-year term, subject to successful completion of contract negotiations.**

An advisory services agreement with CAPTRUST was fully executed, effective April 1, 2023.

- 5. That based on the recommendation of SURS staff and Callan, the Investment Committee approve a commitment of the lesser of \$50 million or 10 percent of total fund commitments to Brasa Real Estate Fund III and the lesser of \$40 million or 10 percent of total fund commitments to Long Wharf Real Estate Partners VII, subject to successful completion of contract negotiations.**

Subscription agreement and side letter for Long Wharf Real Estate Partners VII were fully executed on May 6, 2022. SURS staff is in the process of contract negotiations with Brasa Real Estate Fund III.

- 6. That based on the recommendation of SURS staff and Meketa, the Investment Committee approve a commitment of \$410 million to a Private Equity Co-Investment Vehicle managed by Aksia LLC, subject to successful completion of contract negotiations.**

SURS staff is in the process of contract negotiations.

Open item from June 2, 2022

- 7. 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.

Please advise if you have any questions prior to the June 1, 2023, Investment Committee meeting.

Callan

June 2023



Real Assets Market Discussion

State Universities Retirement System of Illinois

Sally Haskins

Senior Vice President, Co-Manager Real Assets

Munir Iman

Vice President

Jan Mende

Senior Vice President

Market Overview

SURS Office Exposure

SURS Debt Maturities

Other Real Assets

Appendix and Glossary

Real Asset Returns As of March 31, 2023

Private and Public Real Asset Returns

	1Q	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Private RE (NCREIF ODCE)	-3.4%	-3.9%	7.5%	6.6%	8.5%
Income	0.6%	2.5%	2.8%	3.0%	3.4%
Appreciation	-4.0%	-6.3%	4.6%	3.5%	5.0%
U.S. Publicly traded RE (FTSE NAREIT Equity Index)	2.7%	-19.2%	12.1%	6.0%	6.0%
NCREIF Farmland Index	2.1%	8.9%	7.5%	6.5%	8.5%
Publicly traded global infrastructure (FTSE Developed Core 50/50 Infrastructure Index)	1.3%	-8.0%	10.5%	5.7%	6.5%

- Appreciation has had an outsized positive effect on real estate over the last ten years, as the real estate market experienced the upward performance trajectory post Global Financial Crisis driven by a lower interest rate environment and improving supply/demand fundamentals. Over the long term (20 years) income has remained the driver of real estate returns.
- There is valuation risk in private real estate across property types primarily due to rising interest rates and, secondarily for some property types due to structural changes in demand. This began to be reflected in private valuations in Q3. Returns are moderating with positive income returns and negative appreciation.
- The transaction market is experiencing a rapid deceleration due to the Fed tightening; there is less capital in the market as many investors are at or over their real estate allocations.
- U.S. publicly traded real estate and publicly traded global infrastructure have lagged private real estate over the last 1, 5, and 10 year time periods. Publicly traded real estate has repriced unlike private real estate.
- Demand for infrastructure assets remains high, although the sector is not immune from valuation risks, rising labor and materials costs, as well as overall economic risk if a recession occurs.

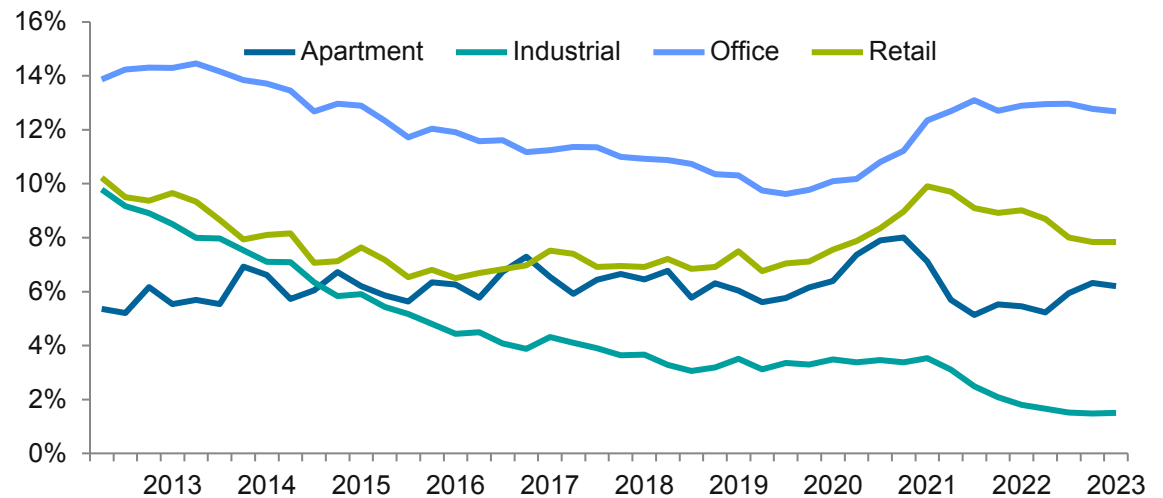
Source: NCREIF, FTSE

U.S. Private Real Estate Market Trends

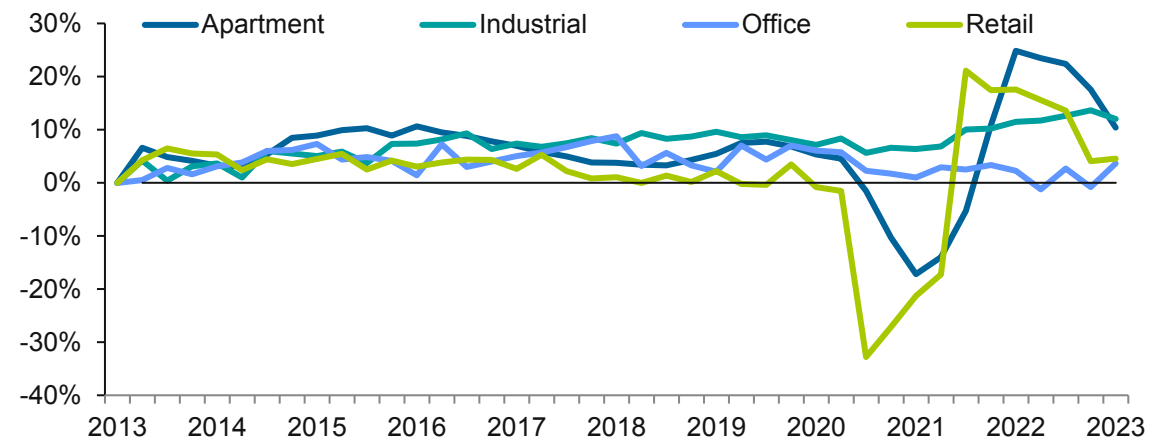
The market is shifting, with mixed results for vacancy and net operating income growth

- Vacancy rates declined marginally in Apartment and Office. Office remains challenged.
- Industrial vacancy rates increased slightly during the quarter. Retail was flat.
- Net operating income growth decreased in Multifamily and Retail, although still high relative to long term averages as is Industrial.
- Office NOI growth decreased; bifurcation in the office market with highly amenitized, newer vintage buildings experiencing positive rent growth while older commodity buildings struggle.
- Overall fundamentals remain strong in Industrial, Apartment, Grocery Anchored Retail, and alternative sectors such as self storage, manufactured housing, and single family rental.

Vacancy by Property Type



NCREIF Property Index Rolling 4-Quarter NOI Growth by Property Type

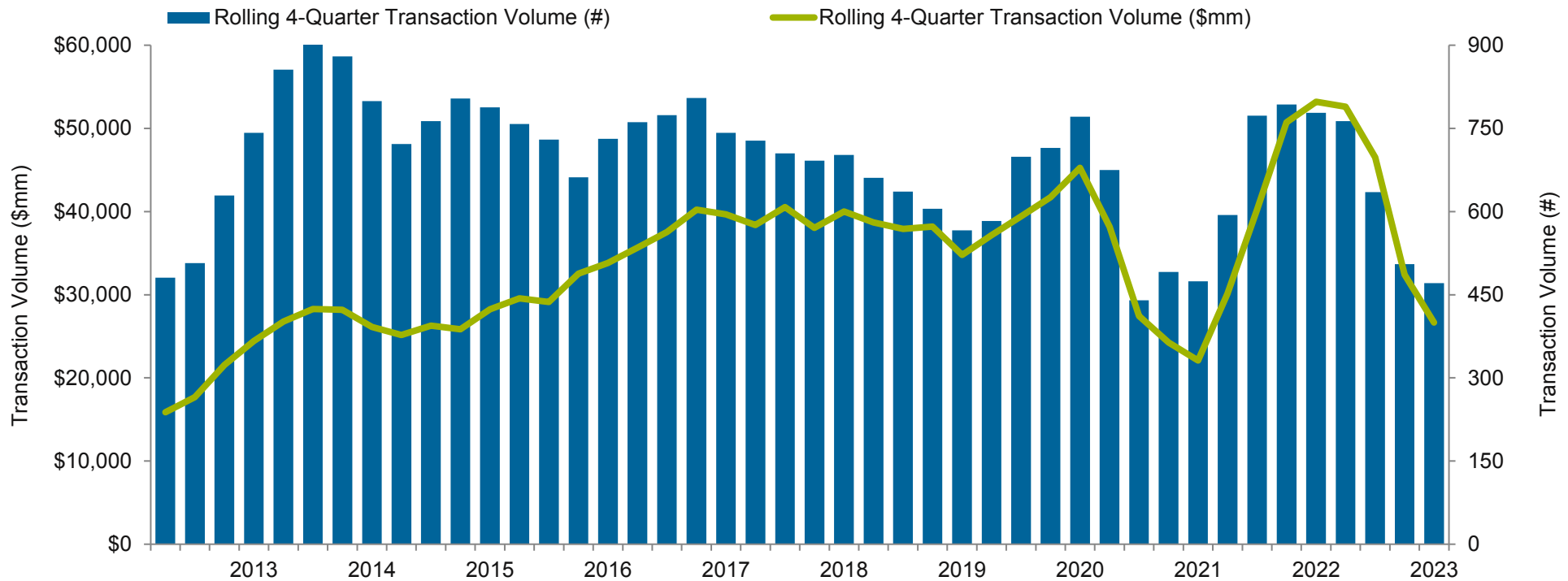


Source: NCREIF

U.S. Private Real Estate Market Trends

Pricing and transaction volumes decline through 1Q23

NCREIF Rolling 4-Quarter Transaction Totals Through 3/31/23



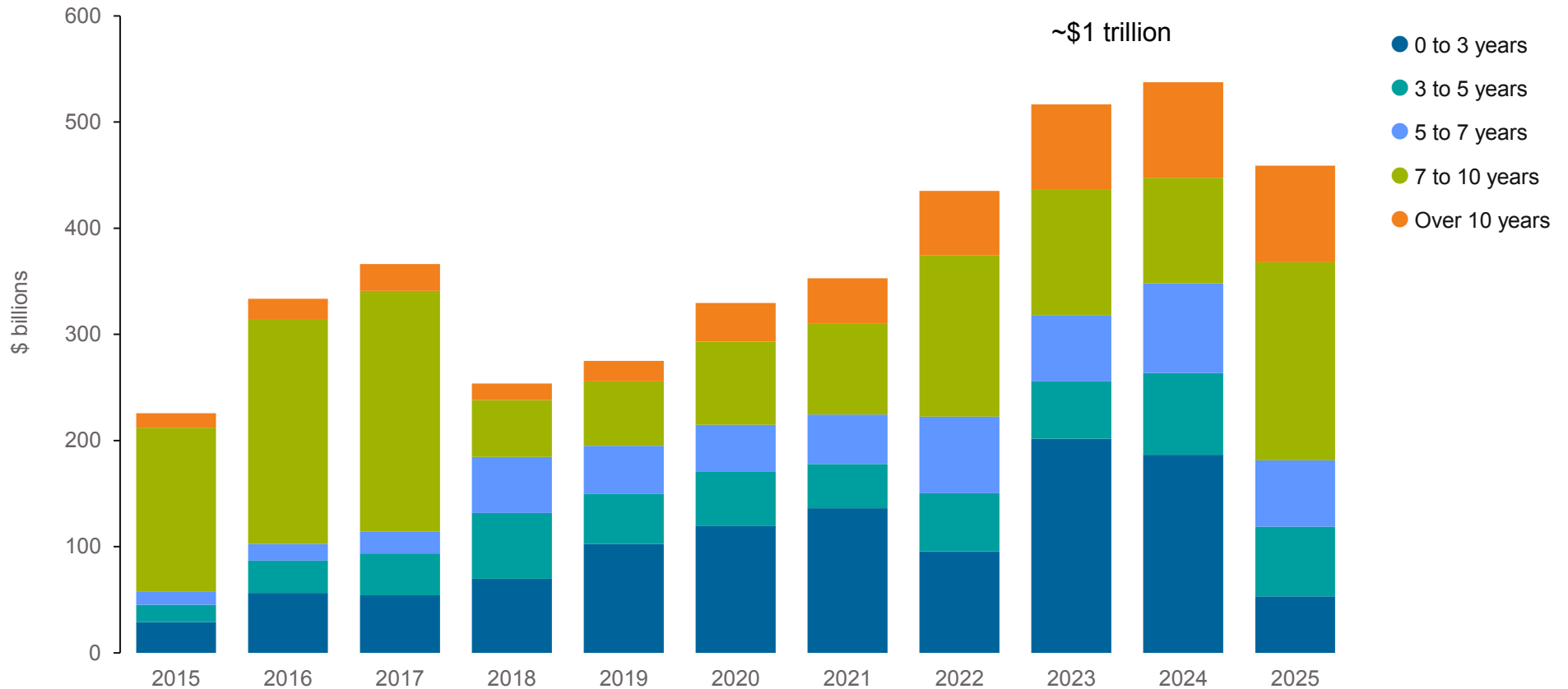
Transaction volume continues to decrease but remains above its five-year average. This is a rapidly changing market.

- ▶ Transaction volume continues to decrease on a rolling four-quarter basis and is now below five-year averages.
- ▶ In 1Q23 transaction volume decreased on a quarter-over-quarter basis; transaction volume is significantly lower compared to 1Q22.
- ▶ The rise in interest rates is the driving force behind the slowdown in transactions. A bid-ask spread remains and price discovery continues to occur among market participants. Sectors that are in favor, such as multi-family and industrial, are more liquid.

Source: NCREIF

Record Debt Maturities in 2023 and 2024

A significant share of near-term maturities were originated since 2020 at peak pricing



Sources: BentallGreenOak, Real Capital Analytics, Newmark

Debt Market Conditions: That Was Then This Is Now

Max Loan Size (single asset)

Then: **\$250mm+** (healthy syndication market)

Now: **\$125mm** (challenging syndication market)

Maximum Loan to Value

Then: **60% to 75%**

Now: **50% to 60%**

Amortization

Then: **10 years interest only** (<50% loan-to-value)

Now: **5 years interest only** (<50% loan-to-value)

Active Lenders

Then:

Fannie Mae / Freddie Mac
Life companies
Banks
CMBS
Debt funds

Now:

Fannie Mae / Freddie Mac
Life companies (selective)
Regional banks (selective?)
Debt funds (opportunistically)

Construction Loans – Recourse Requirement

Then: **0% to 10%**

Now: **20% to 25%**

Construction Loans – Maximum Loan to Cost

Then: **65%**

Now: **55%**

Source: AEW Capital Management

Debt Market Conditions: That Was Then This Is Now

Yield on commercial real estate debt investments

	Then	Now
	One Year Ago Unleveraged Market Yields	March 2023 Unleveraged Market Yields
Senior CMBS	1% – 3%	5% – 7%
First Mortgage – Stabilized	3% – 4%	5% – 7%
First Mortgage – Transitional	4% – 5%	8% – 10%
A and BBB Rated CMBS	2% – 9%	8% – 13%
Below Investment Grade Freddie Mac K-Series	6% – 9%	9% – 11%
B Rated CMBS	9% – 20%	20% – 25%
Mezzanine Loan – Stabilized	6% – 7%	8% – 10%
Mezzanine Loan – Transitional	7% – 10%	10% – 12%
Preferred Equity	9% – 14%	12% – 16%

Source: Torchlight Investors

Office Market Conditions

Headwinds



- ▶ **Capital Markets:** Cost and availability of debt
- ▶ **Demand Is Down:** Work From Home (“WFH”) and economic uncertainty
- ▶ **Capital Intensity:** Cost to bring older stock up to standard is high. Taxes are increasing as city budgets are under pressure
- ▶ **Obsolescence:** Tenants favor newer, amenity-rich products. Most office not configured for conversion with high costs/regulations
- ▶ **Valuations:** Buyers and sellers cannot agree on pricing without a clear picture on future office occupancy as companies struggle with WFH. Asset values down 30%+

Tailwinds

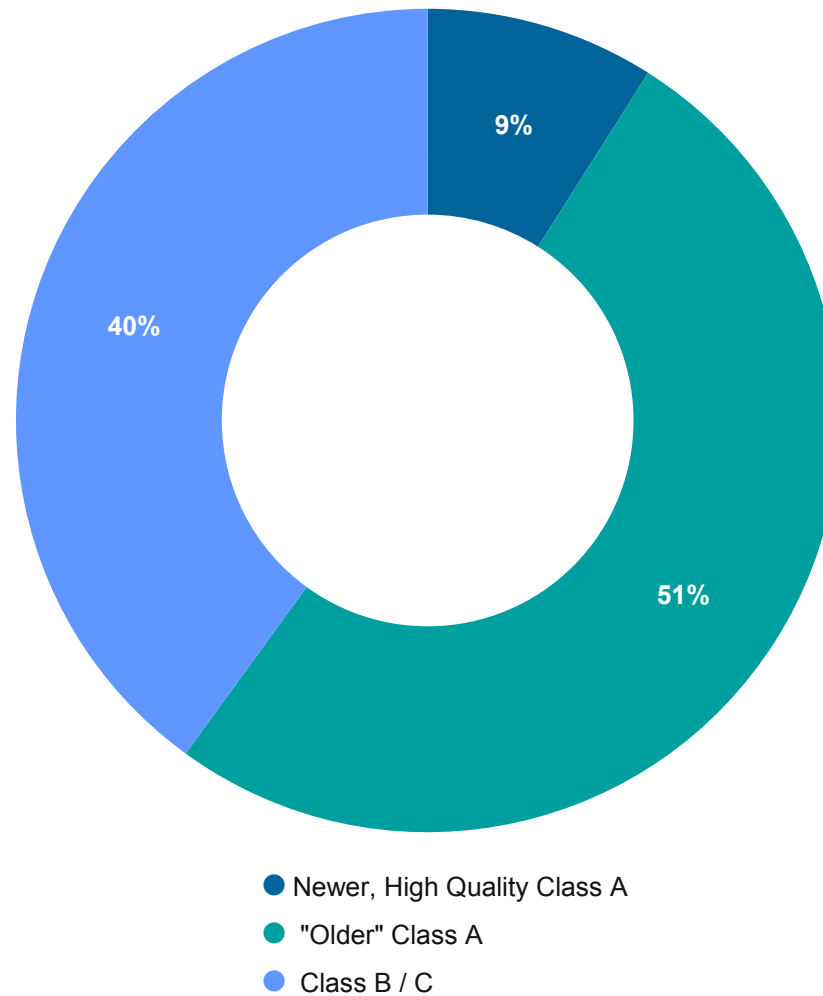


- ▶ **Capital Markets:** Muted new supply expected
- ▶ **Demand for New Buildings:** Demand exists for the right type of property
- ▶ **Valuations:** When valuations stabilize, buyers with capital may benefit from heavily discounted prices and distressed sellers.
- ▶ **Sub-sector opportunities:** Lab science office has been more resilient and there are some opportunities for conversion of some office properties, and good land encumbered with office assets that may be available at the right price.

Office Inventory and Ownership: Class A Is Most Prevalent

Newer, high quality Class A office represents <10% of office inventory

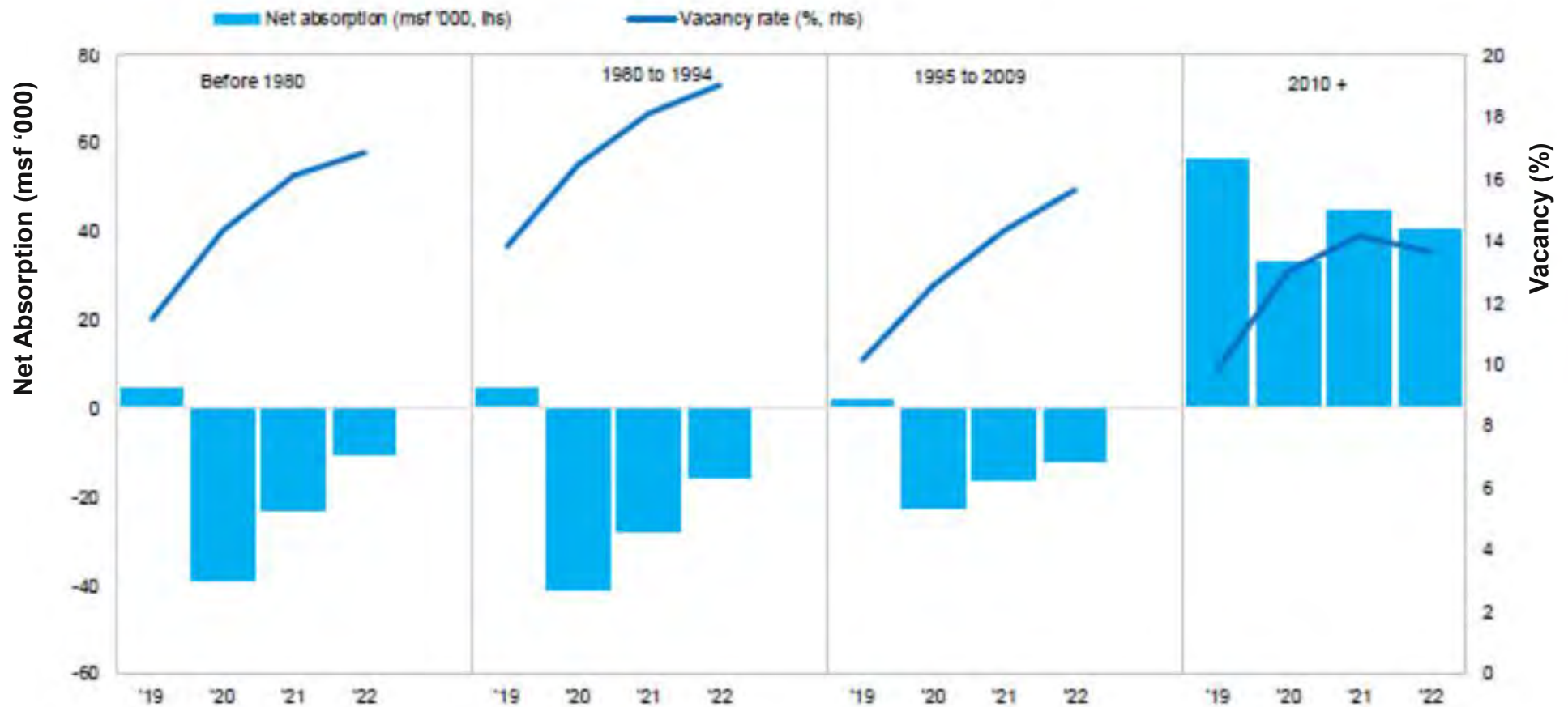
Current Share of U.S. Office Inventory by “Class”



Source: Cushman & Wakefield Research

Newer Office Buildings Have Lower Vacancies and Higher Absorption

Office Net Absorption and Vacancy Rates by Vintage



Source: CBRE EA, Principal Real Estate, Q4 2022.

Market Overview

SURS Office Exposure

SURS Debt Maturities

Other Real Assets

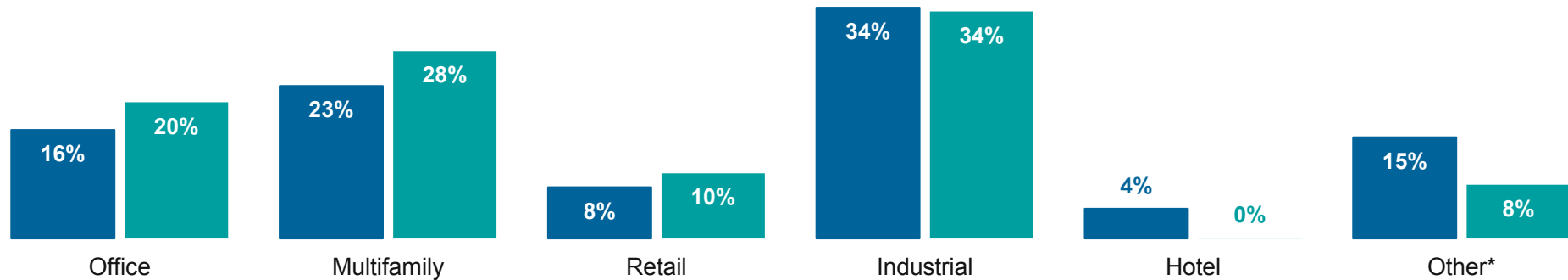
Appendix and Glossary

Office Represented Only 16% of SURS' Overall Portfolio Real Estate Portfolio Value

Approximately \$336 million of total exposure to Office across \$2 billion of real estate value

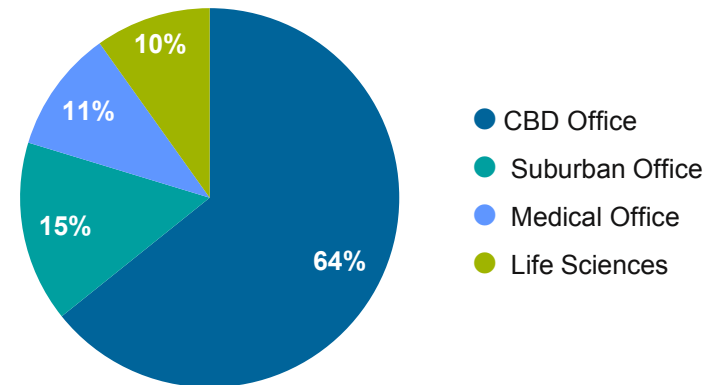
SURS Portfolio Is Diversified Across Multiple Sectors

● SURS Portfolio 4Q22 ● ODCE Benchmark 4Q22



12/31/2022	SURS Market Value	% Office	Office Market Value
Stabilized Growth	\$1.4 billion	18%	\$265 million
Non-Traditional Growth	\$0.6 billion	12%	\$71 million
Total Real Estate	\$2 billion	16%	\$336 million

SURS Office NAV (%)



*Other includes Storage, Healthcare, Land, Senior Housing, Student Housing, Mixed Use, Data Center, Manufactured Housing

Stabilized Growth Funds Office Portfolio Characteristics

Firm	% of SURS RA Portfolio	CBD Office	Suburban Office	Medical Office	Life Sciences	Occupancy	WALT (YRS)	# of Office Investments
Fund A	13%	9%	2%	6%	0%	85%	6	16
Fund B	13%	20%	3%	0%	0%	89%	6	28
Fund C	11%	14%	0%	0%	3%	82%	5	13
Fund D	7%	0%	0%	14%	0%	94%	7	52
Fund E	5%	12%	8%	0%	12%	80%	5	31
Fund F	5%	14%	2%	0%	4%	80%	3	29
Fund G	2%	0%	0%	0%	68%	75%	4	9

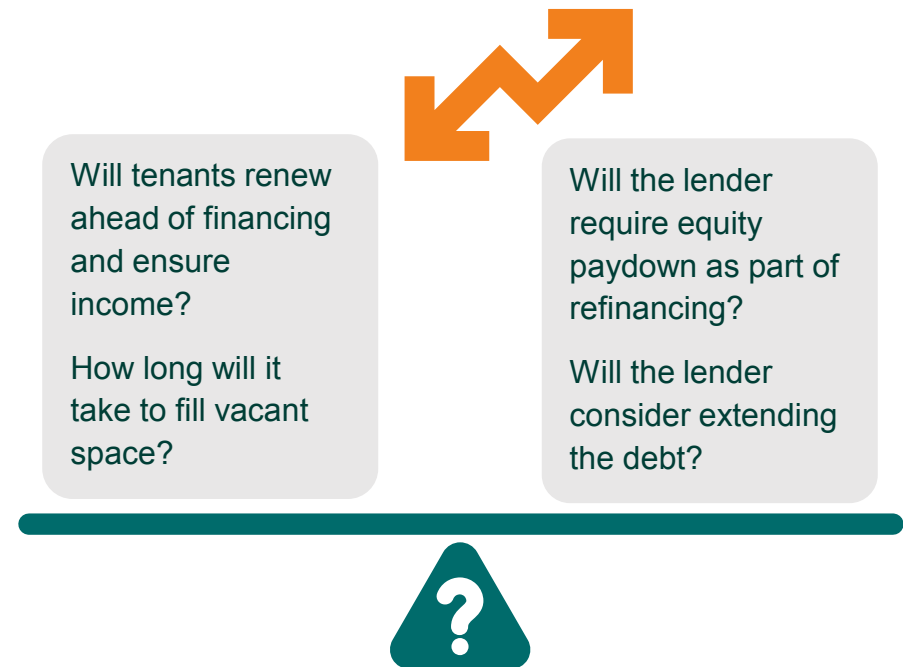
- ▶ % Average occupancy: ranges from 75% to 94% vs 84% (USA national occupancy)
 - Occupancy varies between traditional office and life sciences or medical office
- ▶ Weighted Average Lease Term (WALT): All but one fund has >4 years WALT, total weighted WALT: 6 years
 - In-place leases ensure cash flow to service debt and maintain the building
- ▶ Since 4Q2019 CBD and suburban office investment equity values have been written down significantly
 - Newer, well amenitized buildings have been less impacted

Office Building Owners Face Many Uncertainties Today

Non-Traditional Growth Office

- ▶ Non-US markets have seen employees return to office faster, with minimal distress.
 - Undersupply of Class A space creating tailwinds for owners of Class A properties
- ▶ US assets have mixed performance, depending on age of asset and sub-market location.
 - Class A assets in strong sub-markets continue to attract the bulk of new tenant leasing
- ▶ Managers cited the following conditions in the US:
 - Tenants looking to downsize
 - Tenant Improvement (“TI”) packages increasingly expensive
 - Overall leasing activity has slowed
 - Sublease space on the market has increased
 - Class B buildings are least desired
 - Certain sub-markets are unattractive today
- ▶ Managers indicated financing and leasing markets softened further in Q1 2023 with bank failures/takeovers.
 - In one case, a lender agreed to allow the current owner/borrower ‘transfer’ the loan and offer new buyer the ability to take 65% of purchase price as loan proceeds.

Future Leasing and Lending Activity Will be Critical



Office Assets – Range of Performance

Well-leased assets in San Francisco and other global markets, challenged assets in other markets

Well-leased, with no debt in San Francisco

Type: Stabilized Growth

Location: SF SOMA Market near Transbay Terminal Park

Asset Details

- Highly Amenitized
- Class A+
- No debt on asset
- 98% leased, 6 years WALT

Out of date building in Boston

Type: Stabilized Growth

Location: Boston

Asset Details

- Building efficiency challenges
- Class B
- 73% occupancy. Significant upcoming lease expirations 18% in 2023 and 30% in 2025
- Building is marketed for sale

Lender foreclosed in Los Angeles

Type: Non-Traditional Growth

Location: Los Angeles

Asset Details

- < 75% leased
- Borrower not able to refi. Mezz lender is negotiating with senior lender to stay in and contribute to leasing costs

Class A Space in High Demand in Key Global Markets

Type: Non-Traditional Growth

Location: India, Brazil and London, New York

Market Details

- Flight to quality as companies seek high quality space
- Limited new Class A construction in Brazil
- Indian office leasing velocity above 2019 levels

Lender Foreclosed, Downtown LA

Market Overview

SURS Office Exposure

SURS Debt Maturities

Other Real Assets

Appendix and Glossary

Core and Core Plus Real Estate Funds Represent 65% of SURS' Real Assets NAV

2023 maturities largely addressed via extensions, new term sheets and one new CMBS financing

Debt Profile as of 4Q2022

Firm	% of SURS RA Portfolio	Leverage	Fixed	Floating	WAC Debt	Maturity (years)	Pending Maturities					
							2023	2024	2025	2026	2027	2028-2032
Fund A	13%	23%	97%	3%	4%	5	7%	7%	16%	2%	15%	53%
Fund B	13%	26%	81%	19%	4%	4	8%	15%	22%	17%	10%	27%
Fund C	11%	47%	76%	24%	4%	3	4%	23%	13%	33%	20%	7%
Fund D	8%	13%	94%	6%	3%	9	0%	7%	0%	6%	8%	48%
Fund E	7%	49%	55%	45%	4%	4	3%	3%	6%	12%	1%	75%
Fund F	5%	21%	91%	9%	4%	6	9%	7%	2%	7%	8%	60%
Fund G	5%	19%	69%	31%	4%	3	40%	8%	19%	3%	14%	17%
Fund H	2%	45%	74%	26%	5%	5	0%	13%	13%	0%	54%	20%

- ▶ Near term maturities are a minority of debt outstanding
- ▶ Weighted average maturity of debt in excess of 4 years for all but two funds
- ▶ Office maturities are a portion of maturing debt in any year

Debt Maturities in Non-Traditional Growth Real Estate Portfolio (26% of SURS NAV)

Managers staggered their debt maturities: few 'walls of maturities' in any single fund

Real Estate Equity Managers:

- 2023 maturities are mix of situations: some require pay down on loan, others have 1 or 2-year extensions. In some cases, managers have put assets into special servicing to begin resolution negotiations. In other cases, managers are taking assets to market to avoid investing more assets where they see less opportunity.
- Broadly speaking, office assets are most distressed. Residential seeing some distress where business plans were impacted with covid and construction delays.

	2023	2024	2025	2026	2027	2028+
Fund 1	43%	27%	7%	20%	0%	3%
Fund 2	0%	31%	12%	0%	35%	22%
Fund 3	26%	25%	32%	0%	7%	10%
Fund 4	1%	15%	43%	42%		
Fund 5	12%	18%	5%	18%	37%	10%
Fund 6	7%	49%	0%	12%	11%	21%
Fund 7	0%	0%	2%	46%	40%	12%
Fund 8	0%	7%	26%	35%	14%	18%
Fund 9	0%	0%	15%	28%	16%	41%
Fund 10	33%	32%	14%	6%	15%	

Real Estate Debt Managers:

- Some foreclosures on office assets one multifamily and one retail asset; managers evaluating sales to recover equity.
- Loans that mature in 2023 are likely to see extensions and/or paydowns required by borrowers.

Market Overview

SURS Debt Maturities

SURS Office Exposure

Other Real Assets

Appendix and Glossary

Infrastructure Market Conditions

Headwinds



- ▶ **GDP uncertainty / recession risk:** Uncertain macroeconomic conditions may impact demand for infrastructure assets. Investments reliant on growth may not achieve business plans.
- ▶ **Interest rates:** Higher interest rates put pressure on asset prices.
- ▶ **Inflation:** Some infrastructure assets have inflation pass-through ability, although there can be a lag. Regulators may look unfavorably on higher prices to consumers over a longer term.
- ▶ **Debt maturities / banking sector risk:** Less impact than real estate to-date, but uncertain.

Tailwinds



- ▶ **Energy transition:** Renewables and transmission, NetZero targets, electrification, including Evs, Public policy support (Inflation Reduction Act)
- ▶ **Digitization:** Growth of AI and 5G, with associated data centers, small cell, tower and other infrastructure.
- ▶ **Aging Infrastructure:** Underinvestment across transport, utilities that may create attractive new opportunities with government incentives.
- ▶ **Travel rebound:** Airport traffic has improved beyond pre-pandemic trend.

Farmland

Headwinds



- ▶ **Elevated Expenses:** Farm economy faces continued elevated cost to plant despite recent price decreases in fertilizers, chemical and diesel putting downward pressure on margins for the 2023 crop year.
- ▶ **Higher Interest Rates:** Rising interest rates make large farmland purchases more costly and could lead to values softening.
- ▶ **Water restrictions:** Water constraints reduce the amount of arable land for farming.

Tailwinds



- ▶ **Technological advances:** Technology-driven productivity gains are boosting production to meet the need of a growing population faced with decreasing arable farmland.
- ▶ **Inflation:** Farmland investment is becoming more attractive due to continuing inflation and its positive correlation with farmland.
- ▶ **Geopolitical Uncertainty:** Conflict in Ukraine, a major global exporter of wheat and corn, combined with a fragile agreement to ship crops through the black Sea threatens the global supply of key commodity crops.

Market Overview

SURS Debt Maturities

SURS Office Exposure

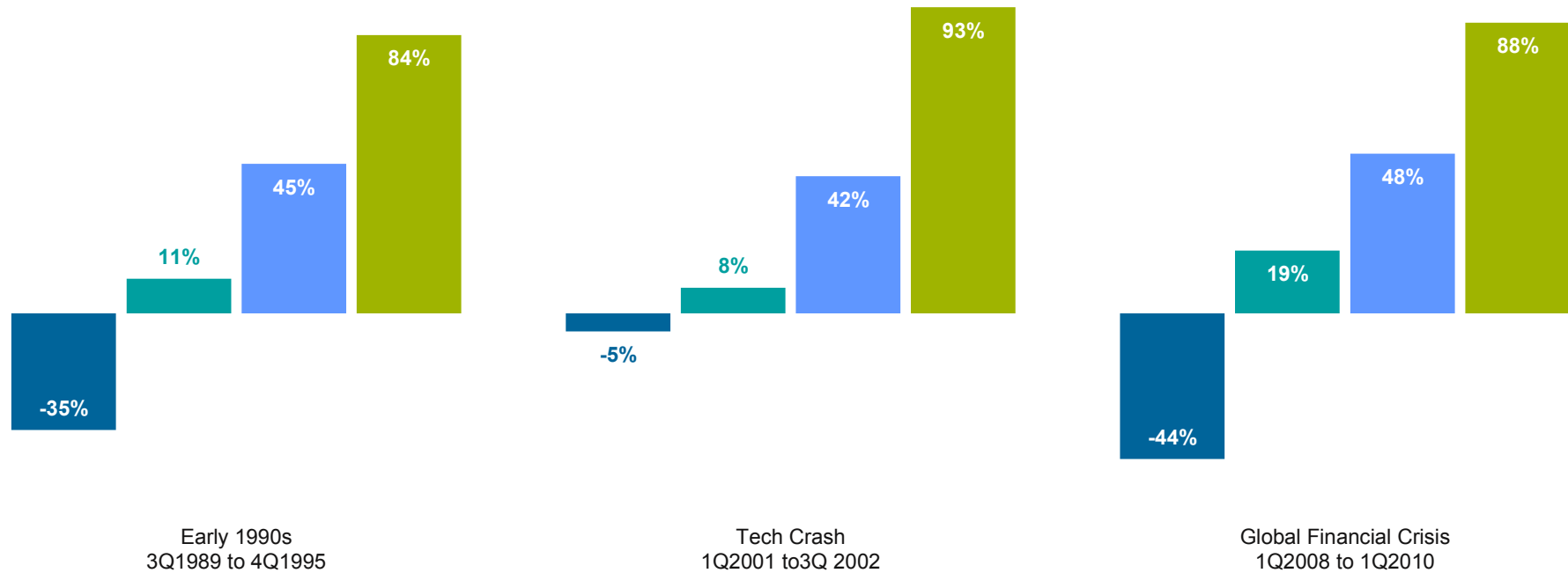
Other Real Assets

Appendix and Glossary

Core Real Estate Returns Following Trough Quarter of Decline by Cycle

Outsized returns followed the past three periods of asset re-pricing

● Peak-to-trough decline ● One-year cumulative return after trough ● Three-year cumulative return after trough ● Five-year cumulative return after trough

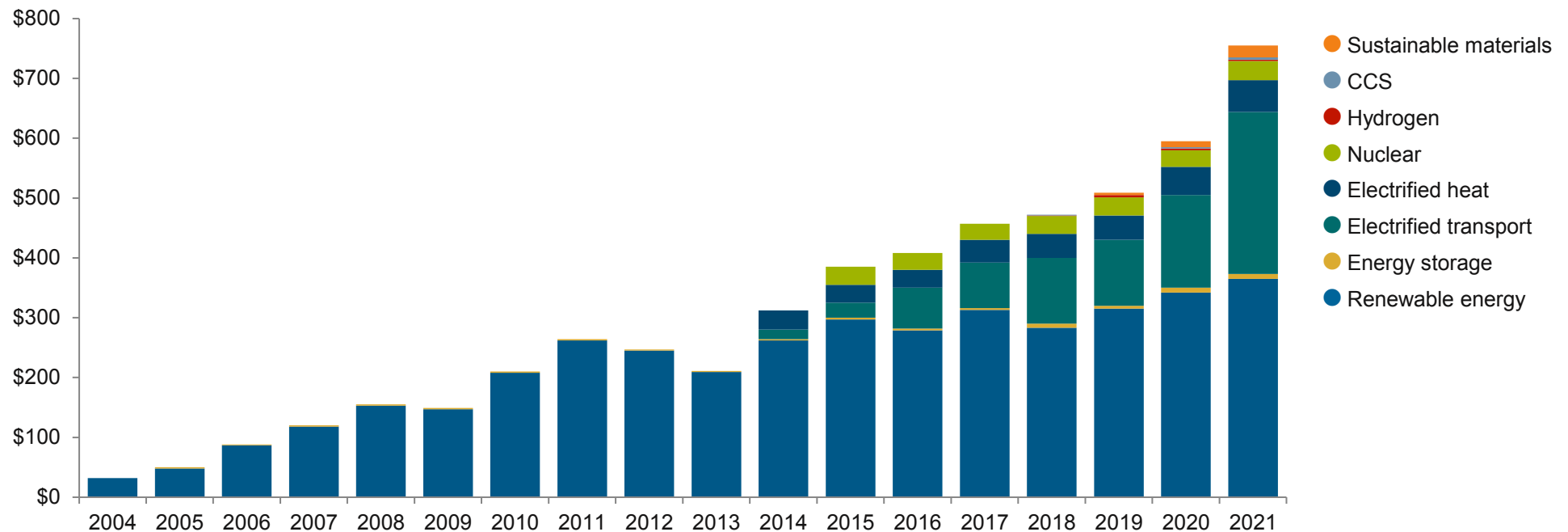


Source: AEW Capital Management

Global Investment in Energy Transition – Renewables are part of the solution

Energy transition investment surpassed \$750 billion in 2021

Global Investment in Energy Transition by Sector (\$billions)



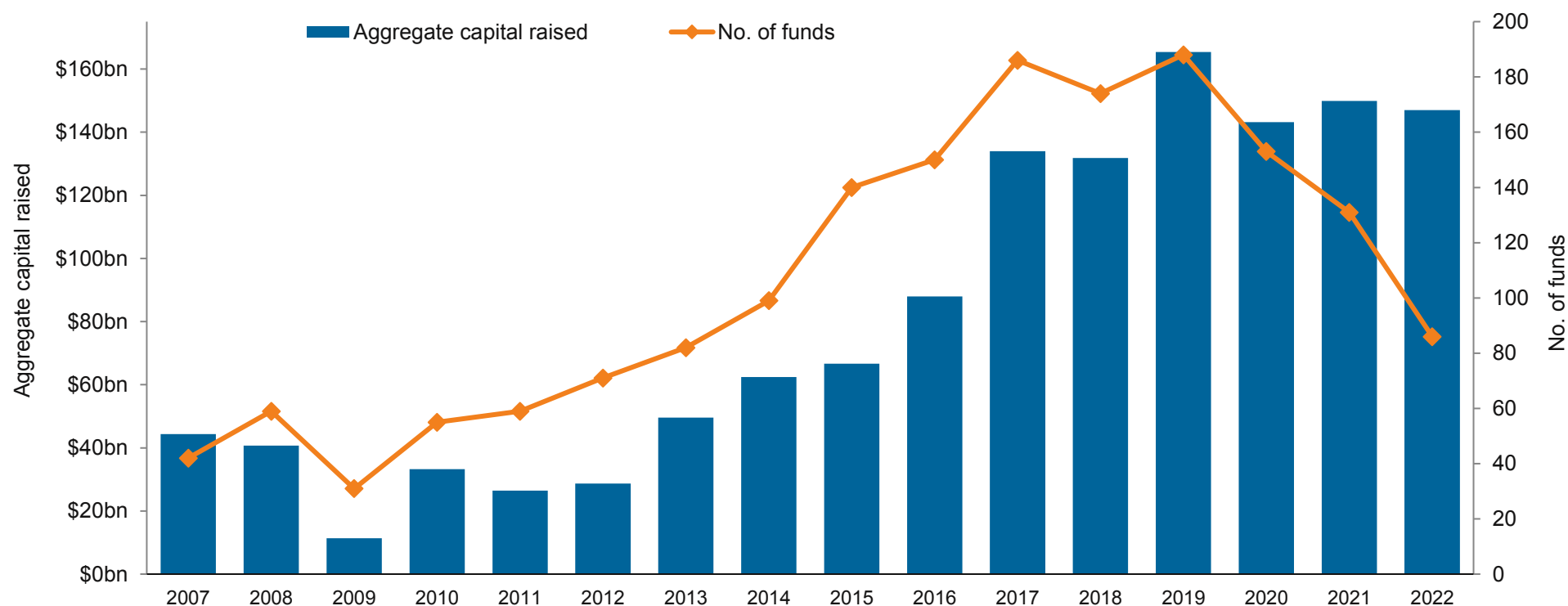
Inflation Reduction Act: This climate and tax bill unlocks funding for clean energy investments.

This bill extends production and investment tax credits for wind and solar by 10 years, allowing project developers to claim up to 30% of the value of a project as a credit in the case of solar and per-watt production tax credit for wind. The bill also introduces tax credits for battery technology, hydrogen storage, stand-alone energy storage, and clean hydrogen. Another notable provision includes bonus tax credits on equipment produced in the U.S., if development is within an “energy community,” or low-income communities.

Source: Callan research, JPM/Bloomberg NEF – Energy Transition Investment Trends Executive Summary 2022

Infrastructure Fundraising Remained Steady Since 2020

Mega-funds continue to dominate fundraising, which has led to fewer funds raised in recent years



- ▶ The closed-end fund market continues to expand, with infrastructure debt, emerging markets and sector-specific strategies (e.g., digital and renewables).
- ▶ The open-end fund market is increasing, with multiple new funds coming to market in 2020/2021/2022.
- ▶ In recent years assets with guaranteed/contracted revenue or more inelastic demand patterns (e.g., renewables, telecoms, and utilities) fared better than assets with GDP/demand-based revenue (e.g. airports, seaports, midstream-related).
- ▶ “NetZero” or other similarly focused transition strategies have been coming to market.

Source: Institutional Infrastructure Investor data and Callan research, Q4 2022

Definitions

Capitalization rate: Commonly known as cap rate, is a rate that helps in evaluating a real estate investment. $\text{Cap rate} = \text{Net operating income} / \text{Current market value (Sales price) of the asset}$.

Net operating income: Commonly known as NOI, is the annual income generated by an income-producing property after taking into account all income collected from operations, and deducting all expenses incurred from operations.

Retail - Community Center: In addition to convenience goods, provides for the sale of goods such as apparel or furniture. Typical area is 100,000 to 350,000 square feet with two or more anchor tenants (primarily Grocery and Drug).

Retail - Neighborhood Center: Provides for the sale of daily living needs of the immediate area. Typical property is 30,000 to 150,000 square feet with at least one anchor tenant.

Retail - Regional Center: Provides a variety of goods comparable to those of a central business district in a small city, including general merchandise, apparel and home furnishings, as well as a variety of services and perhaps recreational facilities. Two or more full-line department stores anchor a total area of 400,000 to 800,000 square feet.

Retail - Super-Regional Center: Provides an extensive variety of shopping goods comparable to those of the central business district of a major metropolitan area. The anchors are three or more full-line department stores, with total area in excess of 800,000 square feet.

NFI-ODCE Index: time-weighted return Index with an inception date of 12/31/1977. The Index is comprised of 36 open-end commingled funds. 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.

Definitions – Investment Styles

Core: Direct investments in operating, fully leased, office, retail, industrial, or multifamily properties using little or no leverage (normally less than 30%).

Value-Added: Core returning investments that take on moderate additional risk from one or more of the following sources: leasing, re-development, exposure to non-traditional property types, the use of leverage.

Opportunistic: Investments that take on additional risk in order to achieve a higher return. Typical sources of risks are: development, land investing, operating company investing, international exposure, high leverage, distressed properties.

Non Core: Includes both value added and opportunistic strategies

Closed-End Fund: A commingled fund with a stated maturity (termination) date with few or no additional investors after the initial formation of the fund. Closed-end funds typically purchase a portfolio of properties to hold for the duration of the fund and, as sales occur, typically do not invest the sales proceeds. (Source: NCREIF PREA Reporting Standards).

Commingled Funds: A term applied to all open-end and closed-end pooled investment vehicles designed for institutional tax-exempt investors. A commingled fund may be organized as a group trust, a partnership, a corporation, an insurance company separate account, or another multiple ownership entity.

Open-End Fund: A commingled fund with no finite life that allows continuous entry and exit of investors, typically on a quarterly basis, and engages in ongoing property operations as well as investment purchase and sale activities.

Real Estate Investment Trust (REIT): A corporation or business trust that combines the capital of many investors to acquire or provide financing for all forms of income-producing real estate. (Source: National Association of Real Estate Investment Trusts)

Definitions – Performance Monitoring

Vintage Year: Year of first drawdown

Paid-In Capital: Cash funded to the investment for acquisition and capital items (i.e., initial investment cost or significant capital improvements).

Uncalled Capital: Capital allocated to managers which remains to be called for investment. Amounts are as reported by managers.

Distributed Capital: Actual cash returned from the investment, representing distributions of income from operations. Withdrawals: Cash returned from the investment, representing returns of capital or net sales proceeds.

Net Asset Value: The value of an investment as determined by actual sales dollars invested and withdrawn plus the effects of appreciation and reinvestment; market value is equal to the ending cumulative balance of the cash flow statement (NAV).

Net IRR: IRR after advisory fees, incentive and promote. This includes actual cash flows and a reversion representing the LP Net Assets at market value as of the period end reporting date.

TVPI Multiple: The ratio of Total Value to Paid-in-Capital (TVPIC). It represents the Total Return of the investment to the original investment not taking into consideration the time invested. Total Value is computed by adding the Residual Value and Distributions. It is calculated net of all investment advisory and incentive fees and promote.

DPI Multiple: The ratio of distributions paid to the investor divided by the amount of contributions paid by the investor. It is calculated net of all investment advisory and incentive fees and promote. It is calculated net of all investment advisory and incentive fees and promote

RVPI Multiple: The ratio of net asset value divided by the amount of contributions paid by the investor.

Net IRR: The total net return for an investment or portfolio over the period of time the client has funds invested. Total portfolio Inception Returns include returns from investments no longer held in the current portfolio.

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Performance numbers in this presentation are based on quarterly data collected from SURS investment managers and calculated by Callan beginning in the third quarter of 2018. Quarterly performance history prior to the third quarter of 2018 was calculated and provided to Callan by the previous consultant, NEPC.

State Universities Retirement System

June 1, 2023

2023 Crisis Risk Offset Class
Review



State Universities Retirement System

Table of Contents

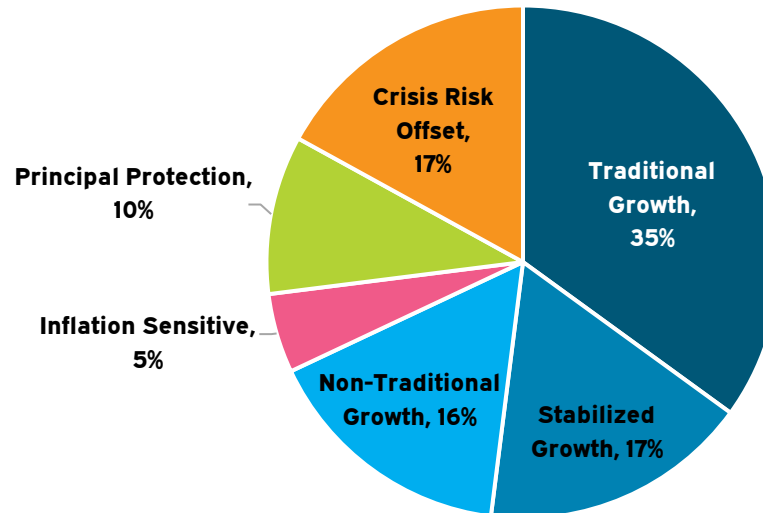
1. Background and Review
2. SURS Experience
3. Class and Manager Structure
4. Conclusion

Background and Review

Policy Targets

- 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.

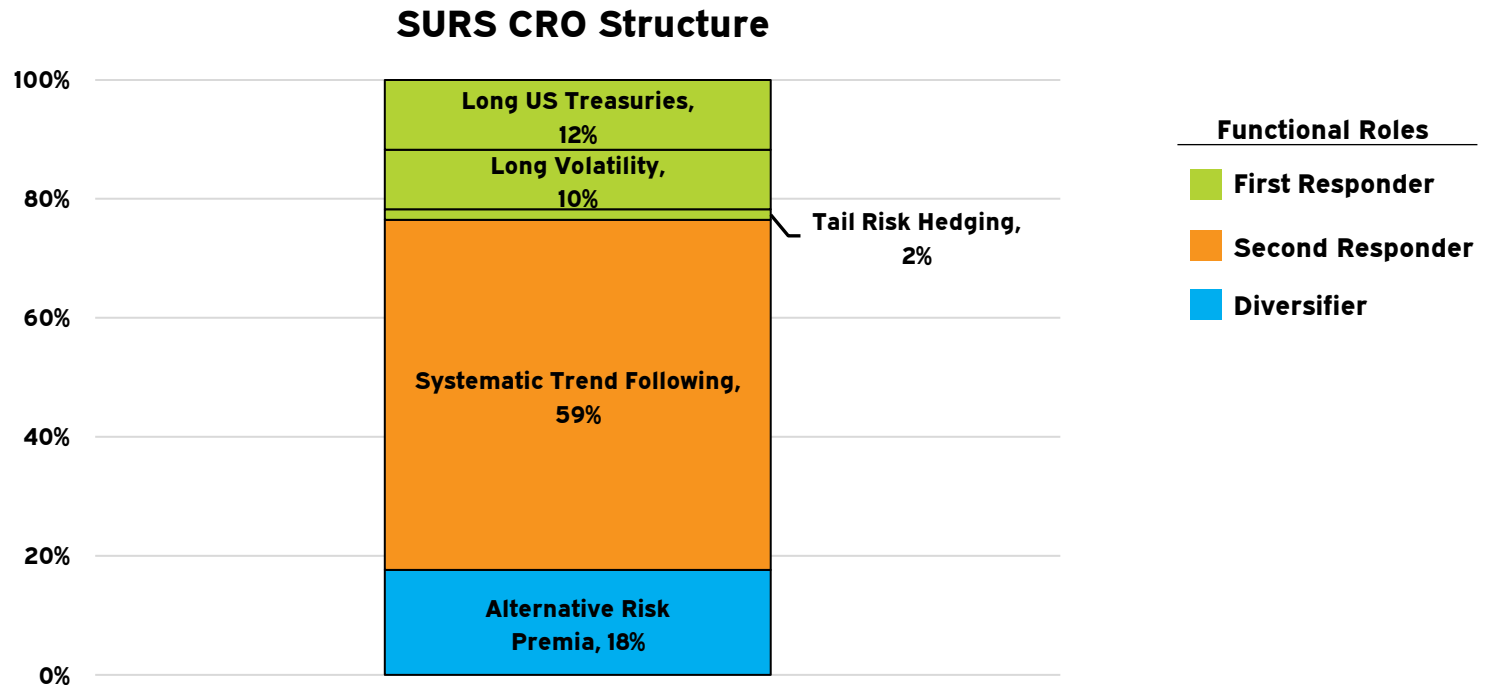
SURS Long-Term Allocation Policy*



*Reflects the Board decision in April 2023 to shift 2% from CRO to Principal Protection.

Crisis Risk Offset – SURS Structure

- The SURS CRO class consists of multiple sub-strategies.
- The structure of the CRO class and its corresponding sub-strategies was an outcome of asset-liability analysis and is aligned with Meketa's recommended framework.



Note: Figures may not sum to 100% due to rounding.

Crisis Risk Offset - Overview

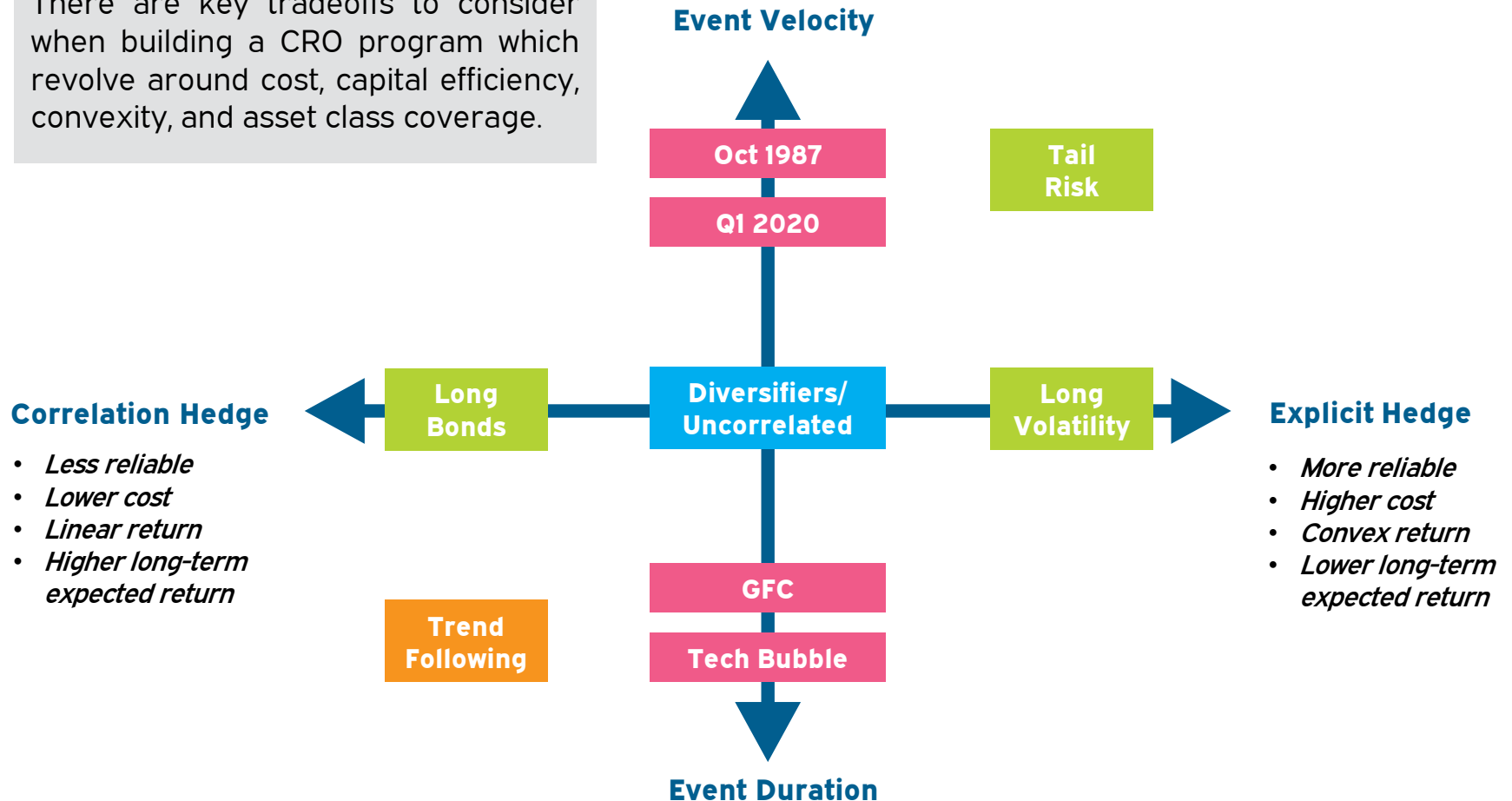
- The concept behind the Crisis Risk Offset (“CRO”) class is to exist as a robust solution for current institutional portfolios that face a challenging capital markets environment.
- CRO portfolios in aggregate are designed to:
 - Have a positive long-term expected return
 - Produce meaningfully positive returns in equity drawdowns
 - Be sufficiently liquid to allow for timely rebalancing
 - Be scalable and capital efficient to have a material impact
 - Low correlation to traditional risk factors on average
- The use of CRO classes can have a meaningful impact on expected portfolio outcomes:
 - Higher expected Sharpe Ratio (i.e., return per unit of risk)
 - Reduced expected volatility and drawdowns
 - Improved long-term probabilities of meeting return expectations

Crisis Risk Offset – Overview (continued)

- Designed to mitigate large total portfolio risks.
 - Most often *Growth Risk* (most portfolios' largest risk)
 - Provide significant positive returns during a *Growth Risk* crisis
 - Maintain a very low correlation to *Growth Risk* on average
- Most commonly utilized components:
 - Long US Treasuries (*in the SURS portfolio*)
 - Long Volatility/Tail Risk (*in the SURS portfolio*)
 - Trend Following (*in the SURS portfolio*)
 - Alternative Risk Premia (*in the SURS portfolio*)
 - Global Macro
 - Other market-neutral strategies
- The construct of a given client's CRO portfolio is often influenced by two things:
 - Pre-existing hedge fund strategies (some of which may fit within CRO)
 - Investment beliefs regarding efficacy of alpha-oriented strategies

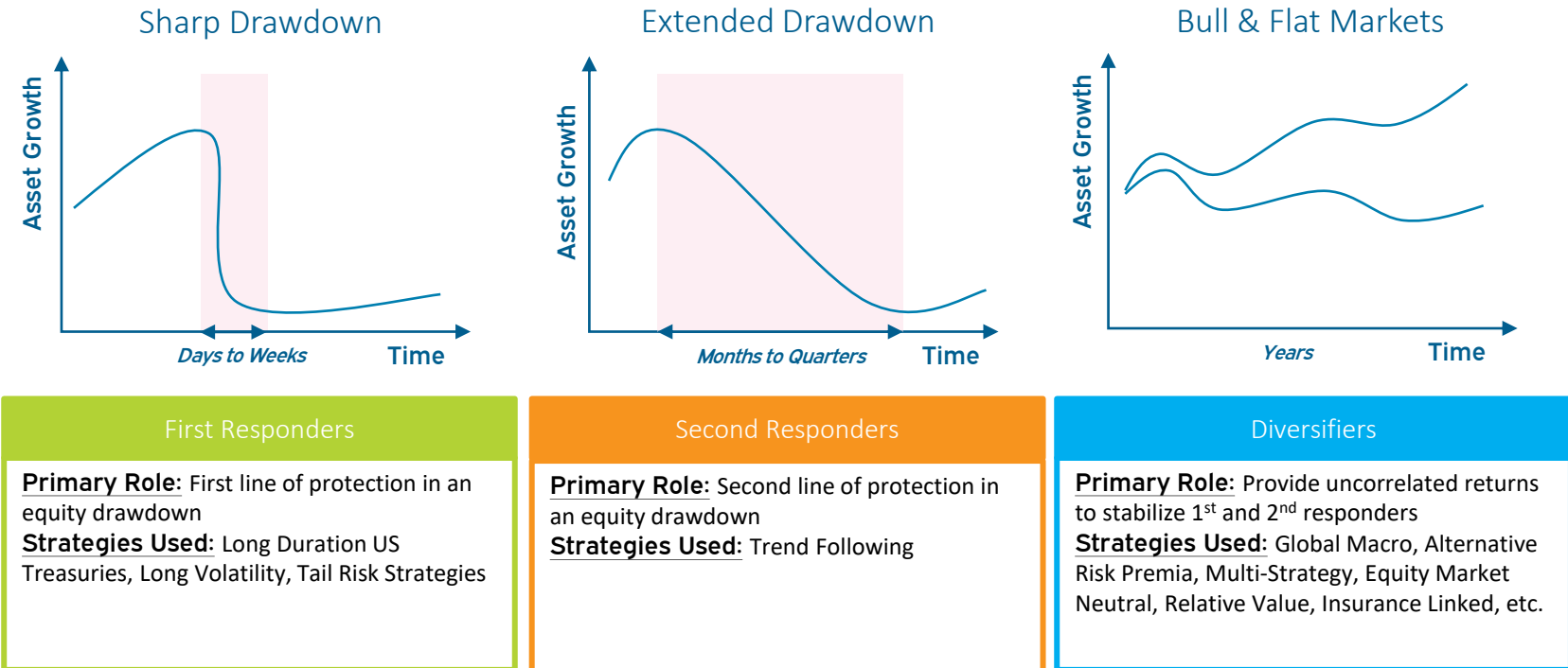
Different Events – Different Protection

There are key tradeoffs to consider when building a CRO program which revolve around cost, capital efficiency, convexity, and asset class coverage.



Choosing Strategies for a CRO Program

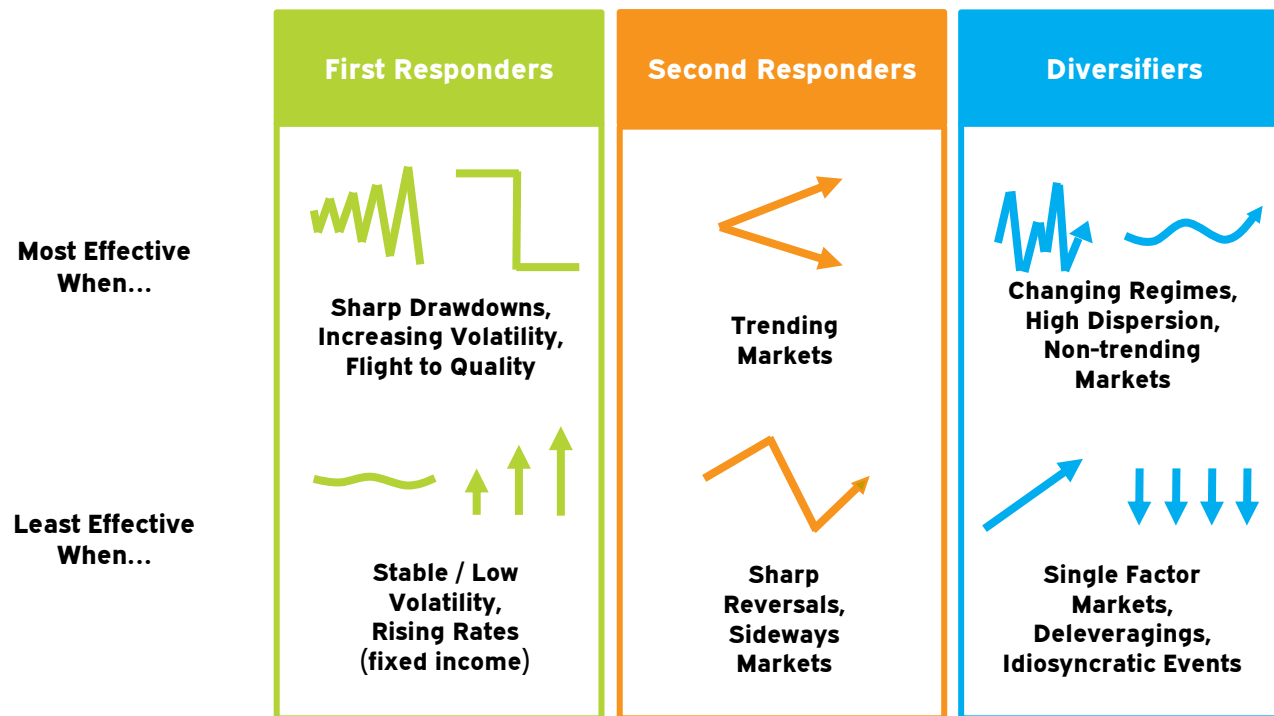
- Underlying strategies are generally viewed through a functional framework focused on outcomes.
- This focus and structure should improve the effectiveness of the class and provide flexibility as markets change over time.



Expanded Component Expectations

→ With varied expectations by strategy, allocating across multiple strategies increases the probability of achieving a desired result.

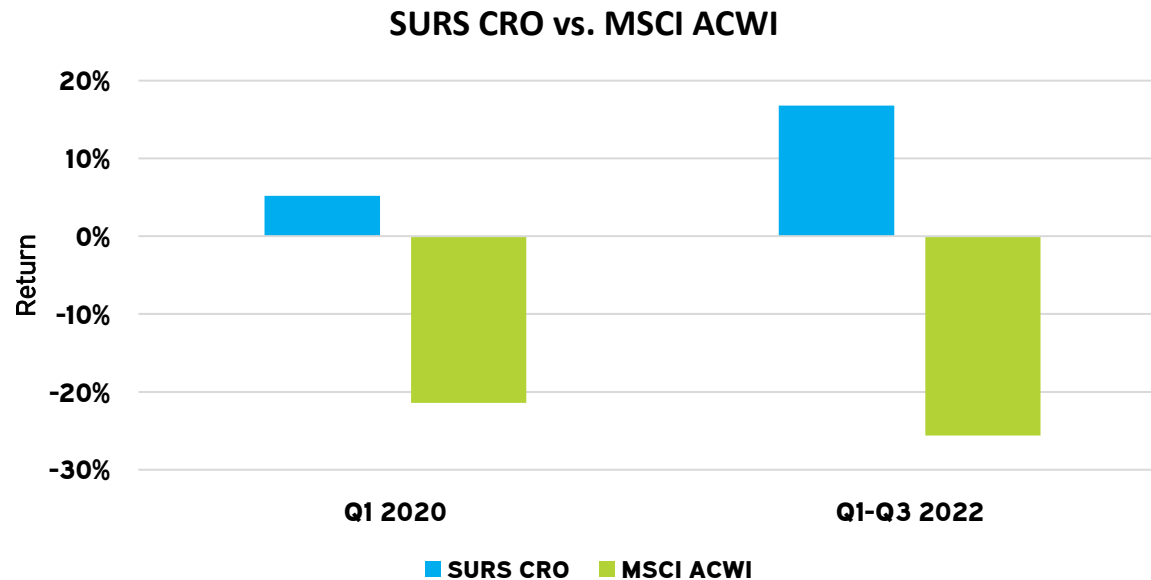
CRO Components and Expected Outcomes



SURS Experience

Performance

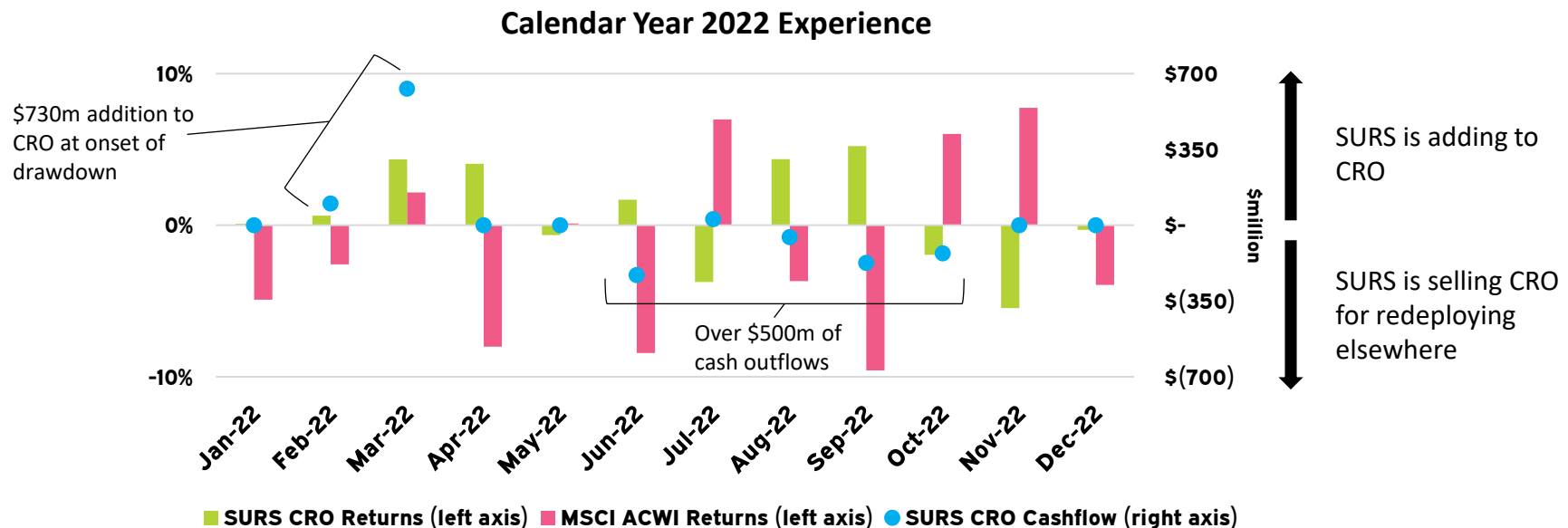
- The SURS CRO class was inceptioned in late-2019.
- From late-2019 through Q1 2023, there have been two material market events in which a CRO class would be expected to protect/diversify the SURS portfolio



- In addition to positive returns during the two material market drawdowns, the SURS CRO composite has generated a +3.0% return since inception through Q1 2023.

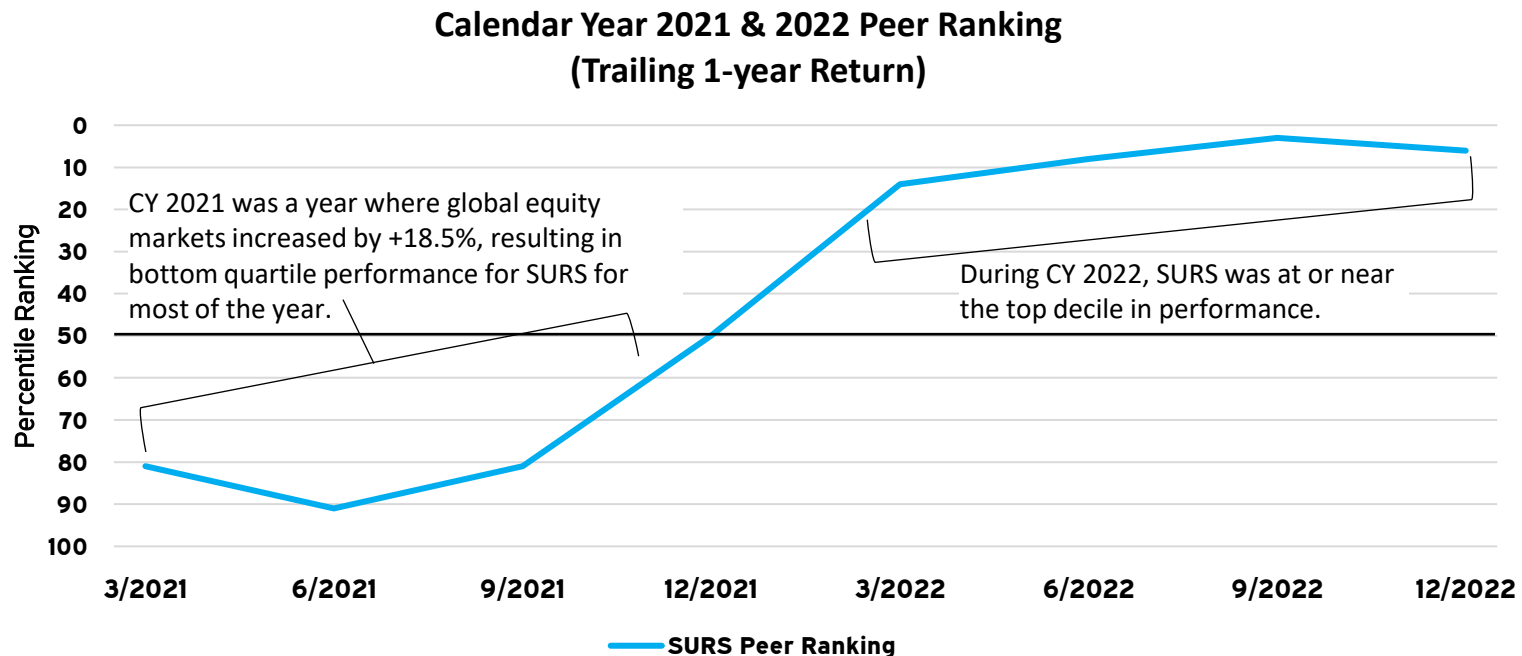
Performance – 2022 in Detail

- Whereas Q1 2020 was a quick V-shaped drawdown, calendar year 2022 was a slower and more sustained drawdown.
- Slower/sustained drawdowns are the environments that put the solvency of defined benefit plans at risk due to cash outflow impacts.
- SURS achieved the policy target allocation in Q1 2022, and this subsequently allowed SURS Staff to harvest gains within CRO for liquidity/rebalancing purposes during Q2-Q3 2022.

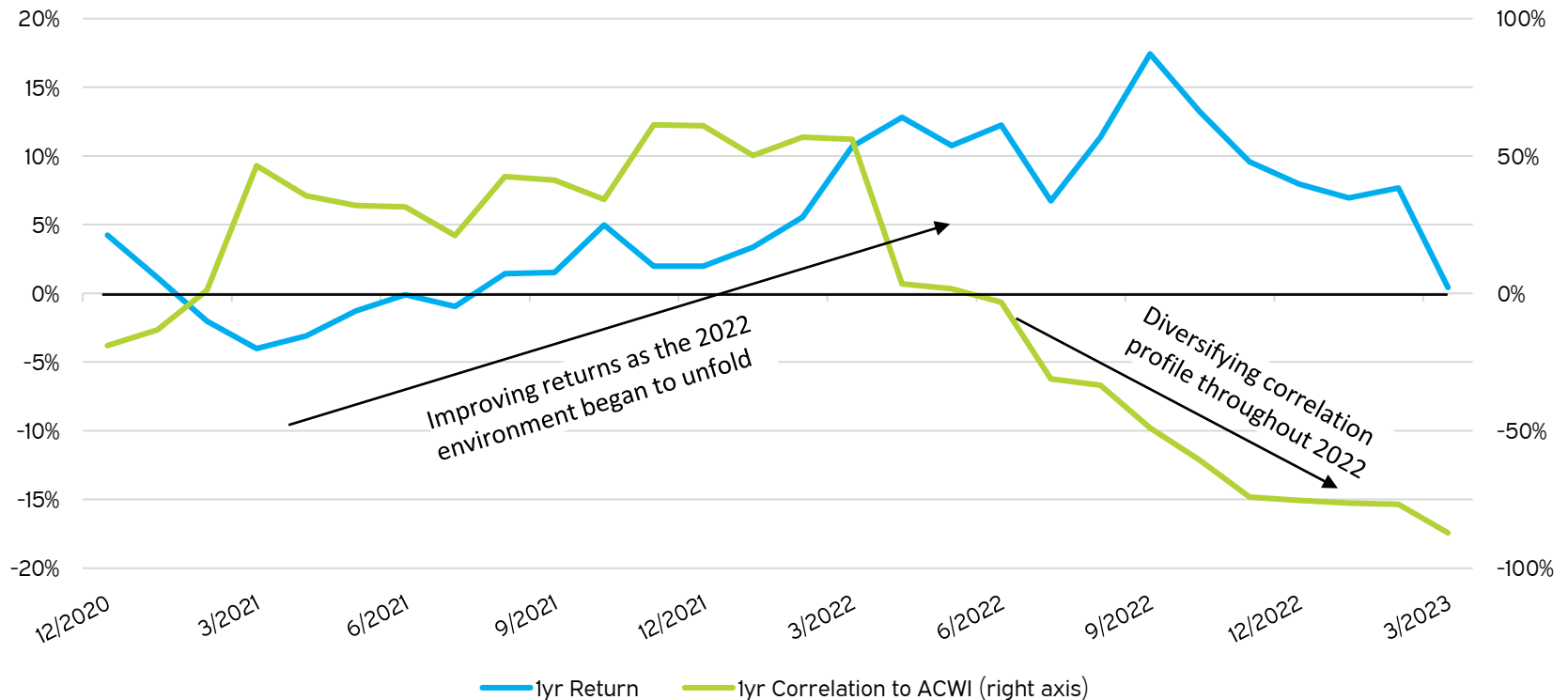


Performance – Peer Comparisons

- When the current risk-based, functional framework was adopted (particularly the allocation to CRO), it was acknowledged that this would cause SURS to perform differently than peers.
- By performing better during challenging market environments, SURS recognized that this would imply trailing during equity bull markets, however, the result would be improved probabilities of funding progress.



Rolling 1-Year Return and Correlation to ACWI



→ While the SURS CRO class has produced a positive absolute return with low correlation to traditional markets since inception, the timing of when returns were produced (and when correlations were negative) has been critical to its portfolio impact.

Class and Manager Structure

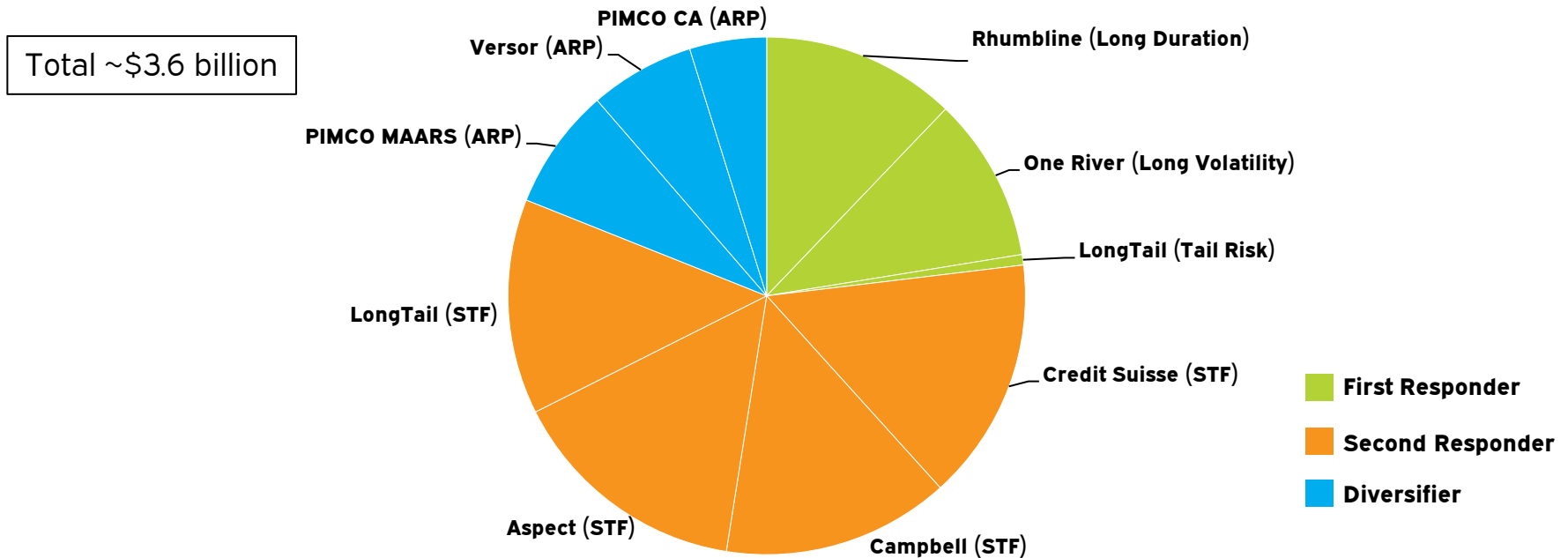
Class Structure Design

→ The CRO class has been continuously evaluated and explicitly structured/refined four times:

1. 2018 Asset-Liability Study
 - Structure explicitly approved post-study in March 2019.
2. 2020/2021 Asset-Liability Study
3. June 2022
 - Addition of Long Volatility/Tail Risk in order to improve protection during inflationary crises.
4. April 2023
 - Reduction of Alternative Risk Premia in order to boost Principal Protection allocation.

→ Given the evolution and recurring analysis of the class, Meketa and SURS Staff do not believe any structure alterations are required at this time.

SURS CRO Manager Structure (as of 5/4/23*)



Mandate Totals

# of mandates	10
% AUM Diverse	33%

Functional Role

First Responder	23%
Second Responder	58%
Diversifier	19%

*AUM figures may be as of 4/30/23 or otherwise estimated.

STF = Systematic Trend Following
ARP = Alternative Risk Premia

Manager Performance Comments

→ Two managers within the SURS CRO portfolio are approaching a level of concern:

Manager/Index	As of 3/31/23				
	QTR	1-year	3-year	Since Inception	Inception Date
LongTail STF	0.4%	-1.9%	-0.5%	1.8%	12/31/2019
Credit Suisse Managed Futures Index	-6.1%	5.4%	13.5%	11.6%	---
Excess	6.5%	-7.3%	-14.0%	-9.8%	---
Versor ARP	-0.8%	-2.8%	-2.2%	-6.5%	12/31/2019
Cash + 2%	1.7%	5.3%	3.2%	3.2%	---
Excess	-2.5%	-8.1%	-5.4%	-9.7%	---

→ The managers' histories with SURS are still relatively new at just over three years.

→ With respect to LongTail, the majority of their underperformance was due to their model's explicit design to not short bonds (a very profitable trade in 2022).

- This same exclusion has contributed to results in 2023.

→ Similar to many other diversified *Alternative Risk Premia* managers, Versor has struggled in recent years as multiple risk premia factors have generated negative returns.

→ SURS Staff and Meketa do not recommend any manager changes at this time, however, both LongTail and Versor remain under close scrutiny.

Conclusion

Conclusion

- The SURS CRO class has played a critical role within the broader portfolio since its inception in 2019.
- Positive returns within CRO during Q1 2020 and Q1-Q3 2022 added material protection to the portfolio, aiding the system's long-term funding trajectory.
- At this time, Meketa and SURS Staff do not recommend any modifications to the CRO class's structure or manager roster.

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Crisis Risk Offset Asset Class Review

June 2023



Fiscal Year 2023

Functional Asset Class Review Schedule

Meeting	Functional Asset Class	Strategies
September	Annual Review/Investment Plan	
October	Principal Protection & Inflation Sensitive	Principal Protection, TIPS
December	Non-Traditional Growth	Private Equity, Non-Core Real Estate
January	Stabilized Growth	Options, Credit, Core Real Assets
March	Defined Contribution	
April	Traditional Growth	Public Equity
→ June	CRO	ARP, Trend Following, Long Duration, Long Vol / Tail Risk



SURS Policy Targets


Classes/Strategies	Current Policy Target %	Long-Term Strategic Policy Target %
Broad Growth	68%	68%
Traditional Growth	37%	35%
Public Equity	37%	35%
Stabilized Growth	17%	17%
Core Real Assets	8%	8%
Options Strategies	1%	0%
Public Credit	6%	4%
Private Credit	2%	5%
Non-Traditional Growth	14%	16%
Private Equity	11%	11%
Non-Core Real Assets	3%	5%
Inflation Sensitive	5%	5%
TIPS	5%	5%
Principal Protection	10%	10%
Crisis Risk Offset	17%	17%
Long Duration	2%	2%
Trend Following	10%	10%
Alt. Risk Premia	3%	3%
Long Volatility	1.7%	1.7%
Tail Risk	0.3%	0.3%
Total	100%	100%

The Current Strategic Policy Target % may change over time and reflects gradual shifting of assets to the Long-Term Strategic Policy Target %, due to practical implementation considerations and liquidity constraints.

As of May 1, 2023



Investment Beliefs

- 
- SURS believes that an **appropriately diversified strategic allocation policy is the primary policy tool** for maximizing the investment program's long-term return in light of its risk profile. The timing and magnitude of projected SURS's employer contributions and future benefit payments (i.e., its funding policy) can have significant cash flow implications and thus should receive explicit consideration during SURS's risk-framing and asset allocation decision-making process.
 - SURS believes that, **in order to achieve its objectives, it must incur a certain amount of investment risk that is tied to economic performance**. Exposure to economic growth comes about primarily through the equity risk premium which, while highly variable, produces a significantly positive long-term return.
 - SURS believes that **diversification within strategic classes helps to mitigate the risks of the class**. Appropriate manager diversification helps to maximize the breadth of capturing alpha after accounting for the major biases in a portfolio. As a result, added value consistency should improve.
 - SURS believes **disciplined allocation of capital is necessary to manage the systematic risk** of the portfolio and maximize the likelihood of achieving its long-term expectations. Key examples of maintaining disciplined capital allocation includes consistently rebalancing back to strategic targets where appropriate and dollar-cost averaging (and/or pacing) new capital allocations over time into both public-market and private-market portfolios.
 - SURS believes that **utilization of passive approaches in highly-efficient publicly-traded markets** should take priority because it is extremely difficult to add consistent value, net of fees, in these markets. In addition, passive management typically provides for rapid, relatively liquid, low-cost exposure to the major risk premiums of the global investment markets.



Investment Beliefs

- SURS believes **active management can prove beneficial in certain market segments** when there is evidence that active management can produce consistent significantly-positive, net of fee performance over various market cycles.
- SURS believes that **investment costs (fees, expenses and frictional costs) directly impact investment returns and should be monitored and managed carefully**. Such costs should be evaluated relative to both expected and realized returns and take into account appropriate alignment of interest considerations.
- SURS believes that the **private markets should produce higher returns than public markets** due to exposure to the illiquidity risk premium. While illiquidity risk can cause a portfolio's risk to increase, over the long-term the illiquidity risk premium is positive and material.
- SURS is **committed to enhancing diversity** by incorporating emerging (minority, woman-owned and disability-owned) investment managers into the portfolio.
- SURS believes that **addressing material environmental, social and governance-related (ESG) issues can lead to positive portfolio and governance outcomes**. To integrate ESG issues into its investment process SURS may apply certain investment and/or engagement strategies/approaches to its portfolio investments. In addition, proxy rights attached to shareholder interests in public companies are also “plan assets” of SURS and represent a key mechanism for expressing SURS's positions relating to specific ESG issues.



Crisis Risk Offset

The role of the Crisis Risk Offset asset class is to add diversification to the SURS portfolio, provide significant positive returns during a crisis, and maintain a low correlation to Growth Risk on average.

Long Duration Treasury, Systematic Trend Following, Alternative Risk Premia, and Long Vol/Tail Risk Hedging



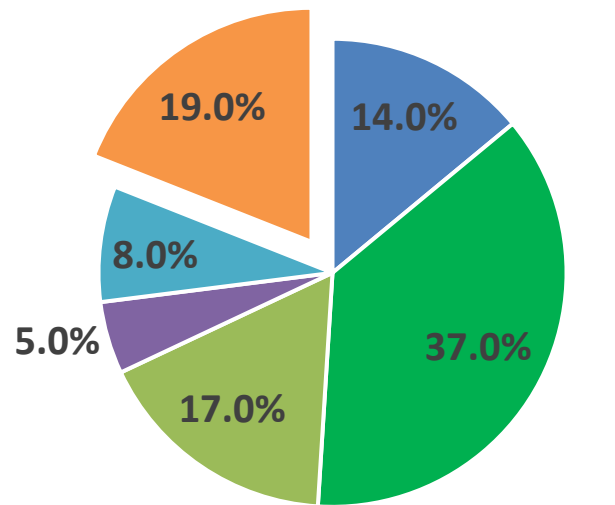
Crisis Risk Offset

- **Long Duration**
 - A portfolio of long duration treasury securities.
- **Long Volatility / Tail Risk (New)**
 - Two managers trading long equity index puts or long volatility futures, along with other options combinations; effectively provides equity drawdown insurance.
- **Systematic Trend Following**
 - Comprised of four managers with accounts containing long and short index futures and forwards with exposure to equities, interest rates, commodities and currencies.
- **Alternative Risk Premia**
 - A portfolio of strategies based on non-traditional risk premiums such as value, momentum, carry, etc., meant to provide uncorrelated returns not driven by growth risk.



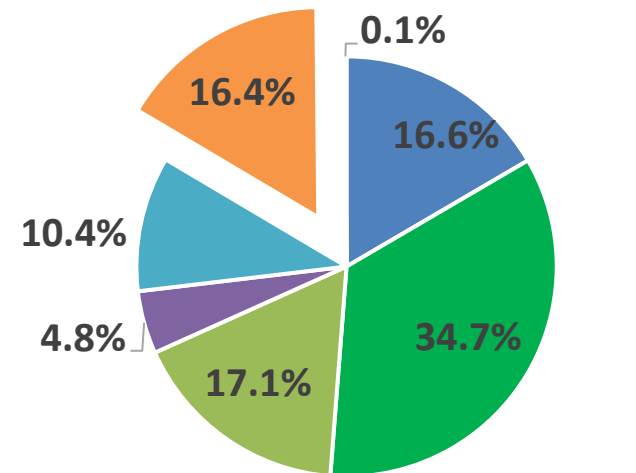
Crisis Risk Offset Target vs. Actual Allocation

Target Allocation



■ Non-Traditional Growth ■ Traditional Growth
■ Stabilized Growth ■ Inflation Sensitive
■ Principal Protection ■ Crisis Risk Offset

Actual Allocation



■ Non-Traditional Growth ■ Traditional Growth
■ Stabilized Growth ■ Inflation Sensitive
■ Principal Protection ■ Crisis Risk Offset
■ Cash

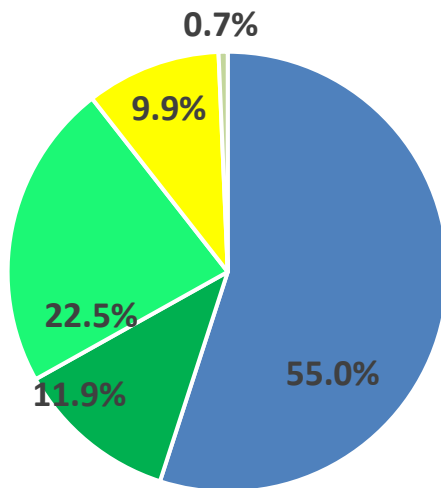
Crisis Risk Offset was below its target allocation

March 31, 2023



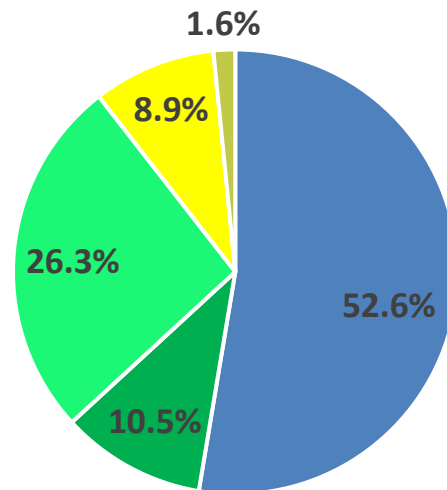
CRO Sub-Asset Class Allocation

Manager Allocation



- Systematic Trend Following
- Long Duration
- Alternative Risk Premia
- Long Vol
- Tail Risk

Policy Target



- Systematic Trend Following
- Long Duration
- Alternative Risk Premia
- Long Vol
- Tail Risk

Data as of March 31, 2022



Accomplishments & Initiatives

- **Past 12 Months Highlights and Accomplishments:**
 - **Additional funding to CRO in Feb/March 2022 (\$730 million) brought CRO in line with long term strategic target allocation.**
 - **Conducted search for Long Volatility and Tail Risk strategies, with managers selected at April 2022 IC meeting.**
 - **Reduced strategic target allocation from 19% to 17% at the April 2023 IC meeting.**
 - **Terminated one Alternative Risk Premia manager due to change of manager's strategy and investment team.**
- **Current and Future Initiatives:**
 - **Continue to monitor allocations and managers currently utilized.**
 - **Explore the universe of alpha seeking absolute return strategies.**



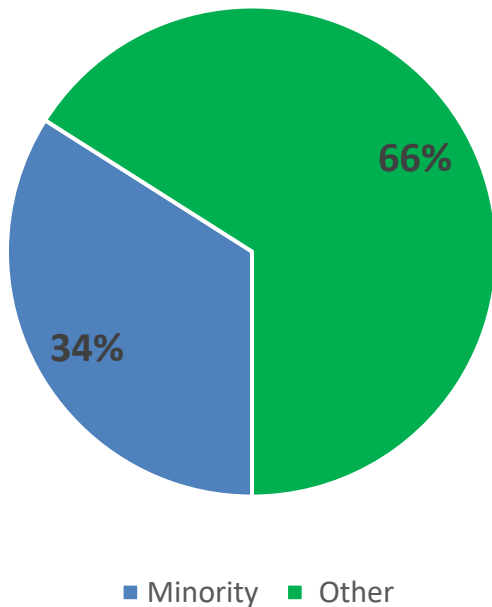
Performance Summary

Trailing Returns, Net of Fees As of March 31, 2023	Three Months	12 Months	Three Years	Since Inception (11/30/2019)
Crisis Risk Offset ex Tail Risk	-1.8%	2.1%	2.7%	3.5%
<i>Policy Benchmark</i>	-2.4%	2.2%	4.3%	5.4%
Long Duration	6.1%	-15.9%	-11.6%	-6.2%
<i>BBG Barc US Long Govt</i>	6.2%	-15.9%	-11.2%	-6.0%
Systematic Trend Following	-4.9%	5.7%	8.8%	8.6%
<i>CS Mngd Fut Liquid 15V</i>	-6.1%	5.4%	13.5%	10.9%
Alternative Risk Premia	1.3%	6.2%	4.1%	0.8%
<i>90 Day T-Bills + 2%</i>	1.7%	5.3%	3.1%	3.2%
Long Volatility	-0.7%			
<i>CBOE Eureka Long Vol Hdg Fd</i>	-2.1%			
Tail Risk (Relative to Assets Under Protection)	-0.5%			

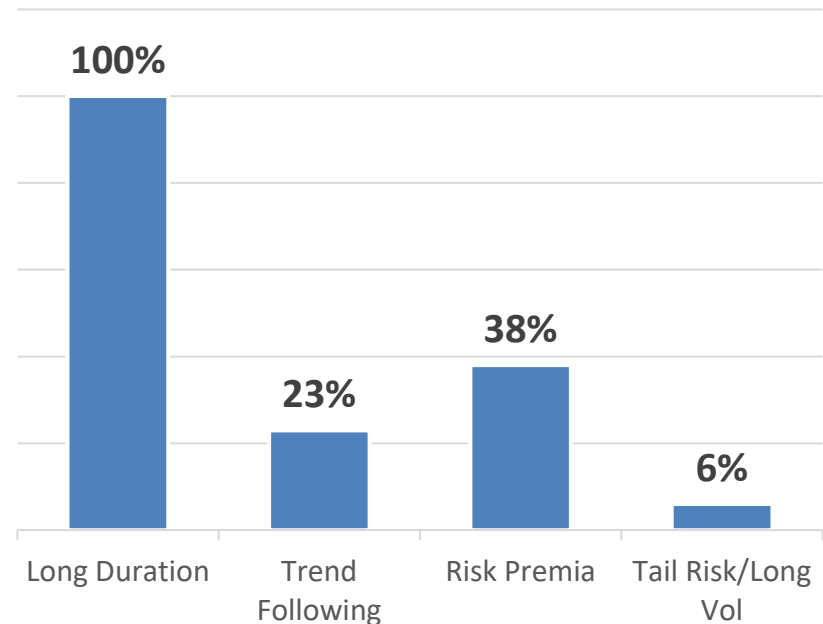


Crisis Risk Offset Minority Firm Exposure

Percentage of CRO



Percentages of CRO Sub-Classes



Managers: Rhumblin (Long Duration), LongTail Alpha (Trend and Tail Risk), Versor (Risk Premia)

Data as of March 31, 2023



CRO Policy Benchmark

- **CRO Benchmark: Blend of sub-class benchmarks for Long Duration (10.5%), Trend (53.0%), Premia (26.0%), and Long Volatility (10.5%)**
- **Long Duration: Bloomberg Barclays U.S. Long Government Index**
 - An index of long duration treasury bonds.
- **Systematic Trend Following: Credit Suisse Managed Futures Liquid Index 15V**
 - A rules-based index that allocates among 35 of the most liquid futures contracts from 18 instruments across Commodities, Currencies, Interest Rates, and Equity Indices, targeting a 15% level of volatility.
- **Alternative Risk Premia: 90 Day T-Bills + 2%**
 - An absolute return index.
- **Long Volatility: CBOE Eureka hedge Long Volatility Index**
 - An equally weighted index comprised of 15 funds that each take a net long view on implied volatility with a goal of positive absolute return



Long Duration

The role of the Long Duration component of the Crisis Risk Offset asset class is to function as the “first responder” in a growth asset crisis and provide negatively correlated returns to the assets in SURS’ Broad Growth asset classes.



Long Duration Performance During the 10 Worst Quarters of Equity Performance

January 2000 - Present

Period	ACWI IMI	Bloomberg Barclays US Long Governemnt
Q4 2008	-22.7%	17.9%
Q1 2020	-22.4%	20.6%
Q3 2011	-17.9%	23.9%
Q3 2002	-17.7%	12.1%
Q3 2008	-16.6%	2.6%
Q3 2001	-15.7%	6.7%
Q4 2018	-13.3%	4.2%
Q1 2001	-12.7%	1.4%
Q2 2010	-11.9%	11.8%
Q1 2009	-10.5%	-5.3%
1 YR Dec 2022	-18.4%	-29.2%
Q1 2023	7.0%	6.2%

Source: eVestment



Long Duration Past Year Review/Outlook

- **Long Duration strategies remain at their most effective during market drawdowns and least effective during climates of rising interest rates.**
- **While 2022 saw equity drawdowns, the inflationary pressure and rapid increase of interest rates remained a major headwind for the strategy for the year. However, Q1 2023 has seen gains in both the markets and strategy.**
- **Performance in Q1 2023 was 6.15% due to strong performance in January and March.**
- **The strategy's performance over the past year has largely matched the benchmark for this passive strategy. Fees remain low at less than 1 bp for 2022.**
- **Looking forward, the pace of inflation and subsequent rate changes will likely hinge on economic data. Volatility in the bond market may persist for the foreseeable future as markets continue to price in the final 25 bps hike in May.**



Systematic Trend Following

The role of the Systematic Trend Following component of the Crisis Risk Offset asset class is to function as the “second responder” in a growth asset crisis, while providing a source of return in normal times with a low correlation to the equity market. These strategies can have negative correlations to growth assets during a sustained market downturn, and often perform well during periods of sustained market trends in either direction.



Trend Following Past Year Review / Outlook

- **SURS' Systematic Trend Following portfolio has experienced positive performance over the 12-month period ending 3/31/2023, with the asset class up over 5.7%. For reference, the MSCI ACWI returned -7.4% over the same period.**
- **Most of the performance is attributed to managers being short fixed income. In 2022, interest rates rose significantly contributing to positive performance. In 2023, some of those gains were given back when the current banking issues developed, and interest rates dropped suddenly in response.**
- **In recent months, the trend following managers have reduced the short to fixed income and diversified into other strategies such as being long equity markets, long agricultures like Sugar, and other currency and energy positions.**



Alternative Risk Premia

The role of the Alternative Risk Premia component of the Crisis Risk Offset asset class is to be a diversified source of returns, uncorrelated with growth risk.



Alt Risk Premia Past Year Review / Outlook

- **The ARP strategies returned 6.2% over the last one-year period ending 3-31-23 while the MSCI ACWI returned -7.4% for reference.**
- **Various fixed income strategies contributed the most to positive performance as interest rates increased over the past year.**
- **Equity strategies were the second largest contributor, benefiting from a rotation to favor value stocks from growth stocks.**
- **Currency trading strategies benefited with long positions in the U.S. Dollar combined with short positions in the Euro and other international currencies.**
- **As opposed to the trend following managers who flexibly change from long to short, the ARP managers have more static positioning based on long-term alpha factors.**



Long Volatility / Tail Risk

The role of the Long Volatility / Tail Risk component of the Crisis Risk Offset asset class is to provide significant positive returns during the early portion of equity selloffs in market crisis situations.



Long Volatility Past Year Review / Outlook

- **The search for a Long Volatility manager concluded at the April 2022 investment committee meeting, with selection of a “bench” manager occurring at the June 2022 meeting.**
- **The selected Long Volatility strategy was funded in July 2022.**
- **Since July 31 inception, the strategy has been down slightly, in line with its benchmark. VIX call options and long volatility futures were detractors in the period, while short dated equity straddles provided some small gains. Cash returns in the portfolio were able to offset a portion of the losses from the volatility trades.**
- **Given the capital efficiency of this strategy, it is poised to benefit from the recent rise in interest rates as the cash returns in the portfolio lower the overall cost of carry. Expected returns of the strategy (in normal market conditions) should be closer to zero verses a negative expected return in lower interest rate environments.**



Tail Risk Past Year Review / Outlook

- **The search for a Tail Risk manager concluded at the April 2022 investment committee meeting, with selection of a “bench” manager occurring at the June 2022 meeting.**
- **The selected Tail Risk strategy was funded in July 2022.**
- **Additional subscriptions were made in November 2022 and March 2023 in order to extend the hedge as options expire and keep the notional asset under protection in line with the target of 50% of the SURS Traditional Growth portfolio.**
- **Quarterly tail risk program reporting has been provided to the Board at the September 2022, December 2022, March 2023, and June 2023 Investment Committee meetings.**
- **Looking ahead, SURS staff and Meketa will continue to work with the tail risk manager to implement this strategy in an effective and capital efficient manner.**



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www.surs.org

Investment Department

To: Investment Committee
 From: Investment Staff
 Date: June 1, 2023
 Re: Credit Suisse Acquisition by UBS

On March 20, 2023, staff were notified by Credit Suisse that it has entered into a merger agreement pursuant to which UBS will acquire Credit Suisse and its subsidiaries, including Credit Suisse Asset Management, LLC, which is one of SURS' managers. The merger will result in UBS having approximately \$1.5 trillion of AUM. The closing of the transaction is expected to occur in the second quarter of 2023.

As further described in the following memorandum from Credit Suisse, the change in control at the parent level may be considered an assignment of SURS' investment management agreement with Credit Suisse Asset Management, LLC. Accordingly, Credit Suisse Asset Management, LLC is requesting SURS' consent to such deemed assignment.

Credit Suisse Asset Management, LLC has represented to Staff that the merger will not affect the Credit Suisse team managing the trend following program or the investment process. Staff maintain confidence in the team but will closely monitor the team, particularly for any changes that may result from the change in ownership at the parent company level.

Given the change of ownership of the manager, the Board's consent will be required for SURS to consent to the deemed assignment of the IMA.

Consultant Comments

Organizational issues have been the primary area of concern for Meketa with respect to Credit Suisse's Quantitative Investment Strategies ("QIS") team (the team that manages the trend following mandate) since we began closely monitoring them over a decade ago. For all clients who have invested with Credit Suisse QIS, we have highlighted the reasonable probability of future organizational issues prior to making the recommendation. The Credit Suisse/UBS merger represents the next stage of the firm's evolution, but we do not believe it will be the last. We will closely monitor how the Credit Suisse/UBS merger solidifies itself over the next several years. Regardless, the QIS team remains intact and will operate autonomously as they always have since SURS has partnered with them. Furthermore, the SURS assets are invested in a separate account and not a commingled fund. Considering all of these facets, Meketa recommends that SURS consent to the assignment of the investment management agreement, subject to legal review.

Recommendation

Staff and Meketa recommend that SURS consent to the deemed assignment of the Investment Management Agreement dated December 30, 2019, between the State Universities Retirement System and Credit Suisse, resulting from the merger of Credit Suisse Group AG with and into UBS Group AG, subject to satisfactory completion of legal review.

Privileged and Confidential



Credit Suisse Asset Management, LLC
Eleven Madison Avenue
New York, NY 10010

CONFIDENTIAL

ATTENTION REQUIRED

May 10th, 2023

Re: Credit Suisse-UBS Merger: Indirect Assignment of your Investment Advisory Agreement – Consent Request

Dear Alex:

As you may have seen, Credit Suisse Group AG (“Credit Suisse”), the indirect parent company of Credit Suisse Asset Management, LLC (“CSAM”), and UBS Group AG (“UBS”) recently announced that the firms have entered into a definitive merger agreement. Under the merger agreement, Credit Suisse will merge with and into UBS, with UBS as the surviving entity (the “Merger”). The Merger is expected to close in the second quarter of 2023, subject to the specified closing conditions.

Following the closing of the Merger, CSAM will continue to serve as your investment adviser pursuant to an investment advisory agreement between you and CSAM (your “Advisory Agreement”), and your account’s investment strategy will continue to be implemented as it is today. However, CSAM, as an indirect wholly-owned subsidiary of Credit Suisse, will undergo an indirect change of control in connection with the Merger and will become an indirect wholly-owned subsidiary of UBS.

Under the U.S. Investment Advisers Act of 1940, the indirect change of control of CSAM may be deemed to result in an “assignment” of your Advisory Agreement upon the closing of the Merger. Under the terms of your Advisory Agreement and applicable law, we are required to seek your consent to an assignment. We are therefore writing to request your consent to the deemed assignment to ensure CSAM can continue to manage your account without interruption following the closing of the Merger. The terms of your Advisory Agreement will remain unchanged notwithstanding any assignment of your Advisory Agreement.

To consent or object to the assignment of your Advisory Agreement, please complete, sign and return the enclosed consent form at your earliest convenience to justin.berrett@credit-suisse.com.

We appreciate your prompt attention to this consent request. Please feel free to contact me at justin.berrett@credit-suisse.com or at (212)-538-5236 with any questions. For any legal related queries, please contact Vadim Furmanov at vadim.furmanov@credit-suisse.com or Vlad Yelizarov at vladimir.yelizarov@credit-suisse.com.

Sincerely,

Justin

Justin R. Berrett

Director

CREDIT SUISSE ASSET MANAGEMENT (USA), LLC

Eleven Madison Avenue | New York NY 10010 | Americas

Office: +1 212 538 5236

justin.berrett@credit-suisse.com | www.credit-suisse.com

ASSIGNMENT CONSENT FORM

Please complete and return the following consent at your earliest convenience but no later than **June 9th, 2023**.

The undersigned hereby (check one):

_____ **CONSENTS TO** the deemed assignment of the Advisory Agreement resulting from the merger of Credit Suisse Group AG with and into UBS Group AG (the “Assignment”), as described in the letter dated May 10th, 2023.

_____ **DOES NOT CONSENT TO** the Assignment.

State Universities Retirement System:

By: _____

Print name: _____

Title: _____

Date: _____

By: _____

Print name: _____

Title: _____

Date: _____

PLEASE RETURN THE SIGNED CONSENT FORM VIA E-MAIL¹
TO justin.berrett@credit-suisse.com ON OR BEFORE
5:00 P.M. (EASTERN STANDARD TIME) ON June 9th, 2023.

¹ If you need to deliver the notice in any format other than via email, please contact Justin Berrett at (212)-538-5236.

[Consent to Assignment]



I am writing to you about a significant development with regard to Credit Suisse and your relationship with the bank. In recent days, there has been extraordinary turbulence in the financial markets across the globe, and Credit Suisse has been the subject of commentary and speculation.

I know that it will have been frustrating to hear about some of the developments regarding Credit Suisse from the media; however, we are now in a position to communicate the current situation to you with certainty and clarity.

Following the intervention of the Swiss Federal Department of Finance, the Swiss National Bank and the Financial Market Supervisory Authority (FINMA), it was announced on Sunday, 19 March, 2023 that Credit Suisse and UBS have entered into a merger agreement, with UBS being the surviving entity. After an examination of various scenarios, it was agreed that this merger is in the best interest of clients, investors and other stakeholders, and will help to restore confidence and stability to the financial markets.

As part of this merger, Credit Suisse Asset Management and UBS Asset Management are being combined to create a leading asset manager in Europe, with invested assets of more than US \$1.5 trillion. UBS' strategy involves growing capital-light businesses including asset management.

Until the completion of the merger, which is subject to customary closing conditions and is expected to be consummated by the end of 2023, Credit Suisse will continue to conduct its business in the usual way, in close collaboration with UBS. We do not expect that clients will need to take any action. In addition, fund assets are safeguarded by being held in custody accounts and the Swiss National Bank will grant unrestricted access to liquidity during this period.

While precise details of the transaction are still being worked through, I would like to stress that we do not expect there to be any disruption to client services. We are fully focused on ensuring a smooth transition and seamless experience for our valued clients and customers; and we are committed to keeping you informed in a timely fashion with any further developments relevant to you.

I would like to take this opportunity to thank you for your continued support.



Illinois State Universities Retirement System

June 1, 2023

First Quarter 2023
Board Report



Illinois State Universities Retirement System

Agenda

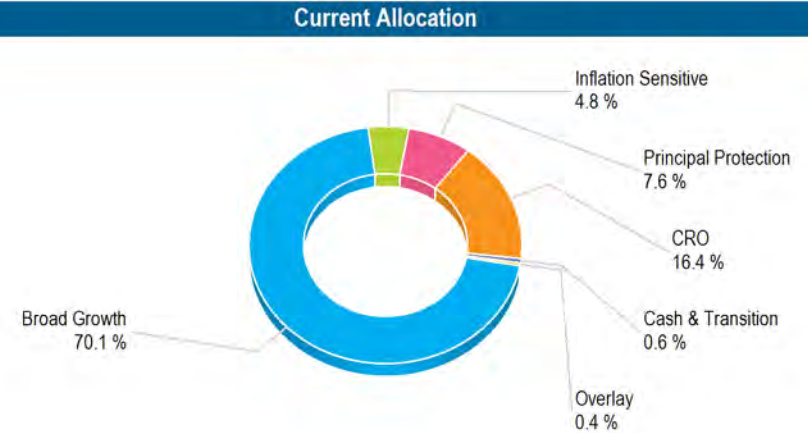
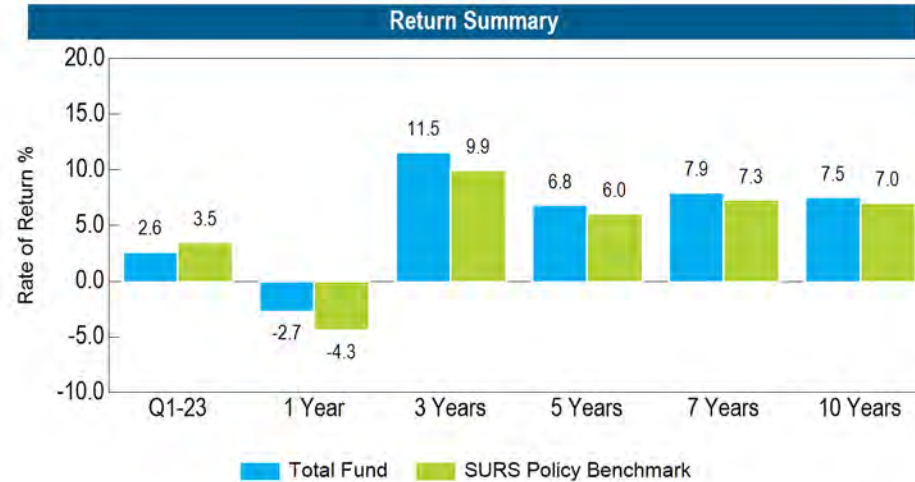
1. Performance Summary
2. Economic and Market Update
3. Total Fund
4. Private Markets Performance
5. US Equity
6. Non US Equity
7. Global Equity
8. Inflation Sensitive
9. Public Credit
10. Principal Protection
11. Crisis Risk Offset
12. Appendix

Performance Summary



Illinois State Universities Retirement System

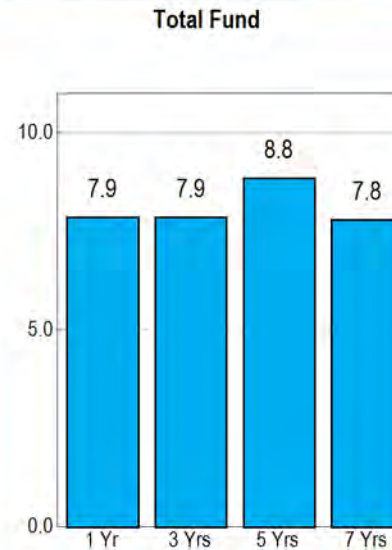
Total Fund | As of March 31, 2023



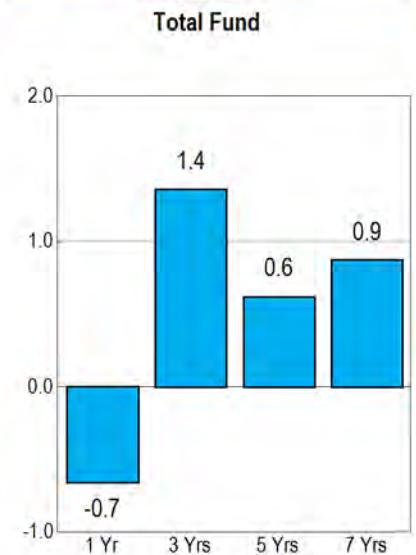
	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total Fund	2.6	-2.7	11.5	6.8	7.9	7.5
<i>SURS Policy Benchmark</i>	<i>3.5</i>	<i>-4.3</i>	<i>9.9</i>	<i>6.0</i>	<i>7.3</i>	<i>7.0</i>
Excess Return	-0.9	1.6	1.6	0.8	0.6	0.5
<i>InvMetrics Public DB > \$1B Gross Rank</i>	<i>95</i>	<i>14</i>	<i>39</i>	<i>28</i>	<i>42</i>	<i>39</i>
<i>InvMetrics Public DB > \$1B Gross Median</i>	<i>3.9</i>	<i>-4.1</i>	<i>11.0</i>	<i>6.2</i>	<i>7.7</i>	<i>7.1</i>



Annualized Standard Deviation



Sharpe Ratio

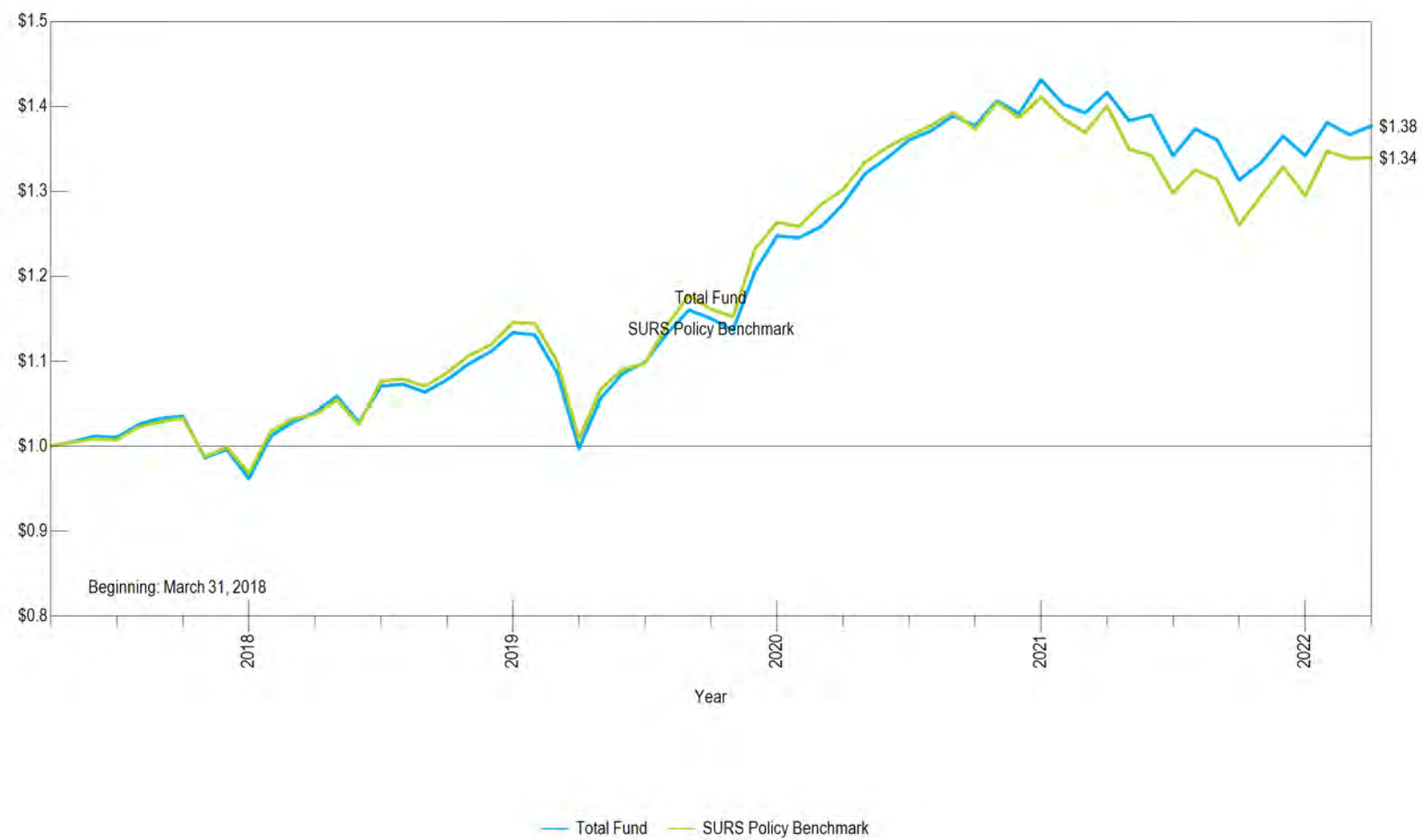




Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

Growth of a Dollar
5 Years Ending March 31, 2023



Economic and Market Update

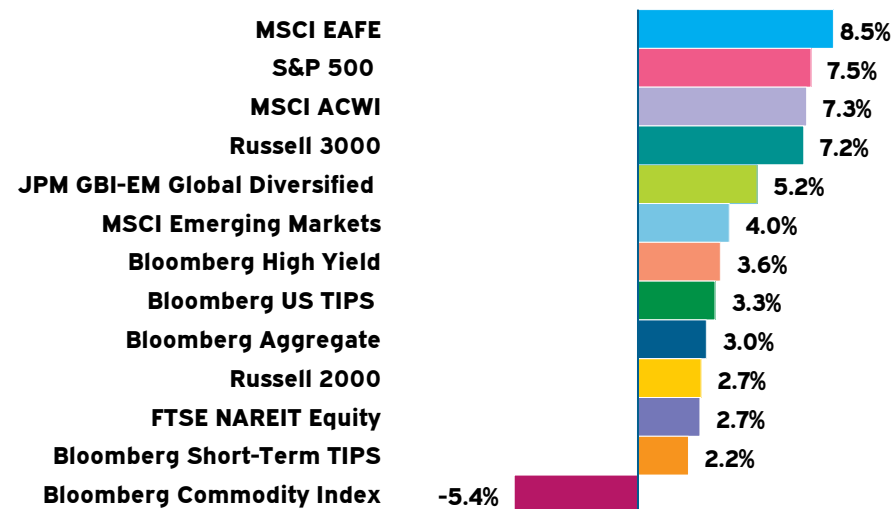
Data as of March 31, 2023

Commentary

- It was a volatile quarter for most asset classes driven by evolving monetary policy expectations and high-profile bank failures. Ultimately, investors remained focused on slowing inflation and potentially peaking rate hikes leading to positive results across most asset classes for the quarter.
- The Fed's, and others', quick responses to pressures in the banking sector brought confidence back to the markets in March with the crisis driving the terminal policy rate expectations lower.
 - US equity markets (Russell 3000) rallied in March (+2.7%) finishing the first quarter in strongly positive territory (+7.2%). Growth significantly outperformed value for the quarter, driven by the technology sector.
 - Non-US developed equity markets (MSCI EAFE +2.5%) also posted positive returns in March. They returned 8.5% for the quarter, finishing ahead of US equities.
 - Emerging market equities had positive returns for the month (+3.0%) supported by Chinese equities (+4.5%) and a weaker US dollar. They trailed developed market equities for the quarter partly due to higher US-China tensions.
 - On expectations for lower inflation and concerns over the banking sector, bonds rallied in March, with the broad US bond market (Bloomberg Aggregate) rising 2.5%. For the quarter, the broad US bond market was up 3.0%.
- This year, the path of inflation and monetary policy, slowing global growth, and the war in Ukraine, as well as recent pressures in small- and medium-sized regional banks in the US, will all be key.

Index Returns¹

Q1 2023



→ Despite volatility during the quarter, public markets, except commodities, finished the first quarter of 2023 in positive territory adding to the strong gains from the fourth quarter of last year.

¹ Source: Bloomberg and FactSet. Data is as of March 31, 2023.

Domestic Equity Returns¹

Domestic Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.7	7.5	-7.7	18.6	11.2	12.2
Russell 3000	2.7	7.2	-8.6	18.5	10.4	11.7
Russell 1000	3.2	7.5	-8.4	18.6	10.9	12.0
Russell 1000 Growth	6.8	14.4	-10.9	18.6	13.6	14.6
Russell 1000 Value	-0.5	1.0	-5.9	17.9	7.5	9.1
Russell MidCap	-1.5	4.1	-8.8	19.2	8.0	10.0
Russell MidCap Growth	1.4	9.1	-8.5	15.2	9.1	11.2
Russell MidCap Value	-3.1	1.3	-9.2	20.7	6.5	8.8
Russell 2000	-4.8	2.7	-11.6	17.5	4.7	8.0
Russell 2000 Growth	-2.5	6.1	-10.6	13.4	4.3	8.5
Russell 2000 Value	-7.2	-0.7	-13.0	21.0	4.5	7.2

US Equities: Russell 3000 Index rose 2.7% in March and 7.2% in Q1.

- US stocks rose in aggregate for the month and quarter as investors were optimistic that the Federal Reserve may end its policy tightening earlier than expected. However, turmoil in the regional banking industry weighed on segments of the market.
- The small cap and value indices were more exposed to the banking turmoil and underperformed their broad market indices by significant margins.
- Large cap stocks were driven higher by the continued strength of the technology and communication services sectors. This same dynamic contributed to the continued outperformance of growth stocks against their value counterparts across the capitalization spectrum.

¹ Source: Bloomberg. Data is as of March 31, 2023.

Foreign Equity Returns¹

Foreign Equity	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	2.4	6.9	-5.1	11.8	2.5	4.2
MSCI EAFE	2.5	8.5	-1.4	13.0	3.6	5.0
MSCI EAFE (Local Currency)	0.5	7.5	3.8	14.6	6.3	7.3
MSCI EAFE Small Cap	-0.2	4.9	-9.8	12.1	0.9	5.8
MSCI Emerging Markets	3.0	4.0	-10.7	7.8	-0.9	2.0
MSCI Emerging Markets (Local Currency)	2.2	3.8	-6.6	8.8	1.9	5.0
MSCI China	4.5	4.7	-4.7	-2.6	-4.0	3.4

Foreign Equity: Developed international equities (MSCI EAFE) rose 2.5% in March and 8.5% for the quarter. Emerging market equities (MSCI EM) rose 3.0% for the month and 4.0% in the first quarter.

- Non-US equities also recovered in March with developed markets (MSCI EAFE) outpacing US equities (8.5% versus 7.2%) for the quarter and emerging markets (MSCI Emerging Markets) trailing (4.0% versus 7.2%).
- Developed market equities also benefited from expectations that monetary policy may be peaking on declining inflation. The continued weakness in the US dollar also added to the quarterly results (+1%) for US investors.
- Emerging market equities started the year with optimism over the reopening of China's economy, but the escalation of US-China tensions and the broader banking crisis led to weaker relative results compared to developed markets.

¹ Source: Bloomberg. Data is as of March 31, 2023.

Fixed Income Returns¹

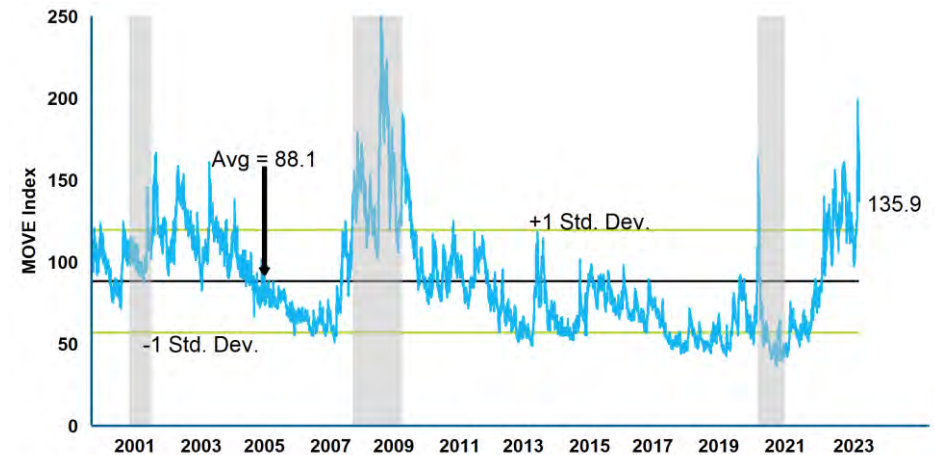
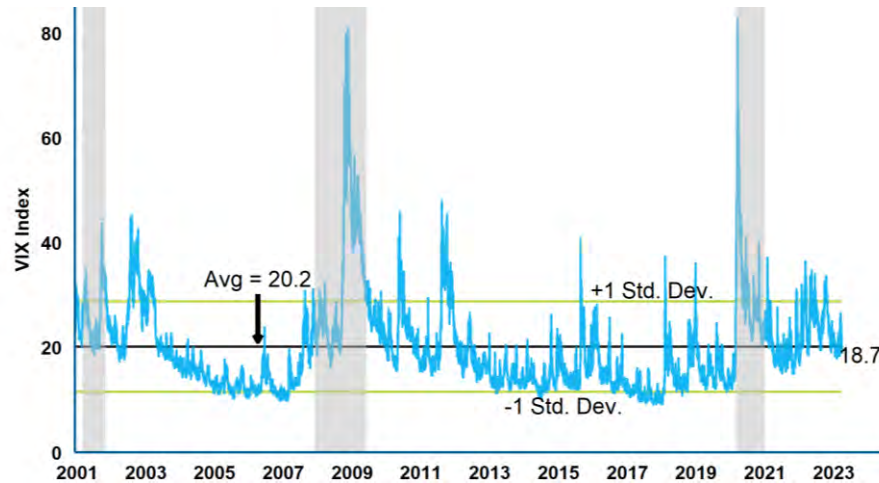
Fixed Income	March (%)	Q1 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Barclays Universal	2.3	2.9	-4.6	-2.0	1.0	1.6	4.8	6.3
Bloomberg Barclays Aggregate	2.5	3.0	-4.8	-2.8	0.9	1.4	4.4	6.5
Bloomberg Barclays US TIPS	2.9	3.3	-6.1	1.8	2.9	1.5	4.1	7.0
Bloomberg Short-term TIPS	1.9	2.2	-0.3	3.5	3.0	1.5	4.6	2.5
Bloomberg Barclays High Yield	1.1	3.6	-3.3	5.9	3.2	4.1	8.5	4.2
JPM GBI-EM Global Diversified (USD)	4.1	5.2	-0.7	0.9	-2.4	-1.5	7.1	5.1

Fixed Income: The Bloomberg Universal rose 2.3% in March and 2.9% in Q1 as global sovereign debt yields fell on monetary policy expectations.

- Anecdotal reports suggest bouts of flight-to-quality flows during the peak of interest rate volatility connected to the banking sector pushed sovereign debt yields lower. These concerns largely outweighed continued inflation concerns and caused investors to adjust their policy expectations.
- The broad TIPS index outperformed the broad US bond market (Bloomberg Aggregate) in March and for the quarter.
- High yield bonds had the weakest results in March driven by banking sector weakness but outperformed the broad US bond market for the quarter.

¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of March 31, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

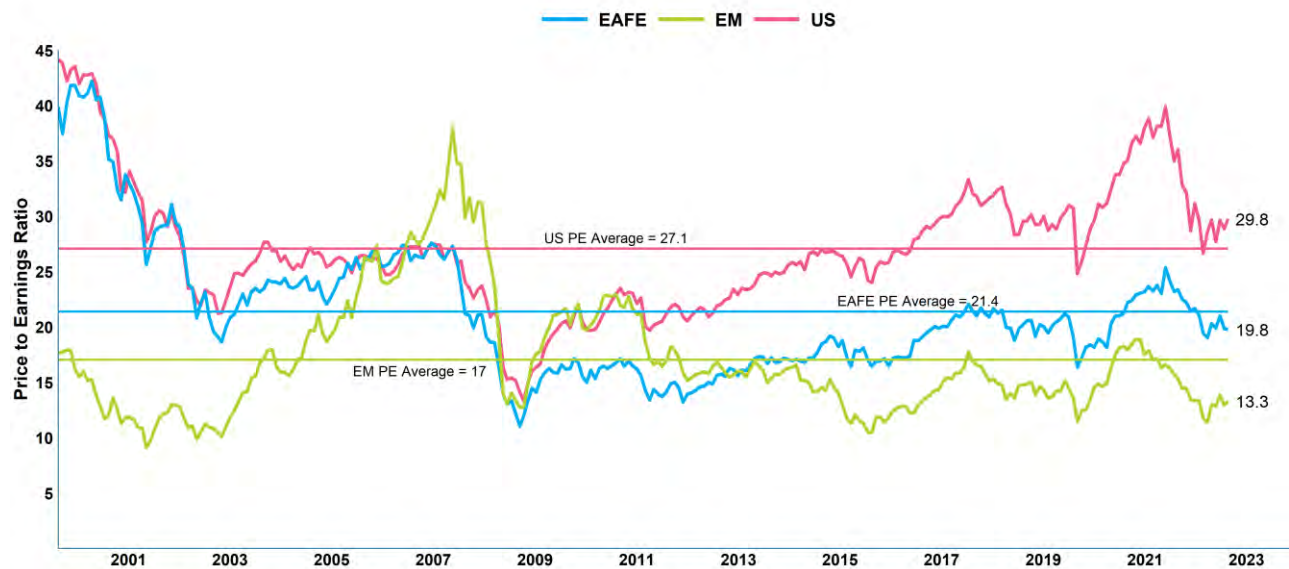
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) remained subdued through the end of March as investors continued to anticipate the end of the Fed's policy tightening.
- In comparison, the bond market remains on edge with the more policy sensitive MOVE (fixed income volatility) remaining well above its long-run average. During the quarter it hit the highest level since the Global Financial Crisis as the banking sector issues created uncertainty over how the Fed would balance fighting inflation and maintaining financial stability.

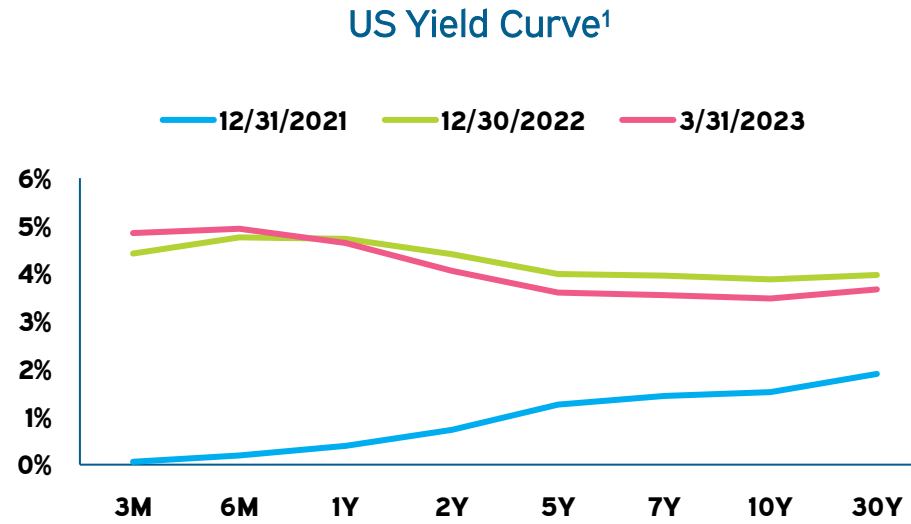
¹ Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of March 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and March 2023.

Equity Cyclically Adjusted P/E Ratios¹



- After its dramatic decline last year the US equity price-to-earnings ratio remains above its long-run (21st century) average.
- International developed market valuations are slightly below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

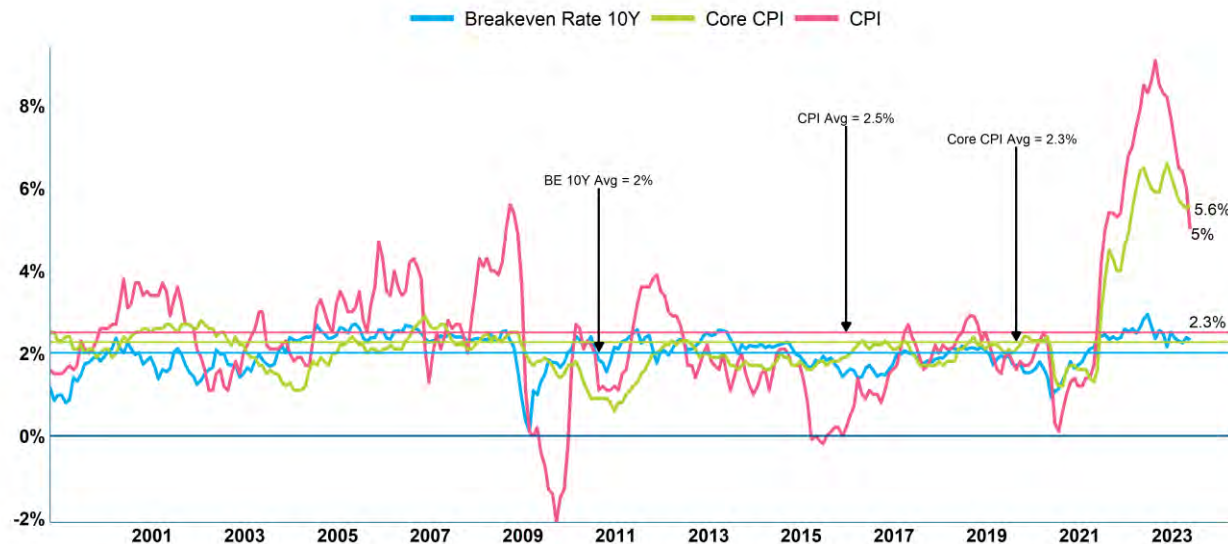
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of March 2023. 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.



- It was a volatile quarter for interest rates, particularly shorter-dated maturities. Except for the shortest maturities, rates largely declined across the yield curve in the first quarter on expectations of peaking policy.
- After hitting -1.07% in early March, the yield spread between two-year and ten-year Treasuries finished the quarter at -0.55% as policy-sensitive rates at the front-end of the curve declined faster than longer maturities. The more closely watched measure by the Fed of three-month and ten-year Treasuries also remained inverted. Inversions in the yield curve have often preceded recessions.
- The Fed remained committed to fighting inflation, despite pressures in the banking sector, raising rates another 25 basis points to a range of 4.75% to 5.0% at its March meeting.

¹ Source: Bloomberg. Data is as of March 31, 2023.

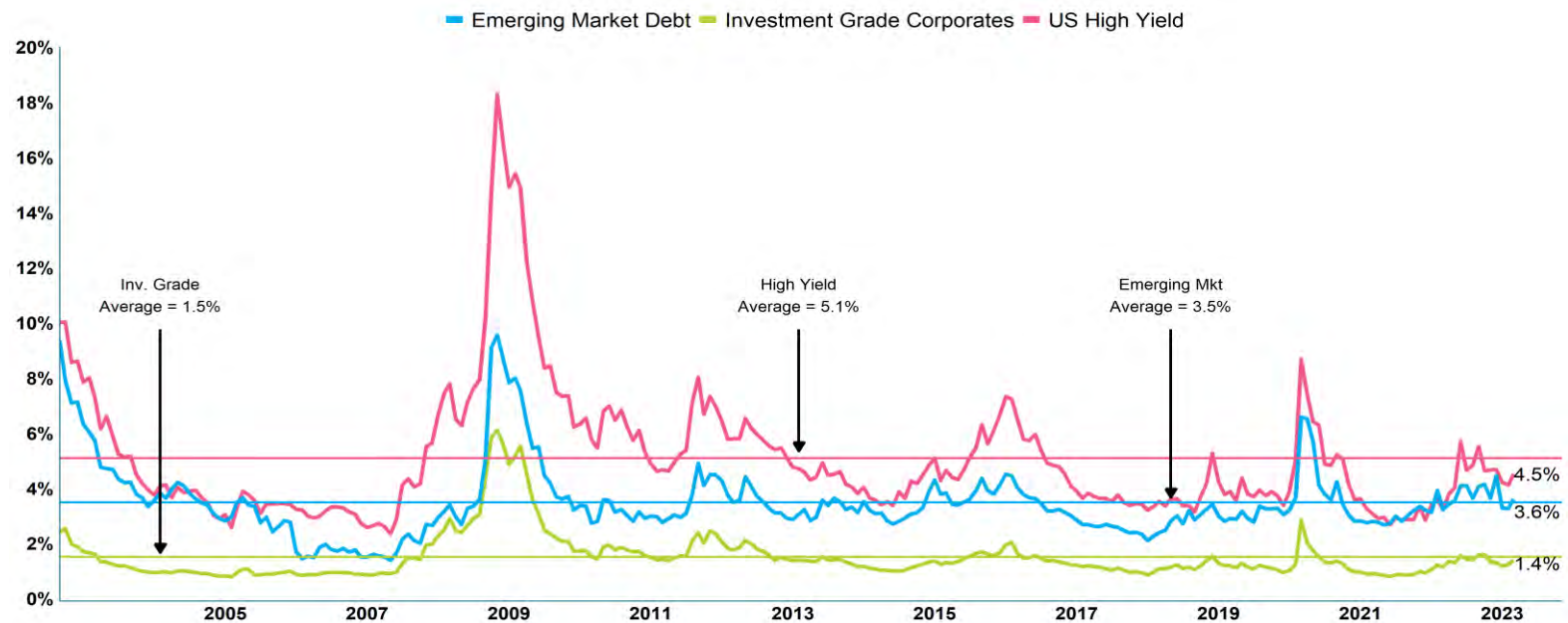
Ten-Year Breakeven Inflation and CPI¹



- Inflation continued to decline in March with the year-over-year reading falling from 6.0% to 5.0% and coming in slightly below the 5.1% expectations. The rate of price increases also slowed on a month-over-month basis (0.1% versus 0.4%), with food prices only slightly higher and energy prices declining.
- Core inflation – excluding food and energy - rose (5.6% versus 5.5%) mostly driven by transportation and housing.
- Inflation expectations (breakevens) were volatile over the month and declined on net, but nonetheless ended the month at 2.3% (roughly where it started the quarter).

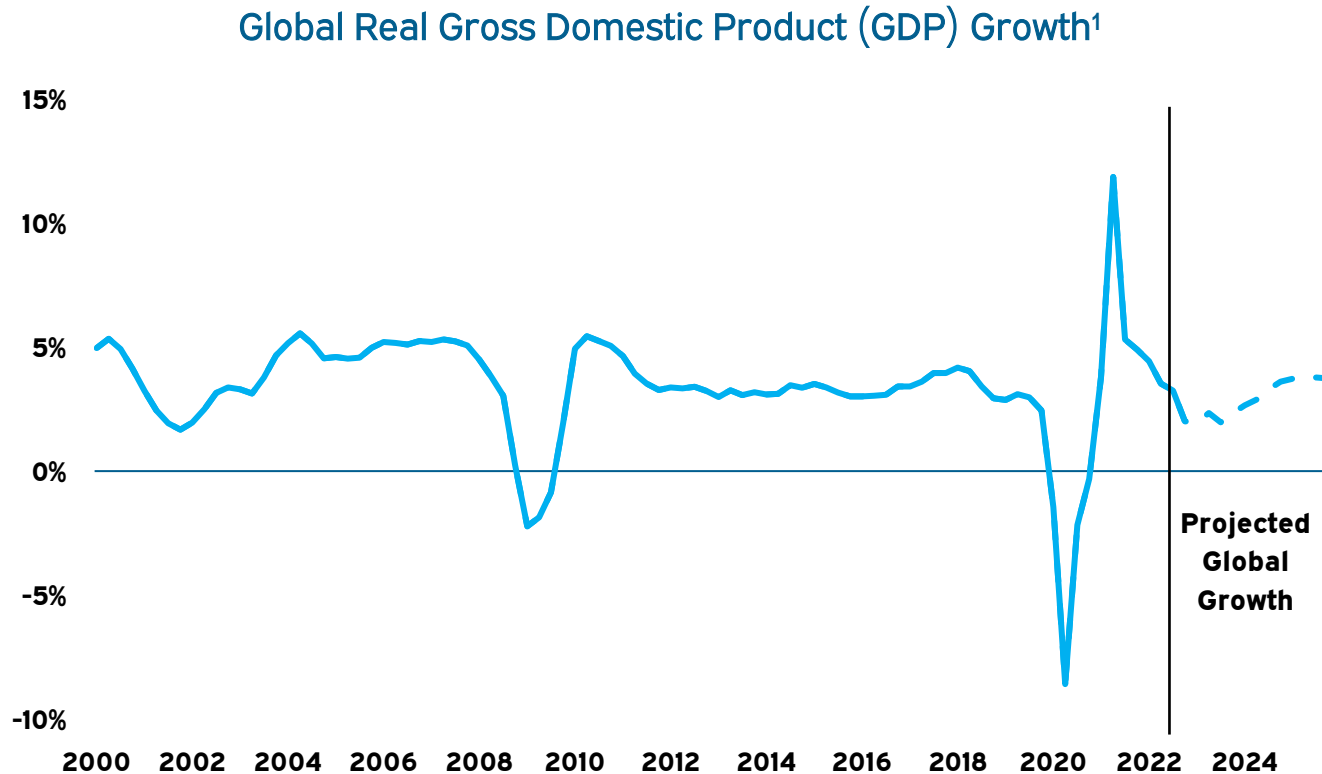
¹ Source: Bloomberg. Data is as of March 31, 2023. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

Credit Spreads vs. US Treasury Bonds¹



- Spreads (the added yield above a comparable maturity Treasury) experienced a significant spike in March during the banking crisis but subsequently declined as the Fed and others stepped in to provide support.
- High yield spreads rose from 4.1% to a peak of 5.2% in March before finishing the quarter at 4.5% (lower than the start of the quarter by 0.2%). Investment grade spreads also spiked in March (1.2% to 1.6%) but also fell from their peak to 1.4%. Emerging market spreads finished the quarter at 3.6% experiencing the largest decline (-0.9%).

¹ Sources: Bloomberg. Data is as of March 31, 2023. 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.

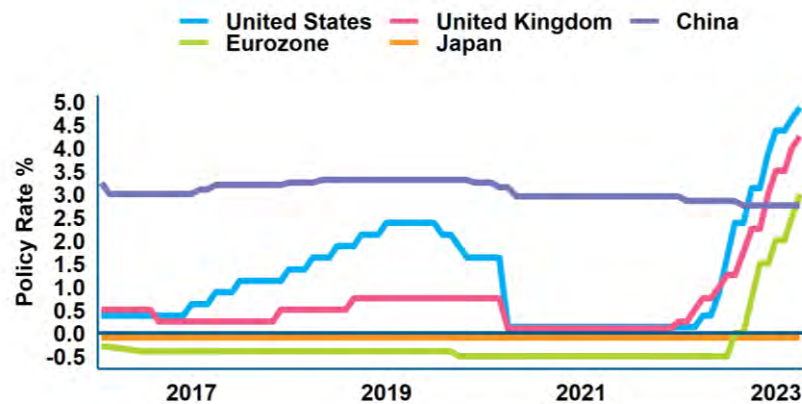


- Global economies are expected to slow in 2023 compared to 2022, with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- The delicate balancing act of central banks trying to reduce inflation without dramatically impacting growth will remain key.

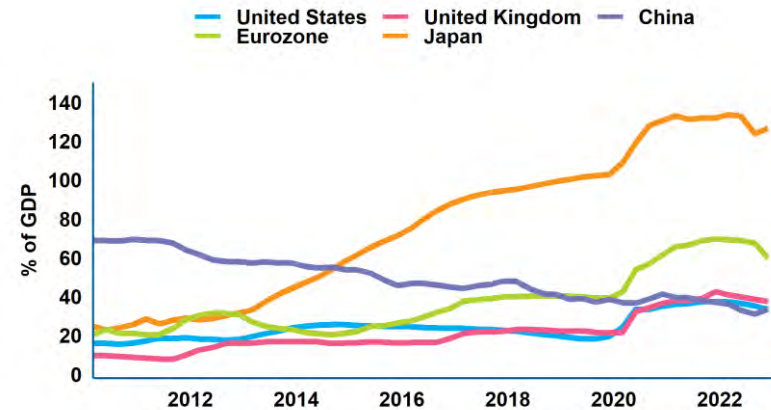
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated March 2023.

Central Bank Response¹

Policy Rates



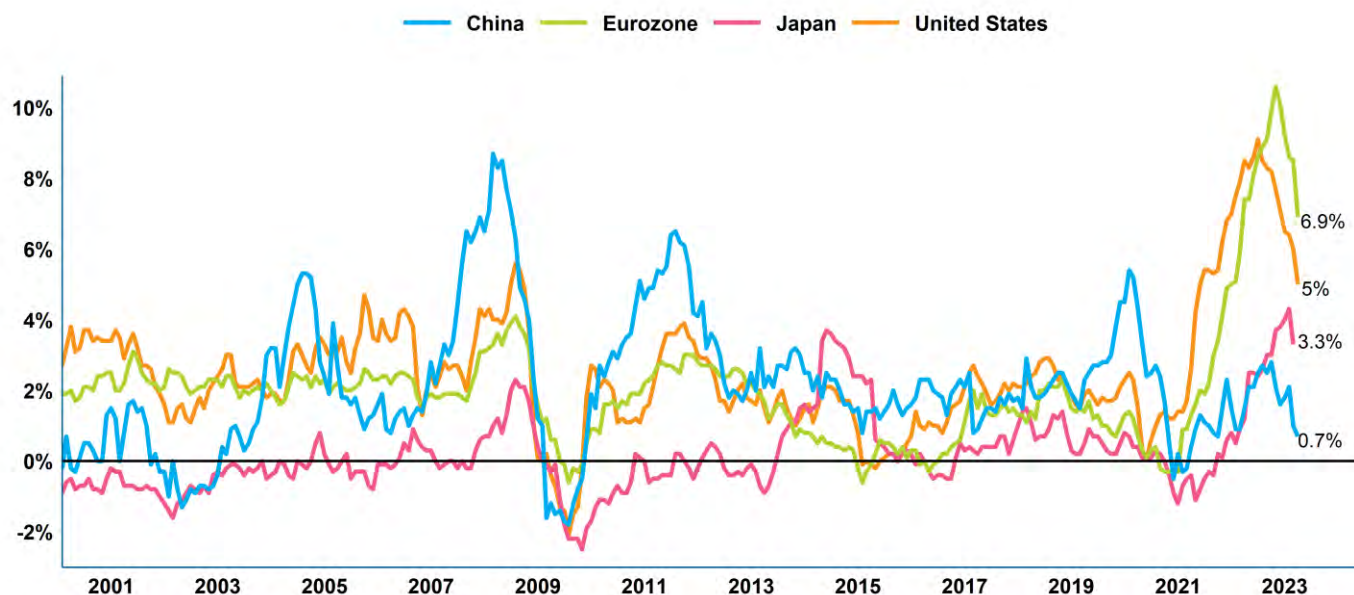
Balance Sheet as % of GDP



- In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation with the US taking the most aggressive approach. Slowing inflation and recent signs of instability in the banking sector have led to expectations for the slowing of policy tightening going forward.
- In March, the Fed, FDIC, and Treasury provided deposit guarantees after high profile bank failures revealed bank capital losses on US Treasuries related to higher interest rates and lax risk management.
- China's central bank is one notable exception. They are expected to maintain an accommodative monetary stance to support the economy. They cut bank reserves requirements to improve bank liquidity and banks have also securitized over \$390 billion in non-performing loans to improve loan quality ratios.
- Looking ahead the risk remains for a policy error as central banks attempt to balance bringing down inflation, maintaining financial stability, and growth.

¹ Source: Bloomberg. Policy rate data is as of March 31, 2023. 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 December 31, 2022.

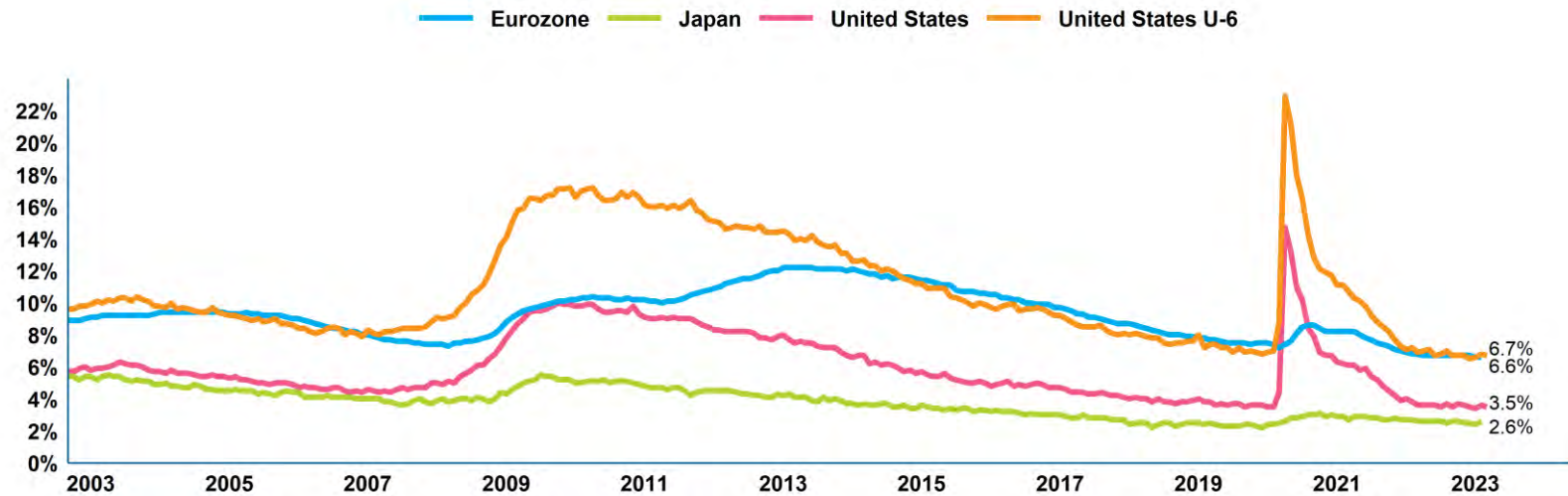
Inflation (CPI Trailing Twelve Months)¹



- Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it reached levels not seen in many decades.
- Inflation pressures are slowly declining in the US as supply issues ease, but they remain elevated, while in Europe they have also started to fall as energy prices have eased.
- Lingering supply issues related to the pandemic, record monetary and fiscal stimulus, strict COVID-19 restrictions in China, and higher commodity prices driven by the war in Ukraine have been key global drivers of inflation.

¹ Source: Bloomberg. Data is as March 31, 2023. The most recent Japanese inflation data is as of February 2023.

Unemployment¹



- Labor markets have significantly improved from the pandemic as economies have largely reopened.
- Despite slowing growth and high inflation, the US labor market remains a particular bright spot. Unemployment in the US, which experienced the steepest rise, recently has returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.7% but have also declined dramatically from their peak.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, likely leading to higher unemployment.

¹ Source: Bloomberg. Data is as March 31, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of February 2023.

US Dollar versus Broad Currencies¹

- The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows. Late last year and into early this year, the dollar experienced some weakness though as investors anticipated the end of Fed tightening.
- Overall, the US dollar depreciated in March and finished the quarter slightly lower than where it started as weaker economic data and bank turmoil drove interest rates lower in the US.
- This year, the track of inflation across economies and the corresponding monetary policies will likely be key drivers of currency moves.

¹ Source: Bloomberg. Data as of March 31, 2023.

Summary

Key Trends:

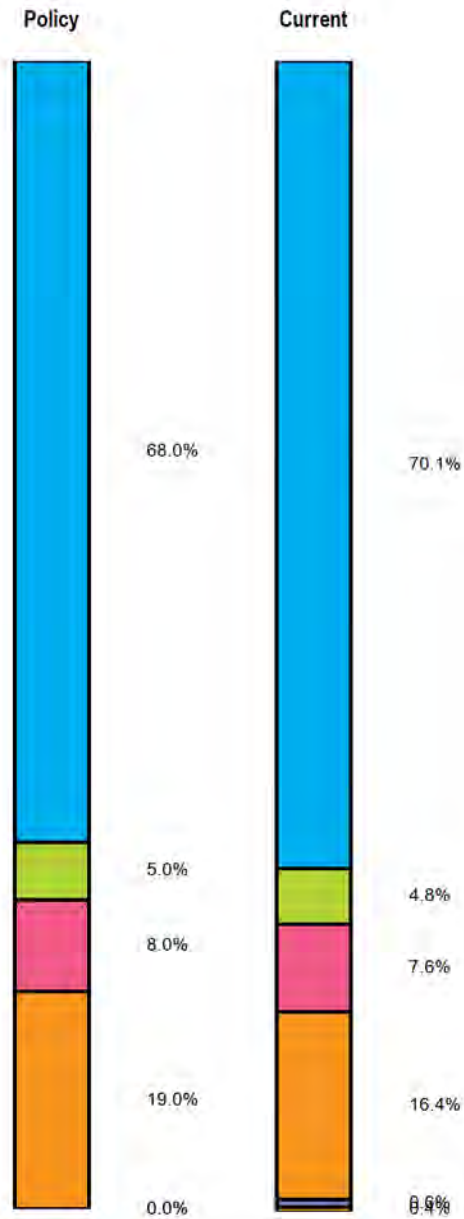
- The impacts of record high inflation will remain key, with market volatility likely to stay high.
- Recent issues related to the banking sector have created a delicate balance for central banks to continue to fight inflation but also try to maintain financial stability.
- Global monetary policies could diverge in 2023 with the Fed pausing and others continuing to tighten. The risk of policy errors remains elevated given persistent inflation pressures and a strong US labor market.
- Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.
- In the US, the end of many fiscal programs is expected to put the burden of continued growth on consumers. Costs for shelter, medical care, and education could continue to rise, keeping 'sticky price' inflation at elevated levels.
- The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation particularly weighing on Europe, and China's rushed exit from COVID-19 restrictions and on-going weakness in the real estate sector.

Total Fund



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

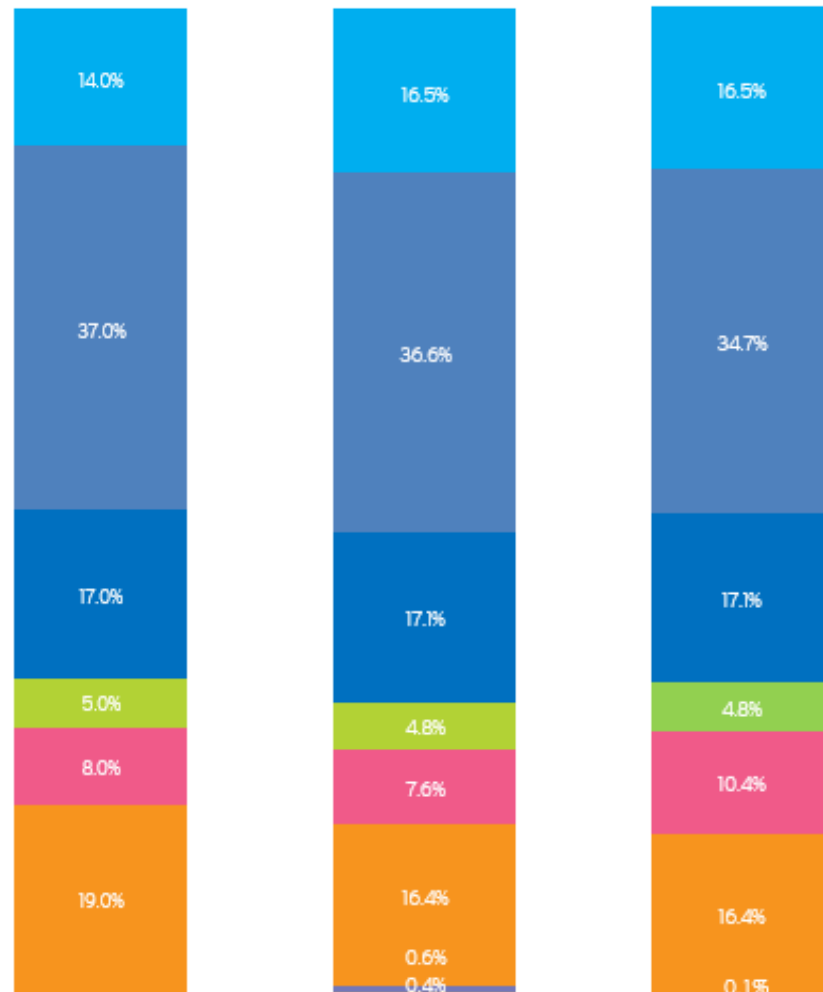


Allocation vs. Interim Policy						
	Current Balance	Current Allocation	Policy	Difference	Difference	
Broad Growth	\$15,887,577,202	70.1%	68.0%	\$480,214,024	2.1%	
Inflation Sensitive	\$1,097,368,851	4.8%	5.0%	-\$35,525,500	-0.2%	
Principal Protection	\$1,727,336,241	7.6%	8.0%	-\$85,294,721	-0.4%	
CRO	\$3,705,024,045	16.4%	19.0%	-\$599,974,490	-2.6%	
Cash & Transition	\$146,511,028	0.6%	0.0%	\$146,511,028	0.6%	
Overlay	\$94,069,659	0.4%	0.0%	\$94,069,659	0.4%	
Total	\$22,657,887,026	100.0%	100.0%			



Illinois State Universities Retirement System

Actual vs. Interim Policy | As of March 31, 2023



**POLICY TARGET
ALLOCATION**

CURRENT ALLOCATION

**ALLOCATION REFLECTING
OVERLAY**

Asset Allocation vs. Interim Policy

	Policy	Current	Overlay	Current Value
Non-Traditional Growth	14.0%	16.5%	16.5%	\$3,740,411,516
Traditional Growth	37.0%	36.6%	34.7%	\$8,282,133,150
Stabilized Growth	17.0%	17.1%	17.1%	\$3,865,032,536
Inflation Sensitive	5.0%	4.8%	4.8%	\$1,097,368,851
Principal Protection	8.0%	7.6%	10.4%	\$1,727,336,241
Crisis Risk Offset	19.0%	16.4%	16.4%	\$3,705,024,045
Cash & Transition	0.0%	0.6%	0.1%	\$146,511,028
Overlay	0.0%	0.4%	0.0%	\$94,069,659
Total	100%	100%	100%	\$22,657,887,026



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

Attribution Summary							
3 Months Ending March 31, 2023							
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Traditional Growth	6.7%	6.9%	-0.3%	-0.1%	-0.1%	0.0%	-0.2%
Stabilized Growth	-0.1%	-0.5%	0.4%	0.1%	0.0%	0.0%	0.1%
Non Traditional Growth	1.0%	7.3%	-6.3%	-0.8%	0.1%	-0.2%	-0.9%
Inflation Sensitive	3.4%	3.3%	0.1%	0.0%	0.0%	0.0%	0.0%
Principal Protection	2.7%	2.4%	0.3%	0.0%	0.0%	0.0%	0.0%
Crisis Risk Offset	-2.2%	-2.4%	0.1%	0.0%	0.0%	0.0%	0.1%
Total	2.5%	3.4%	-0.9%	-0.8%	0.1%	-0.2%	-0.9%

1 Year Ending March 31, 2023							
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Traditional Growth	-6.4%	-7.7%	1.3%	0.5%	-0.2%	0.0%	0.2%
Stabilized Growth	-3.1%	-1.9%	-1.2%	-0.2%	0.0%	0.0%	-0.2%
Non Traditional Growth	0.1%	-11.3%	11.4%	1.5%	-0.3%	0.2%	1.4%
Inflation Sensitive	-6.1%	-6.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Principal Protection	-2.1%	-3.1%	0.9%	0.1%	0.0%	0.0%	0.1%
Crisis Risk Offset	0.4%	2.1%	-1.7%	-0.3%	-0.1%	0.0%	-0.4%
Total	-3.1%	-4.2%	1.1%	1.5%	-0.6%	0.2%	1.1%



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

Trailing Asset Class Net Performance								
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	22,657,887,026	100.0	2.6	2.6	-2.8	11.3	6.6	7.3
<i>SURS Policy Benchmark</i>			3.5	3.5	-4.3	9.9	6.0	7.0
Total Fund ex Overlay	22,563,817,367	99.6	2.5	2.5	-3.1	11.1	6.4	7.2
<i>SURS Policy Benchmark</i>			3.5	3.5	-4.3	9.9	6.0	7.0
Broad Growth	15,887,577,202	70.1	--	--	--	--	--	--
Traditional Growth	8,282,133,150	36.6	6.7	6.7	-6.4	16.1	7.3	8.8
<i>SURS Traditional Growth Blend</i>			6.9	6.9	-7.7	15.6	7.0	8.2
US Equity	1,850,128,674	8.2	7.0	7.0	-7.7	19.0	10.0	11.4
<i>Dow Jones U.S. Total Stock Market</i>			7.2	7.2	-8.8	18.3	10.3	11.6
Passive US Equity	1,736,132,554	7.7	7.2	7.2	-7.3	18.9	10.7	11.9
<i>Dow Jones U.S. Total Stock Market</i>			7.2	7.2	-8.8	18.3	10.3	11.6
Mid Cap	113,996,119	0.5	3.0	3.0	-13.5	21.7	7.1	--
<i>Russell MidCap</i>			4.1	4.1	-8.8	19.2	8.1	--
Non US Equity	1,504,640,668	6.6	7.1	7.1	-6.2	11.4	2.1	4.4
<i>SURS Non US Equity Blend</i>			6.6	6.6	-5.8	12.2	2.5	4.2
Active Non-US Equity	1,234,727,448	5.4	7.1	7.1	-6.4	12.0	2.3	5.4
<i>MSCI EAFE</i>			8.5	8.5	-1.4	13.0	3.5	5.0
Passive Non-US Equity	269,913,221	1.2	6.7	6.7	-6.1	9.4	1.2	3.7
<i>MSCI ACWI ex USA</i>			6.9	6.9	-5.1	11.8	2.5	4.2
Global Equity	4,927,363,807	21.7	6.4	6.4	-5.9	16.4	8.8	10.0
<i>SURS Global Equity Blend</i>			6.9	6.9	-7.7	15.6	6.8	8.0
Global Equity - Active	2,613,976,810	11.5	5.7	5.7	-5.6	--	--	--
Global Equity - Passive	2,313,386,997	10.2	7.3	7.3	-6.2	--	--	--



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Stabilized Growth	3,865,032,536	17.1	-0.1	-0.1	-3.1	7.0	--	--
<i>SURS Stabilized Growth Blend</i>			-0.5	-0.5	-1.9	6.5	--	--
Option Strategies	454,310,063	2.0	4.7	4.7	-2.9	11.6	5.7	--
<i>SURS Options Strategies Blend</i>			5.8	5.8	-3.9	13.6	5.6	--
Stabilized Real Assets	1,761,363,079	7.8	-3.0	-3.0	1.5	9.9	7.6	--
<i>SURS Stabilized Real Assets Blend</i>			-5.0	-5.0	6.4	8.9	7.7	--
Core	1,045,002,445	4.6	-4.8	-4.8	-2.4	9.4	7.0	--
<i>NCREIF ODCE Net 1 Qtr Lag</i>			-5.2	-5.2	8.0	9.5	8.0	--
Core Plus	564,566,848	2.5	-1.7	-1.7	7.1	10.5	--	--
<i>SURS Real Estate Blend</i>			-5.2	-5.2	6.6	9.0	--	--
Core Infrastructure	151,793,787	0.7	5.0	5.0	7.4	--	--	--
<i>FTSE Dev Core Infra 50/50</i>			1.5	1.5	-7.2	--	--	--
Public Credit	1,205,271,959	5.3	2.5	2.5	-4.0	3.6	--	--
<i>SURS Credit Fixed Income Blend</i>			2.8	2.8	-3.1	2.8	--	--
Diversified Credit	847,229,887	3.7	2.5	2.5	-4.2	3.4	1.8	--
<i>SURS Credit ex EMD Blend</i>			2.8	2.8	-3.8	3.2	2.2	--
Bivium Credit	358,042,072	1.6	2.2	2.2	-3.9	4.0	--	--
<i>Bivium Credit Blend</i>			2.7	2.7	-3.6	1.2	--	--
Private Credit	441,633,710	1.9	0.4	0.4	2.9	--	--	--
<i>SURS Private Credit Blend</i>			3.4	3.4	0.7	--	--	--
Non Traditional Growth	3,740,411,516	16.5	1.0	1.0	0.1	19.1	15.3	--
<i>SURS Non Traditional Growth Blend</i>			7.3	7.3	-11.3	7.1	9.3	--
Non-Core Real Assets	807,381,718	3.6	2.3	2.3	10.5	9.8	8.4	--
<i>SURS Non Core Real Assets Blend</i>			-3.3	-3.3	8.9	10.5	9.2	--



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Non-Core Real Estate	544,788,314	2.4	0.6	0.6	8.3	8.4	7.5	--
<i>NCREIF ODCE Net Lagged + 1.5%</i>			-4.8	-4.8	8.1	10.6	9.3	--
Non-Core Real Estate Debt	73,192,370	0.3	0.7	0.7	5.9	5.9	7.8	--
<i>NCREIF ODCE Net Lagged + 1.5%</i>			-4.8	-4.8	8.1	10.6	9.3	--
Non-Core Infrastructure	138,400,017	0.6	9.7	9.7	22.6	18.5	13.6	9.5
<i>CPI+5% 1 Qtr Lagged</i>			1.2	1.2	11.7	10.1	9.0	7.7
Non-Core Farmland	51,001,017	0.2	3.4	3.4	8.9	--	--	--
<i>NCREIF Farmland 1 Qtr Lag</i>			3.3	3.3	9.6	--	--	--
Private Equity- Fund of Funds	2,089,122,389	9.2	-0.5	-0.5	-4.9	21.5	17.4	14.1
<i>SURS PE Blend</i>			10.3	10.3	-16.3	5.9	9.3	14.0
Private Equity- Direct (Aksia)	843,907,410	3.7	3.8	3.8	5.5	18.2	--	--
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>			10.3	10.3	-16.3	5.9	--	--
Inflation Sensitive	1,097,368,851	4.8	3.4	3.4	-6.1	1.8	2.1	--
<i>SURS Inflation Sensitive Blend</i>			3.3	3.3	-6.1	1.8	1.8	--
TIPS	1,097,368,851	4.8	3.4	3.4	-6.1	1.8	2.9	1.4
<i>Bloomberg US TIPS TR</i>			3.3	3.3	-6.1	1.8	2.9	1.5
Principal Protection	1,727,336,241	7.6	2.7	2.7	-2.1	-2.0	1.2	--
<i>BC US Int Ag x Credit Blend</i>			2.4	2.4	-3.1	-2.7	1.2	--
Crisis Risk Offset	3,705,024,045	16.4	-2.2	-2.2	0.4	2.2	--	--
<i>SURS CRO Blend</i>			-2.4	-2.4	2.1	4.3	--	--
Long Duration	441,959,175	2.0	6.1	6.1	-15.9	-11.6	--	--
<i>BBgBarc US Govt Long TR</i>			6.2	6.2	-15.9	-11.3	--	--
Systematic Trend Following	2,039,665,769	9.0	-4.9	-4.9	5.7	8.8	--	--
<i>CS Mgd Futures 15% Vol</i>			-6.1	-6.1	5.4	13.5	--	--



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

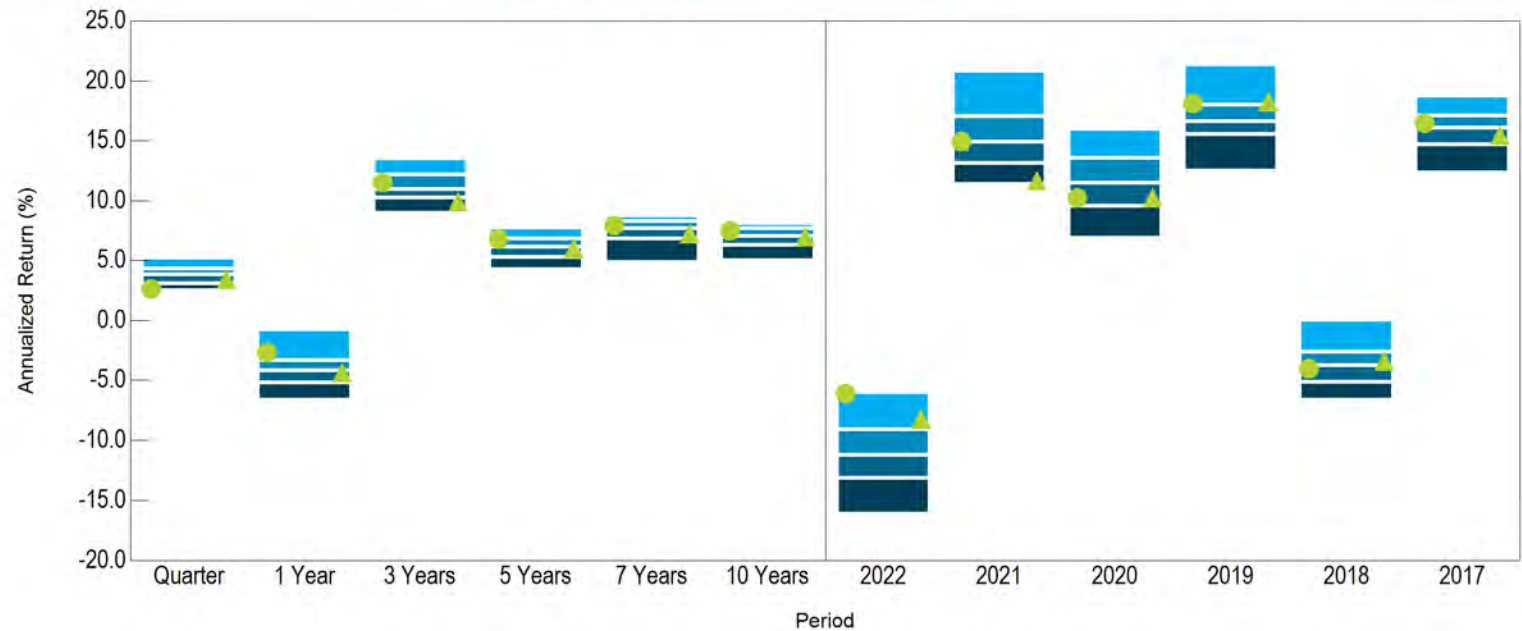
	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Alternative Risk Premia	831,431,217	3.7	1.3	1.3	6.2	4.1	--	--
<i>90 Day T-Bill + 2%</i>			<i>1.7</i>	<i>1.7</i>	<i>5.3</i>	<i>3.1</i>	--	--
Long Volatility	367,984,393	1.6	-0.7	-0.7	--	--	--	--
<i>CBOE Eurekahedge Long Volatility Index</i>			<i>-2.1</i>	<i>-2.1</i>	--	--	--	--
Tail Risk	23,983,491	0.1						
Cash Composite	146,511,028	0.6						
Total Overlay	94,069,659	0.4						



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

InvMetrics Public DB > \$1B Gross Return Comparison
Ending March 31, 2023



	Return (Rank)											
5th Percentile	5.2	-0.8	13.5	7.7	8.7	8.1	-6.0	20.9	16.0	21.4	0.0	18.8
25th Percentile	4.4	-3.3	12.3	6.9	8.3	7.7	-9.0	17.1	13.6	18.1	-2.6	17.2
Median	3.9	-4.1	11.0	6.2	7.7	7.1	-11.1	14.9	11.5	16.7	-3.7	16.2
75th Percentile	3.2	-5.2	10.3	5.4	6.9	6.3	-13.1	13.2	9.6	15.6	-5.1	14.8
95th Percentile	2.6	-6.6	9.0	4.3	4.9	5.1	-16.1	11.4	6.9	12.5	-6.6	12.4
# of Portfolios	70	68	68	68	67	62	75	84	94	81	71	98
● Total Fund	2.6 (95)	-2.7 (14)	11.5 (39)	6.8 (28)	7.9 (42)	7.5 (39)	-6.1 (6)	15.0 (50)	10.2 (70)	18.1 (24)	-4.0 (60)	16.5 (42)
▲ SURS Policy Benchmark	3.5 (71)	-4.3 (56)	9.9 (84)	6.0 (56)	7.3 (65)	7.0 (55)	-8.2 (20)	11.7 (92)	10.3 (69)	18.3 (22)	-3.4 (40)	15.5 (68)



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

	Risk-Adjusted Return of SURS vs. Peers				
	Fiscal YTD	1 Year	3 Years	5 Years	10 Years
Total Fund	-2.8	2.6	11.3	6.6	7.3
Risk-Adjusted Median ¹	-2.7	3.2	8.6	5.4	6.5
Excess Return	-0.1	-0.6	2.7	1.2	0.8

→ On a risk-adjusted basis, the SURS Total Portfolio has outperformed the Median Public Fund in all trailing time periods over one year. 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.

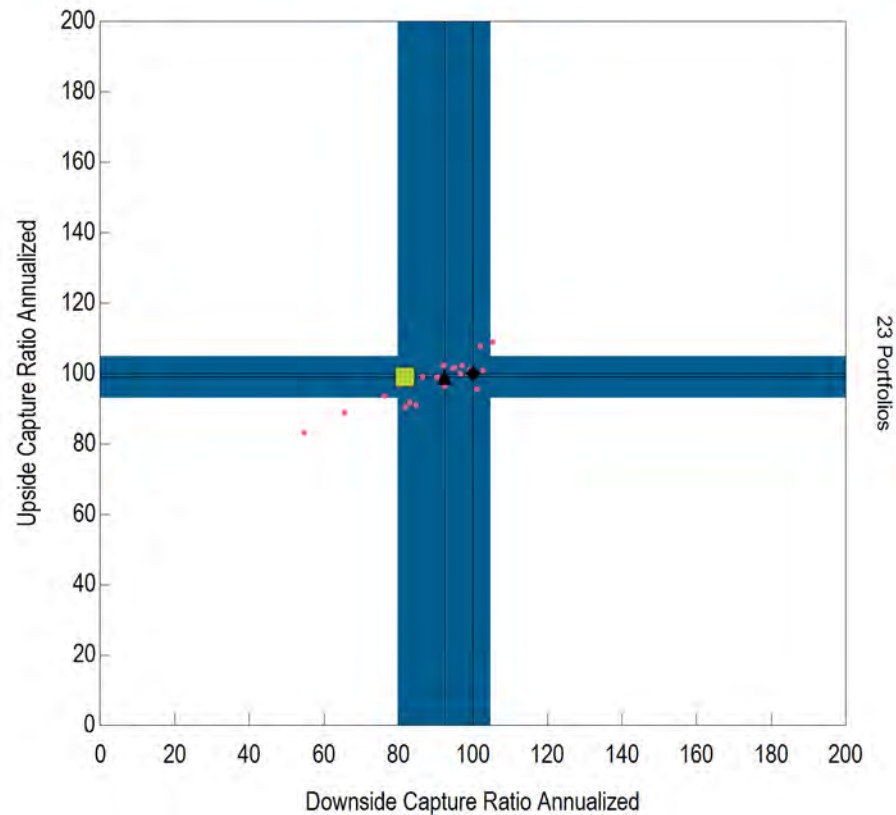
¹ Risk-adjusted median normalizes the median fund to the SURS exhibited volatility. Calculated as: risk-adjusted median = unadjusted median return * (SURS volatility/peer volatility).



Illinois State Universities Retirement System

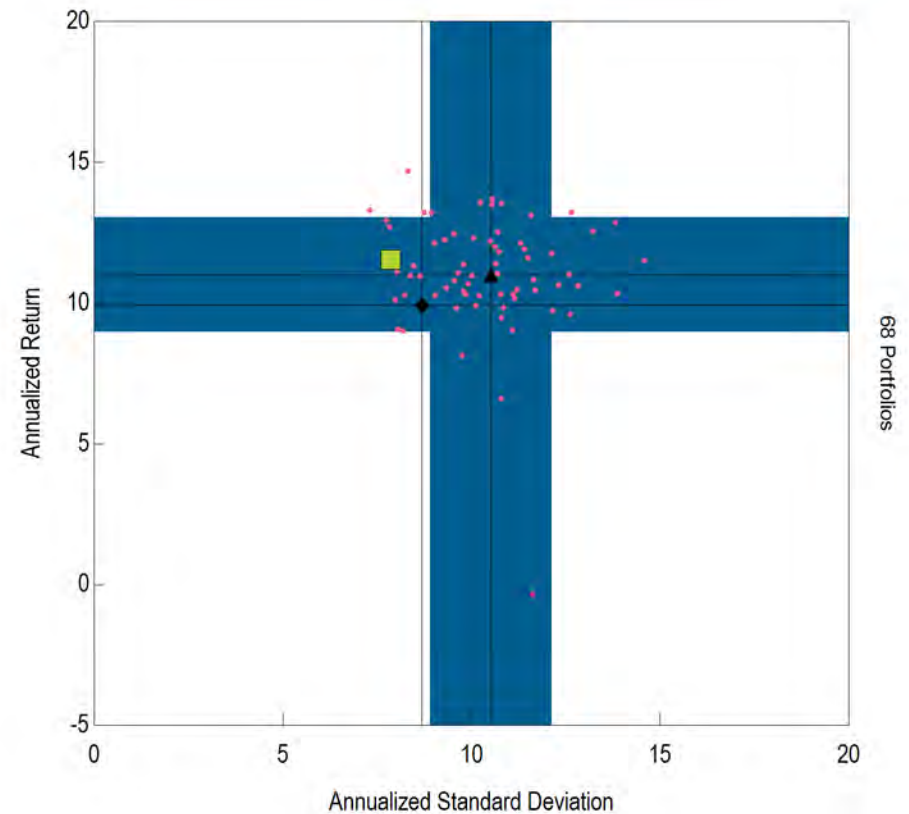
Total Fund | As of March 31, 2023

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending March 31, 2023



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

Annualized Return vs. Annualized Standard Deviation
3 Years Ending March 31, 2023

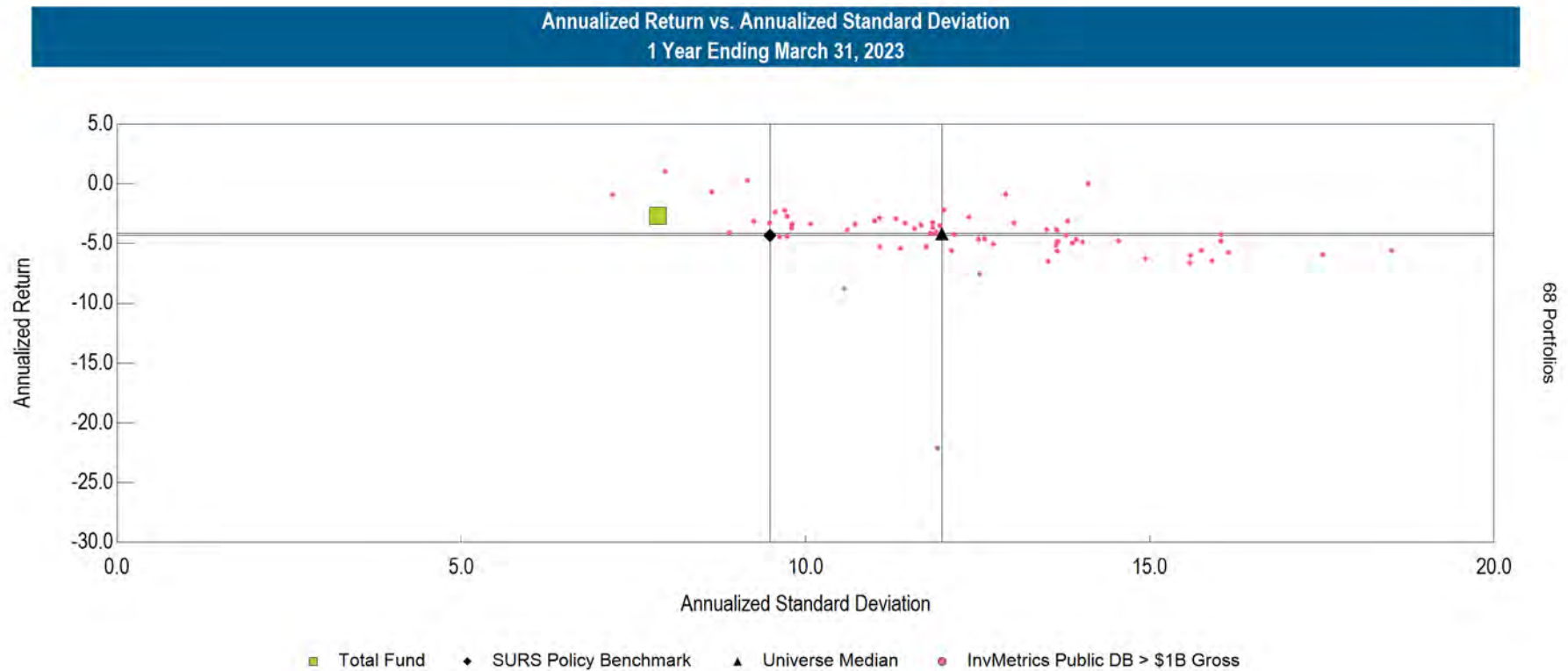


- Total Fund
- ◆ SURS Policy Benchmark
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

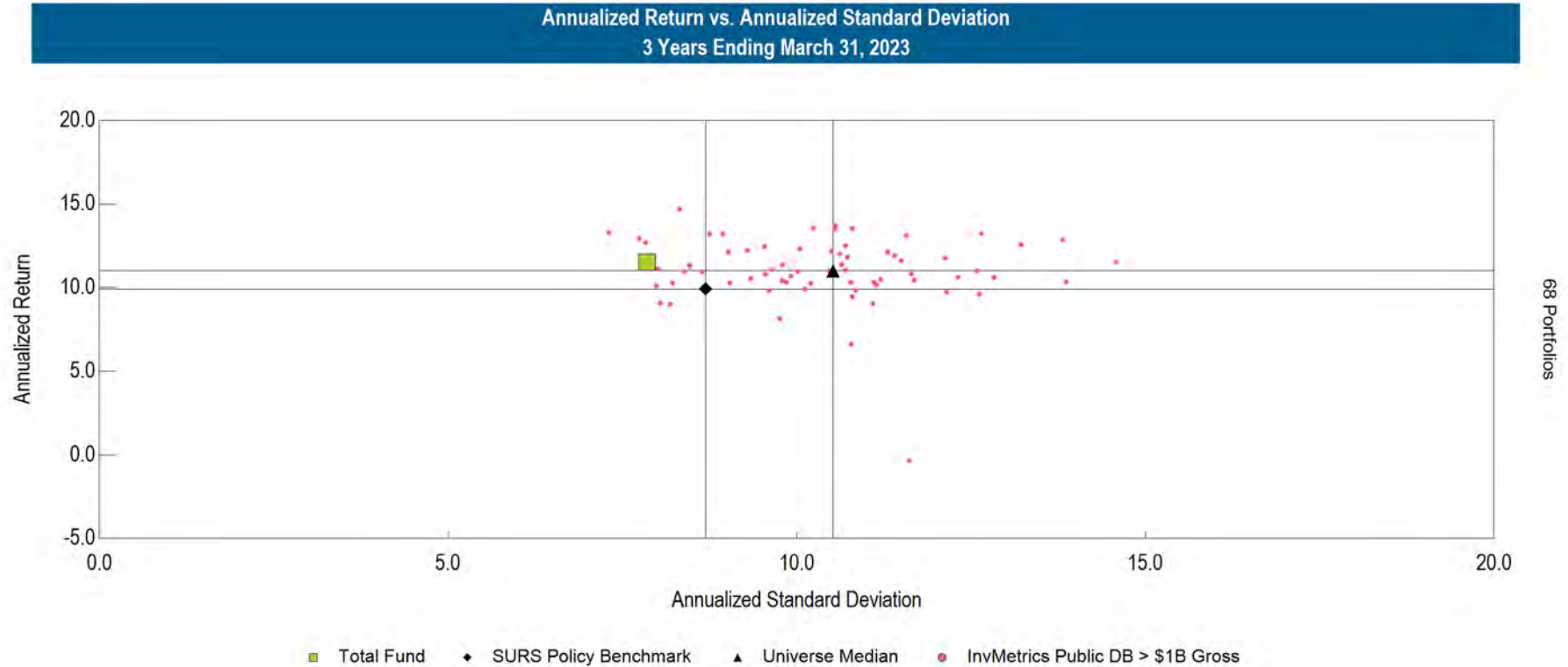


	Annualized Return	Annualized Return Rank	Annualized Standard Deviation	Annualized Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank
Total Fund	-2.7%	14	7.9%	2	-0.7	85	0.6	46
SURS Policy Benchmark	-4.3%	56	9.5%	10	-0.7	95	--	--
InvMetrics Public DB > \$1B Gross Median	-4.1%	--	12.0%	--	-0.5	--	0.6	--



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023

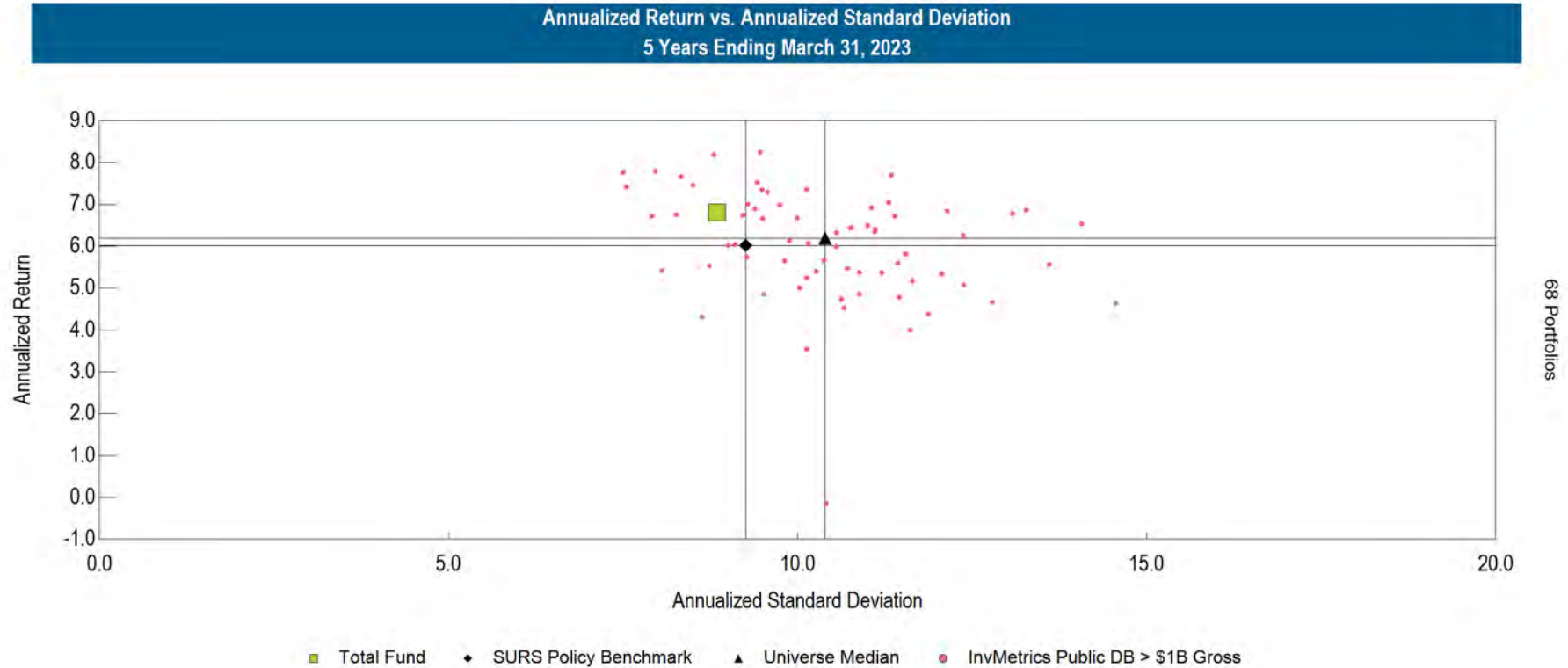


	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank
Total Fund	11.5%	39	7.9%	4	1.4	8	0.7	21
SURS Policy Benchmark	9.9%	84	8.7%	18	1.0	39	--	--
InvMetrics Public DB > \$1B Gross Median	11.0%	--	10.5%	--	1.0	--	0.5	--



Illinois State Universities Retirement System

Total Fund | As of March 31, 2023



	Annualized Return	Annualized Return Rank	Annualized Standard Deviation	Annualized Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank
Total Fund	6.8%	28	8.8%	16	0.6	17	0.4	26
SURS Policy Benchmark	6.0%	56	9.3%	21	0.5	34	--	--
InvMetrics Public DB > \$1B Gross Median	6.2%	--	10.4%	--	0.5	--	0.2	--

Private Markets Performance



Illinois State Universities Retirement System

Private Markets Performance¹ | As of December 31, 2022

	Composite Level IRRs				
	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)	Since Inception (%)
Real Assets ^{1,2}	8.5	10.3	8.6	9.3	7.6
Private Equity	-5.2	21.4	18.3	14.5	20.2

	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple
Real Assets ²	3,177,332,713	2,604,438,358	1,385,452,359	2,356,341,532	1.4
Private Equity	5,389,601,902	4,317,852,128	4,632,363,099	2,918,743,218	1.8

¹ Information provided by Northern Trust.

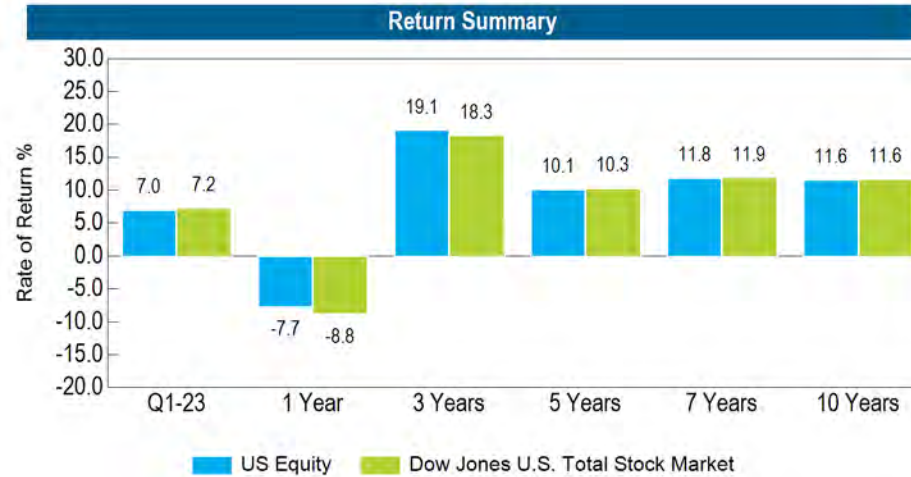
² Real Assets Composite includes Real Estate, Core, and Non-Core Infrastructure.

US Equity



Illinois State Universities Retirement System

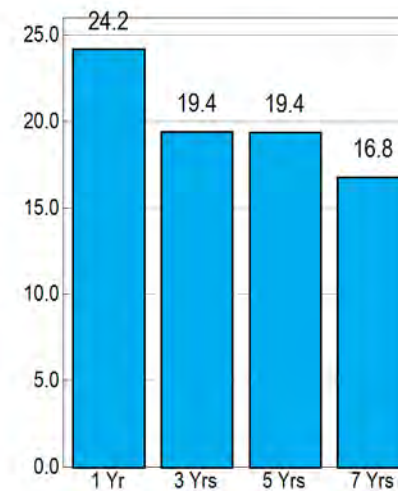
US Equity | As of March 31, 2023



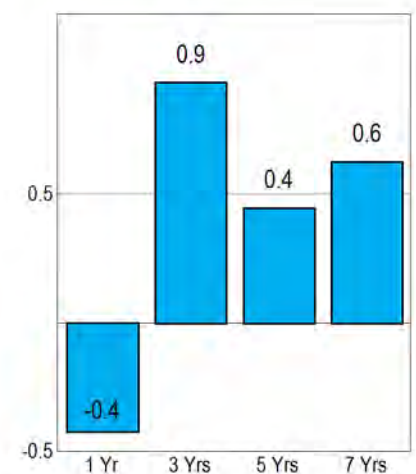
	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
US Equity	7.0	-7.7	19.1	10.1	11.8	11.6
<i>Dow Jones U.S. Total Stock Market</i>	<i>7.2</i>	<i>-8.8</i>	<i>18.3</i>	<i>10.3</i>	<i>11.9</i>	<i>11.6</i>
Excess Return	-0.2	1.1	0.8	-0.2	-0.1	0.0
<i>eV US All Cap Equity Gross Rank</i>	<i>41</i>	<i>52</i>	<i>41</i>	<i>42</i>	<i>44</i>	<i>39</i>
<i>eV US All Cap Equity Gross Median</i>	<i>6.1</i>	<i>-7.4</i>	<i>18.3</i>	<i>9.6</i>	<i>11.3</i>	<i>11.0</i>



Annualized Standard Deviation
US Equity



Sharpe Ratio
US Equity

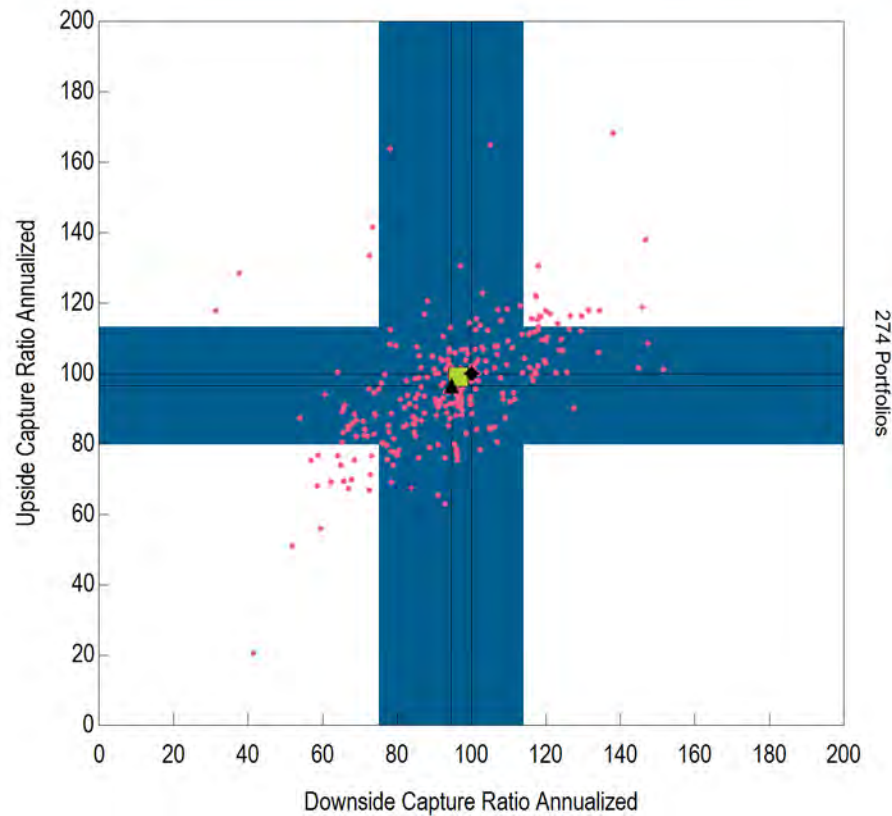




Illinois State Universities Retirement System

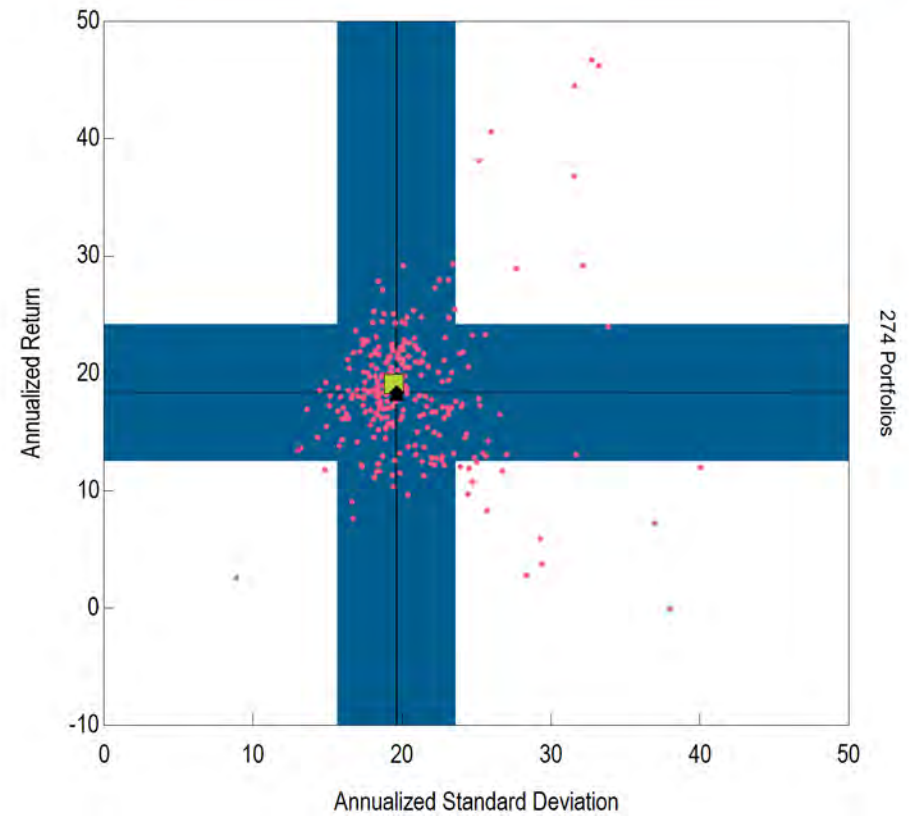
US Equity | As of March 31, 2023

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending March 31, 2023



- 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 March 31, 2023



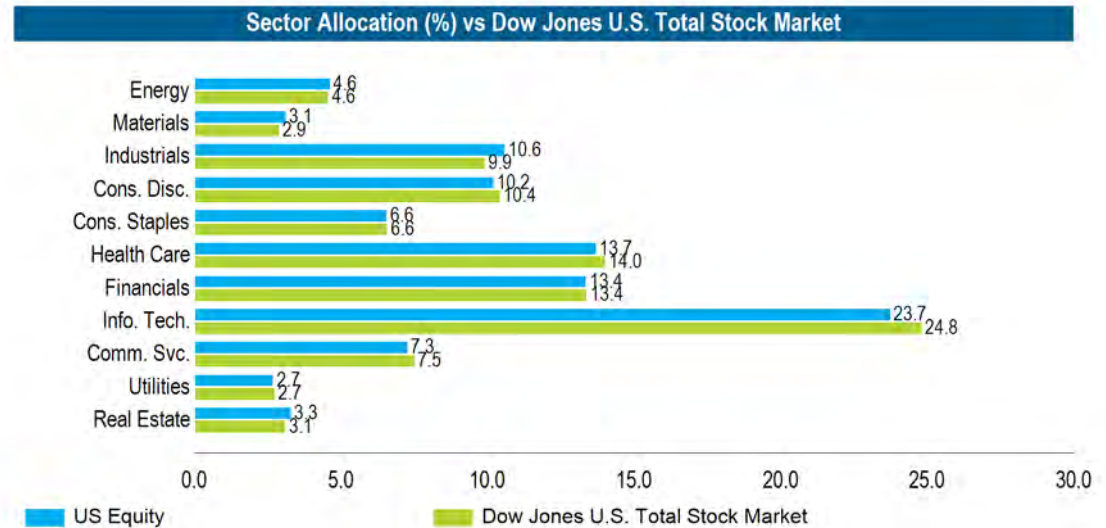
- US Equity
- ◆ Dow Jones U.S. Total Stock Market
- ▲ Universe Median
- 68% Confidence Interval
- eV US All Cap Equity Gross



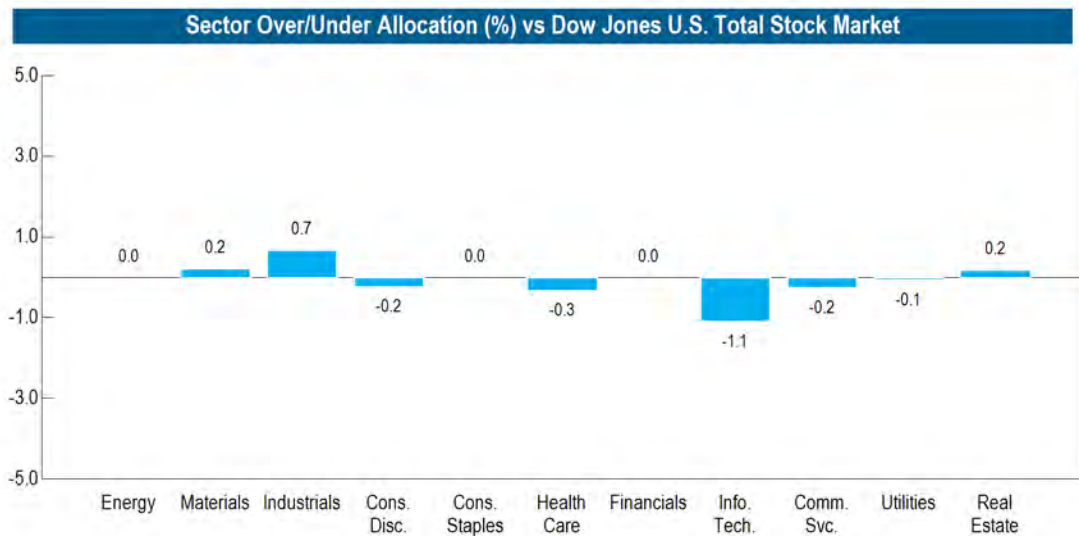
Illinois State Universities Retirement System

US Equity | As of March 31, 2023

Characteristics		Dow Jones U.S. Total Stock Market
	Portfolio	
Number of Holdings	2,935	4,204
Weighted Avg. Market Cap. (\$B)	447.2	466.0
Median Market Cap. (\$B)	2.4	1.1
Price To Earnings	19.6	20.0
Price To Book	3.7	3.9
Price To Sales	2.1	2.1
Return on Equity (%)	21.6	20.8
Yield (%)	1.6	1.7
Beta	1.0	1.0
R-Squared	1.0	1.0



Top Holdings	
APPLE INC	6.1%
MICROSOFT CORP	4.9%
AMAZON.COM INC	2.2%
NVIDIA CORPORATION	1.5%
ALPHABET INC	1.4%
TESLA INC	1.3%
ALPHABET INC	1.3%
META PLATFORMS INC	1.1%
EXXON MOBIL CORP	1.1%
UNITEDHEALTH GROUP INC	1.0%





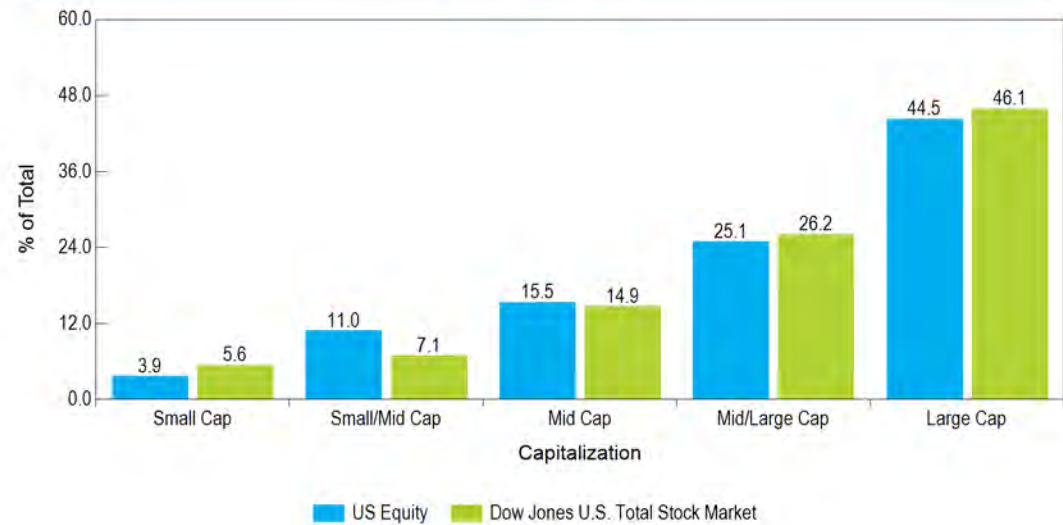
Illinois State Universities Retirement System

US Equity | As of March 31, 2023

Top Contributors

	End Weight	Return	Contribution
APPLE INC	6.09	27.11	1.65
NVIDIA CORPORATION	1.53	90.10	1.38
MICROSOFT CORP	4.91	20.52	1.01
TESLA INC	1.30	68.42	0.89
META PLATFORMS INC	1.10	76.12	0.84
AMAZON.COM INC	2.17	22.96	0.50
ALPHABET INC	1.45	17.57	0.25
SALESFORCE INC	0.46	50.67	0.23
ALPHABET INC	1.26	17.21	0.22
ADVANCED MICRO DEVICES INC	0.37	51.32	0.19

Market Capitalization As of March 31, 2023



Bottom Contributors

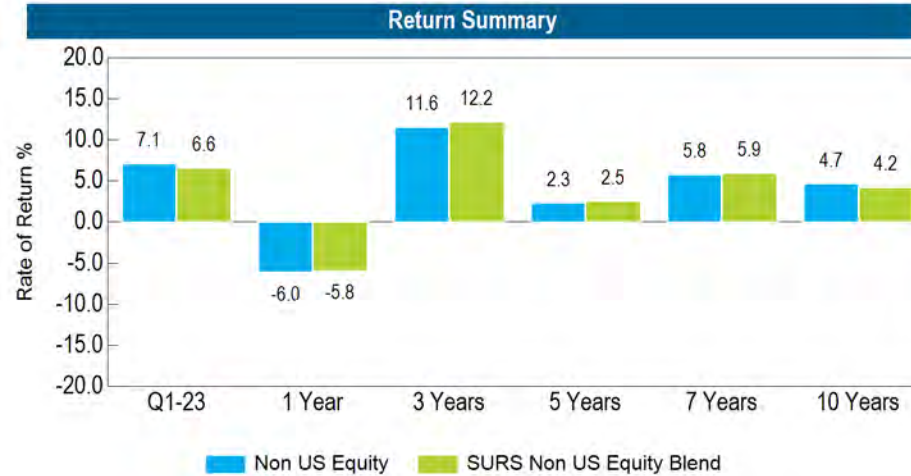
	End Weight	Return	Contribution
JOHNSON & JOHNSON	0.95	-11.64	-0.11
UNITEDHEALTH GROUP INC	1.03	-10.54	-0.11
PFIZER INC	0.54	-19.64	-0.11
SCHWAB (CHARLES) CORP	0.21	-36.89	-0.08
BANK OF AMERICA CORP	0.54	-13.08	-0.07
CHEVRON CORP	0.71	-8.29	-0.06
CVS HEALTH CORP	0.23	-19.71	-0.04
CONOCOPHILLIPS	0.28	-15.02	-0.04
HOME DEPOT INC. (THE)	0.69	-5.90	-0.04
ELI LILLY AND CO	0.68	-5.82	-0.04

Non US Equity



Illinois State Universities Retirement System

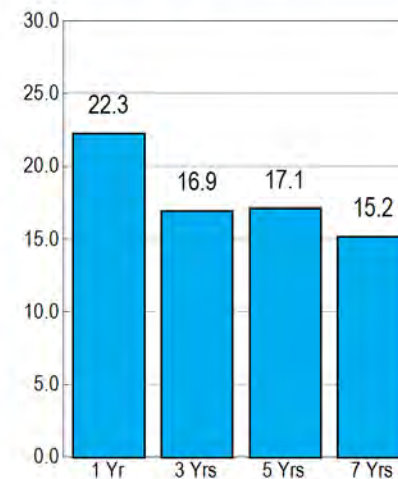
Non US Equity | As of March 31, 2023



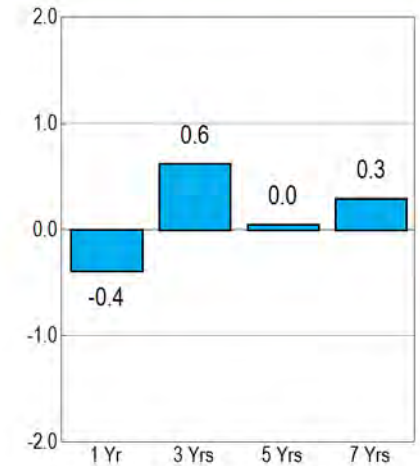
	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Non US Equity	7.1	-6.0	11.6	2.3	5.8	4.7
<i>SURS Non US Equity Blend</i>	<i>6.6</i>	<i>-5.8</i>	<i>12.2</i>	<i>2.5</i>	<i>5.9</i>	<i>4.2</i>
Excess Return	0.5	-0.2	-0.6	-0.2	-0.1	0.5
<i>eV Non-US Diversified Core Eq Net Rank</i>	<i>61</i>	<i>68</i>	<i>73</i>	<i>68</i>	<i>62</i>	<i>76</i>
<i>eV Non-US Diversified Core Eq Net Median</i>	<i>7.6</i>	<i>-4.1</i>	<i>13.0</i>	<i>3.0</i>	<i>6.0</i>	<i>5.3</i>



Annualized Standard Deviation
Non US Equity



Sharpe Ratio
Non US Equity

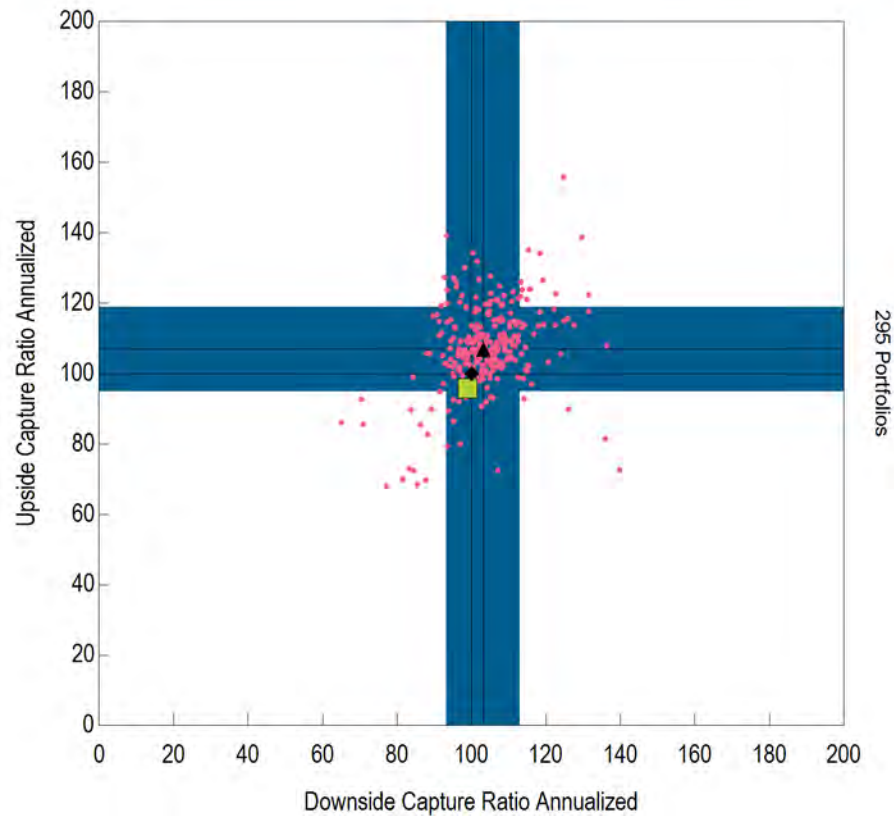




Illinois State Universities Retirement System

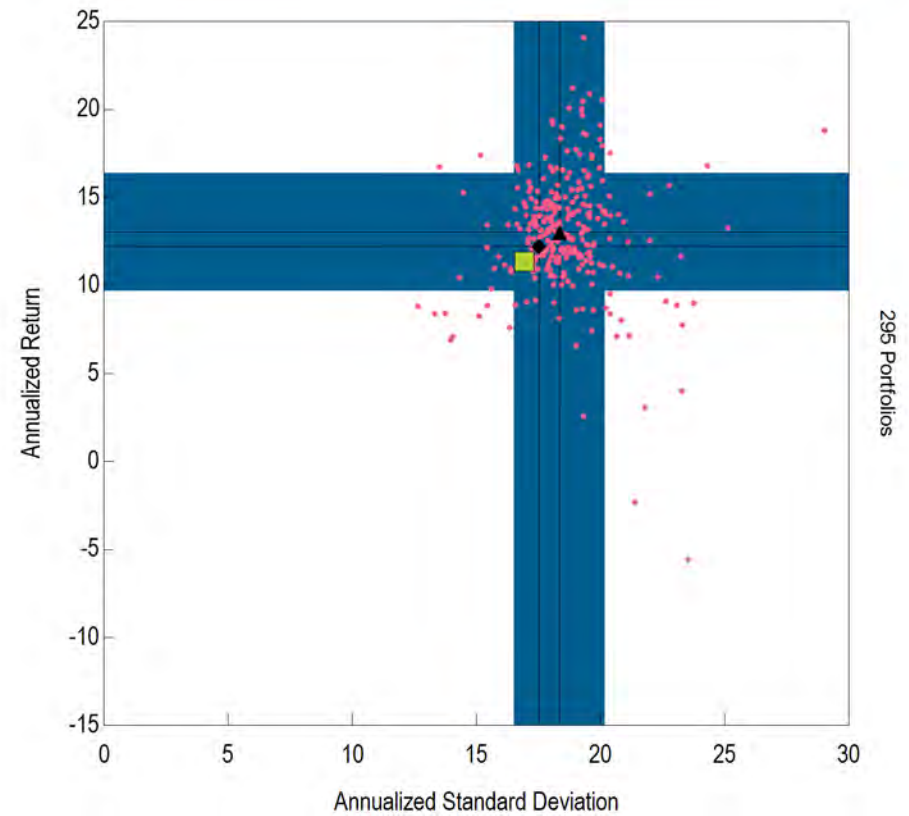
Non US Equity | As of March 31, 2023

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending March 31, 2023



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

Annualized Return vs. Annualized Standard Deviation
3 Years Ending March 31, 2023



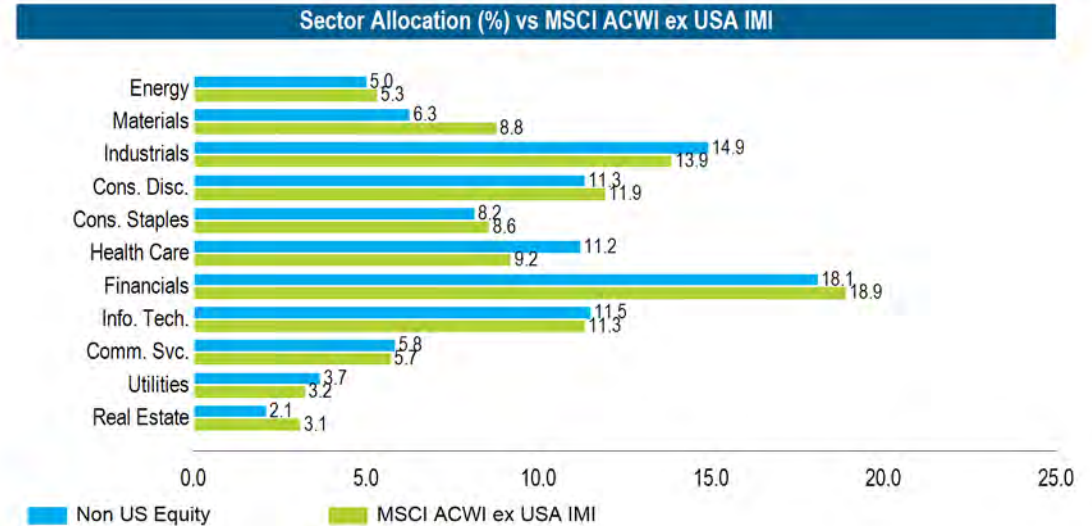
- Non US Equity
- ◆ SURS Non US Equity Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV Non-US Diversified Core Eq Net



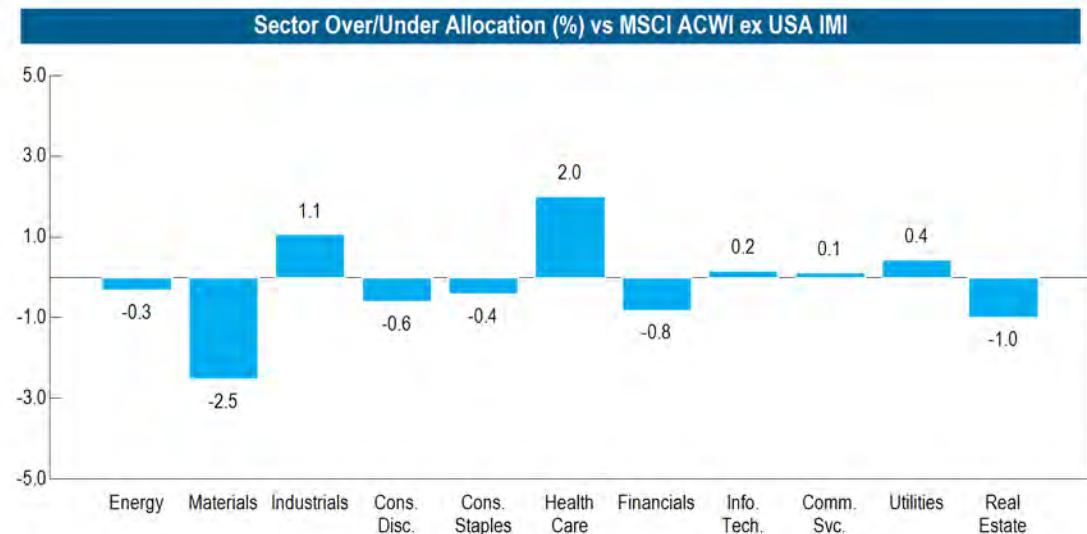
Illinois State Universities Retirement System

Non US Equity | As of March 31, 2023

Characteristics		MSCI ACWI ex USA IMI
	Portfolio	
Number of Holdings	2,535	6,584
Weighted Avg. Market Cap. (\$B)	70.9	78.0
Median Market Cap. (\$B)	8.3	1.7
Price To Earnings	12.4	13.4
Price To Book	2.5	2.4
Price To Sales	1.1	1.1
Return on Equity (%)	18.0	14.1
Yield (%)	3.5	3.3
Beta	1.0	1.0
R-Squared	1.0	1.0



Top Holdings	
NOVO NORDISK 'B'	1.4%
NOVARTIS AG	1.3%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.0%
LOREAL SA	1.0%
LVMH MOET HENNESSY LOUIS VUITTON SE	1.0%
BHP GROUP LTD	0.9%
DEUTSCHE TELEKOM AG	0.8%
ASML HOLDING NV	0.8%
SHELL PLC	0.8%
ROCHE HOLDING AG	0.8%



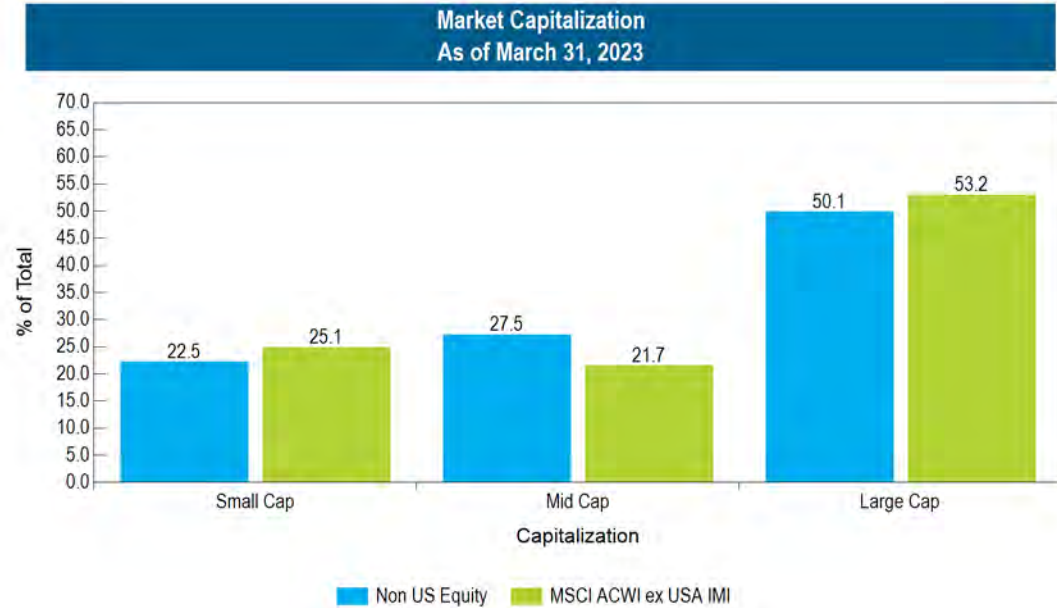


Illinois State Universities Retirement System

Non US Equity | As of March 31, 2023

Top Contributors			
	End Weight	Return	Contribution
RENESAS ELECTRONICS CORP	0.73	60.39	0.44
NOVO NORDISK 'B'	1.42	18.40	0.26
LVMH MOET HENNESSY	0.95	26.25	0.25
LOUIS VUITTON SE	0.99	25.32	0.25
STMICROELECTRONICS NV	0.48	51.01	0.24
ASML HOLDING NV	0.83	26.43	0.22
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	0.99	20.33	0.20
SHIN-ETSU CHEMICAL CO LTD	0.57	32.41	0.19
DEUTSCHE TELEKOM AG	0.85	21.90	0.19
TENCENT HOLDINGS LTD	0.78	20.96	0.16

Bottom Contributors			
	End Weight	Return	Contribution
DOGUS OTOMOTIV SERVIS VE TIC	0.13	-39.16	-0.05
EQUINOR ASA	0.28	-17.76	-0.05
ROCHE HOLDING AG	0.82	-5.68	-0.05
GLENCORE PLC	0.26	-13.65	-0.04
AKER BP ASA	0.18	-19.06	-0.03
KT CORP	0.18	-15.96	-0.03
NORTHLAND POWER INC	0.36	-7.93	-0.03
JD.COM INC	0.12	-22.42	-0.03
NN GROUP N.V.	0.25	-10.87	-0.03
ANGLO AMERICAN PLC	0.21	-12.95	-0.03

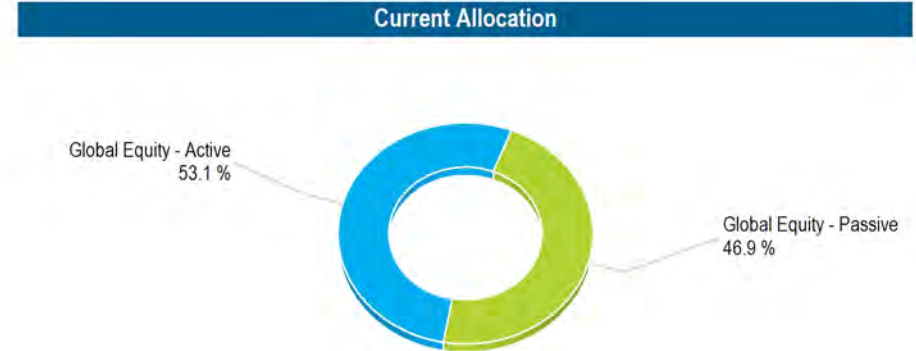
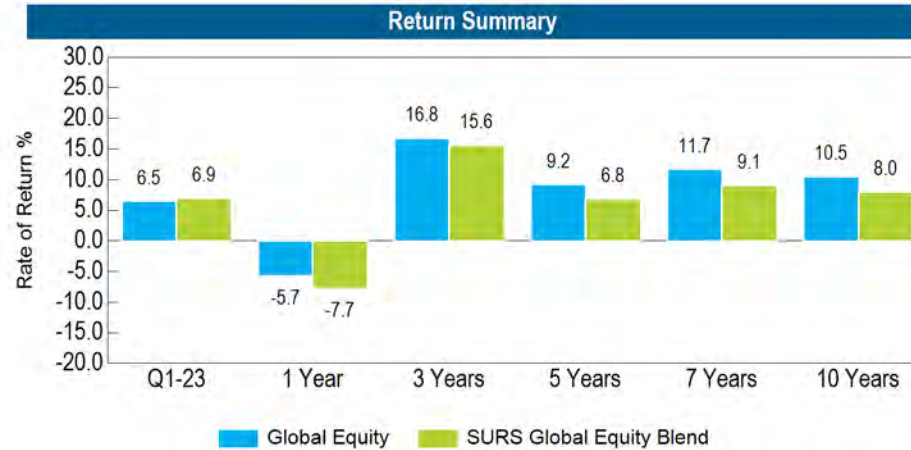


Global Equity



Illinois State Universities Retirement System

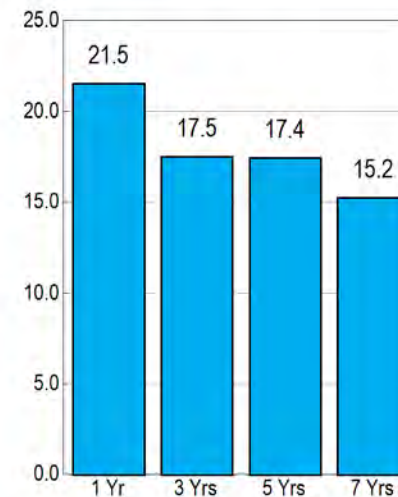
Global Equity | As of March 31, 2023



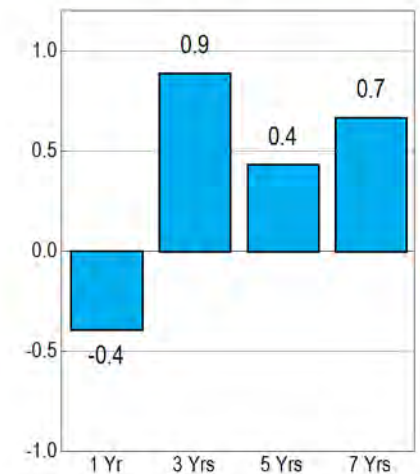
	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Global Equity	6.5	-5.7	16.8	9.2	11.7	10.5
<i>SURS Global Equity Blend</i>	<i>6.9</i>	<i>-7.7</i>	<i>15.6</i>	<i>6.8</i>	<i>9.1</i>	<i>8.0</i>
Excess Return	-0.4	2.0	1.2	2.4	2.6	2.5
<i>eV Global All Cap Equity Gross Rank</i>	<i>58</i>	<i>54</i>	<i>49</i>	<i>30</i>	<i>24</i>	<i>26</i>
<i>eV Global All Cap Equity Gross Median</i>	<i>7.0</i>	<i>-5.4</i>	<i>16.6</i>	<i>7.7</i>	<i>10.0</i>	<i>9.2</i>



Annualized Standard Deviation
Global Equity



Sharpe Ratio
Global Equity

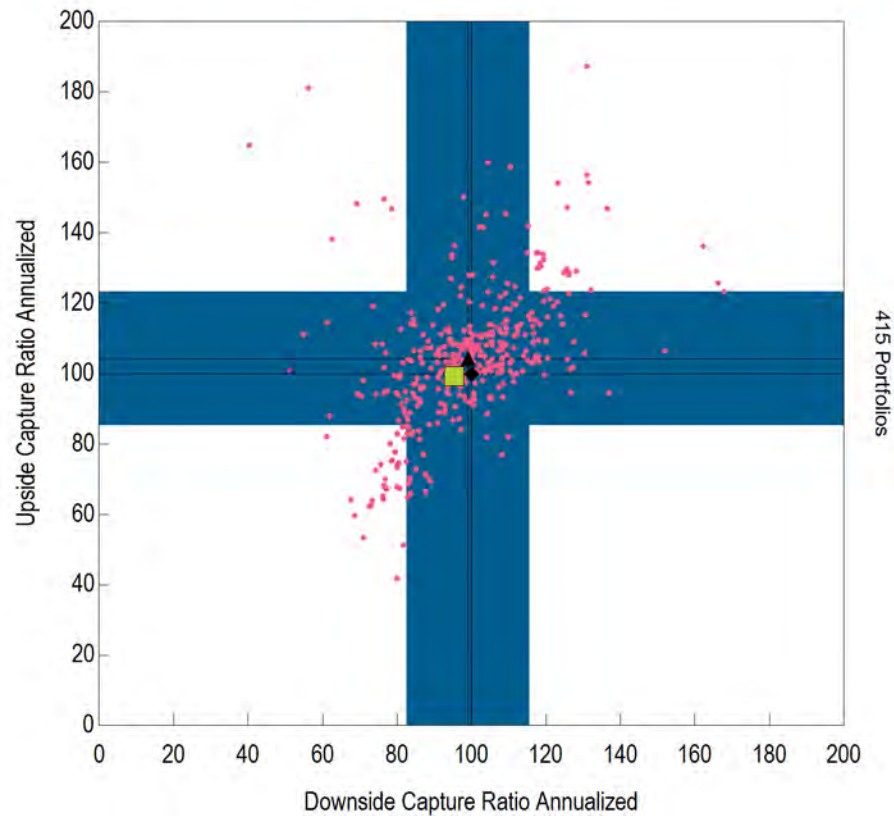




Illinois State Universities Retirement System

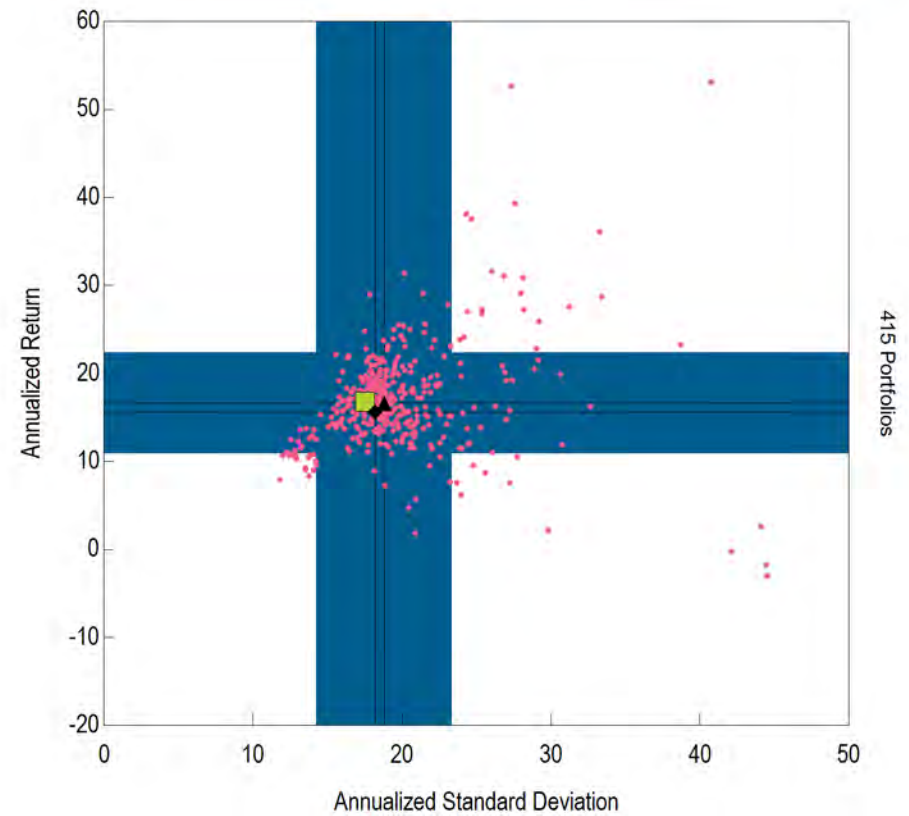
Global Equity | As of March 31, 2023

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending March 31, 2023



- 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 March 31, 2023



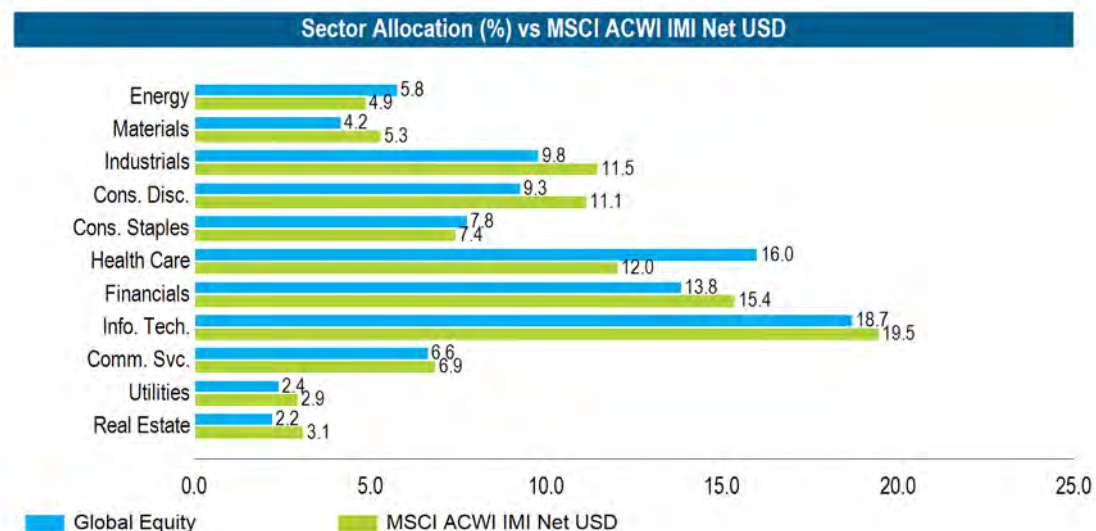
- Global Equity
- ◆ SURS Global Equity Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV Global All Cap Equity Gross



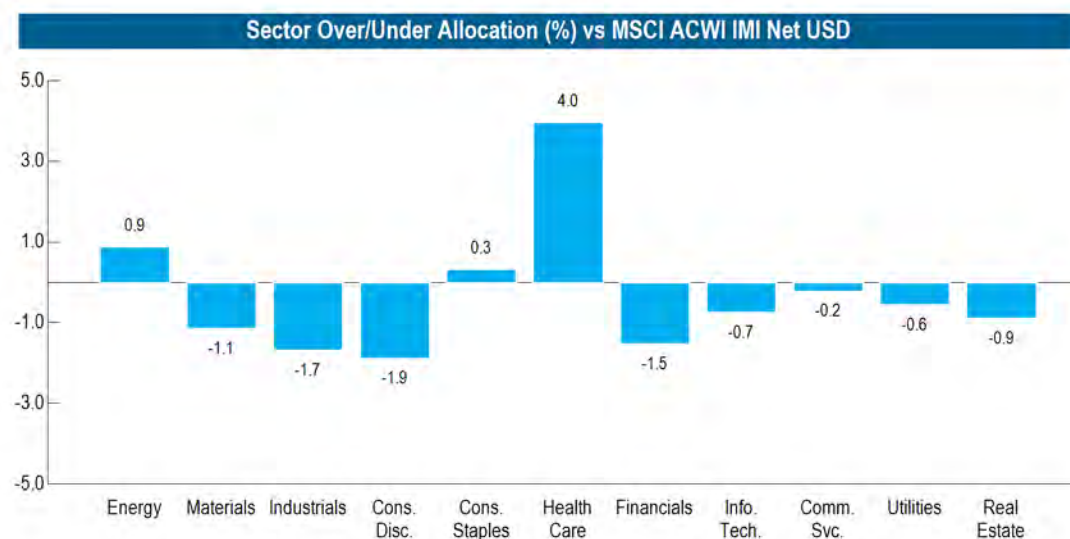
Illinois State Universities Retirement System

Global Equity | As of March 31, 2023

Characteristics		
	Portfolio	MSCI ACWI IMI Net USD
Number of Holdings	1,584	9,106
Weighted Avg. Market Cap. (\$B)	327.3	313.7
Median Market Cap. (\$B)	25.9	1.9
Price To Earnings	18.2	16.8
Price To Book	3.5	3.2
Price To Sales	1.8	1.6
Return on Equity (%)	23.2	18.4
Yield (%)	2.0	2.3
Beta	1.0	1.0
R-Squared	1.0	1.0



Top Holdings	
MICROSOFT CORP	3.5%
APPLE INC	2.9%
AMAZON.COM INC	1.5%
META PLATFORMS INC	1.4%
EXXON MOBIL CORP	1.3%
ALPHABET INC	1.1%
UNITEDHEALTH GROUP INC	1.1%
VISA INC	1.0%
JOHNSON & JOHNSON	0.9%
NVIDIA CORPORATION	0.9%





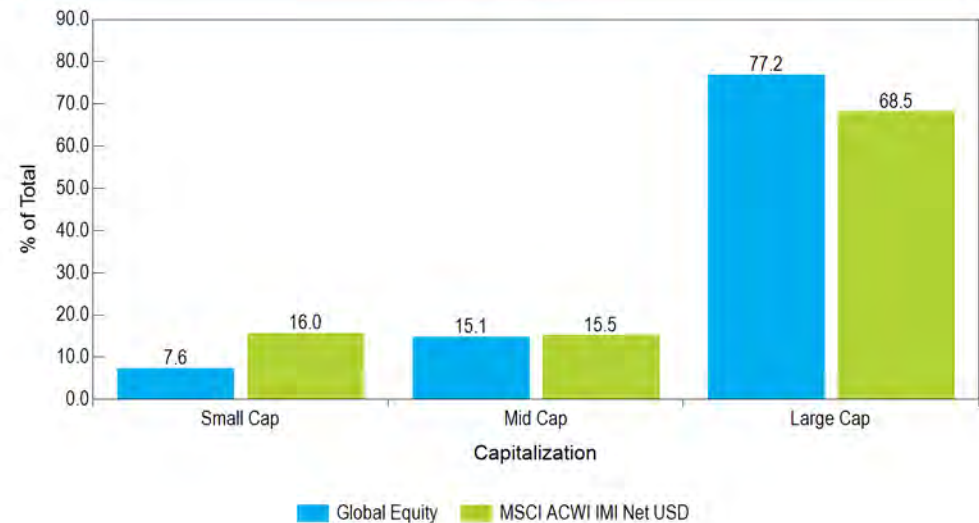
Illinois State Universities Retirement System

Global Equity | As of March 31, 2023

Top Contributors

	End Weight	Return	Contribution
META PLATFORMS INC	1.37	76.12	1.04
NVIDIA CORPORATION	0.91	90.10	0.82
APPLE INC	2.92	27.11	0.79
MICROSOFT CORP	3.51	20.52	0.72
AMAZON.COM INC	1.54	22.96	0.35
TESLA INC	0.44	68.42	0.30
ADVANCED MICRO DEVICES INC	0.49	51.32	0.25
ALPHABET INC	1.15	17.57	0.20
ALPHABET INC	0.91	17.21	0.16
BAIDU INC	0.46	31.95	0.15

Market Capitalization As of March 31, 2023



Bottom Contributors

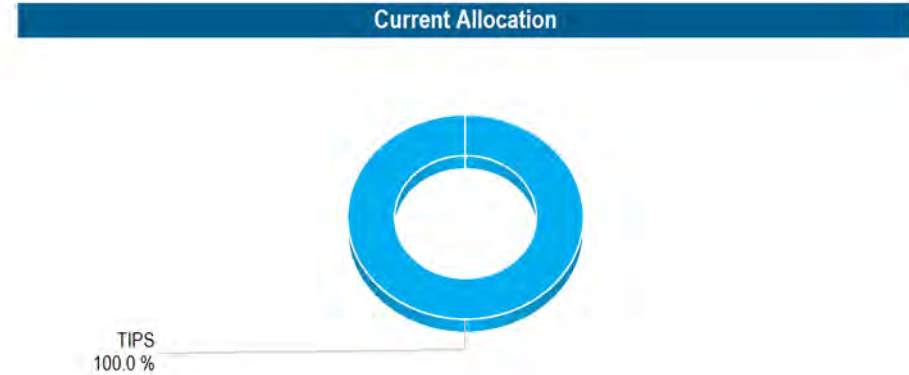
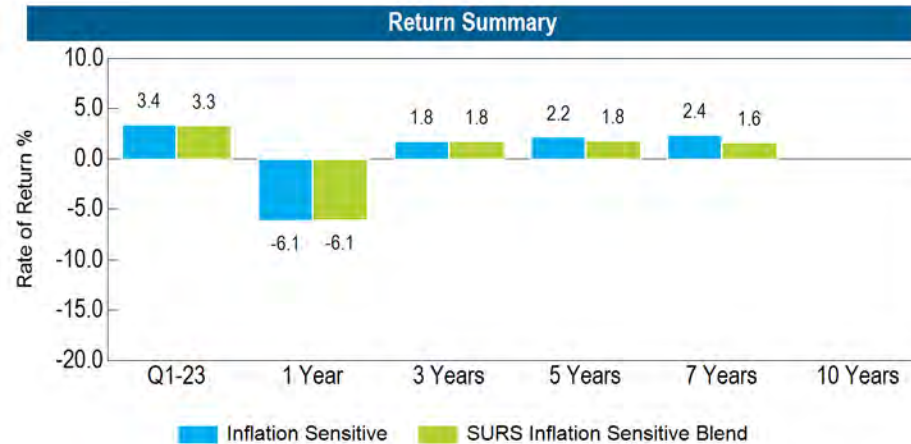
	End Weight	Return	Contribution
UNITEDHEALTH GROUP INC	1.12	-10.54	-0.12
JOHNSON & JOHNSON	0.93	-11.64	-0.11
CENTENE CORP	0.28	-22.92	-0.06
PFIZER INC	0.28	-19.64	-0.06
ELEVANCE HEALTH INC	0.49	-10.07	-0.05
ELI LILLY AND CO	0.75	-5.82	-0.04
WELLS FARGO & CO	0.46	-8.90	-0.04
SCHWAB (CHARLES) CORP	0.11	-36.89	-0.04
CHEVRON CORP	0.47	-8.29	-0.04
CVS HEALTH CORP	0.20	-19.71	-0.04

Inflation Sensitive

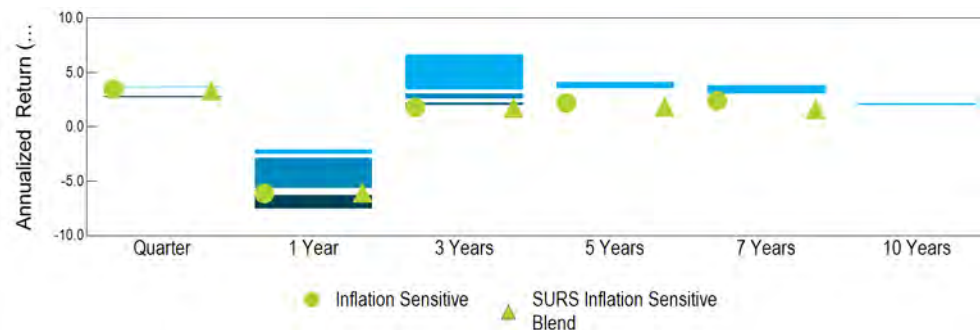


Illinois State Universities Retirement System

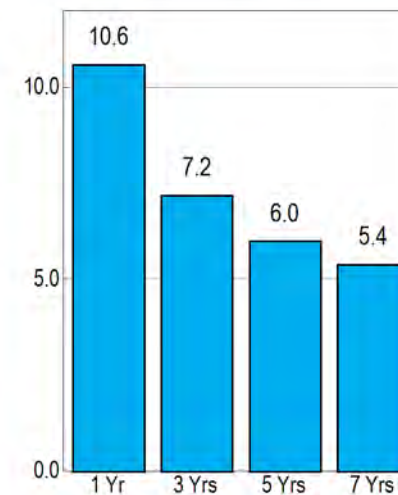
Inflation Sensitive | As of March 31, 2023



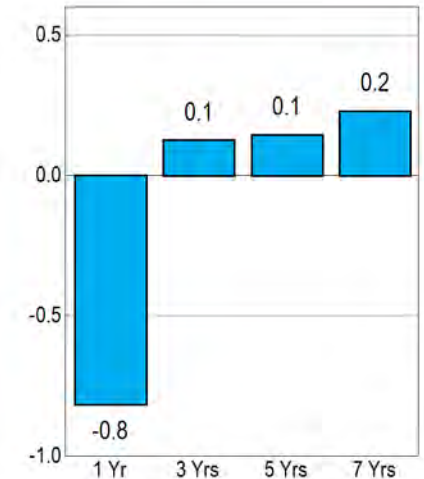
	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Inflation Sensitive	3.4	-6.1	1.8	2.2	2.4	--
<i>SURS Inflation Sensitive Blend</i>	<i>3.3</i>	<i>-6.1</i>	<i>1.8</i>	<i>1.8</i>	<i>1.6</i>	--
Excess Return	0.1	0.0	0.0	0.4	0.8	
<i>eV US TIPS / Inflation Fixed Inc Gross Rank</i>	<i>31</i>	<i>77</i>	<i>85</i>	<i>99</i>	<i>99</i>	--
<i>eV US TIPS / Inflation Fixed Inc Gross Median</i>	<i>3.3</i>	<i>-5.8</i>	<i>2.4</i>	<i>3.2</i>	<i>2.7</i>	<i>1.6</i>



Annualized Standard Deviation
Inflation Sensitive



Sharpe Ratio
Inflation Sensitive

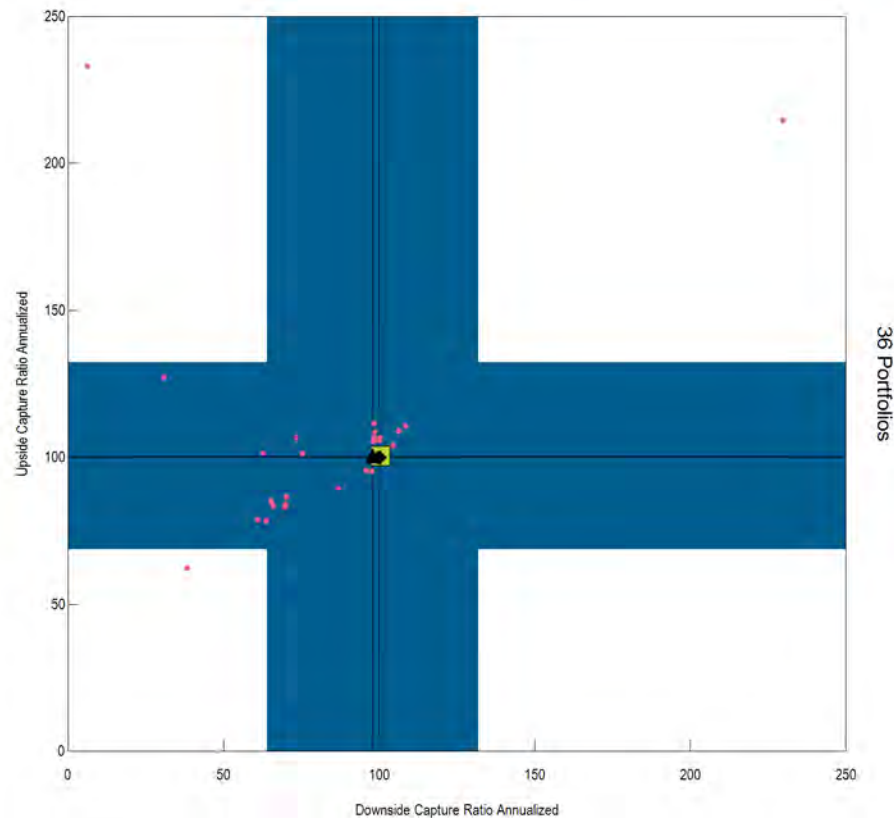




Illinois State Universities Retirement System

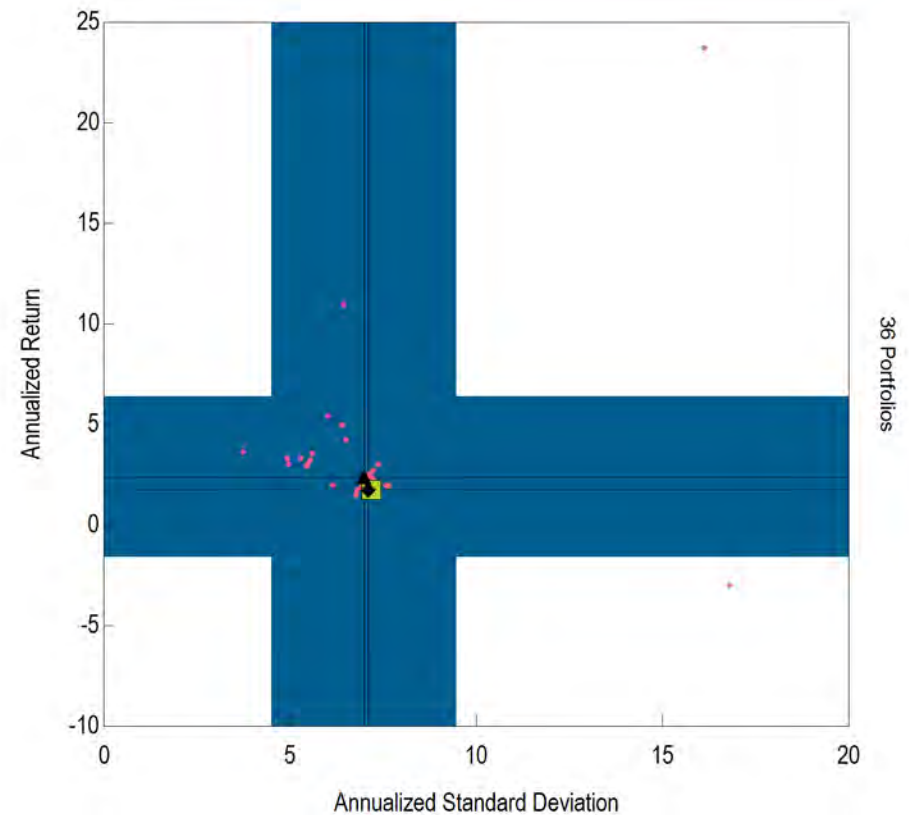
Inflation Sensitive | As of March 31, 2023

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending March 31, 2023



- 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 March 31, 2023



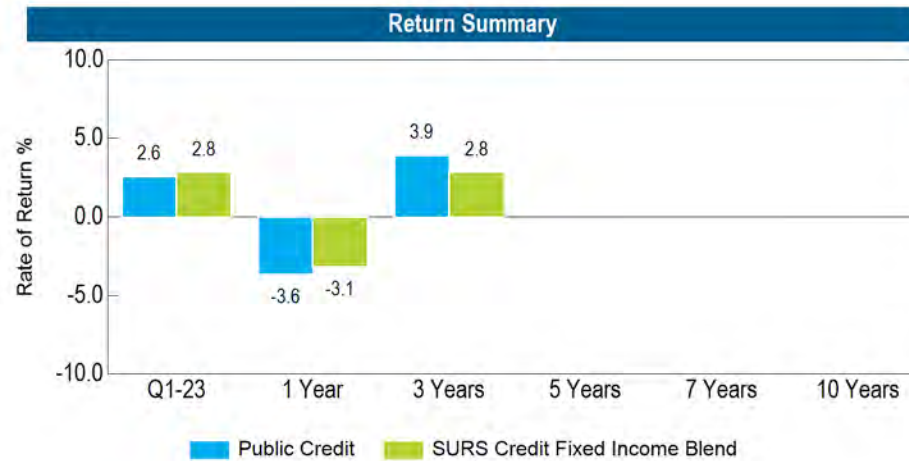
- Inflation Sensitive
- ◆ SURS Inflation Sensitive Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV US TIPS / Inflation Fixed Inc Gross

Public Credit



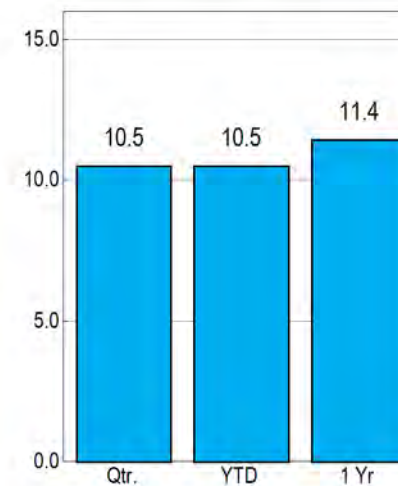
Illinois State Universities Retirement System

Public Credit | As of March 31, 2023

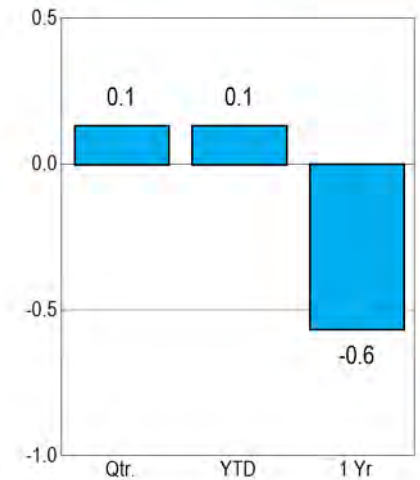


	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Public Credit	2.6	-3.6	3.9	--	--	--
<i>SURS Credit Fixed Income Blend</i>	<i>2.8</i>	<i>-3.1</i>	<i>2.8</i>	--	--	--
Excess Return	-0.2	-0.5	1.1			

Annualized Standard Deviation
Public Credit



Sharpe Ratio
Public Credit

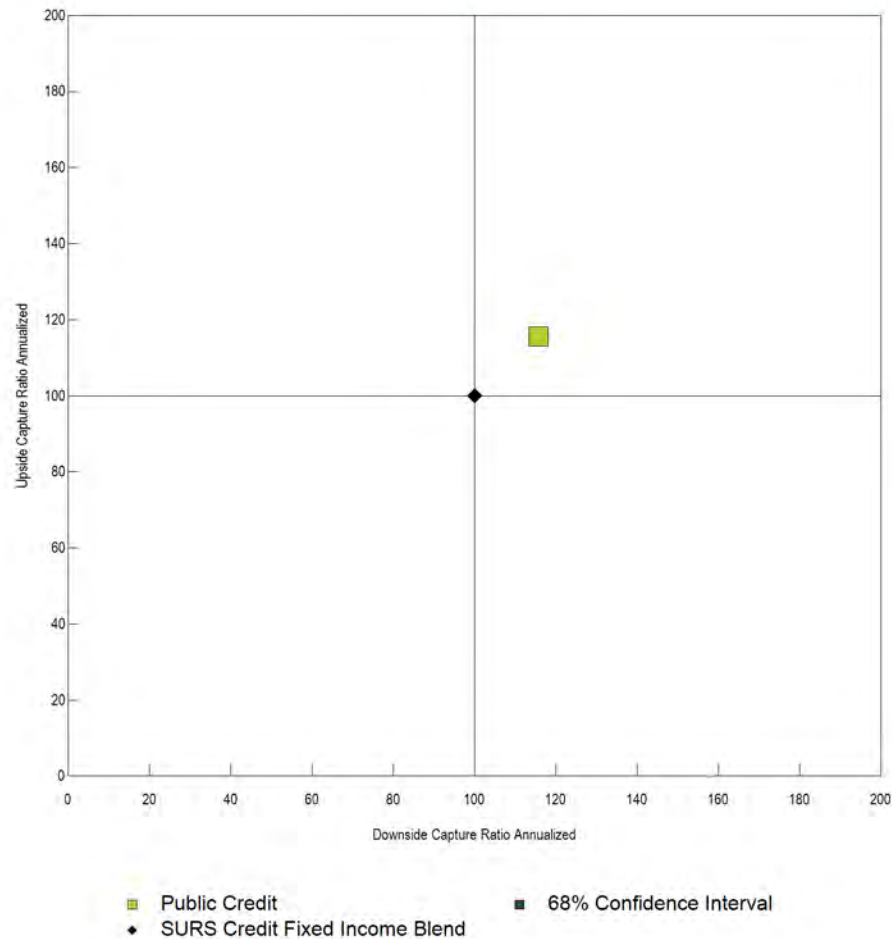




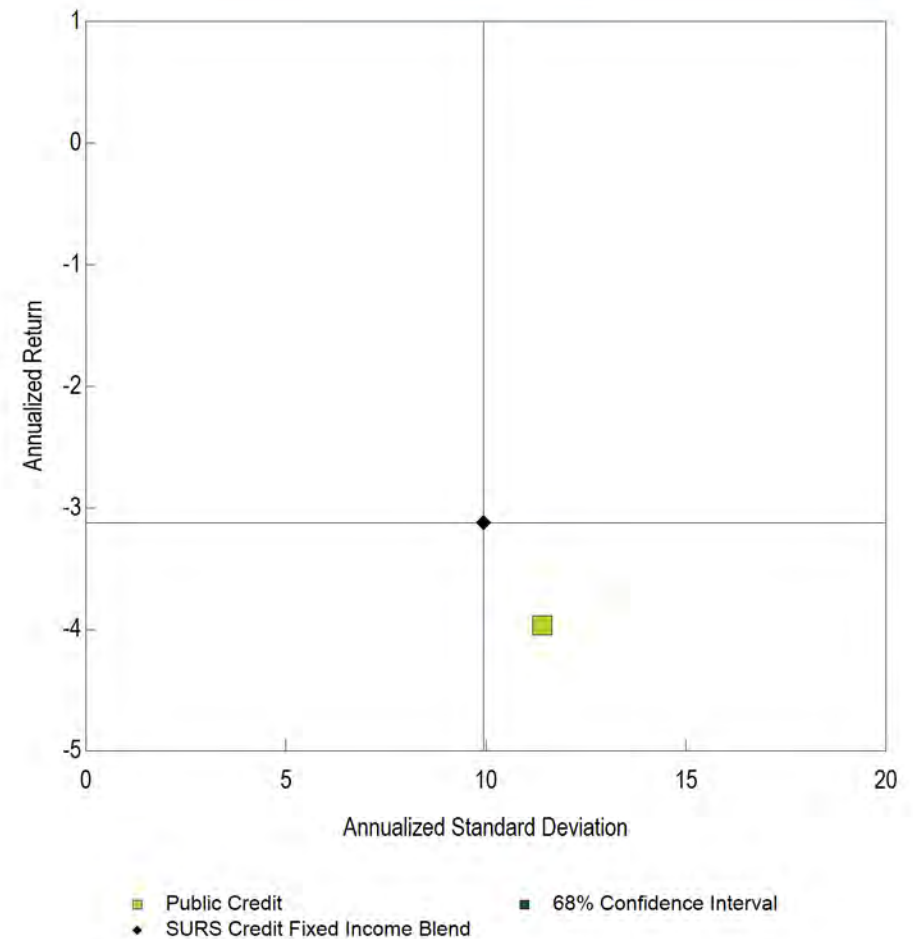
Illinois State Universities Retirement System

Public Credit | As of March 31, 2023

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
1 Year Ending March 31, 2023



Annualized Return vs. Annualized Standard Deviation
1 Year Ending March 31, 2023

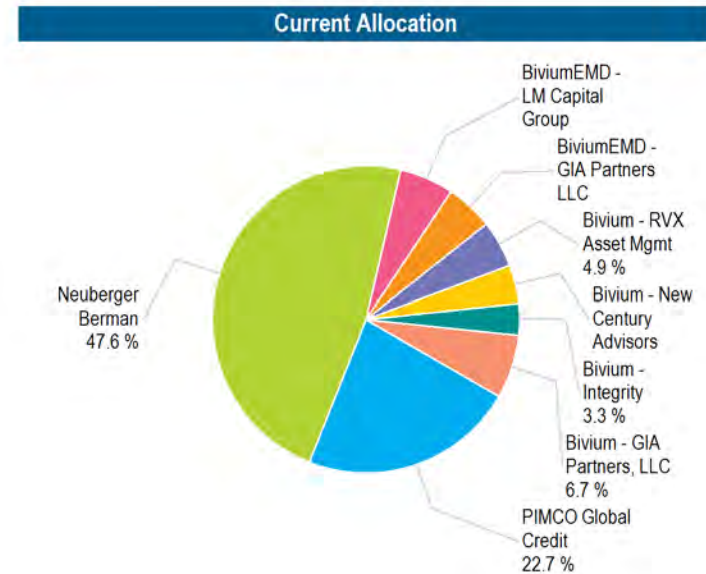




Illinois State Universities Retirement System

Public Credit | As of March 31, 2023

Credit Fixed Income Fixed Income Characteristics	
	Portfolio Q1-23
Fixed Income Characteristics	
Yield to Maturity	8.23
Average Duration	8.94
Average Quality	BB
US Sector Allocation	
UST/Agency	1.83
Corporate	49.77
MBS	3.17
ABS	0.36
Foreign	22.40
Muni	0.63
Yankee	0.44
Other	15.31
Cash	6.08
Credit Quality Allocation	
AAA	4.12
AA	1.58
A	6.42
BBB	22.09
BB and Below	43.34
Not Rated	14.80
Cash	5.65



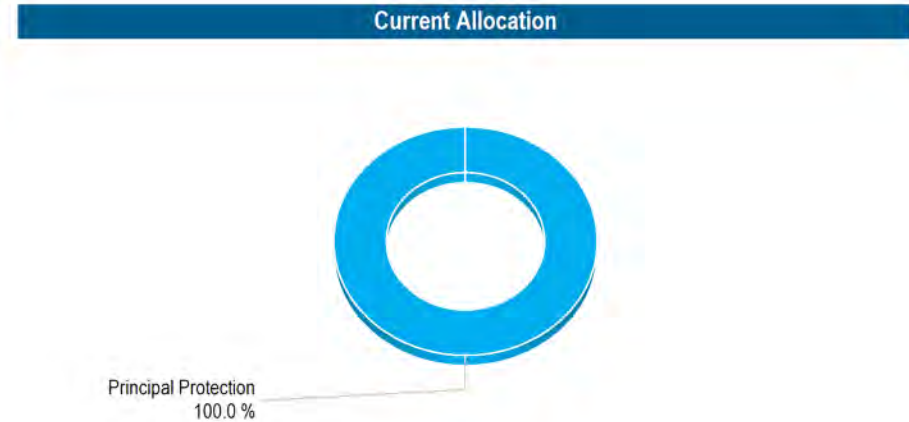
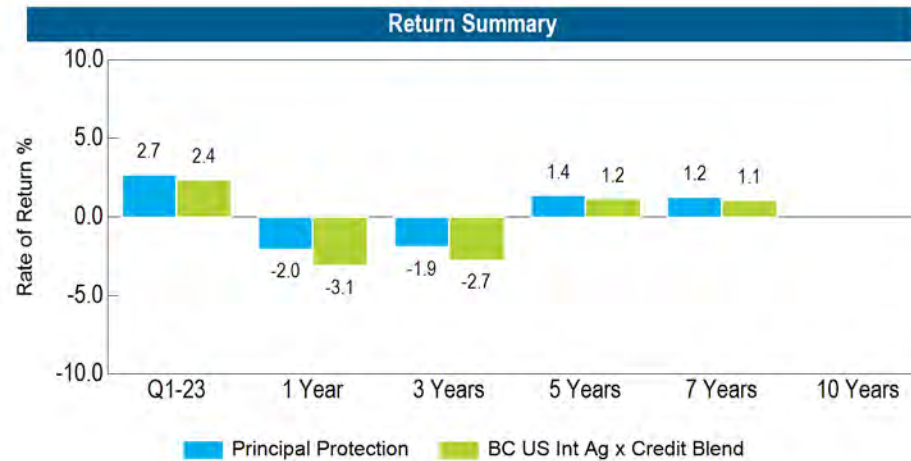
Top Holdings	
NT COLLECTIVE SHORT TERM INVT FD	2.78%
Federal Home Loan Banks 0% DISC NTS 03/04/2023 USD	2.48%
UST 0% NTS 31/05/23 USDBB-2023	1.69%
CASH - USD	0.91%
UST BDS USD	0.87%
LOUISIANA LOC GOVT ENVIRONMENTAL FACS & CMNTY DEV AUTH SYS RESTORATION TAXABLE-LA UTILS RESTORATION	0.74%
Federal Home Loan Banks 0% DISC NTS 24/04/2023 USD	0.53%
Federal Home Loan Banks 0% DISC NTS 19/05/2023 USD	0.52%
CASH - EUR	0.51%
UNITED AIRLS 2020-1A PASS THRU TRS	0.50%

Principal Protection

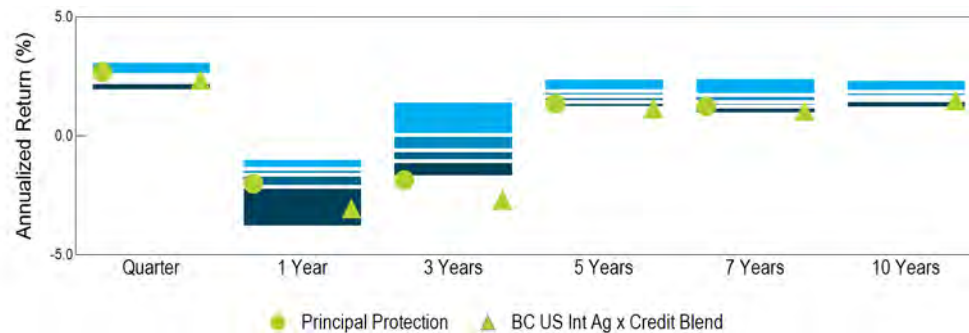


Illinois State Universities Retirement System

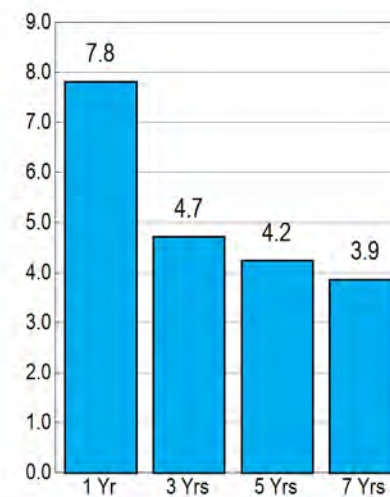
Principal Protection | As of March 31, 2023



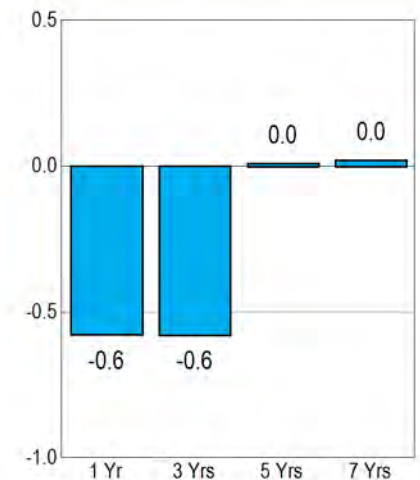
	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Principal Protection	2.7	-2.0	-1.9	1.4	1.2	--
<i>BC US Int Ag x Credit Blend</i>	<i>2.4</i>	<i>-3.1</i>	<i>-2.7</i>	<i>1.2</i>	<i>1.1</i>	<i>--</i>
Excess Return	0.3	1.1	0.8	0.2	0.1	--
<i>eV US Interm Duration Fixed Inc Gross Rank</i>	<i>18</i>	<i>72</i>	<i>96</i>	<i>82</i>	<i>78</i>	<i>--</i>
<i>eV US Interm Duration Fixed Inc Gross Median</i>	<i>2.4</i>	<i>-1.6</i>	<i>-0.6</i>	<i>1.7</i>	<i>1.4</i>	<i>1.7</i>



Annualized Standard Deviation
Principal Protection



Sharpe Ratio
Principal Protection

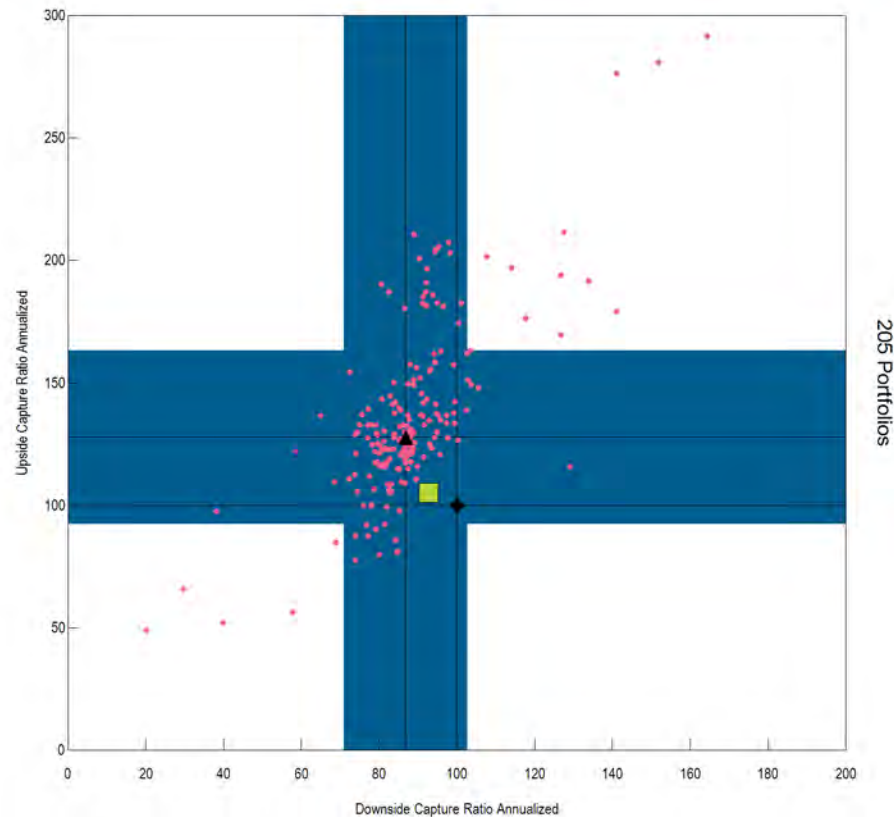




Illinois State Universities Retirement System

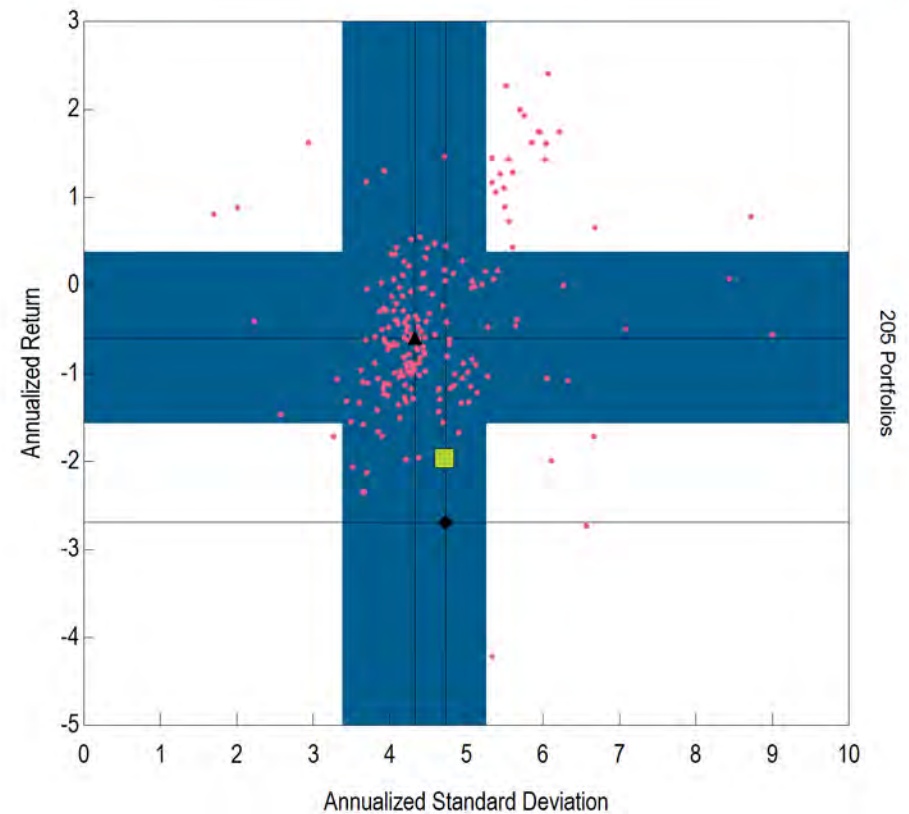
Principal Protection | As of March 31, 2023

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
3 Years Ending March 31, 2023



- 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 March 31, 2023



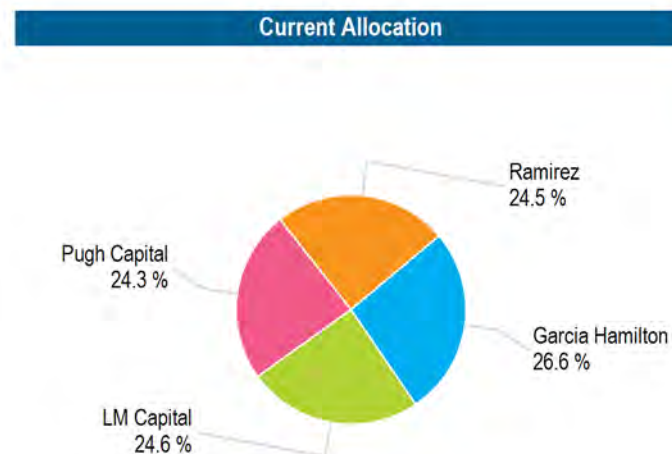
- Principal Protection
- ◆ BC US Int Ag x Credit Blend
- ▲ Universe Median
- 68% Confidence Interval
- eV US Interm Duration Fixed Inc Gross



Illinois State Universities Retirement System

Principal Protection | As of March 31, 2023

Principal Protection Fixed Income Characteristics	
	Portfolio Q1-23
Fixed Income Characteristics	
Yield to Maturity	4.32
Average Duration	4.79
Average Quality	AA
US Sector Allocation	
UST/Agency	39.49
Corporate	3.91
MBS	45.18
ABS	4.01
Muni	5.76
Other	1.03
Cash	0.62
Credit Quality Allocation	
AAA	69.80
AA	24.78
A	3.54
BBB	1.28
Cash	0.60



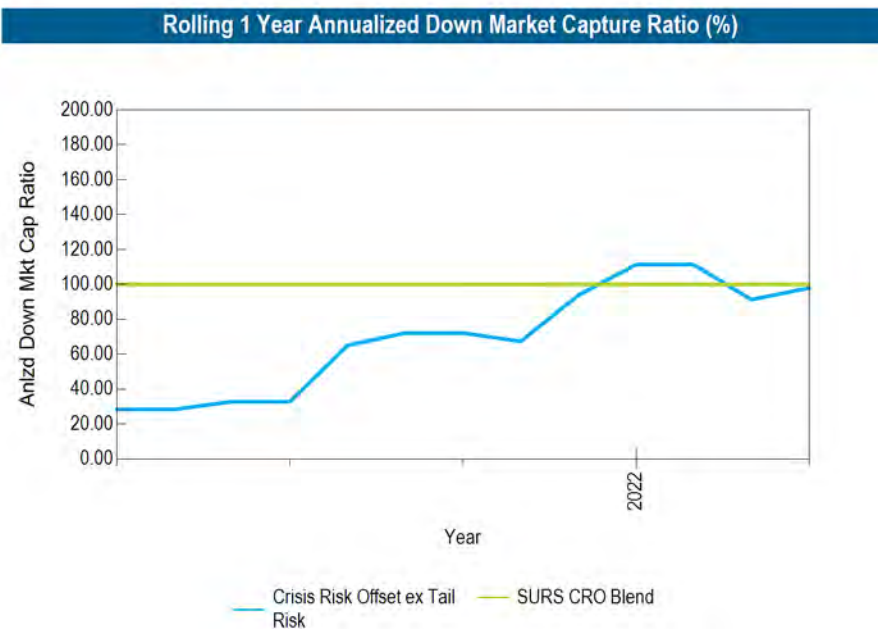
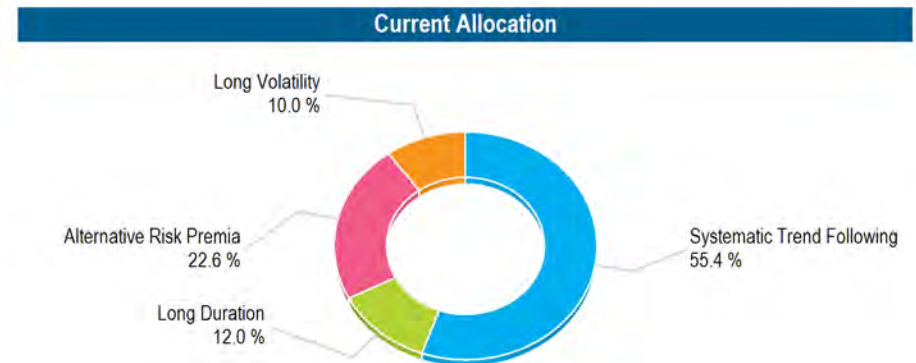
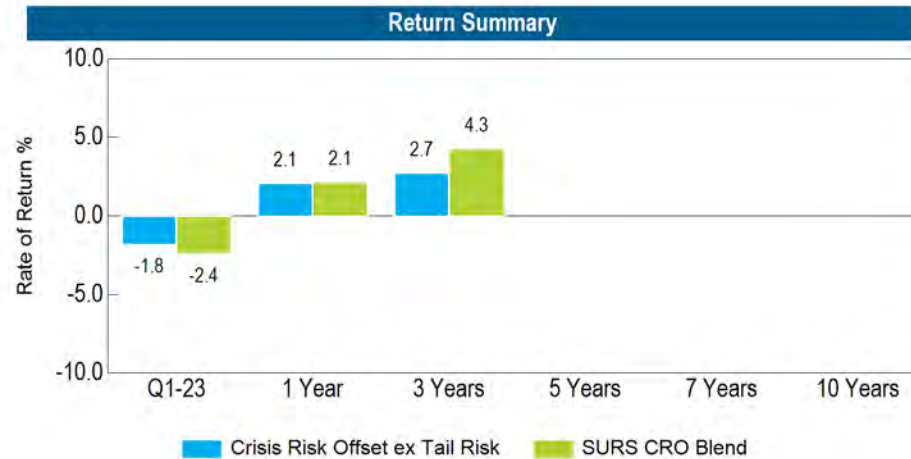
Top Holdings	
UST 0% NTS 15/05/31 USDC-2031	3.01%
UST 1.75% NTS 31/12/24 USD1000	2.57%
UST 0% NTS 31/07/29 USDN-2029	2.55%
UST 0% NTS 15/08/31 USDE-2031	2.17%
UST 0% NTS 15/05/25 USDAN-2025	1.62%
UST 0% NTS 29/02/24 USDAY-2024	1.55%
UST 6.25% BDS 15/05/30 USD1000	1.50%
FHLMC 2.500 2051-10-01 USD	1.48%
UST 2.75% SNR 15/02/2024 USD100	1.44%
UST 0% NTS 15/02/32 USDB-2032	1.41%

Crisis Risk Offset



Illinois State Universities Retirement System

Crisis Risk Offset ex Tail Risk | As of March 31, 2023



	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Crisis Risk Offset ex Tail Risk	-1.8	2.1	2.7	--
MSCI ACWI IMI	6.9	-7.7	15.6	--
S&P 500	7.5	-7.7	18.6	--
Bloomberg Intermediate Agg ex Credit	2.4	-2.9	-7.0	--
Bloomberg Aggregate	3.0	-4.8	-2.8	--
Bloomberg Commodities	-5.4	-12.5	20.8	--



Illinois State Universities Retirement System

Crisis Risk Offset ex Tail Risk | As of March 31, 2023

RISK RETURN STATISTICS		
December 01, 2019 Through March 31, 2023		
	Crisis Risk Offset ex Tail Risk	SURS CRO Blend
RETURN SUMMARY STATISTICS		
Number of Periods	40	40
Maximum Return	4.89	6.05
Minimum Return	-5.15	-2.68
Annualized Return	3.54	5.39
Total Return	12.29	19.12
Annualized Excess Return Over Risk Free	2.60	4.45
Annualized Excess Return	-1.85	0.00
RISK SUMMARY STATISTICS		
Beta	0.85	1.00
Upside Deviation	4.84	5.83
Downside Deviation	4.39	2.46
RISK/RETURN SUMMARY STATISTICS		
Annualized Standard Deviation	7.33	7.36
Alpha	-0.08	0.00
Sharpe Ratio	0.35	0.60
Excess Return Over Market / Risk	-0.25	0.00
Tracking Error	3.97	0.00
Information Ratio	-0.47	--
CORRELATION STATISTICS		
R-Squared	0.73	1.00
Correlation	0.85	1.00
Market Proxy: SURS CRO Blend		
Risk-Free Proxy: 91 Day T-Bills		

Appendix

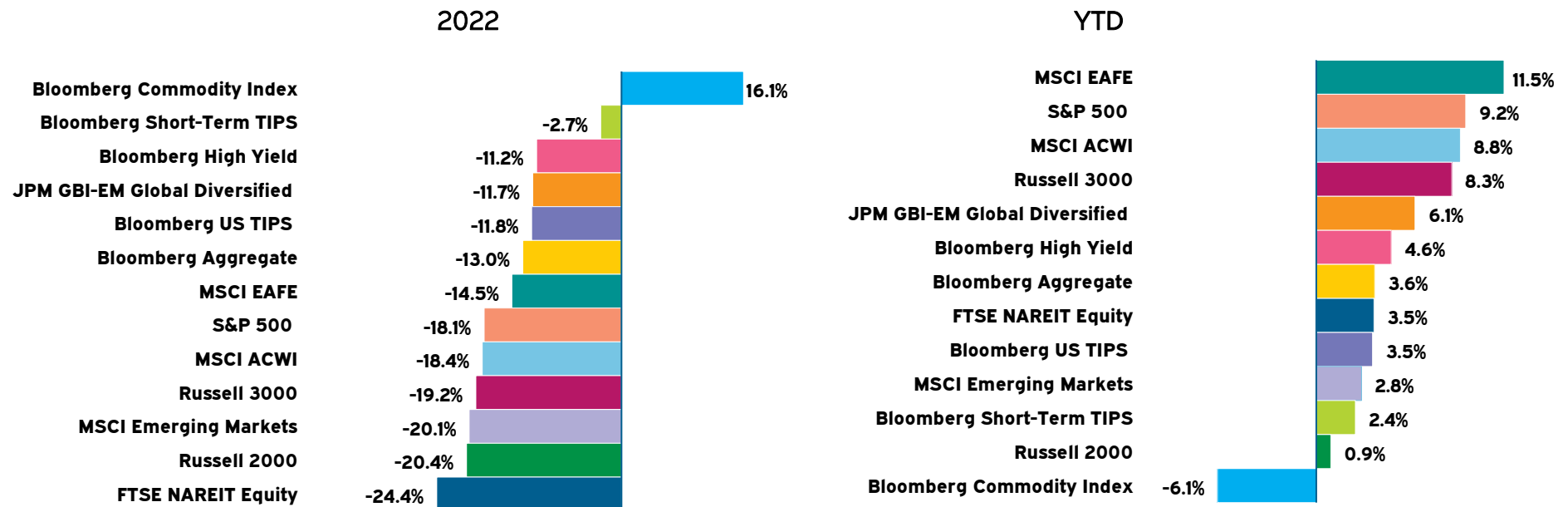
Economic and Market Update

Data as of April 30, 2023

Commentary

- Most asset classes added to first quarter gains in April as investors remained focused on slowing inflation and a potential end to rate hikes.
- The Fed increased interest rates for the tenth time after month-end, to a range of 5.0% - 5.25%, with this action largely expected to be their final hike.
 - Political struggles over the debt ceiling led to a significant increase in short-term rates and a historically high price of the cost to insure against defaults on US Treasuries.
 - US equity markets (Russell 3000) rose in April (+1.1%) adding to YTD gains (+8.3%). Some of the largest technology names drove positive results, with lingering issues in the banking sector (e.g., First Republic) weighing on parts of the equity markets.
 - Non-US developed equity markets also rallied in April (MSCI EAFE +2.8%) extending the outperformance relative to the US so far in 2023 (+11.5% versus +8.3%).
 - Emerging market equities fell in April (-1.1%) driven by declines in China (-5.2%). They significantly trail developed market equities YTD returning +2.8% partly due to higher US-China tensions.
 - After a strong March driven by the issues in the banking sector, bonds had more subdued gains in April, with the broad US bond market (Bloomberg Aggregate) gaining 0.6% for the month.
- This year, the path of inflation and monetary policy, slowing global growth, and the war in Ukraine, as well as recent pressures in regional banks and the looming debt ceiling breach in the US, will all be key.

Index Returns¹



- After a particularly difficult 2022, most public market assets are up in 2023, building on gains from the fourth quarter of last year.
- Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall and growth has slowed.

¹ Source: Bloomberg and FactSet. Data is as of April 30, 2023.

Domestic Equity Returns¹

Domestic Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	1.6	7.5	9.2	2.7	14.5	11.4	12.2
Russell 3000	1.1	7.2	8.3	1.5	14.1	10.6	11.7
Russell 1000	1.2	7.5	8.8	1.8	14.2	11.1	12.0
Russell 1000 Growth	1.0	14.4	15.5	2.3	13.6	13.8	14.5
Russell 1000 Value	1.5	1.0	2.5	1.2	14.4	7.7	9.1
Russell MidCap	-0.5	4.1	3.5	-1.7	13.8	8.0	9.9
Russell MidCap Growth	-1.4	9.1	7.6	1.6	9.2	9.0	10.8
Russell MidCap Value	0.0	1.3	1.3	-3.5	15.8	6.4	8.7
Russell 2000	-1.8	2.7	0.9	-3.6	11.9	4.1	7.9
Russell 2000 Growth	-1.2	6.1	4.8	0.7	7.8	4.0	8.4
Russell 2000 Value	-2.5	-0.7	-3.1	-8.0	15.5	3.7	7.0

US Equities: Russell 3000 Index rose 1.1% in April and 8.3% YTD.

- US stocks rose in April as optimism over the Fed potentially ending its rate hiking campaign was mitigated by lingering concerns in the banking sector and slowing growth. Year-to-date gains in the US equity market remain strong though.
- Most sectors in the Russell 3000 index rose during the month, led by consumer staples and communication services. Growth stocks have significantly outperformed value stocks across the market capitalization spectrum this year, particularly in the large cap space due to technology stocks.
- The resurgence of large cap technology stocks is also driving the outperformance of the large cap indices versus the small cap indices. Weakness in the performance of small cap bank stocks is also contributing to results.

¹ Source: Bloomberg. Data is as of April 30, 2023.

Foreign Equity Returns¹

Foreign Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	1.7	6.9	8.7	3.0	9.8	2.5	4.0
MSCI EAFE	2.8	8.5	11.5	8.4	11.7	3.6	4.8
MSCI EAFE (Local Currency)	2.3	7.5	9.9	7.7	13.5	5.8	7.1
MSCI EAFE Small Cap	2.0	4.9	7.0	-1.2	9.2	1.0	5.7
MSCI Emerging Markets	-1.1	4.0	2.8	-6.5	4.3	-1.0	1.8
MSCI Emerging Markets (Local Currency)	-0.7	3.8	3.1	-3.9	5.5	1.5	5.0
MSCI China	-5.2	4.7	-0.7	-5.8	-6.3	-5.0	2.7

Foreign Equity: Developed international equities (MSCI EAFE) rose 2.8% in April and 11.5% YTD. Emerging market equities (MSCI EM) fell -1.1% for the month but rose 2.8% YTD.

- Non-US equities had mixed results in April with developed markets (MSCI EAFE) gaining and outpacing US equities (2.8% versus 1.1%) for the month, while emerging markets (MSCI Emerging Markets) were the one area that declined (-1.1%).
- Developed market equity gains were broad-based across European sectors, while financials and energy were strong in the UK. In Japan, further weakness in the yen continued to boost market sentiment.
- The decline in emerging market equities (-1.1%) was driven largely by China (-5.2%). An escalation in US-China tensions and mixed results from the reopening of their economy weighed on shares. Taiwan also experienced marked declines over geopolitical concerns and weakness in semiconductors, while India was a bright spot.

¹ Source: Bloomberg. Data is as of April 30, 2023.

Fixed Income Returns¹

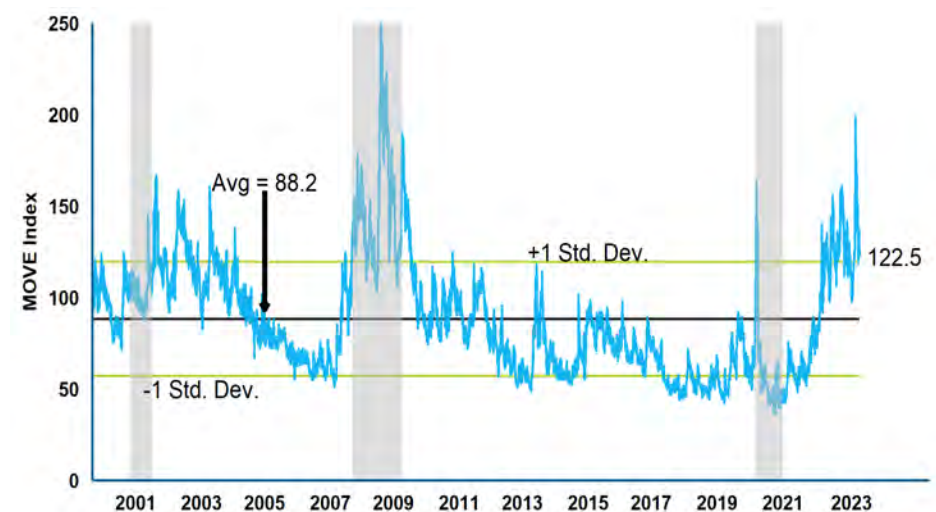
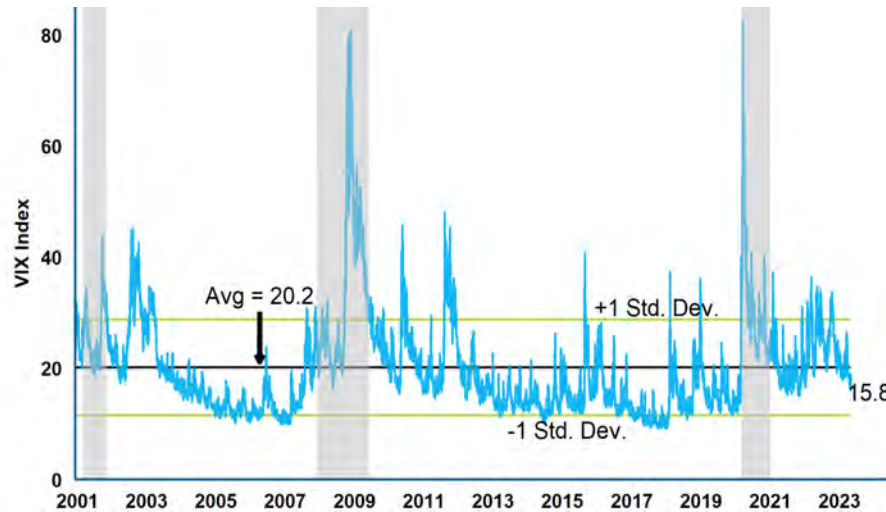
Fixed Income	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	0.6	2.9	3.6	-0.3	-2.5	1.3	1.6	4.8	6.3
Bloomberg Aggregate	0.6	3.0	3.6	-0.4	-3.2	1.2	1.3	4.4	6.5
Bloomberg US TIPS	0.1	3.3	3.5	-4.0	0.9	3.0	1.4	4.0	7.0
Bloomberg Short-term TIPS	0.2	2.2	2.4	-0.1	3.1	3.0	1.6	4.6	2.6
Bloomberg High Yield	1.0	3.6	4.6	1.2	4.7	3.3	4.0	8.5	4.2
JPM GBI-EM Global Diversified (USD)	0.9	5.2	6.1	6.6	-0.1	-1.6	-1.8	7.0	5.0

Fixed Income: The Bloomberg Universal rose 0.6% in April and 3.6% YTD as global sovereign debt yields generally declined for major economies.

- As issues in the banking sector from March eased, the US bond market had a calm April, with interest rates, outside of the very shortest maturities, remaining stable.
- The TIPS index and short-term TIPS index had gains for the month but trailed the broad US bond market (Bloomberg Aggregate).
- High yield bonds (+1.0%) had the best results for the month as they particularly benefited from support for the banking sector.

¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of April 30, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

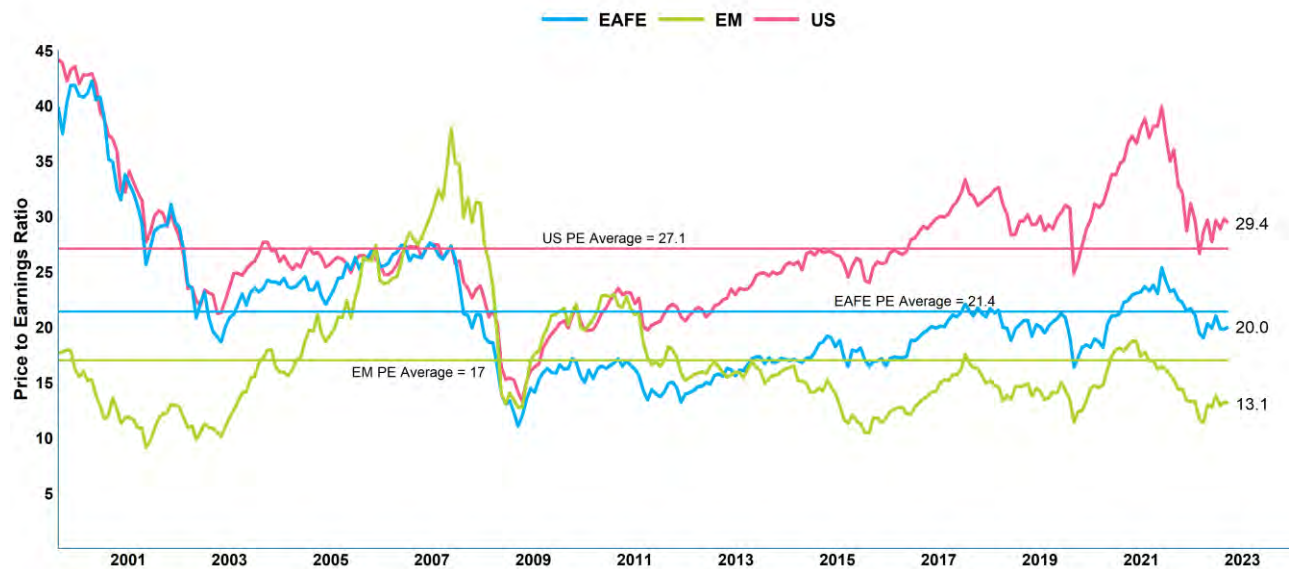
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) continued to decline in April, reaching levels not seen since late 2021 as investors anticipate the end of the Fed's policy tightening.
- In comparison, the bond market remains on edge after last year's historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above its long-run average, but off its recent peak during the heart of the banking crises.

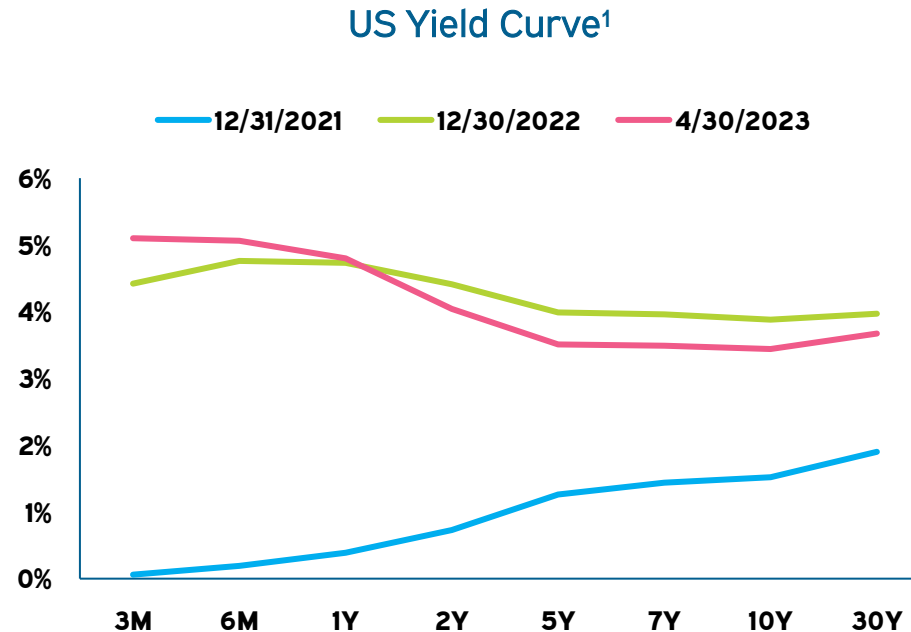
¹ Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of April 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and April 2023.

Equity Cyclically Adjusted P/E Ratios¹



- After its dramatic decline last year the US equity price-to-earnings ratio remains above its long-run (21st century) average.
- International developed market valuations are slightly below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

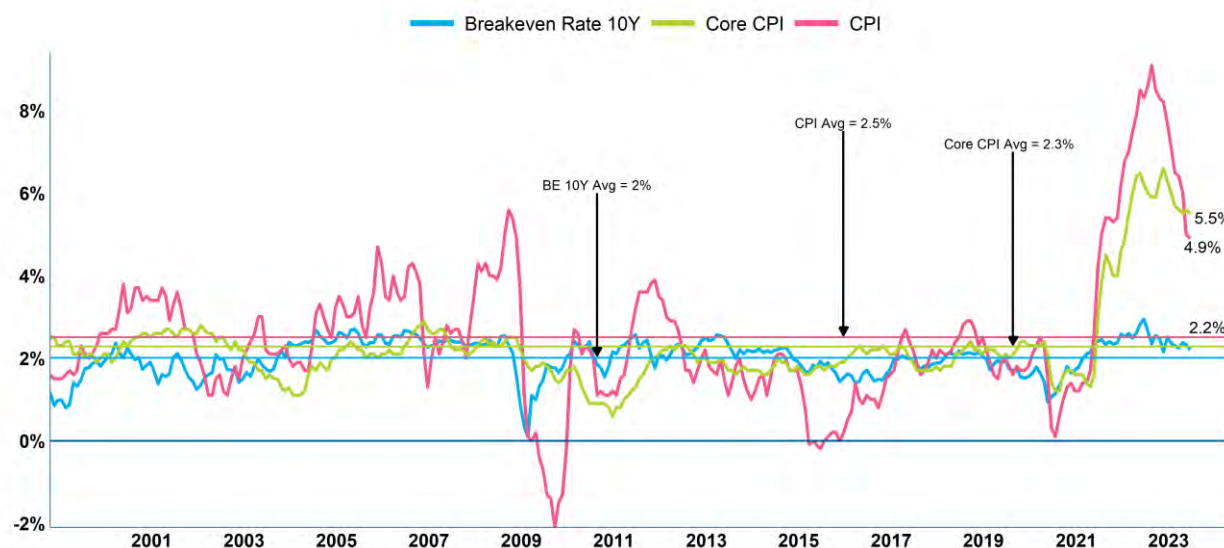
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of April 2023. 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.



- Interest rates have declined this year for maturities two years and beyond, given expectations for peaking policy, while the rates on the very shortest maturities increased due to debt ceiling concerns.
- During April, interest rates at the very front-end of the yield curve rose significantly as the debt ceiling debate continued while other maturities remained largely flat.
- After hitting -1.07% in early March, the yield spread between two-year and ten-year Treasuries finished the month largely unchanged at -0.59%. The more closely watched measure (by the Fed) of three-month and ten-year Treasuries remained inverted. Inversions in the yield curve have often preceded recessions.

¹ Source: Bloomberg. Data is as of April 30, 2023.

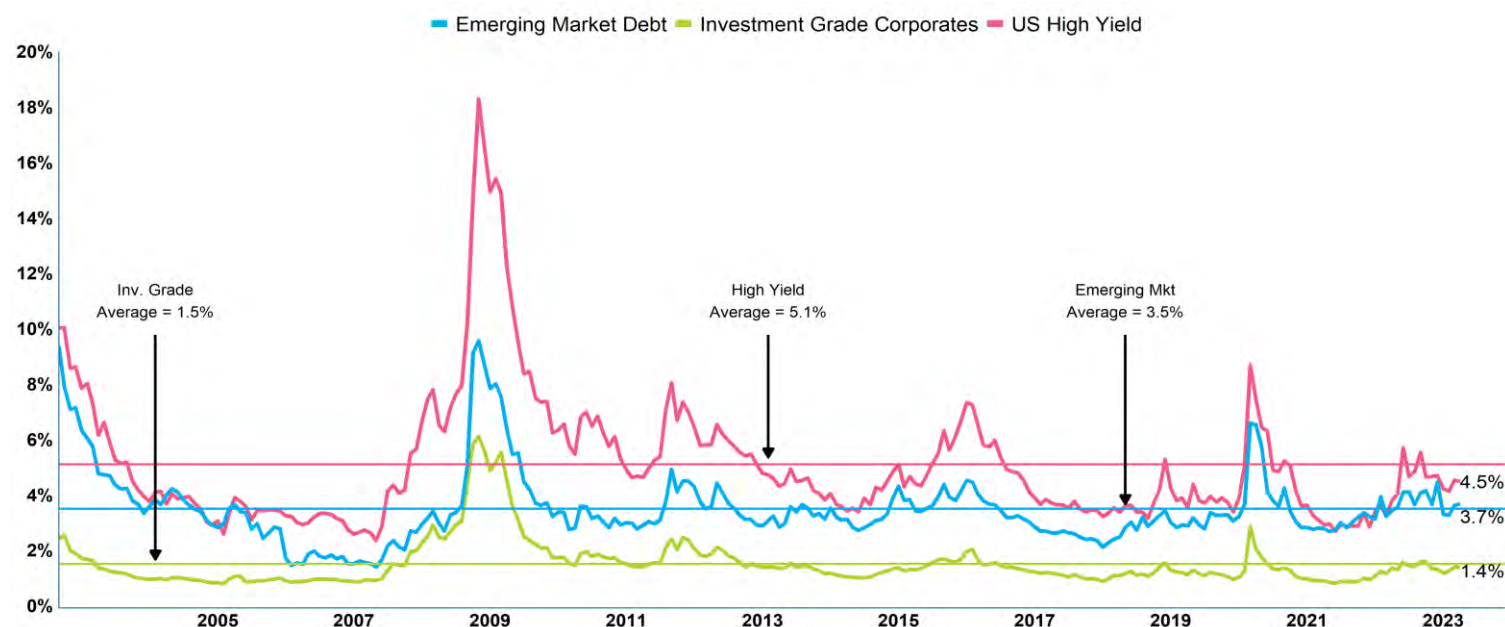
Ten-Year Breakeven Inflation and CPI¹



- Inflation continued to decline in April, with the year-over-year reading falling from 5.0% to 4.9% (slightly below expectations). The month-over-month rate of price increases was 0.4% (matching expectations), with food prices remaining flat, energy prices slightly increasing (0.6%), and all other areas rising 0.4% in aggregate.
- Core inflation – excluding food and energy – fell slightly (5.6% to 5.5%) but remained stubbornly high as the cost for shelter continued to rise.
- Inflation expectations (breakevens) declined very slightly for the month as investors continue to expect inflation to track back toward the Fed's 2% target.

¹ Source: Bloomberg. Data is as of April 30, 2023. 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.

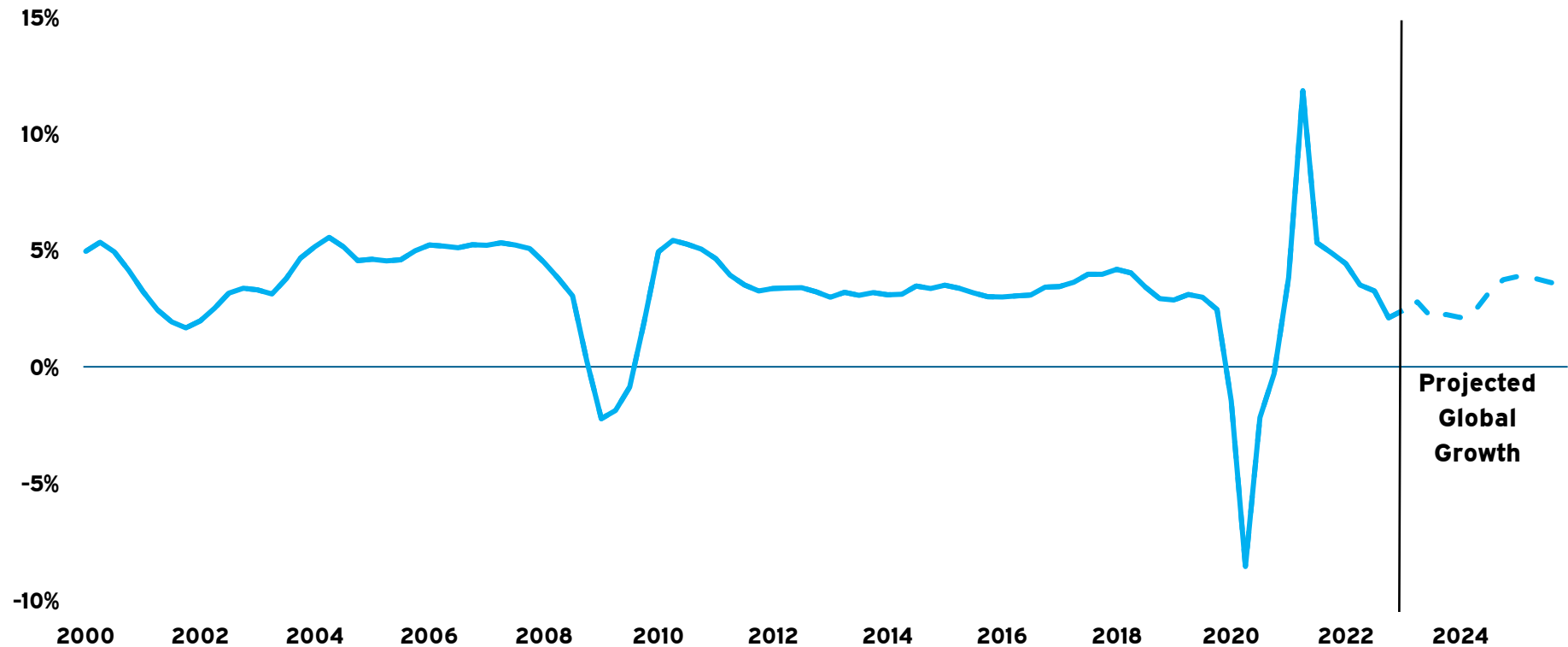
Credit Spreads vs. US Treasury Bonds¹



- Spreads (the added yield above a comparable maturity Treasury) were stable in April as concerns over the banking sector subsided and government and corporate bonds had similar gains.
- High yield spreads remain below the long-term average. Investment grade spreads and emerging market spreads are narrower than high yield spreads and close to their respective long-term averages.

¹ Sources: Bloomberg. Data is as of April 30, 2023. 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.

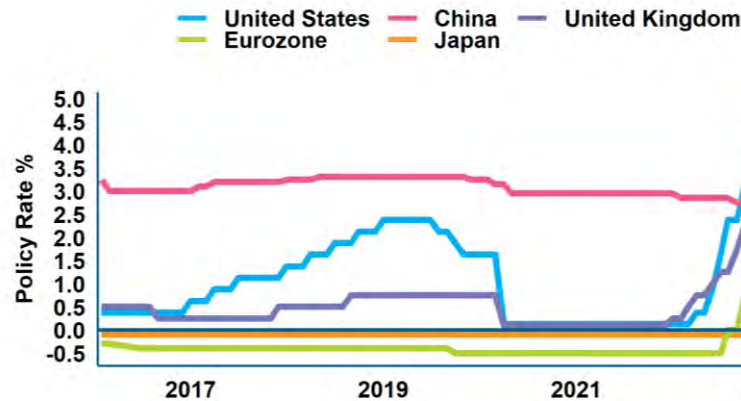
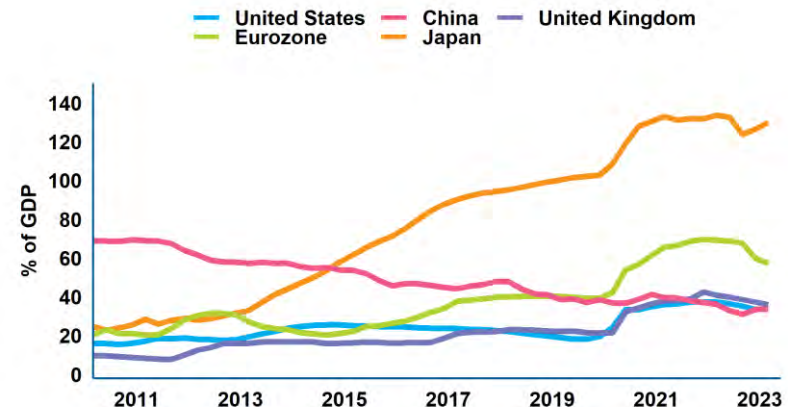
Global Real Gross Domestic Product (GDP) Growth¹



- Global economies are expected to slow this year compared to 2022, with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated April 2023.

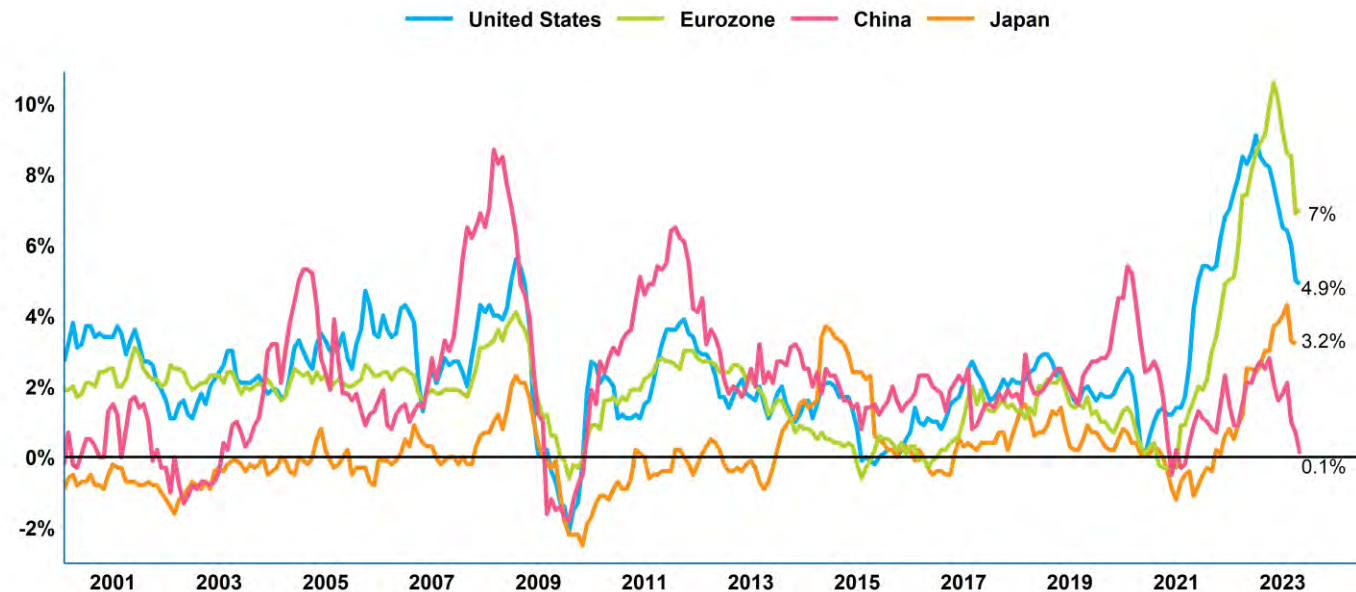
Central Bank Response¹

Policy Rates

Balance Sheet as % of GDP


- In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and recent signs of instability in the banking sector have led to expectations for the slowing of policy tightening going forward.
- Since month-end, the Fed remained committed to fighting inflation despite pressures in the banking sector, raising rates another 25 basis points to a range of 5.0% to 5.25% at its early May meeting. This is largely expected to be the Fed's last rate hike in this cycle.
- China's central bank is a notable exception. They are expected to maintain an accommodative monetary stance to support the economy.
- Looking ahead the risk remains for a policy error as central banks attempt to balance bringing down inflation, maintaining financial stability, and growth.

¹ Source: Bloomberg. Policy rate data is as of April 30, 2023. 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 March 31, 2023.

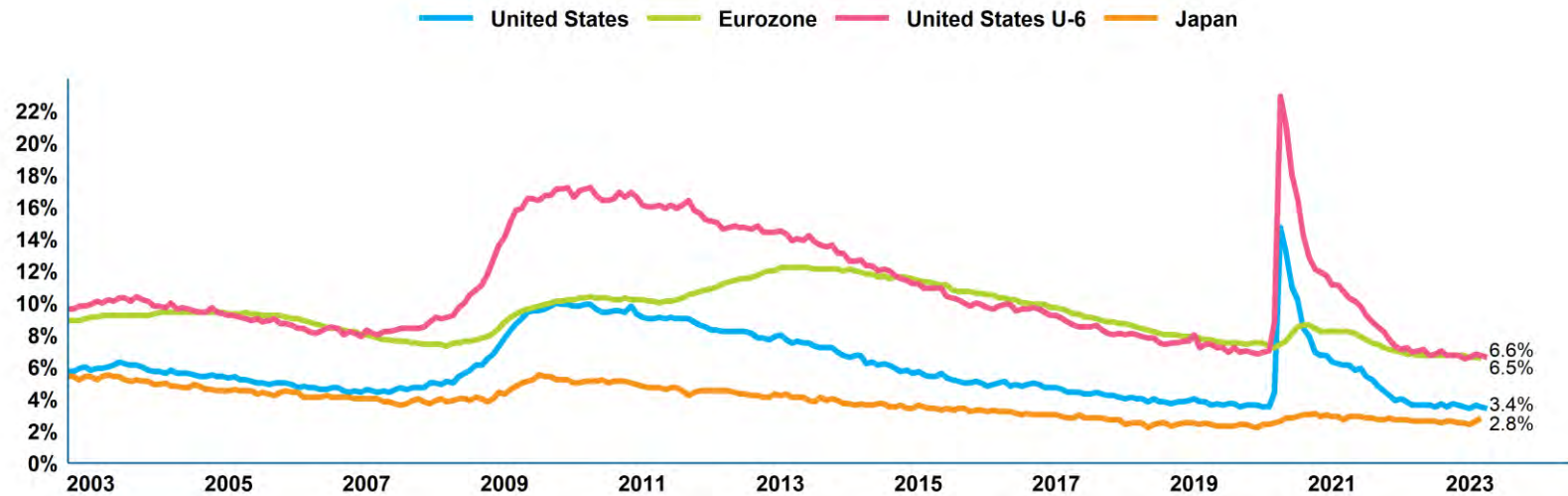
Inflation (CPI Trailing Twelve Months)¹



- Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.
- In the US, inflation fell to 4.9% at month-end, while eurozone inflation increased slightly (7.0% versus 6.9%) a level well off its peak. Despite 2023's declines in the US and Europe, inflation levels remain elevated.
- Inflation remains relatively lower in China and Japan and has also declined recently. In China, inflation levels approached 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

¹ Source: Bloomberg. Data is as April 30, 2023. The most recent Japanese inflation data is as of March 2023.

Unemployment¹



- Labor markets have significantly improved from the pandemic as economies have largely reopened.
- Despite slowing growth and high inflation, the US labor market remains a particular bright spot. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.6% but also declined dramatically from their peak.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, likely leading to higher unemployment.
- Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been relatively flat through the pandemic given less layoffs.

¹ Source: Bloomberg. Data is as April 30, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of March 2023.

US Dollar versus Broad Currencies¹



- The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- Late last year and into early this year, the dollar has fallen, as weaker economic data and declining inflation led to investors anticipating the end of Fed tightening.
- This year, the track of inflation across economies and the corresponding monetary policies will likely be key drivers of currency moves.

¹ Source: Bloomberg. Data as of April 30, 2023.

Summary

Key Trends:

- The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.
- Recent issues related to the banking sector have created a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.
- Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.
- In the US, the end of many fiscal programs is expected to put the burden of continued growth on consumers. Costs for shelter, medical care, and education could continue to rise, keeping 'sticky price' inflation at elevated levels.
- The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.
- Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's rushed exit from COVID-19 restrictions and on-going weakness in the real estate sector.



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Investment Department

To: Investment Committee
 From: Investment Staff
 Date: May 19, 2023
 Re: Corporate Governance Update

Below please find a status update of governance activity since our March meeting.

Proxy Voting Provider – Glass Lewis

- **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 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 40 shareholder proposals (SHP) during the quarter:

- SHP Regarding Misc. Issues: SURS voted in line with the Glass Lewis standard policy on issues on miscellaneous shareholder proposals.
- SHP Regarding Misc. Social Issues: SURS voted in support of increasing a company's disclosure of social issues.
- SHP Regarding Golden Parachutes: SURS voted in support of shareholders being consulted before a company enters into severance agreements that provide benefits exceeding 2.99 times salary and bonus.

The quarterly report, "SURS Q1 2023 Voting Analysis," is attached to this memo as Exhibit A.

Enrollment in BlackRock's Voting Choice Platform

BlackRock recently included the BlackRock Global Alpha Tilts Fund in their Voting Choice platform. As an investor in that fund, SURS can elect to vote the pro-rata ownership of our shares in the fund. SURS staff is working with BlackRock to use Voting Choice to vote our share of ballots based on Glass Lewis' Public Fund Policy guidelines. This voting policy is tailored to "help ensure that public funds fulfill all statutory and common law obligations governing proxy voting, with the intent of maximizing the long-term economic benefits of its plan participants, beneficiaries, and citizens of the state in which the fund resides."

Legislative Update

In response to the recent passage of SB2152 by both houses of the Illinois General Assembly, SURS staff is in the process of fulfilling the requirements outlined in the legislation which require producing an annual report that describes how the Board is considering sustainability factors as defined in the Illinois Sustainable Investing Act. The report is required to:

- (1) describe the Board's strategy as it relates to the consideration of sustainable investment factors;
- (2) outline the process for regular assessment across the total portfolio of potential effects from systemic and regulatory risks and opportunities, including, but not limited to, environmental factors on the assets of the plan;
- (3) disclose how each investment manager serving as a fiduciary to the Board integrates sustainability factors into the investment manager's investment decision-making process;
- (4) provide a comprehensive proxy voting report;
- (5) provide an overview of all corporate engagement and stewardship activities; and
- (6) include any other information the Board deems necessary.

The report will be published on the SURS website by September 1, 2023, and annually thereafter.

Council of Institutional Investors (CII)

The CII's 2023 Spring Conference took place March 6th-8th in Washington, D.C. Trustee Fred Giertz, Trustee Mitch Vogel, and Ms. Ellen Hung attended in person.

- **CII Board Members Elected**

CII members elected the 2022-2023 Board of Directors. SURS cast a vote according to the instructions provided by CII. Four new members joined five returning directors, including Trustee Mitch Vogel.

- **Highlight of Topics Covered at the Conference**

What's Next for Activism – Jeffrey Smith, CEO and CIO of Starboard Value spoke about activist investing. He and his firm have been at the center of several high-profile campaigns including those at Salesforce, Kohls, and Darden Restaurants. He explained how funds like his convince management to implement good governance practices and that company boards are often open to his ideas about how to boost performance. He expressed concern

about universal proxy cards citing the potential to dilute shareholders' votes and emphasized the importance of independent sessions during corporate board meetings.

View from the Boardroom - A panel of experienced directors offered CII members their unique insights into the dynamics now playing out in corporate boardrooms in this post-pandemic economy. They discussed the different concerns (shortage of talent and employees) and necessities (relationship with CEO to allow for questioning and collaboration) facing company boards today.

A Fireside Chat with SEC Chair, Gary Gensler - CII Executive Director Amy Borrus queried Gensler about the host of rulemakings that the commission has been drafting. Among the topics discussed were SEC's proposed climate disclosure rule, the International Sustainability Standards Board's climate disclosure standards, other SEC rules related to human capital management, board diversity and diversity disclosure, and the recent implosions in cryptocurrency firms.

Can We Take Politics Out of ESG? – A panel of experts reviewed the challenges and solutions surrounding ESG today. Some of the challenges noted included the politicization, misrepresentation, and monetization of ESG. Panelists discussed potential solutions through proper risk management, transparency, and a market-driven standard-setting process.

In addition to the topics covered above and reported by CII in their Weekly Governance Alert from March 16, 2023, a variety of member-hosted meetings also took place during the event.

Links to video recordings of the conference are available upon request.



TO: State Universities Retirement System (SURS)
FROM: Lucas Swertloff, Manager, Custom Policy
DATE: April 27, 2023
RE: Review of Vote Activity Report for First Quarter 2023

The Voting Activity Report for the First Quarter 2023 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 – 1Q2023

Votes against management account for 526 of the 2,623 proposals, or 20.05% of the votes. The top categories of votes against management are:

- **Election of Directors** – Votes on the election of directors account for 328 of the 526 votes against management, or about 62.35% of the votes against management, and 12.50% of the total votes.

The top three reasons for votes against management are:

Insufficient gender diversity accounts for 170 votes against management. The Public Pension Policy has strengthened its policy concerning gender diversity on boards. The policy has been updated to provide that, if less than 30% of the board is female, the Public Pension Policy will vote against the entire nominating committee. Previously, the Public Pension Policy would vote against male members of the nominating committee in instances where large-cap companies did not have at least 30% gender diversity and the chair of the nominating committee when mid- and small-cap companies did not have at least one woman on their boards.

The nominee is the CEO of a for-profit company and serves on more than two public company boards accounts for 30 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 27 of the votes against management. For U.S. companies, the Public Pension Policy will closely review director board commitments and will vote against directors serving on more than five total boards, for directors who are not also executives; and against directors serving more than two total boards, for a director who serves as an executive of a public company.

- **Ratification of Auditor** – Votes on the ratification of auditor account for 81 of the 526 votes against management, or about 15.39% of the votes against management, and 3.08% of the total votes.

The top reason for votes against management is:

The auditor's tenure is excessive, which accounts for 74 of the votes against management. Rotating auditors is an important safeguard against the relationship between the auditor and the company becoming too close, resulting in a lack of oversight due to complacency or conflicts of interest. Accordingly, the Public Pension Policy will 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 38 of the 526 votes against management, or about 7.22% of the votes against management, and 1.45% of the total votes.

The top three reasons for votes against management are:



The Company has pay for performance issues and does not link any long-term incentive grant to sustainability metrics accounts for 10 of the votes against management. The Public Pension Policy will vote against compensation plans where a company has both failed to provide an adequate link between pay and performance, and the company has neglected to incentivize environmental and social performance.

Concerning pay practices accounts for 12 of the votes against management. The Public Pension policy on this issue is to follow the Glass Lewis standard approach.

Pay and performance disconnect accounts for 9 of the votes against management. The Public Pension Policy will vote against the approval of a compensation report or policy when there is a significant disconnect between pay and performance.

Top Three Agenda Items Against Glass Lewis – 1Q2023

Votes against the Glass Lewis standard policy account for 290 of the 2,623 proposals, or about 11.05% 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 194 of the 290 votes against Glass Lewis or about 66.90% of the votes against Glass Lewis and 7.40% of the total votes.

The top three reasons for votes against Glass Lewis are:

Insufficient gender diversity on the board of directors accounts for 120 of the votes against Glass Lewis. The Public Pension Policy has strengthened its policy concerning gender diversity on boards. The policy has been updated to provide that, if less than 30% of the board is female, the Public Pension Policy will vote against the entire nominating committee. Previously, the Public Pension Policy would vote against male members of the nominating committee in instances where large-cap companies did not have at least 30% gender diversity and the chair of the nominating committee when mid- and small-cap companies did not have at least one woman on their boards.

The nominee is the CEO of a for-profit company and serves on more than two public company boards accounts for 30 of the votes against Glass Lewis. 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 23 of the votes against Glass Lewis. For U.S. companies, the Public Pension Policy will closely review director board commitments and will vote against directors serving on more than five total boards, for directors who are not also executives; and against directors serving more than two total boards, for a director who serves as an executive of a public company.

- **Ratification of Auditor** – Votes on the ratification of auditor account for 68 of the 290 votes against Glass Lewis or about 23.45% of the votes against Glass Lewis, and 2.60% of the total votes.



The top reason for votes against Glass Lewis is:

The auditor's tenure is excessive accounts for all 68 votes against Glass Lewis. Rotating auditors is an important safeguard against the relationship between the auditor and the company becoming too close, resulting in a lack of oversight due to complacency or conflicts of interest. Accordingly, the Public Pension Policy will 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 10 of the 290 votes against Glass Lewis or about 3.45% of the votes against Glass Lewis, and 0.39% 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 10 votes against Glass Lewis. The Public Pension Policy will vote against compensation plans where a company has both failed to provide an adequate link between pay and performance, and the company has neglected to incentivize environmental and social performance.

Shareholder Proposals - 1Q2023

During quarter one there were 40 shareholder proposals (SHPs), accounting for 1.53% of the total proposals. Governance proposals were the most common, accounting for 19 of the 40 SHPs or 47.50% of the SHPs. Overall, SURS voted SHPs against management 14 times, while SURS voted SHPs against Glass Lewis 6 times.

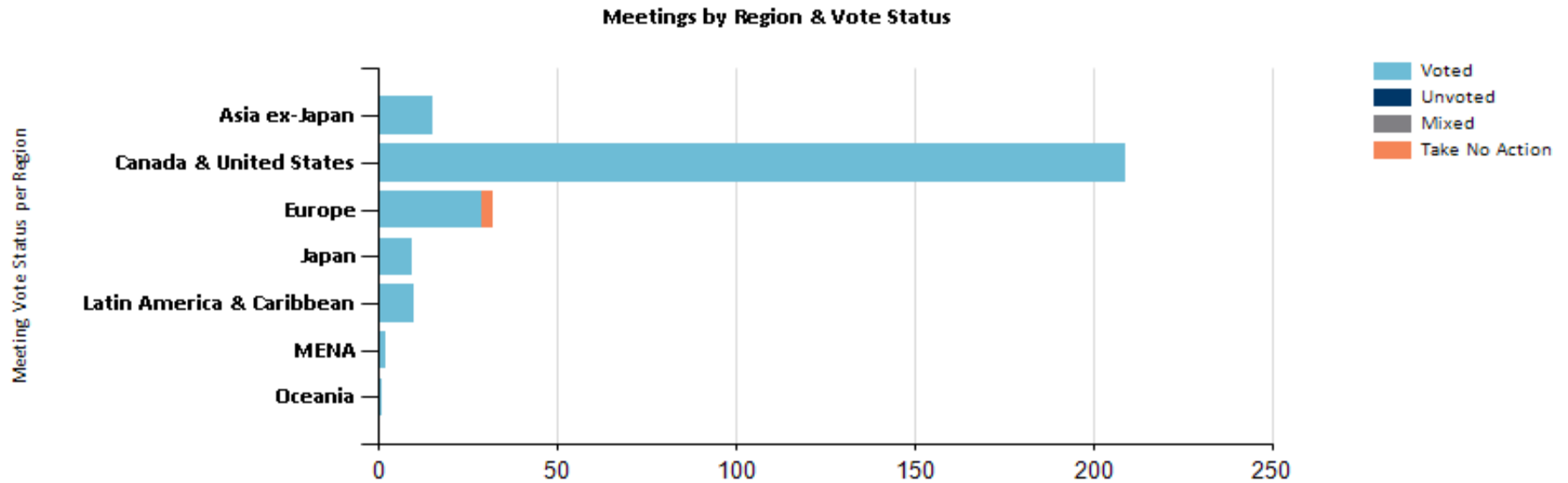
The three most common SHPs are:

- **SHP Regarding Misc. Issue** – accounts for 6 of the SHPs or 15%. The public pension policy follows the Glass Lewis standard policy on this issue.
- **SHP Regarding Misc. Social Issue** – accounts for 6 of the SHPs or 15%. 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 Golden Parachutes** – accounts for 3 of the SHPs or 7.50%. The public pension policy follows the Glass Lewis standard policy on this issue.

Meeting Statistics Report

SURS Q1 2023 Reporting

From 1/1/2023 to 3/31/2023



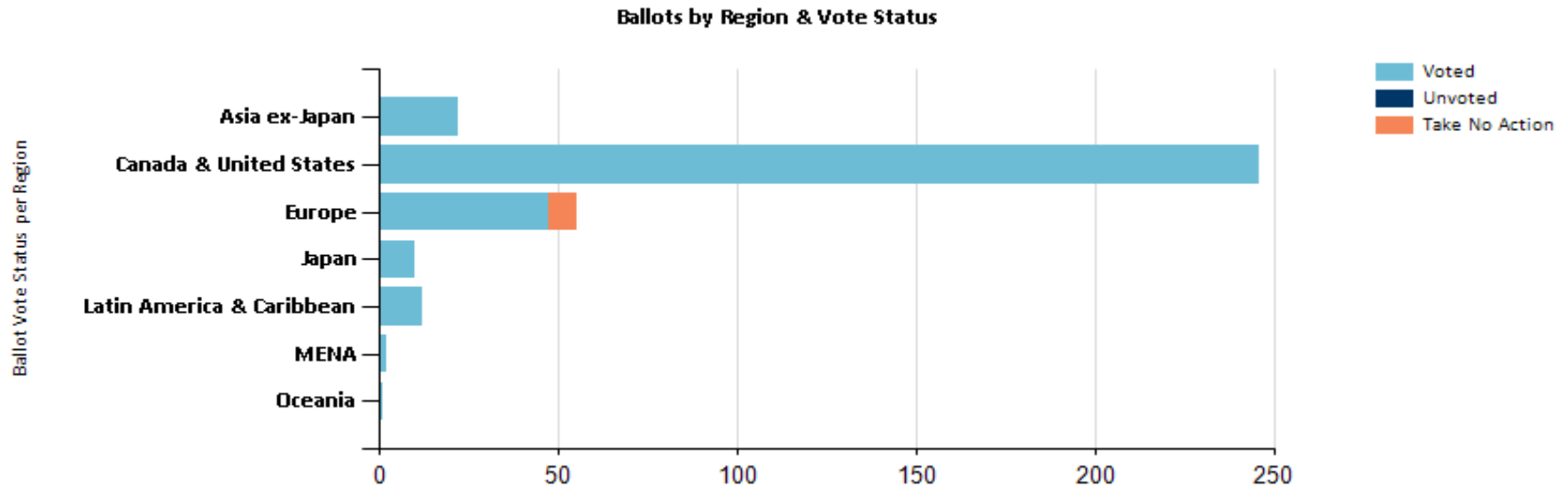
Region	Country Of Origin	Voted	Unvoted	Mixed	Take No Action	Total
Total for all Regions		275	0	0	3	278
Asia ex-Japan		15	0	0	0	15
	China	3	0	0	0	3
	India	1	0	0	0	1
	Indonesia	1	0	0	0	1
	Korea, Republic of	8	0	0	0	8
	Singapore	2	0	0	0	2
Canada & United States		209	0	0	0	209
	Canada	2	0	0	0	2
	United States	207	0	0	0	207

Europe		29	0	0	3	32
	Austria	2	0	0	0	2
	Belgium	1	0	0	0	1
	Denmark	5	0	0	0	5
	Germany	1	0	0	0	1
	Ireland	4	0	0	0	4
	Italy	1	0	0	0	1
	Luxembourg	1	0	0	0	1
	Netherlands	4	0	0	0	4
	Spain	3	0	0	0	3
	Sweden	2	0	0	0	2
	Switzerland	1	0	0	3	4
	United Kingdom	4	0	0	0	4
Japan		9	0	0	0	9
	Japan	9	0	0	0	9
Latin America & Caribbean		10	0	0	0	10
	Bermuda	2	0	0	0	2
	Brazil	5	0	0	0	5
	Cayman Islands	1	0	0	0	1
	Mexico	2	0	0	0	2
MENA		2	0	0	0	2
	Israel	1	0	0	0	1
	Turkey	1	0	0	0	1
Oceania		1	0	0	0	1
	Australia	1	0	0	0	1

Ballot Statistics Report

SURS Q1 2023 Reporting

From 1/1/2023 to 3/31/2023



Region	Country Of Origin	Voted	Unvoted	Take No Action	Total
Total for all Regions		340	0	8	348
Asia ex-Japan		22	0	0	22
	China	4	0	0	4
	India	1	0	0	1
	Indonesia	1	0	0	1
	Korea, Republic of	12	0	0	12
	Singapore	4	0	0	4
Canada & United States		246	0	0	246
	Canada	2	0	0	2
	United States	244	0	0	244
Europe		47	0	8	55
	Austria	3	0	0	3
	Belgium	1	0	0	1

27-Apr-23

3 of 6

	Denmark	9	0	0	9
	Germany	1	0	0	1
	Ireland	10	0	0	10
	Italy	2	0	0	2
	Luxembourg	1	0	0	1
	Netherlands	4	0	0	4
	Spain	5	0	0	5
	Sweden	3	0	0	3
	Switzerland	2	0	8	10
	United Kingdom	6	0	0	6
Japan		10	0	0	10
	Japan	10	0	0	10
Latin America & Caribbean		12	0	0	12
	Bermuda	3	0	0	3
	Brazil	5	0	0	5
	Cayman Islands	1	0	0	1
	Mexico	3	0	0	3
MENA		2	0	0	2
	Israel	1	0	0	1
	Turkey	1	0	0	1
Oceania		1	0	0	1
	Australia	1	0	0	1

Proposal Statistics Report

SURS Q1 2023 Reporting

From 1/1/2023 to 3/31/2023

	Mgmt Proposals	SHP Proposals	Total Proposals
For	1878	16	1894
Against	517	24	541
Abstain	13	0	13
1 Year	89	0	89
2 Years	0	0	0
3 Years	0	0	0
Mixed	0	0	0
Take No Action	86	0	86
Unvoted	0	0	0
Totals	2583	40	2623

Management Proposals – Votes Cast

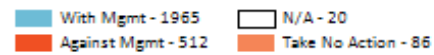


Shareholder Proposals – Votes Cast



	Mgmt Proposals	SHP Proposals	Total Proposals
With Management	1965	26	1991
Against Management	512	14	526
N/A	20	0	20
Mixed	0	0	0
Take No Action	86	0	86
Unvoted	0	0	0
Totals	2583	40	2623

Management Proposals – Votes versus Management



Shareholder Proposals – Votes versus Management



	Mgmt Proposals	SHP Proposals	Total Proposals
With Policy	2497	40	2537
Against Policy	0	0	0
Manual	0	0	0
N/A	0	0	0
Mixed	0	0	0
Take No Action	86	0	86
Unvoted	0	0	0
Totals	2583	40	2623

Management Proposals - Votes versus Policy

With Policy 2497 Take No Action 86



Shareholder Proposals - Votes versus Policy

With Policy 40



Management Proposals - Votes versus Glass Lewis

With GL 2213 Take No Action 86
Against GL 284



Shareholder Proposals - Votes versus Glass Lewis

With GL 34 Against GL 6



	Mgmt Proposals	SHP Proposals	Total Proposals
With Glass Lewis	2213	34	2247
Against Glass Lewis	284	6	290
N/A	0	0	0
Mixed	0	0	0
Take No Action	86	0	86
Unvoted	0	0	0
Totals	2583	40	2623

SURS FY 2023 Private Equity & Private Credit Commitment Activity

Date Closed	Fund	Vintage Year	Strategy	Sub-Strategy	Geography	Commitment (USD)
Private Equity Commitments						
10/05/2022	Base10 Advancement Initiative II*	2023	Growth Equity	Generalist	North America	\$ 25,000,000
01/26/2023	Greenbriar Equity Fund VI LP	2023	Buyouts	Mid-market Buyouts	North America	\$ 22,500,000
02/10/2023	GGV Capital IX LP	2023	Venture Capital	Multi-stage VC	Global - Diversified	\$ 32,000,000
02/10/2023	GGV Capital IX Plus LP	2023	Venture Capital	Multi-stage VC	Global - Diversified	\$ 8,000,000
03/02/2023	Cortec Group Fund VIII	2023	Buyouts	Mid-market Buyouts	North America	\$ 35,000,000
03/16/2023	OceanSound Partners Fund II*	2023	Buyouts	Lower middle market	North America	\$ 25,000,000
FY 2023 Private Equity Commitments						
						\$ 147,500,000

Private Credit Commitments						
7/1/2022	Silver Rock Tactical Allocation Fund - Vintage 2022*	2022	Private Debt	Special Situations	North America	\$ 200,000,000
9/30/2022	Ares Pathfinder Core Fund	Open-End	Private Debt	Specialty Lending	North America	\$ 50,000,000
12/29/2022	Silver Point Specialty Credit Fund III	2023	Private Debt	Direct Lending	North America	\$ 100,000,000
3/31/2023	Ares Pathfinder Fund II	2023	Private Debt	Opportunistic	North America	\$ 100,000,000
FY 2023 Private Credit Commitments						
						\$ 450,000,000

*MWDBE-owned firm



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Investment Department

To: Investment Committee
 From: Investment Staff
 Date: May 19, 2023
 Re: Summary Risk Report

Attached is the Summary Risk Report for the quarter ending March 31, 2023. Highlights for the quarter include:

- Appropriation Summary – FY 2023 state appropriations received were approximately \$1.6 billion, or 100% of the anticipated \$1.6 billion FYTD appropriations due, as of March 31, 2023. The total FY 2023 appropriation is \$2,118,567,000. The actuarial benefit payment projection for FY 2023 is \$3,139,190,000. The total FY 2022 appropriation was paid in full as of June 27, 2022.
- Cash Account Summary – Ending cash on hand was approximately \$144.8 million as of March 31, 2023. Net private partnership cash flows during the quarter were negative and approximately \$271 million.
- SURS Risk Exposures – 89% of Total Risk comes from the Non-Traditional Growth, Traditional Growth, and Stabilized Growth classes as of March 31, 2023.
- Total portfolio risk decreased from 13.30% to 9.31%.
 - Benchmark Risk decreased from 11.33 % to 9.40%.
 - Active Risk decreased slightly from 2.90% to 2.71%.
- Liquidity – Assets in Principal Protection, TIPS, CRO, Overlay, Cash, and Transition, the most liquid categories, amount for 29.88% of assets. Assets in these classes would allow the fund to cover 2.0 years of benefits assuming no contributions to the System or 7.3 years assuming contributions from the state and members. SURS projected annual net cash outflows are between \$827 million and \$991 million over the next 5 years.
- Risk Environment & Sentiment:
 - Market risk levels are high for Fixed Income Volatility, while Yield Curve Slope Level is in the bottom decile compared to historical numbers.
 - U.S Equity and Private Equity Valuations remain high. Real Estate vs Treasury Spreads are above average, moderating slightly from last quarter.
 - Market sentiment towards economic growth is negative for the fourth consecutive quarter.
- Operational Risk Summary: Shows a snapshot of key contracts and procedures to be reviewed periodically. No issues to report.



Summary Risk Report

Quarter Ending March 31, 2023



Appropriation Summary

<u>Month</u>	<u>Amount Due</u>	<u>Amount Received</u>	<u>(Under)/Over</u>	<u>% Received</u>
July	\$176,547,250	\$176,547,250	-	100%
August	\$176,547,250	\$176,547,250	-	100%
September	\$176,547,250	\$176,547,250	-	100%
October	\$246,547,250	\$176,547,250	\$70,000,000	140%
November	\$106,547,250	\$176,547,250	(\$70,000,000)	60%
December	\$176,547,250	\$176,547,250	-	100%
January	\$176,547,250	\$176,547,250		100%
February	\$176,547,250	\$176,547,250		100%
March	\$181,547,250	\$176,547,250	\$5,000,000	103%
April				
May				
June				
FYTD	\$1,593,925,250	\$1,588,925,250	\$5,000,000	100%

Total appropriation for FY 2023 is \$2,118,567,000

Actuarial benefit payments projection for FY 2023: \$3,114,392,000

A supplemental amount of \$38,759,300 was received in July 2022 from the Pension Stabilization Fund and is not included in the table above.



Cash Account Summary

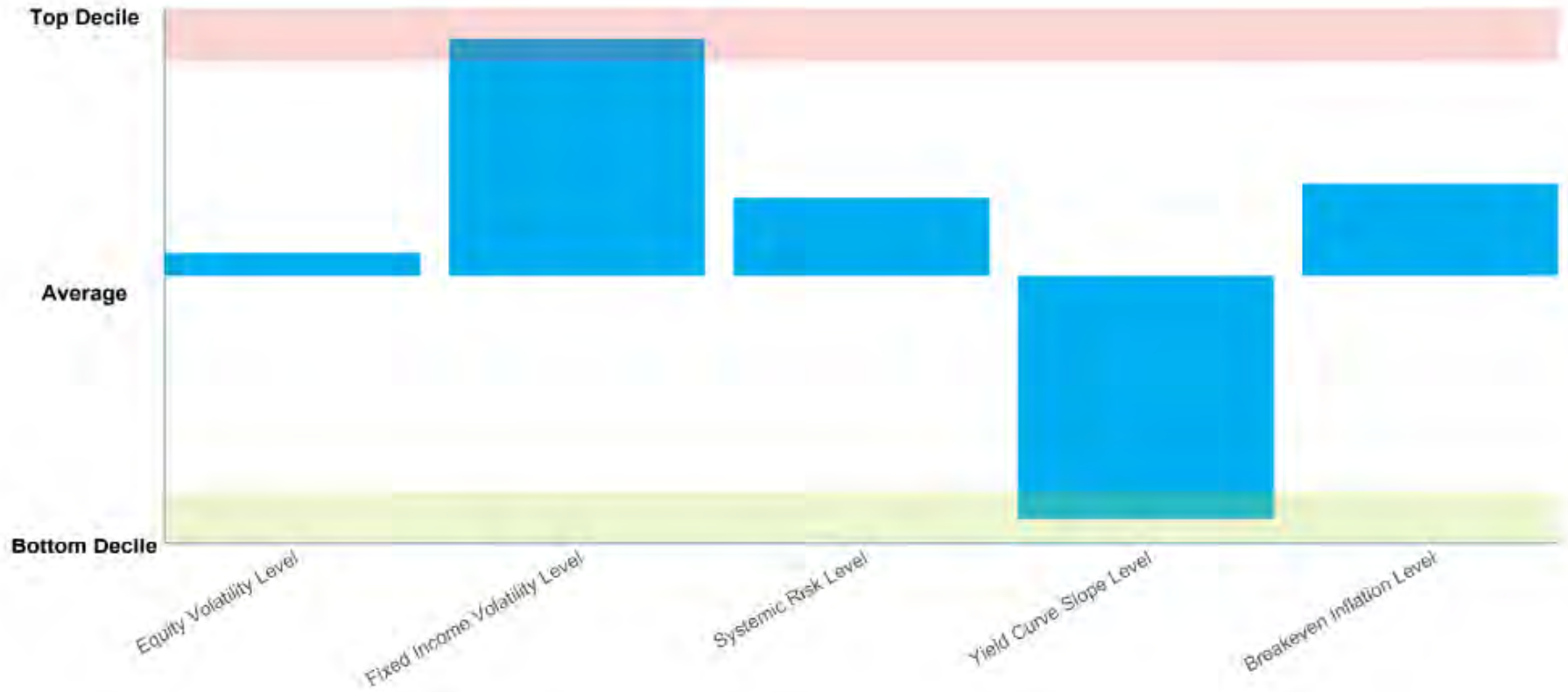
April 1, 2022 – March 31, 2023				
	Apr 1 – Jun 30	Jul 1 – Sep 30	Oct 1 – Dec 31	Jan 1 – Mar 31
Beginning Balance	\$402,610,004	\$386,001,963	\$101,904,304	\$458,562,824
Cash In:				
Partnership Distributions	140,160,145	79,941,958	57,470,494	122,630,908
Transfers	<u>242,549,670</u>	<u>708,674,256</u>	<u>833,915,910</u>	<u>454,226,637</u>
Total Cash In:	382,709,815	788,616,214	891,386,404	576,857,544
Cash Out:				
Partnership Capital Calls	(223,003,649)	(345,448,990)	(450,599,381)	(393,413,557)
Transfers	(60,000,000)	(378,003,851)	(79,115,414)	(124,113,511)
Net Contributions (Contributions less Benefit Payments)	<u>(116,314,206)</u>	<u>(349,261,032)</u>	<u>(5,013,088)</u>	<u>(373,097,773)</u>
Total Cash Out:	(399,317,855)	(1,072,713,873)	(534,727,883)	(890,644,841)
Ending Balance	\$386,001,963	\$101,904,304	\$458,562,824	\$144,775,528

Net private partnership cash flows were negative \$271 million for the quarter

Net contributions (contributions less benefit payments) were negative \$373 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 Fixed Income Volatility Level, moving into top decile range based on historical data.

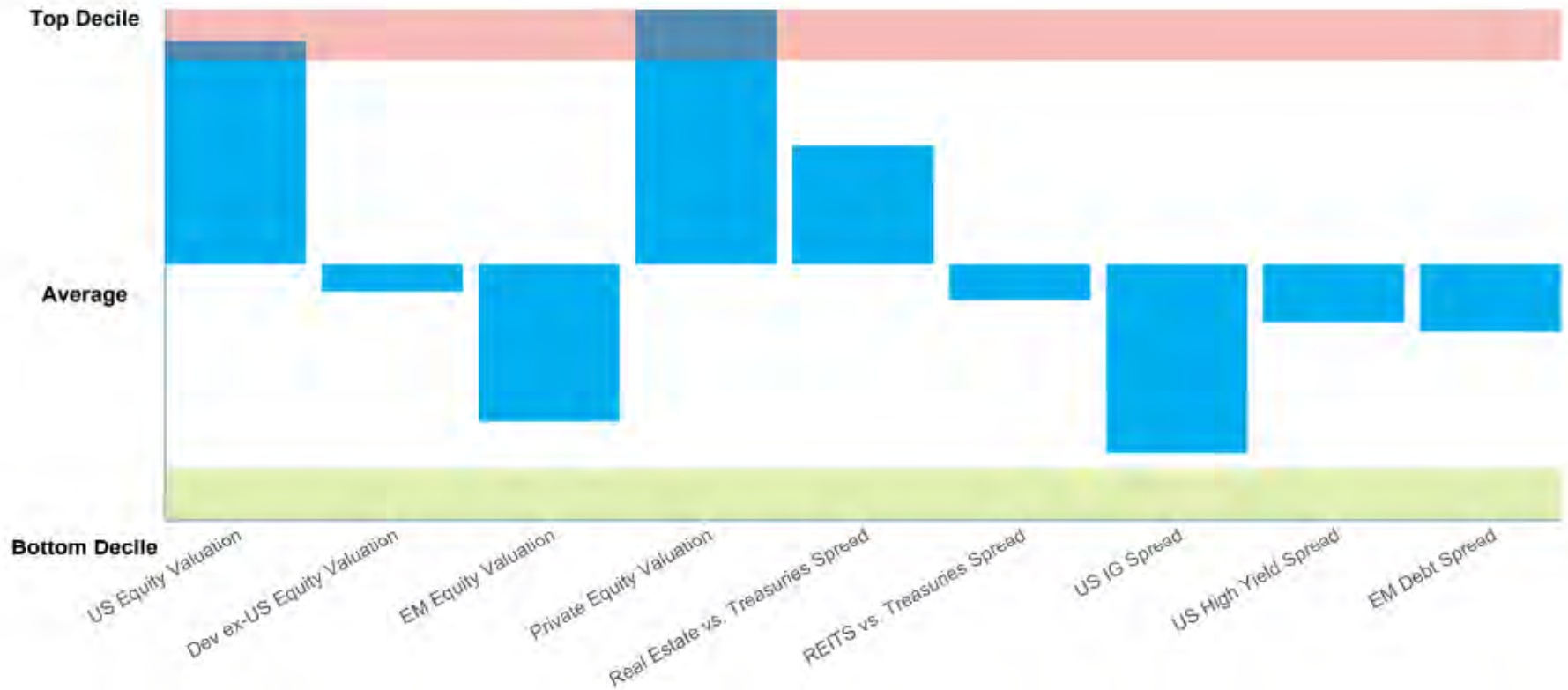
Decrease from last quarter in Equity Volatility Level.

Yield Curve Slope Level indicator remains in the bottom decile based on historical information.

Data as of March 31, 2023



Today's Risk Environment – Risk & Valuation



Market Valuations: Current state of valuation metrics per asset class relative to their own history.

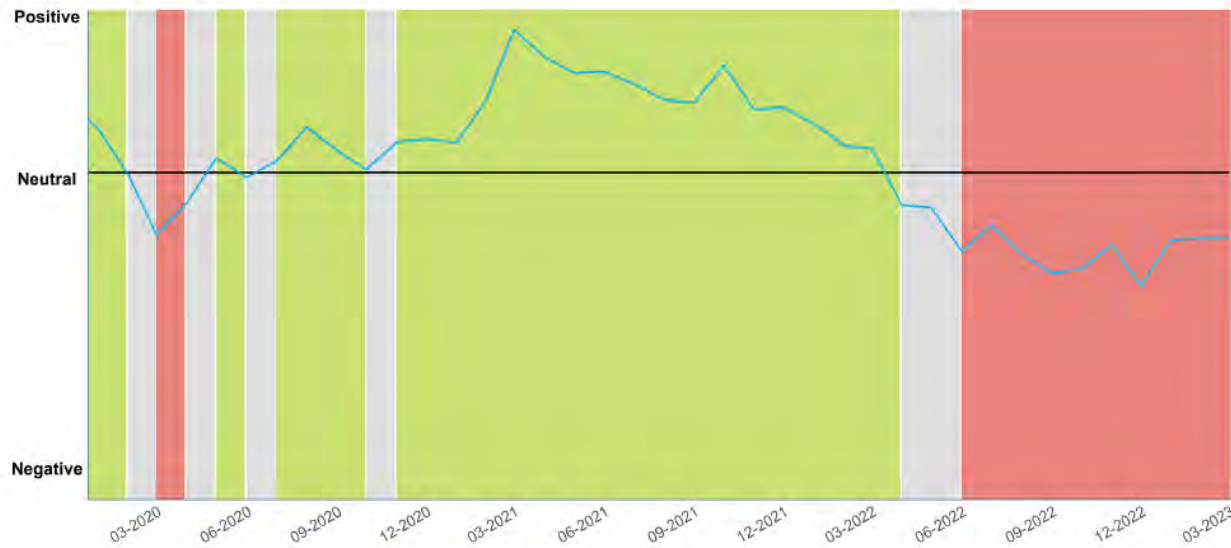
U.S. Equity Valuation and Private Equity Valuation are very high. Real Estate vs Treasuries Spread has come down modestly. Other valuations remain attractive.

Data as of March 31, 2023



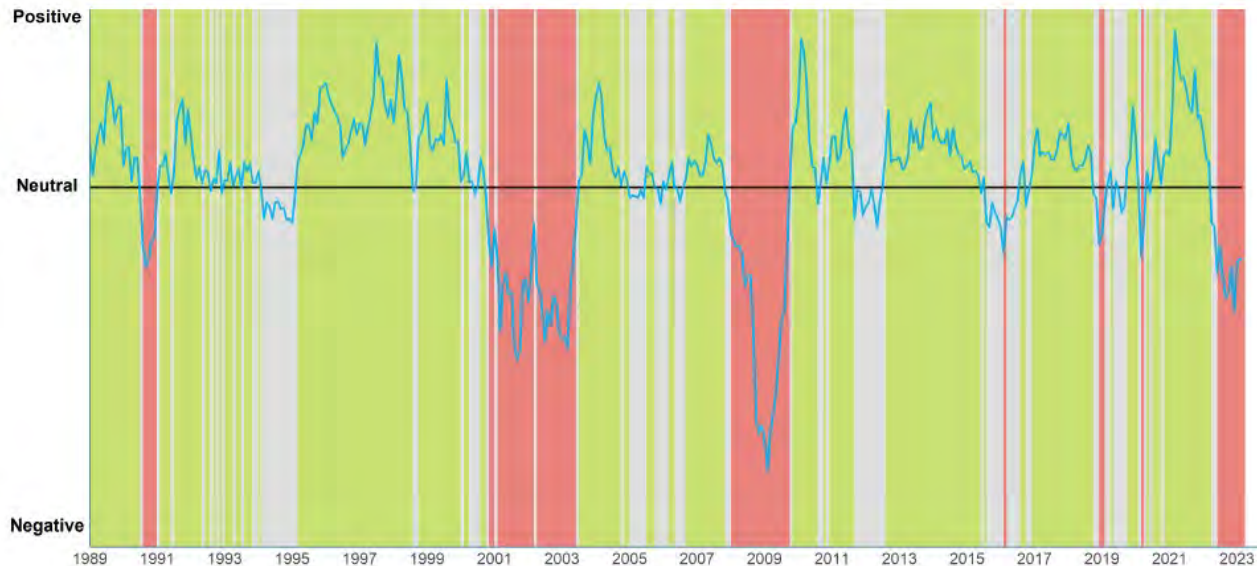
Today's Risk Environment – Sentiment/Concern

Market
Sentiment
Indicator
(Last
three
years)



Red indicator
indicates that
market's
sentiment towards
growth risk is
negative

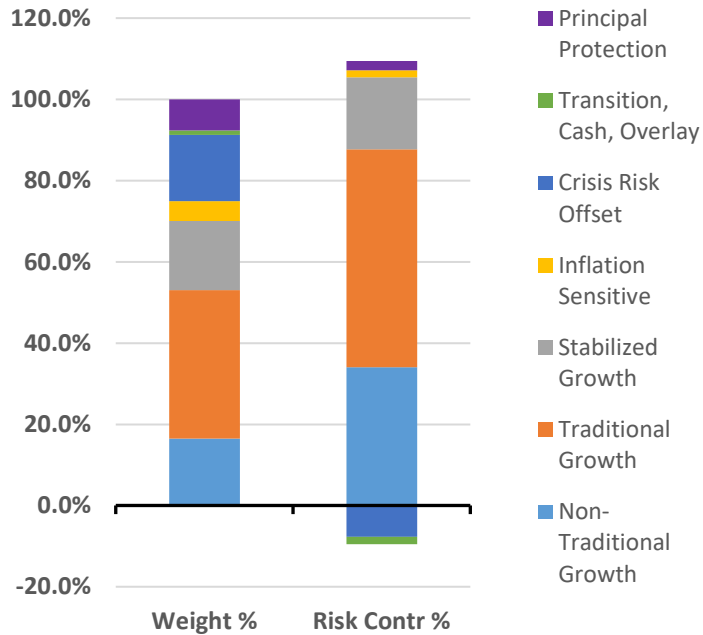
Market
Sentiment
Indicator
(All
History)



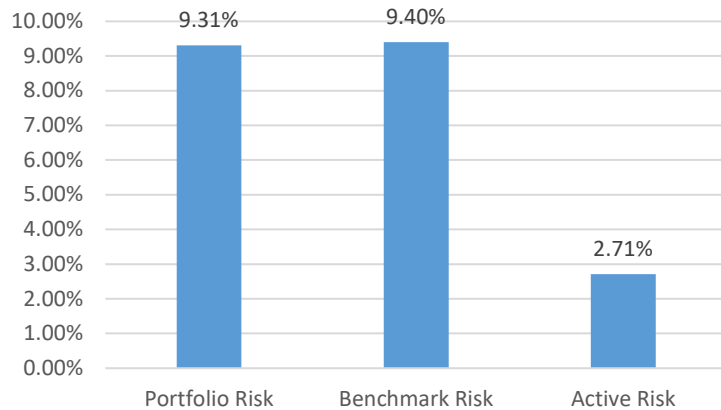
Market's
sentiment
towards growth
risk is negative



SURS Risk Exposures

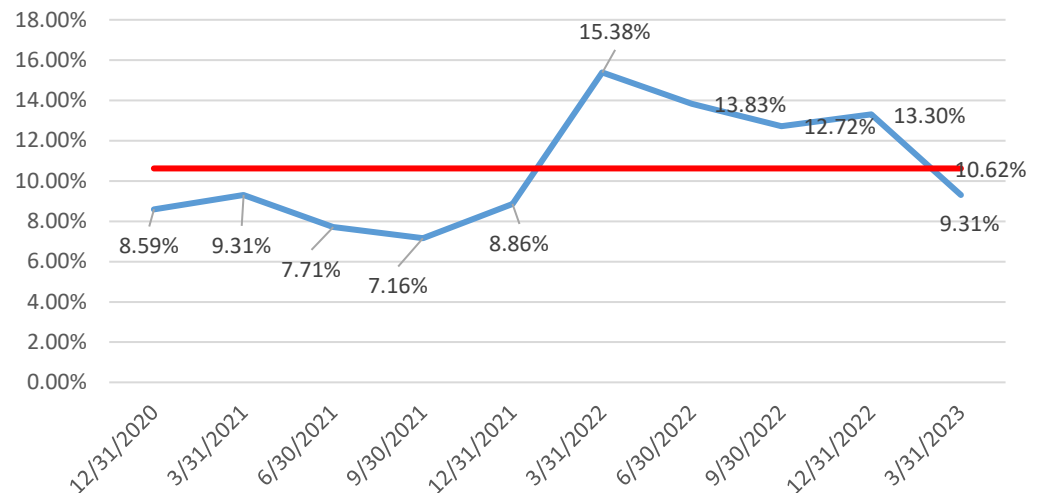


Plan Level Risk Overview



- Total Portfolio Risk comes primarily from the Traditional Growth and Non-Traditional Growth asset classes.
- Portfolio Risk and Benchmark Risk decreased slightly in the quarter.
- Portfolio Risk decreased from 13.30% to 9.31% the past quarter, falling below than the 10.62% average over time

Portfolio Risk Over Time





Scenario Analysis

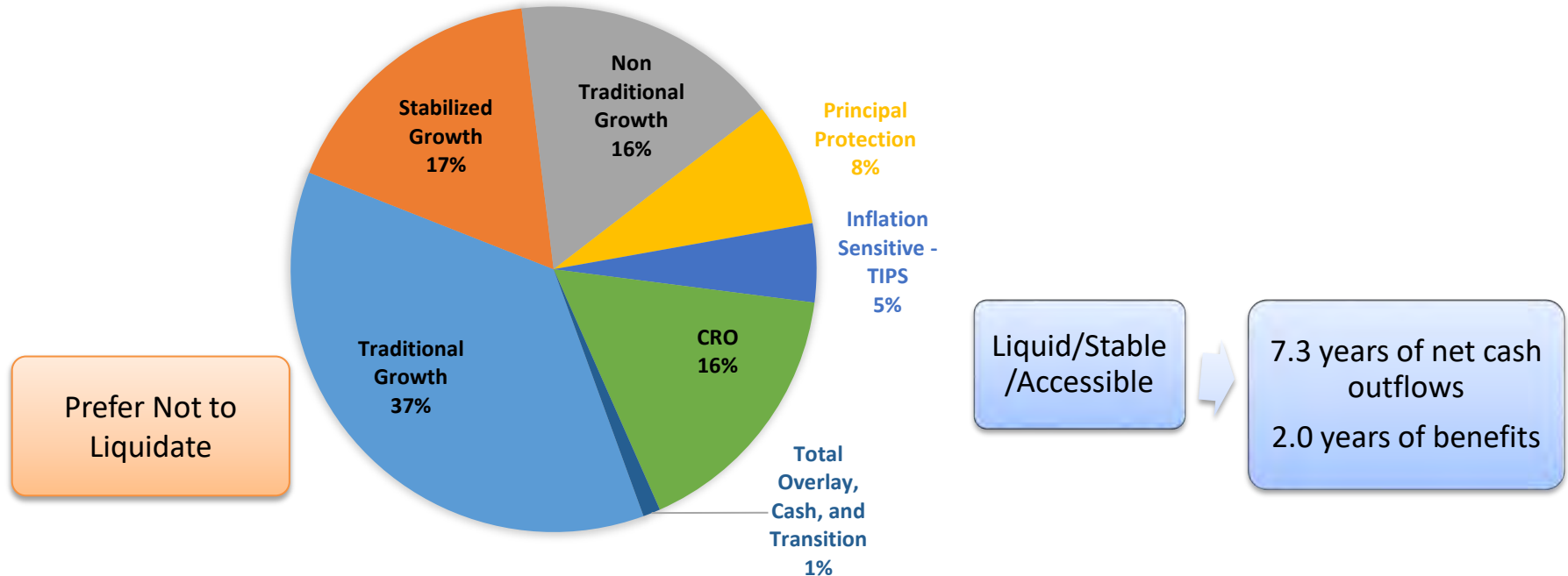
Scenario	Description	% Loss/Gain
Credit '07	Credit & liquidity crisis stemming from a severe slowdown in the housing market causing significant widening of credit spreads and increased implied volatility.	(10.26%)
Crash '08	Credit & liquidity crisis and equity market crash set off by Lehman Brothers bankruptcy. Significant credit spreads widening caused by massive deleveraging.	(19.58%)
FOMC Policy Paths-Lingering Inflation	Lingering Inflation Proves Markets Wrong.	(11.19%)
FOMC Policy Paths-Fed Engineers a Hard Landing	Description: The effects of the Feds policy response in 2022-23 are lagged and prove to be more significant than expected. Growth slows and cracks in the labor market begin to show.. Market prices in a significant recession in the US, driving a sizable risk-off reaction.	(11.73%)
Equity Volatility Increase	1% probability VIX Up movement.	(6.09%)
Stock Market Drop Global	1% probability movement of MSCI World Market Down.	(6.29%)

Current portfolio stress tested using historical scenarios.



Liquidity Profile

SURS TOTAL PORTFOLIO



Liquid/Stable group consists of Principal Protection, Inflation Sensitive – TIPS, CRO and Total Overlay which constitute for 29.9% of SURS portfolio.

SURS Projected Annual Net Contributions: -\$827M to -\$991M over next 5 years



Operational Risk Summary

Operational Risk	Target Review Cycle	Last Reviewed	Comments
Asset Allocation	3-5 Years	June 2021	Minor Changes to Strategic Allocation Targets approved April 2023
Investment Beliefs	3-5 Years	January 2020	
Investment Policy	Annual	September 2022	
Investment Procurement Policy	Annual	September 2022	
Private Real Assets Pacing and Strategic Plan	Annual	December 2022	
Private Equity Pacing and Strategic Plan	Annual	December 2022	
Private Credit Pacing and Strategic Plan	Annual	February 2023	
Capital Market Assumptions Review	Annual	March 2023	
Custodial Review	Annual	August 2022	
Securities Lending Review	Annual	March 2022	
Proxy Voting Guidelines	Annual	January 2022	2023 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	March 1, 2028	
CAPTRUST - DC Specialty	March 31, 2028	
Voya – DC Recordkeeper	August 2025	One year extension available at SURS discretion
Callan - Real Assets Specialty	September 29, 2023	Search Scheduled to conclude in June 2023
Meketa – Private Credit Advisor	December 10, 2025	
Aksia – Private Equity Advisor	September 1, 2024	
Glass Lewis - Proxy Voting Services	October 1, 2024	
ISBI, TRS, SURS Agreement - Quarterly Restricted Securities	June 30, 2025	ISBI negotiated an annual contract with MSCI to provide the quarterly restricted securities list through June 30, 2023, and renews annually through 2025 at the discretion of the parties involved. Costs for these services are shared equally between SURS, ISBI and TRS.



Illinois State Universities Retirement System

June 1, 2023

First Quarter 2023
Supplement to the Board Report



Illinois State Universities Retirement System

Agenda

1. Performance Results
2. Private Markets
3. Capital Markets Outlook & Risk Metrics
4. Appendix

Performance Results



Illinois State Universities Retirement System

US Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
US Equity	1,850,128,674	7.0	-7.7	19.0	10.0	11.7	11.4	11.0	Oct-80
<i>Dow Jones U.S. Total Stock Market</i>		<u>7.2</u>	<u>-8.8</u>	<u>18.3</u>	<u>10.3</u>	<u>11.9</u>	<u>11.6</u>	--	<u>Oct-80</u>
Excess Return		-0.2	1.1	0.7	-0.3	-0.2	-0.2		
Passive US Equity	1,736,132,554	7.2	-7.3	18.9	10.7	12.2	11.9	11.1	Oct-80
<i>Dow Jones U.S. Total Stock Market</i>		<u>7.2</u>	<u>-8.8</u>	<u>18.3</u>	<u>10.3</u>	<u>11.9</u>	<u>11.6</u>	--	<u>Oct-80</u>
Excess Return		0.0	1.5	0.6	0.4	0.3	0.3		
Rhumblin	1,736,132,554	7.2	-8.5	18.9	10.8	12.2	11.9	9.2	Feb-05
<i>Rhumblin Equity Index</i>		<u>7.3</u>	<u>-8.6</u>	<u>18.8</u>	<u>10.7</u>	<u>12.2</u>	<u>11.9</u>	<u>9.2</u>	<u>Feb-05</u>
Excess Return		-0.1	0.1	0.1	0.1	0.0	0.0	0.0	
Mid Cap	113,996,119	3.0	-13.5	21.7	7.1	8.9	--	8.2	Dec-13
<i>Russell MidCap</i>		<u>4.1</u>	<u>-8.8</u>	<u>19.2</u>	<u>8.1</u>	<u>9.9</u>	--	<u>9.1</u>	<u>Dec-13</u>
Excess Return		-1.1	-4.7	2.5	-1.0	-1.0		-0.9	
Channing Capital Management- SMID	113,996,119	3.0	-13.5	21.4	3.3	--	--	2.3	Feb-18
<i>Russell 2500 Value</i>		<u>1.4</u>	<u>-10.5</u>	<u>21.8</u>	<u>5.6</u>	--	--	<u>4.6</u>	<u>Feb-18</u>
Excess Return		1.6	-3.0	-0.4	-2.3			-2.3	



Illinois State Universities Retirement System

Non US Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non US Equity	1,504,640,668	7.1	-6.2	11.4	2.1	5.6	4.4	5.9	May-86
<i>SURS Non US Equity Blend</i>		<u>6.6</u>	<u>-5.8</u>	<u>12.2</u>	<u>2.5</u>	<u>5.9</u>	<u>4.2</u>	--	<i>May-86</i>
Excess Return		0.5	-0.4	-0.8	-0.4	-0.3	0.2		
Active Non-US Equity	1,234,727,448	7.1	-6.4	12.0	2.2	5.3	4.5	--	Jul-92
<i>MSCI EAFE</i>		<u>8.5</u>	<u>-1.4</u>	<u>13.0</u>	<u>3.5</u>	<u>6.2</u>	<u>5.0</u>	--	<i>Jul-92</i>
Excess Return		-1.4	-5.0	-1.0	-1.3	-0.9	-0.5		
Strategic Global Advisors	342,520,378	10.1	-2.7	11.6	2.1	4.8	5.6	5.2	Sep-08
<i>MSCI EAFE</i>		<u>8.5</u>	<u>-1.4</u>	<u>13.0</u>	<u>3.5</u>	<u>6.2</u>	<u>5.0</u>	<u>3.8</u>	<i>Sep-08</i>
Excess Return		1.6	-1.3	-1.4	-1.4	-1.4	0.6	1.4	
Ativo	280,292,981	6.2	-11.7	8.7	1.0	3.3	3.4	3.2	Aug-08
<i>MSCI ACWI ex US</i>		<u>6.9</u>	<u>-5.1</u>	<u>11.8</u>	<u>2.5</u>	<u>5.9</u>	<u>4.2</u>	<u>3.0</u>	<i>Aug-08</i>
Excess Return		-0.7	-6.6	-3.1	-1.5	-2.6	-0.8	0.2	
GlobeFlex Capital	349,269,936	6.1	-5.0	15.4	2.4	6.3	5.8	7.0	Dec-11
<i>MSCI ACWI ex USA</i>		<u>6.9</u>	<u>-5.1</u>	<u>11.8</u>	<u>2.5</u>	<u>5.9</u>	<u>4.2</u>	<u>5.3</u>	<i>Dec-11</i>
Excess Return		-0.8	0.1	3.6	-0.1	0.4	1.6	1.7	
Solstein Capital	94,236,702	7.2	-4.2	11.9	4.7	--	--	5.0	Nov-17
<i>MSCI EAFE</i>		<u>8.5</u>	<u>-1.4</u>	<u>13.0</u>	<u>3.5</u>	--	--	<u>3.5</u>	<i>Nov-17</i>
Excess Return		-1.3	-2.8	-1.1	1.2			1.5	
Nipun Emerging Markets	85,892,696	4.5	--	--	--	--	--	3.6	Dec-22
<i>MSCI Emerging Markets</i>		<u>4.0</u>	--	--	--	--	--	<u>2.5</u>	<i>Dec-22</i>
Excess Return		0.5						1.1	
William Blair Emerging Markets Growth	82,375,396	--	--	--	--	--	--	3.4	Mar-23
<i>MSCI Emerging Markets</i>		--	--	--	--	--	--	<u>3.0</u>	<i>Mar-23</i>
Excess Return								0.4	



Illinois State Universities Retirement System

Non US Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Xponance Non US Equity	139,359	-9.0	-19.3	6.3	--	--	--	4.1	May-20
<i>MSCI EAFE</i>		<i>8.5</i>	<i>-1.4</i>	<i>13.0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.0</i>	<i>May-20</i>
Excess Return		-17.5	-17.9	-6.7				-6.9	
Passive Non-US Equity	269,913,221	6.7	-6.1	9.4	1.2	5.2	3.7	--	Apr-86
<i>MSCI ACWI ex USA</i>		<i>6.9</i>	<i>-5.1</i>	<i>11.8</i>	<i>2.5</i>	<i>5.9</i>	<i>4.2</i>	<i>--</i>	<i>Apr-86</i>
Excess Return		-0.2	-1.0	-2.4	-1.3	-0.7	-0.5		
NTAM ACWI Ex-US IMI	269,443,682	6.7	-4.5	--	--	--	--	6.1	Aug-20
<i>MSCI ACWI ex USA IMI</i>		<i>6.6</i>	<i>-5.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>5.6</i>	<i>Aug-20</i>
Excess Return		0.1	1.3					0.5	



Illinois State Universities Retirement System

Global Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Global Equity	4,927,363,807	6.4	-5.9	16.4	8.8	11.3	10.0	7.8	May-02
<i>SURS Global Equity Blend</i>		<i>6.9</i>	<i>-7.7</i>	<i>15.6</i>	<i>6.8</i>	<i>9.1</i>	<i>8.0</i>	<i>6.9</i>	<i>May-02</i>
Excess Return		-0.5	1.8	0.8	2.0	2.2	2.0	0.9	
Global Equity - Active	2,613,976,810	5.7	-5.6	--	--	--	--	8.4	Nov-20
Wellington	557,316,976	7.1	-7.7	15.8	7.7	10.2	9.5	7.9	Jun-02
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	<i>15.4</i>	<i>6.9</i>	<i>9.2</i>	<i>8.1</i>	<i>7.1</i>	<i>Jun-02</i>
Excess Return		-0.2	-0.3	0.4	0.8	1.0	1.4	0.8	
Mondrian	497,410,632	4.7	-2.1	13.5	6.3	8.2	7.1	8.1	Dec-11
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	<i>15.4</i>	<i>6.9</i>	<i>9.2</i>	<i>8.1</i>	<i>9.1</i>	<i>Dec-11</i>
Excess Return		-2.6	5.3	-1.9	-0.6	-1.0	-1.0	-1.0	
T. Rowe Price Global	342,172,431	8.8	-12.2	16.1	10.3	14.0	13.4	13.0	Nov-08
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	<i>15.4</i>	<i>6.9</i>	<i>9.2</i>	<i>8.1</i>	<i>9.4</i>	<i>Nov-08</i>
Excess Return		1.5	-4.8	0.7	3.4	4.8	5.3	3.6	
Ariel Investments	233,850,432	4.5	-1.1	--	--	--	--	8.9	Aug-20
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>7.8</i>	<i>Aug-20</i>
Excess Return		-2.8	6.3					1.1	
Earnest Global	267,020,370	6.2	-3.5	--	--	--	--	12.1	Aug-20
<i>MSCI ACWI IMI Net USD</i>		<i>6.9</i>	<i>-7.7</i>	--	--	--	--	<i>8.0</i>	<i>Aug-20</i>
Excess Return		-0.7	4.2					4.1	
GQG Partners	266,988,094	-2.5	-8.9	--	--	--	--	5.4	Aug-20
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>7.8</i>	<i>Aug-20</i>
Excess Return		-9.8	-1.5					-2.4	
Strategic Global Advisors	170,283,713	7.4	-4.1	--	--	--	--	9.5	Aug-20
<i>MSCI World</i>		<i>7.7</i>	<i>-7.0</i>	--	--	--	--	<i>9.1</i>	<i>Aug-20</i>
Excess Return		-0.3	2.9					0.4	



Illinois State Universities Retirement System

Global Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Xponance Global Equity	278,934,162	9.6	-5.8	--	--	--	--	-0.1	Jan-21
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>1.7</i>	<i>Jan-21</i>
Excess Return		2.3	1.6					-1.8	
Xponance - Arga Inv ACWI	28,314,525	11.1	3.7	--	--	--	--	8.9	Jan-21
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>1.7</i>	<i>Jan-21</i>
Excess Return		3.8	11.1					7.2	
Xponance - Channing	13,996,171	9.9	-6.6	--	--	--	--	-0.9	Jan-21
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>1.7</i>	<i>Jan-21</i>
Excess Return		2.6	0.8					-2.6	
Xponance - Frontier GL	14,137,524	11.7	-6.1	--	--	--	--	-1.9	Jan-21
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>1.7</i>	<i>Jan-21</i>
Excess Return		4.4	1.3					-3.6	
Xponance - Fithian	35,340,108	14.5	-6.1	--	--	--	--	-4.2	Mar-22
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>-5.0</i>	<i>Mar-22</i>
Excess Return		7.2	1.3					0.8	
Xponance - Foresight	45,974,176	-0.5	-8.0	--	--	--	--	-6.2	Mar-22
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>-5.0</i>	<i>Mar-22</i>
Excess Return		-7.8	-0.6					-1.2	
Xponance - Martin	33,310,018	6.7	-11.0	--	--	--	--	-8.0	Mar-22
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>-5.0</i>	<i>Mar-22</i>
Excess Return		-0.6	-3.6					-3.0	



Illinois State Universities Retirement System

Global Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Xponance - Maytech	37,231,351	25.1	-11.5	--	--	--	--	-9.1	Mar-22
<i>MSCI ACWI</i>		<i>7.3</i>	<i>-7.4</i>	--	--	--	--	<i>-5.0</i>	<i>Mar-22</i>
Excess Return		17.8	-4.1					-4.1	
Xponance - Centerstone	33,709,248	7.8	--	--	--	--	--	8.1	Dec-22
<i>MSCI ACWI</i>		<i>7.3</i>	--	--	--	--	--	<i>3.1</i>	<i>Dec-22</i>
Excess Return		0.5						5.0	
Xponance - Promethos	36,915,425	7.4	--	--	--	--	--	7.0	Dec-22
<i>MSCI ACWI</i>		<i>7.3</i>	--	--	--	--	--	<i>3.1</i>	<i>Dec-22</i>
Excess Return		0.1						3.9	
Global Equity - Passive	2,313,386,997	7.3	-6.2	--	--	--	--	9.5	Aug-20
BTC Global Alpha Tilts	2,313,386,997	7.3	-6.2	--	--	--	--	9.5	Aug-20
<i>MSCI ACWI IMI Net USD</i>		<i>6.9</i>	<i>-7.7</i>	--	--	--	--	<i>8.0</i>	<i>Aug-20</i>
Excess Return		0.4	1.5					1.5	



Illinois State Universities Retirement System

Option Strategies (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Option Strategies	454,310,063	4.7	-2.9	11.6	5.7	--	--	5.7	Apr-18
<i>SURS Options Strategies Blend</i>		<u>5.8</u>	<u>-3.9</u>	<u>13.6</u>	<u>5.6</u>	<u>--</u>	<u>--</u>	<u>5.6</u>	<u>Apr-18</u>
Excess Return		-1.1	1.0	-2.0	0.1			0.1	
Neuberger Berman S&P 500	307,549,966	5.0	-2.9	12.9	7.1	--	--	7.1	Apr-18
<i>CBOE S&P 500 PutWrite Index USD</i>		<u>6.8</u>	<u>-3.1</u>	<u>15.6</u>	<u>6.1</u>	<u>--</u>	<u>--</u>	<u>6.1</u>	<u>Apr-18</u>
Excess Return		-1.8	0.2	-2.7	1.0			1.0	
Gladius - Options	146,760,097	4.0	-2.8	9.8	--	--	--	3.1	Jun-18
<i>SURS Gladius Benchmark</i>		<u>4.0</u>	<u>-5.5</u>	<u>11.6</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>3.9</u>	<u>Jun-18</u>
Excess Return		0.0	2.7	-1.8				-0.8	



Illinois State Universities Retirement System

Stabilized Real Assets (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Stabilized Real Assets	1,761,363,079	-3.0	1.5	9.9	7.6	7.4	--	8.5	Jun-13
<i>SURS Stabilized Real Assets Blend</i>		<i>-5.0</i>	<i>6.4</i>	<i>8.9</i>	<i>7.7</i>	<i>7.6</i>	<i>--</i>	<i>9.1</i>	<i>Jun-13</i>
Excess Return		2.0	-4.9	1.0	-0.1	-0.2		-0.6	
Core	1,045,002,445	-4.8	-2.4	9.4	7.0	6.9	--	7.8	Jul-13
<i>NCREIF ODCE Net 1 Qtr Lag</i>		<i>-5.2</i>	<i>8.0</i>	<i>9.5</i>	<i>8.0</i>	<i>7.8</i>	<i>--</i>	<i>9.2</i>	<i>Jul-13</i>
Excess Return		0.4	-10.4	-0.1	-1.0	-0.9		-1.4	
UBS Trumbull Property Fund	93,862,450	-7.2	-8.9	2.4	2.2	3.2	5.5	4.4	Jun-06
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	<i>6.6</i>	<i>9.0</i>	<i>7.7</i>	<i>7.6</i>	<i>9.1</i>	<i>6.3</i>	<i>Jun-06</i>
Excess Return		-2.0	-15.5	-6.6	-5.5	-4.4	-3.6	-1.9	
JP Morgan Strategic	279,738,730	-3.2	-5.4	6.2	5.7	6.1	--	7.2	Jul-14
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	<i>6.6</i>	<i>9.0</i>	<i>7.7</i>	<i>7.6</i>	<i>--</i>	<i>8.7</i>	<i>Jul-14</i>
Excess Return		2.0	-12.0	-2.8	-2.0	-1.5		-1.5	
Heitman Hart Fund	286,374,150	-4.6	-3.8	9.8	6.8	7.1	--	7.9	Aug-14
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	<i>6.6</i>	<i>9.0</i>	<i>7.7</i>	<i>7.6</i>	<i>--</i>	<i>8.7</i>	<i>Aug-14</i>
Excess Return		0.6	-10.4	0.8	-0.9	-0.5		-0.8	
Prologis Target US Logis	177,786,748	-5.5	11.6	--	--	--	--	26.9	Nov-20
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	<i>6.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.7</i>	<i>Nov-20</i>
Excess Return		-0.3	5.0					15.2	
Clarion Lion Properties Fund, LP	207,205,601	-5.4	--	--	--	--	--	-9.9	Aug-22
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-2.0</i>	<i>Aug-22</i>
Excess Return		-0.2						-7.9	



Illinois State Universities Retirement System

Stabilized Real Assets (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Core Plus	564,566,848	-1.7	7.1	10.5	--	--	--	8.5	Oct-18
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	<i>6.6</i>	<i>9.0</i>	--	--	--	<i>7.7</i>	<i>Oct-18</i>
Excess Return		3.5	0.5	1.5				0.8	
Blackstone Property Partners	256,345,343	-5.8	4.5	7.0	--	--	--	6.3	Mar-19
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	<i>6.6</i>	<i>9.0</i>	--	--	--	<i>7.8</i>	<i>Mar-19</i>
Excess Return		-0.6	-2.1	-2.0				-1.5	
Carlyle Property Investors	267,026,682	1.8	8.3	15.7	--	--	--	12.1	Oct-18
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	<i>6.6</i>	<i>9.0</i>	--	--	--	<i>7.7</i>	<i>Oct-18</i>
Excess Return		7.0	1.7	6.7				4.4	
GI Partners ETS FUND	41,194,823	3.0	--	--	--	--	--	8.8	May-22
<i>SURS Real Estate Blend</i>		<i>-5.2</i>	--	--	--	--	--	<i>4.1</i>	<i>May-22</i>
Excess Return		8.2						4.7	
Core Infrastructure	151,793,787	5.0	7.4	--	--	--	--	-5.4	Feb-21
<i>FTSE Dev Core Infra 50/50</i>		<i>1.5</i>	<i>-7.2</i>	--	--	--	--	<i>6.4</i>	<i>Feb-21</i>
Excess Return		3.5	14.6					-11.8	
Blackrock GL Renewable	49,223,567	10.4	12.9	--	--	--	--	-3.2	Feb-21
<i>FTSE Dev Core Infra 50/50</i>		<i>1.5</i>	<i>-7.2</i>	--	--	--	--	<i>6.4</i>	<i>Feb-21</i>
Excess Return		8.9	20.1					-9.6	
IFM Global Infrastructure Fund	102,570,220	2.6	--	--	--	--	--	2.6	Jan-23
<i>FTSE Dev Core Infra 50/50</i>		<i>1.5</i>	--	--	--	--	--	<i>1.5</i>	<i>Jan-23</i>
Excess Return		1.1						1.1	



Illinois State Universities Retirement System

Public Credit (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Public Credit	1,205,271,959	2.5	-4.0	3.6	--	--	--	0.0	Oct-19
<i>SURS Credit Fixed Income Blend</i>		<u>2.8</u>	<u>-3.1</u>	<u>2.8</u>	--	--	--	<u>-0.3</u>	<i>Oct-19</i>
Excess Return		-0.3	-0.9	0.8				0.3	
Diversified Credit	847,229,887	2.5	-4.2	3.4	1.8	2.1	--	2.3	Jul-13
<i>SURS Credit ex EMD Blend</i>		<u>2.8</u>	<u>-3.8</u>	<u>3.2</u>	<u>2.2</u>	<u>1.8</u>	--	<u>2.3</u>	<i>Jul-13</i>
Excess Return		-0.3	-0.4	0.2	-0.4	0.3		0.0	
PIMCO Global Credit	273,316,152	2.3	-4.1	2.4	--	--	--	0.2	Oct-19
<i>SURS Credit ex EMD Blend</i>		<u>2.8</u>	<u>-3.8</u>	<u>3.2</u>	--	--	--	<u>0.3</u>	<i>Oct-19</i>
Excess Return		-0.5	-0.3	-0.8				-0.1	
Neuberger Berman	573,913,481	2.7	-4.3	4.5	--	--	--	0.6	Oct-19
<i>SURS Credit ex EMD Blend</i>		<u>2.8</u>	<u>-3.8</u>	<u>3.2</u>	--	--	--	<u>0.3</u>	<i>Oct-19</i>
Excess Return		-0.1	-0.5	1.3				0.3	
Bivium Credit	358,042,072	2.2	-3.9	4.0	--	--	--	4.0	Apr-20
<i>Bivium Credit Blend</i>		<u>2.7</u>	<u>-3.6</u>	<u>1.2</u>	--	--	--	<u>1.2</u>	<i>Apr-20</i>
Excess Return		-0.5	-0.3	2.8				2.8	
BiviumEMD - LM Capital Group	68,765,376	1.9	-2.0	4.7	2.3	3.6	--	3.1	May-15
<i>JP Morgan Corporate EMBI Broad TR USD</i>		<u>2.1</u>	<u>-2.3</u>	<u>0.6</u>	<u>1.2</u>	<u>2.7</u>	--	<u>2.5</u>	<i>May-15</i>
Excess Return		-0.2	0.3	4.1	1.1	0.9		0.6	
BiviumEMD - GIA Partners LLC	60,223,972	0.8	-4.9	5.2	1.7	3.7	--	3.1	May-15
<i>JP Morgan Corporate EMBI Broad TR USD</i>		<u>2.1</u>	<u>-2.3</u>	<u>0.6</u>	<u>1.2</u>	<u>2.7</u>	--	<u>2.5</u>	<i>May-15</i>
Excess Return		-1.3	-2.6	4.6	0.5	1.0		0.6	
Bivium - RVX Asset Mgmt	59,525,699	2.0	-0.9	3.6	--	--	--	-1.1	Jan-20
<i>JP Morgan Corporate EMBI Broad TR USD</i>		<u>2.1</u>	<u>-2.3</u>	<u>0.6</u>	--	--	--	<u>-2.0</u>	<i>Jan-20</i>
Excess Return		-0.1	1.4	3.0				0.9	



Illinois State Universities Retirement System

Public Credit (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Bivium - New Century Advisors	48,826,648	3.2	-7.8	-0.7	--	--	--	-1.7	Nov-19
<i>BBgBC Global Corp Agg Blend</i>		<u>3.5</u>	<u>-6.9</u>	<u>-0.8</u>	--	--	--	<u>-2.0</u>	<i>Nov-19</i>
Excess Return		-0.3	-0.9	0.1				0.3	
Bivium - Integrity	39,668,744	3.4	-5.4	0.1	--	--	--	-1.2	Nov-19
<i>Bloomberg US Corporate Inv Grade TR</i>		<u>3.5</u>	<u>-5.6</u>	<u>-0.5</u>	--	--	--	<u>-1.4</u>	<i>Nov-19</i>
Excess Return		-0.1	0.2	0.6				0.2	
Bivium - GIA Partners, LLC	80,738,845	2.5	-3.5	8.4	--	--	--	1.1	Nov-19
<i>ICE/BAML GI HY Const Hedge Blend</i>		<u>3.3</u>	<u>-3.1</u>	<u>5.1</u>	--	--	--	<u>0.6</u>	<i>Nov-19</i>
Excess Return		-0.8	-0.4	3.3				0.5	
Bivium Cash	414	1.0	2.4	--	--	--	--	--	Sep-19
<i>91 Day T-Bills</i>		<u>1.1</u>	<u>2.5</u>	--	--	--	--	--	<i>Sep-19</i>
Excess Return		-0.1	-0.1						
Bivium Fixed Income Transition	5	0.0	0.0	0.0	--	--	--	--	Oct-19
<i>Bivium Credit Blend</i>		<u>2.7</u>	<u>-3.6</u>	<u>1.2</u>	--	--	--	--	<i>Oct-19</i>
Excess Return		-2.7	3.6	-1.2					



Illinois State Universities Retirement System

Private Credit (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Credit	441,633,710	0.4	2.9	--	--	--	--	9.1	Jul-20
<i>SURS Private Credit Blend</i>		<u>3.4</u>	<u>0.7</u>	--	--	--	--	<u>4.7</u>	<i>Jul-20</i>
Excess Return		-3.0	2.2					4.4	
PIMCO Disco III	7,353,797	-5.6	-8.2	--	--	--	--	4.9	Jul-20
<i>SURS Private Credit Blend</i>		<u>3.4</u>	<u>0.7</u>	--	--	--	--	<u>4.7</u>	<i>Jul-20</i>
Excess Return		-9.0	-8.9					0.2	
Silver Rock Tactical Allocation Fund, L.P.	133,984,112	0.0	-1.7	--	--	--	--	3.3	Feb-21
<i>SURS Private Credit Blend</i>		<u>3.4</u>	<u>0.7</u>	--	--	--	--	<u>1.1</u>	<i>Feb-21</i>
Excess Return		-3.4	-2.4					2.2	
Crayhill Principal Strategies Fund II	25,323,681	-1.8	4.6	--	--	--	--	35.9	Jun-21
<i>SURS Private Credit Blend</i>		<u>3.4</u>	<u>0.7</u>	--	--	--	--	<u>0.1</u>	<i>Jun-21</i>
Excess Return		-5.2	3.9					35.8	
NB Private Debt Fund IV	102,731,470	0.0	12.4	--	--	--	--	8.0	Oct-21
<i>SURS Private Credit Blend</i>		<u>3.4</u>	<u>0.7</u>	--	--	--	--	<u>-0.9</u>	<i>Oct-21</i>
Excess Return		-3.4	11.7					8.9	
Turning Rock Fund II	31,817,419	1.5	6.0	--	--	--	--	4.2	Feb-22
<i>SURS Private Credit Blend</i>		<u>3.4</u>	<u>0.7</u>	--	--	--	--	<u>-0.8</u>	<i>Feb-22</i>
Excess Return		-1.9	5.3					5.0	
Fortress Lending Fund III	29,568,209	2.7	-2.4	--	--	--	--	-2.2	Mar-22
<i>SURS Private Credit Blend</i>		<u>3.4</u>	<u>0.7</u>	--	--	--	--	<u>0.3</u>	<i>Mar-22</i>
Excess Return		-0.7	-3.1					-2.5	



Illinois State Universities Retirement System

Private Credit (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Ares Pathfinder Core Fund	53,306,220	2.3	--	--	--	--	--	2.5	Jul-22
<i>SURS Private Credit Blend</i>		<i>3.4</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>8.3</i>	<i>Jul-22</i>
Excess Return		-1.1						-5.8	
Silver Rock Tactical Allocation Fund 2022	52,609,103	0.7	--	--	--	--	--	0.9	Aug-22
<i>SURS Private Credit Blend</i>		<i>3.4</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>4.5</i>	<i>Aug-22</i>
Excess Return		-2.7						-3.6	
Silver Point Specialty Credit Fund III	4,939,699	--	--	--	--	--	--	--	Apr-23



Illinois State Universities Retirement System

Non-Core Real Estate (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non-Core Real Estate	544,788,314	0.6	8.3	8.4	7.5	8.7	--	8.8	Sep-15
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>9.3</i>	<i>9.2</i>	<i>--</i>	<i>9.7</i>	<i>Sep-15</i>
Excess Return		5.4	0.2	-2.2	-1.8	-0.5		-0.9	
Blackstone Re Part Asia	6,014,911	-12.5	--	--	--	--	--	-15.4	Jul-22
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.6</i>	<i>Jul-22</i>
Excess Return		-7.7						-16.0	
Blackstone RE EU VI	42,879,666	1.3	0.3	8.8	--	--	--	7.8	Nov-19
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>10.1</i>	<i>Nov-19</i>
Excess Return		6.1	-7.8	-1.8				-2.3	
Blue Vista RE Partners IV	14,620,266	0.0	15.4	18.4	15.5	--	--	10.5	May-16
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>9.3</i>	<i>--</i>	<i>--</i>	<i>9.2</i>	<i>May-16</i>
Excess Return		4.8	7.3	7.8	6.2			1.3	
Brasa Real Estate Fund II	19,818,739	4.1	9.8	--	--	--	--	7.7	Mar-22
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>10.1</i>	<i>Mar-22</i>
Excess Return		8.9	1.7					-2.4	
Brookfield Fund III	33,287,592	2.2	6.8	10.1	--	--	--	7.3	Apr-19
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>9.4</i>	<i>Apr-19</i>
Excess Return		7.0	-1.3	-0.5				-2.1	
Brookfield Strategy RE Partners IV	27,704,364	1.6	--	--	--	--	--	5.6	Aug-22
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.0</i>	<i>Aug-22</i>
Excess Return		6.4						6.6	
Brookfield Strategy RE Partners II	23,651,089	-3.0	11.2	16.3	14.0	13.0	--	12.9	Mar-16
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>9.3</i>	<i>9.2</i>	<i>--</i>	<i>9.3</i>	<i>Mar-16</i>
Excess Return		1.8	3.1	5.7	4.7	3.8		3.6	
Cabot Industrial Value VI	47,367,426	-0.6	9.7	--	--	--	--	21.1	Sep-20
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>12.4</i>	<i>Sep-20</i>
Excess Return		4.2	1.6					8.7	



Illinois State Universities Retirement System

Non-Core Real Estate (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
CHC Realty Partners IX	42,616,224	-2.2	15.2	--	--	--	--	21.0	Oct-21
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>15.9</i>	<i>Oct-21</i>
Excess Return		2.6	7.1					5.1	
Dune Fund III	63,825,283	-2.4	2.7	-0.2	1.5	5.0	--	5.6	Jul-13
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>9.3</i>	<i>9.2</i>	<i>--</i>	<i>10.7</i>	<i>Jul-13</i>
Excess Return		2.4	-5.4	-10.8	-7.8	-4.2		-5.1	
Dune Fund II	6,102,343	0.5	0.6	2.6	3.8	5.4	9.4	6.7	Apr-09
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>9.3</i>	<i>9.2</i>	<i>10.7</i>	<i>8.1</i>	<i>Apr-09</i>
Excess Return		5.3	-7.5	-8.0	-5.5	-3.8	-1.3	-1.4	
Dune Fund IV	38,996,912	3.1	11.0	1.0	--	--	--	0.8	Aug-19
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>9.8</i>	<i>Aug-19</i>
Excess Return		7.9	2.9	-9.6				-9.0	
Franklin Templeton MDP RE 2015	57,270,258	-0.1	-0.4	-0.2	2.1	1.3	--	-2.0	Sep-15
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>9.3</i>	<i>9.2</i>	<i>--</i>	<i>9.7</i>	<i>Sep-15</i>
Excess Return		4.7	-8.5	-10.8	-7.2	-7.9		-11.7	
Long Wharf RE Partners VI	27,235,980	1.0	5.5	31.1	--	--	--	21.9	Sep-19
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>9.9</i>	<i>Sep-19</i>
Excess Return		5.8	-2.6	20.5				12.0	
Longpoint Realty Partners	43,467,222	2.4	25.1	--	--	--	--	12.1	Dec-21
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>14.3</i>	<i>Dec-21</i>
Excess Return		7.2	17.0					-2.2	
Mesirow MFIRE II	13,640,381	-0.8	-3.5	-0.4	1.3	3.4	5.5	3.4	Apr-12
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>9.3</i>	<i>9.2</i>	<i>10.7</i>	<i>10.8</i>	<i>Apr-12</i>
Excess Return		4.0	-11.6	-11.0	-8.0	-5.8	-5.2	-7.4	
New Cap Partners Fund III	4,082,031								
Westbrook Real Estate Fund XI	26,501,577	11.2	24.7	--	--	--	--	17.6	Dec-20
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>13.8</i>	<i>Dec-20</i>
Excess Return		16.0	16.6					3.8	



Illinois State Universities Retirement System

Non-Core Real Assets (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non-Core Real Estate Debt	73,192,370	0.7	5.9	5.9	7.8	--	--	7.0	Dec-17
<i>NCREIF ODCE Net Lagged + 1.5%</i>		<i>-4.8</i>	<i>8.1</i>	<i>10.6</i>	<i>9.3</i>	<i>--</i>	<i>--</i>	<i>9.3</i>	<i>Dec-17</i>
Excess Return		5.5	-2.2	-4.7	-1.5			-2.3	
Basis Investment Group Fund I	17,775,275								
Oaktree RE Debt Fund II	10,284,678								
Basis Investment Group Fund II	16,345,582								
Torchlight Debt Fund VII	26,286,835								
Torchlight Debt Fund VIII	2,500,000								

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non-Core Farmland	51,001,017	3.4	8.9	--	--	--	--	-0.4	Nov-20
<i>NCREIF Farmland 1 Qtr Lag</i>		<i>3.3</i>	<i>9.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>8.3</i>	<i>Nov-20</i>
Excess Return		0.1	-0.7					-8.7	
Homestead Capital	51,001,017	3.4	8.9	--	--	--	--	-0.4	Nov-20
<i>NCREIF Farmland 1 Qtr Lag</i>		<i>3.3</i>	<i>9.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>8.3</i>	<i>Nov-20</i>
Excess Return		0.1	-0.7					-8.7	



Illinois State Universities Retirement System

Infrastructure (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Non-Core Infrastructure	138,400,017	9.7	22.6	18.5	13.6	10.3	9.5	11.0	Jan-10
<i>CPI+5% 1 Qtr Lagged</i>		<i>1.2</i>	<i>11.7</i>	<i>10.1</i>	<i>9.0</i>	<i>8.4</i>	<i>7.7</i>	<i>7.5</i>	<i>Jan-10</i>
Excess Return		8.5	10.9	8.4	4.6	1.9	1.8	3.5	
Alinda Capital Partners	500,496								
Macquarie Inf Partners Fnd III	56,082,852	25.2	49.2	32.0	23.4	19.8	--	14.8	Oct-14
<i>CPI+5% 1 Qtr Lagged</i>		<i>1.2</i>	<i>11.7</i>	<i>10.1</i>	<i>9.0</i>	<i>8.4</i>	<i>--</i>	<i>7.7</i>	<i>Oct-14</i>
Excess Return		24.0	37.5	21.9	14.4	11.4		7.1	
Macquarie Infra Partners IV	60,441,025								
Ember Infrastructure Partners	7,804,495	-6.3	-11.6	--	--	--	--	-17.4	Sep-21
<i>CPI+5% 1 Qtr Lagged</i>		<i>1.2</i>	<i>11.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.6</i>	<i>Sep-21</i>
Excess Return		-7.5	-23.3					-29.0	
Pantheon Global Infra Fund IV	13,571,148	5.5	7.4	--	--	--	--	6.8	Mar-22
<i>CPI+5% 1 Qtr Lagged</i>		<i>1.2</i>	<i>11.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.5</i>	<i>Mar-22</i>
Excess Return		4.3	-4.3					-4.7	



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity- Fund of Funds	2,089,122,389	-0.5	-4.9	21.5	17.4	15.8	14.1	15.2	Jul-90
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>14.0</i>	<i>12.9</i>	<i>Jul-90</i>
Excess Return		-10.8	11.4	15.6	8.1	3.5	0.1	2.3	
Pantheon Ventures	7,776,613								
Pantheon 2014 Global Fund	130,308,860	0.6	3.7	19.4	16.8	13.9	--	10.9	Feb-15
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>--</i>	<i>11.3</i>	<i>Feb-15</i>
Excess Return		-9.7	20.0	13.5	7.5	1.6		-0.4	
Pantheon Europe VI	7,755,746								
Pantheon Europe VII	20,296,971	-2.7	-15.6	16.5	14.6	15.5	12.0	11.3	Jan-13
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>14.0</i>	<i>13.7</i>	<i>Jan-13</i>
Excess Return		-13.0	0.7	10.6	5.3	3.2	-2.0	-2.4	
Pantheon USA IX	65,453,103	-3.1	-7.2	26.3	23.7	20.3	16.8	16.6	Jan-13
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>14.0</i>	<i>13.7</i>	<i>Jan-13</i>
Excess Return		-13.4	9.1	20.4	14.4	8.0	2.8	2.9	
Pantheon USA VIII	31,924,881								
Fairview Capital	112,720,345	-0.4	4.7	25.3	20.5	16.1	--	7.8	Apr-14
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>--</i>	<i>11.7</i>	<i>Apr-14</i>
Excess Return		-10.7	21.0	19.4	11.2	3.8		-3.9	
Fairview Lincoln Fund Series B	29,264,247	-3.5	-1.2	--	--	--	--	8.2	Mar-21
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>2.7</i>	<i>Mar-21</i>
Excess Return		-13.8	15.1					5.5	
M2-EM PE Fund	120,668,709	0.3	3.9	31.1	21.9	--	--	14.5	Oct-16
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>--</i>	<i>--</i>	<i>12.5</i>	<i>Oct-16</i>
Excess Return		-10.0	20.2	25.2	12.6			2.0	
Adams Street 2008	37,021,978								
Adams Street 2009	54,333,820								



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Adams Street 2012	68,157,920	-1.4	-20.1	17.8	16.5	14.9	12.1	10.2	Apr-12
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>14.0</i>	<i>14.5</i>	<i>Apr-12</i>
Excess Return		-11.7	-3.8	11.9	7.2	2.6	-1.9	-4.3	
Adams Street 2013	108,249,097	-2.8	-20.2	16.6	16.3	14.8	10.6	10.5	Mar-13
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>14.0</i>	<i>14.0</i>	<i>Mar-13</i>
Excess Return		-13.1	-3.9	10.7	7.0	2.5	-3.4	-3.5	
Adams Street 2014	123,390,621	0.0	-9.0	19.3	18.6	16.2	--	13.6	May-14
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>--</i>	<i>12.2</i>	<i>May-14</i>
Excess Return		-10.3	7.3	13.4	9.3	3.9		1.4	
Adams Street 2015 Global Fund	164,699,578	-1.5	-15.0	21.1	20.1	23.6	--	25.8	Sep-15
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>--</i>	<i>11.1</i>	<i>Sep-15</i>
Excess Return		-11.8	1.3	15.2	10.8	11.3		14.7	
Adams Street 2016 Global Fund	184,909,532	0.7	-6.9	22.3	18.7	--	--	22.3	Dec-16
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>--</i>	<i>--</i>	<i>12.0</i>	<i>Dec-16</i>
Excess Return		-9.6	9.4	16.4	9.4			10.3	
Adams Street 2017 Global Fund	117,748,734								
Adams Street 2018 Global	101,369,698								
Adams Street Secondary Fund 5	5,861,908	-8.2	-12.2	4.3	5.4	7.3	4.0	4.4	Oct-12
<i>SURS PE Blend</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	<i>9.3</i>	<i>12.3</i>	<i>14.0</i>	<i>14.1</i>	<i>Oct-12</i>
Excess Return		-18.5	4.1	-1.6	-3.9	-5.0	-10.0	-9.7	
Pantheon Multi-Strategy 2017	90,438,705								
Mesirow Private Equity	278,885,566								
Mesirow Co-Inv	64,321,035								
Pantheon Access 2018	153,879,117								



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity- Direct (Aksia)	843,907,410	3.8	5.5	18.2	--	--	--	--	Oct-19
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	--	--	--	--	<i>Oct-19</i>
Excess Return		-6.5	21.8	12.3					
Cortec Group Fund VII	31,241,526	23.4	29.1	34.0	--	--	--	27.8	Dec-19
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	--	--	--	<i>9.0</i>	<i>Dec-19</i>
Excess Return		13.1	45.4	28.1				18.8	
Oceansound Partners Fund	27,754,774	15.9	20.4	16.1	--	--	--	12.3	Feb-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	--	--	--	<i>7.7</i>	<i>Feb-20</i>
Excess Return		5.6	36.7	10.2				4.6	
Harvest Partners VIII	85,670,697	-0.2	2.6	18.6	--	--	--	14.6	Dec-19
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	--	--	--	<i>9.0</i>	<i>Dec-19</i>
Excess Return		-10.5	18.9	12.7				5.6	
Bregal Sagemount III	37,895,214	5.5	24.3	-13.6	--	--	--	-22.5	Dec-19
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	--	--	--	<i>9.0</i>	<i>Dec-19</i>
Excess Return		-4.8	40.6	-19.5				-31.5	
Reverence Capital II (TC)	71,651,171	11.1	27.6	40.6	--	--	--	32.2	Mar-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>5.9</i>	--	--	--	<i>7.0</i>	<i>Mar-20</i>
Excess Return		0.8	43.9	34.7				25.2	
Clearlake Capital Partners VI	43,437,960	3.0	0.3	--	--	--	--	21.4	May-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	--	--	--	--	<i>6.5</i>	<i>May-20</i>
Excess Return		-7.3	16.6					14.9	
HG Capital Genesis 9 (TC)	10,692,534								
HG Capital Saturn Fund 2	28,297,522								
HG Capital Saturn Fund 3	1								
Rubicon Tech Partners 3	31,550,567	0.0	-0.3	--	--	--	--	0.4	Jul-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	--	--	--	--	<i>16.5</i>	<i>Jul-20</i>
Excess Return		-10.3	16.0					-16.1	



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Torrey Cove Co-Investment Fund	177,374,843	0.0	12.1	--	--	--	--	15.7	Sep-20
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.0</i>	<i>Sep-20</i>
Excess Return		-10.3	28.4					4.7	
MBK Partners Fund V (TC)	25,116,094	15.0	-15.7	--	--	--	--	13.6	Mar-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>2.7</i>	<i>Mar-21</i>
Excess Return		4.7	0.6					10.9	
Altaris Health PTR V	12,964,163	-4.1	9.6	--	--	--	--	-0.5	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.2</i>	<i>Apr-21</i>
Excess Return		-14.4	25.9					-0.7	
Avance Inv Partners	8,106,423	-2.5	9.1	--	--	--	--	2.9	Jul-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-2.8</i>	<i>Jul-21</i>
Excess Return		-12.8	25.4					5.7	
Base 10 Adv Initiative FD	20,146,444	0.0	-9.5	--	--	--	--	-1.6	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.2</i>	<i>Apr-21</i>
Excess Return		-10.3	6.8					-1.8	
GGV Capital VIII	13,986,655	-0.3	8.0	--	--	--	--	-2.4	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.2</i>	<i>Apr-21</i>
Excess Return		-10.6	24.3					-2.6	
GGV Discovery III	6,189,007	3.4	18.3	--	--	--	--	22.7	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.2</i>	<i>Apr-21</i>
Excess Return		-6.9	34.6					22.5	
Oak HC-FT Partners V-A	4,013,838								
Oak HC-FT Partners IV	22,549,744	1.8	9.2	--	--	--	--	-0.3	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.2</i>	<i>Apr-21</i>
Excess Return		-8.5	25.5					-0.5	



Illinois State Universities Retirement System

Private Equity (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Stellex Capital Partners II	15,374,622	1.0	21.5	--	--	--	--	-5.8	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.2</i>	<i>Apr-21</i>
Excess Return		-9.3	37.8					-6.0	
Thoma Bravo Fund XIV	47,087,148	8.2	-5.5	--	--	--	--	-4.0	Apr-21
<i>MSCI ACWI IMI +2% 1 Qtr Lag</i>		<i>10.3</i>	<i>-16.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0.2</i>	<i>Apr-21</i>
Excess Return		-2.1	10.8					-4.2	
GGV Capital VIII Plus	2,577,759								
One Rock Capital III	28,095,158								
Nautic Partners X	8,491,971								
Orchid Asia VIII	3,977,192								
One Equity Partners VIII	14,401,707								
Base 10 Partners III (TC)	4,086,252								
Clearlake Capital Partners VII	24,426,603								
Thoma Bravo Fund XV	12,931,580								
Inflexion Buyout Fund VI	2,497,533								
Bregal Sagemount IV	783,068								
Harvest Partners IX	6,015,322								
HG Capital Genesis 10	23,195								
Advent Int'l GPE X	1,000,001								
Rubicon Tech Partners IV Fund	2,905,370								
Great Hill Equity Partners VIII	1								
Thoma Bravo Discover Fund IV-A	7,218,751								
Base 10 Adv Initiative	3,375,000								



Illinois State Universities Retirement System

Inflation Sensitive (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Inflation Sensitive	1,097,368,851	3.4	-6.1	1.8	2.1	2.3	--	2.1	Jul-13
<i>SURS Inflation Sensitive Blend</i>		<i>3.3</i>	<i>-6.1</i>	<i>1.8</i>	<i>1.8</i>	<i>1.6</i>	<i>--</i>	<i>1.7</i>	<i>Jul-13</i>
Excess Return		0.1	0.0	0.0	0.3	0.7		0.4	
TIPS	1,097,368,851	3.4	-6.1	1.8	2.9	2.5	1.4	3.9	Jan-04
<i>Bloomberg US TIPS TR</i>		<i>3.3</i>	<i>-6.1</i>	<i>1.8</i>	<i>2.9</i>	<i>2.4</i>	<i>1.5</i>	<i>3.7</i>	<i>Jan-04</i>
Excess Return		0.1	0.0	0.0	0.0	0.1	-0.1	0.2	
Rhumblin TIPS	1,097,368,851	3.4	-6.1	1.8	2.9	--	--	2.5	Jun-17
<i>Bloomberg US TIPS TR</i>		<i>3.3</i>	<i>-6.1</i>	<i>1.8</i>	<i>2.9</i>	--	--	<i>2.6</i>	<i>Jun-17</i>
Excess Return		0.1	0.0	0.0	0.0			-0.1	



Illinois State Universities Retirement System

Principal Protection (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Principal Protection	1,727,336,241	2.7	-2.1	-2.0	1.2	1.1	--	1.8	Jul-13
<i>BC US Int Ag x Credit Blend</i>		<i>2.4</i>	<i>-3.1</i>	<i>-2.7</i>	<i>1.2</i>	<i>1.1</i>	<i>--</i>	<i>1.8</i>	<i>Jul-13</i>
Excess Return		0.3	1.0	0.7	0.0	0.0		0.0	
Garcia Hamilton	459,307,351	3.1	-1.1	-1.3	--	--	--	-0.4	Oct-19
<i>BC US Int Ag x Credit Blend</i>		<i>2.4</i>	<i>-3.1</i>	<i>-2.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.1</i>	<i>Oct-19</i>
Excess Return		0.7	2.0	1.4				0.7	
Pugh Capital	419,236,075	2.4	-3.0	-2.4	--	--	--	-1.3	Oct-19
<i>BC US Int Ag x Credit Blend</i>		<i>2.4</i>	<i>-3.1</i>	<i>-2.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.1</i>	<i>Oct-19</i>
Excess Return		0.0	0.1	0.3				-0.2	
LM Capital	425,133,837	2.6	-1.9	-2.2	--	--	--	-0.9	Oct-19
<i>BC US Int Ag x Credit Blend</i>		<i>2.4</i>	<i>-3.1</i>	<i>-2.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.1</i>	<i>Oct-19</i>
Excess Return		0.2	1.2	0.5				0.2	
Ramirez	423,658,979	2.6	-2.6	-1.9	--	--	--	-0.9	Oct-19
<i>BC US Int Ag x Credit Blend</i>		<i>2.4</i>	<i>-3.1</i>	<i>-2.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-1.1</i>	<i>Oct-19</i>
Excess Return		0.2	0.5	0.8				0.2	



Illinois State Universities Retirement System

Crisis Risk Offset (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Crisis Risk Offset	3,705,024,045	-2.2	0.4	2.2	--	--	--	3.0	Dec-19
<i>SURS CRO Blend</i>		<i>-2.4</i>	<i>2.1</i>	<i>4.3</i>	--	--	--	<i>5.4</i>	<i>Dec-19</i>
Excess Return		0.2	-1.7	-2.1				-2.4	
Long Duration	441,959,175	6.1	-15.9	-11.6	--	--	--	-5.3	Jan-20
<i>BBgBarc US Govt Long TR</i>		<i>6.2</i>	<i>-15.9</i>	<i>-11.3</i>	--	--	--	<i>-5.1</i>	<i>Jan-20</i>
Excess Return		-0.1	0.0	-0.3				-0.2	
Rhumblin Long Duration	441,959,175	6.1	-15.9	-11.6	--	--	--	-5.3	Jan-20
<i>BBgBarc US Govt Long TR</i>		<i>6.2</i>	<i>-15.9</i>	<i>-11.3</i>	--	--	--	<i>-5.1</i>	<i>Jan-20</i>
Excess Return		-0.1	0.0	-0.3				-0.2	
Systematic Trend Following	2,039,665,769	-4.9	5.7	8.8	--	--	--	8.6	Dec-19
<i>CS Mgd Futures 15% Vol</i>		<i>-6.1</i>	<i>5.4</i>	<i>13.5</i>	--	--	--	<i>10.9</i>	<i>Dec-19</i>
Excess Return		1.2	0.3	-4.7				-2.3	
Credit Suisse Asset Mgmt	539,841,813	-6.5	6.3	16.0	--	--	--	13.9	Jan-20
<i>CS Mgd Futures 15% Vol</i>		<i>-6.1</i>	<i>5.4</i>	<i>13.5</i>	--	--	--	<i>11.6</i>	<i>Jan-20</i>
Excess Return		-0.4	0.9	2.5				2.3	
Campbell & Company	498,421,502	-5.5	8.8	10.4	--	--	--	9.8	Dec-19
<i>CS Mgd Futures 15% Vol</i>		<i>-6.1</i>	<i>5.4</i>	<i>13.5</i>	--	--	--	<i>10.9</i>	<i>Dec-19</i>
Excess Return		0.6	3.4	-3.1				-1.1	
Aspect Capital	524,041,248	-7.0	8.5	8.8	--	--	--	9.6	Dec-19
<i>CS Mgd Futures 15% Vol</i>		<i>-6.1</i>	<i>5.4</i>	<i>13.5</i>	--	--	--	<i>10.9</i>	<i>Dec-19</i>
Excess Return		-0.9	3.1	-4.7				-1.3	
Longtail Alpha	477,361,207	0.4	-1.9	-0.5	--	--	--	1.8	Jan-20
<i>CS Mgd Futures 15% Vol</i>		<i>-6.1</i>	<i>5.4</i>	<i>13.5</i>	--	--	--	<i>11.6</i>	<i>Jan-20</i>
Excess Return		6.5	-7.3	-14.0				-9.8	



Illinois State Universities Retirement System

Crisis Risk Offset (Net-of-Fees) | As of March 31, 2023

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Alternative Risk Premia	831,431,217	1.3	6.2	4.1	--	--	--	0.8	Dec-19
90 Day T-Bill + 2%		<u>1.7</u>	<u>5.3</u>	<u>3.1</u>	--	--	--	<u>3.2</u>	<u>Dec-19</u>
Excess Return		-0.4	0.9	1.0				-2.4	
PIMCO Commodity Alpha Fund	168,602,259	6.5	20.2	19.0	9.6	--	--	11.0	Jun-16
PIMCO Commodity Alpha Fund Benchmark		<u>1.7</u>	<u>5.3</u>	<u>8.0</u>	<u>-1.5</u>	--	--	<u>-0.5</u>	<u>Jun-16</u>
Excess Return		4.8	14.9	11.0	11.1			11.5	
Versor	318,561,752	-0.8	-2.8	-2.1	--	--	--	-6.3	Dec-19
90 Day T-Bill + 2%		<u>1.7</u>	<u>5.3</u>	<u>3.1</u>	--	--	--	<u>3.2</u>	<u>Dec-19</u>
Excess Return		-2.5	-8.1	-5.2				-9.5	
Lombard Odier	50,672	-0.3	-0.7	-6.2	--	--	--	-5.4	Dec-19
90 Day T-Bill + 2%		<u>1.7</u>	<u>5.3</u>	<u>3.1</u>	--	--	--	<u>3.2</u>	<u>Dec-19</u>
Excess Return		-2.0	-6.0	-9.3				-8.6	
PIMCO Alternative Risk	344,216,534	0.4	13.0	--	--	--	--	6.9	May-20
90 Day T-Bill + 2%		<u>1.7</u>	<u>5.3</u>	--	--	--	--	<u>3.2</u>	<u>May-20</u>
Excess Return		-1.3	7.7					3.7	
Long Volatility	367,984,393	-0.7	--	--	--	--	--	-2.6	Jul-22
CBOE Eurekahedge Long Volatility Index		<u>-2.1</u>	--	--	--	--	--	<u>-2.2</u>	<u>Jul-22</u>
Excess Return		1.4						-0.4	
One River	367,984,393	-0.7	--	--	--	--	--	-2.6	Jul-22
CBOE Eurekahedge Long Volatility Index		<u>-2.1</u>	--	--	--	--	--	<u>-2.2</u>	<u>Jul-22</u>
Excess Return		1.4						-0.4	
Tail Risk	23,983,491								
LongTail Tail Risk	23,983,491								



Illinois State Universities Retirement System

Overlay Performance Detail¹ | As of March 31, 2023

Asset Class	Overlay Exposure (\$)
Traditional Growth	-356,361,240
Non-Traditional Growth	0
Principal Protection	629,960,022
Stabilized Growth	0
Inflation Sensitive	0
Crisis Risk Offset	0
Net Exposure	273,598,782

Overlay Performance	Incremental Gain/Loss (\$)(Gross)	Return as a % of Total Fund (Gross)
Quarter	30,393,218	0.14
Since Inception ²	187,648,555	0.12

Index	QTD	YTD	1 Year
S&P 500	7.50%	7.50%	-7.73%
MSCI EAFE	8.47%	8.47%	-1.38%
Bloomberg Agg.	2.96%	2.96%	-4.78%
Bloomberg Commodity Index	-5.36%	-5.36%	-12.49%

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 December 31, 2022

Investment Name	Infrastructure Investments		
	3 YR (%)	5 YR (%)	Since Inception (%)
Mature			
Alinda Infrastructure II, L.P.	-8.62	-6.90	0.15
Macquarie Infrastructure Partners II	40.92	12.78	8.97
Maturing (5-9 Years)			
Macquarie Infrastructure Partners III	28.22	21.21	17.87
Macquarie Infrastructure Partners IV	13.12	--	12.23

Investment Name	Real Estate Investments			
	3 YR (%)	5 YR (%)	10YR (%)	Since Inception (%)
Liquidated				
RREEF America REIT II	--	--	10.63	2.97
Mature (10+ Years)				
Dune Real Estate Fund II	-3.20	1.79	12.29	14.31
UBS Trumbull Property Fund	5.02	4.11	7.60	6.52
RREEF America REIT III	0.00	0.00	17.56	-3.78
Franklin Templeton EMREFF	-16.81	-4.16	16.20	12.58
Maturing (5-9 Years)				
Dune Real Estate Fund III	-2.49	0.51	--	5.95
Franklin Templeton Private Real Estate Fund	-6.20	7.00	23.84	20.34
Heitman America Real Estate Trust, L.P.	10.44	7.84	--	8.78
JP Morgan Strategic Property Fund	7.81	6.79	--	7.94
MFIRE Global Partnership Fund II, L.P.	-1.14	0.90	7.24	6.62
Franklin Templeton MDP RE 2015, L.P.	5.64	5.90	--	5.01
Blue Vista Real Estate Partners IV	13.43	12.79	--	11.90
Brookfield Real Estate Partners II	15.43	13.34	--	13.22
Crow Holdings Realty Partners VII	7.24	10.17	--	10.97
Crow Holdings VIII	28.36	--	--	23.44
Brookfield Strategic Real Estate Partners III	13.10	--	--	12.11
Carlyle Property Investors	14.77	--	--	12.78
BIG Real Estate Fund I	9.63	--	--	9.56
Oaktree Real Estate Debt Fund II	4.12	5.83	--	6.24

¹ Performance data provided by Northern Trust.



Illinois State Universities Retirement System

Real Estate Tracking Schedule¹ | As of December 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	21,959,033	262,763	0.7	-3.8
UBS Trumbull Property Fund	2006	220,000,000	246,941,660	363,323,341	101,296,664	1.9	6.5
Dune Real Estate Fund II	2009	40,000,000	46,650,688	73,152,806	6,102,343	1.7	14.3
Franklin Templeton EMREFF	2011	75,000,000	67,423,459	95,431,548	2,771,341	1.5	12.6
Maturing (5-9 Years)							
Franklin Templeton Private Real Estate Fund	2012	50,000,000	45,605,929	66,966,984	531,453	1.5	20.3
MFIRE Global Partnership Fund II, L.P.	2012	60,000,000	39,300,000	40,778,439	16,340,381	1.5	6.7
Dune Real Estate Fund III	2013	100,000,000	102,132,261	73,703,256	63,846,588	1.4	6.0
Heitman America Real Estate Trust, L.P.	2014	150,000,000	162,910,662	13,715,905	300,172,112	1.9	8.8
JP Morgan Strategic Property Fund	2014	150,000,000	150,000,000	3,107	288,966,230	1.9	7.9
Franklin Templeton MDP RE 2015, L.P.	2015	90,000,000	73,673,934	24,777,862	62,330,589	1.2	5.0
Blue Vista Real Estate Partners IV	2016	35,000,000	35,000,000	41,026,721	13,584,229	1.6	11.9
Brookfield Strategic Real Estate Partners II	2016	35,000,000	25,056,926	17,310,831	31,889,000	2.0	13.2
Crow Holdings Realty Partners VII	2016	35,000,000	34,971,278	46,361,633	1,310,360	1.4	11.0
Oaktree Real Estate Debt Fund II	2017	30,000,000	19,922,393	13,035,734	10,411,187	1.2	6.2
BIG Real Estate Fund I	2018	30,000,000	23,653,354	10,355,891	21,083,753	1.3	9.6
Carlyle Property Investors, L.P.	2018	200,000,000	215,758,333	14,638,361	267,026,682	1.3	12.8
Crow Holdings VIII	2018	20,000,000	19,265,697	28,692,636	1,241,177	1.6	23.4
Immature (Less than 5 Years)							
Blackstone Property Partners L.P.	2019	200,000,000	200,084,987	84,987	256,345,343	1.3	7.3
Blackstone Real Estate Partners Europe VI	2019	80,043,757	41,229,704	16,758,748	36,934,340	1.3	16.5
Brookfield Strategic Real Estate Partners III	2019	35,000,000	23,580,276	--	32,387,899	1.4	12.1
Dune Real Estate Fund IV	2019	50,000,000	25,287,814	1,800,185	27,321,096	1.2	6.7
Long Wharf Real Estate VI	2019	40,000,000	35,251,540	19,900,892	23,889,968	1.2	24.8

¹ Performance data provided by Northern Trust.



Illinois State Universities Retirement System

Real Estate Tracking Schedule¹ | As of December 31, 2022

Investment Name	Vintage Year	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	ITD IRR (%)
Immature (Less than 5 Years)							
Cabot Industrial Fund VI	2020	50,000,000	36,581,970	--	47,367,426	1.3	25.3
Prologis Targeted US Logistics Holdings, L.P.	2020	100,000,000	100,000,000	11,088	177,786,748	1.8	29.7
Westbrook Realty Management XI	2020	75,000,000	31,655,869	11,290,995	26,797,117	1.2	21.8
Big Real Estate Fund II, L.P.	2021	48,800,000	19,289,704	2,880,322	17,064,236	1.0	3.7
Brasa Real Estate Fund II, L.P.	2021	40,000,000	18,711,792	--	19,818,738	1.1	7.0
Crow Holdings Realty Partners IX, L.P.	2021	50,000,000	42,777,880	13,839,133	39,064,095	1.2	26.7
Longpoint Realty Fund II, L.P.	2021	50,000,000	35,000,000	373,413	38,467,222	1.1	17.8
Newport Capital Partners Fund III, L.P.	2021	6,055,556	7,315,707	7,529,223	420,017	1.1	16.8
Torchlight Debt Fund VII, L.P.	2021	50,000,000	25,000,000	--	26,286,835	1.0	5.3
Blackstone Real Estate Partners Asia III	2022	50,000,000	5,507,550	--	4,796,904	0.9	-13.4
Brookfield Strategic Real Estate Partners IV	2022	75,000,000	15,340,273	--	17,190,624	1.1	13.2
CF Clarion Lion Properties Fund	2022	117,500,000	117,518,142	-114,840	110,565,727	0.9	-11.1
GI Partners ETS Fund, L.P.	2022	75,000,000	38,699,023	--	41,194,823	1.1	9.9

¹ Performance data provided by Northern Trust.



Illinois State Universities Retirement System

Infrastructure Tracking Schedule¹ | As of December 31, 2022

Investment Name	Vintage Year	Commitment Amount (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	IRR (%)
Liquidated							
<i>None</i>							
Mature (10+ Years)							
Alinda Infrastructure II, L.P.	2009	40,000,000	43,098,403	42,971,523	500,496	1.0	0.2
Macquarie Infrastructure Partners II	2010	40,000,000	48,263,681	77,498,177	1	1.6	9.0
Maturing (5-9 Years)							
Macquarie Infrastructure Partners III	2014	50,000,000	44,300,470	45,191,561	56,082,852	2.3	17.9
Macquarie Infrastructure Partners IV	2018	50,000,000	46,120,271	6,986,729	60,441,025	1.5	12.2
Immature (Less than 5 Years)							
Global Renewable Power III	2021	100,000,000	39,155,370	203,279	42,702,000	1.1	10.1
Ember Infrastructure	2021	34,107,954	8,206,759	--	6,604,549	0.8	-17.5
PGIF IV Feeder, L.P.	2022	100,000,000	10,966,956	285,189	11,389,183	1.1	10.6

¹ Information provided by Northern Trust.



Illinois State Universities Retirement System

Private Equity Tracking Schedule – Grouped by Manager¹ | As of December 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	0.0
Mature (10+ Years)							
Adams Street 2007 Global Opportunities Portfolio	2007	100,000,000	91,713,646	148,413,988	1,705,990	1.6	8.1
Adams Street 2008 Global Offering	2008	100,000,000	92,903,014	171,659,365	37,488,126	2.3	14.4
Adams Street 2009 Global Offering	2009	100,000,000	91,572,000	150,308,673	53,818,728	2.2	14.3
Adams Street 2012 Global Fund LP	2012	80,000,000	72,430,078	81,803,860	71,723,776	2.1	14.3
Adams Street Global Opportunities Secondary Fund	2009	25,000,000	22,125,000	36,920,455	273,328	1.7	11.6
Adams Street Global Secondary Fund 5 LP	2012	20,000,000	15,422,938	15,133,955	5,861,908	1.4	6.6
Adams Street Separate Account	1990	901,378,251	885,283,081	1,688,363,109	2,086,539	1.9	28.2
Brinson Non-US Partnership Fund - 1998	1998	79,405,010	76,288,292	130,109,412	2,078,085	1.7	11.6
Muller & Monroe - MPEFF	2003	25,000,000	24,199,726	36,082,976	1	1.5	8.3
Pantheon Europe Fund III LP	2004	87,608,642	83,724,747	151,127,511	2,133,247	1.8	14.7
Pantheon Europe Fund VI LP	2008	39,185,632	37,359,377	57,688,482	8,913,880	1.8	10.2
Pantheon Europe Fund VII LP	2011	36,770,768	33,342,612	42,953,879	22,772,914	2.0	13.3
Pantheon Global Secondary Fund II Ltd	2004	25,000,000	23,750,000	27,354,925	361,374	1.2	3.5
Pantheon USA Fund IX LP	2013	85,444,334	78,883,432	123,759,998	67,992,415	2.4	17.3
Pantheon Separate Account (SURS) LP	2002	599,121,922	570,837,718	955,002,542	7,917,320	1.7	10.2
Pantheon USA Fund VIII LP	2007	103,188,193	96,214,222	175,250,466	32,935,071	2.2	12.9
Progress Venture Capital	1995	19,899,949	19,900,608	17,344,285	275,413	0.9	-2.3

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 December 31, 2022

Investment Name	Vintage Year	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	ITD IRR (%)
Maturing (5-9 Years)							
Adams Street 2013 Global Fund LP	2013	100,000,000	92,426,324	85,803,990	111,553,282	2.1	14.9
Adams Street 2014 Global Fund LP	2014	100,000,000	92,180,699	78,610,395	123,540,991	2.2	16.8
Adams Street 2015 Global Fund LP	2015	125,000,000	109,419,554	78,070,108	168,061,617	2.3	24.3
Adams Street 2016 Global Fund LP	2016	150,000,000	123,461,936	53,823,162	184,909,532	1.9	21.8
Adams Street 2018 Global Fund LP	2018	90,000,000	66,520,251	11,585,629	98,399,698	1.7	26.9
Fairview Capital Lincoln Fund I LP	2014	175,000,000	90,489,215	35,806,488	124,007,451	1.8	15.1
Mesirow Financial Private Equity Special Fund B, LP	2018	280,000,000	202,760,000	--	282,570,327	1.4	17.8
Muller & Monroe - EPEFF	2016	100,000,000	93,920,250	67,465,414	117,891,210	2.0	23.5
Pantheon Multi-Strat 2014 LP	2014	125,000,000	105,264,358	54,500,000	130,308,860	1.8	15.7
Pantheon Multi-Strat 2018 LP	2018	180,000,000	121,774,011	5,040,000	153,879,117	1.3	17.5
Immature (Less than 5 Years)							
Adams Street 2017 Global Fund LP	2017	90,000,000	71,890,233	20,372,431	117,748,734	1.9	24.0
Altaris Health Partners V	2021	25,000,000	12,368,612	--	12,964,163	1.1	5.0
Avance Investment Partners, LP	2022	25,000,000	6,630,381	115,465	6,884,986	1.1	4.8
Base10 Advancement Initiative I	2021	25,000,000	21,147,469	255,699	18,638,954	0.9	-8.0
Base10 Partners III	2022	20,000,000	3,385,564	--	2,851,157	0.8	-18.2
Bregal Sagemount III-B, LP	2020	50,000,000	32,118,622	40,323	38,347,409	1.2	14.2
Bregal Sagemount IV-B, LP	2022	25,000,000	1,202,602	--	783,068	0.7	-35.2
Clearlake Capital Partners VI	2020	30,000,000	29,162,392	1,319,087	43,437,960	1.5	30.8
Clearlake Capital Partners VII LP	2022	50,000,000	20,514,471	1,217	19,990,037	1.0	-3.4
Cortec Group Fund VII LP	2019	35,000,000	30,814,893	4,584	49,857,044	1.6	34.3

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 December 31, 2022

Investment Name	Vintage Year	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	ITD IRR (%)
Immature (Less than 5 Years)							
GGV Capital VIII	2022	21,600,000	11,556,000	--	13,338,655	1.2	13.4
GGV Capital VIII Plus	2022	5,400,000	2,484,000	--	2,577,759	1.0	3.4
GGV Discovery III	2021	9,000,000	4,095,000	--	6,099,007	1.5	38.2
Harvest Partners IX, LP	2022	50,000,000	7,222,821	--	6,015,322	0.8	-25.0
Harvest Partners VIII, LP	2019	70,000,000	64,743,472	6,131,217	85,670,697	1.4	19.8
Hg Genesis 9A	2021	15,172,501	8,870,252	--	10,503,574	1.2	18.5
Hg Saturn 2A	2020	37,500,000	21,283,064	2,479,330	27,052,680	1.4	27.8
Inflexion Buyout Fund VI	2022	21,860,100	351,391	--	888,908	2.5	153.0
MBK Partners Fund V	2021	50,000,000	15,345,283	--	17,031,989	1.1	9.5
Nautic Partners X, LP	2022	25,000,000	6,524,327	--	6,807,991	1.0	6.8
Advent International GPE X Limited Partners	2023	875,000	--	--	--	--	--
Hg Genesis 3 A LP	2023	265,616	--	--	--	--	--
Hg Saturn 10 A LP	2023	105,952	--	--	--	--	--
Oak Hc/FT Partners IV	2021	25,000,000	19,592,189	--	22,159,331	1.1	11.6
Oak Hc/FT Partners V	2022	40,000,000	1,665,186	--	2,369,717	1.4	55.6
OceanSound Partners	2020	25,000,000	18,572,569	403,224	27,754,774	1.5	23.0
One Equity Partners VIII, LP	2022	25,000,000	14,570,293	23,179	17,123,958	1.2	30.8
One Rock Capital Partners III, LP	2021	35,000,000	19,842,300	49,744	25,446,444	1.3	27.5
Orchid Asia VIII, LP	2022	30,000,000	5,112,983	--	3,977,192	0.8	-36.7

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 December 31, 2022

Investment Name	Vintage Year	Capital Commitment (\$)	Draw Down (\$)	Distributed (\$)	Market Value (\$)	TVPI Multiple	ITD IRR (%)
Immature (Less than 5 Years)							
Mesirow Financial Private Equity Fund VII-B LP	2017	40,000,000	39,747,031	29,303,902	82,053,175	2.8	39.4
Pantheon Multi-Strat 2017 LP	2017	90,000,000	64,648,643	14,240,518	88,188,705	1.6	21.8
Reverence Capital Partners Opportunities Fund III	2020	50,000,000	39,464,773	4,291,455	71,651,171	1.9	37.2
Rubicon Technology Partners III LP	2020	32,500,000	29,791,848	--	32,274,783	1.1	6.0
Rubicon Technology Partners IV LP	2022	32,500,000	3,481,920	--	2,905,370	0.8	-16.6
Stellex Capital Partners II	2021	25,000,000	15,256,688	804,383	15,374,622	1.1	8.7
Thoma Bravo Fund XIV	2021	50,000,000	49,110,700	--	46,947,458	1.0	-3.4
Thoma Bravo Fund XV LP	2022	25,000,000	13,411,988	--	12,931,580	1.0	-5.8
Torreycove Co-Investment Fund I LP	2020	200,000,000	140,452,469	8,448,793	165,794,948	1.2	20.1
Total		5,389,601,902	4,317,852,128	4,632,363,099	2,918,743,218	1.8	20.2

¹ Information provided by Northern Trust. Nominal IRR reported for funds with less than 1 year of data.

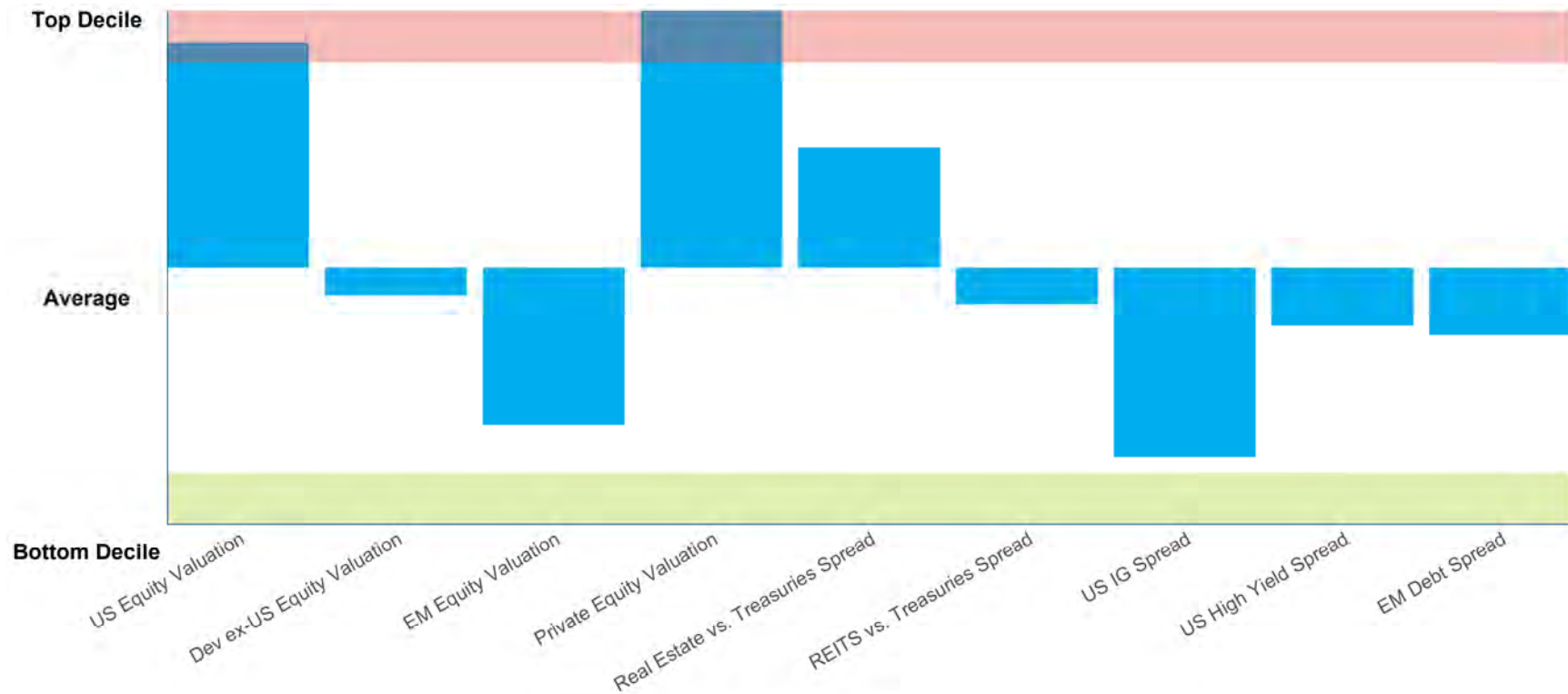
Capital Markets Outlook & Risk Metrics

As of March 31, 2023

Capital Markets Outlook

- Despite banking turmoil in the US and Switzerland, most global markets posted positive returns in the month of March and for the first quarter of 2023.
- Chinese equities outperformed emerging and developed markets in March although the performance of on-shore markets lagged Hong Kong and US-listed Chinese securities.
- Developed market equities lagged US and emerging market equities with growth stocks outperforming value stocks in March.
- US stocks posted a strong start to the year in the first quarter with large cap and growth stocks outperforming small cap and value stocks.
- Commodities turned negative in the first quarter weighing on natural resource stocks in the month of March.
- Most fixed income markets posted positive returns in March and for the first quarter, despite their sell-off in February.
- The US yield curve remains steeply inverted with short-duration bond yields rising whereas longer dated bond yields fell with long-duration credit and government indices posting strong returns in the first quarter.
- Undeterred from bank turmoil, the Fed and the ECB raised interest rates in February. While they appear focused on fighting inflation with higher interest rates, markets appear unconvinced.
- The drive to fight inflation may stall economic growth and increase downward pressure on corporate earnings, stock valuations, and bond returns.

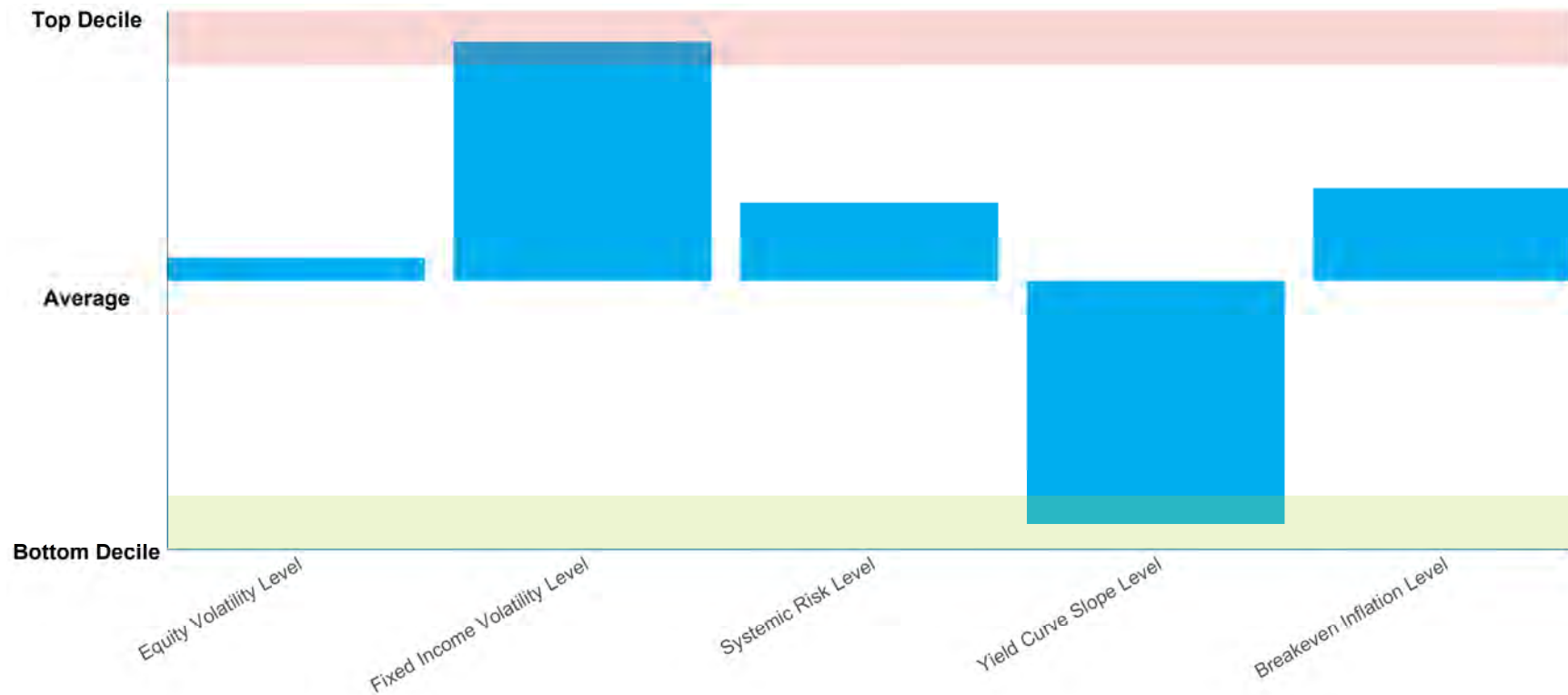
Risk Overview/Dashboard (1) (As of March 31, 2023)¹



→ Dashboard (1) summarizes the current state of the different valuation metrics per asset class relative to their own history.

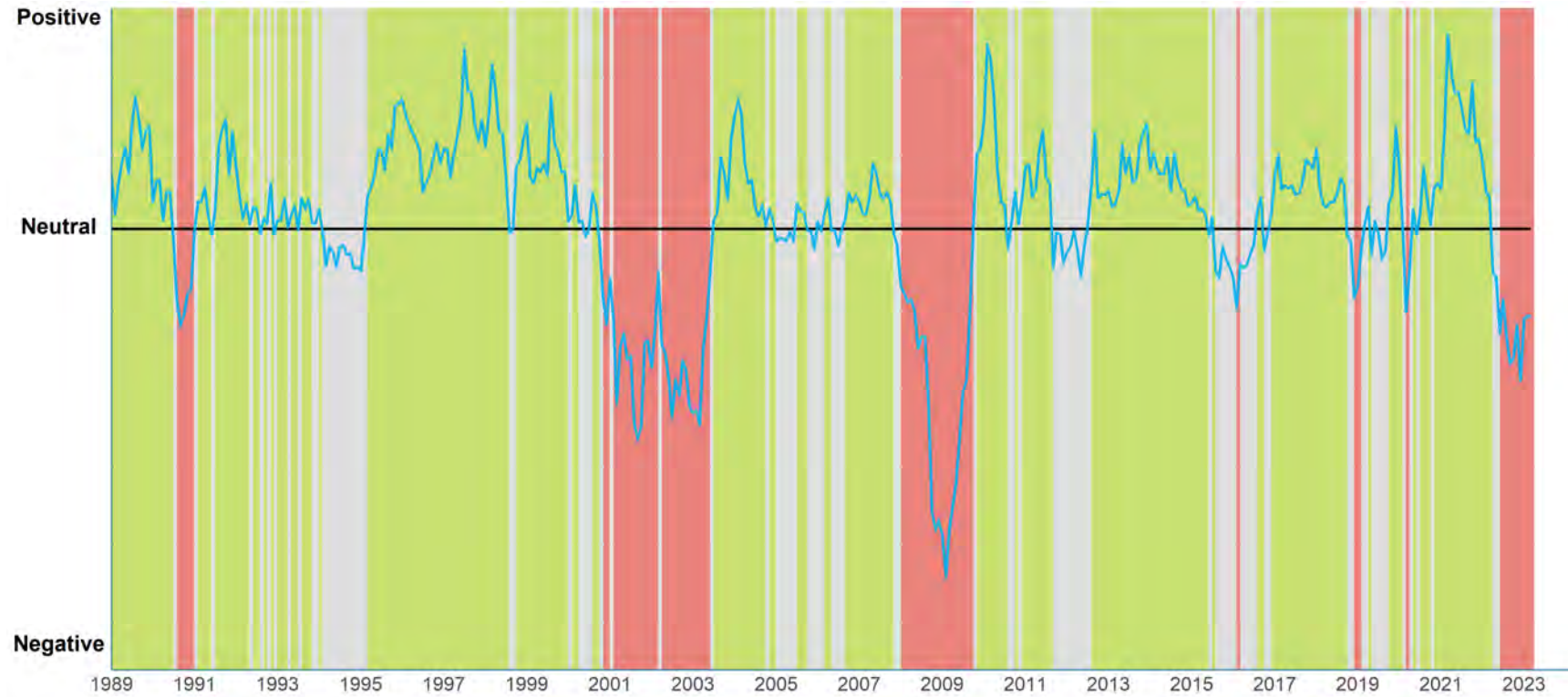
¹ With the exception of Private Equity Valuation, that is YTD as of December 31, 2022.

Risk Overview/Dashboard (2) (As of March 31, 2023)

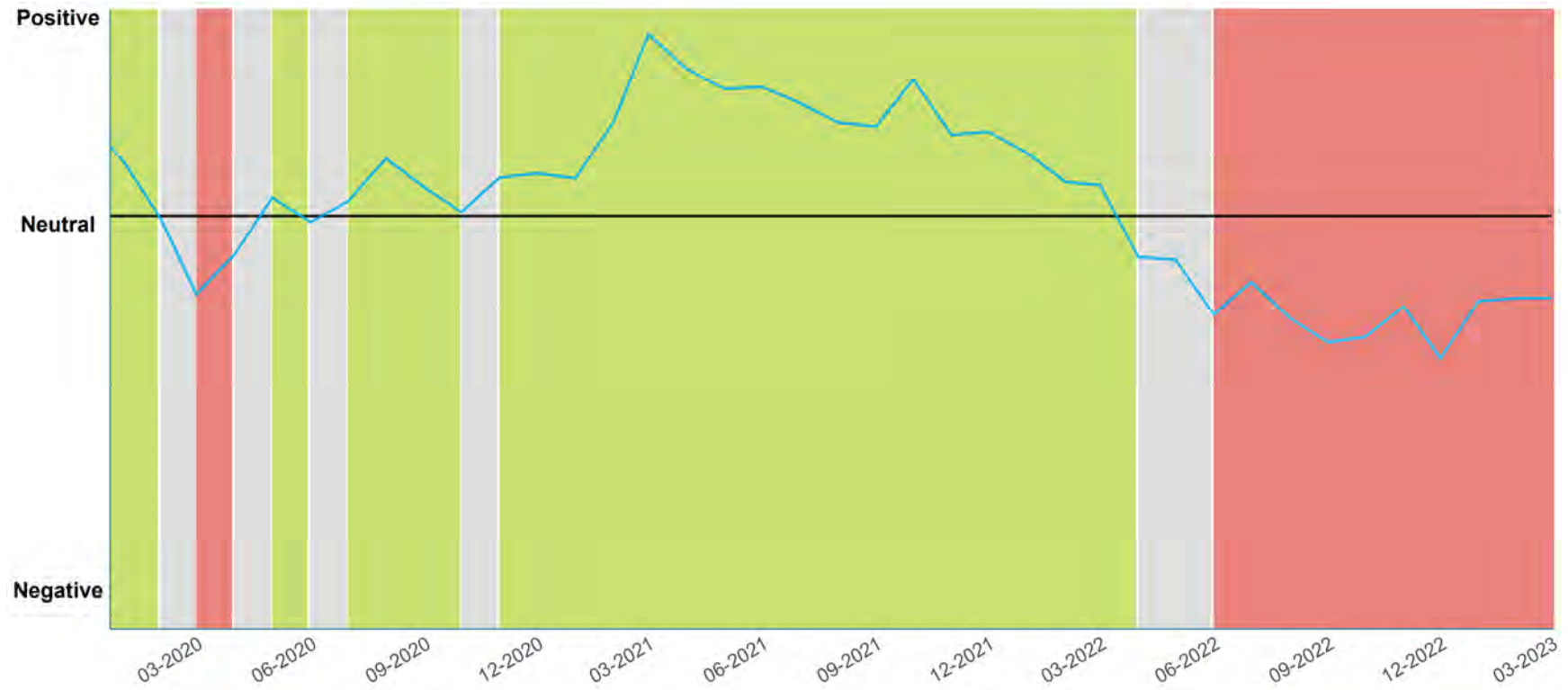


→ Dashboard (2) shows how the current level of each indicator compares to its respective history.

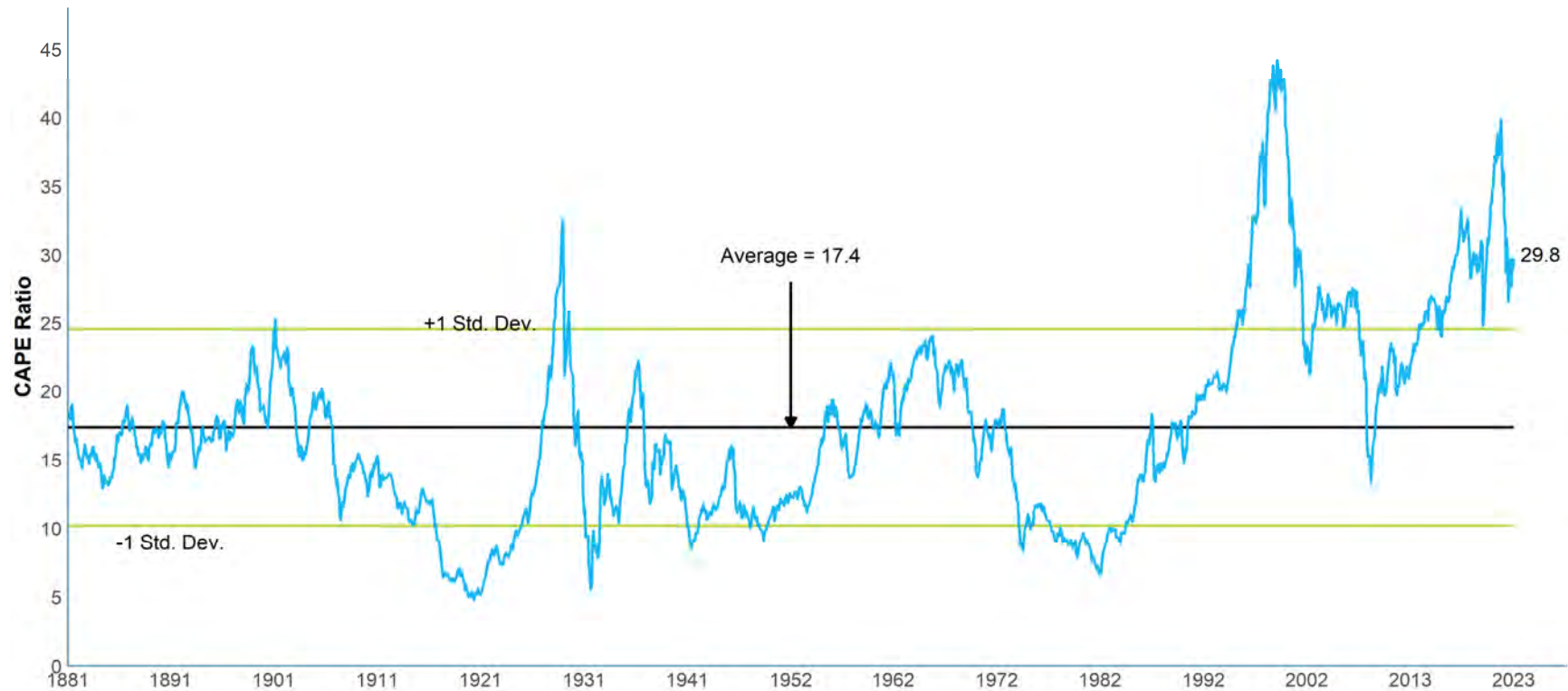
Market Sentiment Indicator (All History)
(As of March 31, 2023)



Market Sentiment Indicator (Last Three Years)
(As of March 31, 2023)



US Equity Cyclically Adjusted P/E¹ (As of March 31, 2023)



→ 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 March 31, 2023)



→ 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 and Bloomberg. Prior months unavailable on Bloomberg are backfilled with last reported earnings. Earnings figures represent 12-month "as reported" earnings.

Growth P/E vs. Value P/E¹ (As of March 31, 2023)



→ 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 March 31, 2023)



→ 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.

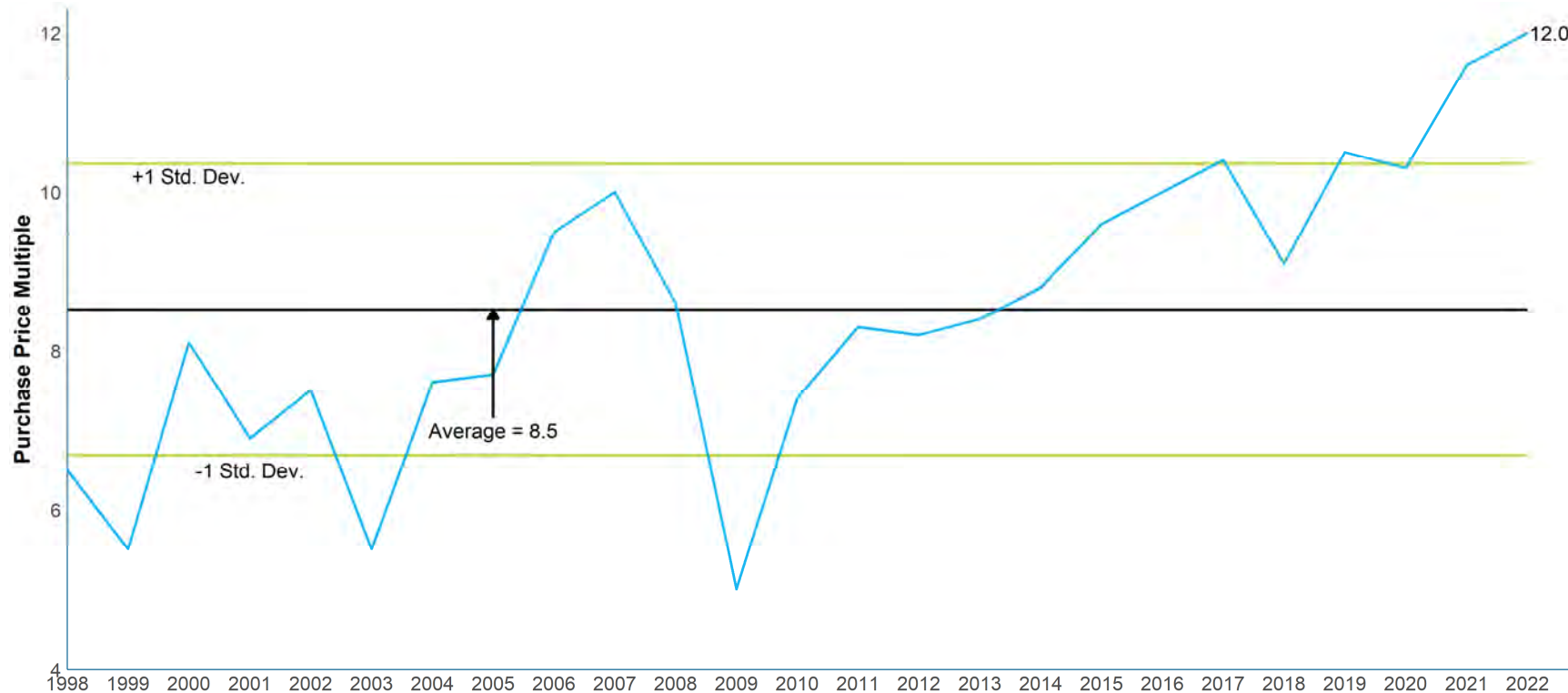
Emerging Market Equity Cyclically Adjusted P/E¹ (As of March 31, 2023)



→ 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.

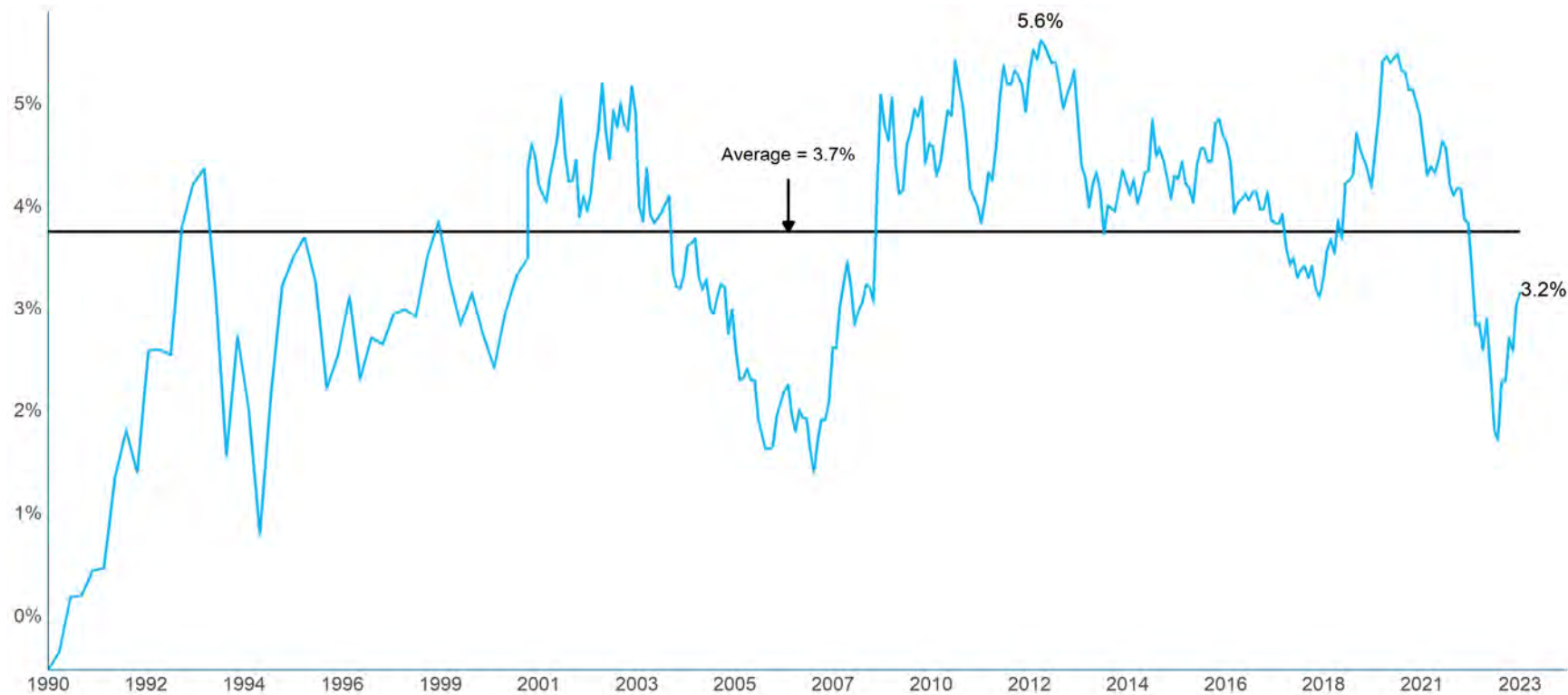
Private Equity Multiples¹ (As of March 31, 2023)



→ 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: Preqin Median EBITDA Multiples Paid in All LBOs.

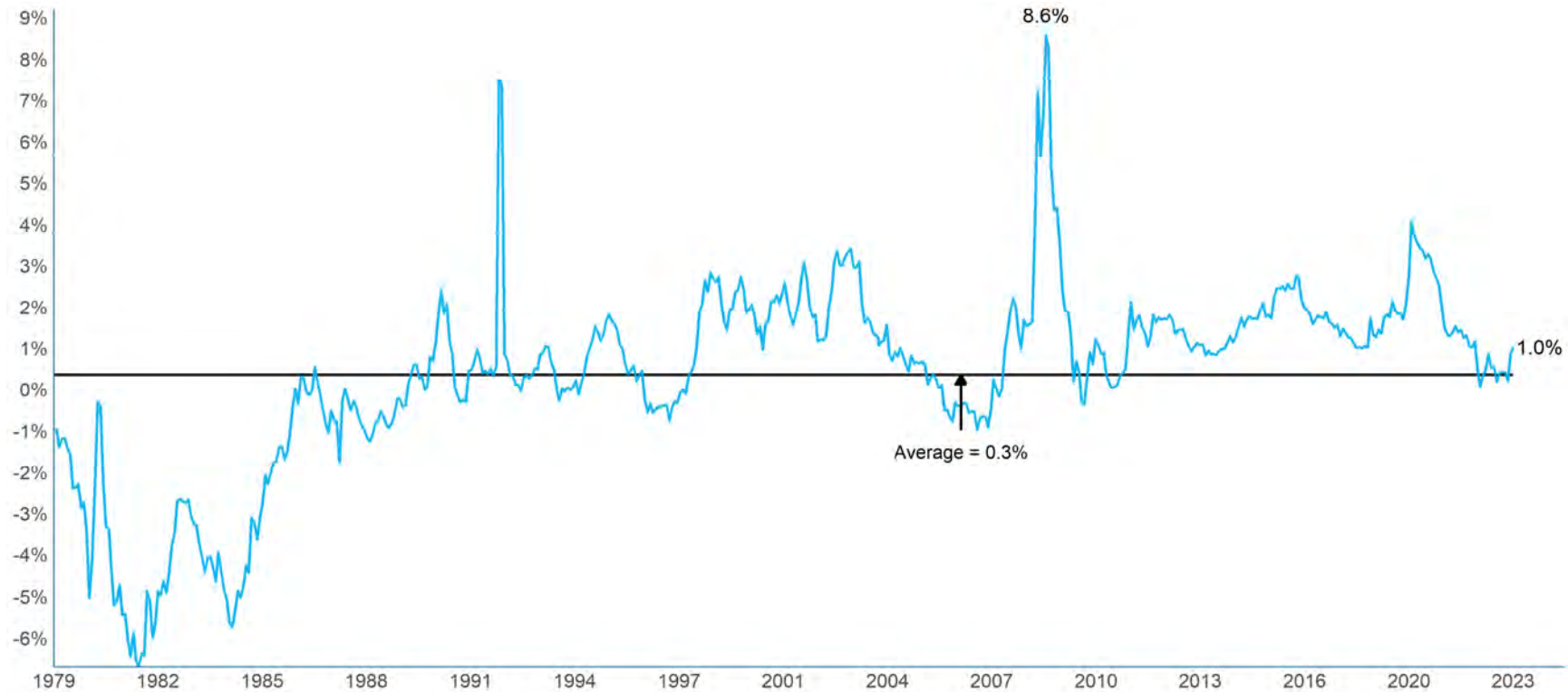
Core Real Estate Spread vs. Ten-Year Treasury¹ (As of March 31, 2023)



→ 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.

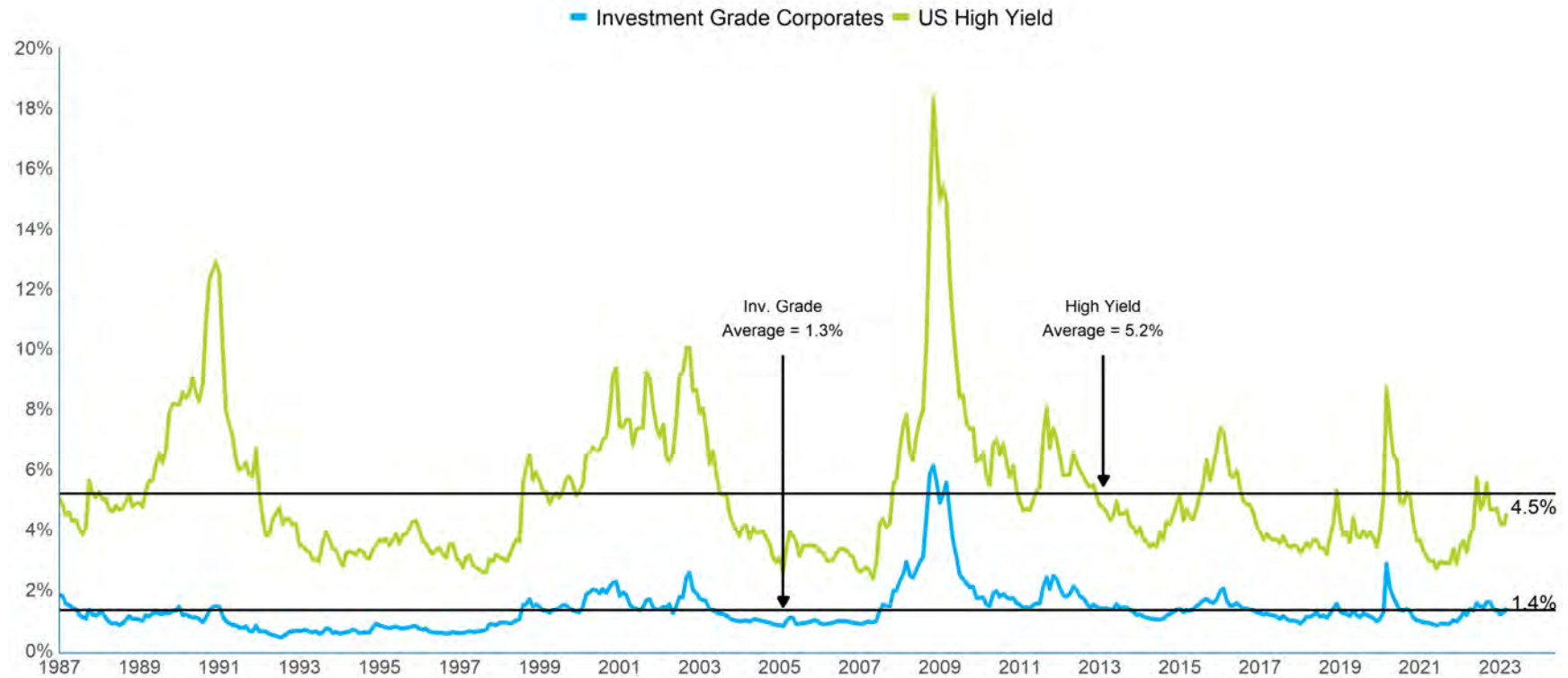
REITs Dividend Yield Spread vs. Ten-Year Treasury¹ (As of March 31, 2023)



→ 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 March 31, 2023)



→ 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.

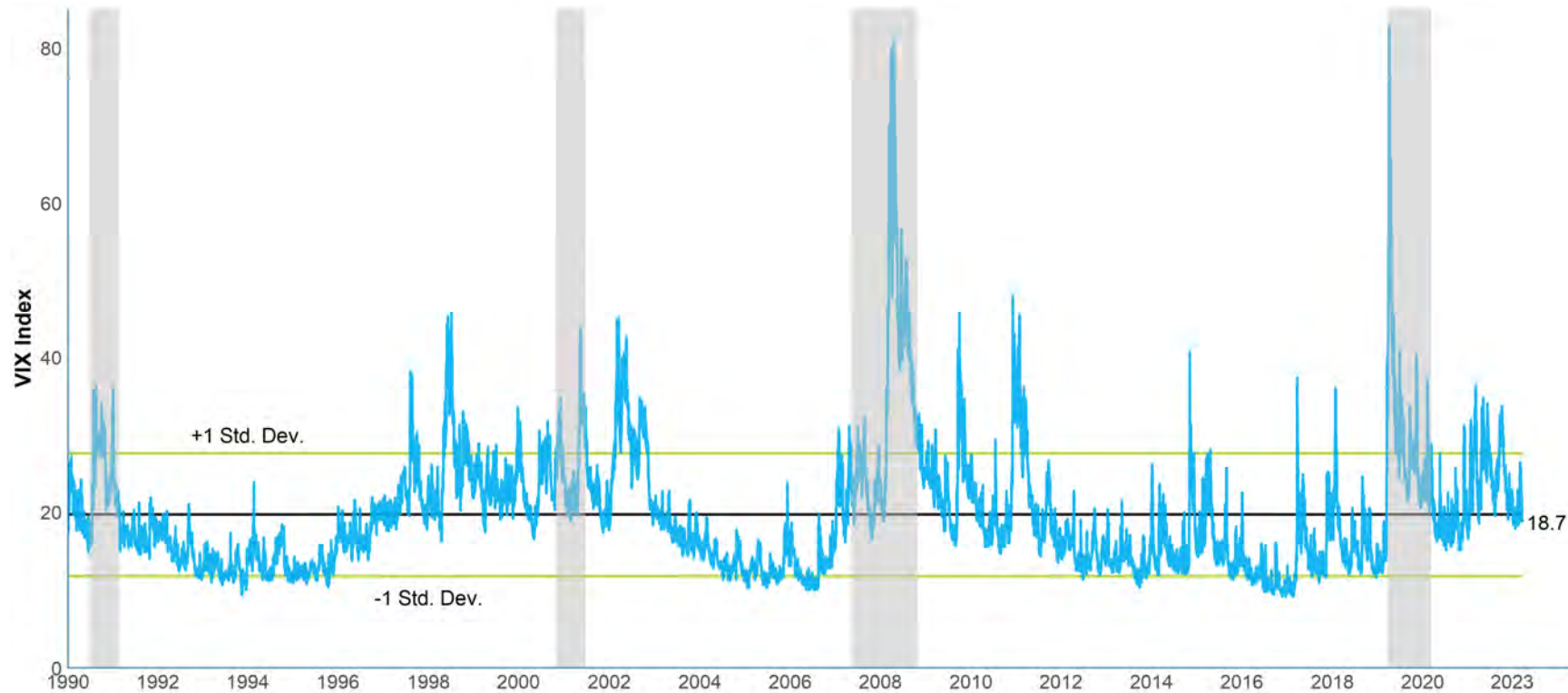
Emerging Market Debt Spreads¹ (As of March 31, 2023)



→ 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.

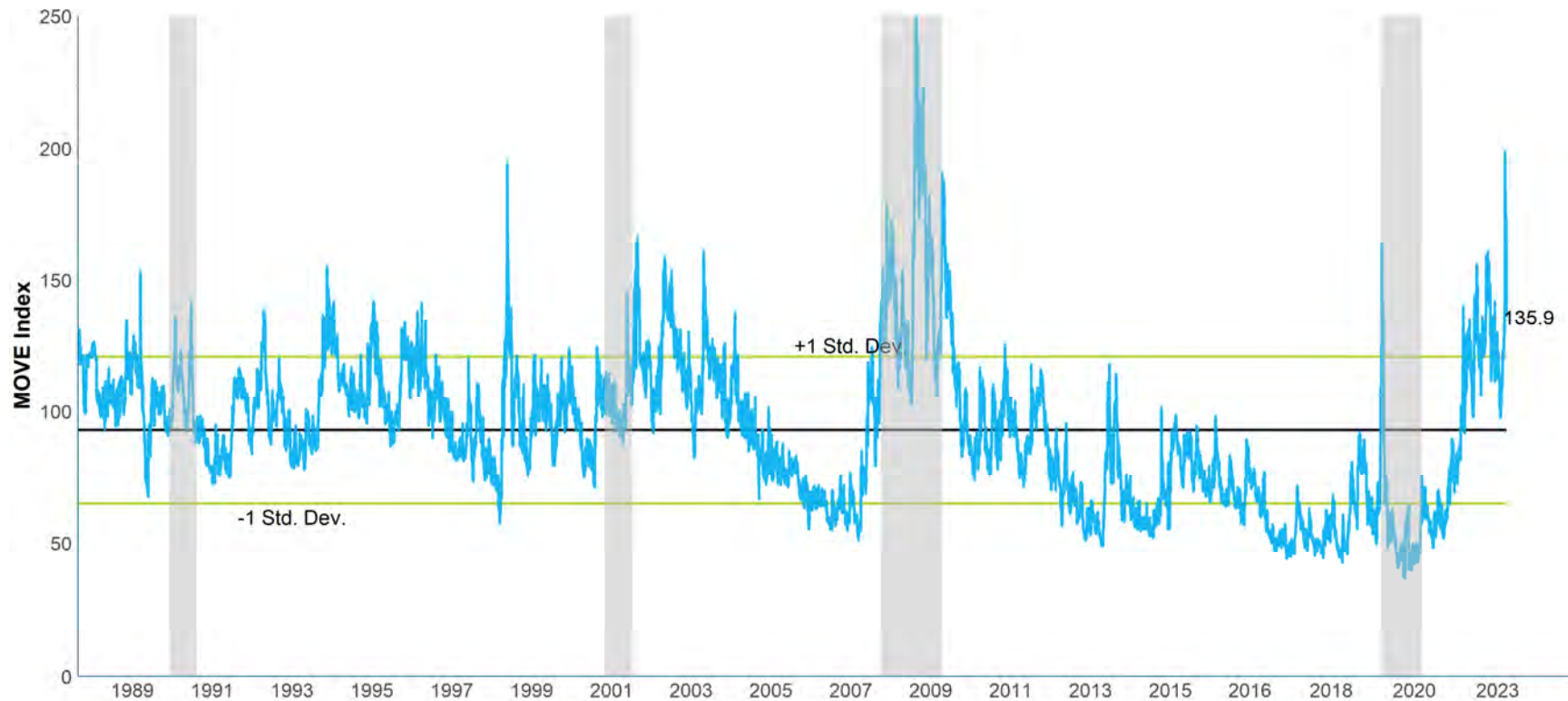
Equity Volatility¹ (As of March 31, 2023)



→ 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.

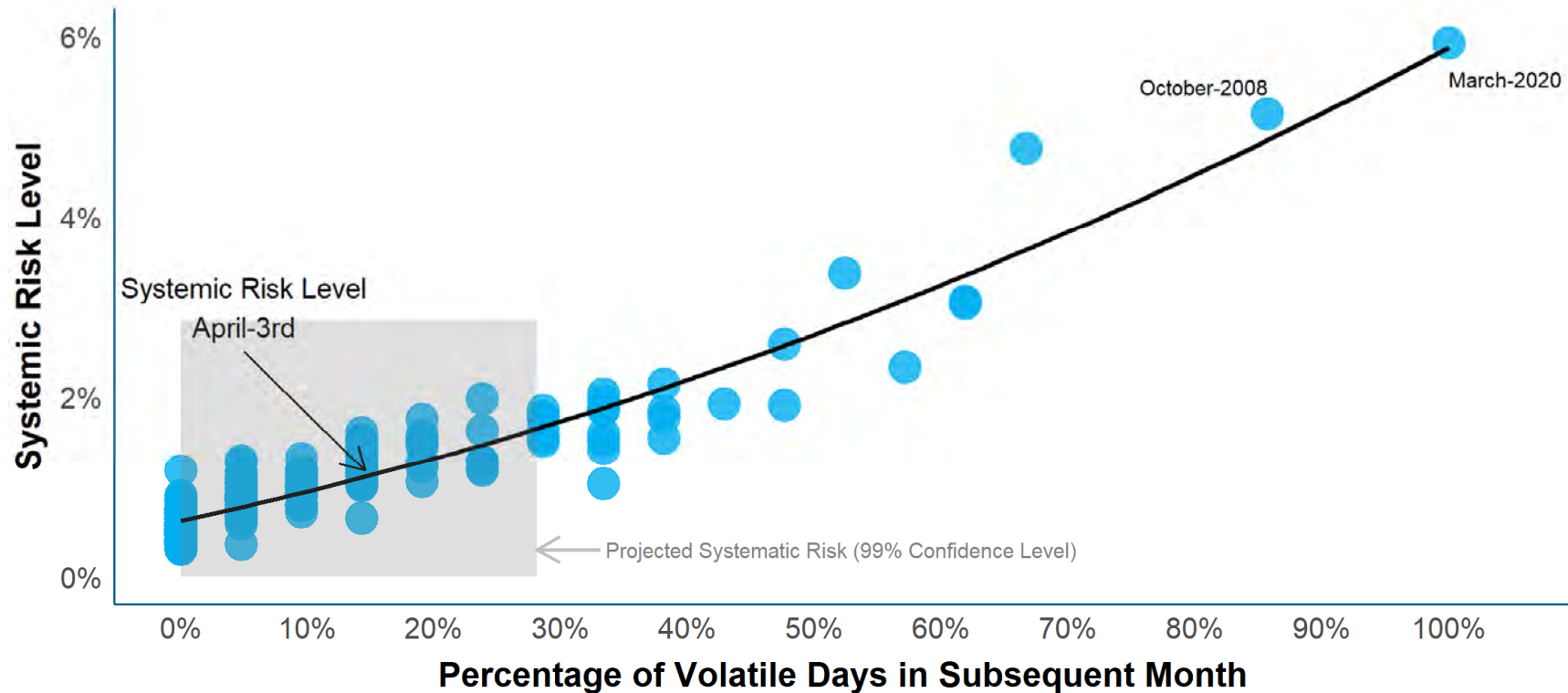
Fixed Income Volatility¹ (As of March 31, 2023)



→ 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 March 31, 2023)



→ 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 March 31, 2023)



→ 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 March 31, 2023)



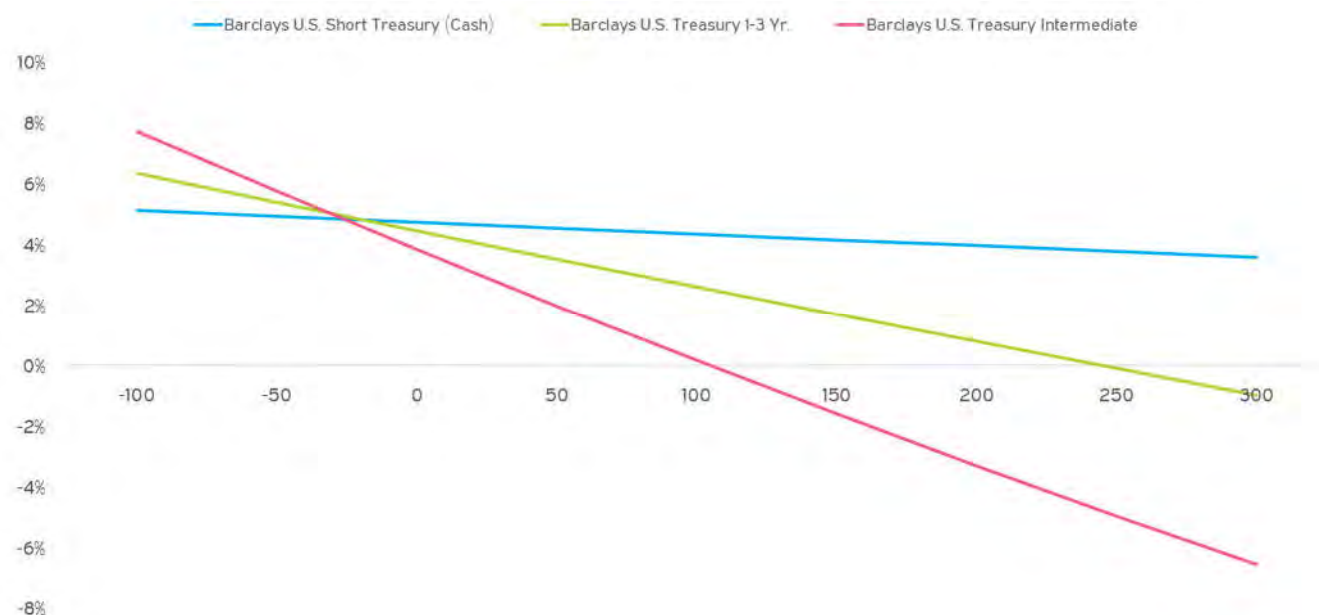
→ This chart details the difference between nominal and inflation-adjusted US Treasury bonds. A higher (lower) figure indicates higher (lower) inflation expectations.

¹ Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).



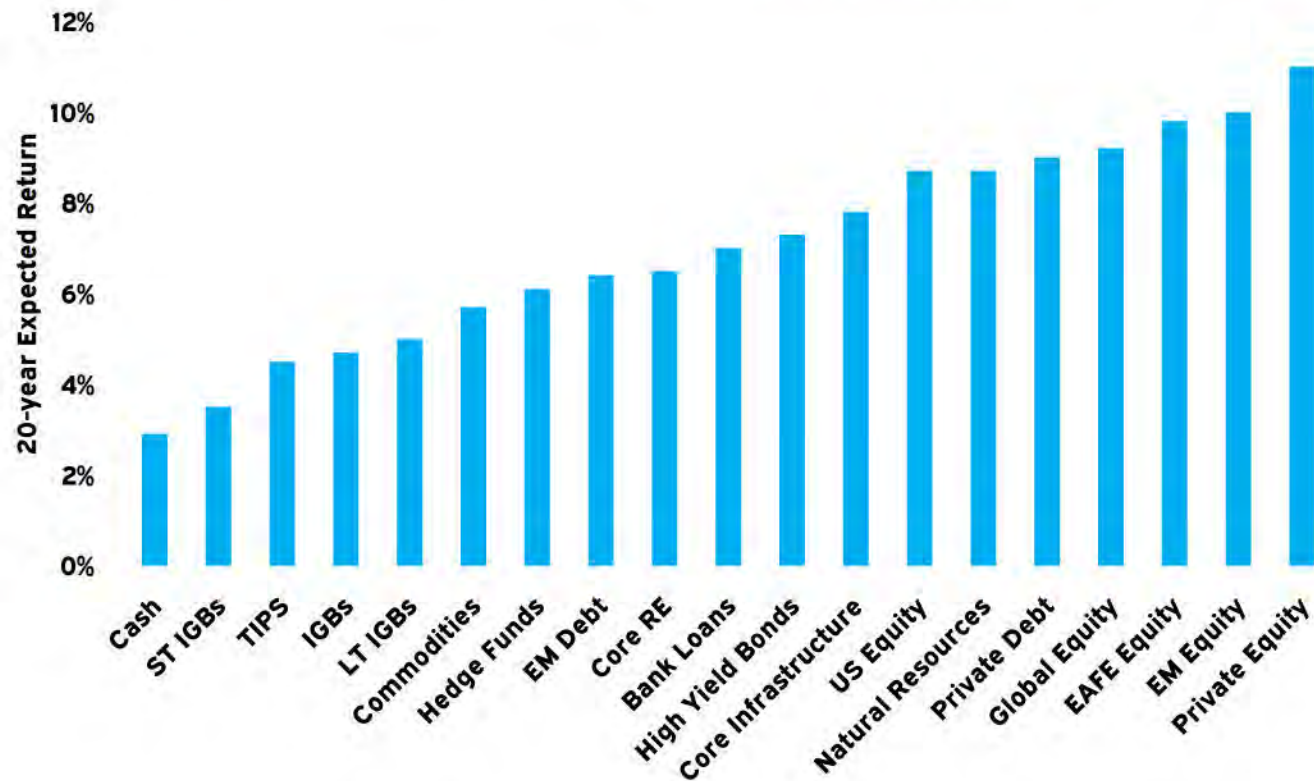
Capital Markets Outlook & Risk Metrics

Total Return Given Changes in Interest Rates (bps)¹ (As of March 31, 2023)



	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)	5.1%	4.9%	4.7%	4.5%	4.4%	4.2%	4.0%	3.8%	3.6%	0.39	4.74%
Barclays US Treasury 1-3 Yr.	6.3%	5.4%	4.5%	3.5%	2.6%	1.7%	0.8%	-0.1%	-1.0%	1.87	4.46%
Barclays US Treasury Intermediate	7.7%	5.8%	3.8%	2.0%	0.2%	-1.6%	-3.3%	-5.0%	-6.6%	3.78	3.84%
Barclays US Treasury Long	21.9%	12.4%	3.8%	-4.0%	-10.9%	-16.9%	-22.0%	-26.3%	-29.7%	16.36	3.77%

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 2023 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 March 31, 2023, 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 March 31, 2023, unless otherwise noted.



Capital Markets Outlook & Risk Metrics

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 March 31, 2023, unless otherwise noted.



Meketa Market Sentiment Indicator

Explanation, Construction and Q&A



Capital Markets Outlook & Risk Metrics

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.

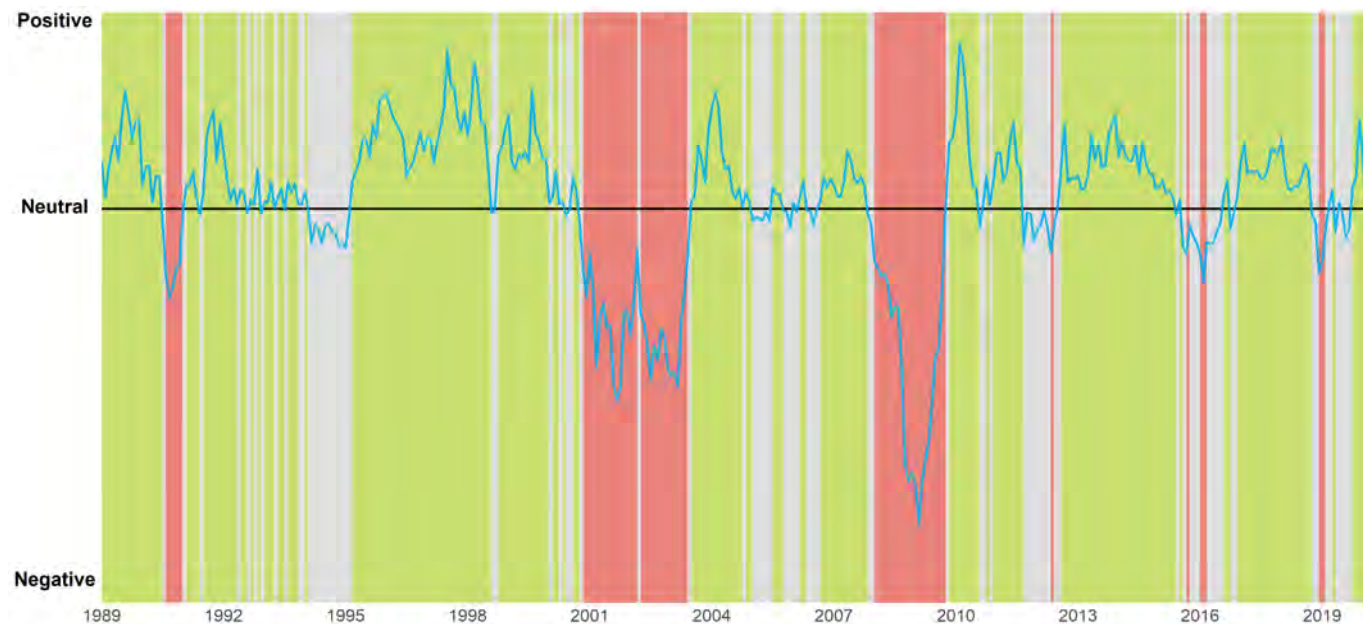
→ Meketa's Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk 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/~lpedersen/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 March 31, 2023

Manager ¹	Market Value
Adams Street 2007	\$1,705,990
Adams St. Global Op.	\$273,328
Adams Street Non-US	\$2,078,083
Adams Street Partners One Line	\$2,840,583
Alinda Capital Partners	\$500,496
BlackRock International Equity Fund	\$469,538
CHC RE Fund VIII	\$1,273,852
Crow Holdings Realty Partners VII	\$1,129,404
Franklin Templeton EMREFF	\$2,771,341
Franklin Templeton FTPREF	\$531,453
Macquarie	\$1
Muller and Monroe MPEFF	\$1
Newport Monarch	\$2,453,725
Pantheon Europe III	\$1,339,705
Pantheon Global	\$2
Pantheon Global II	\$365,258
Pantheon One Line Asset	\$131,760
PIMCO Total Return	\$255
Progress Venture Capital	\$950,894
RREEF Funds	\$34,766
Sanctioned Asset (SUR58)	\$76,313
Sanctioned Asset (SUR75)	\$216,055
Xponance - Applied Research	\$5,616
Xponance- Non-US Equity Funds	\$139,359
Total	\$19,287,778

¹ Includes legacy managers with less than \$2.9 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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Appendix

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.



Illinois State Universities Retirement System

Appendix

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.



Illinois State Universities Retirement System

Appendix

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.



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Appendix

Risk Metrics Description – Rationale for Selection and Calculation Methodology

US Equity Markets:

Metric: $P/E \text{ ratio} = \text{Price} / \text{"Normalized" earnings for the S\&P 500 Index}$

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].



Illinois State Universities Retirement System

Appendix

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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Appendix

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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Appendix

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.



Illinois State Universities Retirement System

Appendix

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.



Illinois State Universities Retirement System

Appendix

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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State Universities Retirement System of Illinois

SURS - Private Equity

Portfolio Report

As Of December 2022

Report created: May 2023

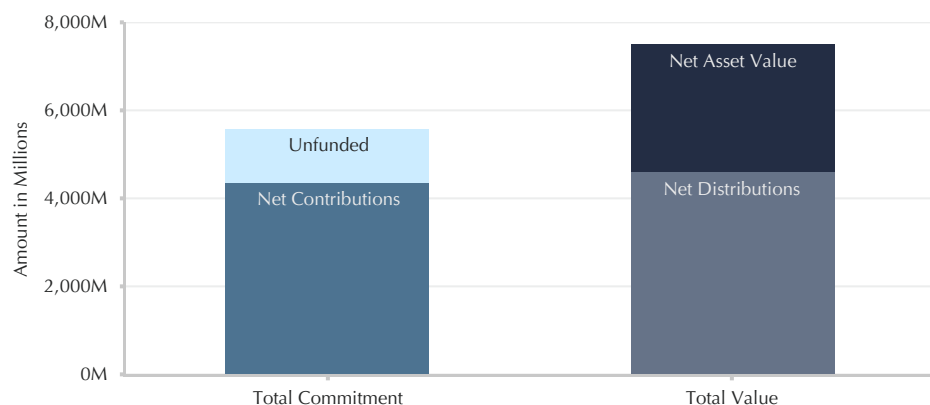
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Portfolio Snapshot	3
Portfolio Overview	5
Performance Review	6
Portfolio QoQ Overview	8
TVPI Distribution	9
Capital Account Change	10
Portfolio Summary	13
Portfolio Summary by Vintage Year	19
Period Chart Analysis	26
Movement By Sector - QTD	27
Movement By Sector - LTM	28
Top QTD Contributors/Detractors	29
Top LTM Contributors/Detractors	30
Portfolio IRR vs Benchmarks	31
Portfolio Composition - Sector	32
Portfolio Composition - Geography (Region)	33
Portfolio Composition - Cambridge Comparison	34

SURS - Private Equity

Portfolio Snapshot

Summary



Portfolio Summary

Total Pension Assets	\$22.4 bn as of 12/31/2022				
GP Relationships	32				
Holdings	76				
# of New Investments within the quarter*	1				
# of Underlying Active Investments	1020				
% of Public Companies	1.9%				
Total Commitment Amount	\$5.6 bn				
Net Contributions	\$4.4 bn				
Net Distributions	\$4.6 bn				
Net Asset Value	\$2.9 bn				
Weighted Average Age	15.1Y				
Unfunded Commitment	\$1.2 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	-5.9%	2Y IRR	15.4%	3Y IRR	20.8%
5Y IRR	18.1%	7Y IRR	16.3%	10Y IRR	13.9%
ITD IRR**	19.2%	ITD TVPI**	1.7x		

* Oct-2022 - Dec-2022

** Jul-1990 - Dec-2022

Position Analytics data based on GP provided information as of Dec-2022

IRR not meaningful for investments held less than 36 months

Weighted Average Age (WAA) is based on contributions

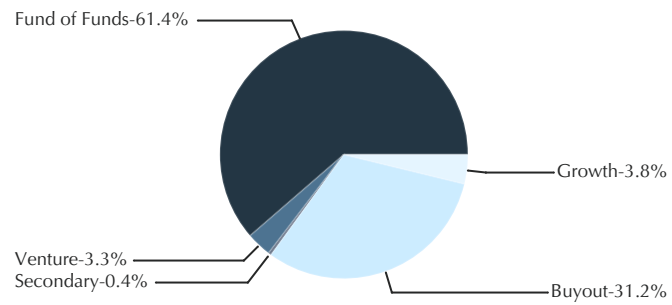
WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Total Exposure = Unfunded + NAV

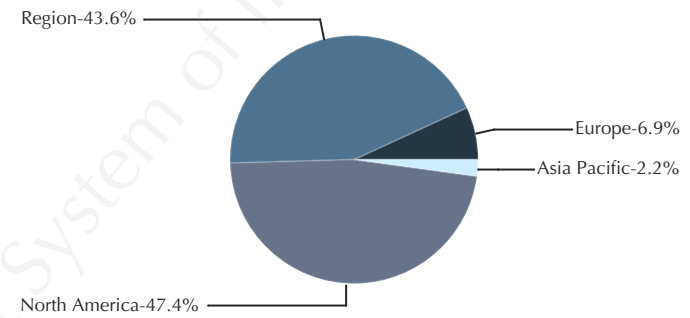
Reporting Period: As Of Dec-2022

[View this portfolio online](#)

Total Exposure by Sector



Total Exposure by Region



Position Analytics data based on GP provided information as of Dec-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

Total Exposure = Unfunded + NAV

Reporting Period: As Of Dec-2022

[View this portfolio online](#)

SURS - Private Equity

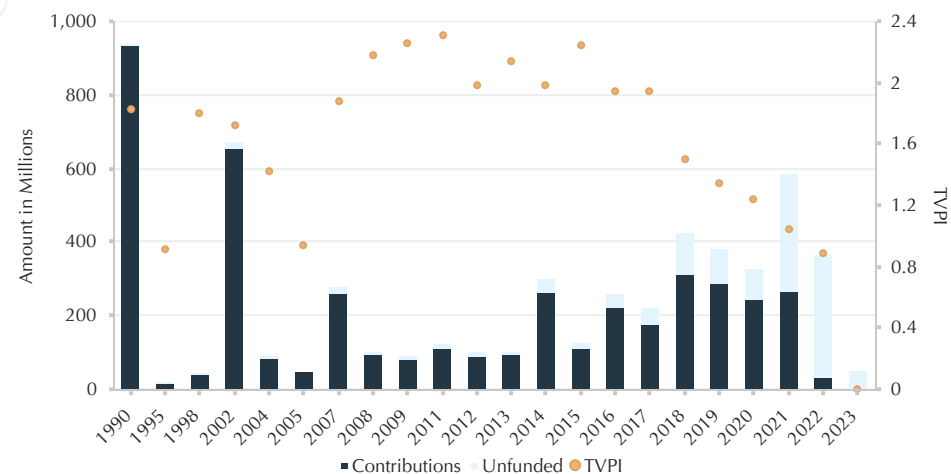
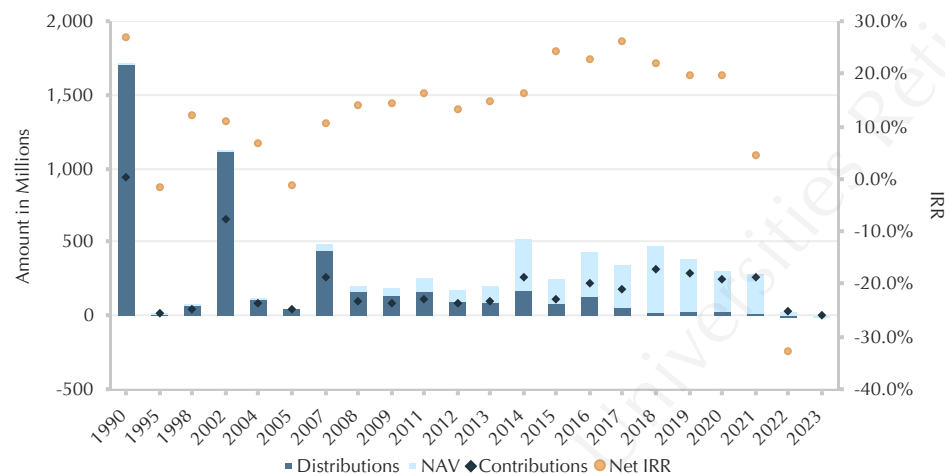
Portfolio Overview

Sector Portfolio Summary

	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Net IRR	TVPI
Buyout	29	2.6	703.9	1,158.7	584.6	1,288.5	616.3	65.6	19.7%	1.2x
Fund of Funds	31	17.4	2,085.4	4,029.8	447.9	2,533.3	3,611.6	4,493.2	19.5%	1.8x
Growth	5	2.4	61.7	155.0	95.4	157.2	59.7	0.4	n.m. ¹	1.0x
Secondary	3	16.7	6.5	70.0	8.7	15.2	61.3	80.1	7.7%	1.4x
Venture	8	5.8	55.9	141.0	78.7	134.6	62.4	39.1	14.4%	1.5x
SURS - Private Equity	76	15.1	2,913.5	5,554.5	1,215.4	4,128.8	4,411.3	4,678.3	19.2%	1.7x

¹ IRR not meaningful for investments held less than 36 months

Performance Review by Vintage Year

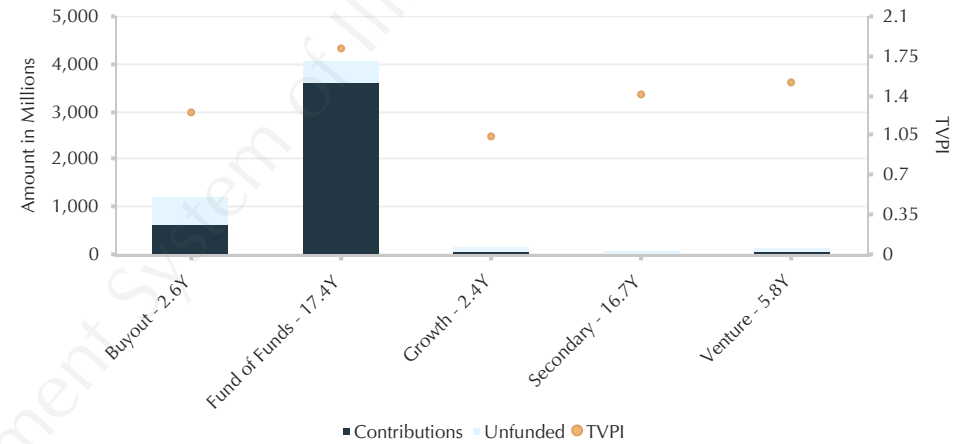
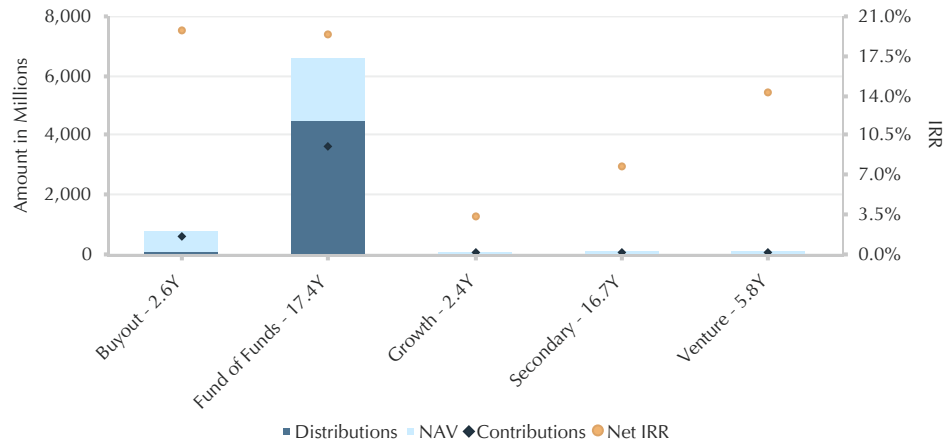


Total Exposure = Unfunded + NAV

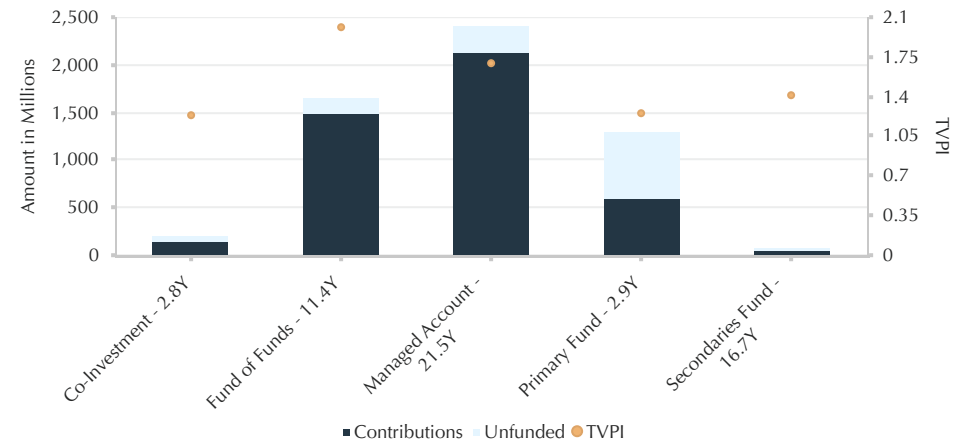
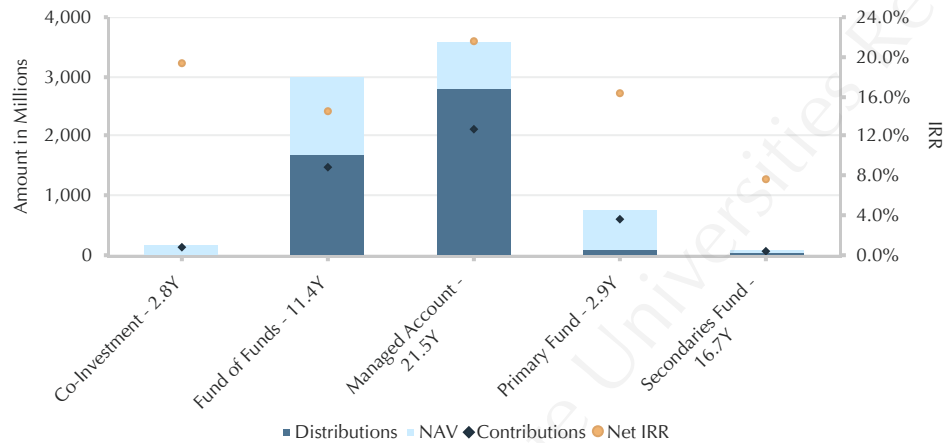
Reporting Period: As Of Dec-2022

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Performance Review by Sector



Performance Review by Structure



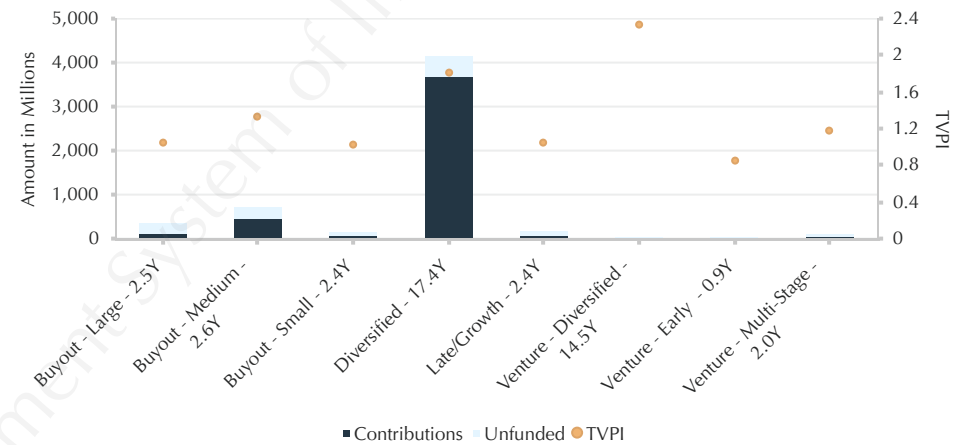
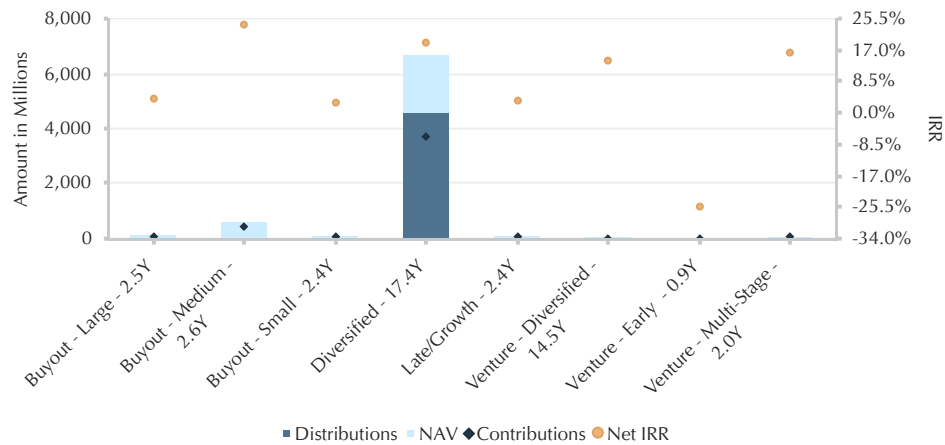
Weighted Average Age (WAA) is based on contributions

WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

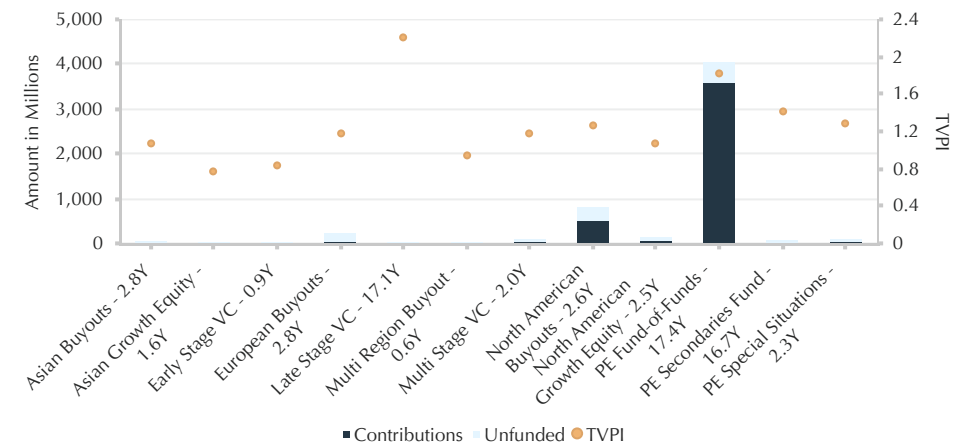
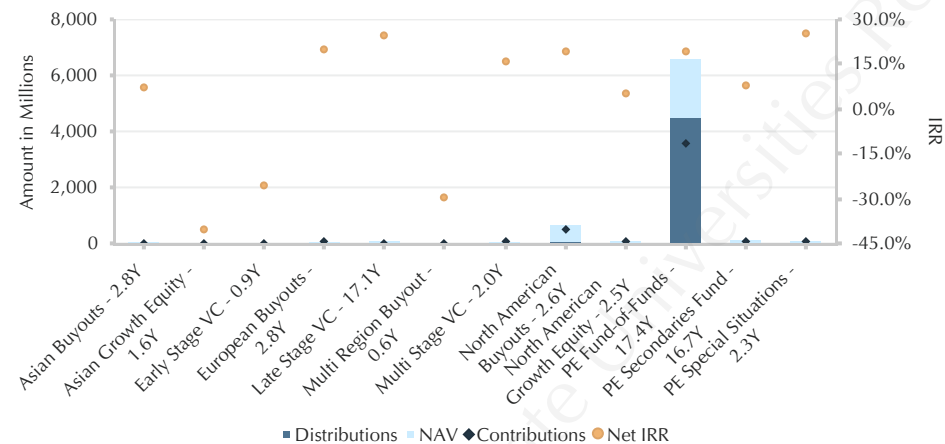
SURS - Private Equity

Performance Review

Performance Review by Strategy



Performance Review by Sub-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

Reporting Period: As Of Dec-2022

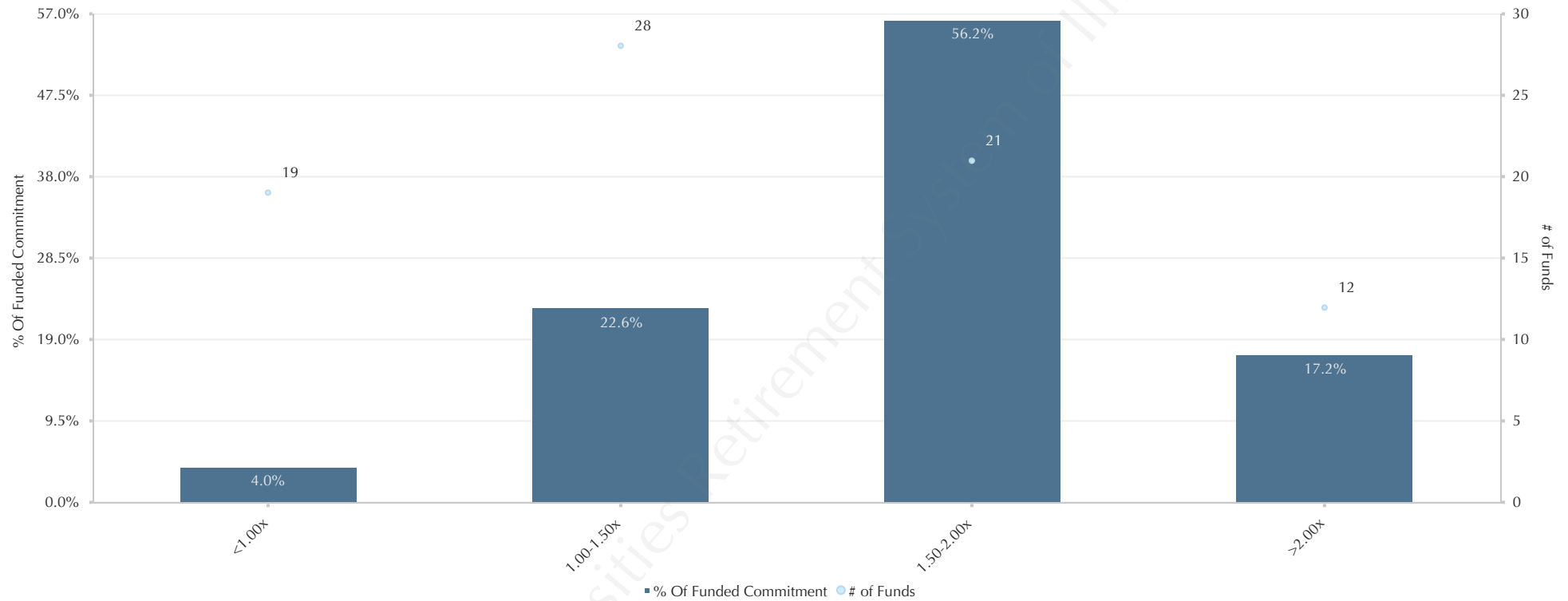
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Performance Statistics

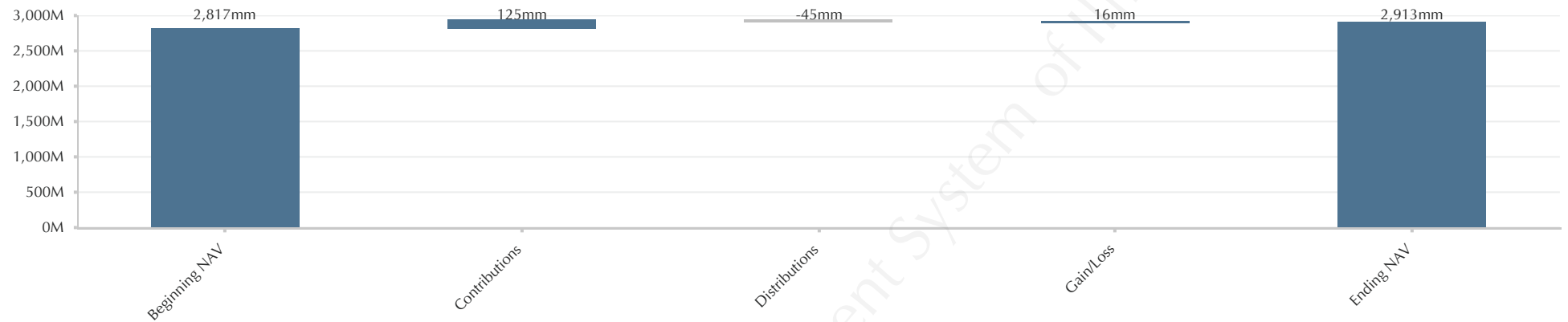
As Of Dec-2022	Dec-2021	Mar-2022	Jun-2022	Sep-2022	Dec-2022	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Dec-2022 Active	Dec-2022 Liquidated
Committed Capital	5,138.9	5,343.9	5,529.5	5,529.5	5,554.5	8.1%	0.5%	8.1%	5,469.5	85.0
Unfunded Commitment	1,207.2	1,362.1	1,419.3	1,302.9	1,215.4	0.7%	-6.7%	0.7%	1,215.4	0.00
Net Contributed Capital	3,949.3	3,998.6	4,121.6	4,228.0	4,353.0	10.2%	3.0%	10.2%	4,268.0	85.0
Net Distributed Capital	4,354.1	4,424.9	4,509.7	4,568.6	4,610.6	5.9%	0.9%	5.9%	4,510.6	99.9
Recallable Capital	51.1	60.6	63.1	65.0	67.7	32.5%	4.2%	32.5%	67.7	0.0
Net Asset Value	2,946.1	2,888.6	2,807.9	2,817.2	2,913.5	-1.1%	3.4%	-1.1%	2,913.5	0.0
Net Gain/Loss	3,355.7	3,320.8	3,202.6	3,164.9	3,180.5	-5.2%	0.5%	-5.2%	3,161.5	19.0
Total Value	7,300.2	7,313.5	7,317.6	7,385.8	7,524.1	3.1%	1.9%	3.1%	7,424.1	99.9
Total Exposure (mm)	4,153.3	4,250.7	4,227.2	4,120.1	4,128.8	-0.6%	0.2%	-0.6%	4,128.8	0.00
DPI	1.1x	1.1x	1.1x	1.1x	1.1x	0.0x	0.0x	0.0x	1.1x	1.2x
Total Value to Paid-In (TVPI)	1.8x	1.8x	1.8x	1.7x	1.7x	-0.1x	0.0x	-0.1x	1.7x	1.2x
Net Internal Rate of Return (IRR)	19.8%	19.7%	19.4%	19.3%	19.2%	-0.6%	-0.1%	-0.6%	19.6%	6.9%

Total Exposure = Unfunded + NAV

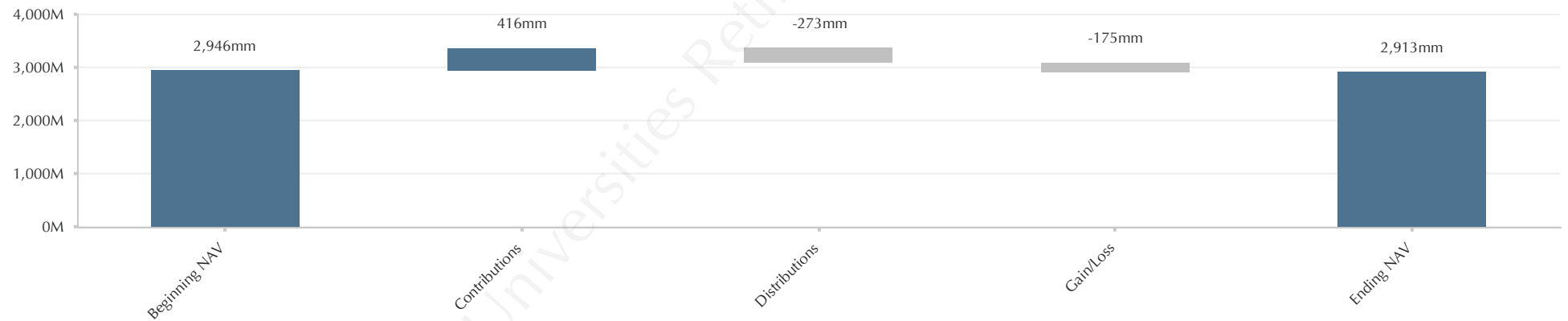
TVPI Distribution



Quarterly Valuation Bridge (Oct-2022 to Dec-2022)



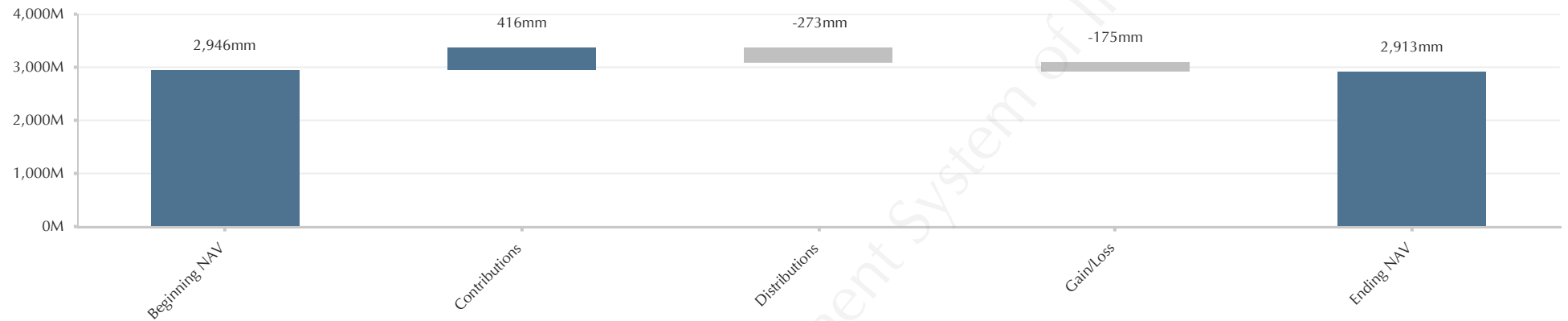
YTD Valuation Bridge (Jan-2022 to Dec-2022)



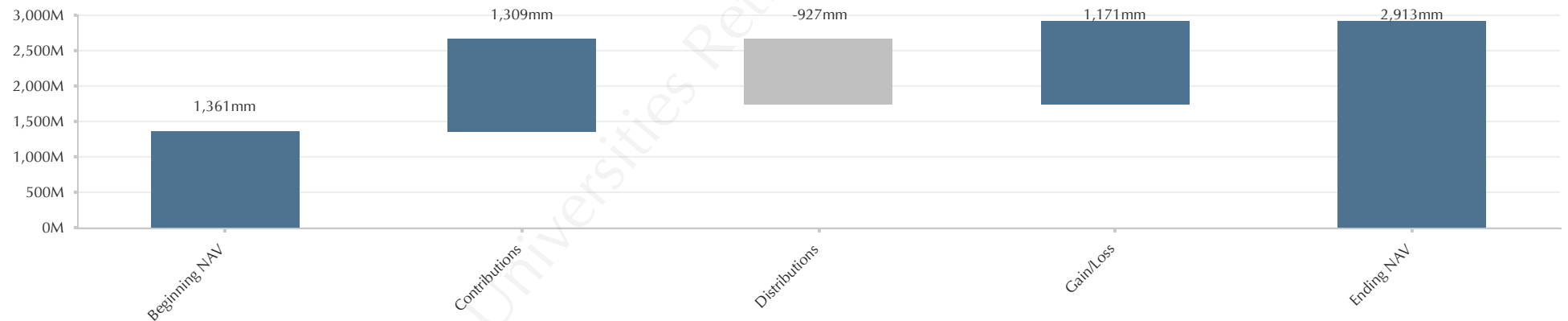
SURS - Private Equity

Capital Account Change

Last 12 Months Valuation Bridge (Jan-2022 to Dec-2022)



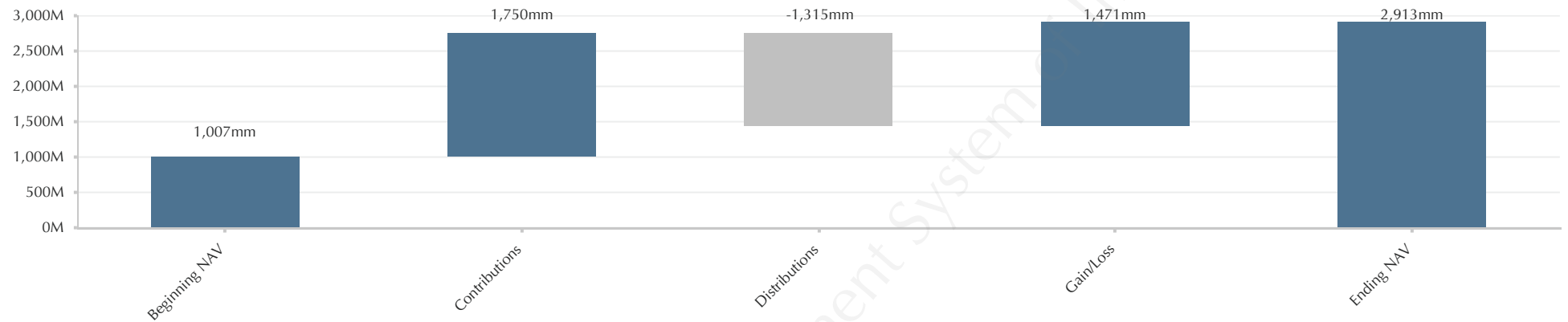
Last 3 Years Valuation Bridge (Jan-2020 to Dec-2022)



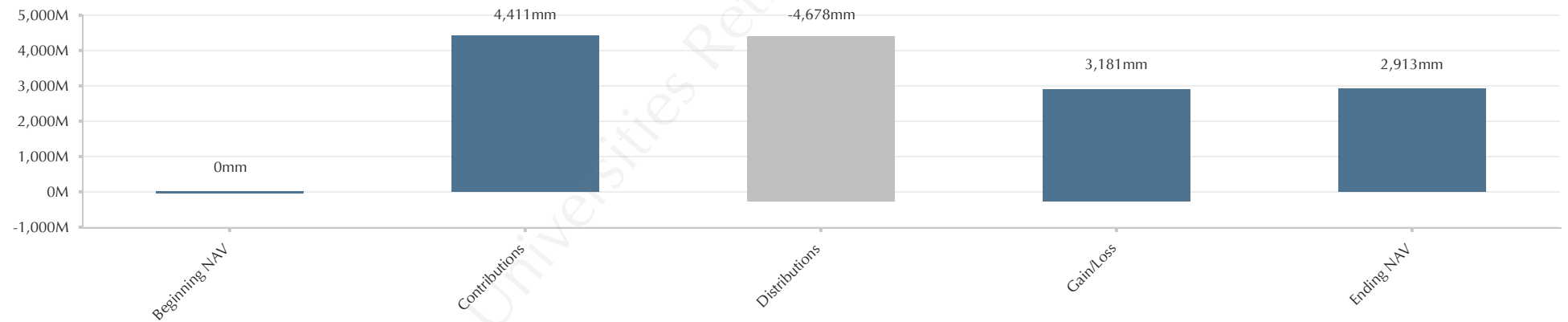
SURS - Private Equity

Capital Account Change

Last 5 Years Valuation Bridge (Jan-2018 to Dec-2022)



LTD Valuation Bridge (Jul-1990 to Dec-2022)



SURS - Private Equity

Portfolio Summary

	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Sector										
Buyout	24.2%	1,158.7	616.3	65.6	584.6	1,288.5	153.2	703.9	19.7%	1.2x
Fund of Funds	71.6%	4,029.8	3,611.6	4,493.2	447.9	2,533.3	2,967.1	2,085.4	19.5%	1.8x
Growth	2.1%	155.0	59.7	0.4	95.4	157.2	2.5	61.7	n.m. ¹	1.0x
Secondary	0.2%	70.0	61.3	80.1	8.7	15.2	25.3	6.5	7.7%	1.4x
Venture	1.9%	141.0	62.4	39.1	78.7	134.6	32.6	55.9	14.4%	1.5x
SURS - Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x
Strategy										
Buyout - Large	3.2%	335.5	101.3	12.9	244.7	337.2	4.1	92.5	n.m. ¹	1.0x
Buyout - Medium	19.0%	683.2	456.0	49.3	256.3	810.5	147.5	554.2	24.0%	1.3x
Buyout - Small	2.0%	140.0	59.0	3.4	83.7	140.8	1.6	57.2	n.m. ¹	1.0x
Diversified	71.8%	4,099.8	3,672.9	4,573.3	456.6	2,548.5	2,992.3	2,091.9	19.2%	1.8x
Late/Growth	2.1%	155.0	59.7	0.4	95.4	157.2	2.5	61.7	n.m. ¹	1.0x
Venture - Diversified	0.2%	20.0	19.6	39.0	0.4	7.0	26.0	6.5	14.4%	2.3x
Venture - Early	0.1%	20.0	3.4	0.0	16.6	19.5	-0.5	2.9	n.m. ¹	0.8x
Venture - Multi-Stage	1.6%	101.0	39.5	0.1	61.6	108.2	7.2	46.5	n.m. ¹	1.2x
SURS - Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x

SURS - Private Equity

Portfolio Summary

SubStrategy	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Asian Buyouts	0.6%	50.0	16.0	0.6	34.7	51.3	1.3	16.6	n.m. ¹	1.1x
Asian Growth Equity	0.1%	30.0	5.1	0.00	24.9	28.9	-1.1	4.0	n.m. ¹	0.8x
Early Stage VC	0.1%	20.0	3.4	0.0	16.6	19.5	-0.5	2.9	n.m. ¹	0.8x
European Buyouts	1.2%	223.7	43.0	14.6	190.2	226.0	7.4	35.8	n.m. ¹	1.2x
Late Stage VC	0.2%	30.0	29.6	58.7	0.4	7.0	35.7	6.5	24.6%	2.2x
Multi Region Buyout	0.0%	25.0	0.9	0.0	24.1	24.9	-0.06	0.8	n.m. ¹	0.9x
Multi Stage VC	1.6%	101.0	39.5	0.1	61.6	108.2	7.2	46.5	n.m. ¹	1.2x
North American Buyouts	20.2%	780.0	505.5	47.8	305.4	892.6	129.5	587.2	19.5%	1.3x
North American Growth Equity	2.0%	125.0	54.6	0.4	70.6	128.3	3.6	57.8	n.m. ¹	1.1x
PE Fund-of-Funds	71.6%	4,019.8	3,601.6	4,473.5	447.9	2,533.3	2,957.4	2,085.4	19.2%	1.8x
PE Secondaries Fund	0.2%	70.0	61.3	80.1	8.7	15.2	25.3	6.5	7.7%	1.4x
PE Special Situations	2.2%	80.0	50.9	2.5	30.3	93.8	15.1	63.4	n.m. ¹	1.3x
SURS - Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x

SURS - Private Equity

Portfolio Summary

Vintage	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2023	0.0%	50.0	0.0	0.0	48.7	48.0	-0.7	-0.7	n.m.	0.0x
2022	0.9%	365.1	29.9	0.01	333.7	360.4	-3.2	26.7	n.m. ¹	0.9x
2021	9.1%	576.0	265.5	10.6	320.1	586.3	11.3	266.2	n.m. ¹	1.0x
2020	9.5%	313.7	242.9	25.6	84.2	360.6	59.0	276.3	n.m. ¹	1.2x
2019	12.1%	360.0	286.0	29.1	93.8	447.8	97.0	353.9	19.8%	1.3x
2018	15.4%	420.0	310.2	17.4	112.2	561.2	156.3	449.0	22.1%	1.5x
2017	9.9%	220.0	176.3	54.7	43.9	332.8	167.4	288.9	26.3%	1.9x
2016	10.4%	250.0	220.5	124.4	36.1	340.2	207.9	304.0	22.6%	1.9x
2015	5.8%	125.0	109.4	78.1	15.6	183.6	136.7	168.1	24.3%	2.2x
2014	12.1%	300.0	263.2	168.9	36.8	389.4	258.3	352.6	16.2%	2.0x
2013	3.8%	100.0	92.4	85.8	7.6	119.1	104.9	111.6	14.9%	2.1x
2012	2.7%	100.0	87.8	96.9	12.2	89.7	86.7	77.6	13.2%	2.0x
2011	3.1%	124.6	110.9	165.9	11.3	100.7	144.4	89.4	16.2%	2.3x
2009	1.8%	90.0	81.8	133.6	8.2	59.2	102.8	51.0	14.4%	2.3x
2008	1.2%	100.0	92.9	166.1	7.1	43.0	109.1	35.9	14.0%	2.2x
2007	1.6%	280.4	258.6	439.3	18.1	64.9	227.5	46.8	10.5%	1.9x
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	117.3	6.0	8.5	35.7	2.5	6.9%	1.4x
2002	0.3%	664.1	652.9	1,115.0	17.6	27.5	472.0	9.9	10.8%	1.7x
1998	0.0%	39.4	42.5	76.6	0.5	0.7	34.3	0.3	12.2%	1.8x
1995	0.0%	20.0	19.8	17.2	0.00	0.9	-1.7	0.9	-1.5%	0.9x
1990	0.1%	916.2	937.2	1,711.9	1.7	4.3	777.3	2.6	26.8%	1.8x

Reporting Period: Jul-1990 - Dec-2022

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SURS - Private Equity

Portfolio Summary

	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
SURS - Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x
Structure										
Co-Investment	5.7%	200.0	140.5	8.4	59.5	224.2	32.7	164.7	n.m. ¹	1.2x
Fund of Funds	44.6%	1,629.4	1,485.4	1,694.5	167.2	1,466.0	1,507.9	1,298.8	14.4%	2.0x
Managed Account	27.0%	2,400.3	2,126.1	2,798.7	280.7	1,067.4	1,459.2	786.6	21.5%	1.7x
Primary Fund	22.5%	1,254.7	597.9	96.6	699.2	1,356.1	155.5	656.9	16.3%	1.3x
Secondaries Fund	0.2%	70.0	61.3	80.1	8.7	15.2	25.3	6.5	7.7%	1.4x
SURS - Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x
Region										
Asia Pacific	1.0%	90.0	30.3	10.3	60.4	89.1	8.8	28.8	8.2%	1.3x
Europe	2.8%	400.4	224.1	306.2	202.3	283.1	162.9	80.8	13.5%	1.7x
Multi-Region	50.3%	1,680.4	1,349.2	895.4	334.9	1,800.4	1,011.8	1,465.5	13.3%	1.7x
North America	45.9%	3,383.6	2,807.7	3,466.4	617.8	1,956.2	1,997.0	1,338.3	21.1%	1.7x
SURS - Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x

SURS - Private Equity

Portfolio Summary

CommitmentYear	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
1990	0.1%	916.2	937.2	1,711.9	1.7	4.3	777.3	2.6	26.8%	1.8x
1995	0.0%	20.0	19.8	17.2	0.00	0.9	-1.7	0.9	-1.5%	0.9x
1998	0.0%	39.4	42.5	76.6	0.5	0.7	34.3	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	0.3%	664.1	652.9	1,115.0	17.6	27.5	472.0	9.9	10.8%	1.7x
2004	0.1%	115.0	105.5	136.1	6.0	8.5	33.1	2.5	5.3%	1.3x
2007	1.5%	270.4	248.8	417.1	17.9	60.9	211.3	43.0	10.3%	1.8x
2008	1.3%	100.0	92.8	171.6	7.2	44.0	115.6	36.8	14.3%	2.2x
2009	1.8%	100.0	91.6	150.3	8.4	62.2	112.6	53.8	14.3%	2.2x
2012	5.7%	224.6	198.7	262.9	23.5	190.5	231.1	167.0	15.0%	2.2x
2013	3.8%	100.0	92.4	85.8	7.6	119.1	104.9	111.6	14.9%	2.1x
2014	12.1%	300.0	263.2	168.9	36.8	389.4	258.3	352.6	16.2%	2.0x
2015	5.8%	125.0	109.4	78.1	15.6	183.6	136.7	168.1	24.3%	2.2x
2016	10.4%	250.0	220.5	124.4	36.1	340.2	207.9	304.0	22.6%	1.9x
2017	19.5%	500.0	379.0	54.7	121.2	689.1	243.6	567.9	22.7%	1.6x
2018	3.4%	90.0	66.4	11.6	23.6	122.0	43.5	98.4	26.9%	1.7x
2019	13.6%	390.0	316.4	31.6	94.7	492.0	112.6	397.4	20.8%	1.4x
2020	15.2%	554.7	388.0	34.1	185.7	629.6	90.0	443.9	n.m. ¹	1.2x
2021	3.8%	354.5	114.5	3.1	240.0	350.6	-0.8	110.6	n.m. ¹	1.0x
2022	1.4%	415.5	46.4	2.3	371.5	413.7	-1.9	42.2	n.m. ¹	1.0x
SURS - Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x

Reporting Period: Jul-1990 - Dec-2022

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SURS - Private Equity

Portfolio Summary

AssetClass	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x
SURS - Private Equity	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x

¹ IRR not meaningful for investments held less than 36 months

* Total figures take into account all current and closed portfolio positions as at Dec-2022

Total Exposure = Unfunded + NAV

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2023											
PAI Partners VIII-1 SCSp	USD	0.0%	50.0	0.0	0.0	48.7	48.0	-0.7	-0.7	n.m.	0.0x
Total 2023	USD	0.0%	50.0	0.0	0.0	48.7	48.0	-0.7	-0.7	n.m.	0.0x
2022											
Advent International GPE X	USD	0.0%	25.0	0.9	0.0	24.1	24.9	-0.06	0.8	n.m. ¹	0.9x
Base10 Advancement Initiative II	USD	-	25.0	0.0	0.0	25.0	25.0	0.0	0.0 ²	n.m.	0.0x
Base10 Partners III	USD	0.1%	20.0	3.4	0.0	16.6	19.5	-0.5	2.9	n.m. ¹	0.8x
Bregal Sagemount IV-B	USD	0.0%	25.0	1.2	0.00	23.8	24.6	-0.4	0.8	n.m. ¹	0.7x
Great Hill Equity Partners VIII-Pref	USD	0.0%	25.0	1.3	0.0	23.7	23.5	-1.5	-0.3	n.m.	-0.2x
Hg Saturn 3 A	USD	0.0%	35.0	0.3	0.0	34.7	34.7	-0.3	-0.03	n.m.	-0.1x
HgCapital Genesis 10 A	USD	0.0%	13.0	0.1	0.0	12.7	12.8	-0.08	0.02	n.m. ¹	0.2x
Inflexion Buyout Fund VI	USD	0.0%	24.5	0.4	0.0	21.4	22.3	0.5	0.9	n.m. ¹	2.5x
Nordic Capital XI Beta	USD	0.0%	50.1	0.0	0.0	51.5	51.2	-0.3	-0.3	n.m.	0.0x
Oak HC-FT Partners V	USD	0.1%	40.0	1.7	0.0	38.3	40.7	0.7	2.4	n.m. ¹	1.4x
Rubicon Technology Partners IV	USD	0.1%	32.5	3.5	0.0	29.0	31.9	-0.6	2.9	n.m. ¹	0.8x
Thoma Bravo Discover Fund IV	USD	0.1%	25.0	3.9	0.0	21.1	24.9	-0.1	3.7	n.m. ¹	1.0x
Thoma Bravo Fund XV	USD	0.4%	25.0	13.4	0.01	11.6	24.5	-0.5	12.9	n.m. ¹	1.0x
Total 2022	USD	0.9%	365.1	29.9	0.01	333.7	360.4	-3.2	26.7	n.m.¹	0.9x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2021											
Altaris Health Partners V	USD	0.4%	25.0	12.4	0.02	12.6	25.6	0.6	13.0	n.m. ¹	1.0x
Avance Investment Partners	USD	0.2%	25.0	9.0	2.4	18.4	25.3	0.4	6.9	n.m. ¹	1.0x
Base10 Advancement Initiative I	USD	0.6%	25.0	21.1	0.3	3.9	22.5	-2.3	18.6	n.m. ¹	0.9x
Clearlake Capital Partners VII	USD	0.7%	50.0	20.5	0.00	29.5	49.5	-0.5	20.0	n.m. ¹	1.0x
GGV Capital VIII	USD	0.5%	21.6	11.6	0.0	10.0	23.4	1.8	13.3	n.m. ¹	1.2x
GGV Capital VIII Plus	USD	0.1%	5.4	2.5	0.0	2.9	5.5	0.09	2.6	n.m. ¹	1.0x
GGV Discovery III	USD	0.2%	9.0	4.1	0.0	4.9	11.0	2.0	6.1	n.m. ¹	1.5x
Harvest Partners IX	USD	0.2%	50.0	7.5	0.3	42.8	48.8	-1.2	6.0	n.m. ¹	0.8x
Lincoln Fund I (Series B)	USD	0.9%	100.0	24.7	0.0	75.3	100.5	0.5	25.2	n.m. ¹	1.0x
MBK Partners Fund V	USD	0.6%	50.0	16.0	0.6	34.7	51.3	1.3	16.6	n.m. ¹	1.1x
Nautic Partners X	USD	0.2%	25.0	6.5	0.0	18.5	25.3	0.3	6.8	n.m. ¹	1.0x
Oak HC-FT Partners IV	USD	0.8%	25.0	19.7	0.1	5.4	27.6	2.6	22.2	n.m. ¹	1.1x
One Equity Partners VIII	USD	0.6%	25.0	16.9	2.3	10.5	27.6	2.6	17.1	n.m. ¹	1.2x
One Rock Capital Partners III	USD	0.9%	35.0	23.4	3.6	15.2	40.6	5.7	25.4	n.m. ¹	1.2x
Orchid Asia VIII	USD	0.1%	30.0	5.1	0.00	24.9	28.9	-1.1	4.0	n.m. ¹	0.8x
Stellex Capital Partners II	USD	0.5%	25.0	15.5	0.9	9.8	25.2	0.9	15.4	n.m. ¹	1.1x
Thoma Bravo Fund XIV	USD	1.6%	50.0	49.1	0.00	0.9	47.8	-2.2	46.9	n.m. ¹	1.0x
Total 2021	USD	9.1%	576.0	265.5	10.6	320.1	586.3	11.3	266.2	n.m.¹	1.0x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2020											
Clearlake Capital Partners VI	USD	1.5%	30.0	30.4	2.5	0.8	44.3	15.6	43.4	n.m. ¹	1.5x
Hg Genesis 9	USD	0.4%	13.7	11.2	2.3	4.9	15.4	1.7	10.5	n.m. ¹	1.1x
HgCapital Saturn Fund 2	USD	0.9%	37.5	31.1	12.3	16.2	41.6	6.6	25.4	n.m. ¹	1.2x
Rubicon Technology Partners III	USD	1.1%	32.5	29.8	0.0	2.7	35.0	2.5	32.3	n.m. ¹	1.1x
SURS TorreyCove Co-Investment Fund I	USD	5.7%	200.0	140.5	8.4	59.5	224.2	32.7	164.7 ²	n.m. ¹	1.2x
Total 2020	USD	9.5%	313.7	242.9	25.6	84.2	360.6	59.0	276.3	n.m.¹	1.2x
2019											
Bregal Sagemount III-B	USD	1.3%	50.0	32.2	0.1	17.9	56.3	6.3	38.3	n.m. ¹	1.2x
Cortec Group Fund VII	USD	1.7%	35.0	33.5	2.7	4.2	52.5	17.5	48.3	32.0%	1.5x
Harvest Partners VIII	USD	2.9%	70.0	72.9	14.1	7.7	93.3	26.9	85.7	19.7%	1.4x
OceanSound Partners Fund	USD	1.0%	25.0	25.6	7.0	5.8	33.6	9.2	27.8	n.m. ¹	1.4x
Pantheon Access (US) - SURS 2018	USD	5.3%	180.0	121.8	5.0	58.2	212.1	37.1	153.9	17.5%	1.3x
Total 2019	USD	12.1%	360.0	286.0	29.1	93.8	447.8	97.0	353.9	19.8%	1.3x
2018											
Adams Street 2018 Global Fund	USD	3.4%	90.0	66.4	11.6	23.6	122.0	43.5	98.4	26.9%	1.7x
Mesirow Financial Private Equity Special Fund B	USD	9.6%	280.0	202.8	0.0	77.2	356.2	76.2	279.0 ²	17.1%	1.4x
Reverence Capital Partners Opportunities Fund II	USD	2.5%	50.0	41.0	5.9	11.3	83.0	36.5	71.7	n.m. ¹	1.9x
Total 2018	USD	15.4%	420.0	310.2	17.4	112.2	561.2	156.3	449.0	22.1%	1.5x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2017											
Adams Street 2017 Global Fund	USD	4.1%	90.0	71.9	20.4	18.1	136.9	67.3	118.8	24.3%	1.9x
Mesirow Financial Private Equity Fund VII-B	USD	2.8%	40.0	39.7	29.3	0.4	82.5	71.6	82.1	39.1%	2.8x
Pantheon Access (US) - SURS 2017	USD	3.0%	90.0	64.6	5.0	25.4	113.4	28.5	88.1	15.9%	1.4x
Total 2017	USD	9.9%	220.0	176.3	54.7	43.9	332.8	167.4	288.9	26.3%	1.9x
2016											
Adams Street 2016 Global Fund	USD	6.4%	150.0	123.5	53.8	26.5	212.8	116.6	186.2	22.0%	1.9x
M2 - SURS Emerging Private Equity Fund-of-Funds	USD	4.0%	100.0	97.1	70.6	9.6	127.4	91.4	117.8 ²	23.5%	1.9x
Total 2016	USD	10.4%	250.0	220.5	124.4	36.1	340.2	207.9	304.0	22.6%	1.9x
2015											
Adams Street 2015 Global Fund	USD	5.8%	125.0	109.4	78.1	15.6	183.6	136.7	168.1	24.3%	2.2x
Total 2015	USD	5.8%	125.0	109.4	78.1	15.6	183.6	136.7	168.1	24.3%	2.2x
2014											
Adams Street 2014 Global Fund	USD	4.2%	100.0	92.2	78.6	7.8	131.4	110.0	123.5	16.8%	2.2x
Lincoln Fund I (Series A)	USD	3.4%	75.0	65.8	35.8	9.2	108.0	68.8	98.8	15.7%	2.0x
Pantheon Multi-Strategy Program 2014 (US) - SURS 2014	USD	4.5%	125.0	105.3	54.5	19.7	150.0	79.5	130.3	15.7%	1.8x
Total 2014	USD	12.1%	300.0	263.2	168.9	36.8	389.4	258.3	352.6	16.2%	2.0x
2013											
Adams Street 2013 Global Fund	USD	3.8%	100.0	92.4	85.8	7.6	119.1	104.9	111.6	14.9%	2.1x
Total 2013	USD	3.8%	100.0	92.4	85.8	7.6	119.1	104.9	111.6	14.9%	2.1x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
2012											
Adams Street 2012 Global Fund	USD	2.5%	80.0	72.4	81.8	7.6	79.3	81.1	71.7	14.3%	2.1x
Adams Street Global Secondary Fund 5	USD	0.2%	20.0	15.4	15.1	4.6	10.4	5.6	5.9	6.6%	1.4x
Total 2012	USD	2.7%	100.0	87.8	96.9	12.2	89.7	86.7	77.6	13.2%	2.0x
2011											
Pantheon Europe Fund VII	USD	0.7%	39.6	33.3	42.9	3.4	24.8	31.0	21.4	13.0%	1.9x
Pantheon USA Fund IX	USD	2.3%	85.0	77.5	123.0	7.9	75.9	113.5	68.0	17.4%	2.5x
Total 2011	USD	3.1%	124.6	110.9	165.9	11.3	100.7	144.4	89.4	16.2%	2.3x
2009											
Adams Street Partnership Fund - 2009 Non-U.S. Developed Markets Fund	USD	0.5%	30.0	26.7	40.0	3.3	16.6	26.5	13.3	13.3%	2.0x
Adams Street Partnership Fund - 2009 Non-U.S. Emerging Markets Fund	USD	0.3%	10.0	9.2	9.7	0.8	9.0	8.6	8.2	9.3%	1.9x
Adams Street Partnership Fund - 2009 U.S. Fund	USD	1.0%	50.0	45.9	83.9	4.1	33.7	67.6	29.6	16.0%	2.5x
Total 2009	USD	1.8%	90.0	81.8	133.6	8.2	59.2	102.8	51.0	14.4%	2.3x
2008											
Adams Street 2009 Direct Fund	USD	0.1%	10.0	9.8	16.7	0.2	3.0	9.7	2.8	13.0%	2.0x
Adams Street Partnership Fund - 2008 Non-U.S. Fund	USD	0.6%	40.0	36.5	55.0	3.5	20.6	35.6	17.2	11.3%	2.0x
Adams Street Partnership Fund - 2008 U.S. Fund	USD	0.5%	50.0	46.5	94.4	3.5	19.4	63.8	15.9	16.2%	2.4x
Total 2008	USD	1.2%	100.0	92.9	166.1	7.1	43.0	109.1	35.9	14.0%	2.2x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Contributions (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	91.3	148.4	8.7	10.4	58.8	1.7	8.2%	1.6x
Adams Street 2008 Direct Fund	USD	0.1%	10.0	9.7	22.2	0.3	4.0	16.2	3.7	15.3%	2.7x
Pantheon Europe Fund VI	USD	0.3%	42.1	37.4	57.6	1.7	10.1	28.6	8.4	10.1%	1.8x
Pantheon USA Fund VIII	USD	1.1%	103.3	95.8	174.8	7.4	40.4	112.0	32.9	12.9%	2.2x
Liquidated Holdings (1)	USD	-	25.0	24.4	36.3	0.00	0.00	11.9		8.3%	1.5x
Total 2007	USD	1.6%	280.4	258.6	439.3	18.1	64.9	227.5	46.8	10.5%	1.9x
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	3.1	15.0	0.3	11.5%	1.7x
Adams Street Partnership Fund - 2004 Non-U.S. Fund	USD	0.1%	40.0	38.1	52.3	1.9	3.7	16.0	1.8	5.9%	1.4x
Pantheon Global Secondary Fund II	USD	0.0%	25.0	23.8	28.1	1.3	1.6	4.7	0.4 ³	4.3%	1.2x
Total 2004	USD	0.1%	90.0	84.0	117.3	6.0	8.5	35.7	2.5	6.9%	1.4x
2002											
Pantheon Europe Fund III	USD	0.1%	65.0	83.7	151.1	3.6	5.7	69.4	2.0	14.6%	1.8x
Pantheon USA Primary Investments	USD	0.3%	599.1	569.2	963.9	13.9	21.9	402.6	7.9	10.3%	1.7x
Total 2002	USD	0.3%	664.1	652.9	1,115.0	17.6	27.5	472.0	9.9	10.8%	1.7x

SURS - Private Equity

Portfolio Summary by Vintage Year

	Currency	NAV Weight	Total Commitment (mm)	Contributions (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	76.6	0.5	0.7	34.3	0.3	12.2%	1.8x
Total 1998	USD	0.0%	39.4	42.5	76.6	0.5	0.7	34.3	0.3	12.2%	1.8x
1995											
Progress Alternative Investment Program	USD	0.0%	20.0	19.8	17.2	0.00	0.9	-1.7	0.9	-1.5%	0.9x
Total 1995	USD	0.0%	20.0	19.8	17.2	0.00	0.9	-1.7	0.9	-1.5%	0.9x
1990											
Adams Street SMA (1990-2007) - SURS	USD	0.1%	906.2	927.2	1,692.2	1.7	4.3	767.6	2.6	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	1,711.9	1.7	4.3	777.3	2.6	26.8%	1.8x
SURS - Private Equity	USD	100.0%	5,554.5	4,411.3	4,678.3	1,215.4	4,128.8	3,180.5	2,913.5	19.2%	1.7x

¹ IRR not meaningful for investments held less than 36 months² Adjusted for additional contributions and distributions since last valuation, which is prior to the report date.³ NAV is not up-to-date: Pantheon Global Secondary Fund II as of Dec-2021

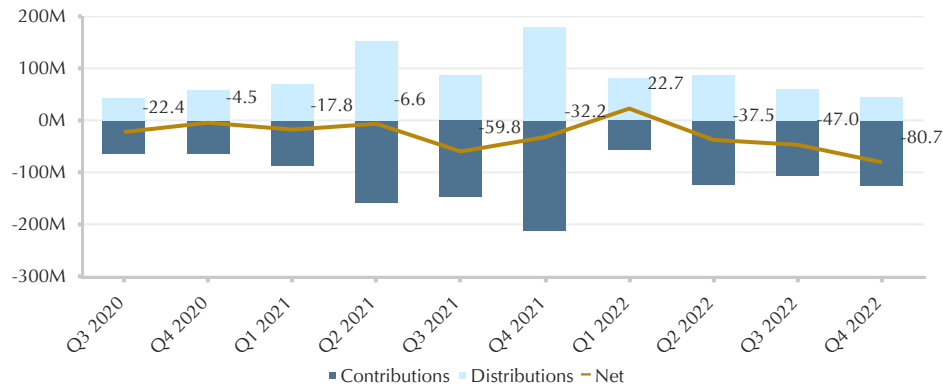
* Total figures take into account all current and closed portfolio positions as at Dec-2022

Total Exposure = Unfunded + NAV

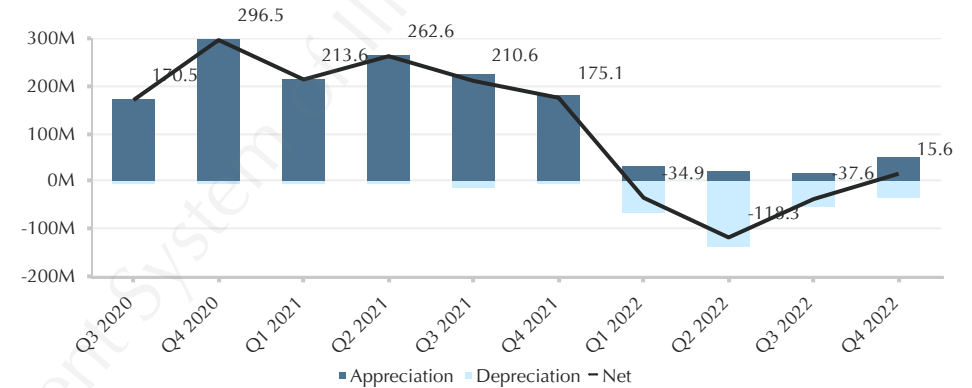
SURS - Private Equity

Period Chart Analysis

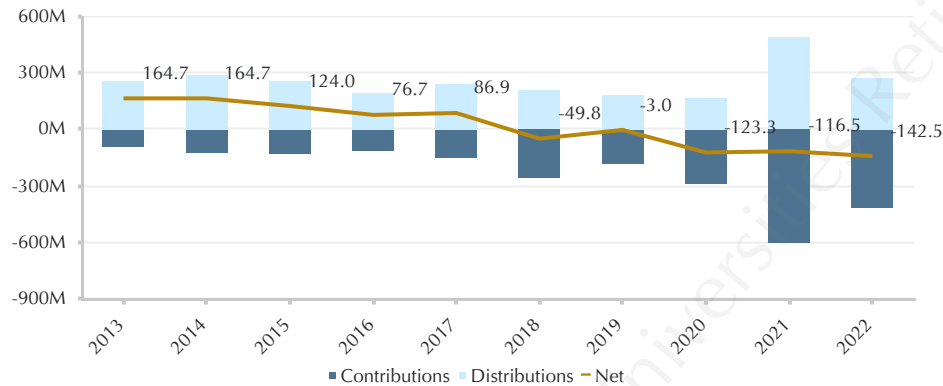
Cash Flows Quarterly



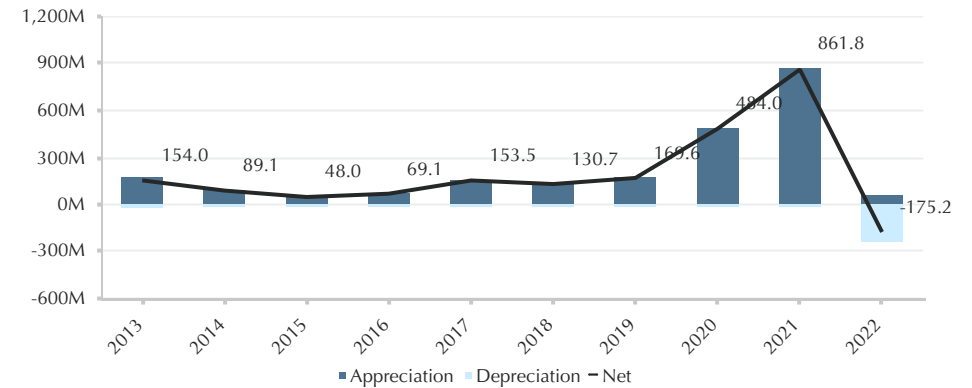
Appreciation/Depreciation Quarterly



Cash Flows Yearly



Appreciation/Depreciation Yearly



SURS - Private Equity

Movement By Sector - QTD

	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	32.0	15	-3.4	13	28.6	183.1%	8.6	19.3%	71.2	56.8%	703.9
Fund of Funds	13.9	14	-27.7	15	-13.8	-88.4%	36.0	80.3%	49.4	39.4%	2,085.4
Growth	3.0	1	-1.7	3	1.3	8.3%	0.00	0.0%	2.2	1.7%	61.7
Secondary	0.2	1	-0.01	1	0.2	1.0%	0.0	-	0.0	-	6.5
Venture	0.9	2	-1.5	6	-0.6	-4.0%	0.2	0.4%	2.7	2.1%	55.9
Total	49.9	33	-34.2	38	15.6	100.0%	44.8	100.0%	125.4	100.0%	2,913.5

Above reporting references both active and closed funds

SURS - Private Equity

Movement By Sector - LTM

	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	45.9	13	-19.2	16	26.7	-15.2%	28.1	10.3%	218.3	52.5%	703.9
Fund of Funds	10.5	7	-209.3	25	-198.7	113.4%	239.6	87.7%	168.8	40.6%	2,085.4
Growth	2.1	1	-4.7	3	-2.6	1.5%	0.3	0.1%	12.4	3.0%	61.7
Secondary	0.0	0	-0.5	2	-0.5	0.3%	2.6	1.0%	0.0	-	6.5
Venture	3.9	5	-3.9	3	-0.01	0.0%	2.5	0.9%	16.2	3.9%	55.9
Total	62.4	26	-237.6	49	-175.2	100.0%	273.1	100.0%	415.6	100.0%	2,913.5

Above reporting references both active and closed funds

Reporting Period: Jan-2022 - Dec-2022

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Top QTD Contributors/Detractors

Top Contributors

	Vintage	% Funded Commitment	Total Commitment Amount (\$mm)	Gain (\$K)	NAV (\$mm)	QTD IRR*	ITD IRR*
Reverence Capital Partners Opportunities F	2018	77.3%	50.0	6,851	71.7	n.m.*	n.m.*
Cortec Group Fund VII	2019	88.0%	35.0	6,249	48.3	16.9%	32.0%
Mesirow Financial Private Equity Fund VII-	2017	98.9%	40.0	4,092	82.1	5.2%	39.1%
OceanSound Partners Fund	2019	76.6%	25.0	3,794	27.8	n.m.*	n.m.*
Thoma Bravo Fund XIV	2021	98.2%	50.0	3,551	46.9	n.m.*	n.m.*
Gain	-	-	200.0	24,537	276.7	10.1%	31.4%
Gain (Remaining)	-	-	2,085.8	25,314	1,514.1	1.7%	12.2%
Total Gain	-	-	2,285.8	49,851	1,790.8	2.9%	12.7%

* 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	% Funded Commitment	Total Commitment Amount (\$mm)	Loss (\$K)	NAV (\$mm)	QTD IRR*	ITD IRR*
Lincoln Fund I (Series A)	2014	87.7%	75.0	-11,948	98.8	-10.8%	15.7%
Adams Street 2014 Global Fund	2014	92.2%	100.0	-3,265	123.5	-2.5%	16.8%
Adams Street 2013 Global Fund	2013	92.4%	100.0	-3,068	111.6	-2.6%	14.9%
Adams Street 2015 Global Fund	2015	87.5%	125.0	-2,489	168.1	-1.4%	24.3%
Adams Street Partnership Fund - 2008 U.S.	2008	93.1%	50.0	-1,526	15.9	-8.6%	16.2%
Loss	-	-	450.0	-22,295	517.9	-4.1%	17.2%
Loss (Remaining)	-	-	2,818.7	-11,945	604.8	-2.0%	21.9%
Total Loss	-	-	3,268.7	-34,240	1,122.7	-3.0%	21.6%

* IRR calculated at portfolio currency. IRR not meaningful for investments held less than 36 months

Total Portfolio(76)	-	78.4%	5,554.5	15,612	2,913.5	0.5%	19.2%
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Reporting Period: As Of Dec-2022

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Top LTM Contributors/Detractors

Top Contributors

	Vintage	% Funded Commitment	Total Commitment Amount (\$mm)	Gain (\$K)	NAV (\$mm)	1Y IRR*	ITD IRR*
Reverence Capital Partners Opportunities F	2018	77.3%	50.0	15,648	71.7	n.m.*	n.m.*
SURS TorreyCove Co-Investment Fund I	2020	70.2%	200.0	8,031	164.7	n.m.*	n.m.*
Cortec Group Fund VII	2019	88.0%	35.0	7,934	48.3	24.1%	32.0%
Mesirow Financial Private Equity Fund VII-	2017	98.9%	40.0	7,876	82.1	10.6%	39.1%
OceanSound Partners Fund	2019	76.6%	25.0	4,551	27.8	n.m.*	n.m.*
Gain	-	-	350.0	44,041	394.5	13.9%	31.6%
Gain (Remaining)	-	-	1,399.0	18,400	400.8	5.3%	10.2%
Total Gain	-	-	1,749.0	62,441	795.3	9.4%	10.8%

* 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	% Funded Commitment	Total Commitment Amount (\$mm)	Loss (\$K)	NAV (\$mm)	1Y IRR*	ITD IRR*
Adams Street 2015 Global Fund	2015	87.5%	125.0	-30,284	168.1	-14.6%	24.3%
Adams Street 2013 Global Fund	2013	92.4%	100.0	-29,296	111.6	-19.6%	14.9%
Adams Street 2014 Global Fund	2014	92.2%	100.0	-24,210	123.5	-15.4%	16.8%
Adams Street 2012 Global Fund	2012	90.5%	80.0	-18,787	71.7	-19.5%	14.3%
Adams Street 2016 Global Fund	2016	82.3%	150.0	-13,692	186.2	-6.7%	22.0%
Loss	-	-	555.0	-116,269	661.1	-14.3%	17.7%
Loss (Remaining)	-	-	3,250.5	-121,341	1,457.1	-8.0%	25.4%
Total Loss	-	-	3,805.5	-237,609	2,118.2	-10.2%	25.2%

* IRR calculated at portfolio currency. IRR not meaningful for investments held less than 36 months

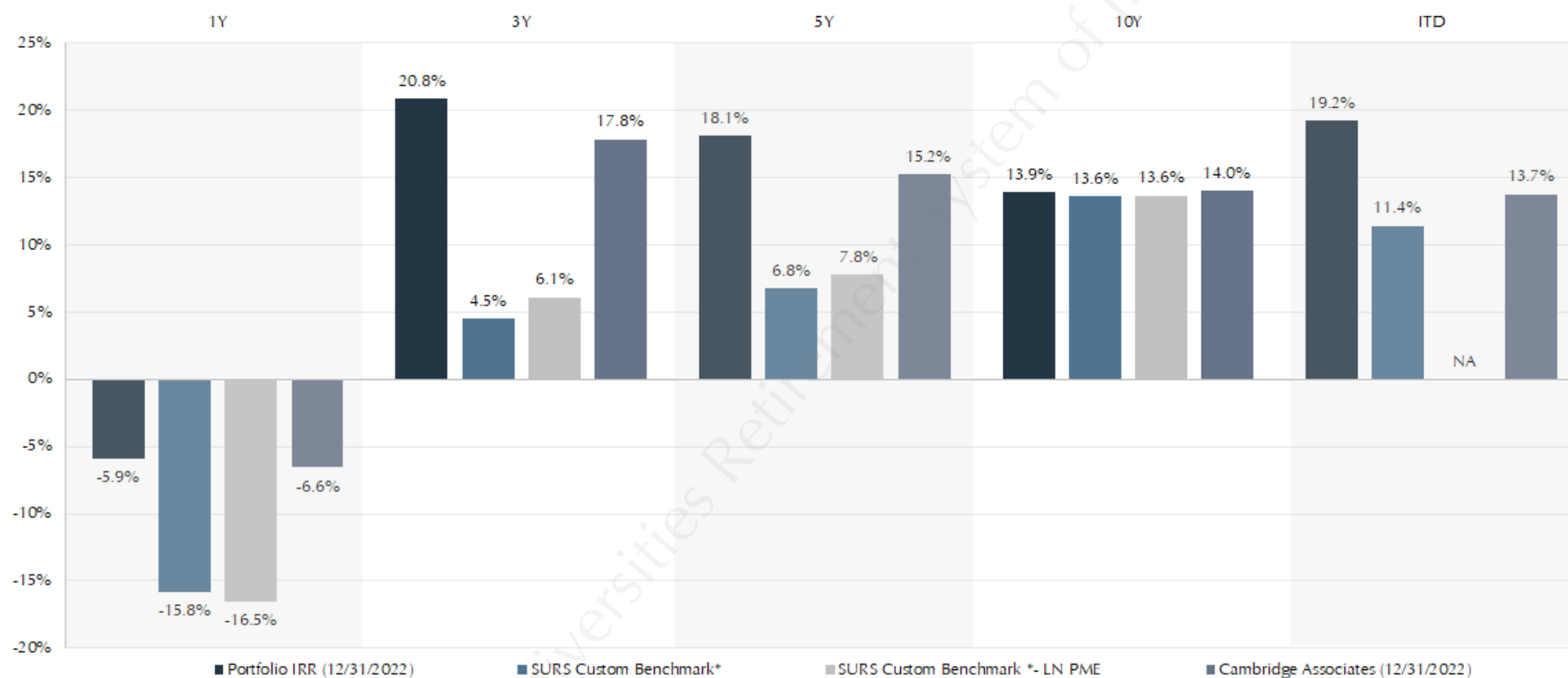
Total Portfolio(76)	-	78.4%	5,554.5	-175,168	2,913.5	-5.9%	19.2%
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Reporting Period: As Of Dec-2022

30

[View this portfolio online](#)

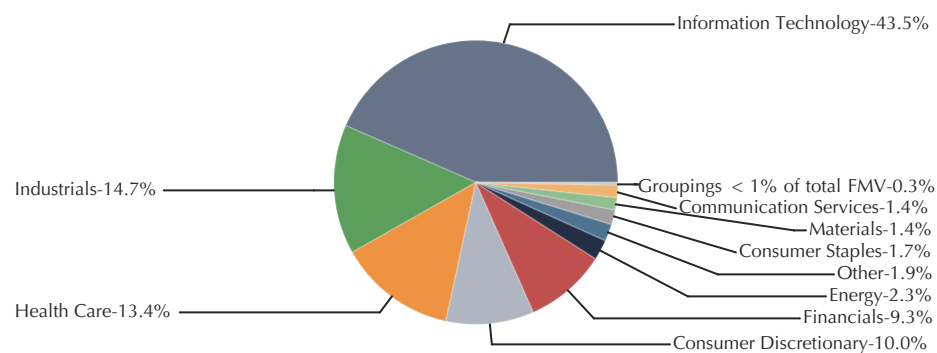
Portfolio IRR vs Benchmarks



Custom Benchmark is the Wilshire 5000 + 3% (1Q lag) through December 2019 and ACWI IMI + 2% from 2020 on forward.

LN PME is a dollar-weighted Long-Nickels calculation of monthly changes in the Custom Benchmark. SURS Private Equity portfolio was activated in July 1990; therefore, inception to date PME was not calculated. Cambridge Associates IRR is Preliminary as of Dec-22 and reflects all Private Equity funds data excluding Real Estate, Timber and Infrastructure.

Sector Exposure by FMV



	Total Invested Capital	% of Total	Fair Market Value	% of Total
Information Technology	336,991,498	48.5%	1,279,551,339	43.5%
Industrials	77,370,113	11.1%	433,761,297	14.7%
Health Care	101,772,487	14.6%	394,942,679	13.4%
Consumer Discretionary	66,073,550	9.5%	295,686,220	10.0%
Financials	74,158,703	10.7%	274,464,663	9.3%
Energy	0	-	67,777,764	2.3%
Other	4,630,391	0.7%	57,024,580	1.9%
Consumer Staples	13,485,221	1.9%	49,321,160	1.7%
Materials	11,397,037	1.6%	41,216,924	1.4%
Communication Services	4,234,486	0.6%	41,190,799	1.4%
Groupings < 1% of total FMV	5,275,580	0.8%	9,332,296	0.3%

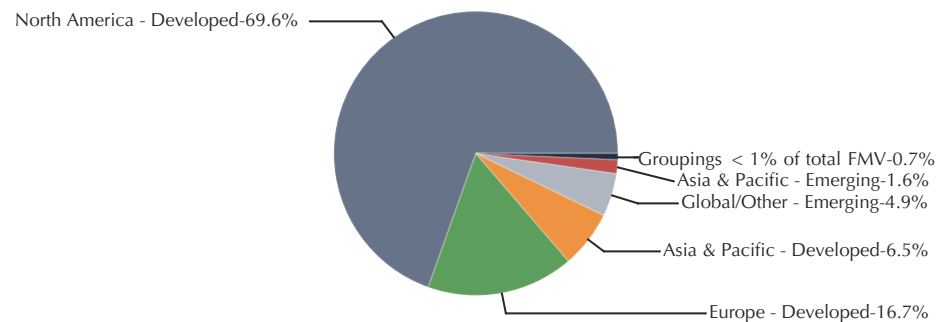
Total Invested Capital represents all investments made since inception and includes any recycled capital.

Position Analytics data based on GP provided information as of Dec-2022

Reporting Period: As Of Dec-2022

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Region Exposure by FMV

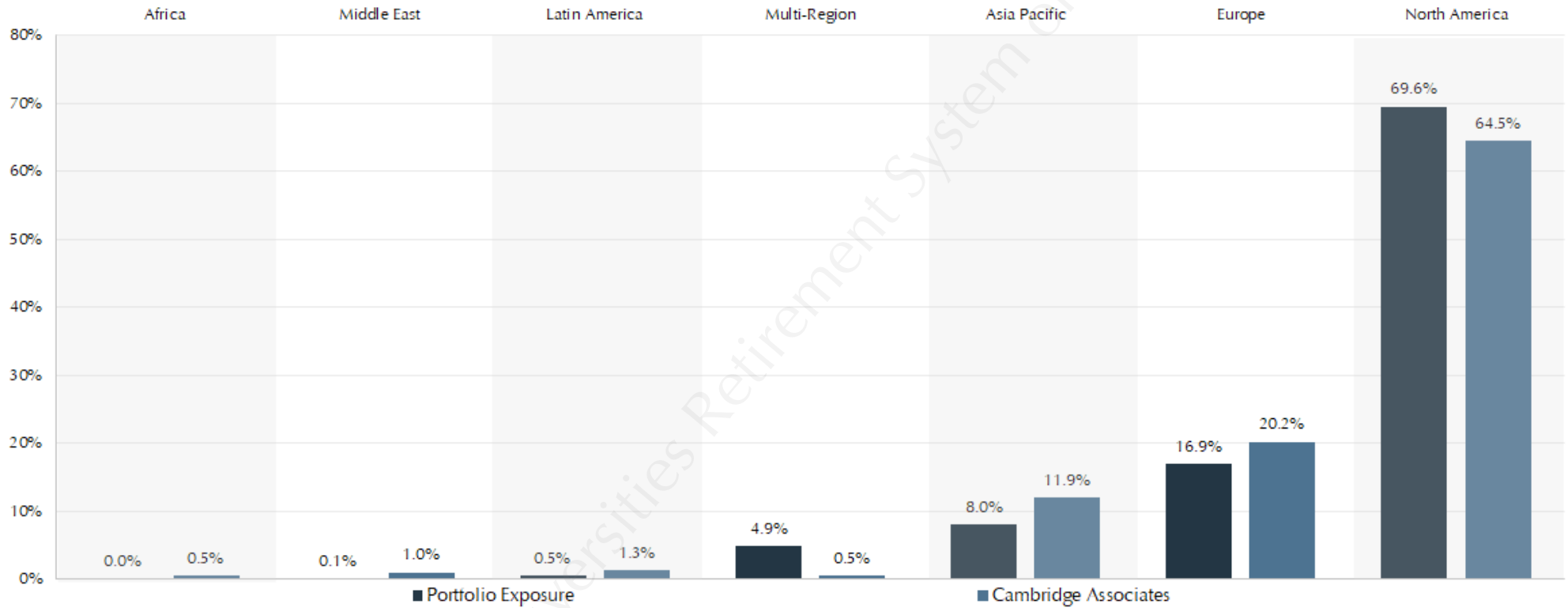


	Total Invested Capital	% of Total	Fair Market Value	% of Total
North America - Developed	574,092,150	82.6%	2,047,941,002	69.6%
Europe - Developed	81,111,082	11.7%	492,920,597	16.7%
Asia & Pacific - Developed	9,215,887	1.3%	192,170,383	6.5%
Global/Other - Emerging	265,316	0.0%	144,424,725	4.9%
Asia & Pacific - Emerging	22,742,655	3.3%	46,306,200	1.6%
Groupings < 1% of total FMV	7,961,975	1.1%	20,506,817	0.7%

Total Invested Capital represents all investments made since inception and includes any recycled capital.

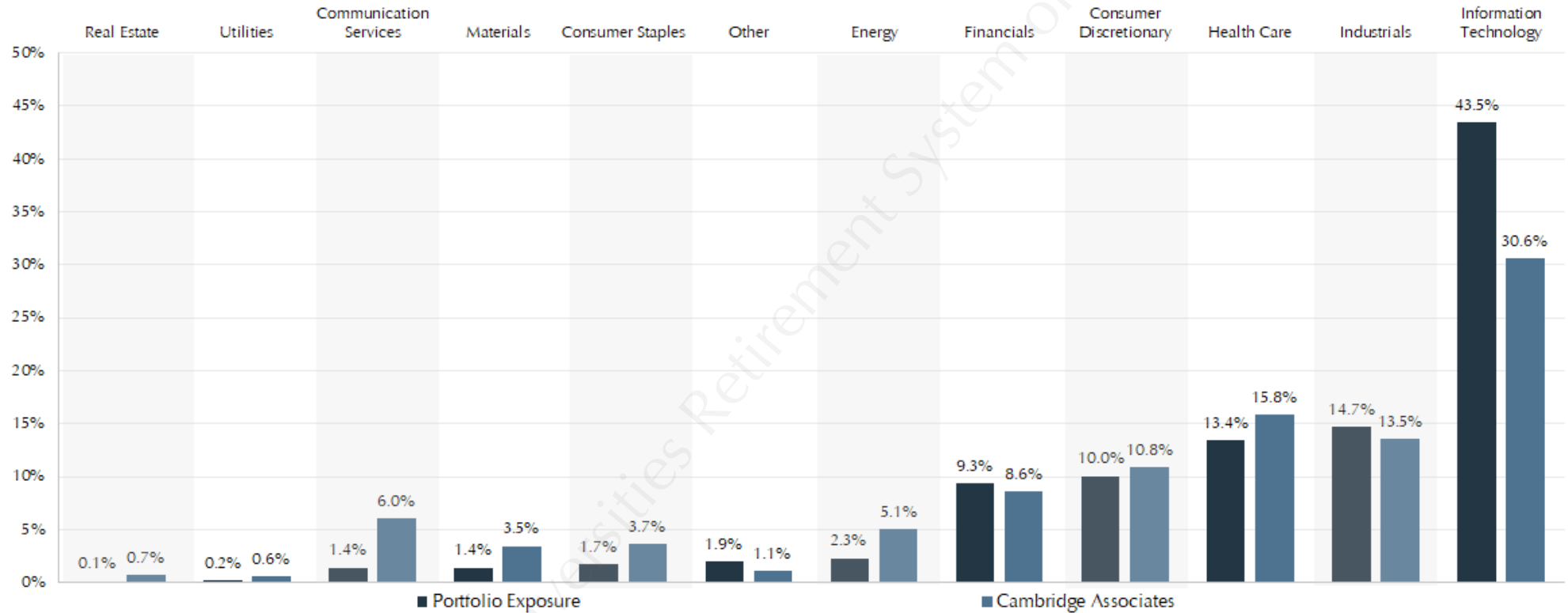
Company headquarters represents location provided by the manager most recently or at initial investment date.
Position Analytics data based on GP provided information as of Dec-2022

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 Dec-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 Dec-2022

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Illinois State Universities Retirement System

April 21, 2023

Fourth Quarter 2022
Private Credit Report

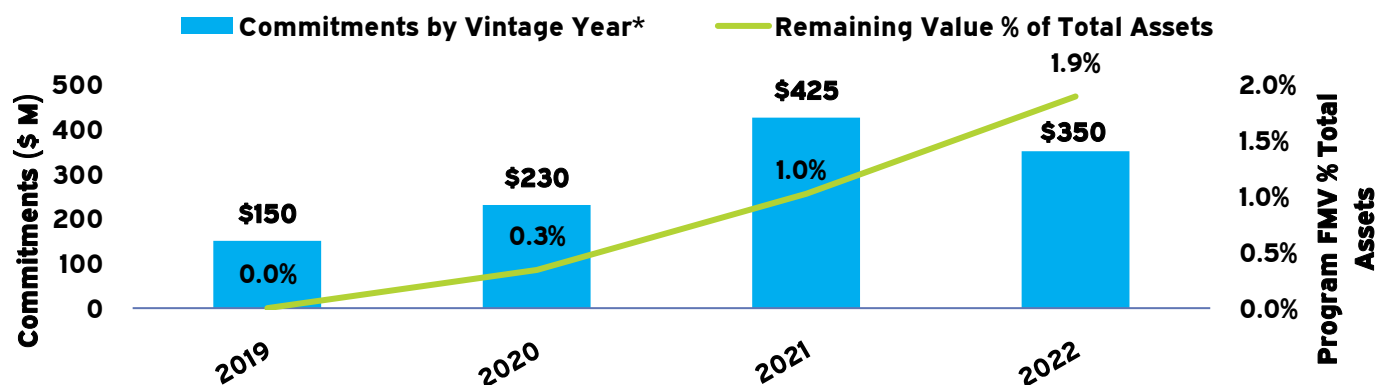


Illinois State Universities Retirement System Private Credit Program

Overview | As of December 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 Q4 2022, ten private credit fund commitments totaling \$1.2 billion have been made to the Program.



*Defined by the date of initial investment

Program Status

No. of Investments	10
Committed (\$ M)	1,155.0
Contributed (\$ M)	519.5
Distributed (\$ M)	131.9
Remaining Value (\$ M)	424.2

Performance Since Inception¹

	Program	PME ²
DPI	0.25x	---
TVPI	1.07x	---
IRR	8.7%	1.4%

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%

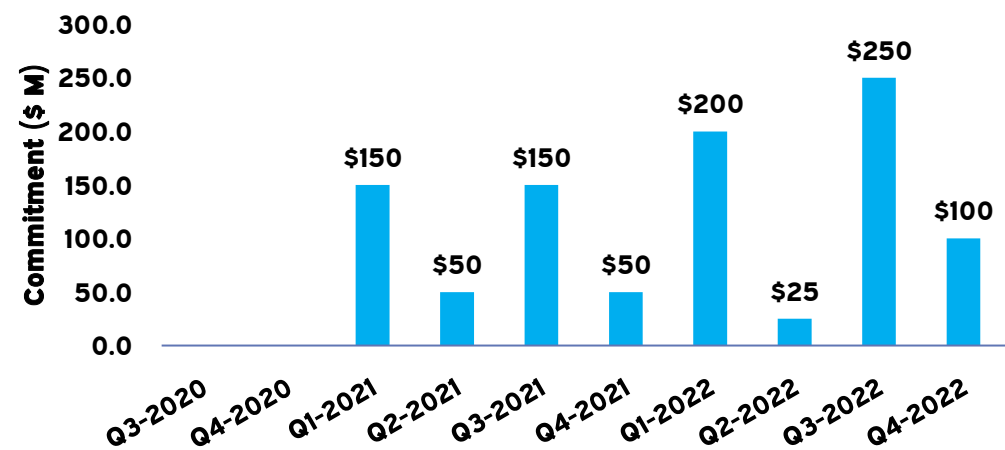


Illinois State Universities Retirement System Private Credit Program

Performance Analysis | As of December 31, 2022

Commitments

Recent Quarterly Commitment Closings



Commitments This Quarter

Fund	Strategy	Region	Amount (M)
Silver Point Specialty Credit Fund III	Direct Lending	North America	100.00



Illinois State Universities Retirement System Private Credit Program

Performance Analysis | As of December 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 – Vintage 2019	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	150.00 ³	Q1 2022
Silver Rock Tactical Allocation Fund – Vintage 2022	Special Situations	200.00	Q3 2022
Silver Point Specialty Credit Fund III	Specialty Lending	100.00	Q4 2022

Commitments made subsequent to quarter end included:

- approved a \$100 million commitment to Ares Pathfinder Fund II, L.P.
 - an opportunistic asset-based credit strategy focused on directly originated investments and diversified asset purchases

¹ 20% of the commitment was released as of September 30, 2021.

² Increased commitment by \$25 million in Q2 2022.

³ Increased commitment by \$50 million in Q3 2022.

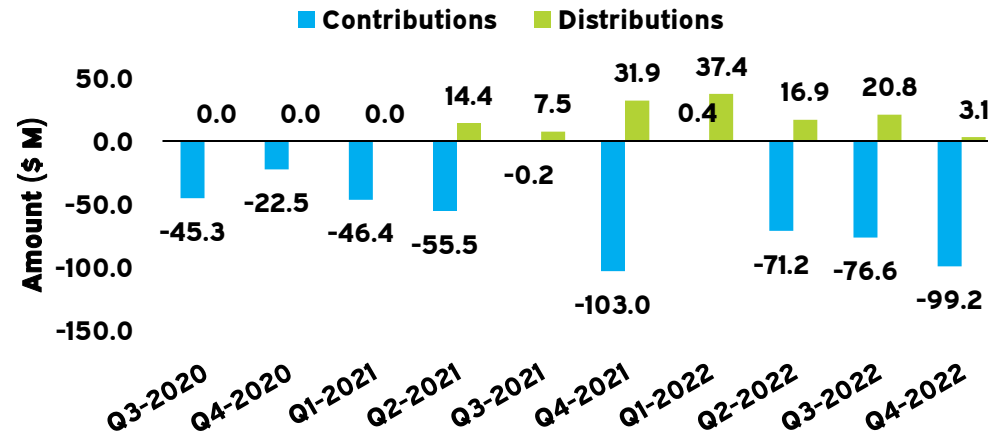


Illinois State Universities Retirement System Private Credit Program

Performance Analysis | As of December 31, 2022

Cash Flows

Recent Quarterly Cash Flows



Largest Contributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$M)
Ares Pathfinder Core	2021	Specialty Lending	North America	49.28
Silver Rock Tac 2022	2022	Special Situations	North America	32.87
Fortress Lending III	2022	Multi-Strategy	North America	11.00

Largest Distributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$M)
NB Debt Fund IV	2021	Direct Lending	North America	2.60
Crayhill Fund II	2020	Specialty Lending	Global: Developed	0.39
Ares Pathfinder Core	2021	Specialty Lending	North America	0.06



Illinois State Universities Retirement System Private Credit Program

Performance Analysis | As of December 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	2	275.0	87.5	188.3	7.5	90.8	279.1	0.09	1.12	NM
Multi-Strategy	2	230.0	121.3	199.0	90.0	46.8	245.8	0.74	1.13	11.8
Special Situations	4	450.0	222.4	246.5	18.9	207.7	454.3	0.08	1.02	NM
Specialty Lending	2	200.0	88.4	119.8	15.6	79.0	198.7	0.18	1.07	NM
Total	10	1,155.0	519.5	753.6	131.9	424.2	1,177.8	0.25	1.07	8.7

By Vintage

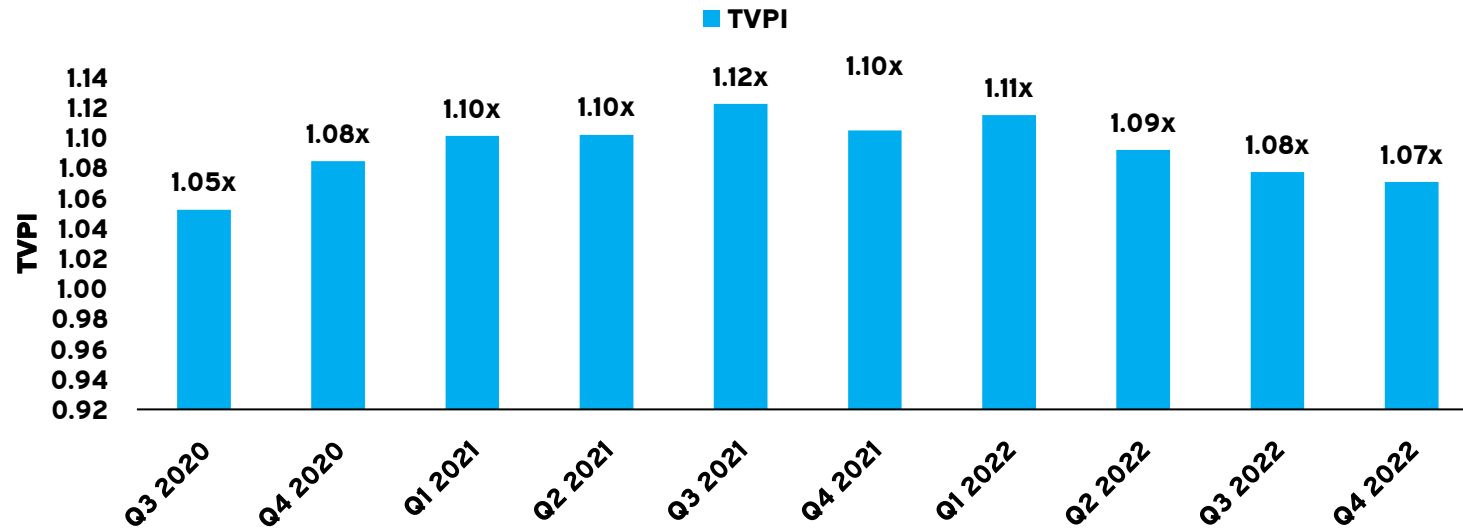
Group	Number	Committed (\$ M)	Contributed (\$ M)	Unfunded (\$ M)	Distributed (\$ M)	Remaining Value (\$ M)	Exposure (\$ M)	DPI (X)	TVPI (X)	IRR (%)
Open-end	1	150.0	53.4	96.6	0.1	54.6	151.2	0.00	1.02	NM
2019	1	150.0	149.5	12.1	11.5	141.1	153.2	0.08	1.02	NM
2020	2	230.0	125.3	203.2	105.5	40.6	243.8	0.84	1.17	14.8
2021	3	275.0	127.5	155.7	14.8	124.1	279.8	0.12	1.09	NM
2022	3	350.0	63.9	286.1	0.0	63.7	349.8	0.00	1.00	NM
Total	10	1,155.0	519.5	753.6	131.9	424.2	1,177.8	0.25	1.07	8.7



Illinois State Universities Retirement System Private Credit Program

Performance Analysis | As of December 31, 2022

Since Inception Performance Over Time



Horizon IRRs

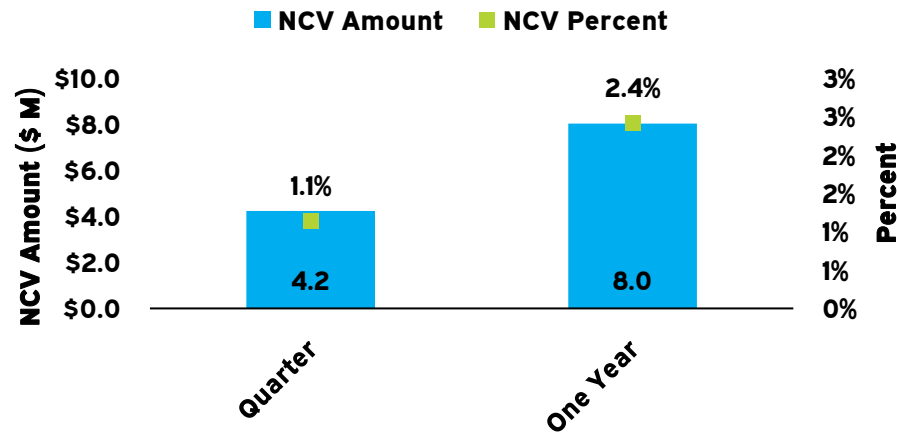
	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)	Since Inception (%)
Aggregate Portfolio	2.9	NM	NM	NM	8.7



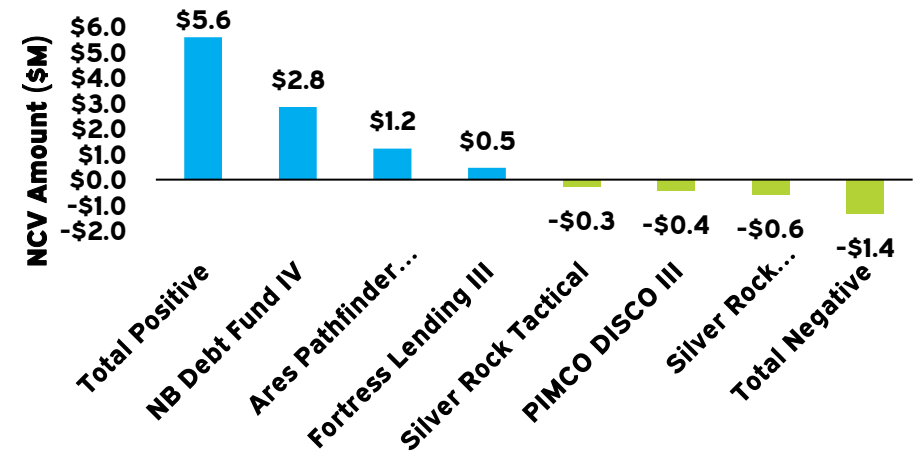
Illinois State Universities Retirement System Private Credit Program

Performance Analysis | As of December 31, 2022

Periodic NCV



1 Quarter Drivers Of NCV





Illinois State Universities Retirement System Private Credit Program

Performance Analysis | As of December 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	150.0	53.4	96.6	0.1	54.6	1.02	NM
Silver Rock Tactical	2019	Special Situations	150.0	149.5	12.1	11.5	141.1	1.02	NM
PIMCO DISCO III	2020	Multi-Strategy	180.0	90.3	180.0	90.0	16.3	1.18	13.4
Crayhill Fund II	2020	Specialty Lending	50.0	35.0	23.2	15.5	24.4	1.14	NM
NB Debt Fund IV	2021	Direct Lending	175.0	87.5	88.3	7.5	90.8 ¹	1.12	NM
Silver Rock ColInvest	2021	Special Situations	50.0	15.6	39.5	5.1	10.0	0.97	NM
Turning Rock Fund II	2021	Special Situations	50.0	24.4	27.8	2.2	23.4	1.05	NM
Silver Point Spec III	2022	Direct Lending	100.0	0.0	100.0	0.0	0.0	NM	NM
Fortress Lending III	2022	Multi-Strategy	50.0	31.0	19.0	0.0	30.5	0.98	NM
Silver Rock Tac 2022	2022	Special Situations	200.0	32.9	167.1	0.0	33.2	1.01	NM
Total			1,155.0	519.5	753.6	131.9	424.2	1.07	8.7

¹ NB Debt Fund IV Remaining Value based upon estimate from manager due to finalized statement not yet being available.

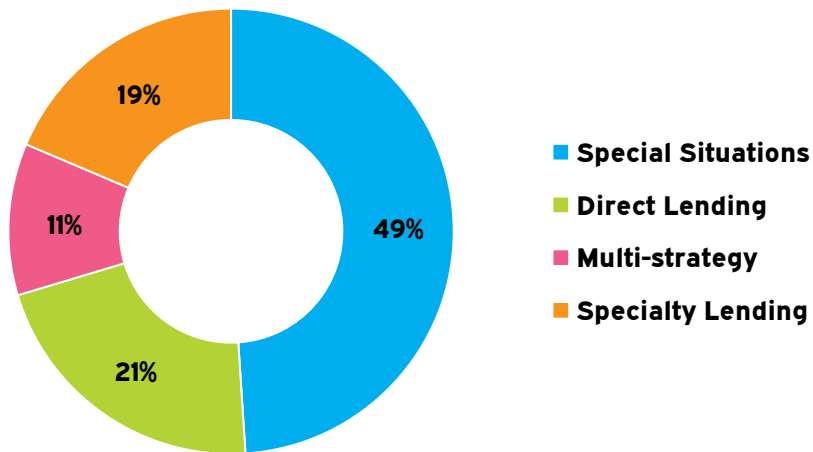


Illinois State Universities Retirement System Private Credit Program

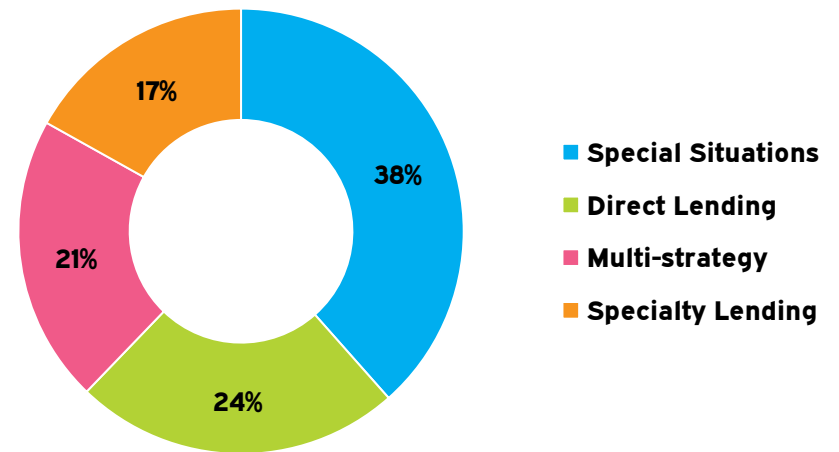
Fund Diversification | As of December 31, 2022

By Strategy

Percent of FMV



Percent of Exposure¹



¹ Represents sum of investor's Unfunded and Remaining Value.

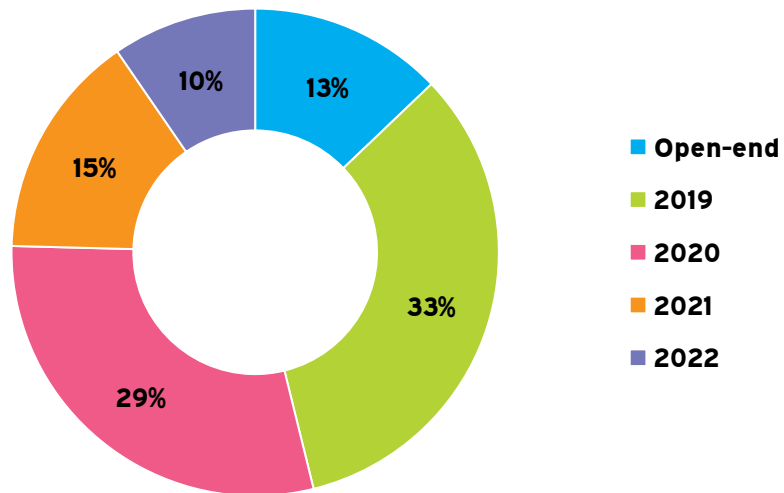


Illinois State Universities Retirement System Private Credit Program

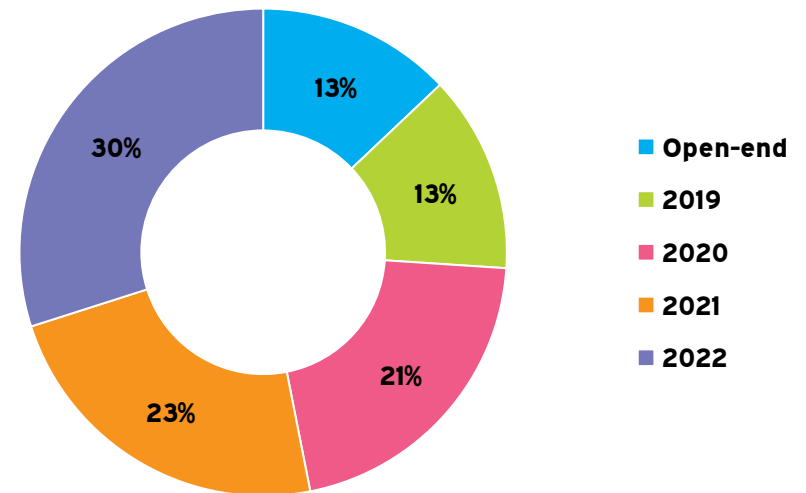
Fund Diversification | As of December 31, 2022

By Vintage

Percent of FMV



Percent of Exposure



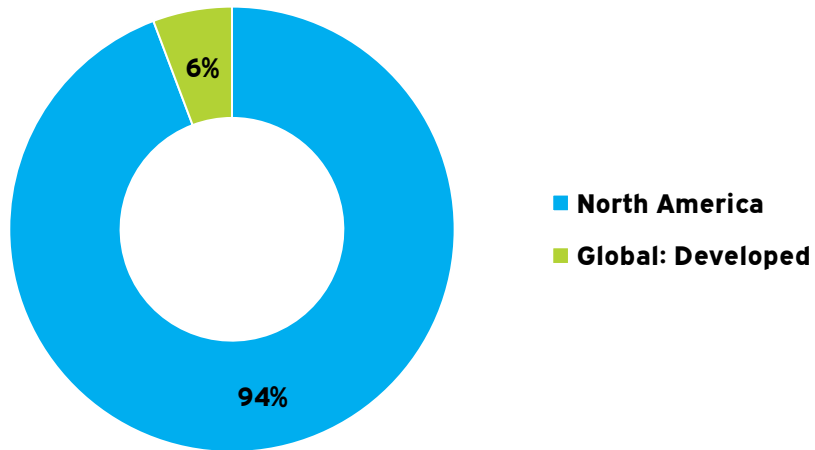


Illinois State Universities Retirement System Private Credit Program

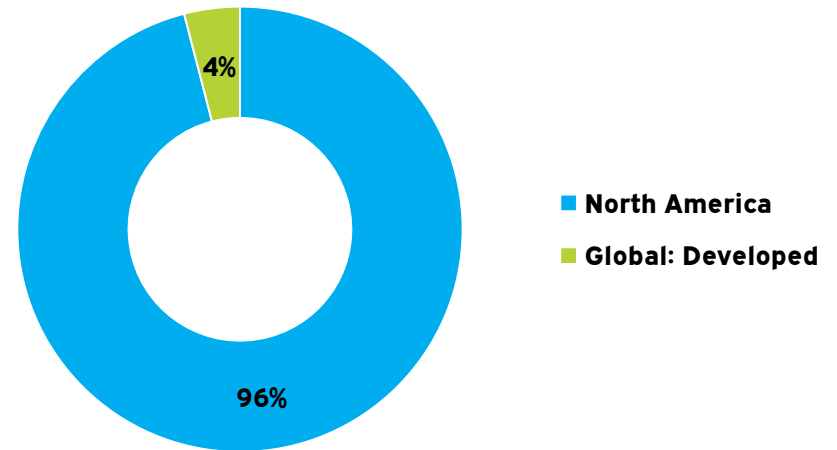
Fund Diversification | As of December 31, 2022

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 December 31, 2022

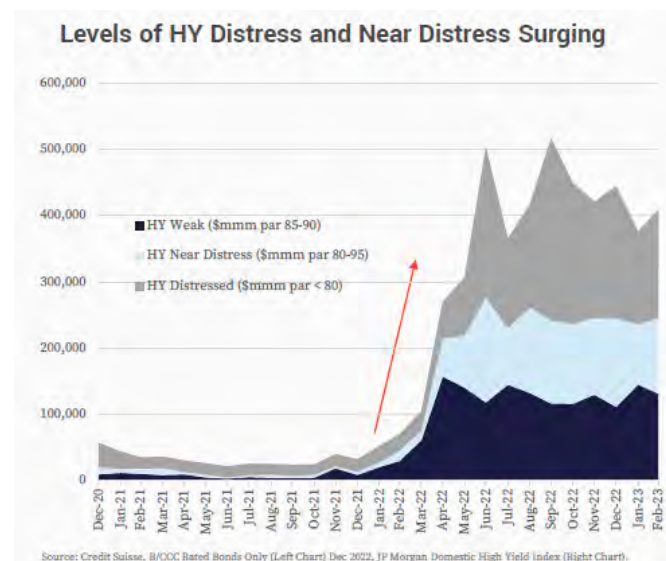
Private Credit: Q4 Market Review

After a tumultuous 2022 where credit markets weathered the fastest rate hike in history (Chart 1), private credit assets generally displayed resilience with respect to rising rates and deteriorating liquidity conditions. The default rate ticked up from historically low levels to 2.1% from the prior quarter's 1.6%.¹ Forward looking estimates for loan defaults range from 2.5% to 6.0% depending on the rating agency or sell side research group. Despite marginal credit deterioration, valuations modestly rebounded in the fourth quarter possibly reflecting improvement in the broader inflation outlook. The high yield market which suffered one of its worst years in 2022 with an increasing volume of issues trading at stressed or distressed levels (Chart 2) reversed price momentum early in the first quarter of 2023 as risk appetites recovered.

Chart 1: Fed Funds Rate Hiking Cycles



Chart 2: High Yield Trading at Stressed/Distressed Levels²



¹ Proskauer's Private Credit Default Index Q4 2022 (as quoted in Private Debt Investor, March 2023).

² Source: MidOcean Partners (Q1 2023)



Illinois State Universities Retirement System Private Markets Program

Market & Industry Analysis | As of December 31, 2022

Private Credit: Market Environment

Prior to the collapse of Silicon Valley Bank and Silvergate Bank in 2023, private credit managers across strategy groups reported increased deal flow coming to private markets as even the largest money center banks were suffering balance sheet mark-to-market losses on securities held for sale or to maturity (Chart 3). In addition, the decline in new CLO issuance corresponding to lower M&A volumes left fewer options for borrowers in need of capital (Chart 4).

Chart 3: Bank Balance Sheet Weakness¹

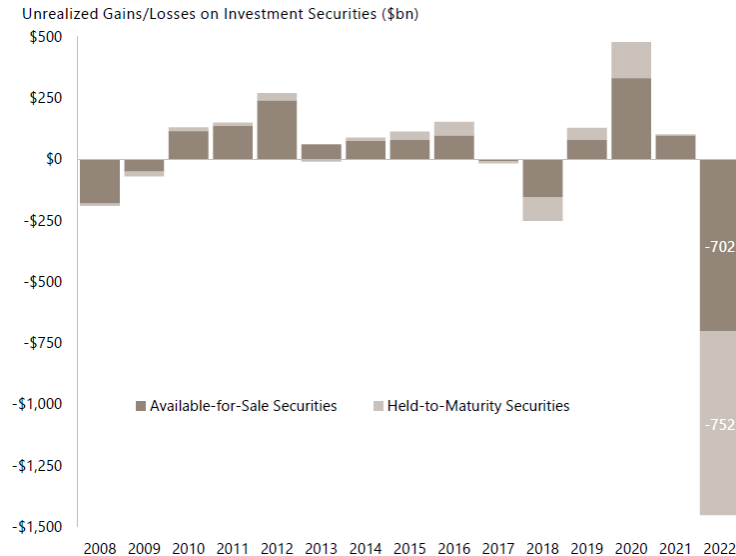
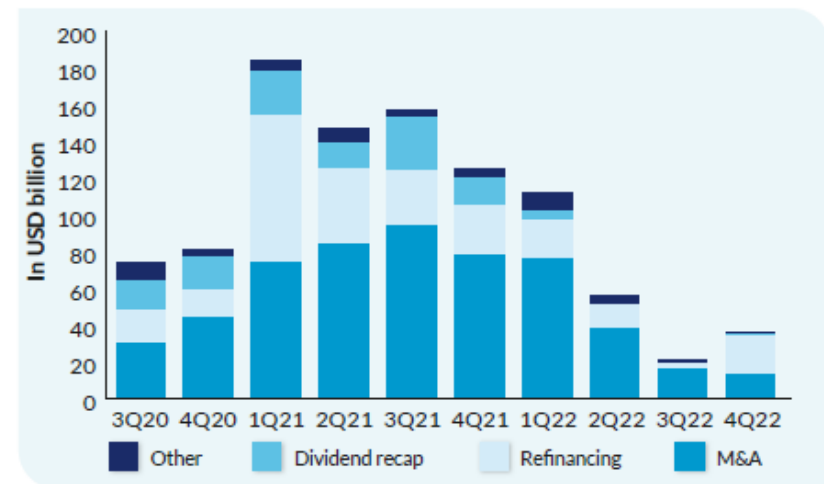


Chart 4: US New Issue Institutional Loan Volume²



Source: S&P LCD, January 2023. For illustrative purposes only

¹ Source: Apollo Global Management (March 2023): FDIC as of September 2022.

² Source: Partners Group, Quarterly Loan Commentary (Q4 2022)



Illinois State Universities Retirement System Private Markets Program

Market & Industry Analysis | As of December 31, 2022

Private Credit: Deal Activity

Private credit managers across strategy groups are seeing increased deal activity with generally improved lender terms. The most straight forward case is senior secured corporate direct lending which is benefiting not only from the lift in base rates (ex. SOFR, Euribor, LIBOR) but also from an increase in the spread earned over that base rate which has expanded by 50-150 basis points to SOFR+625-700bps.¹ The interest outlook is uncertain, but market participants are still not generally forecasting any near-term retrenchment in rates. Outside of economic terms, private credit fund managers are reporting an improvement in the ability extract stronger covenants and downside protective deal terms such as amortization, cash sweeps, and upfront fees.

Chart 5: Yield-to-Maturity at Deal Close¹

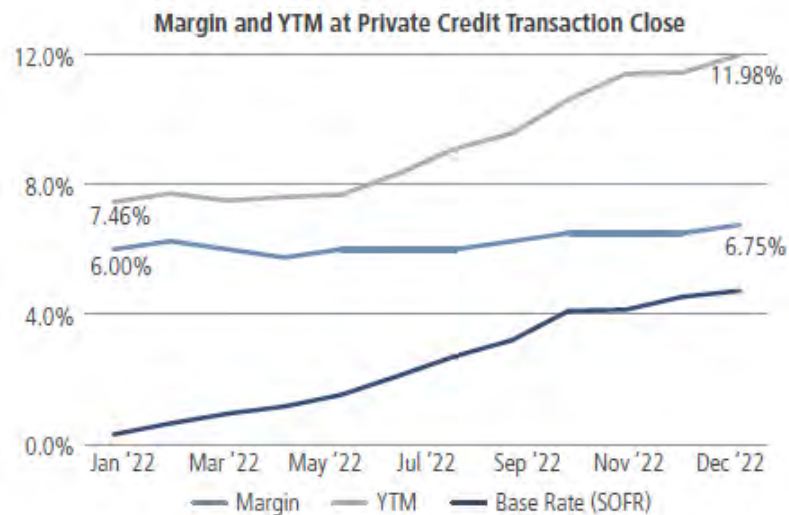
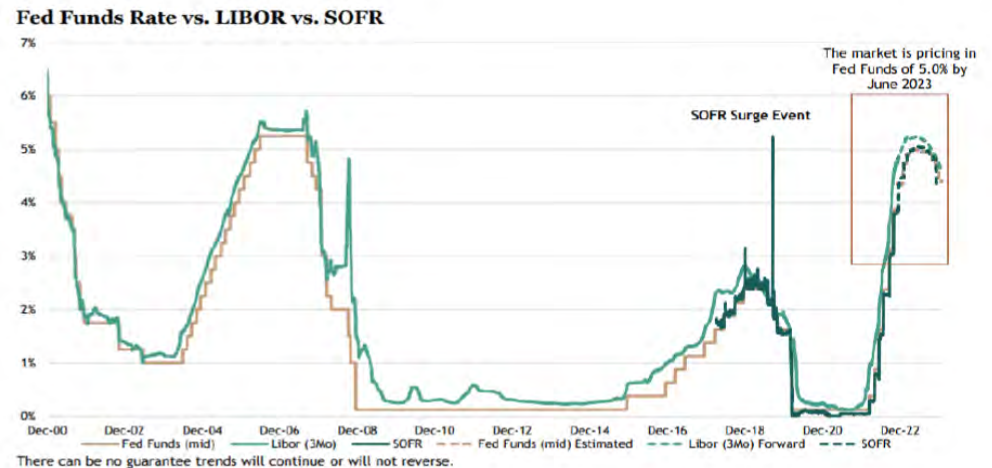


Chart 6: Market Expects Further Rate Hikes²



¹ Neuberger Berman: "Private Credit: An All Weather Asset Class "(White Paper, March 2023)

² Bloomberg, S&P/LCD. Forecast produced by Blackstone (as of January 4, 2023).



Illinois State Universities Retirement System Private Credit Program

Endnotes | As of December 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 Credit Program

Endnotes | As of December 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 Credit Program

Disclaimer | As of December 31, 2022

The material contained in this report is confidential and may not be reproduced, disclosed, or distributed, in whole or in part, to any person or entity other than the intended recipient. The data are provided for informational purposes only, may not be complete, and cannot be relied upon for any purpose other than for discussion.

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.

Callan

December 31, 2022

**State Universities Retirement
System of Illinois
Real Estate**

**Investment Measurement Service
Quarterly Review**

Table of Contents
December 31, 2022

Real Estate Snapshots

Commercial Real Estate Snapshot	2
---------------------------------	---

Summary Analysis

4

Core Funds

Total Core Funds	19
------------------	----

Non-Core Funds

Total Non-Core Funds	26
----------------------	----

Farmland

32

Infrastructure

Total Infrastructure	38
----------------------	----

Definitions

43

Callan Research/Education

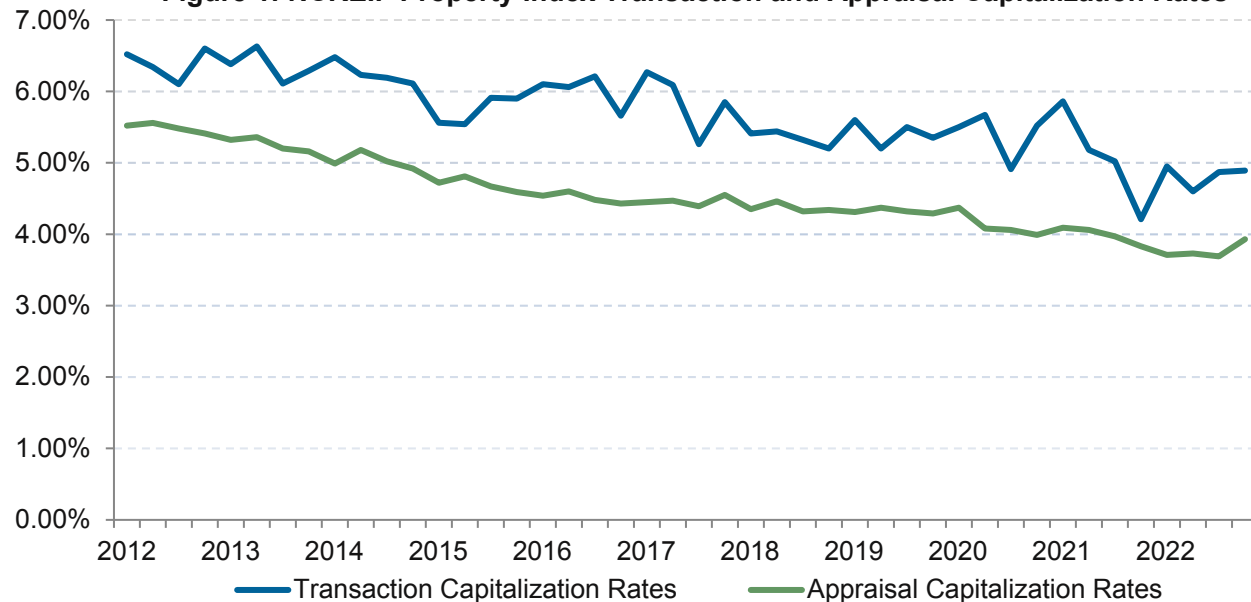
46

Commercial Real Estate Market Snapshot

Fourth Quarter 2022

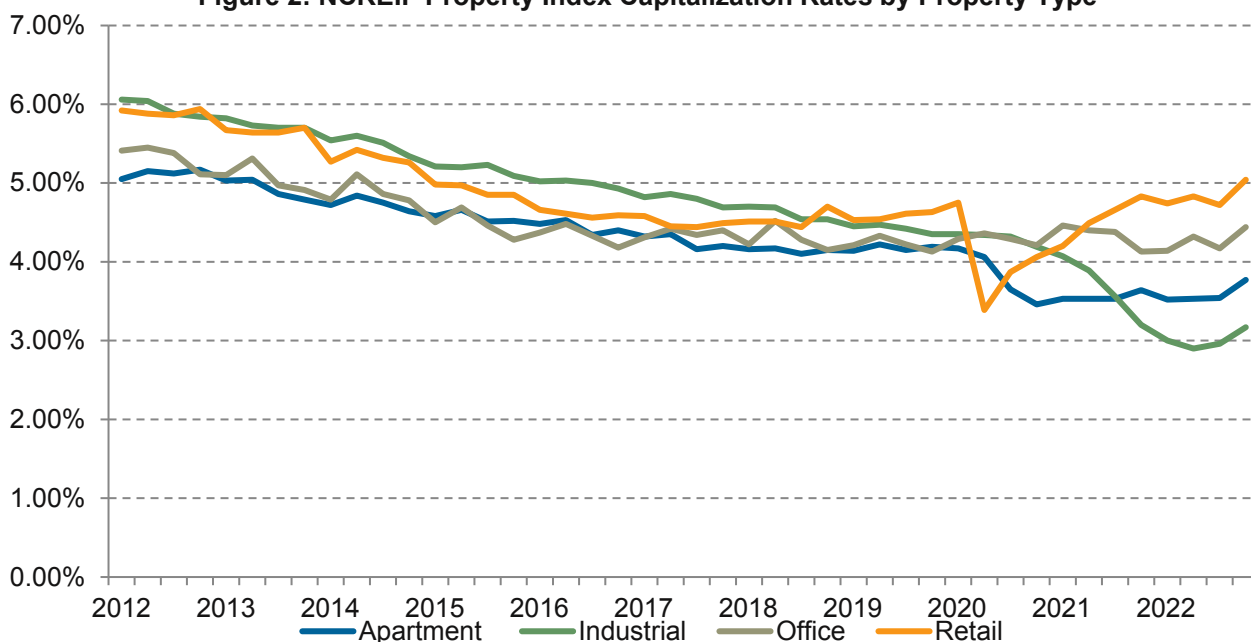
The NCREIF Property Index, a measure of U.S. institutional real estate assets, fell 3.5% during 4Q22. The income return was 1.0% while the appreciation return was -4.5%. Hotels, which represent a small portion of the index, led property sector performance with a gain of 3.4%. Office finished last with a loss of 4.8%. Regionally, the South led with a loss of 2.5%, while the East was the worst performer with a loss of 3.9%. The NCREIF Open-End Diversified Core Equity Index, representing equity ownership positions in U.S. core real estate, fell 5.0% during 4Q, with an income return of 0.8% and an appreciation return of -5.8%.

Figure 1: NCREIF Property Index Transaction and Appraisal Capitalization Rates



As seen in Figure 1, appraisal capitalization rates increased to 3.9% during 4Q, and capitalization rates measured in active trades rose by two basis points to 4.9%. At quarter end, the 10-year average appraisal capitalization rate was 4.5% and the 10-year average transaction capitalization rate was 5.6%. The spread between the two measures, which reflects pricing expectations between buyers and holders of real estate, decreased slightly to 117 basis points.

Figure 2: NCREIF Property Index Capitalization Rates by Property Type

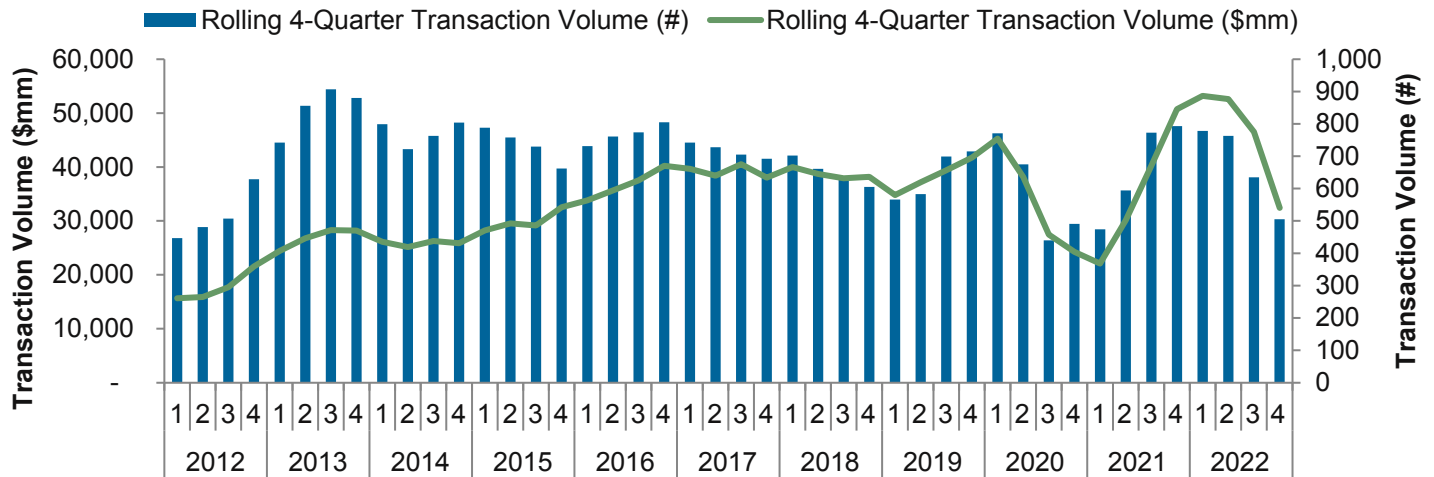


Market-weighted capitalization rates by property type increased in all four sectors, including Apartment (3.8%), Industrial (3.2%), Office (4.4%), and Retail (5.0%).

Commercial Real Estate Market Snapshot

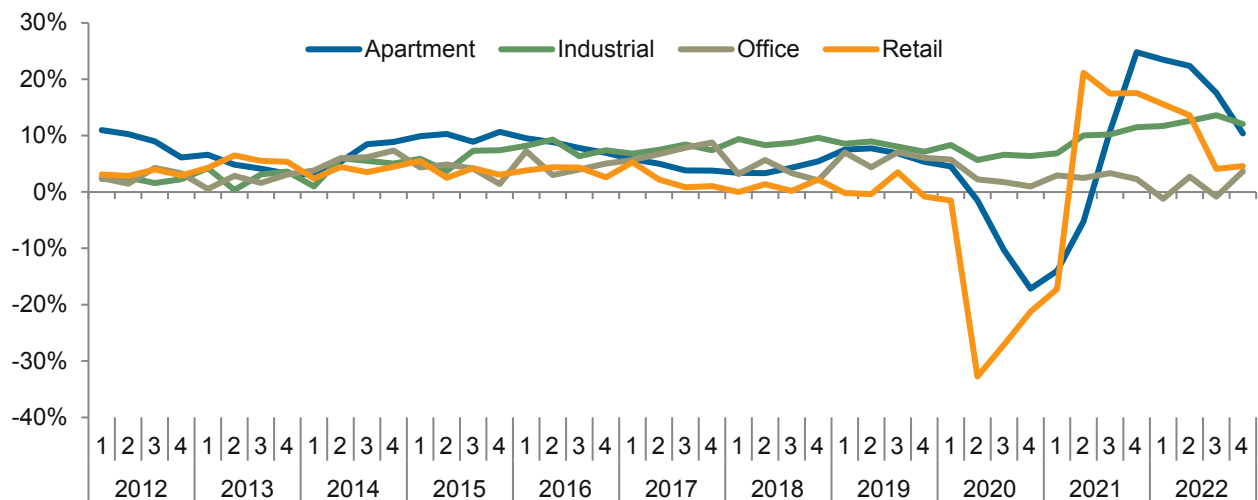
Fourth Quarter 2022

Figure 3: NCREIF Property Index Rolling 4-Quarter Transaction Totals



As shown in Figure 3, rolling four-quarter transaction volume totaled \$32.4 billion across 505 transactions. NCREIF recorded 153 transactions during 4Q, representing \$7.3 billion of value, compared to \$6.6 billion in 3Q. The average transaction size was \$47.4 million, compared to \$66.1 million in 3Q.

Figure 4: NCREIF Property Index Rolling 4-Quarter NOI Growth by Property Type



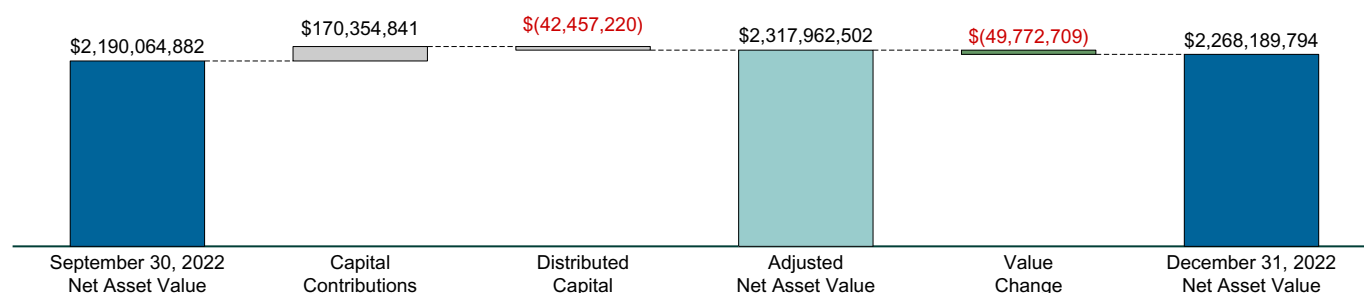
Rolling four-quarter net operating income growth was mixed during the quarter. Rolling four-quarter NOI growth decreased in Apartment (10.4%) and Industrial (12.0%), while NOI growth in Office (3.7%) and Retail (4.6%) increased during the quarter.

Summary Analysis

Total Real Assets
Fund Overview
Period Ended December 31, 2022

Quarterly Position Change	September 30, 2022	Quarterly Change	December 31, 2022
Client Commitment	\$4,454,061,424	\$0	\$4,454,061,424
Paid-In Capital	\$3,295,606,507	\$170,354,841	\$3,465,961,348
Remaining Commitment	\$1,292,035,900	\$(166,921,797)	\$1,125,114,104
Distributions	\$2,502,447,480	\$42,457,220	\$2,544,904,701
Recallable Distributions	\$129,758,509	\$3,155,116	\$132,913,625
Non-Recallable Distributions	\$2,372,688,971	\$39,302,104	\$2,411,991,076
Net Asset Value	\$2,190,064,882	\$78,124,912	\$2,268,189,794
Total Distributed Capital and Net Asset Value	\$4,692,512,362	\$120,582,132	\$4,813,094,495

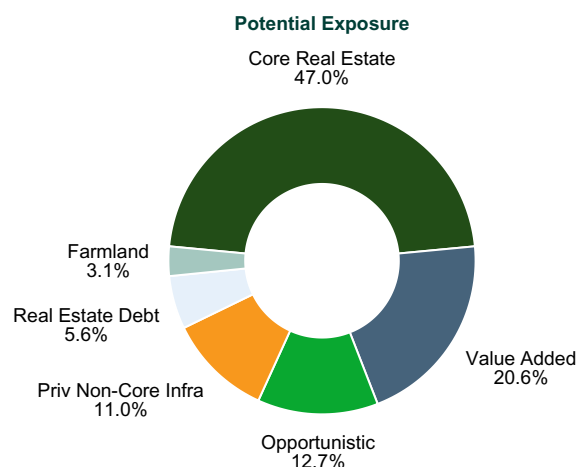
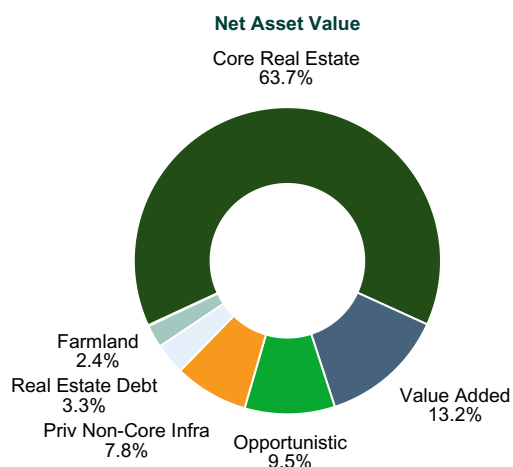
Performance Change	September 30, 2022	Quarterly Change	December 31, 2022
Net Internal Rate of Return, Since Inception	7.69%	(0.33%)	7.36%
Total Value to Paid-in Capital (TVPI)	1.42x	(0.04x)	1.39x
Distributions to Paid-in Capital (DPI)	0.76x	(0.03x)	0.73x
Residual Value to Paid-in Capital (RVPI)	0.66x	(0.01x)	0.65x
% of Commitments Contributed	73.99%	(3.82%)	77.82%



Portfolio Diversification
Total Real Assets
Period Ended December 31, 2022

The following tables illustrate current and potential exposure by Strategy type as of December 31, 2022 in USD millions.

Portfolio Exposure by Strategy Type	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
Core Real Estate	\$1,445	63.71%	\$102	9.97%	\$1,547	46.98%
Value Added	\$300	13.22%	\$377	36.79%	\$677	20.55%
Opportunistic	\$215	9.50%	\$204	19.90%	\$419	12.73%
Priv Non-Core Infra	\$178	7.84%	\$186	18.13%	\$364	11.04%
Real Estate Debt	\$75	3.29%	\$109	10.63%	\$184	5.58%
Farmland	\$55	2.44%	\$47	4.59%	\$102	3.11%
Global REITS	\$0	0.00%	\$0	0.00%	\$0	0.00%
Total Real Assets	\$2,268		\$1,025		\$3,293	



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2022, with the distribution as of September 30, 2022. 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

	December 31, 2022				September 30, 2022	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Private Real Estate	\$2,077,719,692	91.60%	\$120,636,614	\$(55,115,824)	\$2,012,198,902	91.88%
Total Core Funds	\$1,487,827,250	65.60%	\$115,689,041	\$(63,350,210)	\$1,435,488,419	65.55%
BlackRock Global Renewable Power III	42,702,000	1.88%	11,426,993	4,517,519	26,757,488	1.22%
Blackstone Property Partners	256,345,343	11.30%	(638,439)	(15,050,929)	272,034,711	12.42%
Carlyle Property Investors	168,797,633	7.44%	87,524	(1,844,385)	170,554,494	7.79%
Clarion Partners Lion Properties Fund	110,565,727	4.87%	106,629,311	(6,027,578)	9,963,994	0.45%
GI Partners ETS Fund	41,194,823	1.82%	(123,947)	1,334,132	39,984,638	1.83%
Heitman America Real Estate Trust (HART)	300,172,112	13.23%	(543,907)	(15,048,720)	315,764,739	14.42%
JP Morgan Strategic Property Fund (SPF)	288,966,201	12.74%	(604,838)	(15,120,504)	304,691,542	13.91%
Prologis US Logistics Fund (USLF)	177,786,748	7.84%	(380,600)	(10,540,411)	188,707,758	8.62%
UBS Trumbull Property Fund (TPF)	101,296,664	4.47%	(163,057)	(5,569,335)	107,029,055	4.89%
Total Non-Core Funds	\$589,892,442	26.01%	\$4,947,573	\$8,234,386	\$576,710,483	26.33%
Basis Real Estate Debt Fund I	21,083,753	0.93%	(1,845,960)	680,751	22,248,962	1.02%
Basis Real Estate Debt Fund II	17,064,236	0.75%	(999,599)	558,528	17,505,307	0.80%
Blackstone BREP Europe VI (1)	37,046,810	1.63%	1,820,333	3,059,146	32,167,331	1.47%
Blackstone BREP Asia III	4,796,904	0.21%	129,514	114,672	4,552,718	0.21%
Blue Vista Real Estate IV (2)	14,620,266	0.64%	0	0	14,620,266	0.67%
Brasa II	19,818,739	0.87%	1,902,840	925,112	16,990,787	0.78%
Brookfield Strategic Real Estate II	31,886,771	1.41%	(1,968,611)	(927,434)	34,782,816	1.59%
Brookfield Strategic Real Estate III	32,387,899	1.43%	(318,770)	831,334	31,875,335	1.46%
Brookfield Strategic RE IV	17,190,624	0.76%	2,775,747	963,256	13,451,621	0.61%
Cabot Industrial Value VI (CIVF)	47,367,426	2.09%	(187,500)	(117,147)	47,672,073	2.18%
Cabot Industrial Value VII (CIVF)	-341,293	(0.02%)	0	0	-341,293	(0.02%)
Crow Holdings Realty VII	1,310,360	0.06%	(38,407)	11,883	1,336,884	0.06%
Crow Holdings Realty VIII	1,241,177	0.05%	(1,626,274)	(53,094)	2,920,545	0.13%
Crow Holdings Realty IX	39,064,095	1.72%	(392,258)	(856,258)	40,312,611	1.84%
Dune Real Estate Partners II	6,102,343	0.27%	(10,821)	43,337	6,069,827	0.28%
Dune Real Estate Partners III	63,846,588	2.81%	(169,752)	(1,454,511)	65,470,851	2.99%
Dune Real Estate IV	27,321,096	1.20%	852,398	1,235,927	25,232,771	1.15%
Franklin Templeton FTPREF	531,453	0.02%	(971,071)	(84,949)	1,587,473	0.07%
Franklin Templeton EMREFF	2,771,341	0.12%	(19,899)	(79,440)	2,870,680	0.13%
Franklin Templeton MDP RE 2015	62,330,589	2.75%	3,387,866	274,425	58,668,298	2.68%
Longpoint Realty Fund II	38,467,222	1.70%	7,339,140	1,063,498	30,064,584	1.37%
Long Wharf VI	23,888,968	1.05%	(3,100,688)	422,069	26,567,587	1.21%
Newport Capital Partners Fund III	420,017	0.02%	(26,870)	(61,144)	508,031	0.02%
Oaktree Real Estate Debt Fund II	10,411,187	0.46%	(170,983)	131,148	10,451,022	0.48%
StepSt Glb Partner RE II (fka MFIRE) (3)	16,340,381	0.72%	0	0	16,340,381	0.75%
Torchlight Debt VII	26,286,835	1.16%	(175,000)	637,725	25,824,110	1.18%
Torchlight Debt VIII	-160,461	(0.01%)	(55,639)	(104,822)	-	-
Westbrook XI	26,797,117	1.18%	(1,182,163)	1,020,375	26,958,905	1.23%
Farmland	\$55,372,955	2.44%	\$12,760,585	\$1,088,103	\$41,524,267	1.90%
Homestead USA Farmland Fund III	48,711,492	2.15%	6,099,122	1,088,103	41,524,267	1.90%
Homestead USA Farmland Fund IV	6,661,463	0.29%	6,661,463	0	-	-
Total Private Infrastructure	\$135,097,147	5.96%	\$(12,608,906)	\$11,364,339	\$136,341,713	6.23%
Alinda Infrastructure Fund II	500,496	0.02%	(7,016,514)	(355,868)	7,872,878	0.36%
Ember Infrastructure I	6,683,590	0.29%	(149,222)	(43,976)	6,876,788	0.31%
Macquarie Infrastructure Partners II	0	0.00%	(228,825)	(5,048)	233,873	0.01%
Macquarie Infrastructure Partners III	56,082,852	2.47%	(5,567,882)	11,417,443	50,233,291	2.29%
Macquarie Infrastructure Partners IV	60,441,025	2.66%	(177,018)	711,143	59,906,900	2.74%
Pantheon Glb Infrast Secondaries IV	11,389,183	0.50%	530,555	(359,355)	11,217,983	0.51%
Total Fund (4)	\$2,268,189,794	100.0%	\$120,788,293	\$(42,663,382)	\$2,190,064,882	100.0%

(1) Reported in Euro's by manager and then converted to US \$.

(2) Year end figure is based on estimate. YE audit takes 120 days.

(3) Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

(4) Values shown are minus accrued incentive fee.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 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 December 31, 2022

	Last Quarter	Last Year	Last 3 Years
Total Core Funds	(4.30%)	7.98%	10.55%
NCREIF NFI-ODCE Val Wt Nt	(5.17%)	6.55%	8.97%
Blackrock Global Renewable Power III	13.67%	16.37%	-
Blackstone Property Partners	(5.77%)	4.51%	6.96%
Carlyle Property Investors	(1.29%)	11.00%	15.96%
Clarion Partners Lion Properties Fund	(5.33%)	-	-
GI Partners ETS Fund	3.03%	19.10%	-
Heitman America Real Estate Trust (HART)	(4.94%)	9.83%	10.46%
JP Morgan Strategic Property Fund (SPF)	(5.16%)	3.85%	7.81%
Prologis US Logistics Fund (USLF)	(5.83%)	11.60%	-
UBS Trumbull Property Fund (TPF)	(5.36%)	5.28%	5.02%
Total Non-Core Funds	0.92%	8.48%	7.96%
NCREIF ODCE + 1.5%	(4.73%)	8.07%	10.48%
Basis Real Estate Debt Fund I	2.73%	8.84%	9.19%
Basis Real Estate Debt Fund II	2.30%	3.02%	-
Blackstone European VI (3)	8.41%	(4.77%)	6.99%
Blackstone RE Partners Asia III	(1.44%)	-	-
Blue Vista Real Estate IV **	0.00%	(6.68%)	13.47%
Brasa II	4.52%	5.75%	-
Brookfield Strategic Real Estate II	(2.72%)	7.59%	14.48%
Brookfield Strategic RE III	1.81%	10.14%	11.45%
Brookfield Strategic RE IV	4.48%	-	-
Cabot Industrial Value VI (CIVF)	(0.64%)	12.45%	-
Crow Holdings Realty VII	(0.15%)	(25.39%)	(1.93%)
Crow Holdings Realty VIII	(2.61%)	9.34%	25.04%
Crow Holdings Realty IX	(2.40%)	14.38%	-
Dune Real Estate Partners II	0.54%	(0.90%)	(2.00%)
Dune Real Estate Partners III	(2.44%)	2.70%	(1.84%)
Dune Real Estate Partners IV	4.11%	12.11%	5.15%
Franklin Templeton FTPREF	(7.07%)	(2.01%)	(5.66%)
Franklin Templeton EMREFF	(3.46%)	(33.66%)	(18.75%)
Franklin Templeton MDP RE 2015	0.34%	14.52%	3.90%
Longpoint Realty Fund II	2.77%	33.16%	-
Long Wharf VI	1.04%	19.98%	30.03%
Newport Capital Partners Fund III	(17.32%)	48.51%	-
Oaktree Real Estate Debt Fund II	0.93%	1.01%	(1.23%)
StepSt Partner RE II (fka MFIRE) (2)	0.00%	(0.79%)	(0.95%)
Torchlight Debt VII	1.79%	8.93%	-
Westbrook XI	3.19%	26.11%	-
Total Private Real Estate	(2.88%)	8.05%	9.75%
Homestead USA Farmland Fund III	1.98%	11.01%	-
NCREIF Farmland Index	3.10%	9.47%	6.76%
Total Private Infrastructure	7.91%	21.12%	17.33%
CPI + 5%	0.96%	11.26%	10.14%
FTSE Dev Core Inf 50/50 N	9.25%	(5.79%)	1.43%
Ember Infrastructure I	(2.81%)	(11.10%)	-
Macquarie Infrastructure Partners III	23.01%	46.00%	30.10%
Macquarie Infrastructure Partners IV	0.89%	14.51%	13.05%
Pantheon Glb Infrast Secondaries IV	(5.14%)	(2.06%)	-
Total Real Assets	(2.15%)	8.87%	10.32%
Total Real Assets Benchmark*(1)	(4.51%)	7.40%	9.54%

* Current Quarter Target = 66.0% NCREIF NFI-ODCE Val Wt Nt, 26.0% NCREIF NFI-ODCE Val Wt Nt+1.5%, 6.0% CPI-W+5.0% and 2.0% 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.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 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 December 31, 2022

	Last 5 Years	Last 10 Years	Since Inception	
Total Core Funds	8.15%	8.62%	5.53%	(4/05)
NCREIF NFI-ODCE Val Wt Nt	7.72%	9.11%	6.95%	(4/05)
Blackrock Global Renewable Power III	-	-	0.71%	(1/21)
Blackstone Property Partners	-	-	6.55%	(1/19)
Carlyle Property Investors	-	-	12.90%	(7/18)
Clarion Partners Lion Properties Fund	-	-	(5.33%)	(7/22)
GI Partners ETS Fund	-	-	19.10%	(1/22)
Heitman America Real Estate Trust (HART)	7.85%	-	8.48%	(4/14)
JP Morgan Strategic Property Fund (SPF)	6.80%	-	7.78%	(4/14)
Prologis US Logistics Fund (USLF)	-	-	25.99%	(7/20)
UBS Trumbull Property Fund (TPF)	3.42%	6.02%	5.00%	(4/06)
Total Non-Core Funds	7.45%	11.45%	8.63%	(4/09)
NCREIF ODCE + 1.5%	9.22%	10.61%	9.32%	(4/09)
Basis Real Estate Debt Fund I	13.38%	-	12.70%	(10/17)
Basis Real Estate Debt Fund II	-	-	1.34%	(4/21)
Blackstone European VI (3)	-	-	5.70%	(10/19)
Blackstone RE Partners Asia III	-	-	(17.11%)	(4/22)
Blue Vista Real Estate IV **	12.92%	-	3.32%	(10/15)
Brasa II	-	-	5.75%	(1/22)
Brookfield Strategic Real Estate II	12.23%	-	12.93%	(1/16)
Brookfield Strategic RE III	8.93%	-	8.93%	(1/18)
Brookfield Strategic RE IV	-	-	14.04%	(7/22)
Cabot Industrial Value VI (CIVF)	-	-	33.34%	(7/20)
Crow Holdings Realty VII	2.12%	-	5.51%	(10/15)
Crow Holdings Realty VIII	-	-	21.07%	(7/18)
Crow Holdings Realty IX	-	-	23.82%	(7/21)
Dune Real Estate Partners II	1.05%	7.34%	6.57%	(4/09)
Dune Real Estate Partners III	0.52%	-	4.58%	(4/13)
Dune Real Estate Partners IV	2.68%	-	2.55%	(10/17)
Franklin Templeton FTPREF	(4.01%)	9.27%	7.96%	(4/12)
Franklin Templeton EMREFF	(12.72%)	1.91%	0.76%	(7/11)
Franklin Templeton MDP RE 2015	4.90%	-	3.05%	(7/15)
Longpoint Realty Fund II	-	-	14.67%	(10/21)
Long Wharf VI	-	-	19.59%	(7/19)
Newport Capital Partners Fund III	-	-	31.69%	(7/21)
Oaktree Real Estate Debt Fund II	3.65%	-	4.48%	(10/17)
StepSt Partner RE II (fka MFIRE) (2)	0.54%	5.89%	4.95%	(1/12)
Torchlight Debt VII	-	-	3.58%	(4/21)
Westbrook XI	-	-	34.03%	(10/20)
Total Private Real Estate	7.99%	9.35%	5.91%	(4/05)
Homestead USA Farmland Fund III	-	-	9.92%	(10/20)
NCREIF Farmland Index	6.36%	8.81%	8.41%	(10/20)
Total Private Infrastructure	13.26%	8.87%	8.86%	(10/09)
CPI + 5%	8.89%	7.57%	7.45%	(10/09)
FTSE Dev Core Inf 50/50 N	4.47%	7.26%	8.39%	(10/09)
Ember Infrastructure I	-	-	(17.39%)	(7/21)
Macquarie Infrastructure Partners III	23.14%	-	15.54%	(1/15)
Macquarie Infrastructure Partners IV	7.29%	-	7.29%	(1/18)
Pantheon Glb Infrast Secondaries IV	-	-	(2.06%)	(1/22)
Total Real Assets	8.56%	9.07%	5.69%	(4/05)
Total Real Assets Benchmark*(1)	8.30%	8.68%	6.60%	(4/05)

* Current Quarter Target = 66.0% NCREIF NFI-ODCE Val Wt Nt, 26.0% NCREIF NFI-ODCE Val Wt Nt+1.5%, 6.0% CPI-W+5.0% and 2.0% 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 \$.

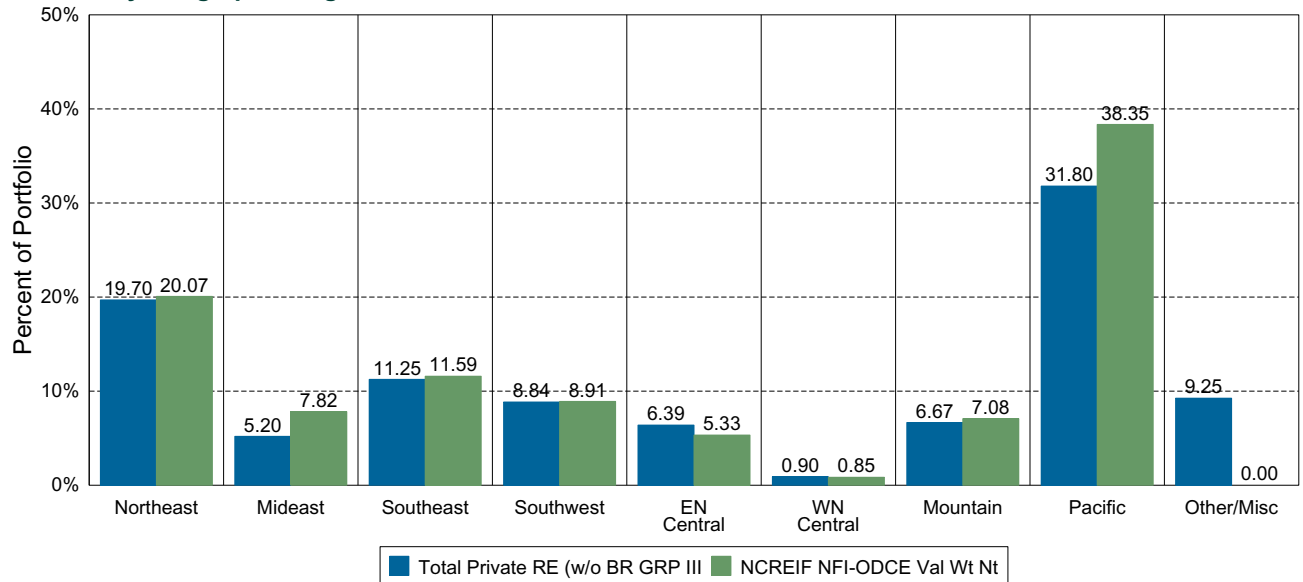
** Year end figure is based on estimate. YE audit takes 120 days.

Total Private RE (w/o BR GRP III) Diversification Analysis as of December 31, 2022

Diversification Analysis

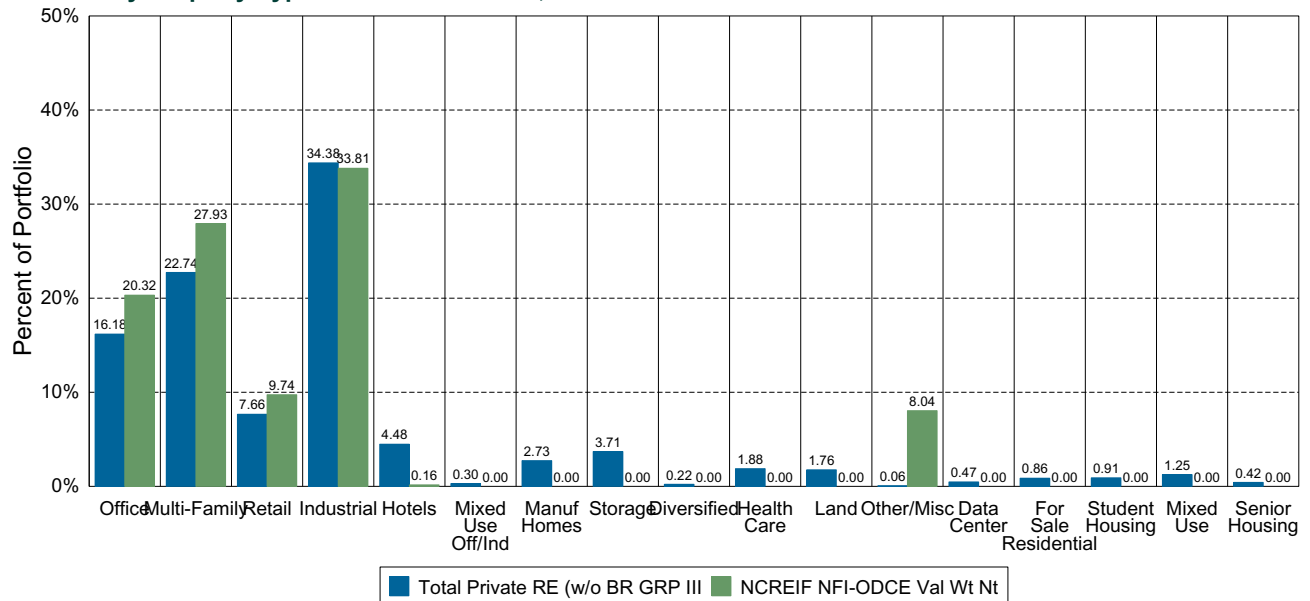
The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of December 31, 2022



Total Private RE (w/o BR GRP III)	19.70%	5.20%	11.25%	8.84%	6.39%	0.90%	6.67%	31.80%	9.25%
NCREIF NFI-ODCE Val Wt Nt	20.07%	7.82%	11.59%	8.91%	5.33%	0.85%	7.08%	38.35%	0.00%

Diversification by Property Type as of December 31, 2022



Total Private RE (w/o BR GRP III)	16.18%	22.74%	7.66%	34.38%	4.48%	0.30%	2.73%	3.71%	0.22%	1.88%	1.76%	0.06%	0.47%	0.86%	0.91%	1.25%	0.42%
NCREIF NFI-ODCE Val Wt Nt	20.32%	27.93%	9.74%	33.81%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.04%	0.00%	0.00%	0.00%	0.00%	0.00%

**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
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	- 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	299,675	10,011,050	11,871,388	1,980,829	1,227,946,436
03/2020	1,227,946,436	30,094,014	9,862,632	3,273,348	(25,837,808)	10,909,231	17,644,036	1,437,607	1,209,919,283
06/2020	1,209,919,283	20,755,150	7,696,750	3,418,980	(43,185,497)	7,121,328	1,923,758	167,748	1,182,553,872
09/2020	1,182,553,872	21,920,519	8,651,977	3,833,535	4,045,070	8,566,129	7,202,553	983,605	1,196,585,616
12/2020	1,196,585,616	120,321,194	10,436,634	3,900,012	21,340,128	10,379,146	5,891,878	0	1,328,512,536
03/2021	1,328,512,536	41,191,888	10,377,413	5,714,627	29,055,048	15,947,023	15,354,059	0	1,372,121,176
06/2021	1,372,121,176	47,072,652	14,944,024	5,029,301	58,604,929	14,552,671	19,194,335	2,007,955	1,451,958,520
09/2021	1,451,958,520	49,754,843	12,868,413	5,464,391	100,490,984	18,376,344	15,353,164	1,141,075	1,574,737,786
12/2021	1,574,737,786	83,289,038	15,766,726	7,536,957	110,311,792	32,823,752	35,002,390	0	1,716,264,851
03/2022	1,716,264,851	74,059,704	13,270,922	6,390,117	125,028,303	17,102,414	5,722,495	3,561,349	1,895,847,405
06/2022	1,895,847,405	54,640,844	11,930,998	6,010,552	56,310,251	32,699,220	27,290,138	16,007,371	1,936,722,218
09/2022	1,936,722,218	105,079,152	11,149,272	7,417,481	(1,494,919)	16,115,366	13,677,513	2,046,462	2,012,198,902
12/2022	2,012,198,902	155,114,229	12,057,250	6,213,412	(67,173,074)	14,269,841	10,839,245	3,155,116	2,077,719,692
	0	2,514,029,823	420,556,138	133,458,638	707,733,714	781,785,378	547,228,017	110,768,788	2,077,719,692

Returns

Net Portfolio Cumulative IRR = 7.16%

Ratios

Capital Account = \$2,077,719,692

Total Value = \$3,517,501,876

Committed Capital = \$3,220,920,423

Paid In Capital = \$2,514,029,823

Remaining Commitment = \$821,007,735

PIC Multiple (Paid In Capital/Committed Capital) = 78.05%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$2,898,727,428

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.40x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.57x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.83x

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 December 31, 2022

The following table summarizes changes in each manager's aggregated cash flows and valuation information as of December 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	\$283,547	283,547	-0	100.00%	399,681	101,297	1.41x	0.36x	1.77x	6.49%
Heitman America Real Estate Trust (HART)	2014	\$206,378	206,378	0	100.00%	56,378	300,172	0.27x	1.45x	1.73x	8.72%
JP Morgan Strategic Property Fund (SPF)	2014	\$150,000	150,000	0	100.00%	2	288,966	0.00x	1.93x	1.93x	7.94%
Carlyle Property Investors	2018	\$119,772	119,772	0	100.00%	20,675	168,798	0.17x	1.41x	1.58x	14.09%
Blackstone Property Partners	2019	\$217,391	217,391	0	100.00%	17,391	256,345	0.08x	1.18x	1.26x	7.25%
Prologis US Logistics Fund (USLF)	2020	\$107,775	107,745	30	99.97%	8,157	177,787	0.08x	1.65x	1.73x	29.81%
BlackRock Global Renewable Power III	2020	\$100,000	43,561	60,928	43.56%	4,760	42,702	0.11x	0.98x	1.09x	10.68%
GI Partners ETS Fund	2022	\$75,000	37,861	37,139	50.48%	0	41,195	0.00x	1.09x	1.09x	20.40%
IFM Glb Infrast Fund (GIF)	2022	\$100,000	0	100,000	0.00%	0	0	-	-	-	0.00%
Clarion Partners Lion Properties Fund	2022	\$225,000	117,829	107,171	52.37%	1,015	110,566	0.01x	0.94x	0.95x	(9.83%)
Non-Traditional Growth Funds											
Mature (10+ years)											
Dune Real Estate Partners II	2008	\$40,000	40,458	0	101.15%	66,998	6,102	1.66x	0.15x	1.81x	14.33%
Macquarie Infrastructure Partners II	2008	\$40,000	48,268	-2,006	120.67%	75,686	0	1.57x	0.00x	1.57x	8.38%
Alinda Infrastructure Fund II	2009	\$40,000	53,410	1,174	133.52%	53,562	500	1.00x	0.01x	1.01x	0.26%
Franklin Templeton FTPREF	2010	\$50,000	58,445	4,625	116.89%	79,908	531	1.37x	0.01x	1.38x	20.54%
Franklin Templeton EMREFF	2012	\$75,000	80,038	7,244	106.72%	106,812	2,771	1.33x	0.03x	1.37x	12.00%
StepSt Partner RE II (fka MFIRE) (2)	2012	\$60,000	39,413	20,587	65.69%	40,963	16,340	1.04x	0.41x	1.45x	6.67%
Dune Real Estate Partners III	2013	\$100,000	142,791	-3,750	142.79%	112,332	63,847	0.79x	0.45x	1.23x	5.48%
Maturing (5-9 years)											
Crow Holdings Realty VII	2014	\$35,000	32,864	2,136	93.90%	44,117	1,310	1.34x	0.04x	1.38x	11.11%
Blue Vista Real Estate IV **	2015	\$35,000	35,000	-0	100.00%	41,360	14,620	1.18x	0.42x	1.60x	12.55%
Brookfield Strategic Real Estate II	2015	\$35,000	40,883	-944	116.81%	31,286	31,887	0.77x	0.78x	1.55x	12.22%
Franklin Templeton MDP RE 2015	2015	\$90,000	81,781	8,219	90.87%	32,700	62,331	0.40x	0.76x	1.16x	4.93%
Macquarie Infrastructure Partners III	2015	\$50,000	52,393	-1,119	104.79%	52,563	56,083	1.00x	1.07x	2.07x	17.39%
Crow Holdings Realty VIII	2017	\$20,000	17,483	2,517	87.41%	27,079	1,241	1.55x	0.07x	1.62x	23.78%
Oaktree Real Estate Debt Fund II	2017	\$30,000	22,590	8,848	75.30%	15,797	10,411	0.70x	0.46x	1.16x	6.39%
Basis Real Estate Debt Fund I	2016	\$30,000	42,588	-2,475	141.96%	31,299	21,084	0.73x	0.50x	1.23x	12.90%
Brookfield Strategic Real Estate III	2017	\$35,000	31,490	3,510	89.97%	7,929	32,388	0.25x	1.03x	1.28x	12.12%

** 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 December 31, 2022

The following table summarizes changes in each manager's aggregated cash flows and valuation information as of December 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)											
Dune Real Estate IV	2018	\$50,000	26,054	23,946	52.11%	2,558	27,321	0.10x	1.05x	1.15x	6.71%
Macquarie Infrastructure Partners IV	2018	\$50,000	53,379	-3,379	106.76%	13,817	60,441	0.26x	1.13x	1.39x	11.87%
Homestead USA Farmland Fund III	2019	\$60,000	46,270	13,754	77.12%	1,449	48,711	0.03x	1.05x	1.08x	6.91%
Long Wharf VI	2019	\$40,000	35,251	4,749	88.13%	19,901	23,889	0.56x	0.68x	1.24x	24.74%
Blackstone European VI (3)	2020	\$85,632	47,848	49,187	55.88%	23,977	37,047	0.50x	0.77x	1.28x	17.48%
Cabot Industrial Value VI (CIVF)	2019	\$50,000	36,956	13,044	73.91%	375	47,367	0.01x	1.28x	1.29x	24.81%
Crow Holdings Realty IX	2020	\$50,000	40,520	9,480	81.04%	12,011	39,064	0.30x	0.96x	1.26x	27.95%
Longpoint Realty Fund II	2021	\$50,000	35,000	15,000	70.00%	373	38,467	0.01x	1.10x	1.11x	17.72%
Westbrook XI	2019	\$75,000	33,789	41,211	45.05%	14,541	26,797	0.43x	0.79x	1.22x	26.12%
Torchlight Debt VII	2020	\$50,000	25,031	24,969	50.06%	31	26,287	0.00x	1.05x	1.05x	5.24%
Brookfield Strategic Real Estate IV	2022	\$75,000	15,340	59,660	20.45%	0	17,191	0.00x	1.12x	1.12x	17.31%
Ember Infrastructure I	2021	\$50,000	8,293	41,707	16.59%	31	6,684	0.00x	0.81x	0.81x	(17.20%)
Basis Real Estate Debt Fund II	2021	\$50,000	32,177	27,580	64.35%	15,426	17,064	0.48x	0.53x	1.01x	1.72%
Newport Capital Partners Fund III	2021	\$30,000	3,574	30,000	11.91%	3,664	420	1.03x	0.12x	1.14x	18.82%
Pantheon Glb Infrast Secondaries IV	2021	\$100,000	12,189	88,563	12.19%	285	11,389	0.02x	0.93x	0.96x	(8.29%)
Blackstone RE Partners Asia III	2022	\$50,000	5,690	44,310	11.38%	0	4,797	0.00x	0.84x	0.84x	(25.09%)
Brasa II	2021	\$40,000	19,763	21,330	49.41%	1,093	19,819	0.06x	1.00x	1.06x	8.09%
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	-341	-	-	-	0.00%
Torchlight Debt VIII	2022	\$50,000	0	50,000	0.00%	0	-160	-	-	-	0.00%
Longpoint Realty Fund III	2022	\$50,000	0	50,000	0.00%	0	0	-	-	-	0.00%
Homestead USA Farmland Fund IV	2022	\$40,000	6,661	33,339	16.65%	0	6,661	0.00x	1.00x	1.00x	0.00%
Total Real Assets (3)	2005	\$4,454,061	3,465,961	1,125,114	77.82%	2,544,905	2,268,190	0.73x	0.65x	1.39x	7.36%

(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 December 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	0.39%	(4.70%)	(4.30%)	1.79%	6.12%	7.98%	2.21%	8.20%	10.55%	2.58%	5.46%	8.15%
BlackRock Glb Renewable Power III	(0.35%)	14.01%	13.67%	(2.93%)	19.78%	16.37%	-	-	-	-	-	-
Blackstone Property Partners	0.24%	(6.01%)	(5.77%)	(0.03%)	4.52%	4.51%	0.20%	6.74%	6.96%	-	-	-
Carlyle Property Investors	(0.03%)	(1.26%)	(1.29%)	1.78%	9.13%	11.00%	2.69%	13.03%	15.96%	-	-	-
Clarion Partners Lion Properties Fund	0.49%	(5.83%)	(5.33%)	-	-	-	-	-	-	-	-	-
GI Partners ETS Fund	(1.09%)	4.12%	3.03%	1.67%	17.46%	19.10%	-	-	-	-	-	-
Heitman America Real Estate Trust	0.72%	(5.66%)	(4.94%)	2.94%	6.74%	9.83%	3.36%	6.93%	10.46%	3.52%	4.22%	7.85%
JP Morgan Strategic Property Fund	0.49%	(5.65%)	(5.16%)	2.22%	1.61%	3.85%	2.60%	5.12%	7.81%	2.76%	3.96%	6.80%
Prologis US Logistics Fund (USLF)	0.46%	(6.29%)	(5.83%)	2.04%	9.43%	11.60%	-	-	-	-	-	-
UBS Trumbull Property Fund (TPF)	0.66%	(6.01%)	(5.36%)	2.94%	2.30%	5.28%	3.17%	1.82%	5.02%	3.29%	0.13%	3.42%
Total Non-Core Funds	(0.04%)	0.96%	0.92%	(0.27%)	8.78%	8.48%	0.26%	7.70%	7.96%	1.13%	6.26%	7.45%
Basis Real Estate Debt Fund I	3.26%	(0.53%)	2.73%	12.49%	(3.35%)	8.84%	12.54%	(3.06%)	9.19%	12.28%	0.66%	13.38%
Basis Real Estate Debt Fund II	2.27%	0.03%	2.30%	6.82%	(3.68%)	3.02%	-	-	-	-	-	-
Blackstone European VI	(0.99%)	9.40%	8.41%	(3.30%)	(1.49%)	(4.77%)	(8.31%)	16.65%	6.99%	-	-	-
Blackstone RE Partners Asia III	(7.91%)	6.47%	(1.44%)	-	-	-	-	-	-	-	-	-
Blue Vista Real Estate IV	0.00%	0.00%	0.00%	0.71%	(7.35%)	(6.68%)	2.07%	11.29%	13.47%	2.21%	10.57%	12.92%
Brasa II	(2.33%)	6.85%	4.52%	(5.73%)	11.98%	5.75%	-	-	-	-	-	-
Brookfield Strategic Real Estate II	1.61%	(4.33%)	(2.72%)	1.85%	5.57%	7.59%	2.94%	10.73%	14.48%	3.28%	8.36%	12.23%
Brookfield Strategic RE III	(0.79%)	2.60%	1.81%	(0.28%)	10.44%	10.14%	(2.11%)	13.67%	11.45%	-	-	8.93%
Brookfield Strategic RE IV	(1.66%)	6.14%	4.48%	(725.97%)	1432.07%	-	-	-	-	-	-	-
Cabot Industrial Value VI (CIVF)	0.28%	(0.92%)	(0.64%)	0.66%	11.67%	12.45%	-	-	-	-	-	-
Crow Holdings Realty VII	3.35%	(3.50%)	(0.15%)	6.56%	(30.17%)	(25.39%)	3.78%	(5.56%)	(1.93%)	3.07%	(0.93%)	2.12%
Crow Holdings Realty VIII	(0.44%)	(2.17%)	(2.61%)	2.71%	6.62%	9.34%	2.56%	22.15%	25.04%	-	-	-
Crow Holdings Realty IX	0.28%	(2.68%)	(2.40%)	0.30%	14.01%	14.38%	-	-	-	-	-	-
Dune Real Estate Partners II	(0.34%)	0.87%	0.54%	(1.25%)	0.36%	(0.90%)	(1.15%)	(0.85%)	(2.00%)	(1.00%)	2.07%	1.05%
Dune Real Estate Partners III	(0.10%)	(2.34%)	(2.44%)	0.09%	2.62%	2.70%	(0.75%)	(1.09%)	(1.84%)	-	-	0.52%
Dune RE IV	(1.07%)	5.18%	4.11%	(3.74%)	16.30%	12.11%	(6.08%)	11.88%	5.15%	-	-	2.68%
Franklin Templeton FTPREF	4.09%	(11.16%)	(7.07%)	10.23%	(12.83%)	(2.01%)	13.81%	(18.70%)	(5.66%)	24.45%	(33.22%)	(4.01%)
Franklin Templeton EMREFF	(0.28%)	(3.18%)	(3.46%)	2.60%	(35.42%)	(33.66%)	4.73%	(22.61%)	(18.75%)	7.17%	(18.77%)	(12.72%)
Franklin Templeton MDP RE 2015	0.21%	0.13%	0.34%	(0.30%)	14.83%	14.52%	2.07%	1.90%	3.90%	3.29%	1.62%	4.90%
Longpoint Realty Fund II	(0.93%)	3.70%	2.77%	(3.57%)	37.76%	33.16%	-	-	-	-	-	-
Long Wharf VI	0.17%	0.87%	1.04%	(0.15%)	20.17%	19.98%	(4.50%)	35.85%	30.03%	-	-	-
Newport Capital Partners Fund III	(3.79%)	(13.54%)	(17.32%)	(15.20%)	65.96%	48.51%	-	-	-	-	-	-
Oaktree Real Estate Debt Fund II	1.77%	(0.84%)	0.93%	6.31%	(5.06%)	1.01%	6.81%	(7.70%)	(1.23%)	7.67%	(3.78%)	3.65%
Torchlight Debt VII	0.91%	0.88%	1.79%	3.14%	5.65%	8.93%	-	-	-	-	-	-
StepSt Partner RE II (fka MFIRE) (2)	0.00%	0.00%	0.00%	(0.86%)	0.06%	(0.79%)	(1.10%)	0.15%	(0.95%)	(1.05%)	1.61%	0.54%
Westbrook XI	(1.31%)	4.50%	3.19%	(2.94%)	29.73%	26.11%	-	-	-	-	-	-
Total Private Real Estate	0.27%	(3.15%)	(2.88%)	1.20%	6.80%	8.05%	1.65%	8.01%	9.75%	2.17%	5.72%	7.99%
Total Non-C w/ Infrastructure	0.50%	1.74%	2.24%	0.63%	10.11%	10.79%	0.50%	9.71%	10.24%	0.94%	7.89%	8.88%
Farmland												
Homestead USA Farmland Fund III	0.55%	1.43%	1.98%	(0.13%)	11.20%	11.01%	-	-	-	-	-	-
Total Private Infrastructure	2.84%	5.07%	7.91%	4.68%	15.95%	21.12%	1.65%	15.50%	17.33%	0.49%	12.74%	13.26%
Ember Infrastructure I	(4.88%)	2.07%	(2.81%)	(12.29%)	1.27%	(11.10%)	-	-	-	-	-	-
Macquarie Infrastructure Partners III	9.20%	13.81%	23.01%	18.43%	24.70%	46.00%	5.50%	23.76%	30.10%	2.88%	19.93%	23.14%
Macquarie Infrastructure Partners IV	(0.24%)	1.13%	0.89%	(1.07%)	15.71%	14.51%	0.37%	12.58%	13.05%	(4.08%)	11.69%	7.29%
Pantheon Glb Infrast Secondaries IV	(1.75%)	(3.39%)	(5.14%)	(34.09%)	2.33%	(2.06%)	-	-	-	-	-	-
Total Real Assets	0.43%	(2.58%)	(2.15%)	1.38%	7.42%	8.87%	1.56%	8.67%	10.32%	1.97%	6.49%	8.56%

State Universities Retirement System of Illinois

Real Estate Portfolio Snapshot - Subreturn Breakdown

As of December 31, 2022

Subreturn Breakdown	Last 10 Years			NET IRR	TVPI
	INC	APP	TNET		
Total Core Funds	3.21%	5.28%	8.62%	6.43%	1.47x
BlackRock Glb Renewable Power III	-	-	-	10.68%	1.09x
Blackstone Property Partners	-	-	-	7.25%	1.26x
Carlyle Property Investors	-	-	-	14.09%	1.58x
Clarion Partners Lion Properties Fund	-	-	-	(9.83%)	0.95x
GI Partners ETS Fund	-	-	-	20.40%	1.09x
Heitman America Real Estate Trust	-	-	-	8.72%	1.73x
JP Morgan Strategic Property Fund	-	-	-	7.94%	1.93x
Prologis US Logistics Fund (USLF)	-	-	-	29.81%	1.73x
UBS Trumbull Property Fund (TPF)	3.63%	2.33%	6.02%	6.49%	1.77x
Total Non-Core Funds	0.03%	11.40%	11.45%	10.65%	1.29x
Basis Real Estate Debt Fund I	-	-	-	12.90%	1.23x
Basis Real Estate Debt Fund II	-	-	-	1.72%	1.01x
Blackstone European VI	-	-	-	17.48%	1.28x
Blackstone RE Partners Asia III	-	-	-	(25.09%)	0.84x
Blue Vista Real Estate IV	-	-	-	12.55%	1.60x
Brasa II	-	-	-	8.09%	1.06x
Brookfield Strategic Real Estate II	-	-	-	12.22%	1.55x
Brookfield Strategic RE III	-	-	-	12.12%	1.28x
Brookfield Strategic RE IV	-	-	-	17.31%	1.12x
Cabot Industrial Value VI (CIVF)	-	-	-	24.81%	1.29x
Crow Holdings Realty VII	-	-	-	11.11%	1.38x
Crow Holdings Realty VIII	-	-	-	23.78%	1.62x
Crow Holdings Realty IX	-	-	-	27.95%	1.26x
Dune Real Estate Partners II	(0.55%)	7.94%	7.34%	14.33%	1.81x
Dune Real Estate Partners III	-	-	-	5.48%	1.23x
Dune RE IV	-	-	-	6.71%	1.15x
Franklin Templeton FTPREF	11.56%	(8.86%)	9.27%	20.54%	1.38x
Franklin Templeton EMREFF	3.52%	(1.69%)	1.91%	12.00%	1.37x
Franklin Templeton MDP RE 2015	-	-	-	4.93%	1.16x
Longpoint Realty Fund II	-	-	-	17.72%	1.11x
Long Wharf VI	-	-	-	24.74%	1.24x
Newport Capital Partners Fund III	-	-	-	18.82%	1.14x
Oaktree Real Estate Debt Fund II	-	-	-	6.39%	1.16x
Torchlight Debt VII	-	-	-	5.24%	1.05x
StepSt Partner RE II (fka MFIRE) (2)	(1.35%)	7.31%	5.89%	6.67%	1.45x
Westbrook XI	-	-	-	26.12%	1.22x
Total Private Real Estate	2.35%	6.88%	9.35%	7.16%	1.40x
Total Non-C w/ Infrastructure	0.04%	10.31%	10.35%	9.99%	1.32x
Farmland					
Homestead USA Farmland Fund III	-	-	-	6.91%	1.08x
Total Private Infrastructure	0.08%	8.79%	8.87%	8.60%	1.45x
Ember Infrastructure I	-	-	-	(17.20%)	0.81x
Macquarie Infrastructure Partners III	-	-	-	17.39%	2.07x
Macquarie Infrastructure Partners IV	-	-	-	11.87%	1.39x
Pantheon Glb Infrast Secondaries IV	-	-	-	(8.29%)	0.96x
Total Real Assets	2.09%	6.87%	9.07%	7.36%	1.39x

State Universities Retirement System of Illinois Real Estate Portfolio Snapshot - Quarterly Cashflows As of December 31, 2022

Quarterly Cash Flow Activity (\$)	Beginning Market Value	Capital Contribution	Accounting Income	Mgmt. Fees	Appreciation	Distributions	Ending Market Value	LTV
BR Glb Renewable (GRP) III	\$26,757,488	\$11,869,492	\$88,469	\$198,128	\$4,429,050	\$244,370	\$42,702,000	3.78%
Blackstone Property Partners	\$272,034,711	\$1,673,084	\$1,296,208	\$638,439	\$-16,347,137	\$1,673,084	\$256,345,343	45.00%
Carlyle Property Investors	\$170,554,494	\$1,360,177	\$328,158	\$369,776	\$-2,172,543	\$902,877	\$168,797,633	50.00%
Clarion Partners Lion Properties Fund	\$9,963,994	\$107,811,107	\$834,113	\$248,036	\$-6,861,691	\$933,760	\$110,565,727	20.90%
GI Partners ETS Fund	\$39,984,638	\$0	\$-311,228	\$123,947	\$1,645,360	\$0	\$41,194,823	44.70%
Heitman (HART)	\$315,764,739	\$2,122,804	\$2,842,655	\$543,907	\$-17,891,375	\$2,122,804	\$300,172,112	22.72%
JP Morgan (SPF)	\$304,691,542	\$0	\$2,118,895	\$604,838	\$-17,239,398	\$0	\$288,966,201	26.39%
Prologis US Logistics Fund (USLFF)	\$188,707,758	\$947,025	\$1,344,704	\$457,796	\$-11,885,115	\$869,828	\$177,786,748	12.30%
UBS (TPF)	\$107,029,055	\$691,926	\$868,800	\$163,057	\$-6,438,134	\$691,926	\$101,296,664	19.07%
Total Core Funds	\$1,435,488,419	\$126,475,615	\$9,410,773	\$3,347,924	\$-72,760,983	\$7,438,649	\$1,487,827,250	
Basis Real Estate Debt Fund I	\$22,248,962	\$0	\$797,023	\$75,664	\$-116,272	\$504,886	\$21,083,753	42.00%
Basis Real Estate Debt Fund II	\$17,505,307	\$2,452,623	\$552,783	\$157,534	\$5,745	\$3,294,688	\$17,064,236	-
Blackstone BREP Europe VI	\$32,167,331	\$3,036,145	\$-46,941	\$277,928	\$3,106,087	\$937,883	\$37,046,810	69.00%
Blackstone RE Partners Asia III	\$4,552,718	\$310,764	\$-185,760	\$181,250	\$300,432	\$0	\$4,796,904	-
Blue Vista Real Estate IV	\$14,620,266	\$0	\$0	\$0	\$0	\$0	\$14,620,266	63.90%
Brasa II	\$16,990,787	\$2,043,990	\$-262,820	\$141,151	\$1,187,932	\$0	\$19,818,739	32.60%
Brookfield Strategic Real Estate II	\$34,782,816	\$636,904	\$547,174	\$0	\$-1,474,608	\$2,334,333	\$31,886,771	54.00%
Brookfield Strategic RE III	\$31,875,335	\$754,925	\$3,977	\$255,343	\$827,357	\$805,062	\$32,387,899	50.00%
Brookfield Strategic RE IV	\$13,451,621	\$3,016,284	\$-25,707	\$240,537	\$988,963	\$0	\$17,190,624	30.00%
Cabot Industrial Value VI	\$47,672,073	\$0	\$320,432	\$187,500	\$-437,579	\$0	\$47,367,426	43.10%
Crow Holdings Realty VII	\$1,336,884	\$13,927	\$58,607	\$13,927	\$-46,724	\$38,407	\$1,310,360	64.98%
Crow Holdings Realty VIII	\$2,920,545	\$0	\$-817	\$9,273	\$-52,277	\$0	\$1,241,177	60.60%
Crow Holdings Realty IX	\$40,312,611	\$0	\$220,012	\$107,790	\$-1,076,270	\$0	\$39,064,095	40.00%
Dune Real Estate Partners II	\$6,069,827	\$0	\$-9,611	\$10,821	\$52,948	\$0	\$6,102,343	-
Dune Real Estate Partners III	\$65,470,851	\$0	\$76,756	\$141,234	\$-1,531,267	\$0	\$63,846,588	-
Dune Real Estate Partners IV	\$25,232,771	\$2,830,952	\$-94,883	\$178,369	\$1,330,810	\$0	\$27,321,096	49.00%
Franklin Templeton FTPREF	\$1,587,473	\$530,406	\$91,791	\$26,445	\$-176,740	\$797,135	\$531,453	30.00%
Franklin Templeton EMREFF	\$2,870,680	\$0	\$12,011	\$19,899	\$-91,451	\$0	\$2,771,341	67.00%
Franklin Templeton MDP RE 2015	\$58,668,298	\$3,462,224	\$199,073	\$74,358	\$75,352	\$-0	\$62,330,589	57.00%
Longpoint Realty Fund II	\$30,064,584	\$7,500,000	\$-142,490	\$160,860	\$1,205,988	\$0	\$38,467,222	52.00%
Long Wharf VI	\$26,567,587	\$1,887,017	\$196,201	\$151,233	\$225,868	\$872,151	\$23,888,968	47.39%
Newport Capital Partners Fund III	\$508,031	\$0	\$9,836	\$26,870	\$-70,979	\$0	\$420,017	59.90%
Oaktree Real Estate Debt Fund II	\$10,451,022	\$0	\$217,314	\$34,410	\$-86,166	\$136,573	\$10,411,187	63.90%
StepSt Partner RE II (fka MFIRE)	\$16,340,381	\$0	\$0	\$0	\$0	\$0	\$16,340,381	32.00%
Torchlight Debt VII	\$25,824,110	\$0	\$408,957	\$175,000	\$228,768	\$0	\$26,286,835	45.40%
Westbrook XI	\$26,958,905	\$162,453	\$-188,219	\$162,453	\$1,208,594	\$265,190	\$26,797,117	39.00%
Total Non-Core Funds	\$577,051,776	\$28,638,614	\$2,754,698	\$2,809,849	\$5,584,510	\$9,986,308	\$590,394,196	
Homestead USA Farmland Fund III	\$41,524,267	\$6,661,463	\$458,147	\$217,081	\$629,956	\$290,514	\$48,711,492	30.00%
Farmland	\$41,524,267	\$6,661,463	\$458,147	\$217,081	\$629,956	\$290,514	\$48,711,492	
Alinda Infrastructure Fund II	\$7,872,878	\$326,347	\$4,032	\$0	\$-359,900	\$868,444	\$500,496	45.00%
Macquarie Infrastructure II	\$233,873	\$0	\$-6,310	\$0	\$1,262	\$228,825	\$0	-
Macquarie Infrastructure III	\$50,233,291	\$90,359	\$4,623,496	\$125,744	\$6,793,947	\$0	\$56,082,852	39.00%
Macquarie Infrastructure IV	\$59,906,900	\$458,386	\$36,268	\$177,018	\$674,875	\$458,386	\$60,441,025	35.00%
Ember Infrastructure I	\$6,876,788	\$0	\$-182,238	\$149,222	\$138,262	\$0	\$6,683,590	0.00%
Pantheon Glb Infrast Secondaries I	\$11,217,983	\$1,042,593	\$32,624	\$226,849	\$-391,979	\$50,466	\$11,389,183	39.00%
Total Private Infrastructure	\$136,341,713	\$1,917,686	\$4,507,872	\$678,834	\$6,856,467	\$1,606,121	\$135,097,147	
Total Portfolio	\$2,190,406,175	\$163,693,378	\$17,131,491	\$7,053,688	\$-59,690,050	\$19,321,593	\$2,262,030,085	

Total Core Fund Period Ended December 31, 2022

Quarterly Summary and Highlights

- Total Core Fund's portfolio posted a (4.30)% return for the quarter placing it in the 32 percentile of the Callan Real Estate ODCE group for the quarter and in the 54 percentile for the last year.
- Total Core Fund's portfolio outperformed the NCREIF NFI-ODCE Val Wt Nt by 0.86% for the quarter and outperformed the NCREIF NFI-ODCE Val Wt Nt for the year by 1.43%.

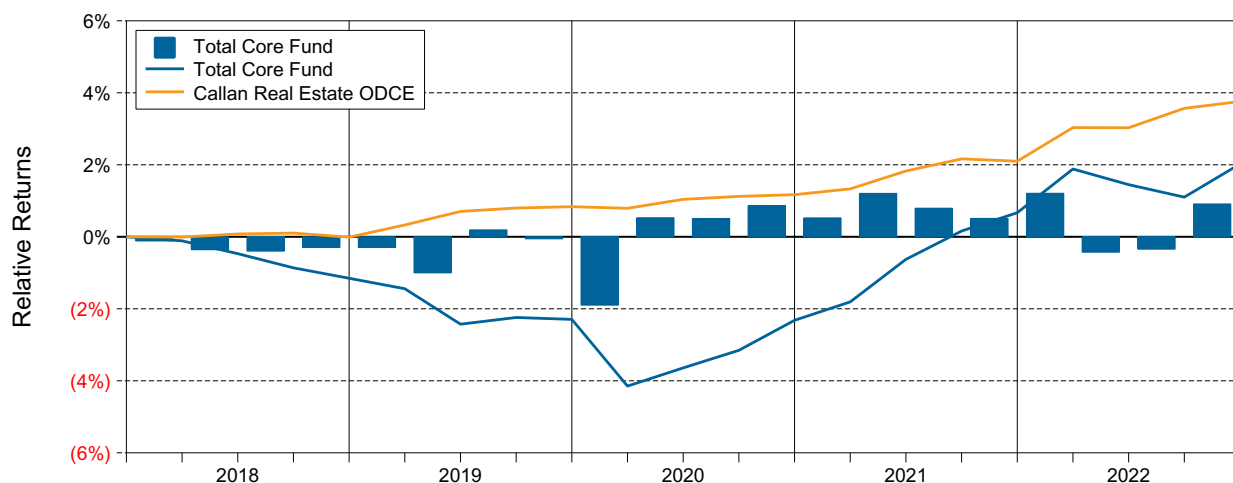
Quarterly Asset Growth

Beginning Market Value	\$1,435,488,419
Net New Investment	\$119,036,965
Investment Gains/(Losses)	\$-66,698,134
Ending Market Value	\$1,487,827,250

Performance vs Callan Real Estate ODCE



Cumulative and Quarterly Relative Returns vs NCREIF NFI-ODCE Val Wt Nt

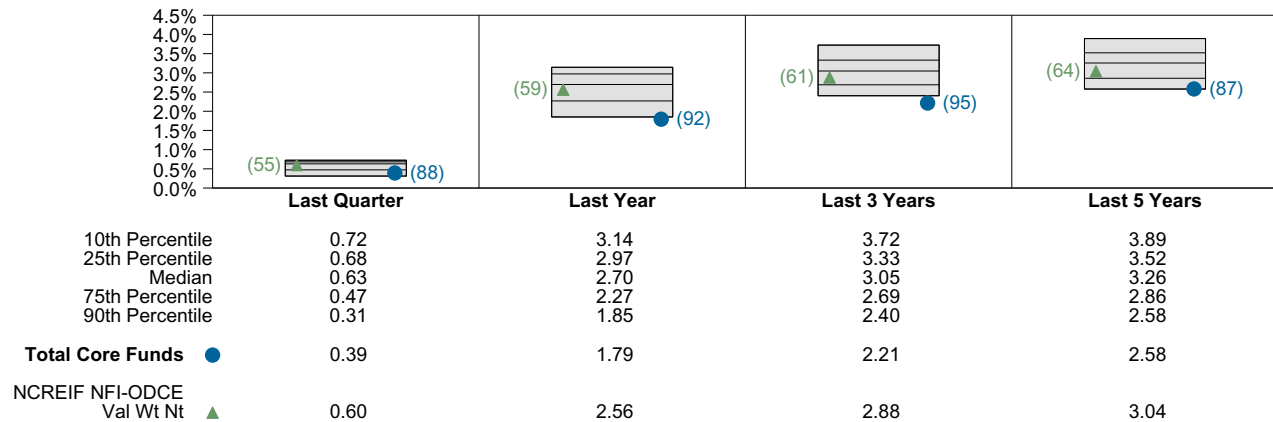


Total Core Funds Return Analysis

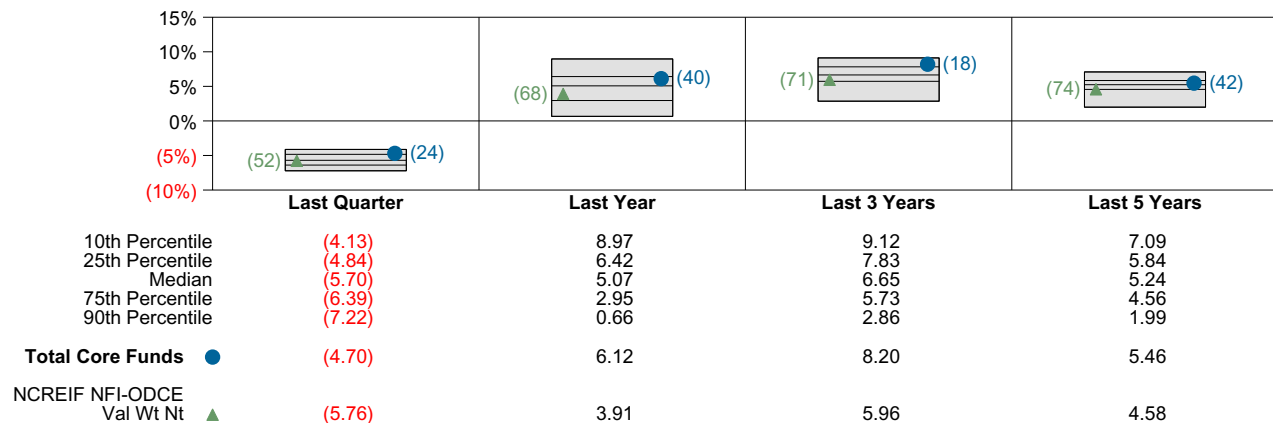
Return Analysis

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.

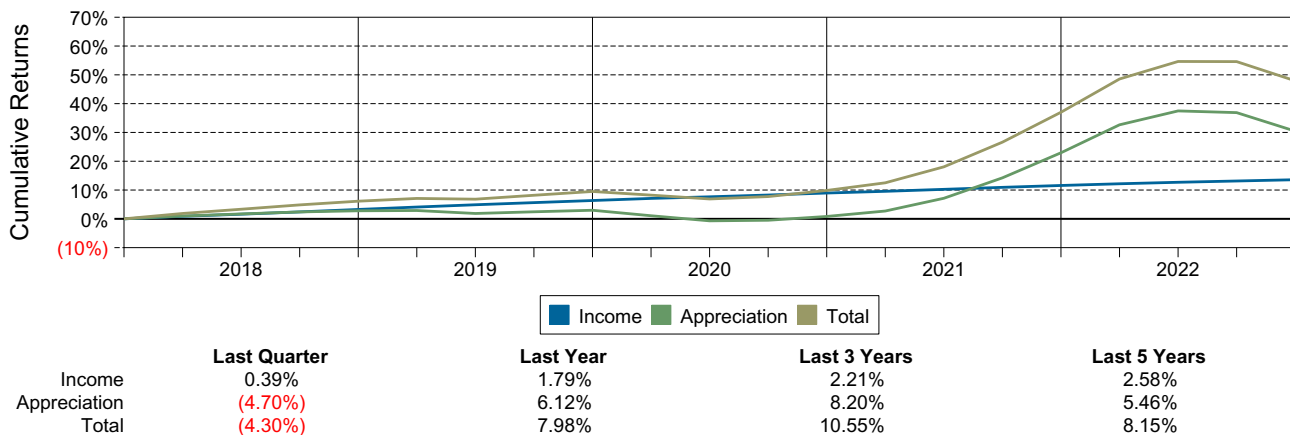
Income Rankings vs Callan Real Estate ODCE Periods ended December 31, 2022



Appreciation Rankings vs Callan Real Estate ODCE Periods ended December 31, 2022



Cumulative Return Composition by Income/Appreciation

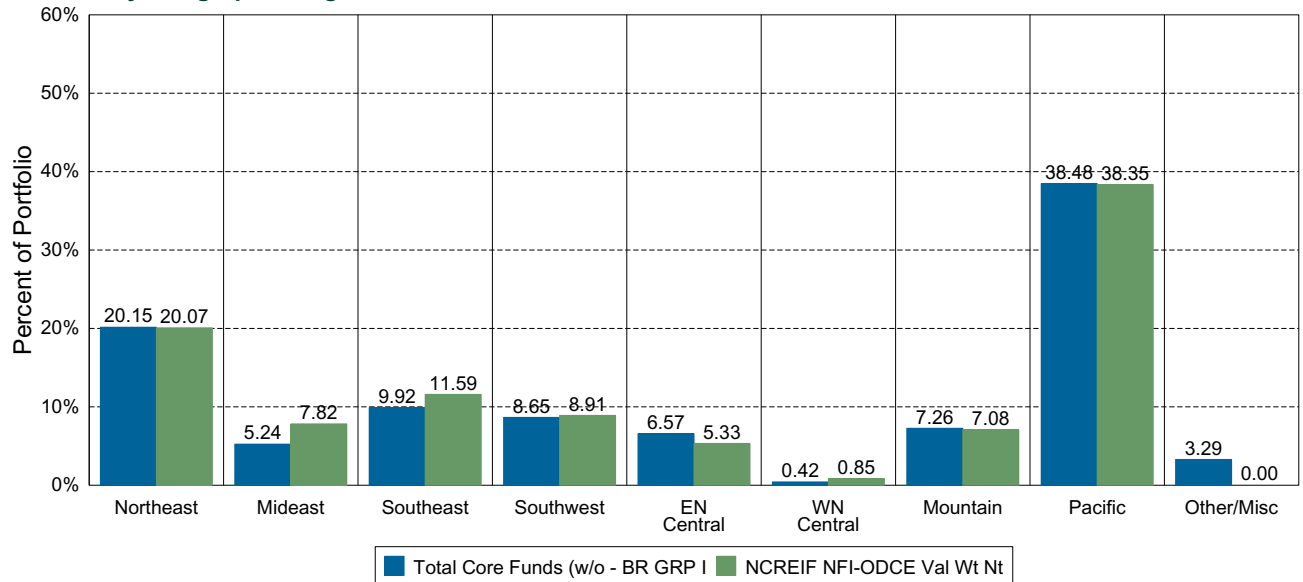


Total Core Funds (w/o - BR GRP III) Diversification Analysis as of December 31, 2022

Diversification Analysis

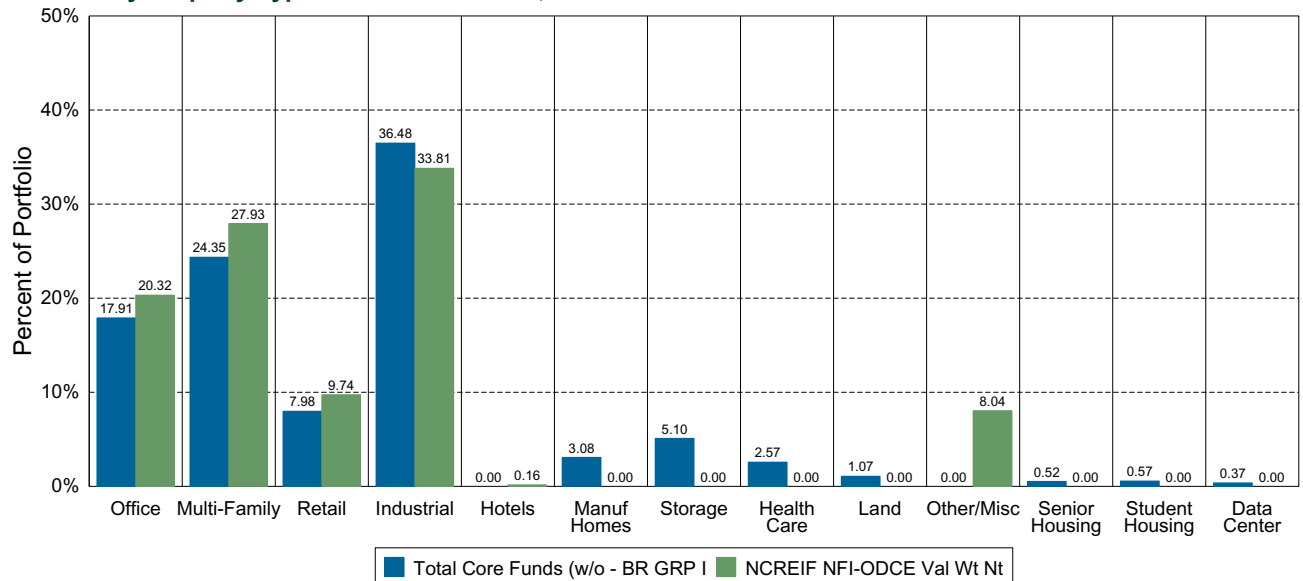
The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of December 31, 2022



Total Core Funds (w/o - BR GRP III)	20.15%	5.24%	9.92%	8.65%	6.57%	0.42%	7.26%	38.48%	3.29%
NCREIF NFI-ODCE Val Wt Nt	20.07%	7.82%	11.59%	8.91%	5.33%	0.85%	7.08%	38.35%	0.00%

Diversification by Property Type as of December 31, 2022

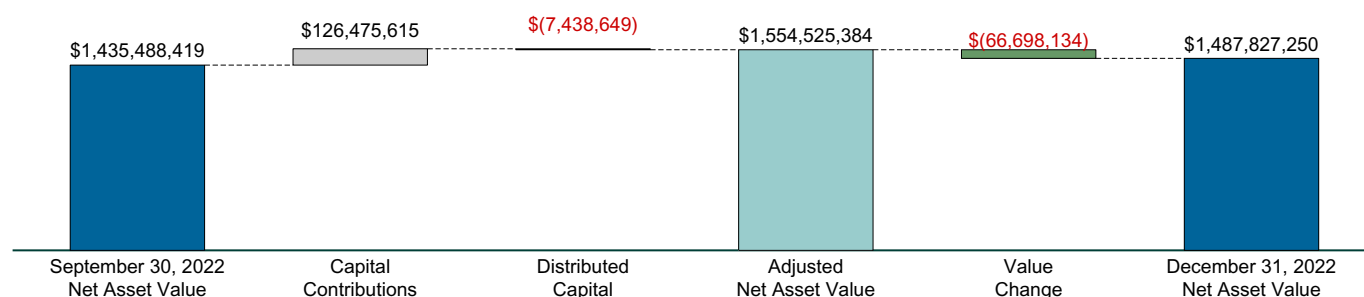


Total Core Funds (w/o - BR GRP III)	17.91%	24.35%	7.98%	36.48%	0.00%	3.08%	5.10%	2.57%	1.07%	0.00%	0.52%	0.57%	0.37%
NCREIF NFI-ODCE Val Wt Nt	20.32%	27.93%	9.74%	33.81%	0.16%	0.00%	0.00%	0.00%	0.00%	8.04%	0.00%	0.00%	0.00%

**Total Core Funds
Fund Overview
Period Ended December 31, 2022**

Quarterly Position Change	September 30, 2022	Quarterly Change	December 31, 2022
Client Commitment	\$1,747,362,000	\$0	\$1,747,362,000
Paid-In Capital	\$1,364,736,431	\$126,475,615	\$1,491,212,046
Remaining Commitment	\$389,328,337	\$(126,231,245)	\$263,097,093
Distributions	\$699,813,988	\$7,438,649	\$707,252,637
Recallable Distributions	\$6,702,769	\$244,370	\$6,947,139
Non-Recallable Distributions	\$693,111,219	\$7,194,279	\$700,305,499
Net Asset Value	\$1,435,488,419	\$52,338,831	\$1,487,827,250
Total Distributed Capital and Net Asset Value	\$2,135,302,407	\$59,777,480	\$2,195,079,887

Performance Change	September 30, 2022	Quarterly Change	December 31, 2022
Net Internal Rate of Return, Since Inception	6.97%	(0.55%)	6.43%
Total Value to Paid-in Capital (TVPI)	1.56x	(0.09x)	1.47x
Distributions to Paid-in Capital (DPI)	0.51x	(0.04x)	0.47x
Residual Value to Paid-in Capital (RVPI)	1.05x	(0.05x)	1.00x
% of Commitments Contributed	78.10%	(7.24%)	85.34%



**Total 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
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	- 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
06/2022	1,325,635,197	26,451,741	9,327,206	3,160,547	48,834,343	6,933,806	0	1,283,269	1,398,870,866
09/2022	1,398,870,866	45,011,576	8,765,689	3,147,851	(6,040,575)	7,017,913	0	953,372	1,435,488,419
12/2022	1,435,488,419	126,475,615	9,410,773	3,347,924	(72,760,983)	7,194,279	0	244,370	1,487,827,250
		0 1,491,212,046	354,571,497	76,931,614	426,227,958	401,058,108	299,247,391	6,947,139	1,487,827,250

Returns

Net Portfolio Cumulative IRR = 6.43%

Ratios

Capital Account = \$1,487,827,250

Total Value = \$2,195,079,887

Committed Capital = \$1,691,288,573

Paid In Capital = \$1,491,212,046

Remaining Commitment = \$207,023,666

PIC Multiple (Paid In Capital/Committed Capital) = 88.17%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$1,694,850,915

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.47x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.47x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.00x

Total Non-Core Fund Period Ended December 31, 2022

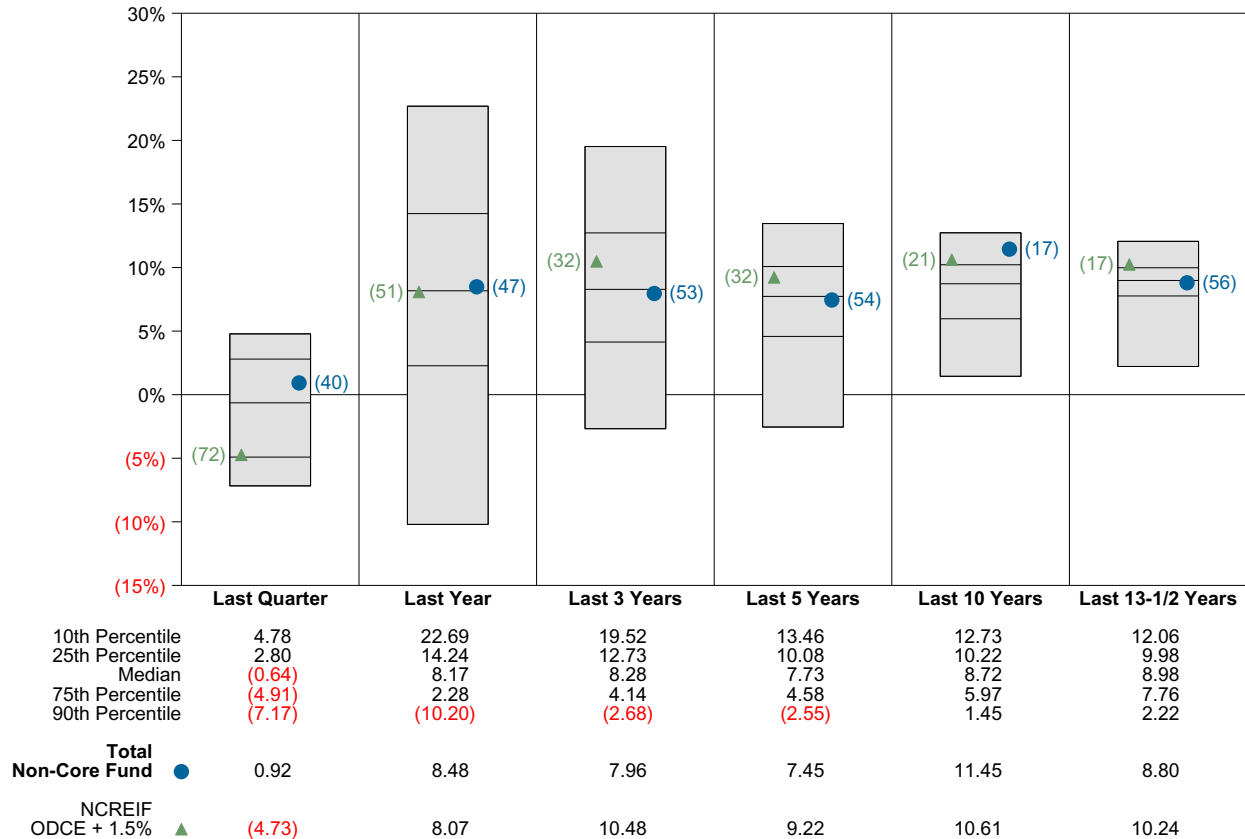
Quarterly Summary and Highlights

- Total Non-Core Fund's portfolio posted a 0.92% return for the quarter placing it in the 40 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 47 percentile for the last year.
- Total Non-Core Fund's portfolio outperformed the NCREIF ODCE + 1.5% by 5.65% for the quarter and outperformed the NCREIF ODCE + 1.5% for the year by 0.41%.

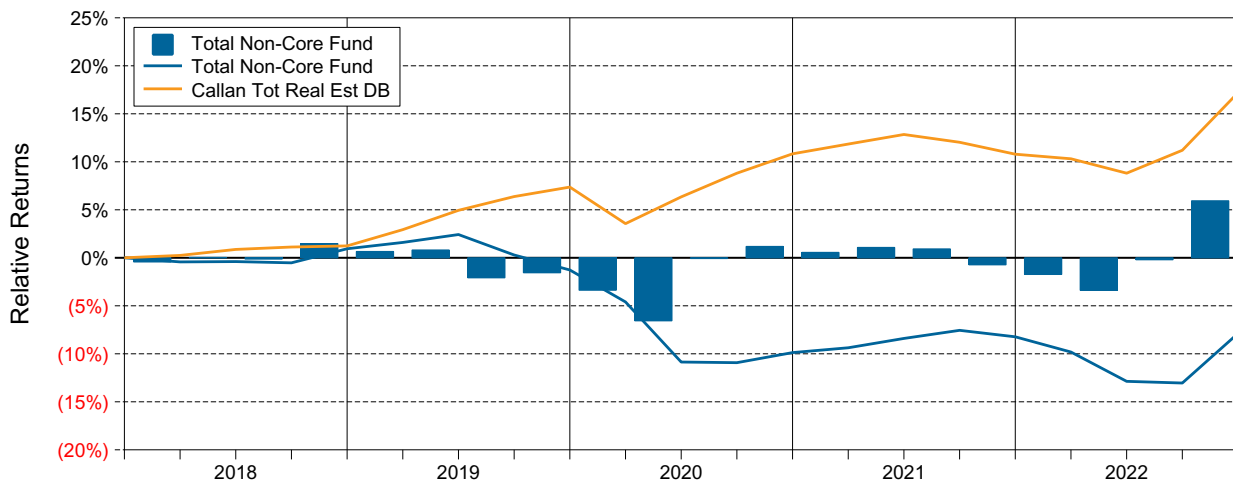
Quarterly Asset Growth

Beginning Market Value	\$576,712,667
Net New Investment	\$7,815,672
Investment Gains/(Losses)	\$5,366,332
Ending Market Value	\$589,894,671

Performance vs Callan Total Domestic Real Estate DB



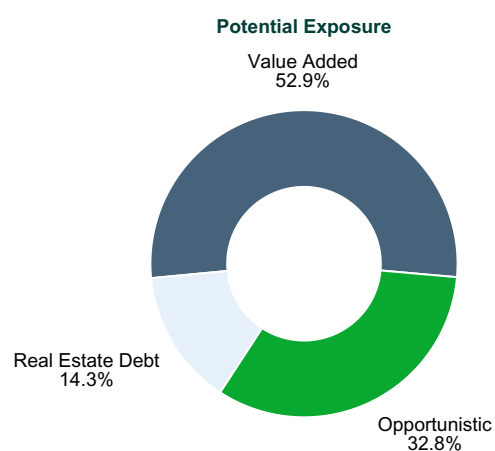
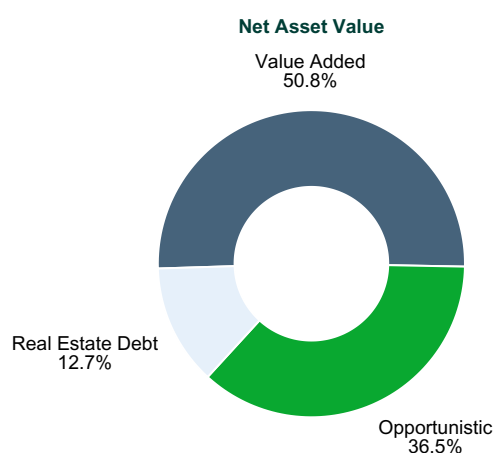
Cumulative and Quarterly Relative Returns vs NCREIF ODCE + 1.5%



Portfolio Diversification
Total Non-Core Funds
Period Ended December 31, 2022

The following tables illustrate current and potential exposure by Strategy type as of December 31, 2022 in USD millions.

Portfolio Exposure by Strategy Type	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
Value Added	\$300	50.82%	\$377	54.65%	\$677	52.89%
Opportunistic	\$215	36.52%	\$204	29.56%	\$419	32.77%
Real Estate Debt	\$75	12.66%	\$109	15.79%	\$184	14.35%
Total Non-Core Funds	\$590		\$690		\$1,280	

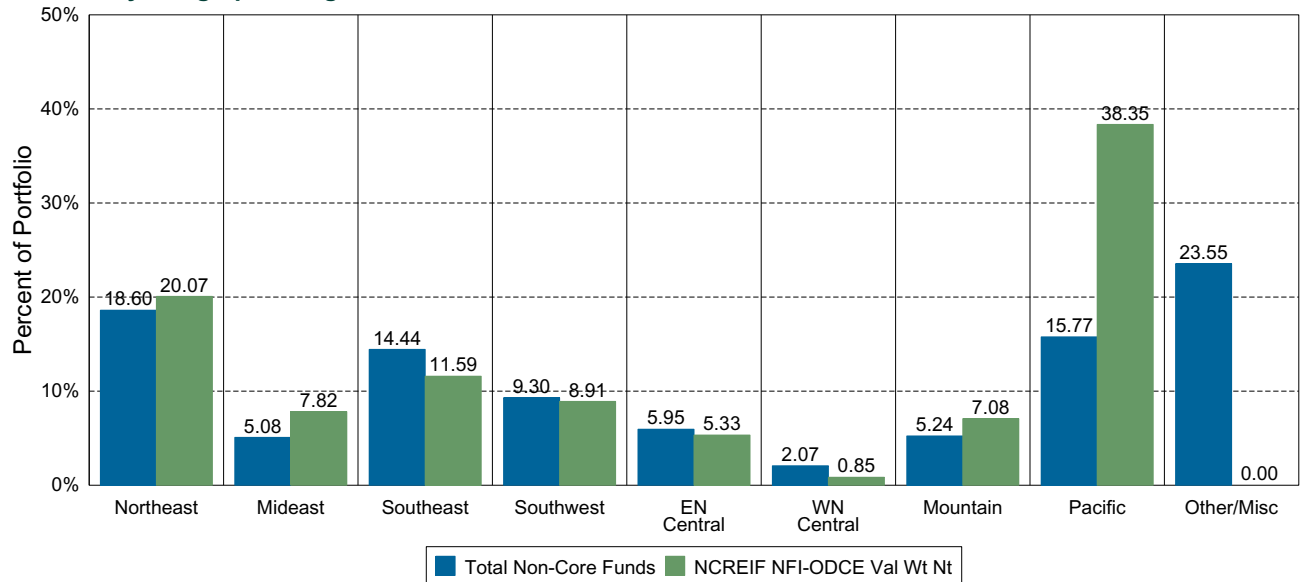


Total Non-Core Funds Diversification Analysis as of December 31, 2022

Diversification Analysis

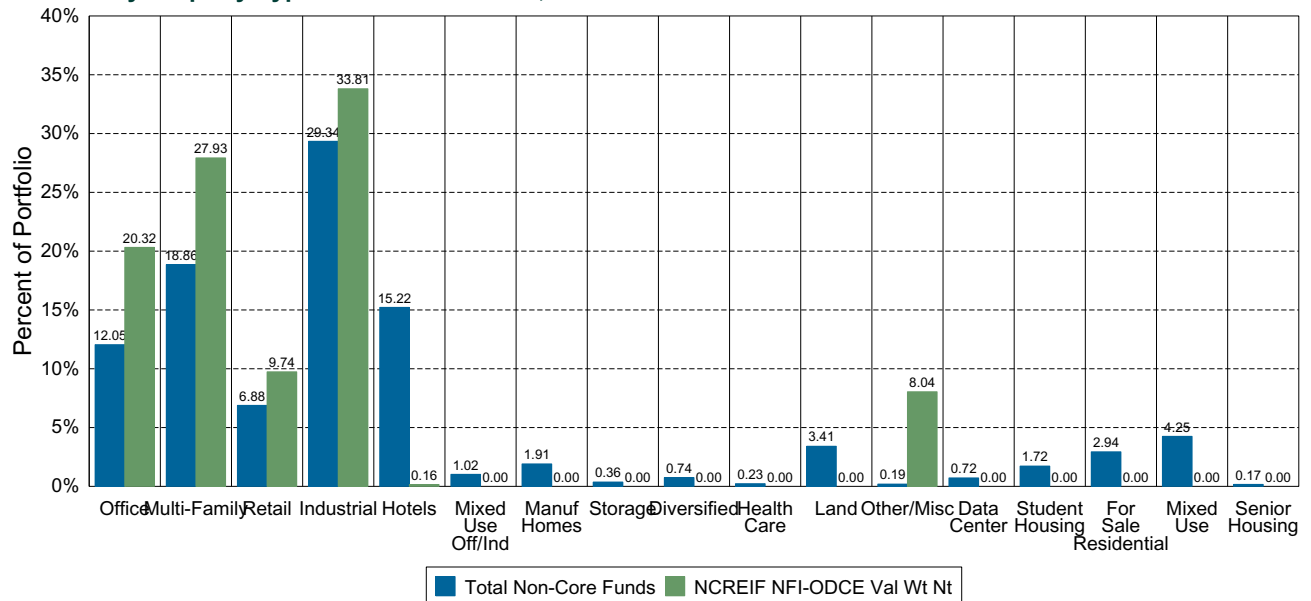
The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Property Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of December 31, 2022



Total Non-Core Funds	18.60%	5.08%	14.44%	9.30%	5.95%	2.07%	5.24%	15.77%	23.55%
NCREIF NFI-ODCE Val Wt Nt	20.07%	7.82%	11.59%	8.91%	5.33%	0.85%	7.08%	38.35%	0.00%

Diversification by Property Type as of December 31, 2022

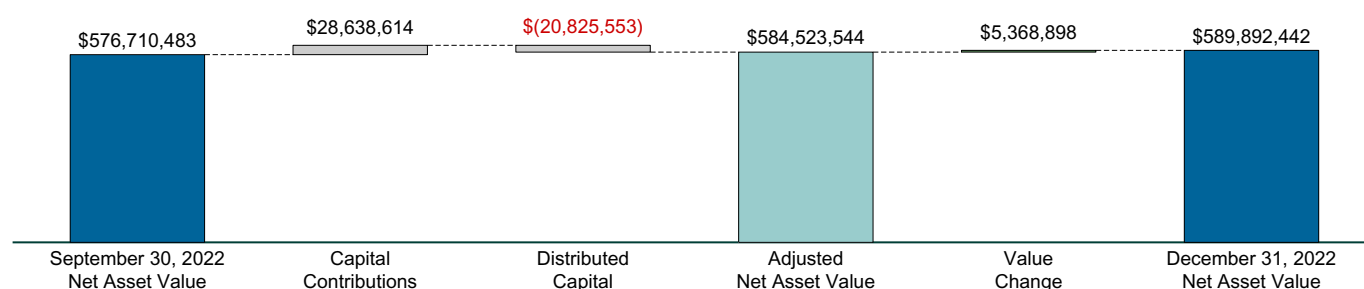


Total Non-Core Funds	12.05%	18.86%	6.88%	29.34%	15.22%	1.02%	1.91%	0.36%	0.74%	0.23%	3.41%	0.19%	0.72%	1.72%	2.94%	4.25%	0.17%
NCREIF NFI-ODCE Val Wt Nt	20.32%	27.93%	9.74%	33.81%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.04%	0.00%	0.00%	0.00%	0.00%	0.00%

**Total Non-Core Funds
Fund Overview
Period Ended December 31, 2022**

Quarterly Position Change	September 30, 2022	Quarterly Change	December 31, 2022
Client Commitment	\$1,605,631,850	\$0	\$1,605,631,850
Paid-In Capital	\$994,179,163	\$28,638,614	\$1,022,817,777
Remaining Commitment	\$715,434,010	\$(25,449,940)	\$689,984,070
Distributions	\$711,703,993	\$20,825,553	\$732,529,546
Recallable Distributions	\$100,910,904	\$2,910,746	\$103,821,650
Non-Recallable Distributions	\$610,793,089	\$17,914,807	\$628,707,896
Net Asset Value	\$576,710,483	\$13,181,960	\$589,892,442
Total Distributed Capital and Net Asset Value	\$1,288,414,476	\$34,007,512	\$1,322,421,989

Performance Change	September 30, 2022	Quarterly Change	December 31, 2022
Net Internal Rate of Return, Since Inception	10.89%	(0.24%)	10.65%
Total Value to Paid-in Capital (TVPI)	1.30x	(0.00x)	1.29x
Distributions to Paid-in Capital (DPI)	0.72x	0.00x	0.72x
Residual Value to Paid-in Capital (RVPI)	0.58x	(0.00x)	0.58x
% of Commitments Contributed	61.92%	(1.78%)	63.70%



**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
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	(4,200,243)	5,092,759	4,017,896	1,980,829	362,361,628
03/2020	362,361,628	25,925,447	2,091,093	1,433,998	(9,935,977)	5,791,539	12,218,341	1,437,607	360,678,937
06/2020	360,678,937	16,765,573	1,524,993	1,609,328	(28,328,041)	2,431,376	1,923,758	167,748	344,509,252
09/2020	344,509,252	18,701,590	1,979,133	1,996,439	2,342,718	4,684,554	7,202,553	983,605	352,665,544
12/2020	352,665,544	15,210,179	2,400,050	1,862,190	8,957,161	4,680,569	5,891,878	0	366,798,297

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	366,798,297	26,878,314	2,096,758	2,714,081	10,916,044	10,398,783	15,354,059	0	378,222,490
06/2021	378,222,490	37,059,106	6,480,622	2,721,813	15,671,621	8,792,825	19,194,335	0	406,724,864
09/2021	406,724,864	43,802,700	3,771,366	3,031,415	31,204,268	12,348,134	15,353,164	1,141,075	453,629,409
12/2021	453,629,409	71,240,929	6,593,325	4,911,985	24,350,830	26,544,107	35,002,390	0	496,878,619
03/2022	496,878,619	64,040,262	3,957,036	3,581,243	28,344,828	10,143,450	5,722,495	3,561,349	570,212,208
06/2022	570,212,208	28,189,103	2,603,792	2,850,005	7,475,908	25,765,414	27,290,138	14,724,102	537,851,352
09/2022	537,851,352	60,067,576	2,383,583	4,269,630	4,545,657	9,097,452	13,677,513	1,093,090	576,710,483
12/2022	576,710,483	28,638,614	2,646,477	2,865,488	5,587,909	7,075,562	10,839,245	2,910,746	589,892,442
	0	1,022,817,777	65,984,642	56,527,024	281,505,755	380,727,270	247,980,626	103,821,650	589,892,442

Returns

Net Portfolio Cumulative IRR = 10.65%

Ratios

Capital Account = \$589,892,442

Total Value = \$1,322,421,989

Committed Capital = \$1,480,631,850

Paid In Capital = \$1,022,817,777

Remaining Commitment = \$564,984,070

PIC Multiple (Paid In Capital/Committed Capital) = 69.08%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$1,154,876,512

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.29x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.72x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.58x

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 December 31, 2022

Investment Philosophy

Homestead Capital USA Farmland Fund III, LP plans to acquire and manage a portfolio of diversified U.S. farmland and will focus on pursuing investments in high-quality row and permanent cropland in the Mountain West, Pacific, Midwest and Delta regions. The Fund has a differentiated "private equity" approach to its farmland investment strategy because it primarily focuses on acquiring farms across the U.S. where meaningful value can be created. The Fund intends to create value through a variety of strategies including capital improvements, operational efficiencies, management and operating changes, crop rotations, conversion to higher and better uses, development of strategic partnerships and platforms, and valuation arbitrage. The Fund will implement a bottom-up investment approach utilizing a team of farm managers on the ground in each region. The bottom-up approach will be paired with a top-down overlay in an effort to ensure proper diversification and an appropriate risk and reward profile at the portfolio level.

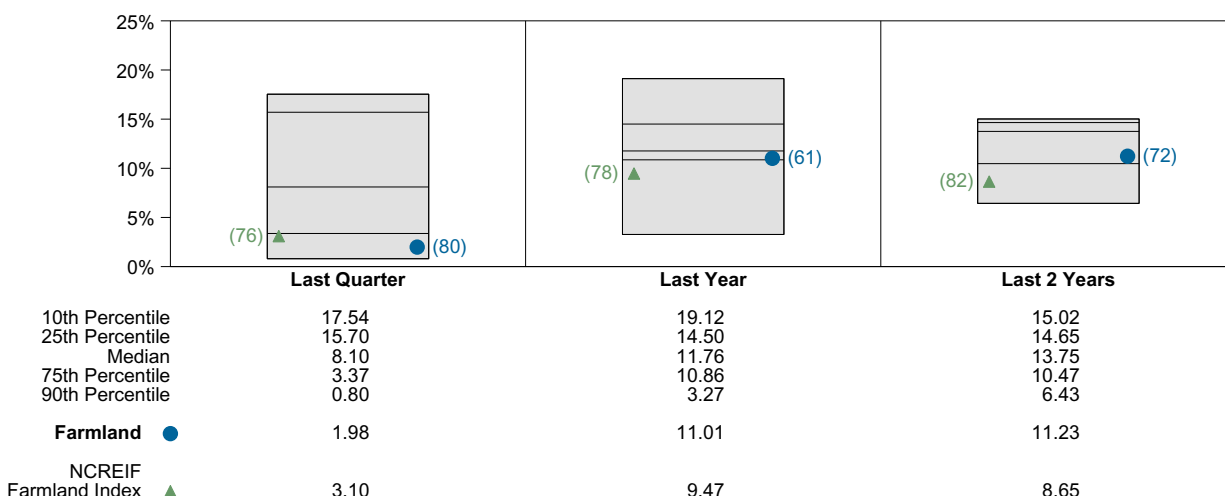
Quarterly Summary and Highlights

- Farmland's portfolio posted a 1.98% return for the quarter placing it in the 80 percentile of the Callan Real Estate Agriculture Funds group for the quarter and in the 61 percentile for the last year.
- Farmland's portfolio underperformed the NCREIF Farmland Index by 1.12% for the quarter and outperformed the NCREIF Farmland Index for the year by 1.54%.

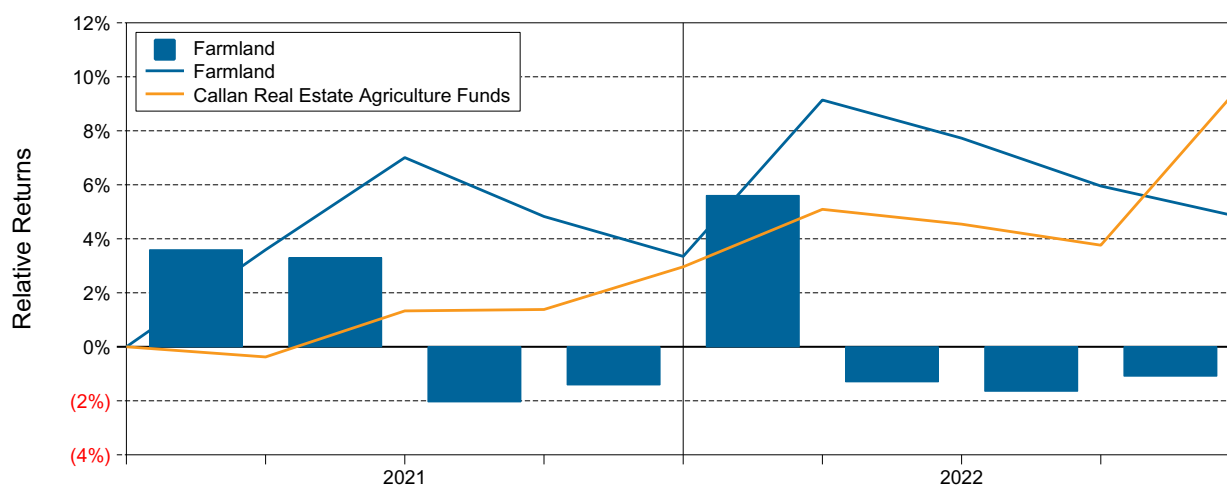
Quarterly Asset Growth

Beginning Market Value	\$41,524,267
Net New Investment	\$6,316,203
Investment Gains/(Losses)	\$871,022
Ending Market Value	\$48,711,492

Performance vs Callan Real Estate Agriculture Funds



Cumulative and Quarterly Relative Returns vs NCREIF Farmland Index

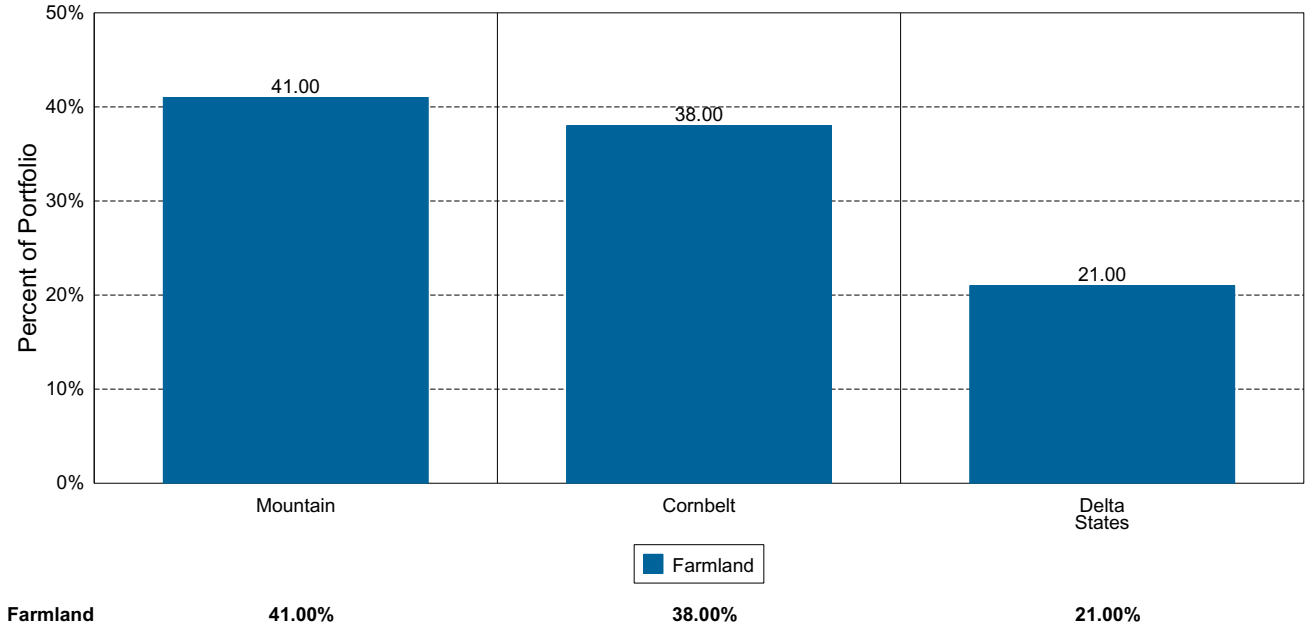


Farmland
Diversification Analysis as of December 31, 2022

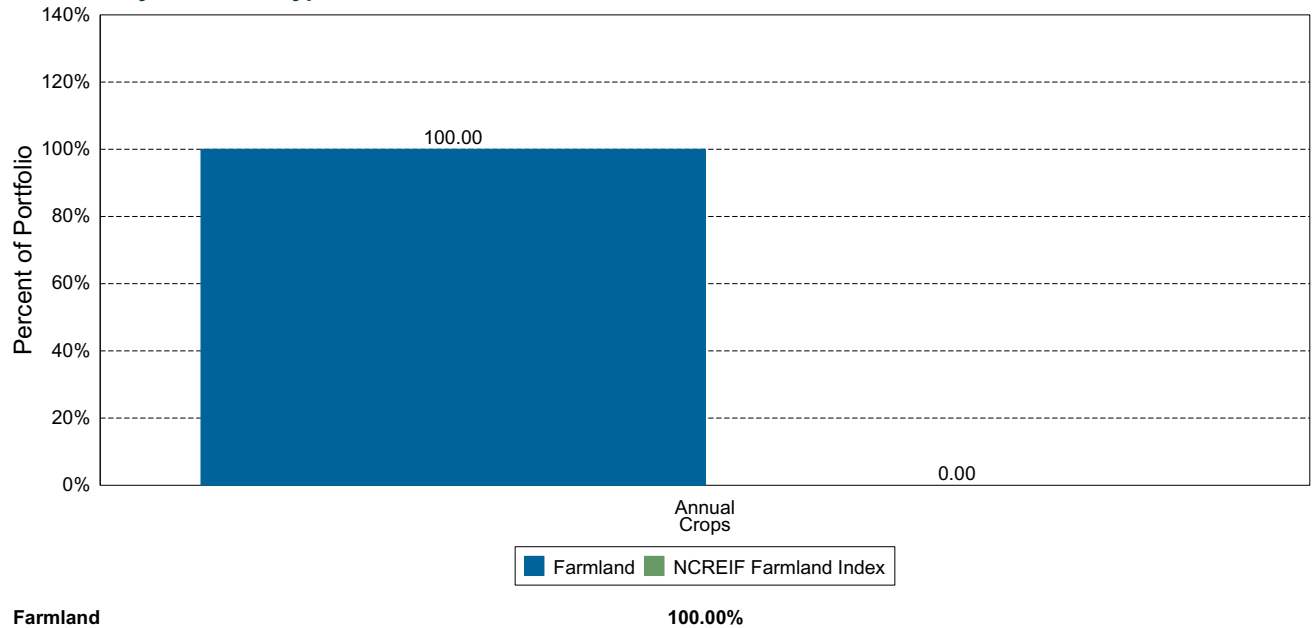
Diversification Analysis

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 December 31, 2022



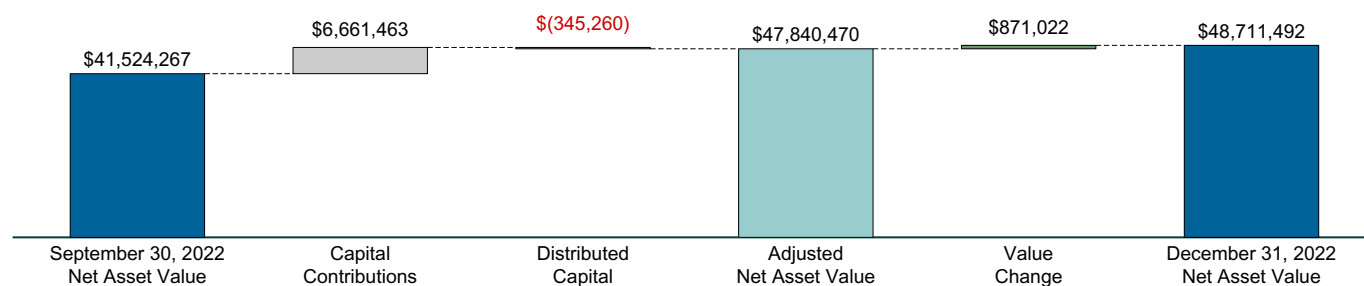
Diversification by Farmland Type as of December 31, 2022



**Farmland
Fund Overview
Period Ended December 31, 2022**

Quarterly Position Change	September 30, 2022	Quarterly Change	December 31, 2022
Client Commitment	\$60,000,000	\$0	\$60,000,000
Paid-In Capital	\$39,608,285	\$6,661,463	\$46,269,748
Remaining Commitment	\$20,415,485	\$(6,661,463)	\$13,754,022
Distributions	\$1,103,382	\$345,260	\$1,448,642
Recallable Distributions	\$23,770	\$0	\$23,770
Non-Recallable Distributions	\$1,079,612	\$345,260	\$1,424,872
Net Asset Value	\$41,524,267	\$7,187,225	\$48,711,492
Total Distributed Capital and Net Asset Value	\$42,627,649	\$7,532,485	\$50,160,134

Performance Change	September 30, 2022	Quarterly Change	December 31, 2022
Net Internal Rate of Return, Since Inception	6.64%	0.27%	6.91%
Total Value to Paid-in Capital (TVPI)	1.08x	0.01x	1.08x
Distributions to Paid-in Capital (DPI)	0.03x	0.00x	0.03x
Residual Value to Paid-in Capital (RVPI)	1.05x	0.00x	1.05x
% of Commitments Contributed	66.01%	(11.10%)	77.12%



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
06/2022	38,570,500	0	(18,876)	207,177	277,361	0	0	0	38,621,808
09/2022	38,621,808	2,783,357	(40,387)	225,000	384,489	0	0	0	41,524,267
12/2022	41,524,267	6,661,463	458,147	217,081	629,956	290,514	54,746	0	48,711,492
	0	46,269,748	1,144,614	3,224,580	5,970,352	1,149,943	274,929	23,770	48,711,492

Returns

Net Portfolio Cumulative IRR = 6.91%

Ratios

Capital Account = \$48,711,492

Total Value = \$50,160,134

Committed Capital = \$60,000,000

Paid In Capital = \$46,269,748

Remaining Commitment = \$13,754,022

PIC Multiple (Paid In Capital/Committed Capital) = 77.12%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$62,465,514

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.08x

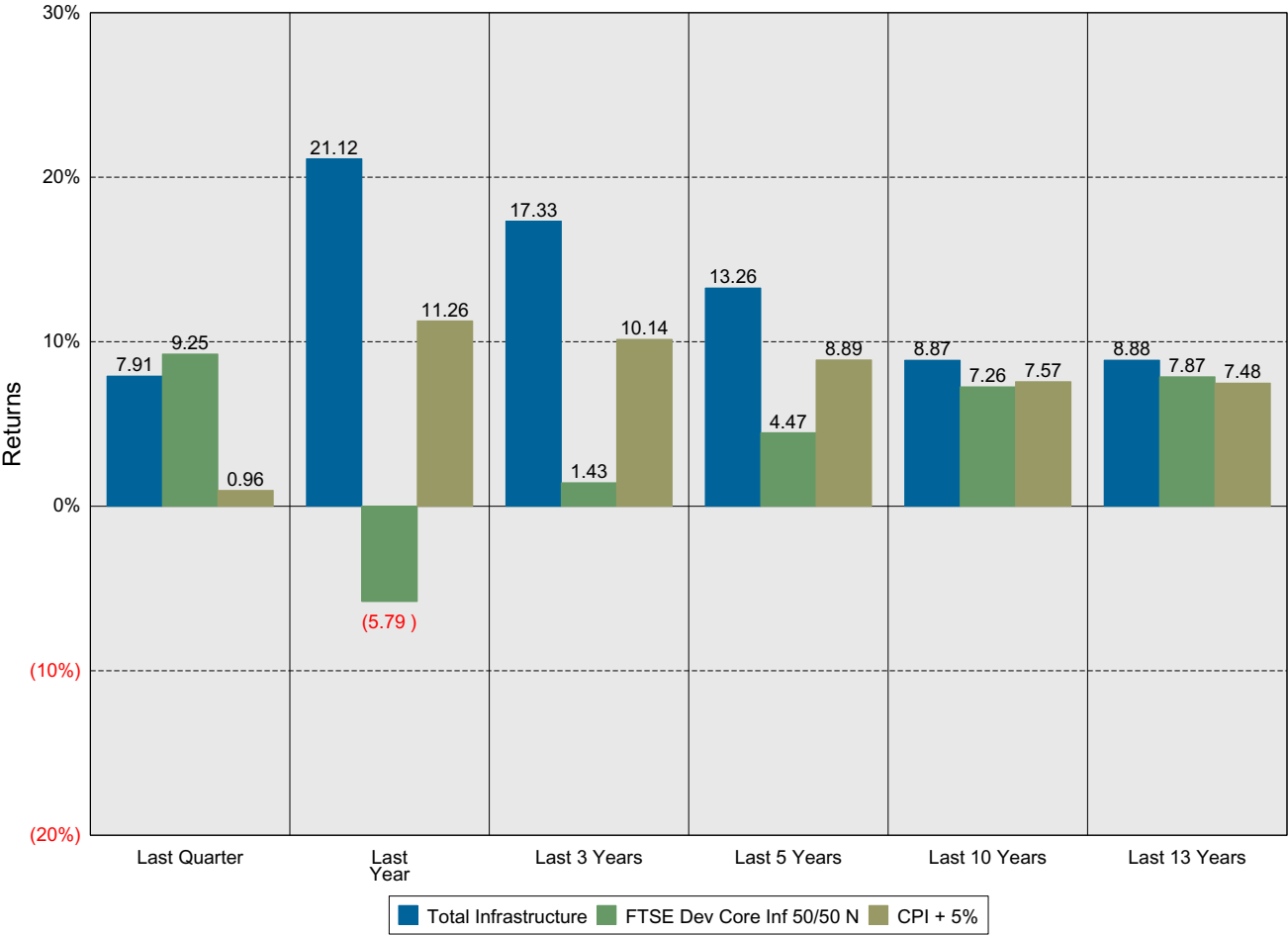
DPI Realization Multiple (Distributions/Paid In Capital) = 0.03x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 1.05x

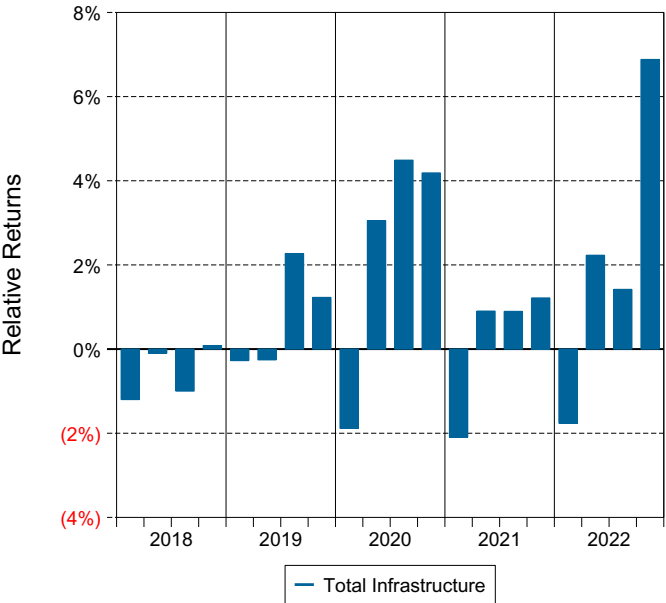
Total Infrastructure
Period Ended December 31, 2022

Quarterly Summary and Highlights

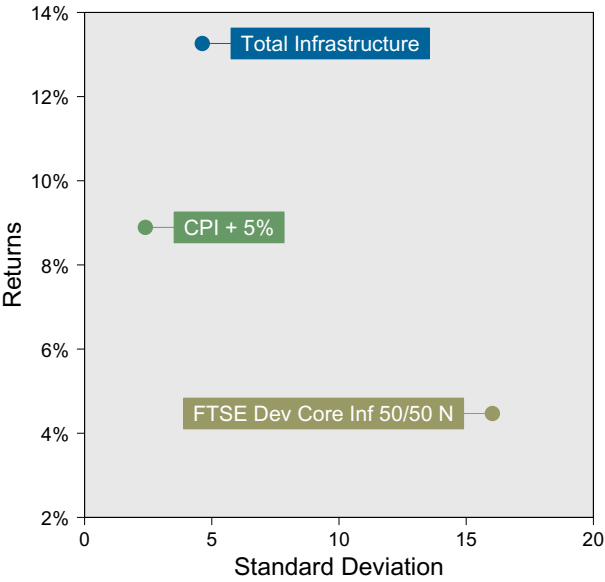
- Total Infrastructure's portfolio outperformed the CPI + 5% by 6.95% for the quarter and outperformed the CPI + 5% for the year by 9.86%.



Relative Return vs CPI + 5%



Annualized Five Year Risk vs Return

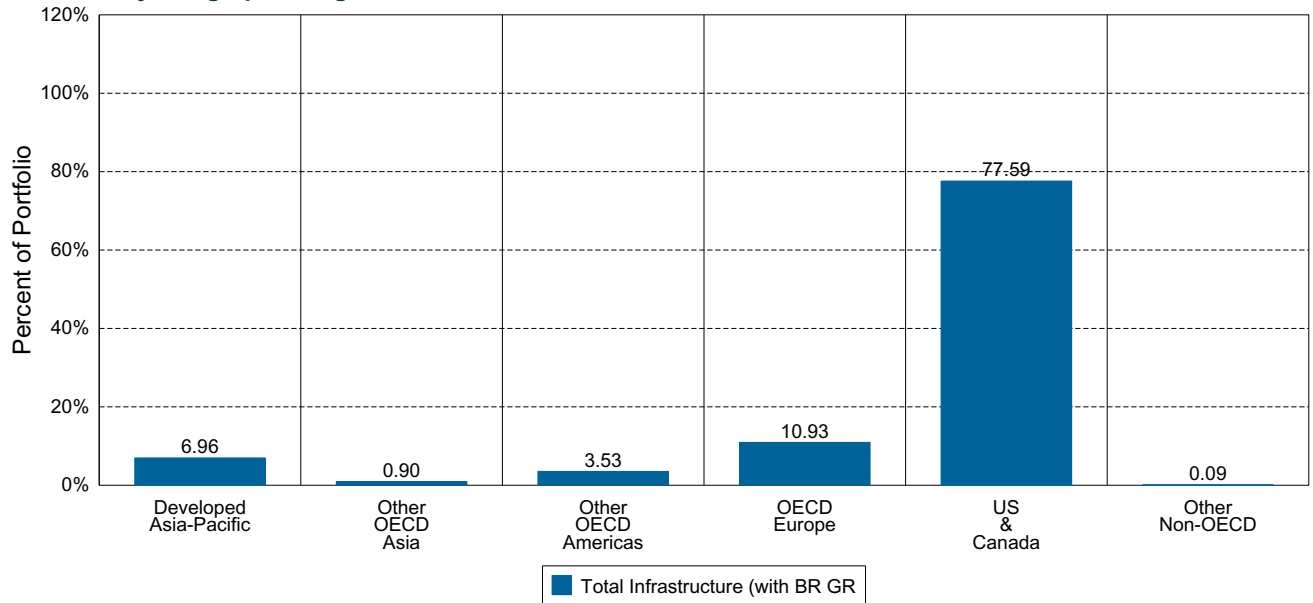


Total Infrastructure (with BR GRP III) Diversification Analysis as of December 31, 2022

Diversification Analysis

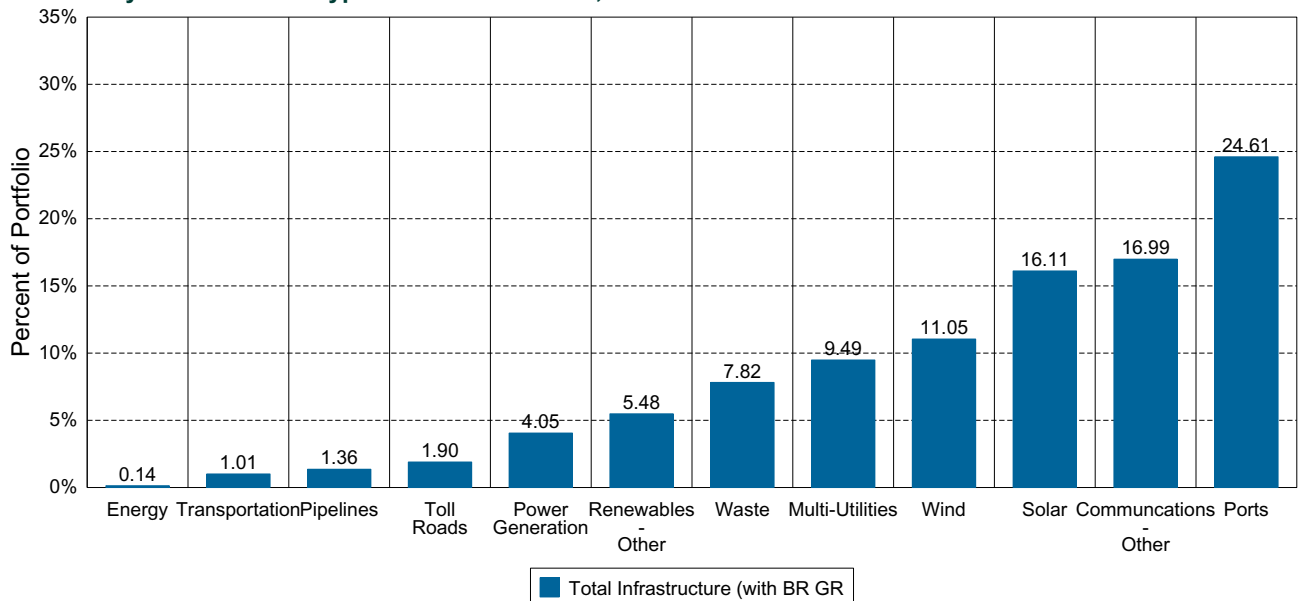
The following charts provide information on the diversification of the portfolio with regards to both Geographic Region and Infrastructure Type. Similar information is provided on the relevant market index for comparison.

Diversification by Geographic Region as of December 31, 2022



Total Infrastructure (with BR GRP III)	6.96%	0.90%	3.53%	10.93%	77.59%	0.09%
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Diversification by Infrastructure Type as of December 31, 2022

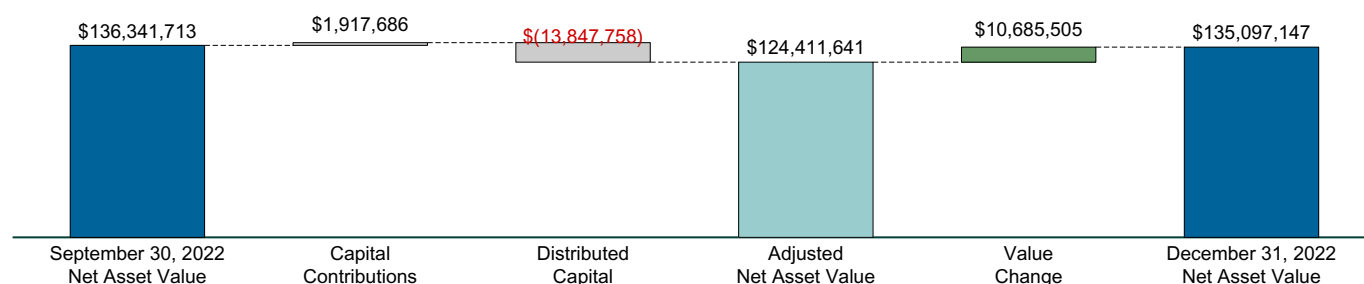


Total Infrastructure (with BR GRP III)	0.14%	1.01%	1.36%	1.90%	4.05%	5.48%	7.82%	9.49%	11.05%	16.11%	16.99%	24.61%
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**Total Private Infrastructure
Fund Overview
Period Ended December 31, 2022**

Quarterly Position Change	September 30, 2022	Quarterly Change	December 31, 2022
Client Commitment	\$330,000,000	\$0	\$330,000,000
Paid-In Capital	\$226,015,053	\$1,917,686	\$227,932,739
Remaining Commitment	\$126,858,069	\$(1,917,686)	\$124,940,383
Distributions	\$182,097,170	\$13,847,758	\$195,944,928
Recallable Distributions	\$22,121,067	\$0	\$22,121,067
Non-Recallable Distributions	\$159,976,103	\$13,847,758	\$173,823,861
Net Asset Value	\$136,341,713	\$(1,244,567)	\$135,097,147
Total Distributed Capital and Net Asset Value	\$318,438,883	\$12,603,192	\$331,042,075

Performance Change	September 30, 2022	Quarterly Change	December 31, 2022
Net Internal Rate of Return, Since Inception	8.16%	0.45%	8.60%
Total Value to Paid-in Capital (TVPI)	1.41x	0.04x	1.45x
Distributions to Paid-in Capital (DPI)	0.81x	0.05x	0.86x
Residual Value to Paid-in Capital (RVPI)	0.60x	(0.01x)	0.59x
% of Commitments Contributed	68.49%	(0.58%)	69.07%



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
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	- 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	3,935,806	224,517	829,218	3,590,387	973,514	0	0	117,455,822
06/2022	117,455,822	8,322,026	3,314,300	771,015	5,358,024	30,921	3,230,520	0	130,417,716
09/2022	130,417,716	3,773,934	875,446	676,370	2,976,674	0	1,025,687	0	136,341,713
12/2022	136,341,713	1,917,686	4,507,872	678,834	6,856,467	1,606,121	12,241,637	0	135,097,147
	0	227,932,739	20,008,687	21,888,357	104,989,005	91,613,412	82,210,449	22,121,067	135,097,147

Returns

Net Portfolio Cumulative IRR = 8.60%

Ratios

Capital Account = \$135,097,147

Total Value = \$331,042,075

Committed Capital = \$180,000,000

Paid In Capital = \$227,932,739

Remaining Commitment = \$(25,059,617)

PIC Multiple (Paid In Capital/Committed Capital) = 126.63%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$110,037,529

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.45x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.86x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.59x

Definitions

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.

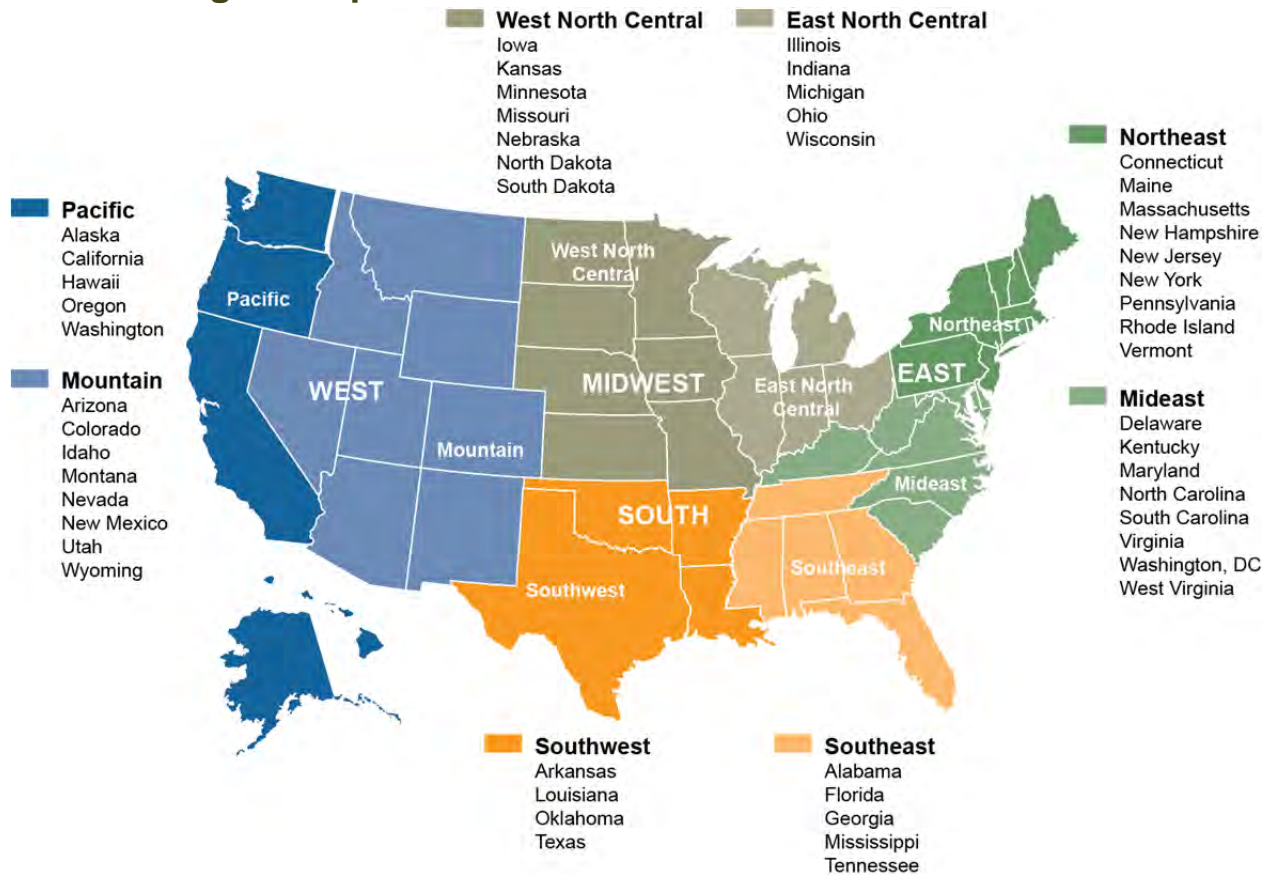
Vintage Year Database Groups: The Vintage Year Groups are comprised of closed end funds that report to the database. The groups are based on IRRs derived from cash flows submitted to the Callan Database by the managers of those funds. A fund is placed in a vintage year based on the year the initial drawdown 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

2022 ESG Survey | Callan's 10th annual survey assesses the status of environmental, social, and governance (ESG) investing in the U.S. institutional investment market.

Considering Currency: A Guide for Institutional Investors | This guide to currency trends over time provides institutional investors with multiple ways to benchmark and analyze their portfolios.

2022 Nuclear Decommissioning Funding Study | Julia Moriarty offers key insights into the status of nuclear decommissioning funding to make peer comparisons more accurate and relevant.

Blog Highlights

What DC Plan Sponsors Should Know About Recent Litigation Trends | Callan reviewed lawsuits filed against DC plans between January 2019 and August 2022, to provide an analysis of trends in litigation centered on the fiduciary duties outlined in ERISA.

How Does Your Public DB Plan Measure Up? | Most public DB plans saw sharp losses for the fiscal year ended 6/30/22. However, plan returns for fiscal year 2021 were the strongest in three decades.

Index Selection Within TDF Benchmarks Can Make a Big Difference | Most TDF providers build a custom benchmark for performance comparisons. While this approach is useful, it does not capture differences in glidepath design and asset allocation that are the major drivers of relative performance.

Webinar Replays

Callan's 2023-2032 Capital Markets Assumptions | During this webinar, Jay Kloepper, Kevin Machiz, and Adam Lozinski described our 2023-2032 Capital Markets Assumptions, discussed the process

and rationale behind these long-term assumptions, and explained the potential implications for strategic recommendations.

Corporate Pension Hibernation | Callan specialists explore why closed and frozen plans might wish to hibernate in the current market, thereby deferring the decision to fully terminate until the future.

Research Cafe: ESG Interview Series | During this interview, Tom Shingler of Callan discusses with Sara Rosner, director of environment research and engagement for AllianceBernstein's responsible investing team, carbon emissions and why they matter to investors.

Quarterly Periodicals

Private Equity Update, 3Q22 | A high-level summary of private equity activity in the quarter through all the investment stages

Active vs. Passive Charts, 3Q22 | A comparison of active managers alongside relevant benchmarks over the long term

Market Pulse, 3Q22 | 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, 3Q22 | Analysis and a broad overview of the economy and public and private markets activity each quarter across a wide range of asset classes

Hedge Fund Update, 3Q22 | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Update, 3Q22 | A summary of market activity for real assets and private real estate during the quarter

Private Credit Update, 3Q22 | A review of performance and fundraising activity for private credit 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:

2023 National Conference

April 2-4, 2023 – Scottsdale, AZ

2023 June Workshops

June 27, 2023 – New York

June 29, 2023 – Chicago

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

March 1-2 – Chicago

May 23-25 – 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-education



"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

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Past performance is no guarantee of future results.

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
1ST QUARTER, 2023

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

1st Quarter, 2023 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 3.31.23 | Q1 23

State Universities Retirement System

	RETIREMENT SAVINGS PLAN (RSP)	DEFERRED COMPENSATION PLAN (DCP)
Total Program Assets	\$3,568,773,643 (+6.2% YTD)	\$22,044,106 (+36.6% YTD)
Voya Assets	\$3,218,842,685	\$22,044,106
Frozen Assets - TIAA	\$349,930,958	N/A
Program Expense Overview		
Voya Recordkeeping Fee / Benchmark ¹	\$30 annual fee per participant (\$7.50/quarter) / \$40.74	
Investment Weighted Average Expense	0.38% (excluding the Voya Fixed Account) 0.12% (excluding the Secure Income Portfolio)	
Lifetime Income Strategy Overview		
Total LIS Participants	20,832	2,074
Total SIP Participants	6,142	817
Activated Participants (Quarter/Inception)	30 / 234	0 / 0
Avg Activated GLWB % (Quarter/Inception)	3.42% / 3.20%	0.00% / 0.00%
Investment Watchlist	<ul style="list-style-type: none"> Delaware Smid Cap Growth R6 (DFZRX) - 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 | 2023 FIDUCIARY CALENDAR

Period Ending 3.31.23 | Q1 23

Review Period	4Q 2022 (February/March)	1Q 2023 (May/June)	2Q 2023 (August/September)	3Q 2023 (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 SURS Lifetime Income Strategy Education SURS Lifetime Income Strategy Assumptive Inputs Review and Implementation Annual Summary Report 	<ul style="list-style-type: none"> SURS Lifetime Income Strategy: Retirement Income Strategies Comparative Analysis 	<ul style="list-style-type: none"> Investment Menu Review <ul style="list-style-type: none"> — Investment Structure Review — Investment Expense & Share Class Evaluation Plan Fee Review <ul style="list-style-type: none"> — Fee Allocation Philosophy — Recordkeeper Fee Benchmarking Plan Expense Account Review SURS LIS Demographic Data Review 	<ul style="list-style-type: none"> 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

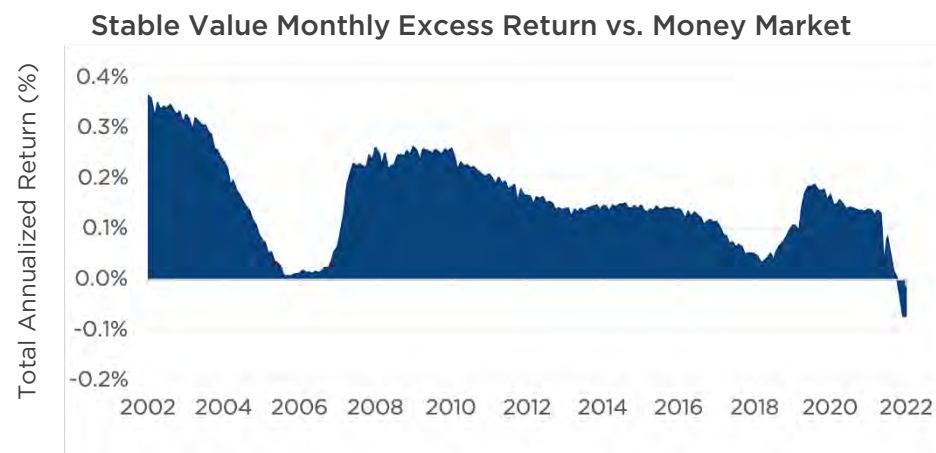
Period Ending 3.31.23 | Q1 23

SECTION 1: RETIREMENT INDUSTRY UPDATES	
Industry Updates.....	

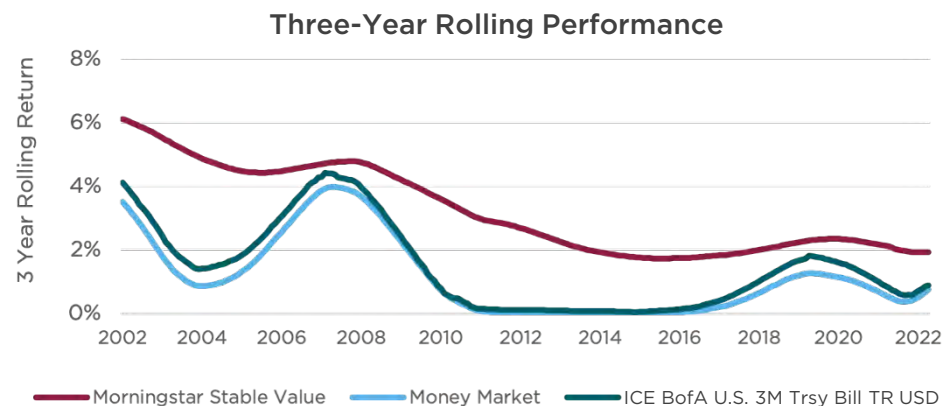


STABLE VALUE FUNDS VS. MONEY MARKET: MARKET IMPACT

In response to high levels of inflation, the Federal Reserve rapidly increased its overnight lending rate with a series of eight rate hikes starting in March 2022. Through these hikes, the target fed funds rate increased from 0.00%-0.25% to 4.75%-5.00% as of March 2023. Short-term bonds have been most impacted by this shift in market environment, warranting an assessment of capital preservation options in retirement plans.



- Rapid rate increases have created an inverted yield curve where short-term bonds are yielding more than long-term bonds.
- As money market funds reinvest in higher yielding bonds, their short-term returns have exceeded stable value funds recently.



- Money market funds hold shorter-term securities, typically one year or less, and follow changes in interest rates quickly.
- Historically, the structural advantage of stable value is that insurance wraps allow the funds to purchase a mix of short- and intermediate-term bonds while maintaining price stability for investors.

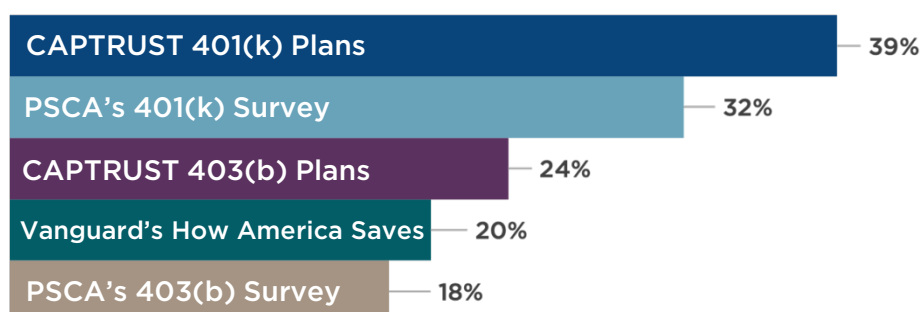
TAKEAWAYS

- CAPTRUST continues to recommend stable value funds for defined contribution plans. Over longer periods, they have delivered a higher return with less volatility than money markets.
- Stable value funds track interest rate movements over time but their movements up and down are slower by design.
- A return to a normal yield curve—where longer-term bonds yield more than shorter-term bonds—will reestablish the structural advantage for stable value funds over money market funds.

SELF-DIRECTED BROKERAGE ACCOUNT: TRENDS & CONSIDERATIONS

Under ERISA 404(a), brokerage windows—or self-directed brokerage accounts (SDBAs)—are excluded as designated investment alternatives, yet the implementation and ongoing monitoring of SDBAs are likely considered fiduciary acts and subject to ERISA. However, there is limited DOL guidance setting standards or expectations for how plan fiduciaries should evaluate, implement, and monitor SDBAs.

PERCENTAGE OF PLANS OFFERING SDBAs¹



SDBA IMPLEMENTATION TRENDS²

Types of Investment Options	Percentage of Plans	
	Mutual Funds Only	Broader Options
Schwab	13%	87%
Fidelity	16%	84%
Empower	7%	93%
Maximum Allowable Percentage	Capped	Uncapped
Schwab	<10%	>90%
Fidelity	75%	25%
Empower	19%	81%

CONSIDERATIONS	EVALUATION	IMPLEMENTATION	MONITORING
	<ul style="list-style-type: none"> Will this add value for our participants? Does our vendor offer different SDBA options? What is the brokerage provider's reputation and experience? What are the fees for the service? 	<ul style="list-style-type: none"> Should a limit be placed on the types of available investments? Is there a need to limit certain investments for compliance or business reasons? Should there be a limit on the amount or percentage of assets in the SDBA? 	<ul style="list-style-type: none"> Are transaction, account, and other participant fees reasonable? Do our participant disclosures include general descriptions of the SDBA including fees and expenses?

CAPTRUST does not advise on self-directed brokerage accounts. The information above is intended to be educational in nature. Plan sponsors should consult their ERISA counsel for further guidance or questions related to fiduciary obligations and SDBAs.

¹ PSCA's "2022 403(b) Plan Survey," PSCA's "65th Annual Survey," Vanguard's "How America Saves 2022," and CAPTRUST Research

² Data represents recordkept retirement plans of all types and size from the quoted sources

SECTION 2: MARKET COMMENTARY AND REVIEW

Period Ending 3.31.23 | Q1 23

SECTION 2: MARKET COMMENTARY AND REVIEW

Market Commentary.....

Market Review.....

Asset Class Returns.....

Index Performance.....



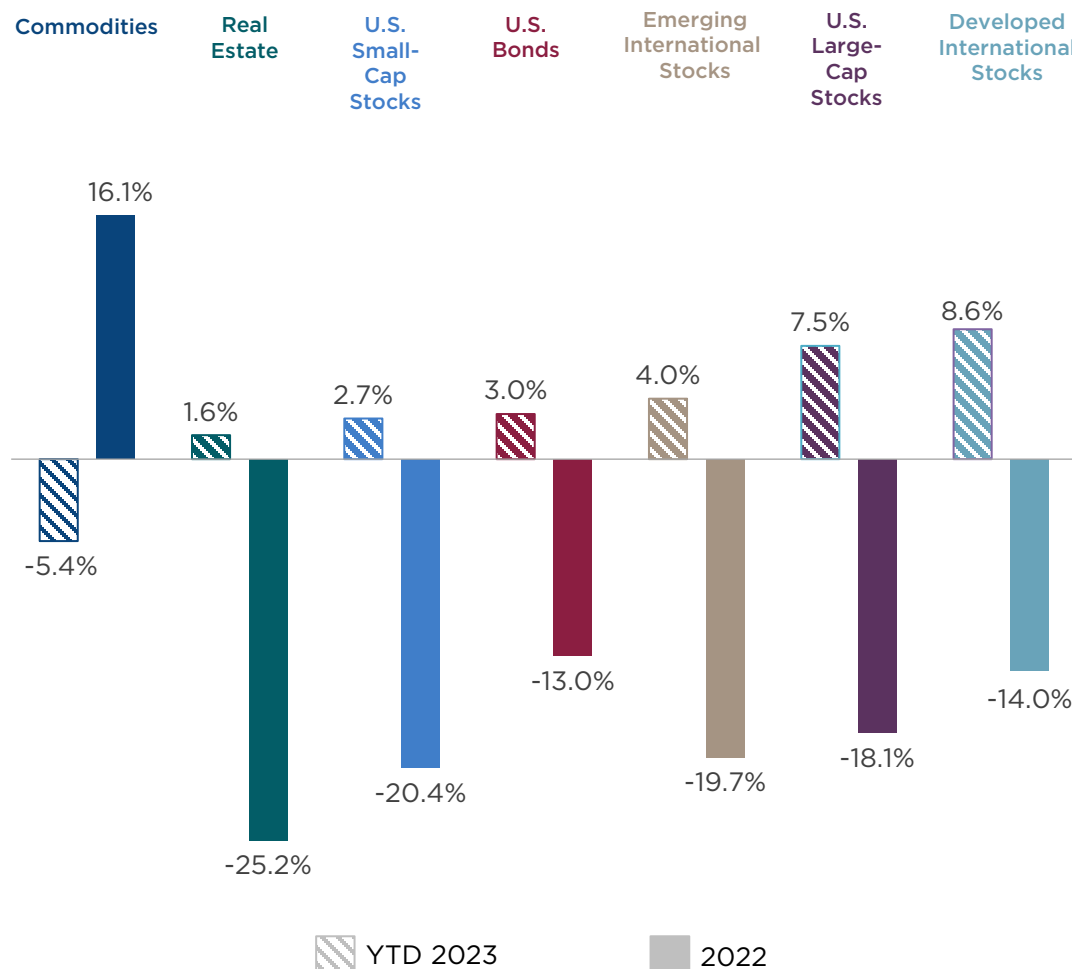
MARKET COMMENTARY

Period Ending 3.31.23 | Q1 23

STRONG RETURNS, SHAKY NERVES

After a strong start to 2023, the first quarter ended on a high note despite a rapid-fire array of troubling news. In early March, two large banks failed, and policymakers stepped in to keep isolated problems from becoming a systemic crisis. Despite the headlines, stock and bond markets were surprisingly calm.

- In the U.S., large-cap stocks floated upward, with their small-cap counterparts trailing behind.
- The financial sector faced understandably stiff headwinds, and investors reacted to banking sector news by rotating back to the comfort of mega-cap technology companies with ample cash flows.
- Skeptical of future Fed actions, bond investors drove prices higher as yields slipped lower.
- Outside the U.S., international developed and emerging markets saw modest but steady gains. The post-pandemic reopening of China, stabilizing energy prices across Europe, and a weakening U.S. dollar contributed.
- Real estate posted a modest gain for the quarter, although many of the same challenges of last year remain as headwinds.
- 2022's standout performer, commodities, was the only major asset class in negative territory for the quarter as oil prices slipped.



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

	Q1 2023	YTD 2023	Last 12 Months
U.S. Stocks	7.5%	7.5%	-7.8%
• Q1 Best Sector: Technology	21.8%	21.8%	-4.6%
• Q1 Worst Sector: Financials	-5.6%	-5.6%	-14.3%
International Stocks	8.6%	8.6%	-0.9%
Emerging Markets Stocks	4.0%	4.0%	-10.3%

Fixed Income

	3.31.23	12.31.22	3.31.22
1-Year U.S. Treasury Yield	4.62%	4.71%	1.61%
10-Year U.S. Treasury Yield	3.47%	3.88%	2.34%
	QTD 2023	YTD 2023	Last 12 Months
10-Year U.S. Treasury Total Return	3.76%	3.76%	-6.79%

Equities – Relative Performance by Market Capitalization and Style

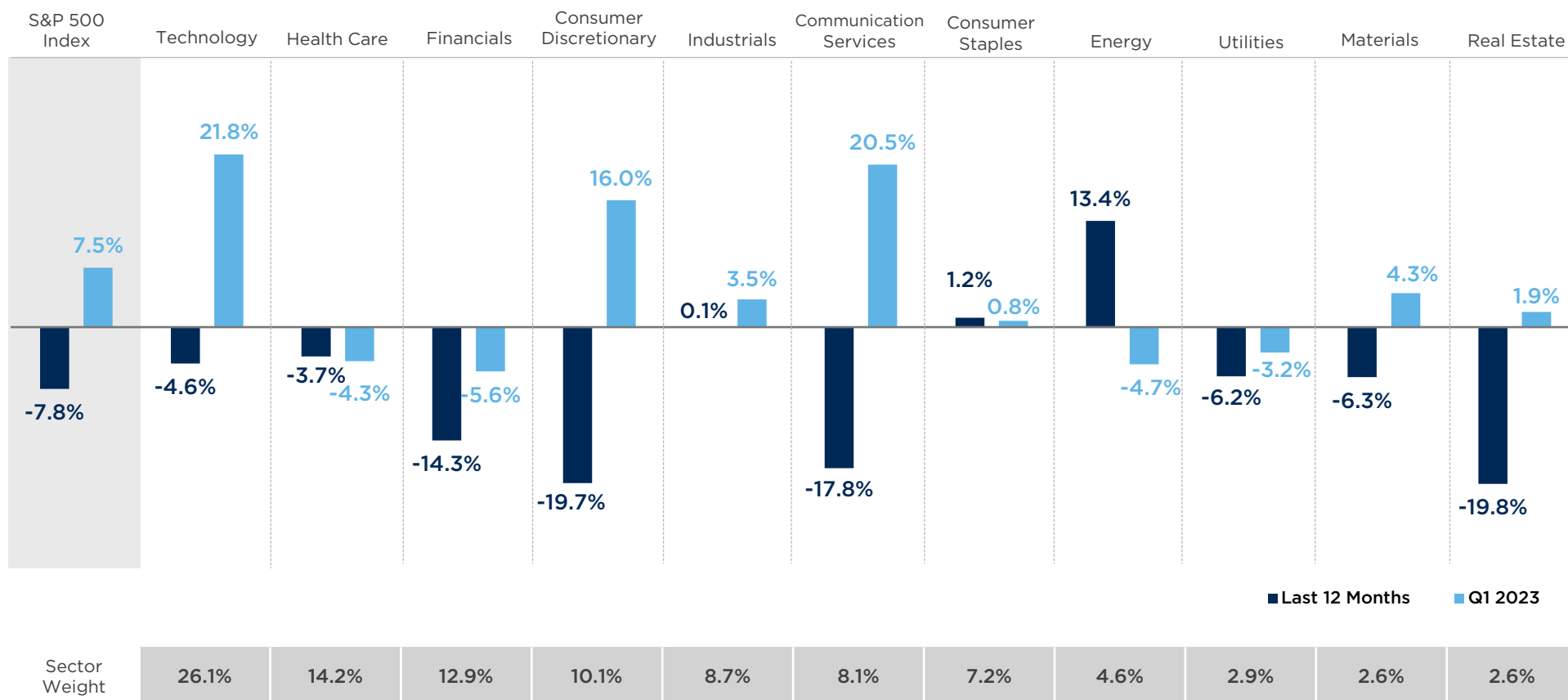
Q1 2023				YTD 2023				Last 12 Months			
	Value	Blend	Growth		Value	Blend	Growth		Value	Blend	Growth
Large	1.0%	7.5%	14.4%	Large	1.0%	7.5%	14.4%	Large	-5.9%	-7.8%	-10.9%
Mid	1.3%	4.1%	9.1%	Mid	1.3%	4.1%	9.1%	Mid	-9.2%	-8.8%	-8.5%
Small	-0.7%	2.7%	6.1%	Small	-0.7%	2.7%	6.1%	Small	-13.0%	-11.6%	-10.6%

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 the most recent quarter.

Returns by S&P 500 Sector



Source: Bloomberg. All calculations are cumulative total return, not annualized, including dividends for the stated period. Past performance is not indicative of future returns.

ASSET CLASS RETURNS

Period Ending 3.31.23 | Q1 23

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Q1 2023
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 1.46%	Large-Cap Growth 14.37%
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%	Large-Cap Value -7.54%	Mid-Cap Growth 9.14%
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%	Mid-Cap Value -12.03%	International Equities 8.62%
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%	Fixed Income -13.01%	Small-Cap Growth 6.07%
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%	International Equities -14.01%	Fixed Income 2.96%
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%	Small-Cap Value -14.48%	Mid-Cap Value 1.32%
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%	Small-Cap Growth -26.36%	Cash 1.07%
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%	Mid-Cap Growth -26.72%	Large-Cap Value 1.01%
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%	Large-Cap Growth -29.14%	Small-Cap Value -0.66%

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 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.



ECONOMIC OUTLOOK

The economy's forward path has become even more complicated with recent high-profile but isolated bank failures accentuating the impact of rising rates. While the Fed remains committed to taming inflation, it must also consider the lagged impact of prior tightening actions. Stricter regulation and tighter lending conditions could compound the effect of its restrictive monetary policy and further slow the economy.

HEADWINDS

The Fed Conflict

- Although inflation remains elevated, prices have descended. The Fed now faces the task of achieving price stability while avoiding strain on the financial system.



Financial System in Turmoil

- Regional and community banks risk losing cash deposits to the perceived safety of larger institutions. Such moves may lead to tighter lending conditions across several economic sectors.

Earnings at Risk

- Despite cost-cutting, certain sectors could see squeezed margins. Financial firms may see tighter regulation and lower net interest margins, while a mild winter and cost inflation could create headwinds for energy companies.

Debt-Ceiling Deadlock

- To avoid the consequences of a default, Congress needs to raise the debt ceiling by mid-summer.
- This debt-ceiling compromise must be struck between polarized parties with thin margins, raising the odds of political fireworks.

TAILWINDS

Consumer Goods Inflation Easing

- The cost of key consumer goods, like food, gas, and housing, is gradually abating.
- Reduced logistic pressures and the Chinese economic reopening have improved supply-side capacity.
- Warmer weather, conservation, and the use of energy reserves have benefited oil and gas prices.
- A wave of new supply has tempered rent growth.



Resilient Labor Market and Consumer Spending

- While wage pressures have eased, job growth remains robust. A stronger labor market provides greater household confidence, supporting consumer spending across goods and services.

Traditional Diversification Benefits

- 2022's highly unusual environment made diversification an ineffective tool.
- Supported by a higher risk-free rate, the new year has shown hints of more normal diversification relationships between asset classes, with stock and bond prices reacting differently to economic data.

The wide range of potential outcomes and an uncertain policy environment limit the ability to create a singular forecast with confidence. Investors should remain vigilant, diversified, and prepared for ongoing volatility.

SECTION 3: PLAN INVESTMENT REVIEW

Period Ending 3.31.23 | Q1 23

SECTION 3: PLAN INVESTMENT REVIEW

Plan Assets.....

Investment Policy Monitor.....

Investment Review Select Commentary.....

Investment Performance Summary.....



PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.23 | Q1 23

Retirement Savings Plan

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2022	(%)	CURRENT	(%)
Money Market	Vanguard Federal Money Market Investor*	\$1,286,589	0.04%	\$1,288,045	0.04%
Stable Value	Voya Fixed Plus Account III	\$58,217,801	1.93%	\$56,712,048	1.76%
Inflation Protected Bond	Vanguard Inflation-Protected Secs I	\$18,507,081	0.61%	\$18,609,608	0.58%
Intermediate Core Bond	State Street U.S. Bond Index Securities Lending Series Fund Class XIV	\$36,951,550	1.22%	\$38,166,779	1.19%
Intermediate Core Bond	TIAA-CREF Core Impact Bond Instl	\$3,799,626	0.13%	\$3,972,467	0.12%
Multisector Bond	PIMCO Income Instl	\$12,188,318	0.40%	\$14,343,879	0.45%
High Yield	PGIM High Yield R6	\$8,667,012	0.29%	\$9,254,179	0.29%
Large Company Blend	BlackRock Equity Index F	\$280,232,536	9.28%	\$303,776,854	9.44%
Medium Company Blend	BlackRock Extended Equity Market F	\$46,923,246	1.55%	\$50,981,712	1.58%
Medium Company Growth	Delaware Smid Cap Growth R6	\$31,372,340	1.04%	\$36,789,272	1.14%
Small/Mid Company Value	Earnest Partners SMID Cap Value Fund	\$15,944,469	0.53%	\$16,364,665	0.51%
Global Large Stock Blend	BlackRock MSCI ACWI ESG Focus Index Fund F	\$15,600,645	0.52%	\$17,354,902	0.54%
Foreign Large Value	Columbia Trust Overseas Value Fund Founders Class	\$7,982,767	0.26%	\$8,704,049	0.27%
Foreign Large Blend	State Street Global All Cap Equity Ex-U.S. Index Securities Lending Series Fund Class II	\$25,790,452	0.85%	\$28,831,700	0.90%
Foreign Large Growth	Vanguard International Growth Adm	\$21,982,827	0.73%	\$26,448,909	0.82%
Specialty-Real Estate	Vanguard Real Estate Index Institutional	\$17,022,473	0.56%	\$17,784,778	0.55%

*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.

CONTINUED...

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.23 | Q1 23

Retirement Savings Plan

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2022	(%)	CURRENT	(%)
Target Date	SURS Lifetime Income Strategy Bond Portfolio	\$276,298,303	9.15%	\$283,909,602	8.82%
Target Date	SURS Lifetime Income Strategy Cash Portfolio	\$2,140,556	0.07%	\$2,335,048	0.07%
Target Date	SURS Lifetime Income Strategy Equity Portfolio	\$1,313,611,613	43.48%	\$1,376,269,868	42.76%
Target Date	SURS Lifetime Income Strategy Real Asset Portfolio	\$90,965,272	3.01%	\$92,178,785	2.86%
Target Date	SURS Lifetime Income Strategy Secure Income Portfolio	\$735,372,663	24.34%	\$814,765,536	25.31%
TOTALS		\$3,020,858,136	100%	\$3,218,842,685	100%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.23 | Q1 23

SURS Deferred Compensation Plan

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2022	(%)	CURRENT	(%)
Stable Value	Voya Fixed Plus Account III	\$873,390	5.43%	\$867,736	3.94%
Inflation Protected Bond	Vanguard Inflation-Protected Secs I	\$208,901	1.30%	\$303,208	1.38%
Intermediate Core Bond	State Street U.S. Bond Index Securities Lending Series Fund Class XIV	\$212,999	1.33%	\$258,553	1.17%
Intermediate Core Bond	TIAA-CREF Core Impact Bond Instl	\$34,493	0.21%	\$51,399	0.23%
Multisector Bond	PIMCO Income Instl	\$120,568	0.75%	\$175,494	0.80%
High Yield	PGIM High Yield R6	\$170,172	1.06%	\$211,276	0.96%
Large Company Blend	BlackRock Equity Index F	\$2,913,475	18.12%	\$4,050,158	18.37%
Medium Company Blend	BlackRock Extended Equity Market F	\$531,772	3.31%	\$690,265	3.13%
Medium Company Growth	Delaware Smid Cap Growth R6	\$416,395	2.59%	\$598,402	2.71%
Small/Mid Company Value	Earnest Partners SMID Cap Value Fund	\$249,630	1.55%	\$314,915	1.43%
Global Large Stock Blend	BlackRock MSCI ACWI ESG Focus Index Fund F	\$232,212	1.44%	\$318,509	1.44%
Foreign Large Value	Columbia Trust Overseas Value Fund Founders Class	\$164,719	1.02%	\$211,804	0.96%
Foreign Large Blend	State Street Global All Cap Equity Ex-U.S. Index Securities Lending Series Fund Class II	\$341,673	2.13%	\$462,013	2.10%
Foreign Large Growth	Vanguard International Growth Adm	\$252,068	1.57%	\$364,682	1.65%
Specialty-Real Estate	Vanguard Real Estate Index Institutional	\$349,046	2.17%	\$464,332	2.11%

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PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.23 | Q1 23

SURS Deferred Compensation Plan

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2022	(%)	CURRENT	(%)
Target Date	SURS Lifetime Income Strategy Bond Portfolio	\$1,573,541	9.79%	\$1,482,700	6.73%
Target Date	SURS Lifetime Income Strategy Cash Portfolio	\$28,408	0.18%	\$9,963	0.05%
Target Date	SURS Lifetime Income Strategy Equity Portfolio	\$6,074,904	37.79%	\$7,614,239	34.54%
Target Date	SURS Lifetime Income Strategy Real Asset Portfolio	\$406,883	2.53%	\$473,338	2.15%
Target Date	SURS Lifetime Income Strategy Secure Income Portfolio	\$919,808	5.72%	\$3,121,120	14.16%
TOTALS		\$16,075,057	100%	\$22,044,106	100%

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INVESTMENT REVIEW | INVESTMENT POLICY MONITOR

Period Ending 3.31.23 | Q1 23

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	▼	●	▼	●	●	●	▼	●	●	●	●	86
Intermediate Core Bond TIAA-CREF Core Impact Bond Instl	●	●	●	●	●	●	●	●	●	●	●	94
High Yield PGIM High Yield R6	●	●	●	●	●	●	●	●	●	●	●	97
Medium Company Growth Delaware Smid Cap Growth R6*	▼	▼	▼	▼	●	●	▼	●	●	●	▼	70
Small/Mid Company Value Earnest Small Mid Value**	▼	●	●	●	●	●	●	●	●	●	●	96
Foreign Large Value Columbia Overseas Value Inst3**	●	●	●	●	●	●	●	●	●	●	●	91
Foreign Large Growth Vanguard International Growth Adm	▼	●	●	●	▼	▼	●	●	●	●	●	94

*Pending replacement based on Investment Committee approval during the April 2023 Board meeting. Assets and future contributions will be mapped to the Fiera SMID Growth Fund separate account.

**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.

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 3.31.23 | Q1 23

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 on-watch as its standard crediting rate has lagged peers. Client specific contract crediting rates may vary. Please confirm with the investment provider.

*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 3.31.23 | Q1 23

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 3.31.23 | Q1 23

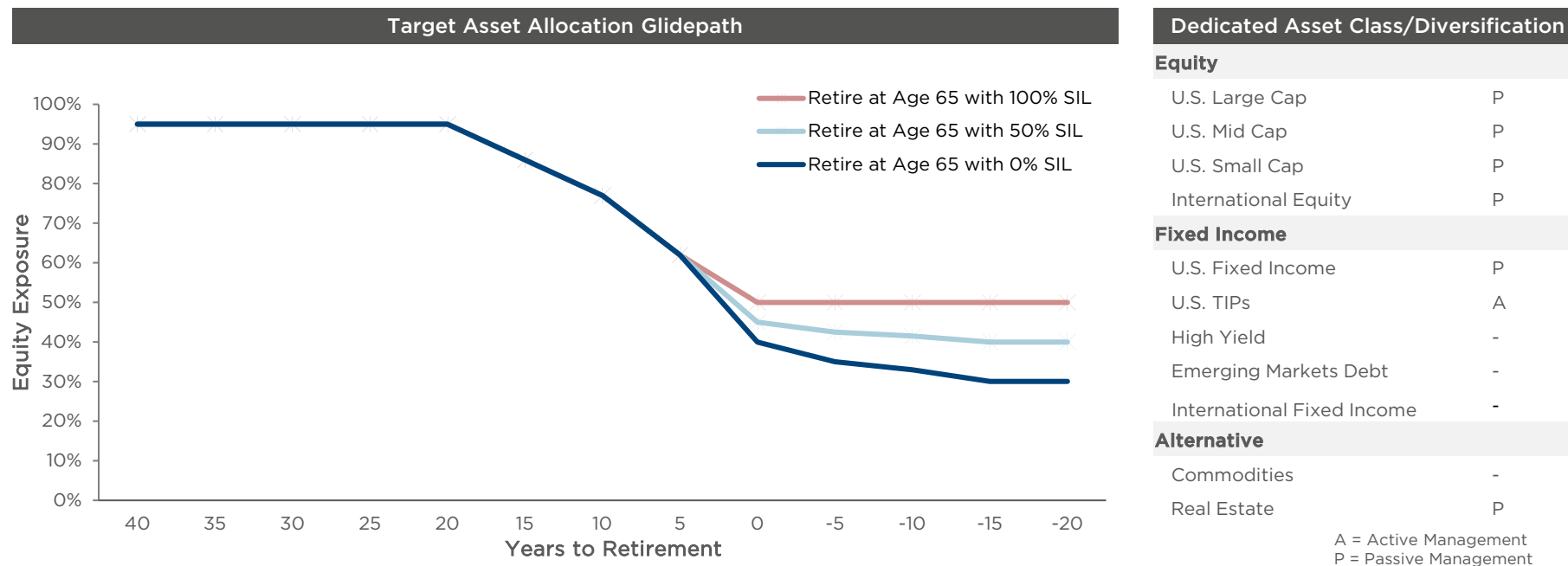
INVESTMENT STATUS

INVESTMENT	TICKER	STATUS	# OF QUARTERS	RATIONALE
Delaware Smid Cap Growth R6	DFZR	Pending Replacement	N/A	<p><i>Pending replacement based on Investment Committee approval during the April 2023 Board meeting. Assets and future contributions will be mapped to the Fiera SMID Growth Fund separate account.</i></p> <p>We continue to recommend this fund for replacement. In December 2022, Portfolio Managers Kim Scott, Nathan Brown, and Brad Halverson took over the strategy from Portfolio Manager Alexander Ely. This SMID strategy's relative performance is heavily influenced by the performance of small caps. In years where smaller, growth orientated stocks outperform (such as 2020 when the fund returned 94%) this fund has significantly outperformed. The past two years, however, as small caps have lagged and growth along with it, the strategy has suffered. Underperformance in 2022 led management to doubt the long-term sustainability of this risk-on strategy, resulting in a portfolio manager shift. This new management team is expected to deviate from Ely's previous portfolio management approach, placing the strategy in uncharted territory. The fund had strong performance during the first quarter, as its allocation to higher risk sectors greatly benefited performance. The fund's overallocation towards technology (38% vs. 27% for the category) was the largest contributor to performance. While short-term performance is encouraging, the fund's heightened risk concerns and the new management team continue to concern our investment team.</p>



SURS LIFETIME INCOME STRATEGY

Period Ending 3.31.23 | Q1 23



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 3.31.23 | Q1 23

INVESTMENT NAME	TOTAL RETURN				
	1Q 2023	YTD 2023	1 Year	Since Inception*	
SURS Lifetime Income Strategy Equity Portfolio	7.06	7.06	(7.16)	6.17	
Custom Benchmark	6.97	6.97	(7.55)	6.06	
SURS Lifetime Income Strategy Real Asset Portfolio	1.80	1.80	(20.15)	4.93	
Custom Benchmark	1.74	1.74	(19.37)	5.49	
SURS Lifetime Income Strategy Bond Portfolio	3.26	3.26	(5.26)	(3.24)	
Custom Benchmark	3.10	3.10	(5.20)	(3.18)	
SURS Lifetime Income Strategy Cash Portfolio	1.08	1.08	2.60	0.96	
Custom Benchmark	1.12	1.12	2.61	1.04	
SURS Lifetime Income Strategy Secure Income Portfolio	5.02	5.02	(6.33)	1.63	
Custom Benchmark	5.12	5.12	(5.41)	2.77	
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	3.49	10.00	4.53	11.00	5.95
Asset Allocation / Implementation / Ongoing Services Fees	6.02	6.02	6.02	6.02	5.98
Custody Account Fee	0.11	0.11	0.11	0.11	0.11
Benefit Admin / Contract Allocation Fees	-	-	-	-	10.00
Insurance Fees	-	-	-	-	95.00
Total	9.62	16.13	10.66	17.13	117.04

*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 3.31.23 | Q1 23

ACTIVITY SUMMARY – RSP / 401(a) Plan	
Asset Summary	1Q 2023
Total LIS Participants	20,832
Total SIP Participants	6,142
Participant Services	1Q 2023
Estimates – Call Center	702
Estimates – Web	1,650
SIL Changes	33
Retirement Age Changes	43
Benefit Statistics	1Q 2023 / Since Inception
Activated Participants	30 / 234
Avg Activated GLWB %	3.42% / 3.20%
Avg Activation Age	69.5 / 66.9

ACTIVITY SUMMARY – DCP / 457(b) Plan	
Asset Summary	1Q 2023
Total LIS Participants	2,074
Total SIP Participants	817
Participant Services	1Q 2023
Estimates – Call Center	2022
Estimates – Web	159
SIL Changes	8
Retirement Age Changes	5
Benefit Statistics	1Q 2023 / 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 3.31.23 | Q1 23

INSURANCE COMPANIES

- LIS uses group contracts to provide guaranteed income withdrawal benefit

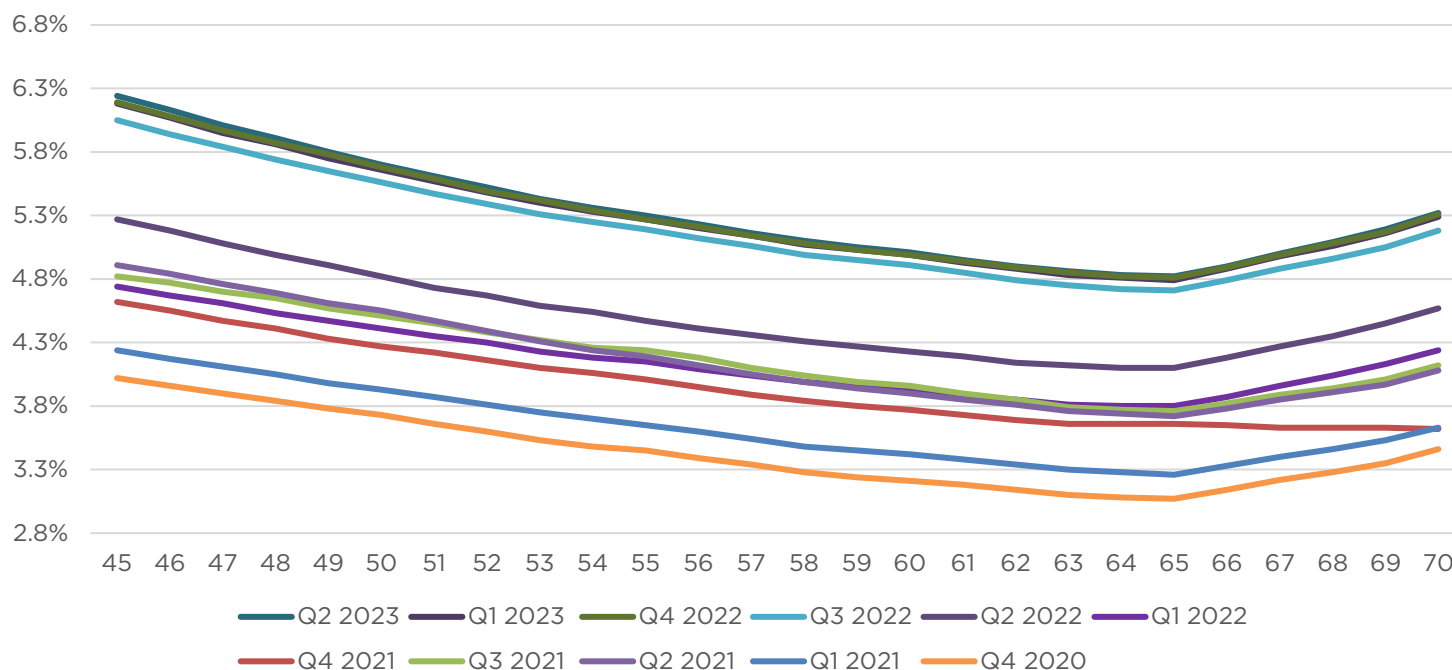
PARTICIPATING COMPANIES

- Jackson National Life Insurance
- Lincoln National Life Insurance Company
- Nationwide Life Insurance Company
- Prudential Retirement Insurance and Annuity Company (Empower Annuity Insurance Co.)

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

BLENDED RATES - ROLLING PERIODS*



FINANCIAL STRENGTH RATINGS AND OUTLOOK

	Jackson		Lincoln		Nationwide		Prudential	
S&P	A (6 th of 20)	Stable	A+ (5 th of 20)	Stable	A+ (5 th of 20)	Stable	AA- (4 th of 20)	Positive
Moody's	A2 (6 th of 21)	Negative	A1 (5 th of 21)	Negative	A1 (5 th of 21)	Stable	Aa3 (4 th of 21)	Stable
Fitch	A (6 th of 21)	Stable	A+ (5 th of 21)	Negative	-	-	AA (3 rd of 21)	Stable
AM Best	A (3 rd of 15)	Stable	A (3 rd 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 3.31.23 | Q1 23

INVESTMENT NAME	Q1 '23	YTD '23	2022	2021	2020	2019	2018	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
MONEY MARKET											
Vanguard Federal Money Market Investor	1.10%	1.10%	1.55%	0.01%	0.45%	2.14%	1.78%	2.66%	0.92%	1.34%	0.82%
ICE BofA ML US Treasury Bill 3 Mon USD	1.07%	1.07%	1.46%	0.05%	0.67%	2.28%	1.87%	2.50%	0.89%	1.41%	0.87%
STABLE VALUE											
Voya Fixed Plus Account III	-	-	Crediting rate: 1.55%					-	-	-	-
ICE BofA ML US Treasury Bill 3 Mon USD	1.07%	1.07%	1.46%	0.05%	0.67%	2.28%	1.87%	2.50%	0.89%	1.41%	0.87%
Morningstar US Stable Value GR USD	0.64%	0.64%	1.89%	1.74%	2.26%	2.52%	2.26%	2.12%	1.98%	2.16%	1.98%
INFLATION PROTECTED BOND											
Vanguard Inflation-Protected Secs I	3.52%	3.52%	-11.90%	5.72%	11.05%	8.18%	-1.40%	-6.20%	1.68%	2.88%	1.41%
Bloomberg US Treasury US TIPS TR USD	3.34%	3.34%	-11.85%	5.96%	10.99%	8.43%	-1.26%	-6.06%	1.75%	2.94%	1.49%
Inflation Protected Bond Universe	3.08%	3.08%	-11.69%	5.25%	9.70%	7.51%	-1.62%	-6.10%	2.14%	2.67%	1.21%
INTERMEDIATE CORE BOND											
State Street U.S. Bond Index Securities Lending Series Fund Class XIV	3.13%	3.13%	-13.13%	-1.62%	7.67%	8.74%	0.03%	-4.80%	-2.76%	0.94%	1.38%
TIAA-CREF Core Impact Bond Instl	3.27%	3.27%	-14.01%	-1.03%	7.45%	8.73%	0.33%	-5.54%	-1.63%	0.82%	1.89%
Bloomberg US Agg Bond TR USD	2.96%	2.96%	-13.01%	-1.55%	7.51%	8.72%	0.01%	-4.78%	-2.77%	0.90%	1.36%
Intermediate Core Bond Universe	3.12%	3.12%	-13.45%	-1.56%	7.85%	8.42%	-0.43%	-5.19%	-2.16%	0.79%	1.24%
MULTISECTOR BOND											
PIMCO Income Instl	2.56%	2.56%	-7.81%	2.61%	5.80%	8.05%	0.58%	-1.30%	3.59%	2.26%	3.98%
Bloomberg US Agg Bond TR USD	2.96%	2.96%	-13.01%	-1.55%	7.51%	8.72%	0.01%	-4.78%	-2.77%	0.90%	1.36%
Multisector Bond Universe	2.63%	2.63%	-10.84%	2.44%	6.32%	10.35%	-1.89%	-4.01%	3.31%	1.68%	2.40%

*ANNUALIZED

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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 3.31.23 | Q1 23

INVESTMENT NAME	Q1 '23	YTD '23	2022	2021	2020	2019	2018	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
HIGH YIELD											
PGIM High Yield R6	3.04%	3.04%	-11.55%	6.47%	5.72%	16.26%	-1.18%	-4.39%	6.12%	3.44%	4.37%
Bloomberg US Corporate High Yield TR USD	3.57%	3.57%	-11.19%	5.28%	7.11%	14.32%	-2.08%	-3.34%	5.91%	3.21%	4.10%
High Yield Bond Universe	3.22%	3.22%	-10.82%	4.87%	5.26%	13.50%	-2.94%	-3.68%	5.57%	2.48%	3.29%
LARGE COMPANY BLEND											
BlackRock Equity Index F	7.50%	7.50%	-18.10%	28.74%	18.48%	31.55%	-4.34%	-7.72%	18.64%	11.23%	12.29%
S&P 500 Index	7.50%	7.50%	-18.11%	28.71%	18.40%	31.49%	-4.38%	-7.73%	18.60%	11.19%	12.24%
Large Blend Universe	6.45%	6.45%	-18.15%	26.68%	17.18%	29.77%	-5.65%	-7.59%	17.91%	9.96%	11.12%
MEDIUM COMPANY BLEND											
BlackRock Extended Equity Market F	5.84%	5.84%	-26.36%	12.45%	32.16%	28.23%	-9.15%	-14.08%	17.18%	6.14%	8.99%
Russell Mid Cap	4.06%	4.06%	-17.32%	22.58%	17.10%	30.54%	-9.06%	-8.78%	19.20%	8.05%	10.05%
Mid Blend Universe	3.72%	3.72%	-15.19%	24.16%	12.93%	26.87%	-11.30%	-6.98%	19.36%	7.11%	8.98%
MEDIUM COMPANY GROWTH											
Delaware Smid Cap Growth R6	11.21%	11.21%	-45.28%	-8.12%	94.51%	35.77%	0.44%	-26.99%	7.13%	7.30%	10.48%
Russell Mid Cap Growth	9.14%	9.14%	-26.72%	12.73%	35.59%	35.47%	-4.75%	-8.52%	15.20%	9.07%	11.17%
Mid Growth Universe	7.67%	7.67%	-28.34%	11.92%	35.93%	33.40%	-5.53%	-11.27%	14.80%	8.34%	10.36%
SMALL/MID COMPANY VALUE											
Earnest Partners Smid Cap Value	1.80%	1.80%	-8.94%	25.57%	-	-	-	-6.16%	-	-	-
Russell 2500 Value	1.40%	1.40%	-13.08%	27.78%	4.88%	23.56%	-12.36%	-10.53%	21.80%	5.61%	7.72%
Mid Value Universe	1.27%	1.27%	-8.16%	28.56%	2.77%	26.77%	-13.59%	-6.36%	21.61%	6.46%	8.39%

*ANNUALIZED

CONTINUED...

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PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

Period Ending 3.31.23 | Q1 23

INVESTMENT NAME	Q1 '23	YTD '23	2022	2021	2020	2019	2018	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
GLOBAL LARGE STOCK BLEND											
BlackRock MSCI ACWI ESG Focus Index Fund F	7.28%	7.28%	-19.13%	18.22%	19.00%	26.87%	-	-7.77%	15.36%	-	-
MSCI ACWI NR USD	7.44%	7.44%	-17.96%	19.04%	16.82%	27.30%	-8.93%	-6.96%	15.90%	7.46%	8.62%
Global Large Stock Blend	6.60%	6.60%	-17.43%	18.08%	14.15%	26.06%	-9.99%	-5.50%	14.76%	6.58%	7.86%
FOREIGN LARGE VALUE											
Columbia Overseas Value Inst3	5.30%	5.30%	-5.88%	10.97%	-0.06%	22.61%	-16.38%	1.69%	16.33%	2.62%	5.60%
Columbia Trust Overseas Value Fund	5.50%	5.50%	-5.01%	11.05%	-	-	-	2.19%	-	-	-
MSCI EAFE	8.62%	8.62%	-14.01%	11.78%	8.28%	22.66%	-13.36%	-0.86%	13.52%	4.03%	5.50%
Foreign Large Value Universe	7.29%	7.29%	-10.36%	11.78%	2.65%	18.23%	-16.50%	0.07%	15.18%	2.13%	4.20%
FOREIGN LARGE BLEND											
State Street Global All Cap Equity Ex-U.S. Index Securities Lending Series Fund Class II	6.91%	6.91%	-16.29%	8.74%	11.36%	22.04%	-14.57%	-4.73%	12.85%	2.64%	4.60%
MSCI EAFE	8.62%	8.62%	-14.01%	11.78%	8.28%	22.66%	-13.36%	-0.86%	13.52%	4.03%	5.50%
Foreign Large Blend Universe	7.95%	7.95%	-15.92%	10.07%	9.73%	22.04%	-15.23%	-2.19%	12.80%	2.85%	4.67%
FOREIGN LARGE GROWTH											
Vanguard International Growth Adm	12.50%	12.50%	-30.79%	-0.74%	59.74%	31.48%	-12.58%	-6.81%	13.48%	6.54%	8.79%
MSCI EAFE	8.62%	8.62%	-14.01%	11.78%	8.28%	22.66%	-13.36%	-0.86%	13.52%	4.03%	5.50%
Foreign Large Growth Universe	9.86%	9.86%	-25.09%	8.66%	22.29%	27.95%	-14.46%	-4.90%	11.00%	3.38%	5.50%
SPECIALTY-REAL ESTATE											
Vanguard Real Estate Index Institutional	1.79%	1.79%	-26.17%	40.41%	-4.67%	29.02%	-5.93%	-20.10%	9.85%	5.84%	5.81%
Dow Jones US Select REIT	2.77%	2.77%	-25.96%	45.91%	-11.20%	23.10%	-4.22%	-20.98%	11.32%	4.66%	5.31%
Specialty-Real Estate Universe	2.61%	2.61%	-26.33%	41.45%	-4.43%	27.87%	-5.92%	-20.09%	10.17%	5.84%	5.84%

*ANNUALIZED

CONTINUED...

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SECTION 4: INACTIVE PLAN REVIEW

Period Ending 3.31.23 | Q1 23

SECTION 4: INACTIVE PLAN REVIEW

Plan Assets.....

Investment Monitor.....

Investment Performance Summary.....



PLAN INVESTMENT REVIEW | ASSET SUMMARY

Period Ending 3.31.23 | Q1 23

SURS Self Managed Plan - Frozen

		— MARKET VALUE —			
FUND OPTION	CURRENT INVESTMENT NAME	12.31.2022	(%)	CURRENT	(%)
Money Market	CREF Money Market R3	\$6,705,935	1.97%	\$6,590,325	1.88%
Stable Value	TIAA Traditional - Retirement Choice	\$146,158,562	42.88%	\$146,188,608	41.78%
Inflation Protected Bond	CREF Inflation-Linked Bond R3	\$7,670,786	2.25%	\$7,838,195	2.24%
Intermediate Core Bond	CREF Bond Market R3	\$15,823,414	4.64%	\$16,093,125	4.60%
Global Allocation	CREF Social Choice R3	\$20,712,173	6.08%	\$21,463,294	6.13%
Allocation--85%+ Equity	CREF Stock R3	\$73,708,574	21.62%	\$77,984,837	22.29%
Specialty-Private Real Estate	TIAA Real Estate Account	\$3,458,066	1.01%	\$3,326,140	0.95%
Large Company Blend	CREF Equity Index R3	\$43,278,055	12.70%	\$45,775,330	13.08%
Large Company Growth	CREF Growth R3	\$253,749	0.07%	\$270,763	0.08%
Global Large Stock Blend	CREF Global Equities R3	\$23,098,953	6.78%	\$24,400,342	6.97%
TOTALS		\$340,868,267	100%	\$349,930,958	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 3.31.23 | Q1 23

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	●	●	●	●	●	●	●	●	●	●	●	98
Intermediate Core Bond CREF Bond Market R3	●	●	●	●	●	●	●	●	●	●	●	98
Global Allocation CREF Social Choice R3	●	●	●	●	●	●	●	●	●	●	●	98
Large Company Growth CREF Growth R3	●	●	●	●	●	●	▼	▼	●	●	●	83
Global Large Stock Blend CREF Global Equities R3	●	●	●	●	●	●	●	●	●	●	●	95

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 3.31.23 | Q1 23

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 3.31.23 | Q1 23

SURS Self Managed Plan - Frozen

INVESTMENT NAME	Q1 '23	YTD '23	2022	2021	2020	2019	2018	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
MONEY MARKET											
CREF Money Market R3	1.08%	1.08%	1.24%	0.00%	0.38%	2.02%	1.46%	2.36%	0.79%	1.19%	0.68%
ICE BofA ML US Treasury Bill 3 Mon USD	1.07%	1.07%	1.46%	0.05%	0.67%	2.28%	1.87%	2.50%	0.89%	1.41%	0.87%
STABLE VALUE											
TIAA Traditional - Retirement Choice	-	-	Crediting Rate: 6.25% (RC); 5.50% (RCP)					-	-	-	-
ICE BofA ML US Treasury Bill 3 Mon USD	1.07%	1.07%	1.46%	0.05%	0.67%	2.28%	1.87%	2.50%	0.89%	1.41%	0.87%
Morningstar US Stable Value GR USD	0.64%	0.64%	1.89%	1.74%	2.26%	2.52%	2.26%	2.12%	1.98%	2.16%	1.98%
INFLATION PROTECTED BOND											
CREF Inflation-Linked Bond R3	2.82%	2.82%	-6.34%	5.28%	8.03%	6.53%	-0.49%	-2.39%	2.90%	3.14%	1.37%
Bloomberg US Treasury US TIPS TR USD	3.34%	3.34%	-11.85%	5.96%	10.99%	8.43%	-1.26%	-6.06%	1.75%	2.94%	1.49%
Inflation Protected Bond Universe	3.08%	3.08%	-11.69%	5.25%	9.70%	7.51%	-1.62%	-6.10%	2.14%	2.67%	1.21%
INTERMEDIATE CORE BOND											
CREF Bond Market R3	3.25%	3.25%	-13.14%	-1.23%	7.92%	9.03%	-0.19%	-4.75%	-1.55%	1.08%	1.55%
Bloomberg US Agg Bond TR USD	2.96%	2.96%	-13.01%	-1.55%	7.51%	8.72%	0.01%	-4.78%	-2.77%	0.90%	1.36%
Intermediate Core Bond Universe	3.12%	3.12%	-13.45%	-1.56%	7.85%	8.42%	-0.43%	-5.19%	-2.16%	0.79%	1.24%
GLOBAL ALLOCATION											
CREF Social Choice R3	5.22%	5.22%	-15.47%	12.64%	13.52%	20.80%	-4.29%	-5.23%	9.42%	5.78%	6.46%
60% MSCI World 40% Bloomberg Agg Index	5.57%	5.57%	-16.02%	10.20%	13.49%	19.41%	-5.52%	-6.14%	8.02%	4.81%	5.57%
Global Allocation Universe	4.04%	4.04%	-13.46%	10.75%	7.25%	17.22%	-7.55%	-6.27%	9.07%	3.46%	4.56%

*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 3.31.23 | Q1 23

SURS Self Managed Plan - Frozen

INVESTMENT NAME	Q1 '23	YTD '23	2022	2021	2020	2019	2018	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*
ALLOCATION--85%+ EQUITY											
CREF Stock R3	6.97%	6.97%	-18.45%	18.92%	17.91%	27.45%	-9.65%	-7.07%	16.38%	7.18%	8.98%
85% S&P 500, 15% Bloomberg Agg	6.81%	6.81%	-17.20%	23.77%	17.14%	27.97%	-3.58%	-7.13%	15.32%	9.79%	10.69%
Allocation--85%+ Equity Universe	5.86%	5.86%	-19.21%	18.50%	16.69%	25.81%	-9.30%	-8.27%	14.48%	6.27%	8.04%
SPECIALTY-PRIVATE REAL ESTATE											
TIAA Real Estate Account	-2.41%	-2.41%	8.19%	17.87%	-0.84%	5.51%	4.79%	0.14%	7.22%	6.21%	6.95%
NCREIF Property Index	-1.81%	-1.81%	5.52%	17.70%	1.61%	6.42%	6.71%	-1.63%	7.16%	6.71%	8.34%
NCREIF ODCE Index	-3.17%	-3.17%	7.46%	22.18%	1.18%	5.34%	8.35%	-3.09%	8.40%	7.51%	9.45%
LARGE COMPANY BLEND											
CREF Equity Index R3	7.14%	7.14%	-19.25%	25.52%	20.63%	30.73%	-5.37%	-8.66%	18.29%	10.29%	11.49%
S&P 500 Index	7.50%	7.50%	-18.11%	28.71%	18.40%	31.49%	-4.38%	-7.73%	18.60%	11.19%	12.24%
Large Blend Universe	6.45%	6.45%	-18.15%	26.68%	17.18%	29.77%	-5.65%	-7.59%	17.91%	9.96%	11.12%
LARGE COMPANY GROWTH											
CREF Growth R3	15.20%	15.20%	-32.34%	20.43%	40.76%	31.66%	-2.46%	-11.94%	15.27%	10.67%	13.19%
Russell 1000 Growth	14.37%	14.37%	-29.14%	27.60%	38.49%	36.39%	-1.51%	-10.90%	18.58%	13.66%	14.59%
Large Growth Universe	12.69%	12.69%	-30.85%	21.97%	34.85%	32.81%	-1.63%	-12.49%	14.70%	10.37%	12.26%
GLOBAL LARGE STOCK BLEND											
CREF Global Equities R3	7.64%	7.64%	-18.49%	15.65%	22.75%	28.28%	-12.36%	-6.32%	16.75%	7.12%	8.49%
MSCI ACWI NR USD	7.44%	7.44%	-17.96%	19.04%	16.82%	27.30%	-8.93%	-6.96%	15.90%	7.46%	8.62%
Global Large Stock Blend	6.60%	6.60%	-17.43%	18.08%	14.15%	26.06%	-9.99%	-5.50%	14.76%	6.58%	7.86%

*ANNUALIZED

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SECTION 5: FUND FACT SHEETS

Period Ending 3.31.23 | Q1 23

SECTION 5: FUND FACT SHEETS	
Fund Fact Sheets.....	



VOYA FIXED ACCOUNT

Period Ending 3.31.23 | Q1 23

INDUSTRY ANALYSIS

Inflation levels continue to decline overall in the first quarter, but market uncertainty has increased considering the most recent banking events. Furthermore, as of quarter-end, an inversion at the front-end of the yield curve remained, increasing the possibility of a mild recession in future quarters amongst industry professionals. The Federal Reserve increased the overnight lending rate twice in the first quarter, each of 25 basis-points, making it a total of nine times since beginning its monetary tightening in 2022. As of quarter-end, the target range was set between 4.75% - 5.00%. Guaranteed contract providers continue to operate as expected, with appealing potential crediting rates relative to other capital preservation vehicles in the first quarter. As the Fed is expected to continue its monetary tightening in 2023, we can expect guaranteed products to continue increasing crediting rates. When determining the guaranteed crediting rates, insurance companies use forward-looking forecasts of the interest rate environment. Rising interest rates present negative pressure on existing general account underlying portfolios in the short-term, as the value of current portfolio holdings decline, but give issuers in the space comfort that higher yields will support the ability to offer higher guaranteed rates future quarters.

CAPTRUST ANALYSIS

The Voya Fixed Account 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 monthly 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.

CREDITING RATE

Current Crediting Rate is 1.55%

INVESTMENT DETAILS

Crediting Rate Details:

Existing money is credited monthly. The guaranteed minimum interest rate will not change for the life of the contract.

Competing Options:

Competing options are allowed, but they are subject to equity wash provisions.

Minimum Rate:

The minimum rate is 1.00% for existing allocations.

LIQUIDITY PROVISIONS

Plan Sponsor

Subject to the plans deferred sales charge.

Participant

Benefit Responsive. Non-benefit withdrawals may be subject to an annual transfer limit not to be less than 10%.

*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.



VOYA RETIREMENT INSURANCE AND ANNUITY CO (VRIAC)

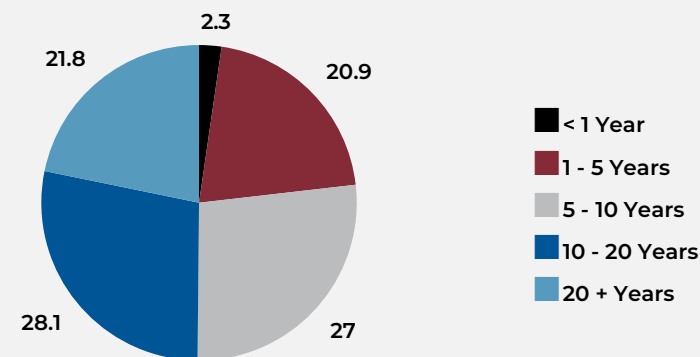
Period Ending 3.31.23 | Q1 23

AGENCY RATINGS*

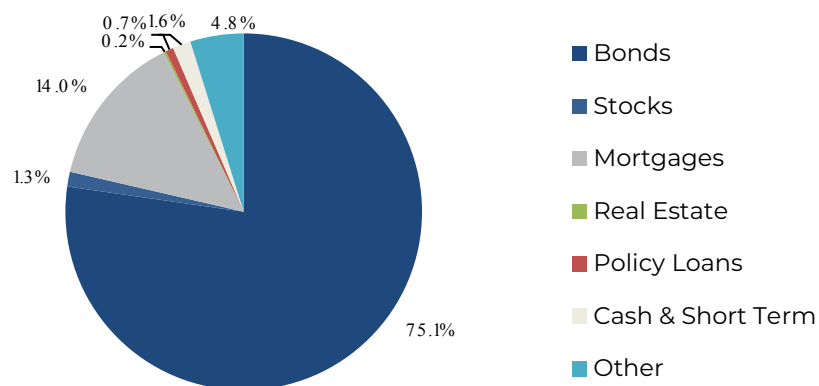
A.M. Best (15 ratings)	NR
Standard & Poors (20)	A+ (5)
Moody's (21)	A2 (6)
Fitch (21)	A (6)
Weiss (16)	B (5)
Comdex Ranking (Percentile Rank)	81

Comdex Ranking: Insurers are assigned a percentile rank, per agency, based on their ratings relative to peers. Percentiles are then averaged to arrive at one Comdex Ranking; over 1,100 companies are currently ranked.

MATURITY BREAKDOWN

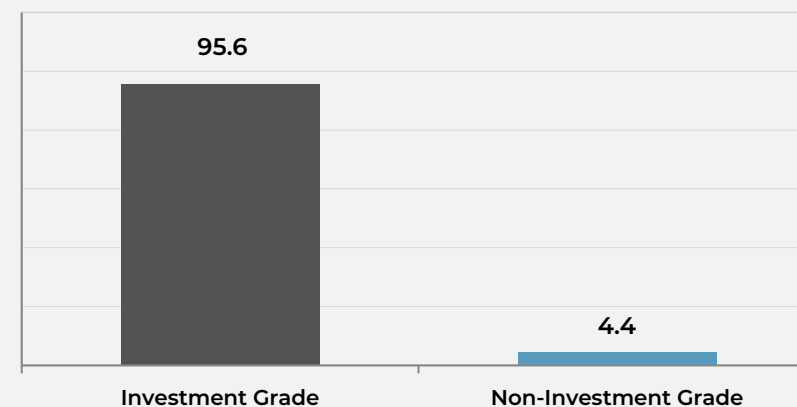


GENERAL ACCOUNT INVESTMENTS



Total Surplus & Asset Valuation Reserve (as % of GA Assets): 7.2%

BOND QUALITY (%)



Source: Vital Signs

*Agency ratings as of most recent quarter-end; all other data as of most recent year end.

Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate thus an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein. For performance data current to the most recent month-end, please call 800. 216.0645. Agency ratings are sourced from Bloomberg. Index averages are derived from Morningstar. The opinions expressed in this report are subject to change without notice. This material is not a solicitation or an offer to buy any security or to participate in any investment strategy and is not guaranteed as to accuracy. Any such solicitation must be made by prospectus only. To obtain a prospectus, please contact your financial advisor. CAPTRUST Financial Advisors. Member FINRA/SIPC.

VANGUARD FEDERAL MONEY MARKET INVESTOR

Period Ending 3.31.23 |

Q1 '23

INDUSTRY ANALYSIS

The Federal Reserve has increased the overnight lending rate a total of nine times, to a final target range set between 4.75% - 5.00%, as of quarter-end in its continued battle against inflation. As such, short-term interest rates have been driven to 15-year highs and money market yields have elevated nearly 500 basis points relative this time in 2022. Money market yields are expected to closely track short-term interest rates as the Federal Reserve plans to continue its monetary tightening in 2023, including two rate hikes of 25-basis points in the first quarter. Inflation levels fell overall in the first quarter and remain the Fed's priority until the target is reached. As of quarter-end, an inversion at the front-end of the yield curve remained and along with the recent banking sector concerns, market uncertainty amongst investors has increased, further supporting the possibility of a mild recession on the horizon.

	Last Quarter	1 Year	3 Years	5 Years	10 Years
Vanguard Federal Money Market Investor	1.10	2.66	0.92	1.34	0.82
FTSE 3 Month T-Bill	1.12	2.61	0.95	1.40	0.85

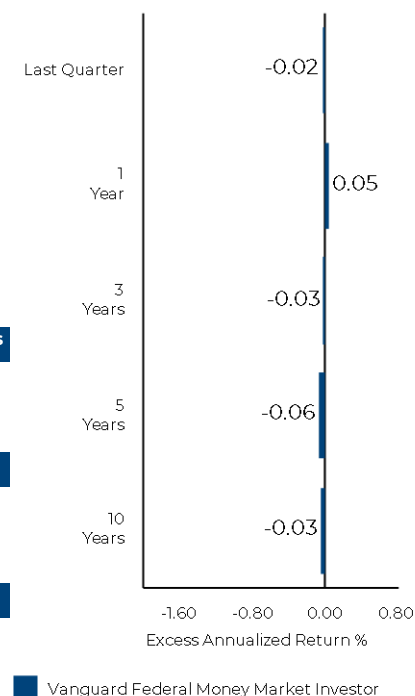
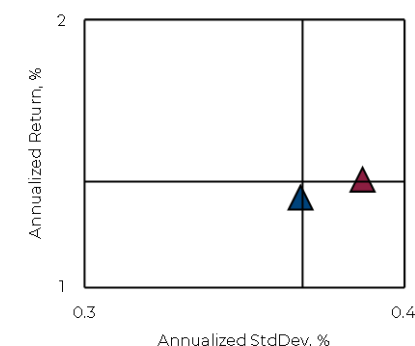
	2022	2021	2020	2019	2018
Vanguard Federal Money Market Investor	1.55	0.01	0.45	2.14	1.78
FTSE 3 Month T-Bill	1.50	0.05	0.58	2.25	1.86

	STD DEV / 5 YEAR
Vanguard Federal Money Market Investor	0.37
FTSE 3 Month T-Bill	0.37

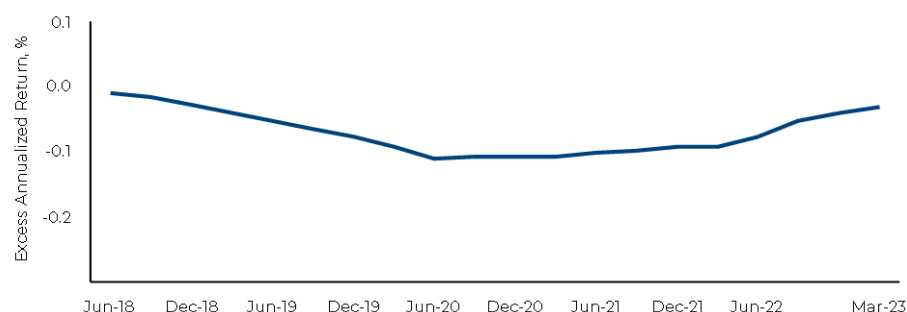
INVESTMENT PROFILE

Ticker	VMFXX
Fund Inception Date	1981
Prospectus Expense Ratio	0.11 %
SEC Yield	-

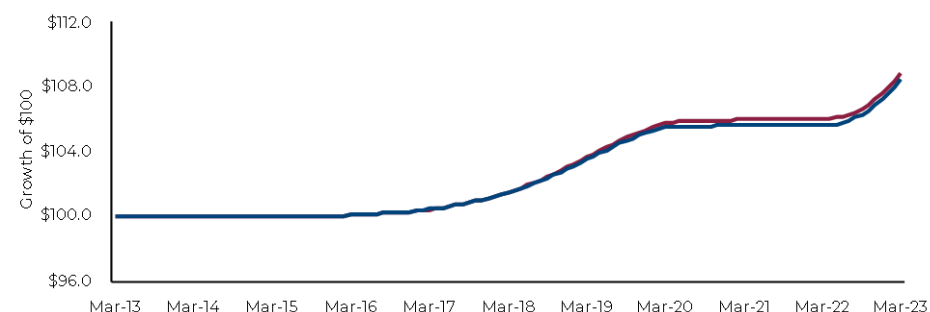
Performance vs Risk - 5 Year



Rolling 3 Year Annualized Excess Return (Jun-18 - Mar-23)



Cumulative Performance (Apr 2013 - Mar 2023)



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VANGUARD INFLATION-PROTECTED SECS I

Period Ending 3.31.23 | Q1 '23

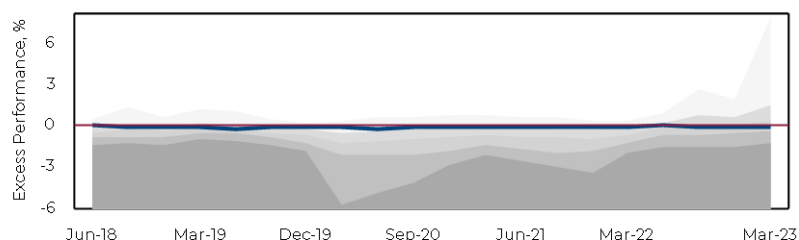
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
Vanguard Inflation-Protected Secs I	3.52	-6.20	1.68	2.88	1.41	-11.90	5.72	11.05	8.18	-1.40
Blmbg. U.S. TIPS	3.34	-6.06	1.75	2.94	1.49	-11.85	5.96	10.99	8.43	-1.26
Inflation-Protected Bond Median	3.08	-6.10	2.14	2.67	1.21	-11.69	5.25	9.70	7.51	-1.62
Rank (%)	21	54	63	31	30	57	32	26	30	43
Population	193	193	188	186	173	193	197	198	214	222

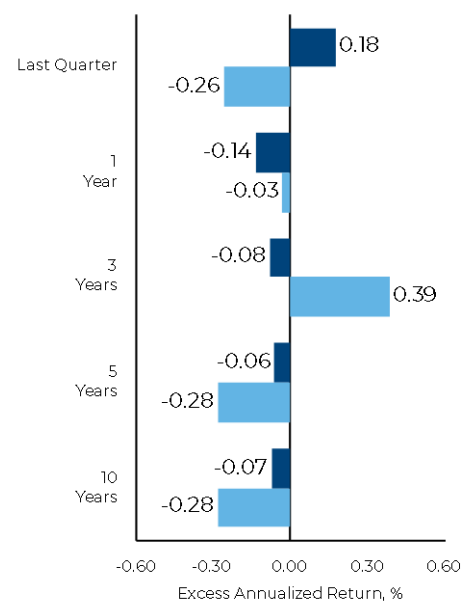
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Vanguard Inflation-Protected Secs I	0.28	0.00	0.98	0.99	97.46	97.26	-0.13
Blmbg. U.S. TIPS	0.28	0.00	1.00	1.00	100.00	100.00	-
Inflation-Protected Bond Median	0.25	-0.13	0.97	0.93	93.17	97.31	-0.17

Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



INVESTMENT PROFILE

Ticker	VIPIX
Portfolio Manager	Madziyire,J
Portfolio Assets	\$12,099 Million
PM Tenure	1 Year 4 Months
Net Expense(%)	0.07 %
Fund Inception	2003
Category Expense Median	0.57
Subadvisor	-

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	31.79 %
Number of Holdings	58
Turnover	28.00 %
Avg. Effective Duration	6.75 Years
SEC Yield	1.50 %

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STATE ST US BND INDX SL CL XIV

Period Ending 3.31.23 |

Q1 '23

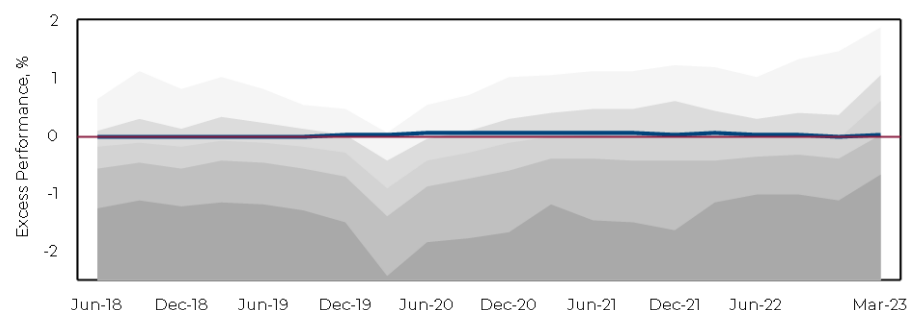
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
State St US Bnd Indx SL Cl XIV	3.13	-4.80	-2.76	0.94	1.38	-13.13	-1.62	7.67	8.74	0.03
Blmbg. U.S. Aggregate Index	2.96	-4.78	-2.77	0.90	1.36	-13.01	-1.55	7.51	8.72	0.01
Intermediate Core Bond Median	3.12	-5.19	-2.16	0.79	1.24	-13.45	-1.56	7.85	8.42	-0.43
Rank (%)	49	30	75	36	34	33	52	57	32	26
Population	434	426	410	399	358	428	430	432	450	451

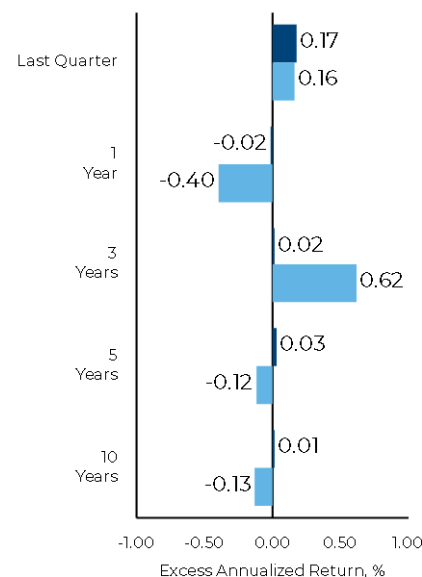
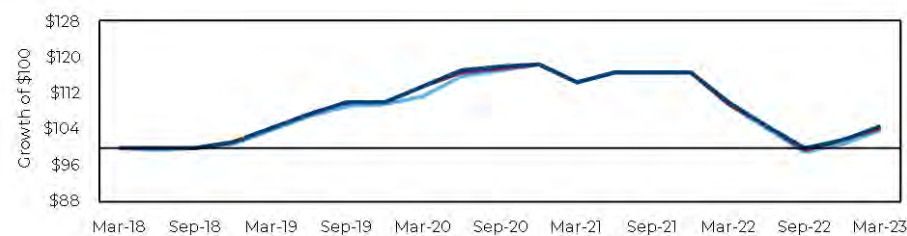
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
State St US Bnd Indx SL Cl XIV	-0.06	0.03	1.01	1.00	100.98	100.63	0.27
Blmbg. U.S. Aggregate Index	-0.07	0.00	1.00	1.00	100.00	100.00	-
Intermediate Core Bond Median	-0.08	-0.11	1.00	0.96	101.07	102.73	-0.08

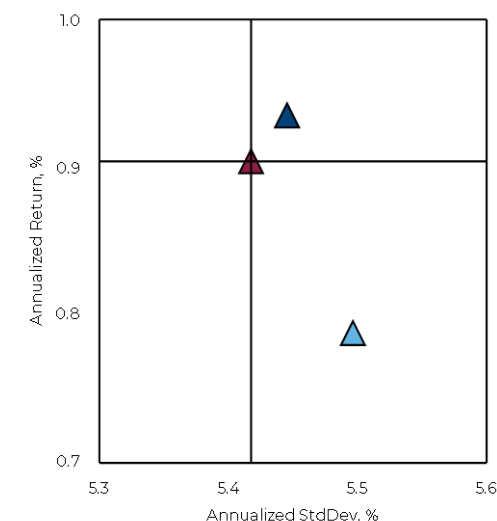
Rolling 3 Year Annualized Excess Return



5 Year Cumulative Performance



Performance vs Risk 5 Year



▲ State St US Bnd Indx SL Cl XIV
 ▲ Intermediate Core Bond Median
 ▲ Blmbg. U.S. Aggregate Index

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TIAA-CREF CORE IMPACT BOND INSTL

Period Ending 3.31.23 | Q1 '23

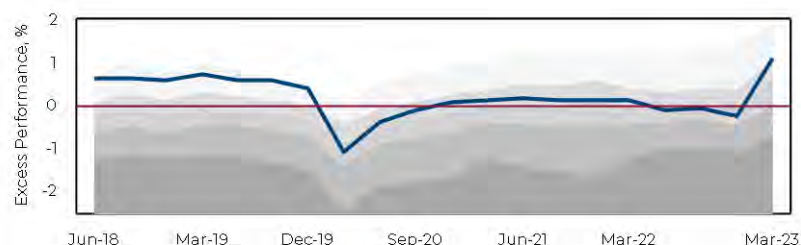
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
TIAA-CREF Core Impact Bond Instl	3.27	-5.54	-1.63	0.82	1.89	-14.01	-1.03	7.45	8.73	0.33
Blmbg. U.S. Aggregate Index	2.96	-4.78	-2.77	0.90	1.36	-13.01	-1.55	7.51	8.72	0.01
Intermediate Core Bond Median	3.12	-5.19	-2.16	0.79	1.24	-13.45	-1.56	7.85	8.42	-0.43
Rank (%)	31	69	23	49	6	72	24	65	33	13
Population	434	426	410	399	358	428	430	432	450	451

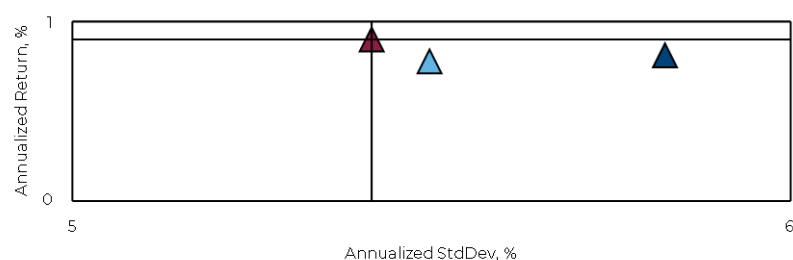
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
TIAA-CREF Core Impact Bond Instl	-0.07	-0.08	1.01	0.89	105.85	107.80	-0.03
Blmbg. U.S. Aggregate Index	-0.07	0.00	1.00	1.00	100.00	100.00	-
Intermediate Core Bond Median	-0.08	-0.11	1.00	0.96	101.07	102.73	-0.08

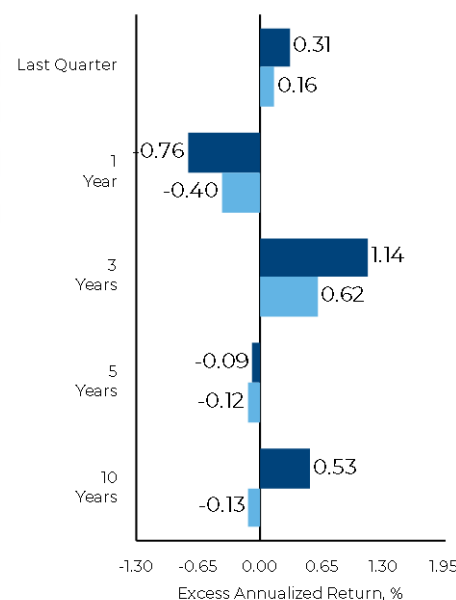
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ TIAA-CREF Core Impact Bond Instl
 ▲ Intermediate Core Bond Median
 ▲ Blmbg. U.S. Aggregate Index



■ TIAA-CREF Core Impact Bond Instl
 ■ Intermediate Core Bond Median

INVESTMENT PROFILE

Ticker	TSBIX
Portfolio Manager	Higgins,J/Liberatore, S/Zarzycki,J
Portfolio Assets	\$4,519 Million
PM Tenure	10 Years 6 Months
Net Expense(%)	0.38 %
Fund Inception	2012
Category Expense Median	0.55
Subadvisor	-

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	17.62 %
Number of Holdings	986
Turnover	255.00 %
Avg. Effective Duration	6.24 Years
SEC Yield	4.33 %

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PIMCO INCOME INSTL

Period Ending 3.31.23 | Q1 '23

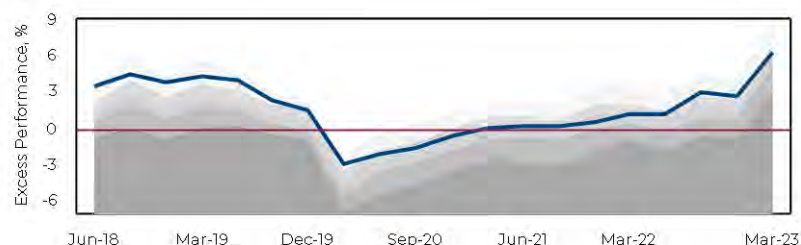
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
PIMCO Income Instl	2.56	-1.30	3.59	2.26	3.98	-7.81	2.61	5.80	8.05	0.58
Blmbg. U.S. Aggregate Index	2.96	-4.78	-2.77	0.90	1.36	-13.01	-1.55	7.51	8.72	0.01
Multisector Bond Median	2.63	-4.01	3.31	1.68	2.40	-10.84	2.44	6.32	10.35	-1.89
Rank (%)	55	10	38	20	1	19	44	56	79	14
Population	339	335	309	267	196	333	337	335	312	336

KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
PIMCO Income Instl	0.17	1.72	0.68	0.37	84.25	60.52	0.27
Blmbg. U.S. Aggregate Index	-0.07	0.00	1.00	1.00	100.00	100.00	-
Multisector Bond Median	0.08	1.15	0.78	0.33	92.32	81.17	0.14

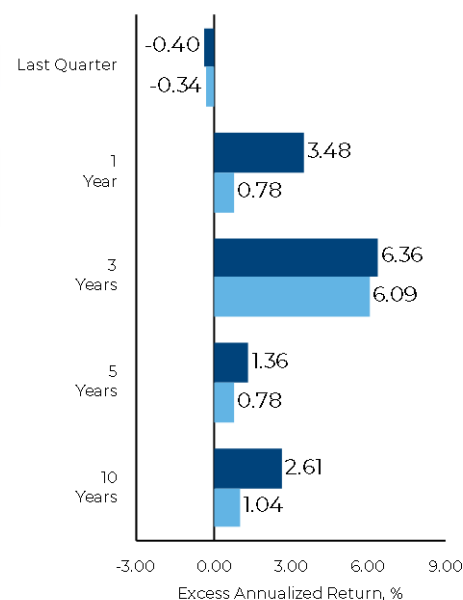
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ PIMCO Income Instl ▲ Multisector Bond Median ▲ Blmbg. U.S. Aggregate Index



■ PIMCO Income Instl
■ Multisector Bond Median

INVESTMENT PROFILE

Ticker	PIMIX
Portfolio Manager	Anderson, J/Ivascyn, D/Murata, A
Portfolio Assets	\$67,996 Million
PM Tenure	16 Years
Net Expense(%)	0.51 %
Fund Inception	2007
Category Expense Median	0.90
Subadvisor	-

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	10.56 %
Number of Holdings	8003
Turnover	319.00 %
Avg. Effective Duration	3.83 Years
SEC Yield	4.34 %

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PGIM HIGH YIELD R6

Period Ending 3.31.23 | Q1 '23

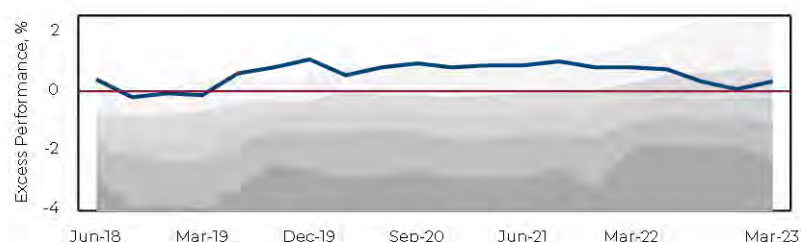
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
PGIM High Yield R6	3.04	-4.39	6.12	3.44	4.37	-11.55	6.47	5.72	16.26	-1.18
ICE BofA US High Yield, Cash Pay Index	3.68	-3.50	5.82	3.06	4.02	-11.14	5.28	6.21	14.40	-2.26
High Yield Bond Median	3.22	-3.68	5.57	2.48	3.29	-10.82	4.87	5.26	13.50	-2.94
Rank (%)	60	65	33	13	6	69	17	40	5	13
Population	629	627	603	595	527	629	646	659	693	711

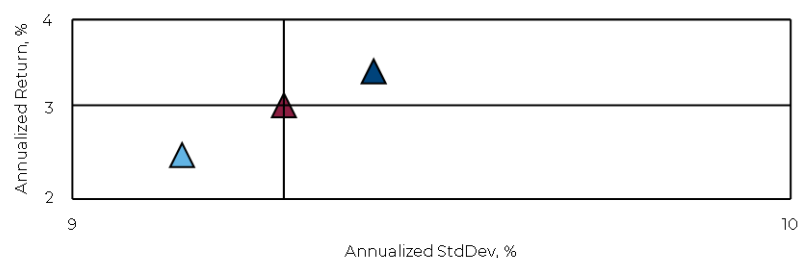
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
PGIM High Yield R6	0.26	0.36	1.01	0.99	101.72	98.15	0.35
ICE BofA US High Yield, Cash Pay Index	0.22	0.00	1.00	1.00	100.00	100.00	-
High Yield Bond Median	0.17	-0.36	0.97	0.98	94.63	97.94	-0.31

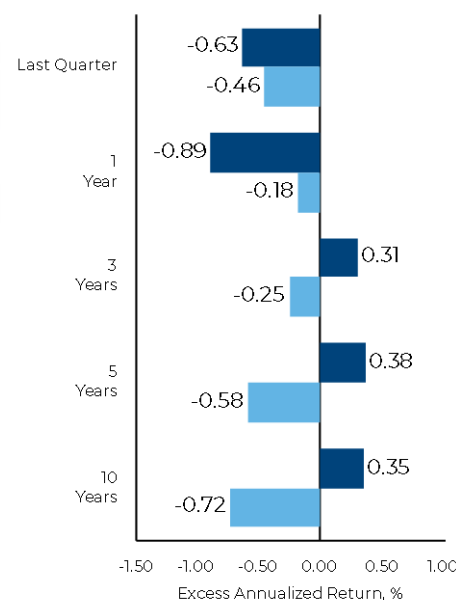
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ PGIM High Yield R6
▲ ICE BofA US High Yield, Cash Pay Index
▲ High Yield Bond Median



INVESTMENT PROFILE

Ticker	PHYQX
Portfolio Manager	Team Managed
Portfolio Assets	\$7,454 Million
PM Tenure	15 Years 5 Months
Net Expense(%)	0.38 %
Fund Inception	2011
Category Expense Median	0.82
Subadvisor	PGIM Limited

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	11.55 %
Number of Holdings	737
Turnover	38.00 %
Avg. Effective Duration	4.21 Years
SEC Yield	8.86 %

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BLACKROCK EQUITY INDEX F

Period Ending 3.31.23 | Q1 '23

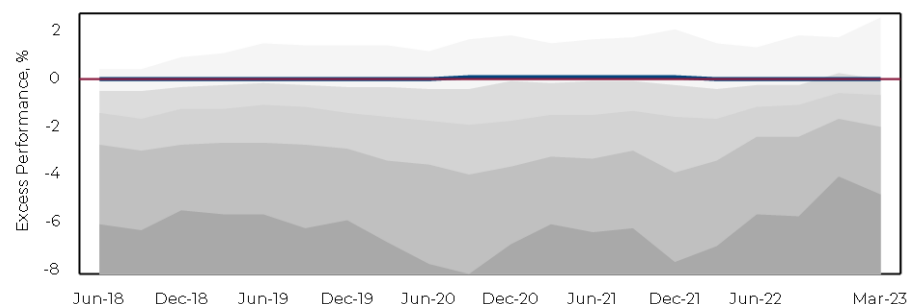
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
BlackRock Equity Index F	7.50	-7.72	18.64	11.23	12.29	-18.10	28.74	18.48	31.55	-4.34
S&P 500 Index	7.50	-7.73	18.60	11.19	12.24	-18.11	28.71	18.40	31.49	-4.38
Large Blend Median	6.45	-7.59	17.91	9.96	11.12	-18.15	26.68	17.18	29.77	-5.65
Rank (%)	19	52	25	13	9	49	20	34	21	22
Population	1,195	1,170	1,132	1,093	975	1,175	1,188	1,220	1,264	1,297

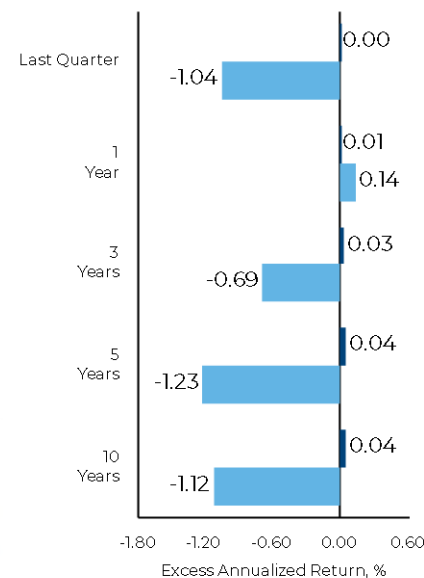
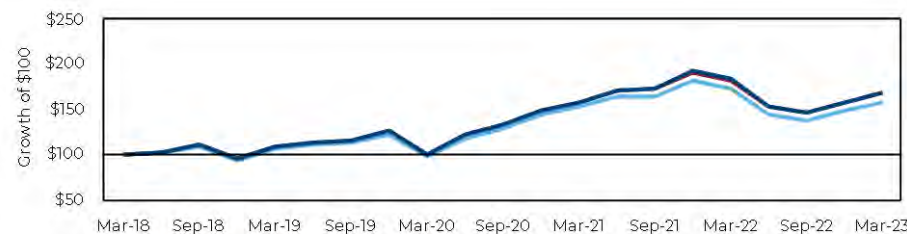
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
BlackRock Equity Index F	0.59	0.04	1.00	1.00	100.09	99.95	1.70
S&P 500 Index	0.59	0.00	1.00	1.00	100.00	100.00	-
Large Blend Median	0.53	-0.90	1.00	0.97	97.00	100.23	-0.47

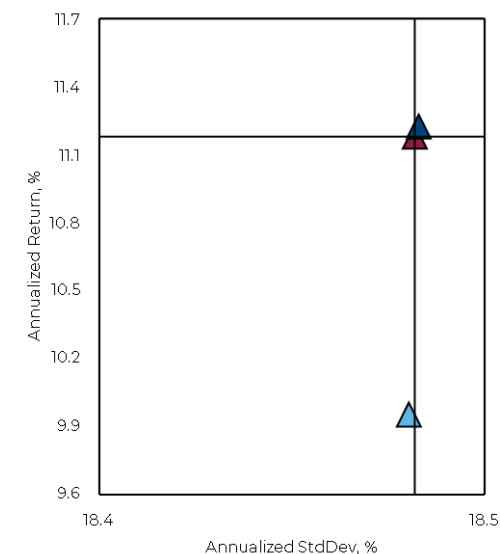
Rolling 3 Year Annualized Excess Return



5 Year Cumulative Performance



Performance vs Risk 5 Year



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BLACKROCK EXTENDED EQUITY MARKET F

Period Ending 3.31.23 | Q1 '23

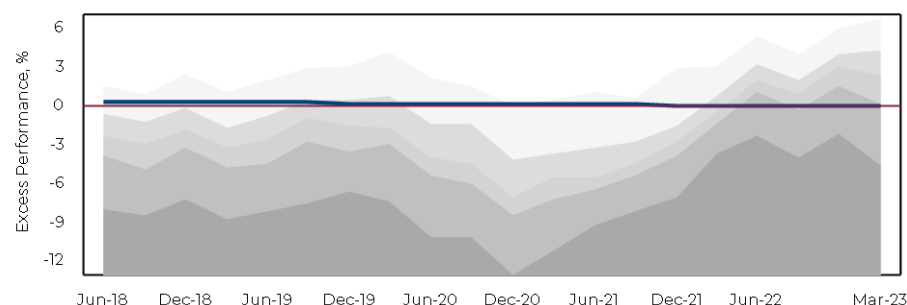
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
BlackRock Extended Equity Market F	5.84	-14.08	17.18	6.14	8.99	-26.36	12.45	32.16	28.23	-9.15
Dow Jones U.S. Completion Total Stock Market Indx	5.80	-14.27	17.04	5.93	8.77	-26.54	12.35	32.16	27.94	-9.57
Mid-Cap Blend Median	3.72	-6.98	19.36	7.11	8.98	-15.19	24.16	12.93	26.87	-11.30
Rank (%)	16	92	76	68	50	98	97	2	41	26
Population	354	348	338	323	262	351	352	364	386	401

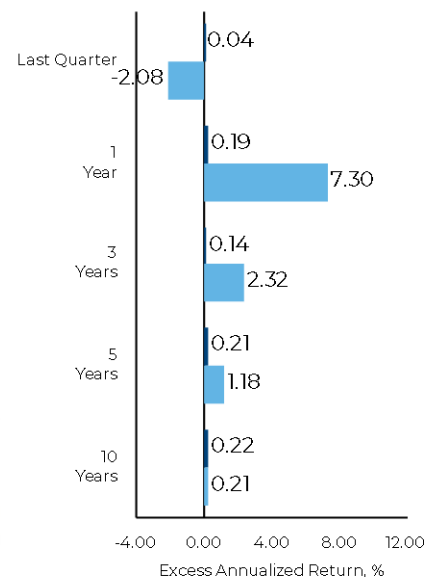
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
BlackRock Extended Equity Market F	0.31	0.20	1.00	1.00	100.44	99.84	1.68
Dow Jones U.S. Completion Total Stock Market Indx	0.30	0.00	1.00	1.00	100.00	100.00	-
Mid-Cap Blend Median	0.37	1.84	0.83	0.90	85.38	80.64	0.07

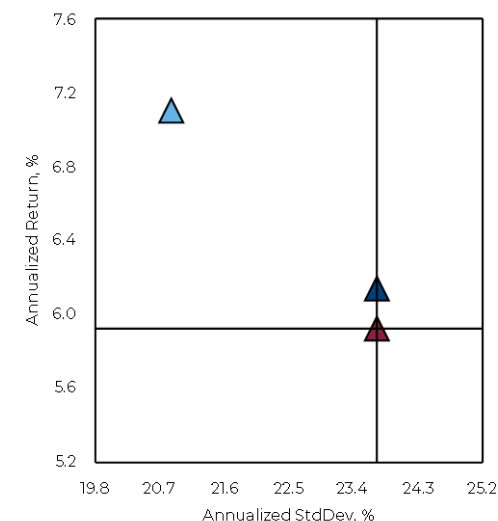
Rolling 3 Year Annualized Excess Return



5 Year Cumulative Performance



Performance vs Risk 5 Year



▲ BlackRock Extended Equity Market F
 ▲ Mid-Cap Blend Median
 ▲ Dow Jones U.S. Completion Total Stock Market Indx

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DELAWARE SMID CAP GROWTH R6

Period Ending 3.31.23 | Q1 23

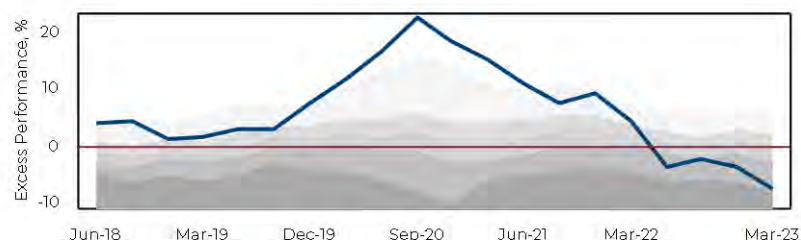
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
Delaware Smid Cap Growth R6	11.21	-26.99	7.13	7.31	10.48	-45.28	-8.12	94.51	35.77	0.44
Russell 2500 Growth Index	6.54	-10.35	14.75	6.82	10.05	-26.21	5.04	40.47	32.65	-7.47
Mid-Cap Growth Median	7.67	-11.27	14.80	8.34	10.36	-28.34	11.92	35.93	33.40	-5.53
Rank (%)	11	98	94	69	48	97	97	4	33	11
Population	550	550	529	515	486	551	566	575	588	599

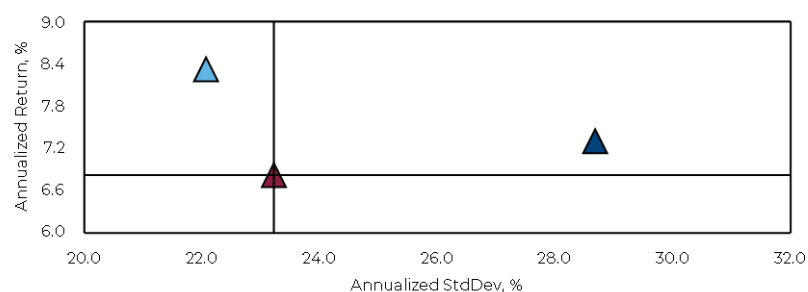
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Delaware Smid Cap Growth R6	0.34	0.59	1.14	0.85	116.53	115.25	0.16
Russell 2500 Growth Index	0.34	0.00	1.00	1.00	100.00	100.00	-
Mid-Cap Growth Median	0.41	2.10	0.91	0.92	92.55	86.42	0.16

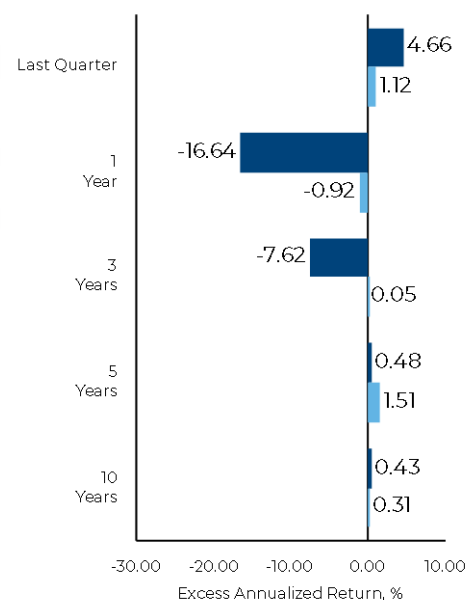
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ Delaware Smid Cap Growth R6 ▲ Mid-Cap Growth Median ▲ Russell 2500 Growth Index



INVESTMENT PROFILE

Ticker	DFZR
Portfolio Manager	Brown,N/Halverson, B/Scott,K
Portfolio Assets	\$94 Million
PM Tenure	3 Months
Net Expense(%)	0.71 %
Fund Inception	2016
Category Expense Median	1.04
Subadvisor	Macquarie Investment Management Global

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	31.19 %
Number of Holdings	66
Turnover	81.00 %
Avg. Market Cap	\$16,170 Million
Dividend Yield	0.61 %

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BLACKROCK MSCI ACWI ESG FOCUS INDEX F

Period Ending 3.31.23 | Q1 '23

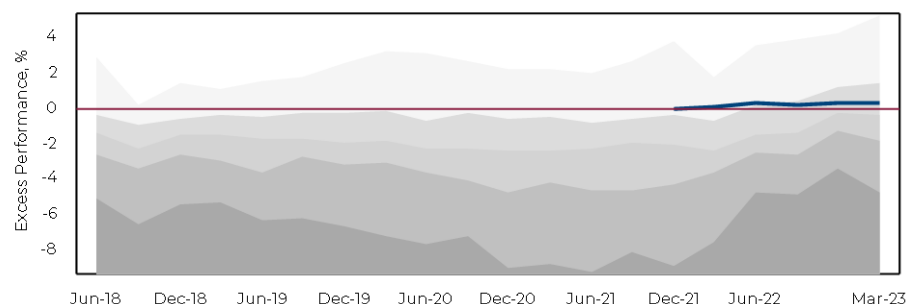
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
BlackRock MSCI ACWI ESG Focus Index F	7.28	-7.77	15.36	-	-	-19.13	18.22	18.99	26.87	-
MSCI AC World ESG Focus Index (Net)	7.20	-8.51	15.10	-	-	-19.54	18.31	18.55	27.44	-
Global Large-Stock Blend Median	6.60	-5.50	14.76	-	-	-17.43	18.08	14.15	26.06	-
Rank (%)	31	86	42	-	-	76	48	16	39	-
Population	345	334	323	-	-	335	351	347	337	-

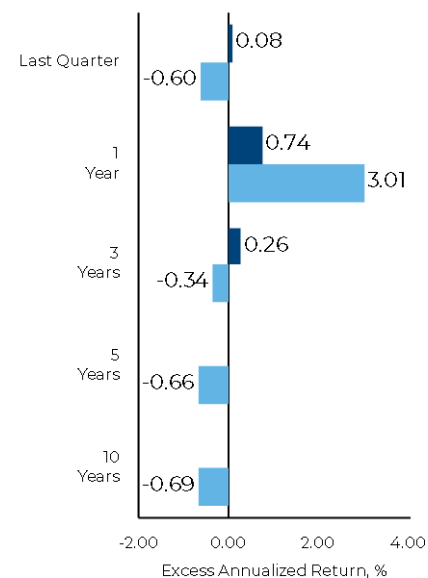
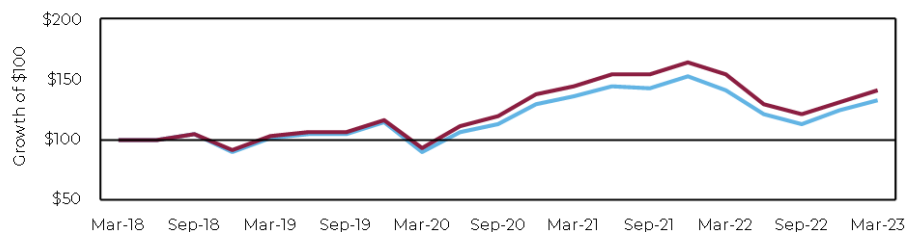
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
BlackRock MSCI ACWI ESG Focus Index F	-	-	-	-	-	-	-
MSCI AC World ESG Focus Index (Net)	0.40	0.00	1.00	1.00	100.00	100.00	-
Global Large-Stock Blend Median	0.37	-0.30	0.98	0.96	95.34	98.17	-0.17

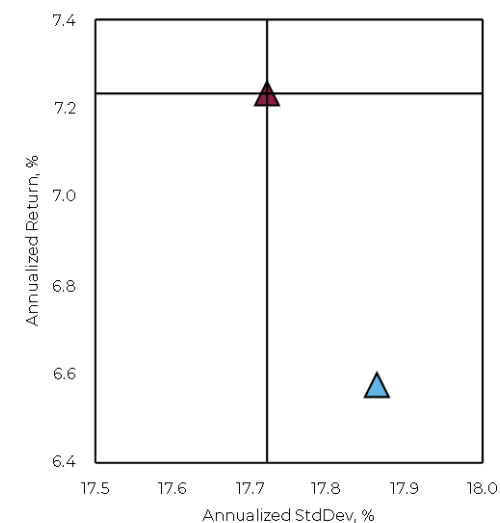
Rolling 3 Year Annualized Excess Return



5 Year Cumulative Performance



Performance vs Risk 5 Year



■ BlackRock MSCI ACWI ESG Focus Index F
 ■ Global Large-Stock Blend Median
 ■ MSCI AC World ESG Focus Index (Net)

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COLUMBIA OVERSEAS VALUE INST3

Period Ending 3.31.23 | Q1 '23

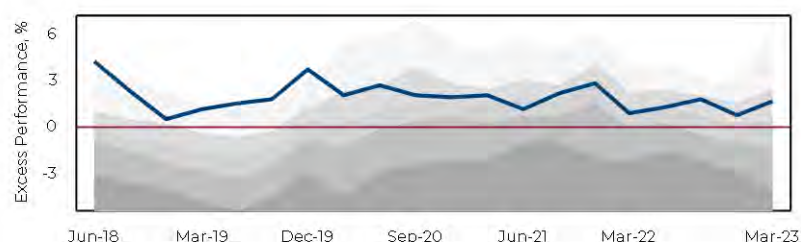
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
Columbia Overseas Value Inst3	5.30	1.69	16.33	2.62	5.60	-5.88	10.97	-0.06	22.61	-16.38
MSCI EAFE Value Index (Net)	5.93	-0.31	14.58	1.75	3.75	-5.58	10.89	-2.63	16.09	-14.78
Foreign Large Value Median	7.29	0.07	15.18	2.13	4.20	-10.36	11.78	2.65	18.23	-16.50
Rank (%)	91	33	34	35	6	17	58	73	13	49
Population	325	320	296	277	252	321	322	336	349	344

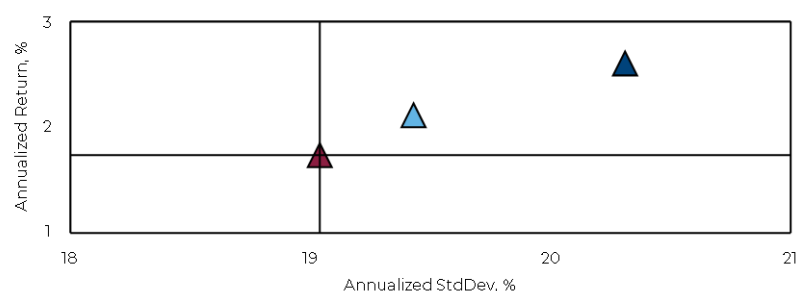
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Columbia Overseas Value Inst3	0.16	0.96	1.04	0.96	108.84	105.33	0.27
MSCI EAFE Value Index (Net)	0.11	0.00	1.00	1.00	100.00	100.00	-
Foreign Large Value Median	0.14	0.51	0.99	0.93	101.17	99.39	0.11

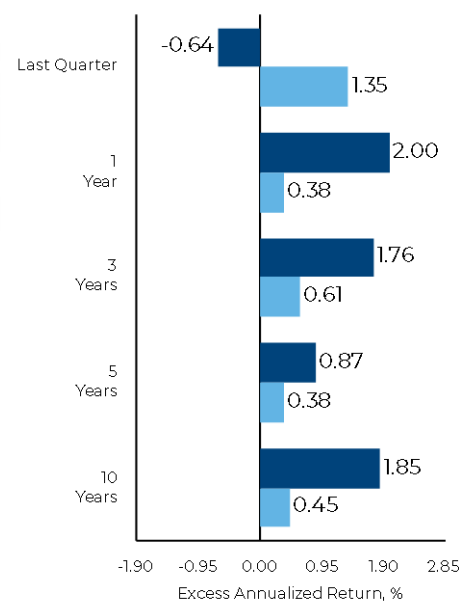
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ Columbia Overseas Value Inst3 ▲ Foreign Large Value Median ▲ MSCI EAFE Value Index (Net)



INVESTMENT PROFILE

Ticker	COSYX
Portfolio Manager	Copper,F/Nomoto,D
Portfolio Assets	\$808 Million
PM Tenure	15 Years
Net Expense(%)	0.77 %
Fund Inception	2015
Category Expense Median	0.95
Subadvisor	-

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	28.57 %
Number of Holdings	121
Turnover	43.00 %
Avg. Market Cap	\$22,036 Million
Dividend Yield	4.31 %

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COLUMBIA TRUST OVERSEAS VALUE FOUNDERS

Period Ending 3.31.23 | Q1 '23

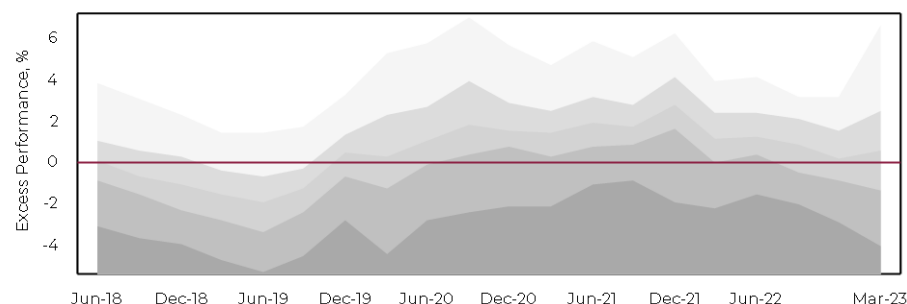
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
Columbia Trust Overseas Value Founders	5.50	2.19	-	-	-	-5.01	11.05	-	-	-
MSCI EAFE Value Index (Net)	5.93	-0.31	-	-	-	-5.58	10.89	-	-	-
Foreign Large Value Median	7.29	0.07	-	-	-	-10.36	11.78	-	-	-
Rank (%)	88	29	-	-	-	11	56	-	-	-
Population	325	320	-	-	-	321	322	-	-	-

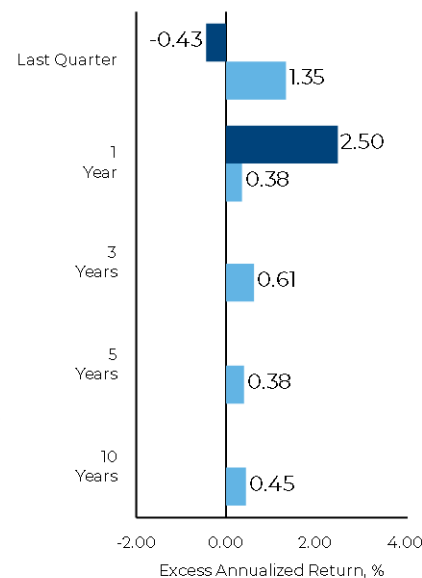
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Columbia Trust Overseas Value Founders	-	-	-	-	-	-	-
MSCI EAFE Value Index (Net)	0.11	0.00	1.00	1.00	100.00	100.00	-
Foreign Large Value Median	0.14	0.51	0.99	0.93	101.17	99.39	0.11

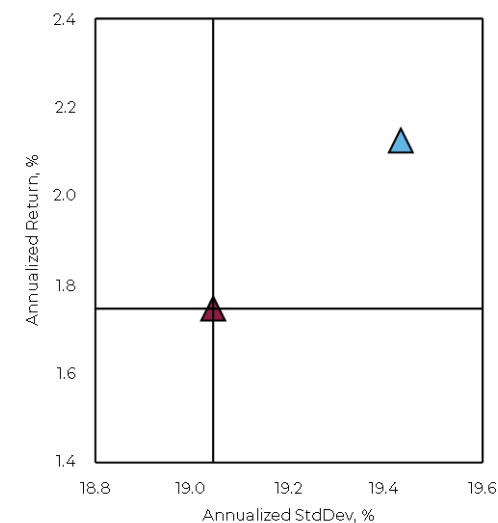
Rolling 3 Year Annualized Excess Return



5 Year Cumulative Performance



Performance vs Risk 5 Year



Columbia Trust Overseas Value Founders
 Foreign Large Value Median
 MSCI EAFE Value Index (Net)

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STATE ST GBL ALLCP EQ EX-US IDX SL CL II

Period Ending 3.31.23 | Q1 '23

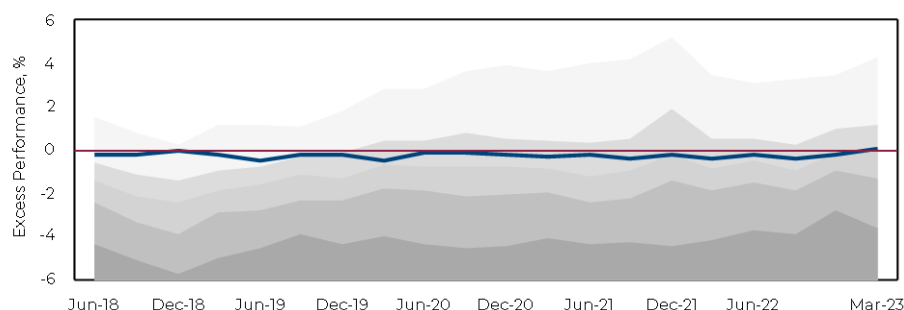
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
State St Gbl AllCp Eq ex-US Idx SL Cl II	6.91	-4.73	12.85	2.64	4.60	-16.29	8.74	11.36	22.04	-14.57
MSCI AC World ex USA IMI	6.70	-5.34	12.72	2.84	4.76	-16.15	8.99	11.59	22.24	-14.35
Foreign Large Blend Median	7.95	-2.19	12.80	2.85	4.67	-15.92	10.07	9.73	22.04	-15.23
Rank (%)	76	82	50	58	56	56	63	40	50	41
Population	682	673	649	620	518	678	711	747	755	751

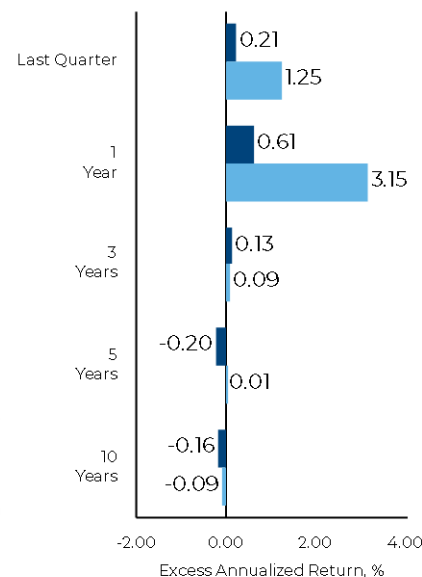
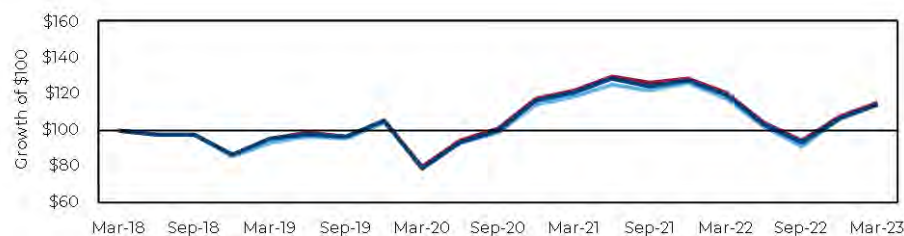
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
State St Gbl AllCp Eq ex-US Idx SL Cl II	0.16	-0.21	1.02	0.99	102.45	103.49	-0.08
MSCI AC World ex USA IMI	0.17	0.00	1.00	1.00	100.00	100.00	-
Foreign Large Blend Median	0.17	0.11	1.02	0.95	103.01	103.60	0.03

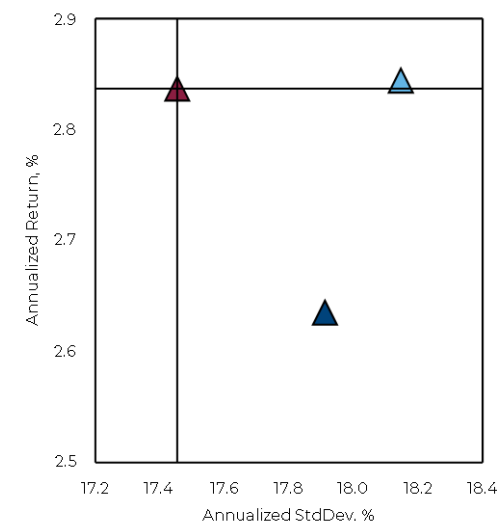
Rolling 3 Year Annualized Excess Return



5 Year Cumulative Performance



Performance vs Risk 5 Year



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VANGUARD INTERNATIONAL GROWTH ADM

Period Ending 3.31.23 | Q1 '23

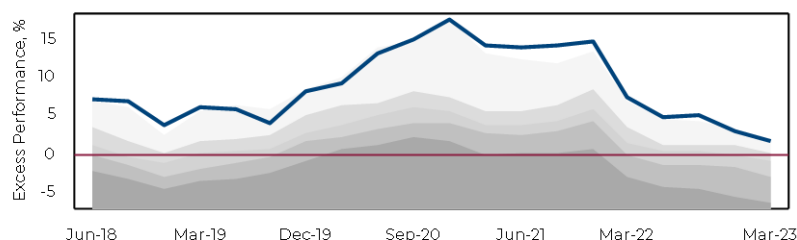
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
Vanguard International Growth Adm	12.50	-6.81	13.48	6.54	8.79	-30.79	-0.74	59.74	31.48	-12.58
MSCI AC World ex USA (Net)	6.87	-5.07	11.80	2.47	4.17	-16.00	7.82	10.65	21.51	-14.20
Foreign Large Growth Median	9.86	-4.90	11.00	3.38	5.50	-25.09	8.66	22.29	27.95	-14.46
Rank (%)	15	67	7	10	5	82	89	2	22	34
Population	428	428	397	382	327	426	434	425	430	443

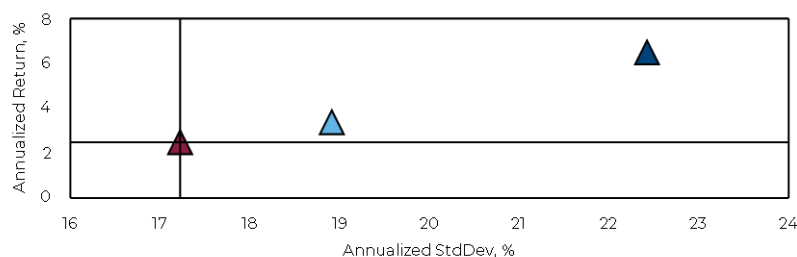
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Vanguard International Growth Adm	0.33	4.29	1.18	0.82	130.05	112.57	0.48
MSCI AC World ex USA (Net)	0.15	0.00	1.00	1.00	100.00	100.00	-
Foreign Large Growth Median	0.20	1.17	1.02	0.86	109.10	103.03	0.19

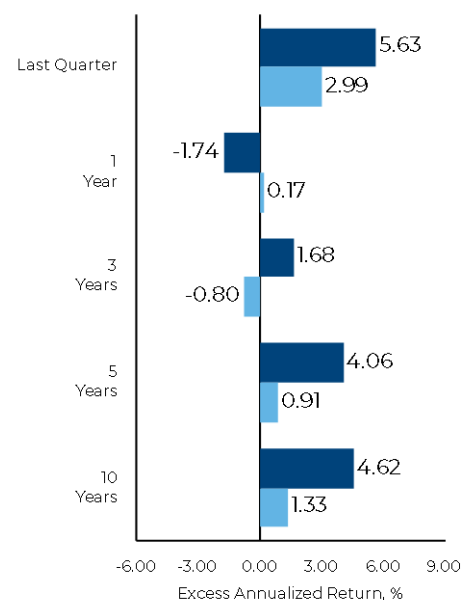
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



▲ Vanguard International Growth Adm ▲ Foreign Large Growth Median
▲ MSCI AC World ex USA (Net)



INVESTMENT PROFILE

Ticker	VWILX
Portfolio Manager	Team Managed
Portfolio Assets	\$36,924 Million
PM Tenure	13 Years 3 Months
Net Expense(%)	0.34 %
Fund Inception	2001
Category Expense Median	0.99
Subadvisor	-

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	33.74 %
Number of Holdings	151
Turnover	15.00 %
Avg. Market Cap	\$58,291 Million
Dividend Yield	1.45 %

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VANGUARD REAL ESTATE INDEX INSTITUTIONAL

Period Ending 3.31.23 | Q1 '23

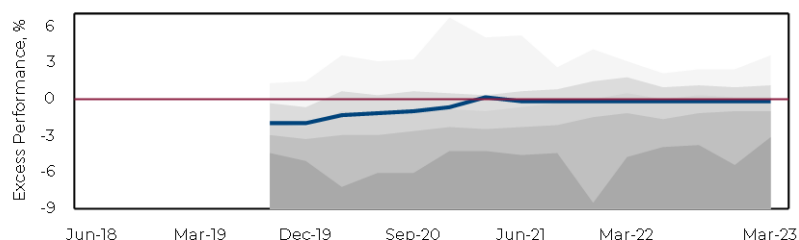
TRAILING AND CALENDAR RETURNS

	Last Quarter	1 Year	3 Years	5 Years	10 Years	2022	2021	2020	2019	2018
Vanguard Real Estate Index Institutional	1.79	-20.10	9.85	5.84	5.81	-26.17	40.41	-4.67	29.02	-5.93
MSCI U.S. IMI Real Estate 25/50 Index	1.83	-20.00	9.96	5.76	-	-26.12	40.56	-4.55	29.03	-4.59
Real Estate Median	2.61	-20.09	10.17	5.84	5.84	-26.33	41.45	-4.43	27.87	-5.92
Rank (%)	85	51	56	51	52	47	64	53	37	51
Population	221	221	217	212	189	221	229	233	251	249

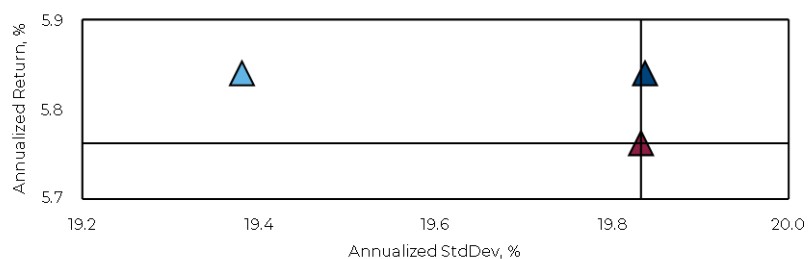
KEY MEASURES/5 YEAR

	Sharpe Ratio	Alpha	Beta	R-Squared	Up Capture	Down Capture	Information Ratio
Vanguard Real Estate Index Institutional	0.32	0.07	1.00	1.00	100.31	100.09	0.29
MSCI U.S. IMI Real Estate 25/50 Index	0.31	0.00	1.00	1.00	100.00	100.00	-
Real Estate Median	0.32	0.30	0.96	0.98	97.35	97.26	0.02

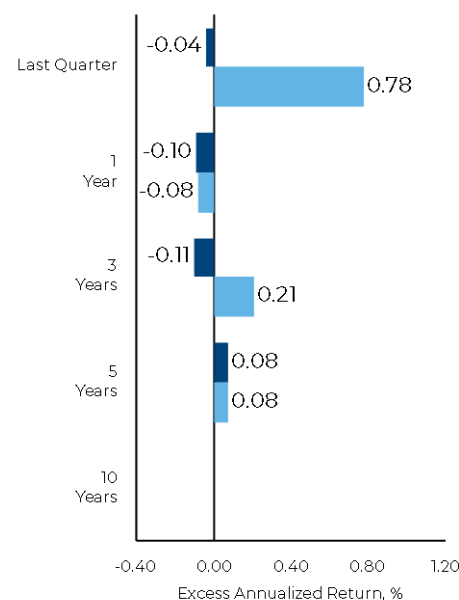
Rolling 3 Year Annualized Excess Return



Performance vs Risk 5 Year



Vanguard Real Estate Index Institutional
 Real Estate Median
 MSCI U.S. IMI Real Estate 25/50 Index



INVESTMENT PROFILE

Ticker	VGSNX
Portfolio Manager	Nejman,W/O'Reilly,G
Portfolio Assets	\$9,927 Million
PM Tenure	26 Years 10 Months
Net Expense(%)	0.10 %
Fund Inception	2003
Category Expense Median	1.00
Subadvisor	-

HOLDINGS OVERVIEW

% Assets in Top 10 Holdings	47.22 %
Number of Holdings	170
Turnover	7.00 %
Avg. Market Cap	\$21,110 Million
Dividend Yield	3.87 %

For use with CAPTRUST clients only. Performance summarized here represents past performance and does not guarantee future results. Data has been obtained from Morningstar and is not guaranteed to be accurate or complete. Mutual fund investing involves risk. For a prospectus with a complete description of the risks associated with investing in this fund, please call CAPTRUST at (800)216-0645. For a detailed description of the risks associated with investing by asset class, please visit

<https://www.captrust.com/important-disclosures/>



APPENDIX
Glossary of Terms.....
Evaluation Methodology.....



GLOSSARY

Period Ending 3.31.23 | Q1 23

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 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 ratios, the Treynor Ratio only has value when it is used as the basis of comparison between portfolios. The higher the Treynor Ratio, the better.



INVESTMENT REVIEW | EVALUATION METHODOLOGY

Period Ending 3.31.23 | Q1 23

	QUANTITATIVE EVALUATION ITEMS	QUALITATIVE EVALUATION ITEMS
 MARKED FOR REVIEW The following categories of the Investment Policy Monitor appear “Marked For Review” when:	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.	Fund Management A significant disruption to the investment option’s management team has been discovered.
	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.	Fund Family A significant disruption to the investment option’s parent company has been discovered.
	3/5 Year Style The investment option’s 3 or 5 Year R-Squared measure falls below the absolute threshold set per asset class.	Portfolio Construction The investment option’s combined Portfolio Construction score is 6 or below out of a possible 15 points.
	3/5 Year Confidence The investment option’s 3 or 5 Year Confidence Rating falls below the 50 th percentile of the peer group.	Underlying Investment Vehicles The investment option’s combined Underlying Investment Vehicles score is 6 or below out of a possible 15 points.
	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.	

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