2023 - 2024

SCERS

INVESTMENT YEAR IN REVIEW

2023

ANNUAL INVESTMENT PLAN

2024

Sacramento County Employees' Retirement System
Sacramento, California

2023 - 2024

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Sacramento County Employees' Retirement System
Sacramento, California

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SECTION ONE

Introduction

Letter Of Introduction

As Chief Executive Officer of the Sacramento County Employees' Retirement System (SCERS), I am pleased to present the 2023 SCERS Investment Year in Review and 2024 Annual Plan, as crafted by SCERS' Investment Staff and consultants.

The purpose of this report is to summarize the major events and developments in the investment program in the past year and preview the investment program's projects and objectives for the upcoming year.

Overall, this annual report on SCERS' investment program helps track our progress toward achieving near-term and long-term investment objectives, and in particular, meeting the fundamental goal of providing funding for the benefits paid to our members.

In 2023, the SCERS Board of Retirement ensured the strategic asset allocation kept in balance by supporting new investment opportunities to maintain a highly diversified investment portfolio and adjusting asset class exposures, including a modest increase to our dedicated cash allocation to take advantage of the higher interest rate environment. The SCERS Board also reviewed its assumed rate of return and other actuarial assumptions as part of the triennial Experience Study. The Board agreed to maintain its 6.75% long-term investment return assumption, based on capital market forecasts over the next several years.

In the shorter term, SCERS will continue to work with our internal staff, consultants, and key partners through 2024 to navigate and find value throughout the investment universe as the geopolitical environment, inflation, high interest rates and slowing growth, including a potential recession, remain risks to financial markets.

As a long-term investor, SCERS remains well positioned to weather and find value across different economic and market environments, by staying committed to a strategic asset allocation that is the driving force behind portfolio returns.

Respectfully Submitted,

ERIC STERN
Chief Executive Officer

SECTION TWO

Portfolio Overview

Market Overview

Calendar year 2023 represented a continuation of central banks' hawkish actions to get inflation under control, as well as growing geopolitical risks across the globe. Coming off of pent-up consumer demand fueled by extraordinary monetary and fiscal policy during the pandemic, inflation picked up significantly, with headline inflation peaking at 9.1% in the first half of 2022. Inflation has been on a downward trajectory over the past year as central banks have raised interest rates at an unprecedented pace, but the question going forward is will inflation continue towards the Federal Reserve's (The Fed) target rate of 2%, or will it remain at elevated levels.

Headline inflation, which includes energy and food, fell sharply in 2023 to 3% though it sits at 3.7% as of the end of September 2023. Energy has been the driver of the decrease in headline inflation, while food inflation remains elevated. Core inflation, which excludes food and energy, has been more stubborn and remains higher at 4.1%. Goods inflation is way down as pandemic fueled supply chain disruptions have sorted themselves out. However, services inflation remains sticky at close to 6%. Shelter inflation and transportation services are currently the highest contributors to inflation. Markets have shown optimism that The Fed is close to being finished raising rates and are more likely to cut rates in 2024. The reality is that while meaningful progress has been made by The Fed and other central banks, inflation is still a risk going forward, as evidenced by the spike in 10-year Treasury yields to a post-Global Financial Crisis high of more than 5.0% in the fourth quarter 2023, which is signaling concerns about higher interest rates for longer.

Another area of uncertainty is the effect that monetary policy tightening will have on the economy. A couple of data points suggest that the rapid rise in interest rates will eventually push the U.S. economy into recession. In particular is the inverted yield curve, where short term rates at the front end of the yield curve are higher than long term rates farther out on the curve, which has preceded the past 7 recessions. In addition, the Leading Economic Index (LEI) is negative and has been a consistent predictor of recessions over the past 60 years. While these measures are typically good recession predictors, current economic conditions are relatively strong and the market has seemed to assign a lower level of probability of recession in recent months. It's important to remember that the impacts of tightening monetary policy and rising rates occur with a lag, and most recessions have occurred 6-24 months after a yield curve inversion. The current inversion started in July of 2022, so it's probably too early to say whether the economy will avoid a recession and if a soft landing has been navigated.

Many economists believe that avoiding a recession hinges on employment, as well as the health of the consumer and its ability to support the higher cost of debt. Unemployment sits at a very low level of 3.8%, and job growth remains strong, with the U.S. labor market adding over 3 million jobs over the past year. There is speculation that companies are reluctant to reduce headcount given the challenges they faced replacing laid off workers after pandemic lockdowns eased.

Housing also remains resilient. The Case-Shiller Home Price Index is close to record levels reached in 2022. Demand remains strong, there is limited new home supply, and existing housing turnover is low as homeowners with low mortgage rates are locked into their current homes. However, affordability remains low due to higher prices and interest rates. Consumer spending also remains robust; however, consumer excess savings that accumulated during the pandemic have nearly worn off. Consumer debt has also increased, and along with higher interest rates, loan delinquencies across auto loans and credit cards have seen an uptick.

In addition to economic risks, growing geopolitical conflicts represent a significant risk to the globe and financial markets. Russia's invasion of Ukraine shows no signs of abating, and growing tensions between the U.S. and China create greater uncertainty. In September, Hamas' attack on Israel led to the eruption of an Israel-Hamas war, which threatens greater escalation in the Middle East. This could elevate market volatility, in particular energy prices.

Major global market returns have been stronger in 2023 versus the negative returns of 2022. Within equities, the global MSCI ACWI IMI returned 10.1% through the end of September; however, increasing interest rates and geopolitical conflicts have eaten into these gains in the fourth quarter of 2023. On the geographic front, domestic equities have outperformed international equities. Within styles, growth stocks have continued their multi-year recent trend of outperforming value stocks, fueled by the "Magnificent 7" group of large capitalization stocks. Large capitalization stocks have significantly outperformed small capitalization stocks year to date.

Bond markets have been mixed year to date, with credit outperforming government bonds, as rising interest rates continue to be a challenge for the latter. The Bloomberg U.S. Treasury Index is down -1.5% as of September 30, 2023, as longer duration Treasury yields have remained high during the year, with the 10-Year Treasury yield increasing from 3.87% on December 31, 2022 to 4.58% on September 30, 2023. Short-term rates have continued their rapid increase in line with the Fed interest rate hikes, and currently sit well over 5%. Credit has fared better in 2023, with high yield bonds returning 5.9% (Bloomberg U.S. Corporate High Yield Index). The broad-based Bloomberg Barclays Aggregate Index, which contains an equal mix of Treasuries, agency mortgages, and investment grade credit, is down -1.2% as of September 30, 2023.

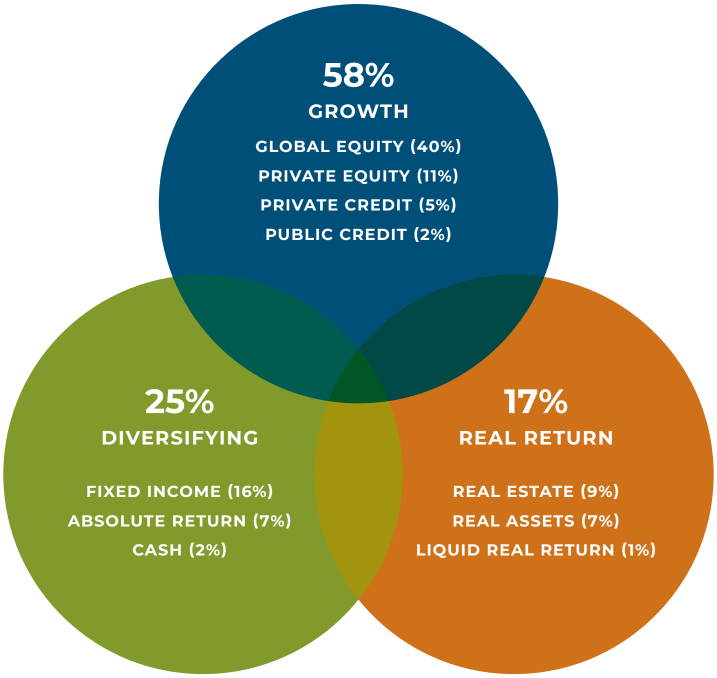
Public markets have generally performed better than private markets during the year, as the latter experienced the lag effect of rising interest rates and valuation deterioration that public markets faced in 2022. Private equity, including venture capital, and real estate have been the most impacted, while private credit and real assets have fared better. With geopolitical risks rising and expectations that interest rates could remain higher for longer to control inflation, as well as the potential economic ramifications of higher rates, market volatility and the potential for market downside should not be unexpected. SCERS' strategic asset allocation is structured to provide diversification across economic environments and risk factors, which should translate to more consistent returns in a variety of market outcomes.

Strategic Asset Allocation

SCERS' investment program is structured around a strategic asset allocation with the objective of ensuring diversification of investments in a manner that generates a desired rate of investment return with an acceptable level of investment risk. The asset allocation targets are not tactical, but rather are long term in nature, consistent with the nature of our members' lifelong benefit obligations. Ranges are incorporated around target allocations to add flexibility around the implementation of the portfolio based on relative value considerations across asset classes.

SCERS' strategic asset allocation incorporates a functional framework that groups and classifies segments of the portfolio in order to link those segments that are exposed to similar economic environments and risk factors, and which would be expected to have similar roles and outcomes in a portfolio. The functional grouping breaks the portfolio into three asset categories: (1) Growth; (2) Diversifying; and, (3) Real Return, with asset classes that underlie these asset categories. The current allocation is shown below:

Asset Categories
GRAPH 1



The Growth asset category includes those segments of the portfolio that tend to perform best in a high growth and low/moderate inflationary environment, including most equity and credit investments. In contrast, they tend to perform poorly during recessionary periods, when GDP growth is contracting, or during certain periods when unexpected inflation arises. Growth assets tend to comprise the dominant allocation within most institutional investment portfolios, including that of SCERS. The Diversifying asset category includes those segments of the portfolio which are expected to protect capital and perform better than the Growth asset category during dislocated and stressed market environments, including traditional fixed income and absolute return strategies. The Real Return asset category includes those segments of the portfolio that protect against inflation, generate cash flow, and provide further portfolio diversification, including real estate, infrastructure, energy, and agriculture investments, as well as liquid real return investments.

SCERS' strategic asset allocation takes a risk-balanced approach that emphasizes having enough return generating assets to drive performance toward the actuarial rate of return; however, it also maintains meaningful diversification, especially to investment strategies with low and negative correlations to equity markets that can reduce portfolio volatility and protect against significant market drawdowns. It is also expected to generate meaningful cash flow for SCERS' plan. The strategic asset allocation contains a meaningful allocation to less liquid private market investments, so tracking SCERS' liquidity profile in order to maintain sufficient liquidity and cash flows in order to meet benefit payment obligations is a key focus of SCERS' Board, investment staff, and investment consultants.

During the year, SCERS evaluated its strategic asset allocation in light of changing capital market assumptions and made a couple of small adjustments. This included increasing the dedicated cash allocation from 1% to 2%, in line with SCERS' increasing negative cash flow profile, and also to take advantage of the higher interest rate environment where the front end of the yield curve is yielding over 5%. SCERS reduced the Liquid Real Return allocation from 2% to 1% to fund the increased cash allocation, based on the segment's less favorable risk/return profile going forward. The adjustment's impact on the risk/return profile of SCERS' strategic asset allocation was marginal given that the change only represented 2% of the total portfolio. As described below, SCERS plans on conducting a full asset liability modeling study in late calendar year 2024.

SCERS utilizes an Overlay Program, managed by State Street Global Advisors (SSGA), to bring SCERS' portfolio in line with its target asset allocation, and to invest excess portfolio cash. The Overlay Program uses public market proxies to replicate exposures within the portfolio, making it particularly effective in rebalancing public market assets, and less so for alternative assets. Any over- and under-weights within the portfolio are rebalanced quarterly by SCERS' Overlay Program, and when any physical rebalancing activity takes place, the Overlay Program is adjusted accordingly.

2023 Investment Activity

SCERS had an active year with investment implementation and activity taking place under the guidance of the Board approved 2023 investment plan. The public market asset classes (global equity and fixed income) do not have budgeted plans like the alternative asset classes; however; SCERS was active implementing revised structural changes, including conducting several public equity investment manager searches.

These include:

- In Global Equity, SCERS added two new replacement emerging markets equity managers during the year. SCERS also hired a replacement international developed small cap equity manager. In addition, SCERS fully redeemed from a fund within the Global/Unconstrained segment of the Global Equity asset class and within this segment also hired a manager that manages a closed end fund equity strategy.
- SCERS did not make any manager changes within the Fixed Income asset class.

Within private markets, SCERS was active making new commitments during the year, even though a couple of asset classes are above their target allocations. Private market asset classes require consistent annual commitments to new funds in order to account for existing funds that sell investments and distribute capital back to SCERS, while newer funds draw down capital and make new investments. Private market investments have longer investment periods, and it is important to maintain vintage year diversification, while also maintaining allocations with top tier investment managers.

While SCERS was active in the private markets, commitments came in at the lower end of the Board approved budgets for most private market asset classes. This was a function of a few dynamics. First, the fundraising environment for private markets has slowed in the face of headwinds in 2023, particularly private equity, driven by higher interest rates, the higher cost of debt, a significant drop in capital deployment, fewer realizations, and tighter limited partner budgets. This is in stark contrast to the past several years where private market funds were coming back to market at a blistering rate in a low interest rate environment that translated to a fast pace of deal activity and large appetites for allocations by limited partners. Second, Staff and consultants were more selective given the challenging economic and market environment and given that several asset classes are overweight their targets.

Below is a summary of implementation within the alternative asset classes, which includes funds that are expected to close by the end of the year. Each alternative/private market asset class had defined budgets approved by the Board. The implementation in 2023 consisted of mostly follow-on fund investments with existing managers, in addition to select investments with new managers. The individual asset class sections of this report provide greater detail related to implementation activity in 2023.

SCERS' Implementation Summary
TABLE 1

2023 Implementation Summary

	Investment Amount (in millions)	Targeted Amount (in millions)	Total # Investments
Absolute Return*	$100	$50	2
Private Equity	$218	$260	7
Private Credit	$85	$140	2
Real Assets	$165	$190	4
Real Estate	$0	$80	0

*SCERS also will have fully redeemed from three Absolute Return funds during 2023.

Last year's report highlighted several meaningful divergences between the actual allocation within asset classes and target allocations. This included a significant overweight to Private Equity and a significant underweight to Global Equity, which was the result of the sell off within the equity and fixed income markets during the first half of 2022, while private market valuations held fairly steady given their lagged valuations. In 2023, this dynamic reversed with public markets generating positive returns and private market assets classes generating negative or muted returns as lagged valuations caught up. As a result, some of the meaningful divergences between actual and target allocations corrected themselves without SCERS undertaking meaningful rebalancing.

Table 2 below compares SCERS' actual physical allocations as of September 30, 2023 to the target allocations.

SCERS' Actual Allocations versus Target Allocations

TABLE 2

SCERS' Actual vs. Target Allocations			
Asset Catagory/Asset Class	**Actual Allocation***	**Target Allocation**	**Variance**
Growth* **	**56.6%**	**58.0%**	**-1.4%**
Global Equity	38.2%	40.0%	-1.8%
Private Equity	13.3%	11.0%	2.3%
Public Credit	1.8%	2.0%	-0.2%
Private Credit	3.3%	5.0%	-1.7%
**Growth Absolute Return	0.1%	0.0%	0.1%
Diversifying* **	**22.3%**	**25.0%**	**-2.7%**
Fixed Income	13.7%	16.0%	-2.3%
Absolute Return	6.5%	7.0%	-0.5%
Cash	2.0%	2.0%	0.0%
Real Return** **	**16.4%**	**17.0%**	**-0.6%**
Real Estate	8.0%	9.0%	-1.0%
Real Assets	8.3%	7.0%	1.3%
Liquid Real Return	0.1%	1.0%	-0.9%
Overlay Program	**1.1%**	**0.0%**	**1.1%**
Other Cash	**3.6%**	**0.0%**	**3.6%**
	100.0%	**100.0%**	

* Based on State Street Global Advisors market values as of 09/30/2023
** Growth Absolute Return was eliminated from the strategic asset allocation
*** Does not include Overlay exposure
**** Includes Overlay exposure

As a reminder, for asset classes that are out of balance to their targets, the Overlay Program rebalances the asset categories to their target allocations at the end of each quarter, using a combination of derivatives (Growth and Diversifying asset categories) and physical exposures (Real Return asset category). The Overlay Program brings the allocations to target when physical rebalancing is not utilized. The 'Actual Allocation' column in Table 2 does not reflect the Overlay exposure for the Growth and Diversifying asset categories; however; the Real Return Overlay exposures are reflected.

Portfolio Considerations

Staff and Verus are targeting the end of 2024 for the next asset liability modeling (ALM) study. The ALM study will incorporate updated capital market assumptions and fresh actuarial data, which will guide whether any strategic asset allocation adjustments should be made. Asset allocation considerations include:

- The recognition of a change in economic regimes
- The impact of the higher interest rate environment
- The proper categorization of asset classes within the functional asset categories
- The level of private market exposure in line with plan liquidity considerations
- The level of risk versus the targeted actuarial rate and economic/market dynamics

Prior to starting the next ALM study, in the first few quarters of 2024 Staff and consultants plan on presenting an educational series on the asset liability modeling process, a review of SCERS' current investment philosophy and portfolio construction, as well as a deep dive into SCERS' various asset classes. The objective of the asset class educational series is to assist the Board in understanding the roles and objectives of each asset class, asset class construction, performance of the asset classes in meeting their objectives, and macro trends within the asset classes.

During 2022, the SCERS Board approved a portfolio analytics software service provider, Burgiss, and its software platform Caissa. The portfolio analytics software provides analytical tools to better oversee and manage a growing and complex portfolio. It provides a total portfolio view that can holistically view exposures and risk across the entire portfolio (i.e., publics and privates), as well as granularly within asset classes, including the alternative asset classes. The software enables SCERS to dynamically view portfolio exposures, performance attribution, and perform stress testing and scenario analysis when considering new investments. Staff has been working with Burgiss to onboard the software, and it is now nearly fully implemented and functioning.

SCERS, like many public plans has negative cash flows, meaning on an annual basis more benefit payments go out than contributions come in. The difference in cash flows is made up by the returns of the investment portfolio. The annual liquidity study conducted by Verus in 2023 demonstrated that SCERS is currently in a strong liquidity position; however, the gap between benefit payments and contributions is forecasted to grow over the next ten years.

A final consideration is related to investment staff resources. The SCERS investment portfolio has experienced tremendous growth over the past decade, both in terms of total assets and number of manager relationships, and underlying strategies and funds. Given this growth, it is important that SCERS' investment staff is properly resourced to originate new investment ideas, administer the portfolio, and more importantly provide oversight of a large number of underlying managers and funds.

The exposure, budgeting, and pacing data within the upcoming asset class sections were provided by SCERS' consultants, in particular Cliffwater (Absolute Return; Private Equity; Private Credit; Real Assets) and Townsend (Real Estate), with the recommended budgets presented by Staff and Cliffwater/Townsend.

SECTION THREE

Asset Classes

Global Equity

Market Overview

Equity markets began 2023 with heightened uncertainty following the sharp declines experienced during the prior year. For calendar year 2022, global equity markets declined approximately -18% (MSCI ACWI IMI), despite positive returns in the fourth quarter, which minimized the full year losses that peaked at -26%. Despite markets facing the prospect of continued increases in interest rates, as the Federal Reserve and other global central banks continued increasing rates to combat persistent inflation, global equity prices rallied to start the year.

The first half of the year was led by the technology sector and the potential benefits from artificial intelligence (AI), with equity markets looking past slowing economic growth and geopolitical tensions. Particularly in the United States, where the economy has proven to be surprisingly resilient despite increased interest rates, large cap technology companies drove the market higher. Led by the "Magnificent Seven"[1], which includes the seven largest companies in the U.S. by market capitalization[2], U.S. equity markets advanced 16% through June. The Magnificent Seven companies advanced by an average of 89% during the first half of the year and contributed over 70% of total U.S. equity market returns. The majority of the returns were driven by multiple expansion versus significant increases in earnings expectations, with only NVIDIA and Meta having double digit increases in earnings expectations from the start of the year. Outside of these top seven companies, equity market returns were relatively subdued, with the average return for the other 493 companies in the S&P 500 below 5%.

Developed International equity markets also generated strong returns to start the year, with the MSCI World ex-U.S. index up 12% through June, with contributions across Europe and Japan. The European region saw strong positive earnings revisions in the first half of the year and combined with falling inflation (excluding the U.K.) and relatively attractive valuations, most equity markets posted positive double digit returns. Japan benefited from structural measures to increase shareholder returns and increased corporate earnings from easing of COVID-19 restrictions. Japan has also benefited from a return of inflation, following decades of low inflation or deflation, which has allowed its central bank to ease measures of yield curve control.

The third quarter saw a reversal of the equity market trends driving performance for the first half of the year. As the resilience of the U.S. economy continued and inflation remained above targets, the prospect of "higher for longer" interest rates began to take hold. Interest rates in the U.S. rallied significantly in the third quarter, which contributed to negative equity market returns, particularly among the large cap tech companies that drove market performance through the first half of the year. In the U.S., equity markets declined -3% in the third quarter, resulting in year-to-date returns through September of 12%. Developed International equity markets also declined in the third quarter, down -4%, resulting in year-to-date returns of 7% through the end of the third quarter[3].

Emerging markets has been an area of relative weakness across global equity markets. Despite optimism at the start of the year, particularly from an expectation that China's re-opening from zero-COVID

1 "Magnificent Seven" includes the following U.S. companies: Apple, Microsoft, NVIDIA, Amazon, Meta, Tesla, and Alphabet (Google)

2 As of June 30, 2023

3 MSCI World ex-USA Index net returns, as of September 30, 2023

restrictions would spur economic growth and enhance emerging market equity returns, through the end of September emerging markets have only generated 2% returns year-to-date. Positive returns in Emerging Markets were driven by Taiwan (+12%) and India (+7%), while China was the primary source of weakness, with the MSCI China index down -7% through September.

From a style perspective, 2023 has been another year where growth significantly outperformed value. Through the first three quarters of the year, growth has outperformed value by approximately 15%, as measured by the MSCI AWCI Growth and Value indices. The difference is even more pronounced in the U.S., where growth has outperformed value by 22% year-to-date. The spread between growth and value performance in the U.S. is the second largest over the past 20 years, with only 2020 representing a greater calendar year difference, when growth outperformed value by 35%. Large cap stocks have significantly outperformed small cap stocks, both in the U.S. and International markets. Within the U.S., the Russell 1000 index has outperformed the Russell 2000 index by 10.5% year-to-date through September. U.S. large cap stocks have outperformed small caps in nine out of the last ten years, resulting in a 5% annualized difference in returns over the ten-year period[4].

SCERS Global Equity Portfolio

Following double digit declines across global equity markets in 2022, SCERS' Global Equity portfolio began the year underweight the 40% target allocation, at 36.2%. The underweight allocation was driven by the U.S. and Global/Unconstrained allocations, while International Equity was in line with its target allocation. The U.S. and Global/Unconstrained segments were both underweight their target allocations by approximately 2%, with the U.S. underweight due to prior year performance, while the Global/Unconstrained segment is a recent addition to the portfolio and still being built out. By the end of September 2023, the Global Equity allocation grew to 38.2%, within the approved range for the asset class, as a result of the equity rally during the year. As a reminder, SCERS' Overlay Program rebalances SCERS' Global Equity allocation to target on a quarterly basis using futures positions when the physical allocation is below or above target.

In the first quarter of the year, SCERS funded two new emerging markets mandates with Oaktree Capital Management and ARGA Investment Management, which were approved in December 2022, and helped bring the International Equity sub-asset class targets in line with the strategic asset allocation. To fund the new mandates, SCERS rebalanced the International Equity portfolio, redeeming from several developed large cap mandates. Also during the first quarter, SCERS completed a search for a new international small cap value mandate, which was awarded to Acadian Asset Management and funded during the second quarter of 2023. The new mandate with Acadian was funded through the redemption of a total return swap, which was put in place to maintain international small cap market exposure following the termination of the prior manager in 2022, and while the manager search process was completed.

4 Source: FTSE Russell. Ten Year Annualized returns for Russell 1000 index (+11.63%) versus Russell 2000 index (+6.65%), as of September 30, 2023

During the third quarter of 2023, SCERS also completed a search for a Global Equity mandate, which was awarded to Allspring Global Investments. The Allspring mandate fits within the Unconstrained segment of SCERS' Global/Unconstrained sub-asset class due to the unique nature of the strategy. Allspring manages a portfolio of closed-end funds, purchasing funds when the share price trades at a discount to underlying net asset value, while minimizing sector and geographic differences versus their benchmark. During the first half of the year within the Global/Unconstrained sub-asset class, SCERS redeemed from its investment in Third Point Partners, as the strategy proved not to be a good fit within the sub-asset class.

Looking forward to 2024, SCERS will continue to build out the Global/Unconstrained segment of the Global Equity portfolio. Potential additions include equity long/short or equity extension strategies. Other options could include strategies with unique drivers of return capable of delivering excess returns versus global equity benchmarks, across various market environments. The structure of the Global Equity asset class and its underlying sub-asset classes is shown below.

SCERS Global Equity Portfolio Structure

	Minimum	Target Allocation	Maximum
Total Global Equity Portfolio	**36%**	**40%**	**44%**
Domestic Equity	18%	**20%**	22%
International Equity	14%	**16%**	20%
Global/Unconstrained	1%	**4%**	6%

Domestic Equity Structure			
Asset Class	**Target Allocation**	**Target Allocation**	**Est. Allocation as of 9/30/23**
Domestic Equity	**20.0%**		**19.3%**
Domestic Equity Large Cap	90.0%		91.6%
Large Cap Passive		50.0%	
Large Cap Active		40.0%	
Domestic Small Cap	10.0%		8.4%
Small Cap Active		10.0%	

International Equity Structure			
Asset Class	**Target Allocation**	**Target Allocation**	**Est. Allocation as of 9/30/23**
International Equity	**16.0%**		**15.9%**
International Equity Developed Markets	70.0%		71.7%
Developed Markets Large Cap Active		60.0%	
Developed Markets Small Cap Active		10.0%	
International Equity Emerging Markets	30.0%		28.3%
Emerging Markets Active		30.0%	

Global/Unconstrained Equity Structure			
Asset Class	**Target Allocation**	**Target Allocation**	**Est. Allocation as of 9/30/23**
Global/Unconstrained Equity	**4.0%**		**3.0%**
Global Equity		>/= 50%	67.2%
Sector or Country Concentrated		</= 25%	12.7%
Non-Beta 1 (Long/Short)		</= 25%	20.1%

2023 Activity

- Funded emerging markets equity mandates within the International Equity sub-asset class. Manager recommendations were presented in December 2022 and the approved mandates were funded in the first quarter 2023
  - Oaktree Emerging Markets Equity Fund: $190 million
  - ARGA Emerging Markets Equity Fund: $190 million
- Completed a manager search for an international small cap value equity mandate within the International Equity sub-asset class. Manager recommendation was presented in March 2023 and the approved mandate was funded in the second quarter 2023
  - Acadian Non-U.S. Small Cap Developed Equity: $100 million
- Completed a manager search for a global equity mandate within the Global/Unconstrained sub-asset class. Manager recommendation was presented in August 2023 and the approved mandate was funded in the third quarter 2023
  - Allspring Global Closed-End Fund Equity: $75 million
- Redeemed from unconstrained mandate with Third Point Partners within Global/Unconstrained sub-asset class. Proceeds will be received over the course of the following year
- Performed manager due diligence on additional strategies for Global/Unconstrained sub-asset class
- Oversaw, monitored, and met with SCERS' existing Global Equity managers

2024 Annual Plan

- Rebalance the Global Equity portfolio, as necessary, to keep the sub-asset class segments within range and minimize style or market capitalization tilts
  - Review geographic, sector, and style allocations across the entire Global Equity portfolio
- Evaluate potential additions to the Global/Unconstrained sub-asset class to bring it towards the 4% target allocation
- Oversee, monitor, and asses the existing manager lineup

Fixed Income

Market Overview

The fixed income markets generated strong returns to start 2023, due to volatility related to the Silicon Valley Bank collapse in March and expectations for rate cuts later in the year, as well as progress being made on the inflation front. However, those returns and expectations dwindled during the second and third quarters as the higher interest rates for longer theme gained traction.

The Fed has instituted four 25 bps rate hikes in 2023, with the Federal Funds target rate standing at a range of 5.25% to 5.5% as of September 30, 2023. This has represented a dramatic increase from the near 0% target in early 2022. While the short end of the yield curve has been on a rapid and steady path toward its current target, longer dated maturities have been more volatile. The 10-year Treasury yield started the year at 3.9%, dropped toward 3.2% during the first quarter, but has been on a rapid increase the remainder of the year. In October, the 10-year and 30-year Treasury yields rose to levels above 5.0%. While the yield curve remains inverted, which is traditionally a signal of an upcoming recession, it has flattened out somewhat compared to the heavy negative inversion in the spring. At a global level, yields across most countries outside of the U.S. are up for the year as central banks confront inflation, but the 10-year yields are far ranging, from 0.65% in Japan to 9.28% in Mexico as of September 30, 2023. Most major developed market economies have 10-year yields between 2.5% and 4.9%. U.S. Treasuries have been one of the worst performing market segments during 2023, with the Bloomberg US Treasury Index returning -1.5% as of September 30, 2023. Longer date Treasuries have performed even worse, with the Bloomberg US Treasury Long Index returning -8.6% as of September 30, 2023, with most of those losses occurring in the third quarter.

Credit has fared better than government bonds in 2023. Investment grade spreads have tightened slightly during the year and sit at 112 bps over Treasuries as of September 30, 2023. This has translated to flat returns as represented by the Bloomberg US Credit Index. High yield bonds have performed better, as the Bloomberg US Corporate High Yield Index has returned 5.9% as of September 30, 2023. High yield spreads have tightened 77bps in 2023 and sit at 406 bps above Treasuries as of September 30, 2023.

Many investors transitioned some of their fixed income exposure toward the front end of the yield curve during 2023 to take advantage of high interest rates with almost no risk, with hesitation to take too much duration risk given that the resilient economy and persistent inflation are likely to keep us in a "higher-for-longer" rate environment. However, with most market experts believing that central banks are close to being done raising interest rates, and uncertainty about the potential economic impact of higher rates, many investors are reserving some appetite to add duration should potential monetary easing and rate cuts occur.

SCERS Fixed Income Portfolio

SCERS' total fixed income exposures reside within different segments of the total SCERS portfolio. The bulk of the exposure sits within the Diversifying asset category, within a Fixed Income asset class, which consists of Core Plus Fixed Income and U.S. Treasuries exposure. The Fixed Income asset class has the objective of providing lower correlation to growth assets and diversification for SCERS' total portfolio, moderate income and cash flow generation, some return enhancement, and a source of liquidity.

SCERS also maintains fixed income exposure within the Growth asset category, in the form of a Public Credit asset class, which is comprised of mostly high yield corporate credit and bank loans. This exposure has a higher risk and return profile than the Fixed Income asset class within the Diversifying asset category.

The custom blended benchmark for the Fixed Income asset class reflects the sub-strategies and their respective target weights (75% core plus fixed income and 25% U.S. Treasuries). The Public Credit segment has its own blended benchmark. The aggregate fixed income targets and benchmarks are shown below.

SCERS Fixed Income Portfolio Structure

	Asset Category	Minimum	Target Allocation	Maximum	Policy Index Benchmark
Total Fixed Income Portfolio		**13%**	**18%**	**23%**	**Custom Blend of benchmarks below:**
Core Plus Fixed Income	Diversifying	9%	12%*	15%	Bloomberg Barclays U.S. Aggregate Index
U.S. Treasuries	Diversifying	3%	4%*	5%	Bloomberg Barclays U.S. Treasury Index
Public Credit (high yield/bank loans)	Growth	1%	2%*	3%	50% ICE BofA ML High Yield + 50% Credit Suisse Leveraged Loan

* Percentage of total portfolio

As of September 30, 2023, the actual Total Fixed Income allocation is 15.5%, versus the target allocation of 18%, due to the underperformance of fixed income relative to other asset classes. As a reminder, SCERS' Overlay Program rebalances SCERS' Fixed Income allocation to target on a quarterly basis using futures positions when the physical allocation is below or above target.

The Fixed Income structure was heavily revised in 2022, which included adding additional Core Plus fixed Income exposure and mandates, which take an active approach to duration management, to the existing lineup of Core Plus managers. SCERS also fully redeemed from a global fixed income fund that was eliminated from the strategic asset allocation. SCERS did not make any manager changes to the Fixed Income portfolio in 2023 and spent the year evaluating the revised structure and underlying managers.

2023 Activity

- Oversaw, monitored, and met with SCERS' Fixed Income managers

2024 Annual Plan

- Monitor allocations to existing managers and rebalance the portfolio as appropriate
- Oversee, monitor, and assess the existing manager lineup

Absolute Return

Market Overview

The market environment for absolute return has been positive for most strategies over the course of the year. Despite recessionary concerns and rising interest rates, equity market performance across both U.S. and International markets has been strongly positive. Fixed income markets are slightly negative due to rising rates but have performed better than in the prior year. Higher volatility and increasing interest rates have led to higher dispersion within equity and credit markets, providing trading opportunities for absolute return managers. Most absolute return strategies have delivered positive performance year-to-date, with returns ranging from low to high single digits. Additionally, despite intra-month volatility, which has created some negative performance pressure in certain strategies such as Global Macro, dispersion across strategies is lower compared to prior years. Year-to-date though September the broad HFRI Composite Weighted Index is up 3.9% and the HFRI Fund of Funds Composite Index is up 2.8%.

At the strategy level, Equity Long/Short has been the top performing strategy year to date, particularly longer-biased strategies and technology focused strategies that have benefited from the strong equity market rally through the first part of the year. Event Driven and Relative Value strategies have also generated positive results during the year. Relative Value strategies have benefited from dispersion within equity and credit, generating positive results despite maintaining limited overall market exposure. Event Driven strategies have rebounded during the later part of the year after struggling earlier in the year from some failed merger deals and widening spreads.

Discretionary and Systematic Global Macro, which were the top performing strategies in 2022, have been the bottom performing strategies so far in 2023. Compared to 2022 when there was more consistent directional movement in markets (i.e. negative equity and increasing interest rates), Macro strategies have suffered from directional changes month to month.

Following strong relative returns in calendar year 2022, assets under management in the hedge fund industry increased during the first half of 2023. Asset levels rose due to a combination of net inflows and positive performance. During the first half of the year, investors allocated an estimated $13 billion of new capital to the industry. Net inflows along with positive performance brought global hedge fund assets to approximately $4 trillion, which is near peak levels for the industry.

Multi-manager, multi-strategy platforms have been an increasing area of focus in the hedge fund industry over the past several years. Following the example of several highly successful firms, multi-manager platforms have experienced significant growth over the past few years, both in the level of assets and headcount. These strategies typically seek to generate attractive risk-adjusted returns, with limited market exposure (beta and correlation), while minimizing volatility and drawdowns. The attractive returns and risk profile has allowed these firms to generate significant growth in assets. However, these strategies also tend to have higher fees, often utilizing a pass-through fee structure, and require extended lock-ups and gating provisions for new investors. Additionally, the competitive dynamics of the industry have placed increased emphasis on attracting skilled portfolio managers (i.e. competition for talent), which has further increased fees charged to investors. While the multi-manager platforms have attributes that are attractive to investors, it remains to be seen if the success of original multi-manager platforms can be replicated by newer entrants and if the increased fees and reduced liquidity are justified and sustainable.

SCERS Absolute Return Portfolio

SCERS' Absolute Return portfolio began the year with an allocation of 7.5%, above the 7% target allocation, primarily due to strong relative returns in calendar year 2022. In the prior year, SCERS' Absolute Return portfolio was up +1% compared to double digit declines in equity and fixed income markets.

SCERS funded a new investment in the first quarter of the year, which was recommended and approved in the fourth quarter of the prior year. The investment in the Tudor BVI Global Fund replaced a prior SCERS Discretionary Global Macro investment, which was redeemed from in the prior year. The investment in Tudor was made with the goal to improve the overall risk-adjusted return profile of the portfolio, which was part of the reasoning for other redemptions made in the first quarter of the year, as detailed below.

SCERS made two redemptions during the first quarter, which brought the portfolio down below the 7% target allocation. SCERS also made a redemption in the fourth quarter due to the change in the structure of an underlying fund, with proceeds to be received at the start of 2024. These redemptions provide capacity for additional new investment opportunities throughout the remainder of this year and into next year. Additionally, with the increase in interest rates, SCERS was compensated for holding cash and temporarily increased the cash allocation while evaluating options for re-allocating proceeds to other parts of the portfolio. As cash rates have continued to increase toward 5% and above, the hurdle rate for absolute return investments has increased. Depending on the future path of interest rates, absolute return strategies may come under increased pressure to generate higher returns to compensate investors for the risk, increased fees, and reduced liquidity that many absolute return strategies demand.

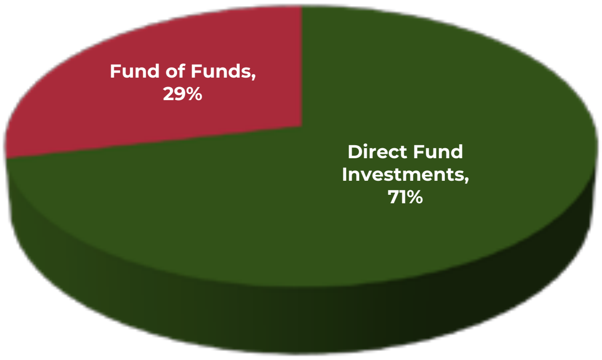
SCERS will continue to evaluate opportunities to improve the portfolio, including new direct investments and rebalancing the portfolio as appropriate. Potential additions include equity long/short, multi-strategy, and macro-oriented strategies. These strategies fit the overall profile for SCERS' Absolute Return profile, which includes attractive risk adjusted returns, low correlation and beta to equity and credit markets, and the ability to protect capital during market drawdowns.

The following charts show the construction parameters and guidelines for SCERS' Absolute Return portfolio, along with current portfolio allocations, per SCERS' alternative assets consultant, Cliffwater.

Absolute Return Portfolio Structure	
Portfolio Objective	Positive absolute return profile over time with limited sensitivity to broad market performance
Benchmark	Policy: HFRI FoF Conservative Index Long-term objective: T-bills + 2%
Risk Target	Standard Deviation < 25% of global equities
Market Sensitivity	Target an equity beta <0.2 Target equity correlation <0.5
Market Exposure	Total notional gross exposure < 750%
Target Allocation	7% of total assets
Allocation Range	5% to 9% of total assets
Number of Funds	Target 12 funds with a range of 8 to 15
Non-U.S. Exposure	Expect 20% to 50% non-U.S. exposure

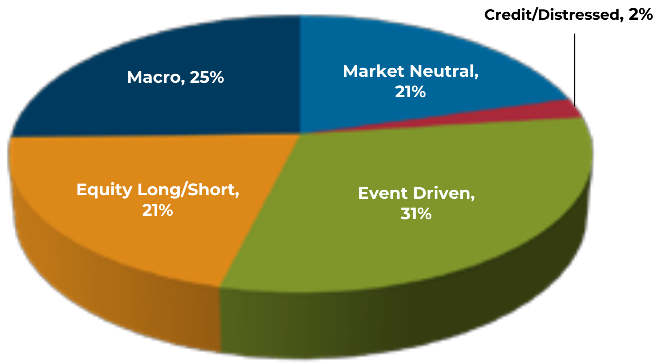
Absolute Return Portfolio Allocations

AS OF JUNE 30, 2023



Absolute Return Portfolio Strategy Allocations

AS OF JUNE 30, 2023



2023 Activity

The 2023 Absolute Return annual investment plan was:

- A target of one fund commitment, with a range of 0-3 funds
- An average commitment size of $50 million per fund

2023 actual activity:

- Fully redeemed from Alternative Risk Premia strategy during the first quarter of 2023
  - Two Sigma Risk Premia Enhanced Fund: $48 million
- Fully redeemed from Multi-Strategy fund during the first quarter of 2023
  - Sculptor Domestic Partners II: $58 million
- Funded new investment in Discretionary Global Macro strategy in January 2023
  - Tudor BVI Global Fund: $50 million
- In process and expected to close by year-end
  - $50 million investment to an Equity Long/Short fund
  - Put in a full redemption request during the fourth quarter of 2023 to a Multi-Strategy fund in the portfolio, due to a change in the fund structure
- Oversaw, monitored, and met with SCERS' existing Absolute Return managers

2024 Annual Plan

Below is the 2024 annual plan for the Absolute Return asset class, as recommended by Cliffwater and Staff:

SCERS Absolute Return Annual Investment Plan			
	Target	Minimum Range	Maximum Range
Number of Funds	1	0	3
Investment per Fund	$50 MM	$30 MM	$60 MM

- Evaluate investment levels with existing managers and rebalance the direct Absolute Return portfolio as necessary
- Consider the strategic fit of multi-manager platforms and if allocations to these strategies should be considered
  - Do the risk-adjusted returns justify higher fee structures, including pass-through fees, and potentially reduced liquidity?
- Evaluate the potential addition of new strategies to bring the Absolute Return portfolio in line with 7% target allocation and improve risk-adjusted returns
  - Potential additions include equity long/short, multi-strategy, and macro-oriented strategies
- Oversee, monitor, and assess the existing manager lineup

Private Equity

Market Overview

Within private equity, the first nine months of 2023 have been marked by challenging fundraising conditions, which continues the trend witnessed in the latter part of 2022. The high-interest-rate environment remains a persistent hurdle, which is intensifying the costs associated with borrowing and servicing floating-rate debt. This has led to a significant 49% drop in capital deployment since the recent peak in the fourth quarter of 2021, and a parallel decline of 68% in exit activity since the second quarter of 2021.

While the performance of private equity funds has generated strong returns over the past decade, its shorter-term, one-year performance has experienced negative returns. Fundraising over the past year has encountered challenges, lagging behind first half 2022 figures by 15% to 25%, most notably in venture capital. Leverage ratios for leveraged buyout (LBO) transactions have receded to 43% in 2023, compared to the 2022 average of 51% and the five-year average of 52%, indicating a more cautious and circumspect approach to financing by private equity managers in the face of higher interest rates. Exit activity has been similarly subdued, declining 22% since the end of the first quarter of 2023. This discrepancy between investments and exits raises concerns about potential liquidity challenges for larger funds.

For private equity buyouts, prices are undergoing a comprehensive corrective phase. With EV (enterprise value) to EBITDA (earnings before interest, taxes, depreciation, and amortization) serving as a common valuation metric, multiples maintained a narrow range—between 11.5x and 12.4x—over the four years ending in 2022, only to experience an abrupt 18.5% decline this year. The median EV to EBITDA multiple stands at 10.5x for the 12 months ending in the second quarter of 2023, down from the 12.1x observed in 2022.

Buyout funds generated $202 billion in deal value during the first half of 2023, a 58% decline from the same period last year. An estimated $1.1 trillion in dry powder is allocated to buyout funds, which provides motivation to ramp up investing after more than a year of low deal activity. Bain and Company estimate that buyout funds alone are sitting on a record $2.8 trillion in assets that have not been exited, which is over four times the amount held during the global financial crisis. According to a recent survey by Bain, most limited partners (LPs) would prefer that general partners (GPs) generate liquidity rather than try to squeeze another 0.5x multiple of value from underlying portfolio companies.

In 2021, IPOs in the US raised an impressive $142 billion across 397 offerings, according to data from Renaissance. However, this count plummeted to $7.8 billion across 71 deals in 2022, and the first half of 2023 saw only 53 IPOs raise a total of $8.9 billion. The slow IPO market has prompted later-stage venture capital and growth equity firms to recalibrate their strategies, in order to navigate the landscape of elongated investment periods and follow-on investments at reduced valuations, which has resulted in fewer write-offs and a concerted effort to preserve value. This effort has manifested in underlying portfolio companies curbing their spending, prioritizing profitability, and moderating growth trajectories to better weather the funding challenges and demonstrate their ability to generate profits.

SCERS Private Equity Portfolio

SCERS' Private Equity portfolio has a target allocation of 11% and is broken out by strategy, namely: buyouts, venture capital, distressed debt, and growth equity. SCERS uses the Cambridge Associates LLC Global Private Equity & Venture Capital Pooled Index as its policy index benchmark to assess the performance of the Private Equity asset class. The long-term objective of the Private Equity portfolio is to earn equity-like returns, using the Russell 3000 Index as a benchmark, with an additional premium of 3% to compensate for the liquidity risk undertaken by investing in the asset class. The targeted ranges of investment exposures within Private Equity are shown below.

SCERS Private Equity Portfolio Structure

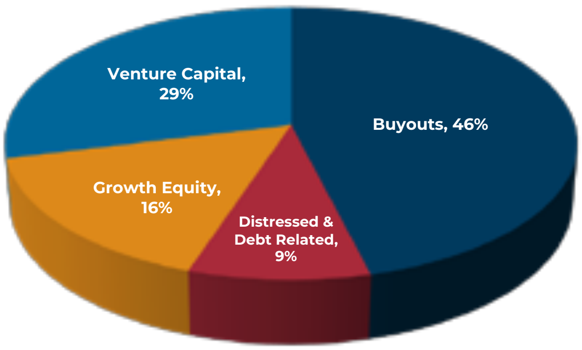
	Minimum	Target Allocation	Maximum	Policy Index Benchmark
Total Private Equity Portfolio	**8%**	**11%**	**14%**	**Cambridge Associates PE/VC Index**
Buyout	35%	**55%**	75%	
Venture Capital	10%	**20%**	40%	
Growth Equity	10%	**15%**	35%	
Distressed Debt	5%	**10%**	30%	
Other	0%	**0%**	15%	
U.S. Private Equity	70%	**80%**	90%	
Non-U.S. Private Equity	10%	**20%**	30%	

SCERS has been investing directly with private equity managers since 2011. As of September 30, 2023, the current allocation stands at 13.3% based on June 2023 NAVs. While the Private Equity allocation is overweight to the 11% target allocation, it has come down significantly from the 15.4% allocation in last year's report, as the lag effect of private equity valuation declines has caught up with the public market valuation declines in 2022. SCERS also sold some small allocations to a few legacy secondary fund of funds from the 2006-2008 period, which reduced the Private Equity allocation on the margin. Given private equity's unique cash flow characteristics, it is important that SCERS commit to private equity funds across vintage years to maintain its target allocation to the asset class. Cliffwater incorporates the Private Equity overweight into its modeling forecasts that are used to determine the annual Private Equity budget.

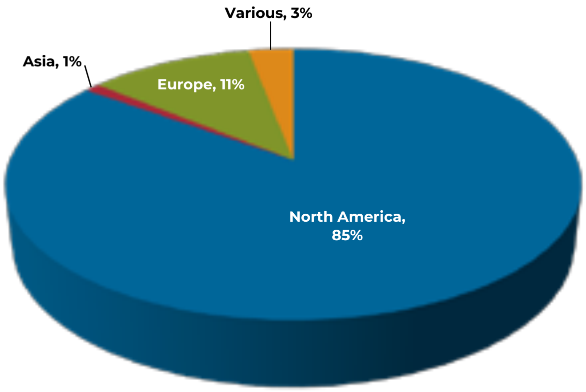
With a mature Private Equity portfolio that includes many existing managerial relationships and GPs quickly coming to market with follow-on funds, there are often times more investment opportunities than capital available in the SCERS budget. Each follow-on investment under consideration is fully underwritten as if it is a new relationship. Cliffwater and Staff are comfortable with not committing money to a follow-on fund if the opportunity is not warranted or if a new fund is better suited for the portfolio.

SCERS current Private Equity portfolio strategy and geographic breakdowns are shown below:

Private Equity Portfolio Strategy Allocations
AS OF JUNE 30, 2023



Private Equity Portfolio Geographic Allocations
AS OF JUNE 30, 2023



Venture capital, at a 29% allocation within Private Equity, is currently above its 20% target but within the permissible range. The overweight to venture can be attributed to SCERS' more mature funds with vintage years prior to 2018. While these funds have been impacted from valuation declines in their holding of public market securities, they are still generating strong net multiples of over 2.0x in aggregate. However, they are still holding a number of value driving assets that have been impacted from a dramatic slowdown in the exit market. The top five most significant venture fund exposures, all of which are pre-2018 vintages, account for 49% of the total venture capital exposure. Staff and Cliffwater believe it is important to continue investing in venture capital for vintage year diversification; however, with the moderation in the exit market for venture-backed companies, Staff and Cliffwater believe it is prudent to slow down the pace of investing within the sub-strategy until the exit market picks up, to manage the overweight.

2023 Activity

The 2023 Private Equity annual investment plan was:

- A target of 9 fund commitments, with a range of 6-11 funds
- A total of $260 million in commitments, with a range of $200–$300 million
- An average commitment size of $30 million per fund

2023 actual activity:

- 7 fund commitments were made during the year totaling $218 million in aggregate
  - $40 million follow-on investment in Cortec Group VIII, LP (Buyout)
  - $35 million follow-on investment in Accel-KKR Buyout Fund VII, LP (Buyout)
  - €30 million ($33 million equivalent) investment in CVC Capital Partners IX, LP (Buyout)
  - Additional $5 million in Gridiron Capital Fund V, LP (Buyout) – prior $30 million investment in the fund in 2022
  - In process and expected to close by year-end, a $40 million follow-on investment in a Buyout fund
  - €32 million ($35 million equivalent) investment in Alchemy Special Situations Opportunities Fund V, LP (Distressed)
  - $30 million follow-on investment in Khosla Ventures VIII, LP (Venture Capital)
- Sold four legacy fund of funds positions from vintage year 2006-2008, for an aggregate amount of $23.9 million
  - HarbourVest Partners VIII – Buyout Fund, LP
  - HarbourVest Partners VIII – Mezzanine Fund, LP
  - HarbourVest International Private Equity Partners VI, LP
  - Goldman Sachs Private Equity Partners X, LP
- Oversaw, monitored, and met with SCERS' existing Private Equity managers

2024 Annual Plan

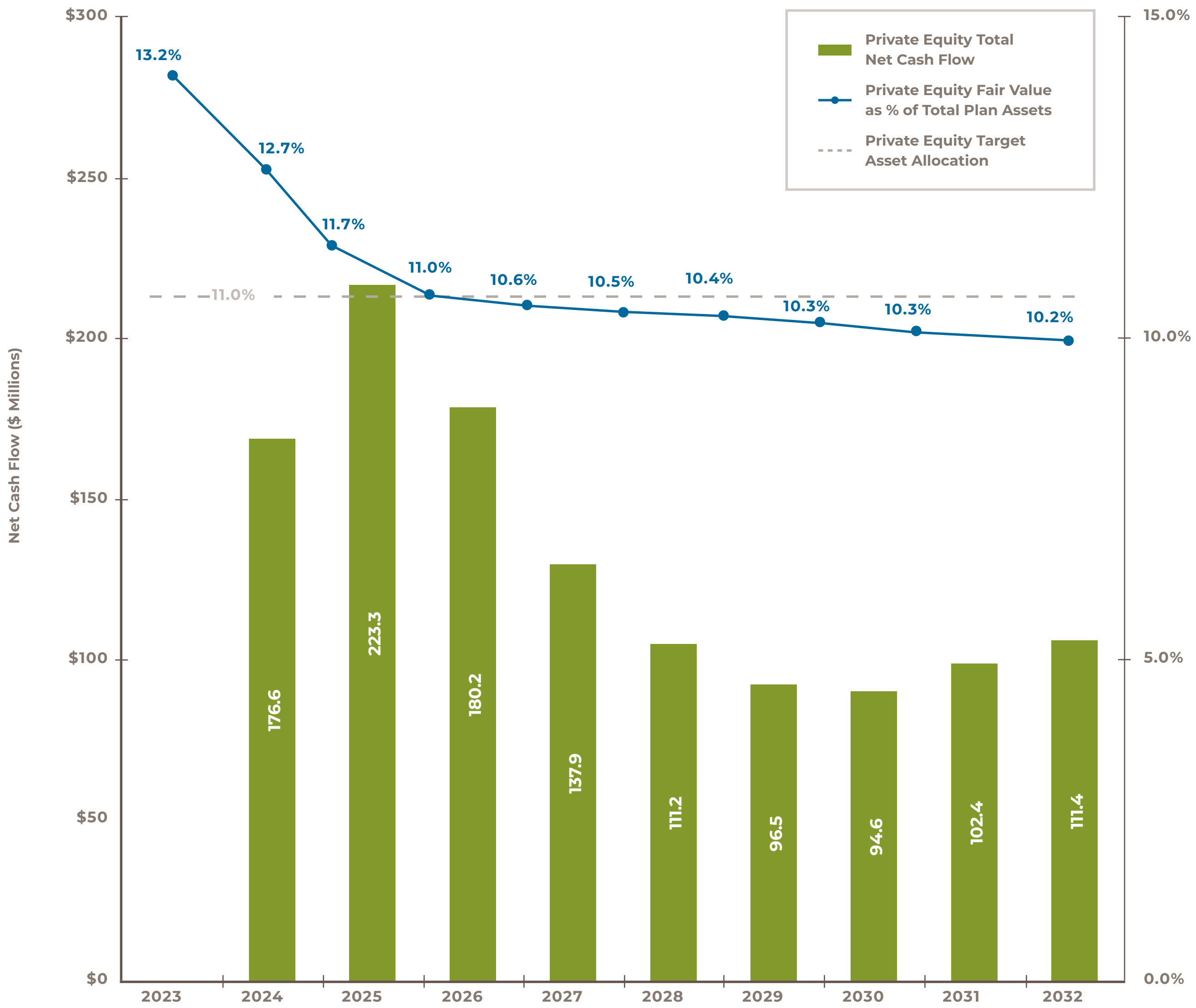
Below is the 2024 capital commitment plan for the Private Equity asset class, as recommended by Cliffwater and Staff:

SCERS Private Equity Annual Investment Plan			
	Target	**Minimum Range**	**Maximim Range**
Commitment Level	$250 MM	$200 MM	$300 MM
Number of Funds	8	6	10
Buyout fund(s)	4	3	6
Distressed fund(s)	1	0	2
VC fund(s)	2	1	4
Growth Equity fund(s)	1	0	2
Other fund(s)	0	0	1
Non-U.S. fund(s)	1	0	3
Commitment per Fund	$35 MM	$20 MM	$50 MM

Non-U.S. funds are already reflected in the strategy categories above

- Recommend a $250 million commitment budget for 2024, with a range of $200 million to $300 million
  - Target 8 fund commitments at an average commitment size of $35 million, with a range of $20-$50 million per fund
  - The commitment budget for 2024 is in line with the budget from the prior year
  - The 2024 budget does not include any funds in which a commitment was made in 2023 but capital has not been called

Private Equity Capital-Pacing Plan



- Staff and Cliffwater continue to take a measured approach when making new commitments as the Private Equity portfolio is above the 11% target allocation
  - Given the abundance of capital in the markets, Staff and Cliffwater will remain prudent and thoughtful when making new commitments
- Staff and Cliffwater continue to prefer specialist managers in specific sectors and industries
- 2024 investment strategies and themes include:
  - Follow-on investments to existing managers/strategies
  - Continued attention to distressed debt and buyout funds
  - Continued implementation of the recently formed co-investment mandate
  - Monitoring of secondary pricing for potential additional asset sales and investment opportunities
- Oversee, monitor, and assess the existing manager lineup

Private Credit

Market Overview

The public and private markets have each experienced varying degrees of valuation resets resulting from rising interest rates, as governments around the world try to bring down inflation. The ratcheting up of the federal funds interest rate in the U.S., which is the base rate for determining discount rates for valuing assets, has pushed asset values down. Concurrently, borrowing rates have increased as well. This is causing financial strains on corporate earnings and the ability to refinance or finance growth initiatives. In a rising interest rate environment, private debt benefits investors due to its floating rate structures. However, despite increasing with inflation, floating-rate loans have a negative consequence to the borrower in the form of higher loan payments, which creates the potential to jeopardize a firm's ability to service the loan and potentially repay the loan at maturity.

The investment markets have seen transactions down considerably with a wide difference between what sellers are asking and what buyers are willing to pay. Capital is being more selective and conservative. This is a positive for private credit investors that are attaining more favorable lender terms, tighter covenants, lower leverage, and higher interest rate spreads. But the negative is that the loans made prior to The Fed tightening, where competitive pressures led to minimal covenants, higher leverage, and lower spreads, are experiencing some strain.

With the potential for a slow economy or mild recession, Staff and Cliffwater will be prudent in making new private credit commitments. The focus remains on selecting cycle-tested managers, who are disciplined, can generate transactions and deal flow, and earn higher returns with favorable lending terms due to their competitive advantage or specialization. Having experience renegotiating loans and in-house resources to navigate a potential default cycle will be essential and a key consideration.

SCERS Private Credit Portfolio

Initiated in 2017, the Private Credit asset class sits within SCERS' Growth asset category and represents loans to private companies, primarily mid-sized private businesses. Increasingly, private credit has moved into lending to large public corporations traditionally served by large money center banks and the public market.

An attractive feature of private credit investments is the cash yield provided, which is generally most of the return. Cash yield comes from contracted loan payments (interest and principal) and the various fund fees such as origination fees and call protections. Since private credit is an illiquid investment, SCERS' Private Credit investments must generate a premium for the illiquidity, as measured by exceeding the publicly traded bank loan returns by 2%, which SCERS measures against the Credit Suisse Leveraged Loan Index, an index of over 1,600 publicly traded bank loans.

The Private Credit allocation has a 5% target allocation, with a +/- 2% range around the target, broken out between Direct Lending and Opportunistic Lending sub-strategies. As of September 30, 2023, the actual Private Credit allocation is 3.3%.

The Private Credit sub-strategy targets and geographic mix are shown below:

SCERS Private Credit Portfolio Structure				
	Minimum	**Target Allocation**	**Maximum**	**Policy Index Benchmark**
Total Private Credit Portfolio	**3%**	**5%**	**7%**	**Credit Suisse Leveraged Loan + 2%**
Direct Lending	50%	**65%**	90%	
Opportunistic Lending	10%	**35%**	50%	
U.S. Private Credit	65%	**75%**	100%	
Non-U.S. Private Credit	0%	**25%**	35%	

SCERS continues to make progress in reaching the 5% Private Credit target allocation, which is projected by year-end 2026. By the end of 2023, SCERS will have made two commitments totaling $85 million, which is below the budget of $140 million and also below the range of $100-$180 million. With rising interest rates and uncertain economic conditions, Staff and Cliffwater were prudent in selecting investments. While Staff and Cliffwater have been evaluating several managers and strategies, actionable opportunities were more limited. Commitments made during the year included an upsizing of $35 million to IFM U.S. Infrastructure Debt Fund and $50 million to an existing manager but a new strategy, Ares Senior Direct Lending Fund III.

Private credit is an alternative financing source for private companies to finance the growth of their businesses, acquire other companies, or other corporate purposes. The asset class tends to heavily focus on sponsored-back lending, or lending to private equity-owned businesses, which is lending based on the going-concern or future enterprise value of the private equity-owned company. Monthly loan payments and repayment are predicated on the cash flow generation and growth of the borrowing company. When the economy is growing, then this lending position is fairly secure, but should the economy slow down, then there is heightened repayment risk. This repayment risk is especially relevant for companies that provide services or are asset light, where the possibility of a complete loss is a greater risk because the only assets of the firm are often its people and office equipment.

While SCERS has ample exposure to sponsored-back lending, Staff and Cliffwater have also consistently targeted lending strategies backed by some level of hard, tangible, or recoverable collateral such as equipment, infrastructure, transportation assets, royalties, intellectual property, and online content, where the downside is mitigated by the collateral value; thereby, lessening the possibility of a complete loss.

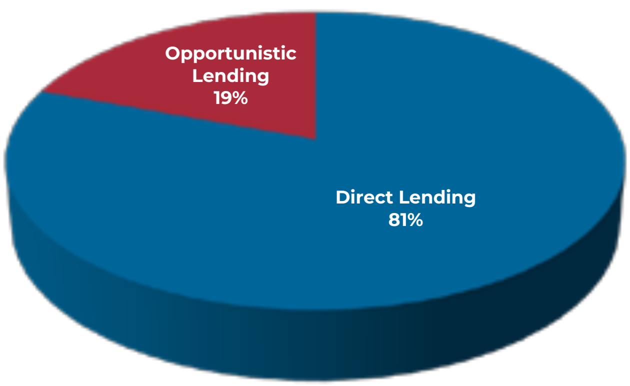
Additionally, collateral lending tends to be less sensitive to economic conditions particularly for assets that have long lives, long income streams, or which are mission critical to the borrowing company. Recent examples of this are SCERS' investments in Brookfield Infrastructure Debt Fund and Shamrock Content Debt Fund, made last year.

Some examples of asset backed strategies of interest include aviation and equipment leasing. Geographically, Asia is also an area that Staff has been performing due diligence on, as there is less institutional focus in the region.

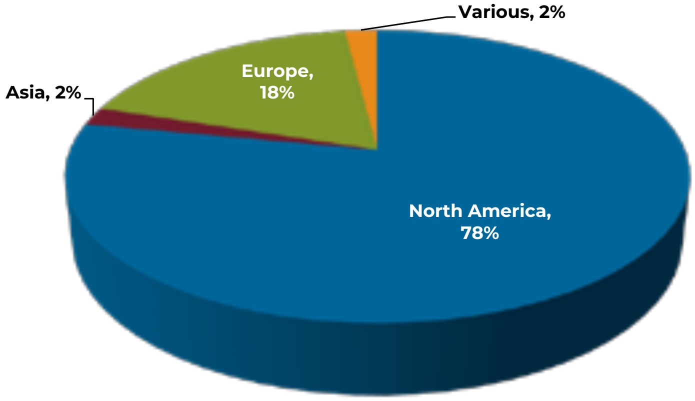
The private credit market remains a crowded space with varying levels of differentiation among managers, and where many managers only have 10 years or less track records. As such, Staff and Cliffwater remain focused on managers with experience through a market cycle, differentiated strategies, and who have in-house workout expertise renegotiating loan terms. Given the prevalence of private credit lending, Staff and Cliffwater continue to seek out specialist managers and collateral-based lending strategies.

Below is SCERS' Private Credit diversification by investment strategy and geography as of June 30, 2023:

Private Credit Portfolio Strategy Allocations
AS OF JUNE 30, 2023



Private Credit Portfolio Geographic Allocations
AS OF JUNE 30, 2023



2023 Activity

The 2023 Private Credit annual investment plan was:

- A target of 4 fund commitments, with a range of 2-6
- A total of $140 million in commitments, with a range of $100-180 million
- An average commitment size of $40 million per fund

2023 actual activity:

- 2 commitments were made during the year totaling $85 million:
  - $35 million upsize investment to IFM U.S. Infrastructure Debt Fund, LP, an open-ended commingled fund (U.S. direct lending) bringing SCERS' total invested to $100 million
  - $50 million investment to Ares Senior Direct Lending Fund III, LP (U.S. Direct Lending)
    - SCERS is an investor in Ares Capital Europe Fund V (Europe Direct Lending)
- Oversaw, monitored, and met with SCERS' existing Private Credit managers

2024 Annual Plan

Below is the 2024 capital commitment plan for the Private Credit asset class, as recommended by Cliffwater and Staff:

SCERS Private Credit Annual Investment Plan			
	Target	**Minimum Range**	**Maximim Range**
Commitment Level	$160 MM	$120 MM	$200 MM
Number of Funds	4	2	6
Direct Lending fund(s)	2	1	3
Opportunistic Lending fund(s)	2	1	3
Commitment per Fund	$40 MM	$30 MM	$75 MM

- Recommend a $160 million commitment budget for 2024, with a range of $120 million to $200 million
  - Target 4 fund commitments averaging $40 million each, with a range of $30-$75 million per fund
  - The 2024 budget does not include any funds in which a commitment was made in 2023 but capital has not been called

Private Credit Capital-Pacing Plan

- Staff and Cliffwater continue to make progress, though measured, towards reaching the 5% Private Credit target allocation, which is expected to be reached in 2026
  - Given the abundance of capital in the private credit markets, Staff and Cliffwater will remain prudent and thoughtful in making new commitments
  - Staff and Cliffwater continue to seek out specialist managers in corporate going-concern lending but are favoring collateral-based credit strategies
- 2024 investment strategies and global themes include:
  - Follow-on investments to existing managers/strategies
  - Niche and specialty lending/leasing strategies
  - Hard collateral or intellectual property-based lending
  - Pan-Asia private credit
- Oversee, monitor, and assess the existing manager lineup

Real Assets

Market Overview

The past year has seen the world in a state of transition, with geopolitics still dominating headlines along with inflation, although trending down, and rising interest rates. Within the real assets segment, energy markets (oil and gas) are experiencing bouts of pricing volatility, while infrastructure is enjoying considerably strong performance.

Infrastructure

So far, the infrastructure sector has been less impacted by higher interest rates due to its inflation linkage, long-term contracted revenues with credit worthy counterparties, and its lower correlation to other assets, which is driving investor demand. Therefore, values are holding up. Infrastructure, unlike other private assets often has long-term contracted or regulated revenues that tend to be less sensitive to economic conditions and market volatility given the essential nature of the underlying assets. Infrastructure is not fully immune to higher loan rates; however, its cash flows tend to be more stable and predictable, which are very sought after features by investors.

Geopolitical events are creating an increased urgency for resource sustainability, infrastructure security, and energy reliability. As an example, the Russia-Ukraine war caused Europe to face an unprecedented energy crisis due to its reliance on Russian oil and gas. The distribution in the energy supply is particularly acute for Europe with its colder climates and large manufacturing base. What came out of this crisis is that many countries realized an immediate need to diversify their energy supply and the critical need to protect their energy systems from outside forces. This realization pushed forward recent legislation in the U.S. and Europe to provide governmental subsidies and economic incentives to replace broken infrastructure and build new infrastructure including renewable energy resources, port security measures, technology upgrades, and investment in transportation infrastructure (roads, bridges, and marinas). This large governmental investment is and will have a positive outcome for infrastructure investing across all strategies from core to greenfield development. SCERS' infrastructure portfolio has been constructed around capturing this dynamic from core infrastructure with Brookfield Super Core Infrastructure Partners and IFM Global Infrastructure Fund, to value-add investments in brownfield and platform development with ISQ Global Infrastructure and Brookfield Infrastructure, to greenfield development with Meridiam Infrastructure public-private partnerships in the U.S. and Europe.

Energy And Power

The oil and gas sector, which contributes to inflationary cost pressures and drives economic activity, is facing a difficult environment for capital investment for existing production, much less future production. As is well known in the industry, oil extraction declines as the resources are pulled out of reservoirs, known as the decline curve. The decline curve is rather sharp early on as the initial flow of oil is high and abundant, then within 12-24 months drops by 25% or more and gradually declines to a steady state.

Historically, the industry would need to develop new wells just to offset the decline curve without considering increasing production as demand grew. However, the oil and gas sector has been capital starved for the last 5 years as it overspent during the height of the fracking boom.

Energy companies have responded to investor demands for disciplined capital spending, current cash flow generation, and distribution of earnings. With more discipline, energy companies are operating within their budgets and focusing on generating economic returns. The industry is also facing challenges from the rapid adoption of alternative sources of energies, including renewables, as well as mounting pressure from ESG concerns. Industry research points to a pending supply-demand imbalance resulting from the lack of reinvestment into finding new sources of hydrocarbons. As a highly capital-intensive business, government prioritization of and incentives for renewable energy and reducing the global carbon footprint is driving capital away from the conventional energy sector and rapidly toward alternative sources of energy.

Understanding that it will take several decades to transition to alternative sources of energy, there is a recognition that there will need to be a symbiotic balance between conventional oil and gas and renewables to serve the word's energy needs, and investment opportunities will most likely follow this path accordingly. Staff and Cliffwater continue to follow the opportunities and challenges within the energy sector, knowing the long-term consideration for a balance of oil and gas and renewables, but also remain cautious due to the sector's historical volatility.

SCERS Real Assets Portfolio

The investment objective of Real Assets is to generate returns with a moderate cash yield component, lower return volatility, less correlation to other asset classes, and the ability to adjust with inflation.

Within Real Assets, there are several sub-asset classes and investment strategies across infrastructure, energy and power, agriculture, timber, and other real assets. Portfolio construction for the Real Assets portfolio provides flexibility in investment ranges, with the ability to target exposures with the most attractive risk-adjusted returns.

The Real Assets target allocation is 7%, with a +/- 2% range around the target. As of September 30, 2023, the actual Real Assets allocation is 8.3%.

The sub-strategy targets and ranges for Real Assets are shown below:

SCERS Real Assets Portfolio Structure				
	Minimum	Target Allocation	Maximum	Policy Index Benchmark
Total Real Assets Portfolio	**5%**	**7%**	**9%**	**Custom blend of benchmarks below:**
Infrastructure	45%	**60%**	75%	60% Cambridge Associates Private Infrastructure
Energy	15%	**30%**	45%	30% Cambridge Associates Private Energy
Agriculture, Timber, Other	0%	**10%**	20%	10% NCREIF Farmland

As communicated in last year's investment year in review, the Real Assets asset class reached and moved beyond its 7% target allocation well ahead of schedule due to a combination of valuation increases within the asset class, a reduction in plan assets in 2022, and funding of an open-end infrastructure commitment. Having reached the targeted allocation, combined with a large allocation to open-end evergreen infrastructure funds, future Real Assets commitments will be selective.

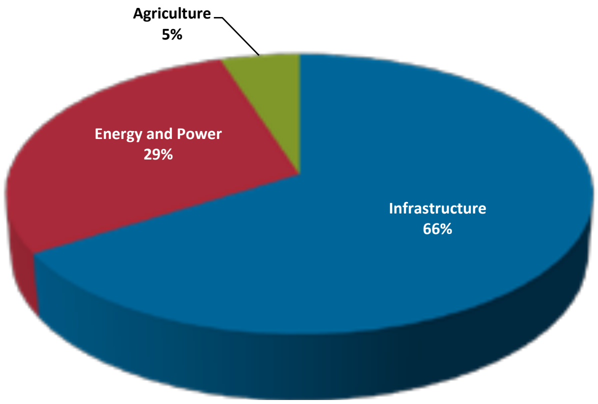
In 2023, SCERS made four commitments totaling $165 million, which was slightly below the budget of $190 million but within the range of $150-$230 million. Commitments made during the year were a $25 million upsize with an existing closed-end energy manager, NGP Royalties Fund II; $40 million to a new manager, Ara Partners Fund III; a $50 million follow-on investment with an existing closed-end infrastructure manager, Meridiam Infrastructure North America IV; and $50 million to a new closed-end infrastructure manager, KKR Asia Pacific Infrastructure Fund II, though an existing relationship in real estate.

With Cliffwater's help, SCERS has been tilting the portfolio towards more cash flowing investments and less reliance on capital appreciation to generate returns. By focusing on current cash flow, which is controllable, and away from future outcomes (appreciation), which are less controllable, the Real Assets portfolio is expected to experience greater resiliency in its returns. Illustrating this is SCERS' 1-year Real Assets net return of 9.5%, which compares to the performance of other private market asset classes, which generated either negative or low single digit returns.

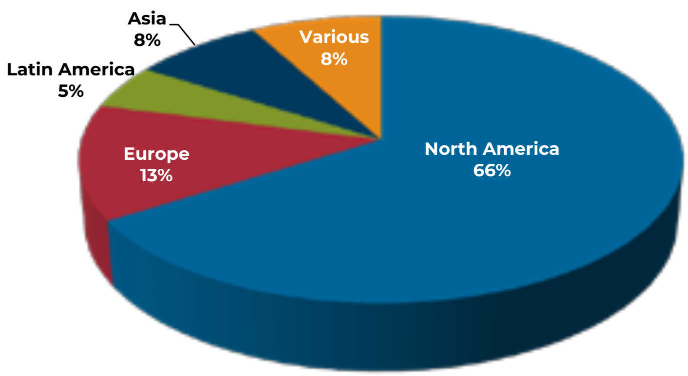
Staff and Cliffwater continue to favor unique and differentiated real assets investment strategies that provide attractive risk adjusted returns, are less sensitive to the broader economy, offer attractive current yield, and/or have the potential to adjust with inflation. With a high interest rate environment and an uncertain economic environment, coupled with competitive pressures in the real assets marketplace, Staff and Cliffwater are comfortable being selective and measured in new commitments within the asset class.

Below is SCERS' Real assets diversification by investment strategy and geographic region, as of June 30, 2023:

Real Assets Portfolio Strategy Allocations
AS OF JUNE 30, 2023



Real Assets Portfolio Geographic Allocations
AS OF JUNE 30, 2023



2023 Activity

The 2023 Real Assets annual investment plan was:

- A target of 4 fund commitments, with a range of 3-6
- A total of $190 million in commitments, with a range of $150-230 million
- An average commitment size of $50 million per fund

2023 actual activity:

- 4 commitments were made during the year totaling $165 million
  - $25 million upsize investment to NGP Royalty Partners II, LP (Energy and Power)
  - $40 million investment to Ara Partners Fund III, LP (Other – industrial decarbonization)
  - $50 million follow-on investment to Meridiam Infrastructure North Americas IV, LP (Infrastructure)
  - $50 million investment to KKR Asia Pacific Infrastructure Fund II, LP (Infrastructure)
- Oversaw, monitored, and met with SCERS' existing Real Assets managers

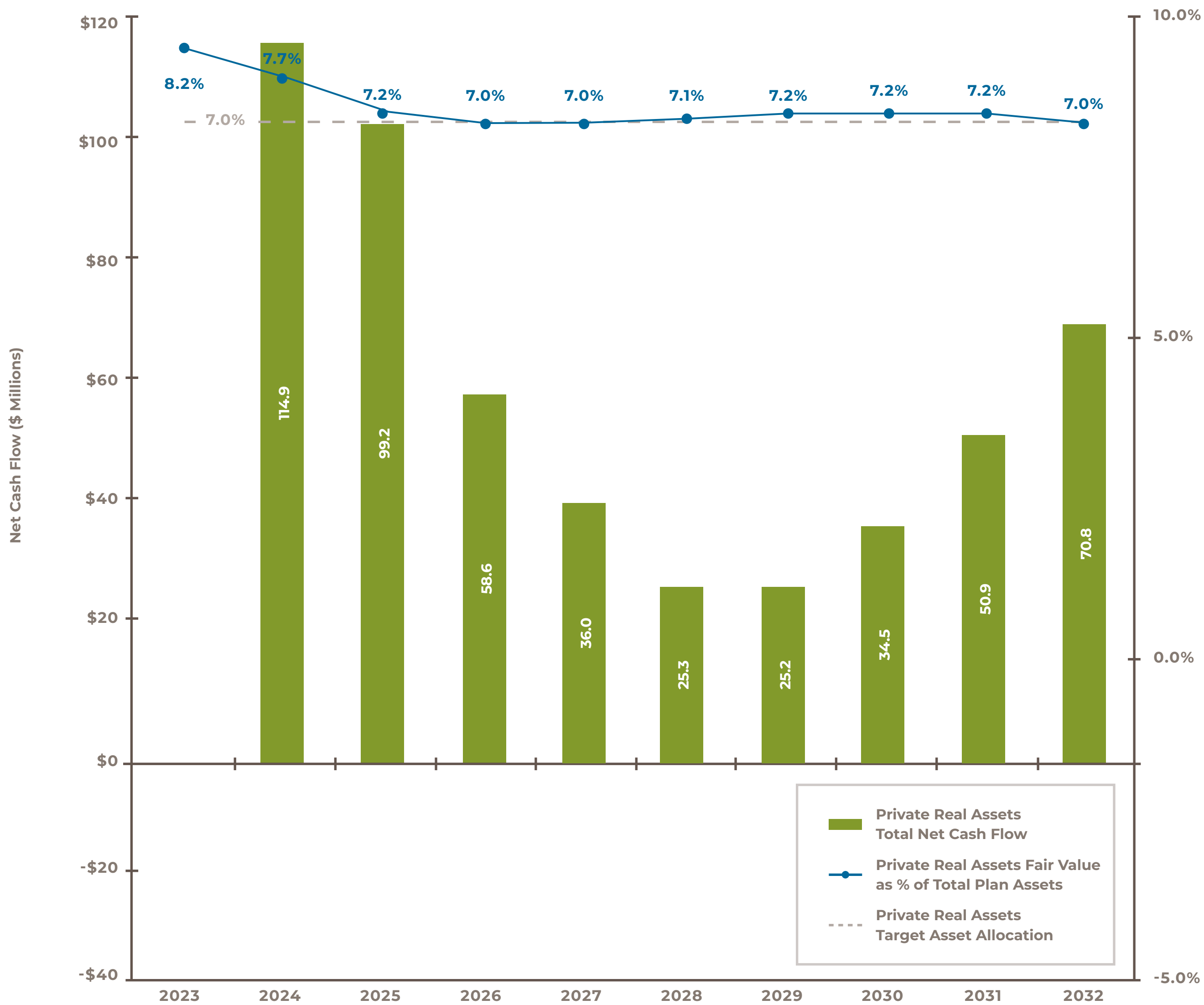
2024 Annual Plan

Below is the 2024 capital commitment plan for the Real Assets asset class, as recommended by Cliffwater and Staff:

SCERS Private Real Assets Annual Investment Plan			
	Target	Minimum Range	Maximim Range
Commitment Level	$180 MM	$140 MM	$210 MM
Number of Funds	4	3	6
Energy Related	1	0	2
Infrastructure	2	1	4
Ag, Minerals, Timber	1	0	2
Other	0	0	1
Commitment per Fund	$45 MM	$35 MM	$100 MM

- Recommend a $180 million commitment budget for 2024, with a range of $140-$210 million
  - Target 4 fund commitments averaging $45 million each, with a range of $35-$100 million per fund
  - The 2024 budget does not include any funds in which a commitment was made in 2023 but capital has not been called

Real Assets Capital-Pacing Plan



- Staff and Cliffwater expect future commitments to be selective
  - Capital pacing is dependent on the opportunity set of differentiated strategies/managers and the economic/market cycle
  - Capital deployment will be measured but focused
- 2024 investment strategies and global themes of focus include:
  - Follow-on investments with existing managers/strategies
  - Developing and Emerging Market infrastructure
  - Small/ mid-sized infrastructure
  - Agriculture and strategies across the food value chain
  - Aviation and transportation sectors
  - Specialty and sector focused real assets strategies
  - Environmentally driven strategies (de-carbonization, circular economy, and alternative energy/fuels)
- Oversee, monitor, and assess the existing manager lineup

Real Estate

Market Overview

Across asset classes, real estate is one of the more sensitive to interest rates due to the use of debt to finance investments. As such, the rapid hike in interest rates has had a profound impact on real estate values globally. No property sector has been immune. Property sectors that were previously in high demand, industrial and multifamily, have seen their share of significant write downs. In industrial's case, it is more the mathematical consequence of the discounted cash flow methodology where the base interest rate (Treasuries) increased from virtually 0% to 5%. The fundamentals for industrial/logistics remain strong with vacancy rates across the U.S. at less than 4% and Europe at less than 5%, which are clearly tight market conditions. But the flipside is that transaction volumes continue to contract given the higher financing rates and uncertainty around a potential recession.

Staff and Townsend have been tilting the portfolio towards property sectors that have the potential for long-term positive outcome and address the secular themes of demographics, consumption, and medical delivery. In addition, SCERS has been strategic in its core investing by reducing exposures to office and retail and emphasizing the main '24-hour cities' where returns are less volatile compared to the higher growth markets in the south, due to the south's abundance of land for new development. Staff and Townsend also take a global view for relative value opportunities to not only diversify the real estate portfolio but also to capture potential better risk-adjusted returns compared to the U.S., which over the past few years has been in developed Asia and Southeast Asia.

North America

Transaction volumes in the U.S. are down some 50% or more versus last year, as interest rates have risen. Overall, all property sector values are down; however, any transactions taking place are primarily within industrial/logistics and to a lesser extent the multifamily sector. Logistics is still viewed quite favorably because of the current strong fundaments (less than 4% vacancy) and the continued structural change in the overall goods supply-chain. Office is suffering from a secular change to a work-from-home office environment. Office has also become highly commoditized, overbuilt, and very capital-intensive, which further dissuades investors. Retail remains bifurcated by the preferred neighborhood grocery-anchored shopping center versus less than favorable malls and power centers. Multifamily is seeing cracks developing with rental rate growth slowing or declining, rent concession becoming more prevalent, and a large supply of new product expected to be delivered over the next two years.

Europe

Europe has been impacted by the uncertain economic environment, as well as a weak Euro which is impacting investor interest. In addition, inflation has been higher in Europe and the dominant German economy, which is largely manufacturing based. Europe has also been affected by slowing capital goods demand, geopolitical events, and high energy prices. But like the U.S., industrial/logistics is a favored property type despite values being down, with strong fundaments (less than 5% vacancy) having kept investor interest. European office has not suffered as much as the U.S., but it could be partly that most of the office inventory is in the prime cities with barriers to entry and a higher back to office participation rate. Retail is like the U.S. where grocery-anchored necessity retail is in favor. While European multifamily is still a developing property sector, it is seeing positive demand, but single family residential has weakened as a result of higher mortgage rates.

Asia Pacific

As with the other regions, Asia markets saw a cooling in transaction volumes as rising rates created market uncertainty. Certain markets held up better than others like Japan and Korea. Conversely, China's real estate market has been particularly hard hit, especially residential for sale. China headlines around major residential developers going bankrupt has cast a pall over the market while China's sluggish economy and geopolitical tensions is keeping investors away.

In contrast to the U.S. and Europe, office in Japan and Korea have been a bright spot as the return-to-work was quicker and is nearly back to 100%. The Asia markets have more constraints on working from home such as smaller housing units and access to technology. But the cultural preference for working in an office makes office investments in Japan and Korea a favored property type. Foreign investors have been particularly attracted to the Asia industrial/logistics sector for some time as there has been a chronic undersupply of modern logistics facilities compared to the U.S. and Europe. Another property sector drawing foreign investor interest has been Japan residential given its strong fundamentals, stability through cycles, liquidity, and high fragmentation. Overall, while transaction volumes are down throughout the region, Japan and Korea have experienced better activity and investor preference.

SCERS Real Estate Portfolio

SCERS' Real Estate asset class, which resides within the Real Return asset category, seeks to generate current income with moderate return volatility, adjust with inflation, and serve as a diversifier to SCERS' overall portfolio. Portfolio construction for the Real Estate portfolio provides flexibility in investment ranges, with the ability to target exposures with the most attractive risk-adjusted returns. In addition, a range of permitted investment structures include closed and open-end commingled funds, customized separate accounts, and secondary investments.

Real estate investment strategies fall within two broad categories – core/core plus and non-core. Investments in core/core plus strategies will typically possess a lower but stable risk-return profile and serve as the hub/foundation of the Real Estate asset class. Non-core investments represent the spoke/alpha component of the Real Estate asset class and can serve as a complement and return enhancer to the overall portfolio, but entail more risk as they typically employ greater levels of leverage. Core/core plus investments are typically made in open-end fund structures, while non-core investments are made in closed-end fund structures.

Over the past year and a half, the increase in interest rates has had a significant negative impact on real estate values, yet the impact may not be fully recognized in the private markets. With few transactions taking place, investors and third-party appraisers are finding it difficult to settle on a price. The increase in interest rates has greatly depressed transactions by some 50%-75% from a year ago. Until interest rates stabilize at some level, it will be difficult for investors and appraisers to determine real estate pricing. As such, the real estate market may not have reached its inflection from peak to trough until transaction activity picks up.

For core real estate, the value of an asset is based on its in-place contracted rents and an expectation of future market rents. Beyond leasing space and minor capital expenditures, there is little to be done to a core asset to enhance its value. With the economy slowing, rental growth has also slowed or declined, and vacancy rates have begun to increase across property sectors. Given core real estate's dependence on rental growth, Staff and Townsend do not believe core real estate will offer much of a return over the short term and may experience some additional pullback. However, while non-core is experiencing similar challenges, Staff and Townsend do see limited opportunities in non-core where returns are earned by improving or fixing deficiencies. Until the economic environment stabilizes along with interest rates, Staff and Townsend expect to focus on select non-core value-add real estate strategies for 2024, as reflected within the Real Estate budget below.

In 2021, the Real Estate allocation target was increased from 7% to 9%, with a +/- 2% range around the target. The increase in the target allocation reflects the strong historical performance of the asset class and the large opportunity set of investment strategies. In addition to the overall target increase, the sub-strategy targets and ranges were changed to those shown below. As of September 30, 2023, the actual Real Estate allocation is 8%, below the 9% target, but within the range of 7%-11%.

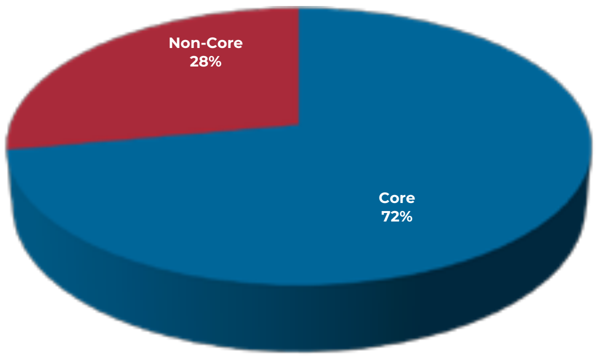
SCERS Real Estate Portfolio Structure

	Minimum	Target Allocation	Maximum	Policy Index Benchmark
Total Real Estate Portfolio	**7%**	**9%**	**11%**	**Custom blend of benchmarks below:**
Core Real Estate	50%	**60%**	70%	60% NFI-ODCE
Non-Core Real Estate	30%	**40%**	50%	40% NFI-ODCE + 1%
Non-U.S. Real Estate	0%	**N/A**	35%	

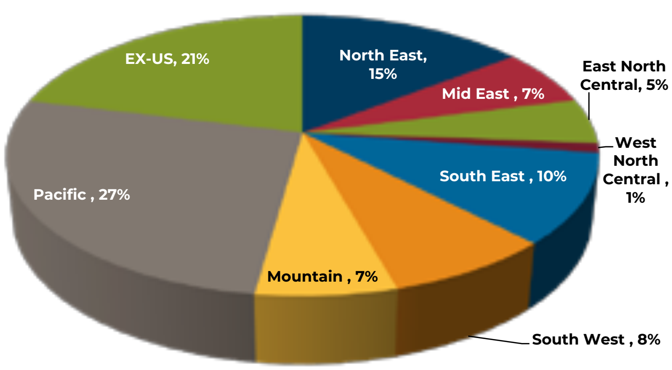
The implementation of the larger Real Estate allocation has not occurred through new investments, but rather the run up in real estate valuations in 2022, as SCERS was well below the target commitment budget in 2022, and in 2023, SCERS did not make any commitments given the rising interest rate impact on property valuations and transaction activity. There are very few markets that have not felt the impact of inflation, rising interest rates, and the slowing of the economic environment. This translated to a cautious and selective investment approach during the year by Staff and Townsend. There were a few interesting investment opportunities during the year that Staff and Townsend evaluated, including U.S. data centers, Japan multifamily, and Korean office; however, none of them materialized. Staff and Townsend are seeing some attractive relative value opportunities in Asia and remain supportive of selective investing in the region if an opportunity demonstrates a return premium relative to comparable opportunities in the U.S. and Europe.

Below is SCERS' Real Estate diversification by investment strategy and geographic region, as of June 30, 2023:

Real Estate Portfolio Strategy Allocations
AS OF JUNE 30, 2023



Real Estate Portfolio Geographic Allocations
AS OF JUNE 30, 2023



2023 Activity

The 2023 Real Estate annual investment plan was:

- A target of 2 fund commitments, with a range of 1-4
- A total of $80 million in commitments, with a range of $40-120 million
    - 0 core funds
    - 2 non-core funds totaling $80 million
- An average commitment size of $40 million per fund

2023 Actual Activity

- No commitments were made during the year
- Oversaw, monitored, and met with SCERS' existing Real Estate managers

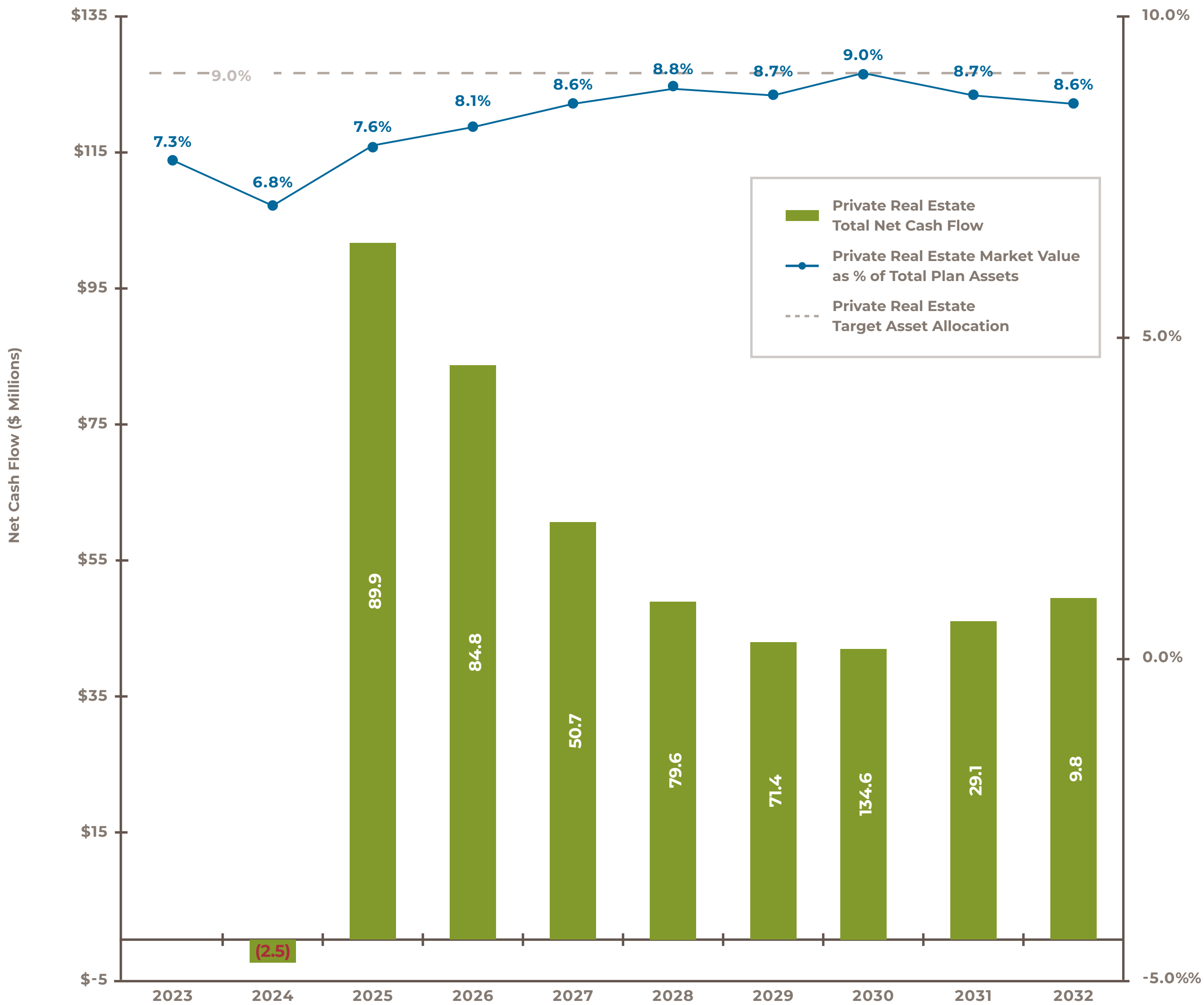
2024 Annual Plan

Below is the 2024 capital commitment plan for the Real Estate asset class, as recommended by Townsend and Staff:

SCERS Real Estate Annual Investment Plan			
	Target	Minimum Range	Maximum Range
Commitment Level	$120 MM	$100 MM	$180 MM
Number of Funds	3	2	5
Core Fund(s)	0	0	1
Non-Core Fund(s)	3	2	5
Commitment per Non-Core Fund	$40 MM	$25 MM	$50 MM
Commitment per Core Fund	$75 MM	$50 MM	$100 MM

- Recommend a $120 million commitment budget for 2024, with a range of $100-$180 million
    - Target 3 fund commitments (non-core) averaging $40 million each, with a range of $25-$50 million per fund
    - There are no targeted commitments in core
    - The 2024 budget does not include any funds in which a commitment was made in 2023 but capital has not been called

Real Estate Capital-Pacing Plan



- Rebalance the U.S. core open-end portfolio to bring the strategy and geographic mixes within targeted ranges
  - While Staff and Townsend will monitor the core market for an improvement in fundamentals, the investment focus for 2024 is expected to be on non-core opportunities
- 2024 investment strategies and global themes include:
  - Specialty/niche property types
  - Southeast Asia value add
  - Attainable/affordable housing
  - Europe and Asia core/core plus
- Oversee, monitor, and assess the existing manager lineup

Liquid Real Return

SCERS Liquid Real Return Portfolio

SCERS' Liquid Real Return asset class was revised in 2023, moving from a 2% to a 1% target allocation, due to the segment's less favorable risk/return profile going forward, and to increase SCERS' cash allocation to take advantage of the favorable interest rate environment, as cash rates have moved above 5%. A separate account mandate managed by Brookfield Asset Management was terminated in order to implement the asset allocation change.

Liquid Real Return is implemented with a separate account mandate managed by SCERS' Overlay Program manager, State Street Global Advisors (SSGA). The SSGA mandate serves a dual purpose, part strategic allocation and part overlay proxy that rebalances the overall Real Return allocation to its target allocation. As of September 30, 2023, the actual Liquid Real Return allocation stood at 0.1%, below the 1% target, as SSGA has reduced most of the allocation to offset the overweight to the Real Return asset category (driven by an overweight to Real Assets).

The SSGA Liquid Real Return mandate consists of a diversified series of liquid publicly traded real return exposures that complement the broader objectives of the Real Return asset category. Underlying investments include global real estate investment trusts (global REITS), global infrastructure equities, commodities, Treasury inflation protected securities (TIPS), global natural resource equities, and floating rate notes. Given that underlying exposures are publicly traded, Liquid Real Return exposures tend to have higher correlations to equities and fixed income, compared to their private market equivalents within Real Assets and Real Estate.

2023 Activity

- Liquidated the $108 million Brookfield Diversified Real Assets mandate in order to implement the reduction in Liquid Real Return from a 2% to a 1% target allocation
- Oversaw, monitored, and met with SCERS' existing Liquid Real Return managers

2024 Annual Plan

- Perform any rebalancing activity as necessary
- Oversee, monitor, and meet with SCERS' existing Liquid Real Return manager

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SECTION FOUR

Other Investment Activities

2023 Activities

Other projects, activities, and enhancements within the investment program in 2023 included:

- Evaluated strategic asset allocation modeling adjustments utilizing updated capital market assumptions
  - Reduced target Liquid Real Return allocation by 1% and increased target Cash allocation by 1%
- Revised Board reporting based on feedback from SCERS' Ad Hoc Committee
- Conducted fiduciary "health check" of SCERS' alternative assets investment contracts, as called for within SCERS' Alternative Asset Investment Standard of Care Policy
- Completed the onboarding of the Caissa portfolio analytics software platform
- Conducted an annual liquidity analysis as called for in SCERS' Cash Management Policy
- To comply with California Government Code Section §7514.7, provided public disclosure of calendar year 2022 information regarding fees, expenses, and returns for alternative investment funds in which SCERS invests
- Renewed contract with custodian State Street Bank and Trust
- Attended and participated as speakers/panelists at several industry conferences
- Oversaw, monitored, and met with existing investment managers

2024 Initiatives

- Initiate asset liability modeling (ALM) study in late 2024
- Introduce new annual Investment Operations Report
- Create additional reporting to the Board to incorporate portfolio exposures from Caissa
- Evaluate contact relationship management (CRM) and due diligence process management software
- Conduct annual liquidity analysis as called for in SCERS' Cash Management Policy
- To comply with California Government Code Section §7514.7, provide public disclosure of calendar year 2023 information regarding fees, expenses, and returns for alternative investment funds in which SCERS invests
- Oversee, monitor, and conduct calls/meetings with investment managers
- Conduct review of private market fees/expenses
- Attend and participate in industry conferences

SECTION FIVE

Board Education

2023 Board Education

- Education on global markets outlook – JPM Morgan Asset Management
- Education on ESG and values-based investing
- Education on fiduciary considerations regarding “ESG” and “DEI” – Nossaman LLP
- Education on absolute return trend-following strategies – Graham Capital Management
- Education on cash counterparty risk within SCERS’ Portfolio – December meeting

Anticipated 2024 Board Education

- Education on upcoming ALM study
- Educational series on an overview of SCERS’ underlying asset classes
- Education on performance attribution and analytics
- Strategy update presentations by SCERS’ investment managers
- Other educational presentations by Consultants and Staff

SECTION SIX

Appendix

Verus

Memorandum

To: Sacramento County Employees' Retirement System (SCERS) Board
From: John Nicolini; Verus
Brian Kwan; Verus
Date: November 15th, 2023
RE: 2023 Investment Year in Review

Executive Summary

Following 2022, where much of the year was focused on orienting the portfolio to revised asset allocation targets and manager structures, SCERS spent much of 2023 focused on the public equity portion of the portfolio. Some strategies were funded to replace previously underperforming strategies, and other strategies were funded as a continued buildout to those revised targets and structures. Additionally, a minor adjustment was made to the asset allocation targets after reviewing updated capital market assumptions. Discussed below are the portfolio initiatives completed in 2023 and planned projects for 2024.

PORTFOLIO INITIATIVES IN 2023

Global/Unconstrained Equity
Following the 2021 adoption of a new Global/Unconstrained Equity sub-asset class (4% target) and the 2022 hiring of 2 new global equity managers, SCERS hired Allspring Global Closed-End Fund strategy as part of the continued buildout of this sub-asset class. There are now 3 managers within the Global/Unconstrained Equity portfolio.

International Developed Equity
Following the termination of Mondrian International Small Cap Equity and the implementation of an interim passive exposure solution in 2022, SCERS hired Acadian Non-US Small Cap Value as the value-oriented replacement to compliment the growth-oriented William Blair Developed Small Cap.

Emerging Market Equity
Following the termination of Mondrian Emerging Markets Equity and the implementation of an interim passive exposure solution in 2022, SCERS hired 2 new emerging market managers:

- ARGA Emerging Markets Equity was hired as the value-oriented replacement; and
- Oaktree Emerging Markets Equity was hired to compliment both growth-oriented Baillie Gifford and value-oriented ARGA

Asset Allocation Revision
Following a review of 2023 capital market assumptions, which broadly showed higher expected returns over the next 10 years, SCERS made a minor revision to the asset allocation targets:

Asset Class	Previous Target %	New Target %
Liquid Real Return	2%	1%
Cash	1%	2%

— The revision resulted in the full redemption of Brookfield Diversified Real Assets to fund the increased allocation to Cash. The remaining allocation to Liquid Real Return is a passive mandate with SSgA.

PROJECTS FOR 2024

Global Equity
Within global equity, additional opportunities in the Global/Unconstrained sub-asset class will be explored, such as another global equity strategy and/or a dedicated global small cap equity allocation.

Board Education
Staff and Verus plan to provide education around asset classes and portfolio structure, focused on the role within the portfolio. This will help lay some groundwork for the asset-liability study later in the year.

Asset Allocation
An asset-liability study, which integrates plan projections with capital market assumptions to help reaffirm or adjust SCERS' asset allocation targets, will be presented. The last asset-liability study was conducted in 2021 and resulted in changes to the asset allocation.

To: Sacramento County Employees' Retirement System
From: Cliffwater LLC
Date: November 15, 2023
Regarding: **Alternative Assets 2024 Annual Investment Plans**

The annual investment plans that Sacramento County Employees' Retirement System ("SCERS") produces each year serve as near-term implementation guides to support SCERS' long-term strategic planning decisions. These plans, though each is specific to individual asset classes, are designed to reflect the total portfolio's strategic goals and objectives while also effectuating the specific objectives of each asset class.

The SCERS Investment Staff works closely with Cliffwater to develop the annual investment plans for the alternative assets in the SCERS portfolio. These assets include private equity, private credit, real assets, and absolute return strategies. Several of these asset classes are focused on illiquid investments. Each annual plan begins with a review of the portfolio's current positioning, performance, and expectations for each asset class, in the context of the objectives each asset class is expected to achieve within the SCERS total portfolio. The annual investment plans are developed to enable each portfolio to meet its objectives and reach its targeted allocation and desired exposures. A significant component of this process involves developing commitment pacing forecasts for the private investments so that SCERS can effectively manage the allocation to these asset classes over time.

The unique investing characteristics of private asset partnerships requires prospective planning such that allocators like SCERS can regularly commit new capital to private funds to reach or maintain their targeted allocations without significantly overallocating or having outsized unfunded commitments. Investors in private assets use capital budgeting to set a target annual commitment pace, with an expected range of activity around the target to allow for flexibility to adapt as needed to changing market conditions or quality of available investment opportunities. This pacing process is intended to provide vintage year diversification without making unintended "bets" on specific vintage years. Prudent pacing is also intended to limit situations in which allocators may not have the capacity to commit to strategies when desired.

Cliffwater develops commitment pacing forecasts for each private portfolio, including private equity, private credit, and real assets. Each forecast includes fund- or strategy-specific assumptions for expected contributions (capital calls), fair value growth of investments (capital appreciation), and distributions (returns of capital and investment gains) within the private portfolios. Cliffwater applies the assumptions to each of the investments in the current portfolios, as well as to the expected future commitments which are developed through this process. By combining the forecasts for the private asset classes with expectations for SCERS' total portfolio growth, Cliffwater and the SCERS Investment Staff determine the appropriate level of annual commitment pacing. These annual commitment "budgets" for each private asset class then serve as the basis for determining the number, size, and type of new commitments SCERS expects to make in future years. The annual plans presented to the SCERS Board include the annual commitment plan, projected allocations, and cash flow forecasts for each of the private asset classes.

Private Equity

The recommended SCERS 2024 investment plan for private equity includes a commitment target of $250 million for 2024 vintage year private equity funds, with an expected commitment range of $200 million to $300 million. The plan is to target approximately eight new partnership commitments, diversified across buyout, growth equity, venture capital, and special situations/distressed-oriented funds. The expected average size of individual commitments is $35 million, with a range of $20 million to $50 million. The lower end of the sizing range should primarily be for funds with a higher expected risk which may warrant a somewhat smaller allocation, or for funds with limited access where SCERS is looking to establish a new general partner relationship.

The SCERS portfolio allocation to private equity was 13.3% at the end of the 2023 fiscal year. This represents a modest overallocation as compared to the SCERS target allocation of 11%. The SCERS Investment Staff and Cliffwater are forecasting the SCERS private equity allocation will continue to trend closer to its targeted allocation through 2024 and 2025, then remain near the 11% target in 2026 and beyond. The SCERS private equity portfolio is projected to remain cash-flow positive, with distributions expected to exceed contributions, as it has been for several quarters now. The private equity portfolio remains well-diversified by strategy, sector, geography, and vintage year, with these allocations within their targeted exposure ranges.

The 2024 investment plan for private equity represents a continuation of SCERS' strategic plan for private equity, rather than displaying significant changes from the 2023 private equity investment plan. The recommended commitment target and expected commitment range are quite similar to the pacing in the 2023 annual investment plan. SCERS expects to commit to a similar number of private equity funds in 2024, with a modest increase in the expected average size of individual commitments. SCERS will continue to look for opportunities to commit to new funds of its well-known general partners already managing capital for SCERS (known as "re-ups") as it remains mindful of its total number of private equity general partner relationships. However, SCERS will continue to evaluate new funds of high conviction general partners that are not currently represented in the SCERS private equity portfolio as it always strives to allocate capital to the best available opportunities.

Private Credit

The recommended 2024 investment plan for private credit includes a commitment target of $160 million for 2024 vintage year private credit funds. The expected range for new commitment activity is $120 million to $200 million. The plan is to target four new partnership commitments, likely averaging $40 million per individual commitment. While $40 million represents the average commitment size, individual commitment amounts could range from $30 million to $75 million, depending on a number of fund-specific factors and portfolio construction considerations. SCERS expects to include both Direct Lending and Opportunistic Lending funds within its new commitment activity in 2024.

While the 2024 commitment target and expected commitment range are consistent with the target and range recommended in the 2023 private credit investment plan, the 2024 target and range are slightly higher than in 2023 as SCERS had modest new allocations to private credit thus far in 2023. The expected number of new funds and sizing of those funds is also very consistent with the parameters of the 2023 investment plan. However, the higher end of the sizing range for individual commitments was increased in 2024 to allow for a potentially larger allocation to a "core" lending strategy that could be included within the SCERS Direct Lending portfolio.

The SCERS Investment Staff and Cliffwater are forecasting the SCERS private credit allocation will nearly reach its targeted allocation by the end of 2025. The SCERS private credit portfolio is also projected to become cash-flow positive shortly after reaching its targeted allocation. The SCERS private credit portfolio's allocations are currently within their targeted exposure ranges for strategy and geography.

Real Assets

The recommended 2024 investment plan for real assets includes a commitment target of $180 million for 2024 vintage year real asset funds, with an expected commitment range of $140 million to $210 million. The 2024 commitment target is slightly lower than pacing in prior years, as the real assets portfolio remains slightly above its targeted allocation, benefitting from continued strong absolute and relative performance. The plan is to target four new partnership commitments. New commitments in 2024 may favor Infrastructure investments, though may also include allocations to new Energy and Power or Agriculture partnerships. The expected average size of individual commitments is $45 million, with a range of $35 million to $100 million. Setting the upper end of the sizing range at $100 million is once again intended to allow SCERS to make a larger allocation to an open-end fund or dedicated account, consistent with SCERS' "hub and spoke" approach to portfolio construction for real assets. Through this approach, SCERS looks to make larger allocations to funds that are intended to broadly deliver on the portfolio's objectives, complemented by smaller commitments to more specialized, often niche, funds that are intended to generate higher returns and further diversify the portfolio's exposures.

The SCERS portfolio allocation to real assets was 8.5% at the end of the 2023 fiscal year. This represents a modest overallocation as compared to the target allocation of 7%. The SCERS Investment Staff and Cliffwater are forecasting the SCERS real assets allocation will continue to move closer to its targeted allocation through the next few years, as more seasoned investments continue to distribute capital back to SCERS. The new commitment pacing that is reflected in the 2024 investment plan and in subsequent years is intended to allow SCERS to return to its targeted 7% allocation in the near term, without materially undershooting or overshooting its target. SCERS Investment Staff and Cliffwater are also forecasting that the real assets portfolio will produce more in distributions than contributions (i.e., become cash-flow positive) in 2024 and beyond. The SCERS real assets portfolio remains well-diversified by strategy, sector, geography, and vintage year. The portfolio's allocations are within their targeted exposure ranges.

Absolute Return Portfolio

The recommended 2024 investment plan for absolute return strategies includes an expectation for one new investment to be made in 2024, likely sized at $50 million. Since the absolute return portfolio is already fully developed, including being appropriately diversified across funds and sub-strategies, the only expected new investment activity would be for marginal additions to the portfolio or replacements of funds as desired. While only one new investment is likely in 2024, additional changes are certainly possible; the SCERS Investment Staff and Cliffwater actively monitor the absolute return investments and will adjust exposures as needed and strive to maintain the portfolio quality with investments in the highest conviction strategies. The absolute return portfolio does not require a similar private asset commitment pacing analysis, since the absolute return strategies are typically fully invested at the inception of each investment.

The Big Picture

Since most of the SCERS alternative assets portfolios are relatively mature, it is not surprising to see the alternative investment annual plans remaining fairly consistent from year to year. In fact, barring significant changes to expectations for individual asset classes or to SCERS' strategic portfolio plans, being able to maintain a level of consistency in annual portfolio planning is a testament to successful implementation and long-term planning. However, even with the benefit of consistency, SCERS continues to adjust and refine these portfolios through their ongoing implementation. SCERS will look to maintain its portfolio quality, which features a deep roster of top tier investment managers, and manage to its target allocations and exposures, while continuing to generate strong performance that is broadly distributed across each of the alternative asset portfolios.

MEMORANDUM

TO: **Sacramento County Employees' Retirement System**

DATE: November 15, 2023

SUBJECT: Real Estate Investment Year in Review (Data as of June 30, 2023)

FROM: **The Townsend Group**

The SCERS real estate target allocation is 9% with a permissible exposure range between 7.0% and 11.0%. As of 2Q2023, real estate represented 8.1% of total plan assets, which is slightly below the target of 9.0% but within the allowable range.

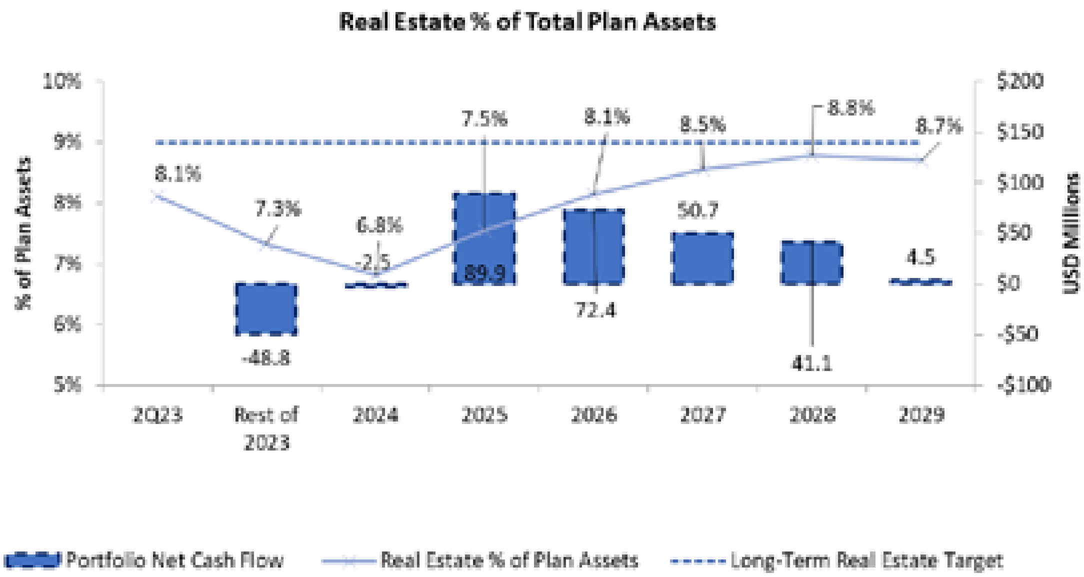
Real Estate Return and Risk Forecasts

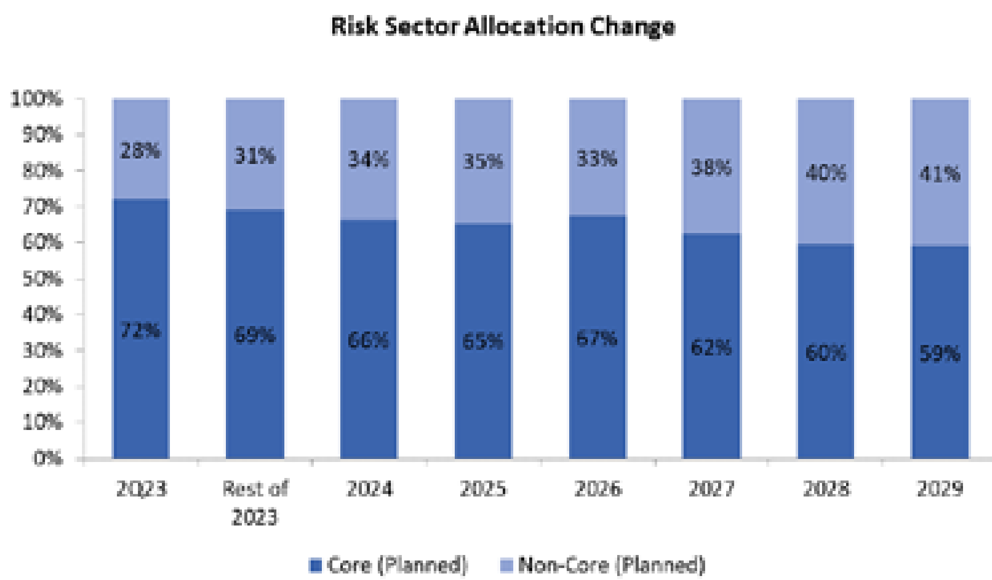
Townsend's long-term return expectations for private real estate and real assets are provided below:

Risk & Return	Core	Value	Opportunistic	REITs	Timber	Row Crop	Perm Crop	Private Infrastructure
Expected Net Return	**6.0%**	**6.5%**	**9.0%**	**6.0%**	**5.8%**	**6.0%**	**11.0%**	**7.0%**
Standard Deviation	**6.4%**	**9.1%**	**10.3%**	**20.9%**	**5.0%**	**4.3%**	**10.7%**	**7.3%**

SCERS Private Real Estate Forecasts

Due to the recent rebound in the total plan assets, SCERS is projected to remain slightly below the 9% real estate target for several years. Private real estate asset values have fallen due to a combination of rising interest rates and capitalization rates, as well as softening fundamentals across most property types, which further contribute to SCERS' underweight relative to target exposure within the real estate portfolio. Given the current above target core allocation, Townsend is modeling an increase in future non-core commitments in order to bring the non-core portfolio in line with the target 40% allocation. The pacing forecast below assumes $0 commitment to core in 2024 and an average $120 million non-core commitments per annum between 2024 and 2027.





2023 Recap

In 2023, investment activity year-to-date was limited and primarily focused on redemptions from open-ended funds to bring industrial exposure below the 40% limit, reduce overweight to the core real estate and provide additional liquidity. Two partial redemptions were submitted from a core diversified fund and a core industrial fund. Both investments represented the largest single vehicle positions within SCERS' real estate portfolio.

These redemptions helped right size commitments and better diversify the real estate portfolio. The full requested amount was received from the industrial fund and the diversified core fund continues to make redemption payments.

Recap and Vision for 2024

For 2024, we expect to see multiple non-core opportunities with high return potential as the real estate market enters a new cycle. There are various risks to consider, and ongoing uncertainty may unexpectedly impact global real estate returns. However, the outlook is promising in certain sectors such as industrial, multifamily and alternative property types while other sectors such as office remain under pressure. Annualized absolute returns have come down significantly during the year but SCERS' portfolio has held up relatively well compared to the benchmark.

Townsend and Staff will continue to pursue the Portfolio's strategic objectives, as approved by SCERS' board. Due to the repricing taking place in the market, we will pause investments in the core space and focus on non-core opportunities during the upcoming year. Townsend will continue to identify select non-core opportunities accretive to SCERS' Portfolio, with a focus on sector or regional specialists in thematically interesting offerings likely to take advantage of current market opportunities. We recommend targeting three new non-core commitments at $40-50 million per fund.

2023 - 2024

SCERS

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