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**2020 INVESTMENT YEAR IN REVIEW
2021 ANNUAL INVESTMENT PLAN**



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2020 INVESTMENT YEAR IN REVIEW 2021 ANNUAL INVESTMENT PLAN

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LETTER OF INTRODUCTION

As Chief Executive Officer of the Sacramento County Employees' Retirement System (SCERS), I am pleased to present the 2020 SCERS Investment Year in Review and 2021 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 this 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.

SCERS experienced a 12.5% gain in 2020, as the global economy persevered through the market volatility of the COVID-19 pandemic. While the market rebound has provided some level of comfort for the public employees and retirees who depend on a strong SCERS fund, capital market assumptions continue pointing toward lower returns in the future. In 2020, the SCERS Board of Retirement lowered the assumed rate of return from 7.00% to 6.75%, largely driven by the persistently low-inflationary environment.

To mitigate risks in 2021, SCERS will continue to work with our internal investment staff, investment consultants, and key investment partners to maintain a highly diversified investment portfolio that provides value across different economic and market environments.

SCERS will also focus efforts in 2021 on reviewing its strategic asset allocation as part of an asset liability modeling study, ensuring our portfolio continues to be prudently balanced from a risk and return perspective to meet SCERS' long-term benefit obligations.

Respectfully Submitted,



Eric Stern
Chief Executive Officer

STAFF, CONSULTANTS & STRATEGIC PARTNERS

Under the California Constitution, the SCERS Board has the exclusive authority and fiduciary responsibility for the management of SCERS' investment program. In carrying out this duty, the SCERS Board establishes the strategic direction, asset allocation, return and risk parameters, and investment policies for the retirement system. The SCERS Board receives guidance in making these decisions from its internal staff of investment professionals (Staff) and from expert investment consultants, all of whom also serve as fiduciaries with respect to the fund. SCERS' general investment consulting services are provided by Verus Advisory. Cliffwater LLC serves as lead consultant for the alternative asset classes, and The Townsend Group serves as lead consultant for the real estate asset class.

During 2020, SCERS issued an RFP for alternative assets consulting services to evaluate its current consulting mandate with Cliffwater relative to other consultants in the marketplace. The RFP evaluation is expected to conclude during the first quarter of 2021.

Given the complexities of managing a large, multi-asset class investment program, the SCERS Board has delegated substantial responsibility for the day-to-day oversight and management of the assets of the retirement system to the internal investment Staff, who in turn, utilize and draw upon the investment expertise and resources of SCERS' investment consultants and key investment partners. SCERS believes that a strong, collaborative partnership between Staff, consultants, and investment service providers not only assures the prudent oversight of the fund, but produces significant investment value over time in the form of higher returns, lower risk, and lower costs.

The collaborative partnership between Staff, consultants, and investment partners is grounded in the following principles:

- Staff focuses on and directly engages in those areas where it can add investment value;
- Consultants serve as an 'extension of staff' in those areas where they have greater expertise, capabilities and/or resources; however, Staff continues to be actively involved in any decisions involving such areas;
- Both Staff and consultants are responsible for monitoring and overseeing the investment portfolio;
- Both Staff and consultants are charged with developing ways to improve investment performance and manage risk;
- Strategic partnerships may be established with investment providers if they will (a) allow SCERS to develop an efficient, customized solution to an investment need; (b) allow SCERS to gain access to specialized investment knowledge or expertise; or (c) improve access to niche investment markets or strategies that will add value to the portfolio; and
- Overlapping expertise and capabilities of Staff, consultants, and strategic partners is beneficial because it brings multiple perspectives to the investment decision-making process.

Implicit in this approach is SCERS' belief that a strong internal investment Staff is central to the successful execution of the investment program, in that Staff: (1) serves as the 'hub' and coordinator of the activities of consultants and strategic partners; (2) provides a source of analysis independent from those partners; (3) allows SCERS to be a generator of investment ideas and not simply a passive recipient of investment ideas; (4) facilitates investment solutions specific to SCERS' needs; and (5) enables SCERS to capture and institutionalize knowledge and expertise.

STAFF, CONSULTANTS & STRATEGIC PARTNERS (Continued)

The effectiveness of the collaborative partnership between SCERS' Staff, consultants, and strategic partners can be seen in the managing of the portfolio during the COVID-19 driven market volatility, and the significant level of implementation that occurred in 2020 to align with SCERS' strategic asset allocation, as well as other investment program undertakings.

SCERS added to the investment staff in 2020 with the hiring of an Investment Analyst, who started in early 2021. SCERS also promoted one of its Investment Officers to a Senior Investment Officer during the year. The current investment Staff structure and any additional investment staffing needs will be evaluated in 2021.

Commentary on the ongoing development of SCERS' investment program from consultants Verus, Cliffwater, and Townsend can be found in Appendix 1 to 3 of this Report.



PORTFOLIO OVERVIEW

SUMMARY OVERVIEW

For the calendar year ended December 31, 2020, the Sacramento County Employees' Retirement System (SCERS) generated a gross return of 12.5%. As explained in more detail below, SCERS' return was above the Policy Index return of 10.7%. Over the 3-year and 5-year periods, SCERS has returned 9.4% and 10.6%, respectively, versus the Policy Index return of 7.8% and 9.2%. SCERS ended 2020 with \$11.5 billion in assets.

MARKET OVERVIEW

History will mark 2020 as a year of an unprecedented worldwide health crisis that has caused untold tragedy and damage across economies globally. For many of us, we have become accustomed to a new vocabulary – COVID-19, coronavirus, global pandemic, and stay-at-home orders. These are words that will be with us for some time. The health impact from COVID-19 has been devastating, with tragic outcomes for families globally. The economic impact has been dramatic, with many segments of the economy coming to a grinding halt in line with the stay at-home-orders. Economists estimate the pandemic will have contracted the global economy by -4.9% in 2020, exceeding the -2.5% contraction during the Global Financial Crisis in 2009. The worst of the contraction was felt during the first half of 2020, where U.S. second quarter GDP contracted at a -31.9% quarterly annualized rate and the economy entered into a deep recession, ending the longest period of economic expansion in modern history.

In March of 2020, liquidity within the financial markets dried up, creating unprecedented mark-to-market losses across assets. The impact within the economy and the financial markets led to governments acting quickly and aggressively, both through fiscal and monetary policy. The U.S. Congress approved the \$2.3 trillion U.S. Cares Act economic stimulus package, followed by a second \$900 billion stimulus package in December. The Federal Reserve dropped interest rates to zero, and flooded the markets with liquidity, purchasing around \$3 trillion in assets across Treasuries, mortgages, municipal bonds, and even corporate credit.

The economic impact of COVID-19 in the U.S. has been severe. The U.S. labor market was decimated during the second quarter of 2020, with the unemployment rate jumping from historic lows of 3.5% early in 2020 to 14.7% in April. With the gradual re-opening of parts of the economy, the unemployment rate has partially recovered, and stood at 6.7% at the end of December. Headline inflation and core inflation (which excludes food and energy), both stood at 1.4% at the end of December, which remain below the Fed's baseline level of 2.0%. Economic activity rebounded in the second half of the year, with third quarter U.S. GDP growing at a 33.4% quarterly annualized rate, and fourth quarter GDP is estimated to come in at a 4.0% rate. However, with a dramatic increase in infections and renewed stay-at-home measures late in the year, fourth quarter GDP growth is likely to be impacted.

The pandemic has created stark divergences within the economy, with some industries affected very differently than others. Many once healthy industries almost ceased to exist overnight, such as airlines, hotels and lodging, and restaurants. Early in the year, year-over-year economic activity within seated dining was off by 100%, TSA passenger traffic off by 96%, and hotel occupancy off by 69%. Other industries have actually thrived during the

PORTFOLIO OVERVIEW (Continued)

pandemic, such as information technology, video conferencing platforms, and staple-based grocers. Residential housing has been resilient, particularly within suburban neighborhoods, with increases in prices driven by limited housing supply and historically low interest rates.

Similar to the U.S., European economies experienced a deep contraction earlier with a bounce back in economic activity in the summer. Another wave of infections brought with it additional stay-at-home measures. Having previously experienced significant health scares in recent years, such as SARS and the avian influenza, many Asian countries quickly responded to the pandemic and implemented effective containment measures, and were therefore less impacted health-wise and economically. China is one of the only global economies to experience positive economic growth in 2020, at a preliminary rate of 2.3%.

Major financial markets had a roller coaster of a year, up at record levels heading into COVID-19, dropping precipitously at the depths of the pandemic in March and April 2020, and rallying throughout the remainder of the year as stimulus measures were priced in, as vaccine development programs went into high gear, and as the U.S. presidential election concluded. U.S. equities overcame a 20% deficit early in the year, and actually ended up close to 20%. Implied volatility spiked in March to a record daily close of 82.7%, surpassing the high of 80.9% reached in November 2008, but came down throughout the year to current levels of approximately 25%.

Most asset classes generated positive returns during 2020, except for energy-related commodities. Within equities, returns were exceptional across the board, with the global MSCI ACWI returning 16.3%. There were divergences across both geographies and styles. On the geographic front, domestic equities outperformed international equities, including emerging markets. The Russell 3000 Index returned an impressive 20.9%, while the MSCI EAFE and MSCI Emerging Markets Indexes returned 7.8% and 18.7%, respectively. Within styles, growth stocks meaningfully outperformed value stocks, continuing a multiyear trend, and large capitalization stocks outperformed small capitalization stocks.

Fixed income markets generated particularly strong returns in 2020, fueled by long dated government bonds early in the year, and the spread sectors later in the year. U.S. Treasury yields collapsed in March, as the Federal Reserve aggressively cut rates. Though rates edged higher the remainder of the year, 10-Year Treasury yields ended the year at 0.91%, compared to 1.8% at the end of 2019. Treasuries generated returns of 8.0% (Bloomberg Barclays U.S. Treasury Index). During the market sell off in March, credit spreads spiked significantly, with high yield spreads widening from 336 bps at the end of 2019 to a high of 1,100 bps in March 2020, and investment grade corporate spreads widening nearly 180 bps in the first quarter. Spreads tightened meaningfully during the rest of the year, resulting in the Bloomberg Barclays U.S. Corporate High Yield Index ending the year up 7.1%, and the U.S. Investment Grade Credit Index returning 9.4% for the year. The broad-based Bloomberg Barclays Aggregate index, which contains an equal mix of Treasuries, agency mortgages, and investment grade credit, generated a strong return of 7.5% during the year.

The economic outlook in 2021 should improve but depends on getting the pandemic under control. There is optimism around the roll out of the COVID-19 vaccine, though mass immunity will require patience. As the economy recovers, some of the beaten up service sectors should experience the most healing. The economy should continue to receive support from additional stimulus measures if needed, both on the monetary and fiscal sides. Congress is contemplating an additional stimulus/relief package in early 2021, and the Federal Reserve has stated it will remain in full accommodative mode by keeping interest rates near zero for the foreseeable future. The direction of the financial markets is more of a mystery. Valuations across most asset classes are near or at all time highs, and most experts are forecasting a lower return environment going forward.



PORTFOLIO OVERVIEW (Continued)**SCERS PORTFOLIO STRUCTURE**

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 SCERS' 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 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 diversifying 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.

SCERS' strategic asset allocation has heavy allocations to growth assets that can drive returns. 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 cash flows in order to meet benefit payment obligations is a key focus of SCERS' Board, investment staff, and investment consultants.

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.

PORTFOLIO OVERVIEW (Continued)

SCERS' strategic asset allocation is summarized in **Table 1** below:

Table 1 – SCERS' Strategic Asset Allocation

Asset Category/Asset Class	Target Allocation
Growth	58.0%
Domestic Equity	20.0%
International Equity	20.0%
Private Equity	9.0%
Public Credit	2.0%
Private Credit	4.0%
Growth Absolute Return	3.0%
Diversifying	25.0%
Core Plus Fixed Income	10.0%
US Treasury	5.0%
Global Fixed Income	3.0%
Diversifying Absolute Return	7.0%
Real Return	16.0%
Real Estate	7.0%
Real Assets	7.0%
Liquid Real Return	2.0%
Cash	1.0%
Opportunities	0.0%
Total	100.0%

2020 PORTFOLIO REVIEW

Early in 2020, a significant portion of time was spent managing through the unprecedented events of the pandemic, including the extreme market volatility and the impact on the SCERS portfolio. In the midst of the market dislocation, SCERS' Overlay Program manager, SSGA, implemented an intra-quarter portfolio rebalance in March, where SCERS purchased discounted equities while selling government bond exposure. During the market uncertainty, Staff was also in dialogue with SCERS' investment managers to stay abreast of portfolio positioning and portfolio trouble spots.

Staff also keenly kept track of SCERS' liquidity profile in the midst of an influx of private market capital calls and ongoing benefit payment outflows. The 1% dedicated cash allocation, which was created in 2019 to help close the gap between cash outflows and inflows in an environment where investment earnings fall short of target, played a key role in giving SCERS a liquidity buffer in case the liquidity position had worsened. Verus ran its annual liquidity analysis during the year, and the study showed that while SCERS' liquidity position was less than it was a year prior, it still remained at healthy levels.

Staff also worked with Cliffwater to re-evaluate cash flow pacing schedules within the private markets, to determine if already approved investment/commitment pacing for 2020 should be modified. While budgets didn't change, Staff did take a measured approach in implementing at the lower end of targets during the year given the



PORTFOLIO OVERVIEW (Continued)

uncertainty with the pandemic. The pacing of alternative asset investments relative to target allocations can ebb and flow annually based on investment opportunities and risk considerations within the markets. Experiencing some variability in annual implementation is expected, as reaching the actual allocations to asset class targets is a multi-year process to fully execute, especially within the private market asset classes, given the unique cash flow characteristics of these segments and the importance of maintaining vintage year diversification.

While implementation fell toward the lower end of the approved budgets in 2020, SCERS did make several investments across the portfolio to keep pace in moving closer to the target allocations of the strategic asset allocation. During the year, SCERS made follow-on investments with several existing managers and funds, while also making several new investments. Some investments were intended to opportunistically invest into the market dislocation, while others focused on sectors and industries that were minimally affected by the pandemic or those that are experiencing strong secular tailwinds

The majority of SCERS' asset classes are fully implemented, except for Private Credit and Real Assets, which continue to make progress toward their target allocations, and where full implementation is expected to be completed in 2023 and 2025, respectively. Private Equity and Real Estate are fully allocated and within range of their respective target allocations. Within the Absolute Return portfolio, SCERS continued the build out of the diversifying segment in 2020, by fully unwinding an interim solution with Grosvenor that had been in place, and using the proceeds to make several direct investments. The growth and diversifying segments of Absolute Return are both within range, though slightly below the targets. Within the public markets, due to the continued strong performance of stocks versus bonds, SCERS' Domestic Equity asset class is meaningfully overweight its target allocation and the top of the range, while International Equity is in line with the target, and public Fixed Income is below target. Staff plans on physically rebalancing the public market assets classes during the first quarter of 2021. During 2020, SCERS terminated its U.S. small cap value mandate and conducted a replacement manager search, which the Board approved a new manager in December.

PORTFOLIO OVERVIEW (Continued)

Table 2 below compares SCERS' actual physical allocations as of the end of 2020 to the target allocations.

Table 2 – SCERS' Actual Allocations versus Target Allocations

Asset Category/Asset Class	Actual Allocation*	Target Allocation	Variance
Growth	58.7%	58.0%	0.7%
Domestic Equity	22.8%	20.0%	2.8%
International Equity	19.9%	20.0%	-0.1%
Private Equity	10.1%	9.0%	1.1%
Public Credit	1.7%	2.0%	-0.3%
Private Credit	1.9%	4.0%	-2.1%
Growth Absolute Return	2.3%	3.0%	-0.7%
Diversifying	22.1%	25.0%	-2.9%
Core/Core Plus Fixed Income	8.9%	10.0%	-1.1%
US Treasury	4.3%	5.0%	-0.7%
Global Fixed Income	2.5%	3.0%	-0.5%
Diversifying Absolute Return	6.4%	7.0%	-0.6%
Real Return	15.6%	16.0%	-0.4%
Real Estate	7.3%	7.0%	0.3%
Real Assets	5.0%	7.0%	-2.0%
Liquid Real Return	3.3%	2.0%	1.3%
Opportunities	0.0%	0.0%	0.0%
Cash	2.5%	1.0%	1.5%
Overlay Program	1.1%	0.0%	1.1%
	100.0%	100.0%	

* Based on Verus Advisory market values

During 2020, SCERS issued an alternative assets consulting RFP, in order to evaluate its current consulting relationship with Cliffwater relative to the evolving alternative assets consulting marketplace. The conclusion of the consulting search/evaluation is expected to take place during the first quarter of 2021. Also during 2020, SCERS made progress in the onboarding of Colmore, who SCERS hired as a third party private markets accounting service provider to assist with the accounting and reporting of SCERS' growing private markets portfolio.

PORTFOLIO CONSIDERATIONS

The COVID-19 pandemic was the central theme that drove markets in 2020, and caused severe economic damage and a dramatic sell off in almost all asset classes. Thanks to unprecedented monetary and fiscal stimulus measures and the successful development of a vaccine, markets have experienced an amazing recovery, including SCERS' portfolio, though the real economy will be slower to recover. The strong markets have helped SCERS' plan get off to a solid start to the current fiscal year (July to December), with the portfolio already up over 15.8% half way through the year. But with valuations at or near all-time highs across many asset classes, a reasonable question to ask is what to expect going forward, for the economy, the financial markets, and for SCERS' investment portfolio.



PORTFOLIO OVERVIEW (Continued)

The upcoming Asset Liability Modeling (ALM) study is coming at an important time. Market experts are forecasting a lower return environment across a variety of asset classes. Public equity prices are at all-time highs, bond yields are at all-time lows, and credit spreads are at historically tight levels. In 2020, the SCERS Board of Retirement lowered the assumed rate of return from 7.00% to 6.75%, largely driven by the persistently low-inflationary environment. The lower return target takes some pressure off taking on more risk to reach for returns. However, a consideration is whether the current strategic asset allocation, when running it against updated capital market assumptions, might fall short of the actuarial rate of return.

The current strategic asset allocation has done a good job generating less volatile returns across a variety of market environments. It is designed to put SCERS in a reasonable position to meet the actuarial rate of return, by having a sufficient level of growth assets to drive returns, while emphasizing diversification, reduced downside risk and the range of outcomes that the portfolio is subject to, and meaningful cash flow generation. As SCERS considers any revisions to the asset allocation, there will be risk tradeoffs to structuring in a greater level of higher returning investments in order to enhance returns. These tradeoffs include increasing concentration to risk factors, such as the equity risk premium and credit risk, increasing susceptibility to downside risk, and decreasing portfolio liquidity if allocations to higher returning private market investments were made.

Outside of making significant asset allocation changes, there are some tools that an institutional investor can utilize to more efficiently enhance returns. One such tool is excess return generation over the policy index benchmark. While excess returns aren't necessarily something that SCERS models into its strategic asset allocation, they have provided value to SCERS' portfolio historically. Over the past 10 years, SCERS has been able to generate moderate excess returns net of fees. Over the 3-, 5-, and 10- year periods, SCERS has earned annualized returns in excess of the policy index benchmark of 1.6%, 1.4%, and 0.4%, respectively. However, earning consistent excess return is predicated on selecting top performing investment managers and strategies, which in a landscape where investment managers are raising ever increasing amounts of capital, and a greater number of institutional investors are allocating capital in similar market segments, and with similar managers, this becomes increasingly challenging.

Another tool that could potentially enhance returns is the use of tactical tilts within the strategic asset allocation. While making tactical adjustments across market segments is challenging for the best investors, and it is difficult to time the markets, if implemented in a thoughtful and prudent approach it can potentially add marginally enhanced returns for the portfolio. The most efficient approach for SCERS would be to use the Overlay Program to incorporate small tilts across market segments, such as stocks and bonds, while staying very close to existing target allocations and within ranges. Meaningful research and due diligence would need to be conducted before considering any tactical allocations within the SCERS portfolio.

Portfolio level leverage is also a tool that some institutional investors use to increase returns; however, it does come with increases in portfolio risk. Leverage can also be used less as a return enhancer, but more to improve the efficiency of capital in order to increase liquidity or improve portfolio diversification. An example includes taking existing portfolio beta exposures, such as equities and bonds, and implementing these segments through the use of futures contracts instead of holding physical positions. Since only a fraction of the futures exposure is required to be funded through cash (the majority is funded through margin (i.e., leverage)), the excess cash can then be used for other purposes, including holding larger cash positions to improve a plan's liquidity profile or supporting private market allocations, and/or investing in other strategies to improve portfolio diversification and potentially enhance returns. This is an area where further Board education and input would certainly be required prior to any consideration towards its use.

PORTFOLIO OVERVIEW (Continued)

An ongoing consideration for SCERS is managing the complexity of the investment portfolio. As SCERS' assets have grown over time, so has the number of asset classes, investment manager relationships, and underlying investment strategies. The growth in the portfolio has moved in line with increased diversification across a wide range of asset classes that serve varying roles within the total portfolio. In constructing and implementing the investment portfolio, SCERS tries to find a balance between simplicity and complexity. This includes having a fewer number of investment managers in asset classes with greater liquidity profiles where there is reduced risk in having concentrated investment mandates, such as in public equity and fixed income. Within the private market asset classes, SCERS strives to balance ample exposure to larger, more liquid, and lower-cost open-end investment vehicles, while prudently allocating to closed-end illiquid investment structures. This approach requires making appropriately sized allocations and seeking differentiated strategies that compensate investors for the underlying liquidity risk.

With greater portfolio complexity, Staff believes it is increasingly important for SCERS to have sufficient risk management and analytical tools to help oversee and manage the portfolio. These tools can assist Staff and the Board in being able to dynamically view factor exposures, industry concentrations, performance attribution, and perform scenario analysis when considering new investments, both within individual asset classes, as well as the total portfolio. There are several third party vendors that provide sophisticated analytical and risk tools that provide institutional investors with a combination of a total portfolio view that can holistically view exposures across the entire portfolio (i.e., publics and privates), as well as granularly within assets classes, including the alternative asset classes. More robust risk and analytical tools would also provide the SCERS Board with a greater level of transparency, to assist in its fiduciary oversight of the portfolio.

PORTFOLIO PERFORMANCE AND ATTRIBUTION

For 2020, SCERS generated a total gross fund return of 12.5%, which was really quite remarkable considering that after the end up the first quarter, the plan was down -9.7%. The Overlay Program was additive to the total return due to timely rebalancing into downtrodden equities during the spring, as SCERS' total gross fund return ex-Overlay was 11.5%. The calendar year return meaningfully outperformed the Policy Index return of 10.7%, and was ahead of the Investment Metrics peer universe of defined benefit plans with assets greater than \$1 billion, whose median return was 11.1% during 2020.

SCERS' asset categories delivered mixed results, with Growth assets returning an impressive 16.8%, Diversifying assets returning 8.2%, and Real Return assets returning a disappointing -0.7%. The Growth asset category benefitted from impressive double digit returns across Public Equities and Private Equity. Growth Absolute Return, Public Credit, and Private Credit also delivered strong returns (private market returns are lagged a quarter). Within the Diversifying asset category, both Public Fixed Income and Diversifying Absolute Return generated positive returns, with the former outperforming the latter. Across the Real Return asset category, Real Estate (non-core real estate is lagged a quarter) generated muted low single-digit returns. Real Assets delivered high single-digit negative returns due to the dramatic sell-off in energy prices early in the year, and the impact they had on SCERS' energy investments, though infrastructure investments fared much better. The Liquid Real Return asset class rebounded from early year negative returns to produce slightly positive results.

SCERS' asset classes, which underlie each asset category, generally produced positive returns across the board for the year, except for Real Assets, with mixed results relative to their respective benchmarks. Asset classes that exceeded their benchmarks included Domestic Equity by 0.9%, International Equity by 3.0%, Private Equity by



PORTFOLIO OVERVIEW (Continued)

4.3%, Public Credit by 0.4%, Private Credit by 4.8%, Public Fixed Income by 1.5%, Real Estate by 2.6%, and Liquid Real Return by 1.5%. Asset classes that trailed their benchmarks included Growth Absolute Return by -0.9%, Diversifying Absolute Return by -1.5%, Real Assets by -3.4%, and Opportunities by -10.6%.

The performance of the Private Equity, Private Credit, and Real Assets asset classes are better reflected through an internal rate of return (IRR) calculation, which accounts for asset inflows and outflows. The performance results of these segments in the asset class sections of this report utilize an IRR calculation, as calculated by Cliffwater. Townsend uses a time-weighted return for Real Estate in the Real Estate section.

Over the longer 3-year and 5-year periods, SCERS has generated gross returns of 9.4% and 10.6%, respectively. Both the 3- and 5-year figures exceed the Policy Index return of 7.8% and 9.2%, respectively. Both the 3-year and 5-year returns also exceed SCERS' actuarial return assumption of 6.75%. Since inception (as of June 1986), SCERS' portfolio has generated a gross return of 8.6%, which is in-line with the Policy Index return of 8.6%.

SCERS' investment results (as calculated by Verus) are summarized in **Table 3**.

Table 3 - Investment Results

	For the Period Ended December 31, 2020		
	Annualized		
	1 Year	3 Years	5 Years
GROWTH ASSET CATEGORY:*	16.8%	11.8%	-%
Policy Benchmark: Blended weighted average of asset class benchmarks	15.1	10.2	-
Domestic Equity	21.8%	14.7%	15.4
Policy Benchmark: Russell 3000 Index	20.9	14.5	15.4
InvMetrics All DB U.S. Eq Gross Median	18.4	13.2	14.5
International Equity	14.1	7.6	11.1
Policy Benchmark: MSCI ACWI ex-U.S. Index	11.1	5.4	9.4
InvMetric All DB ex-U.S. Eq Gross Median	12.7	5.6	9.6
Private Equity**	18.2	20.6	17.7
Policy Benchmark: Thomson Reuters C/A All PE 1 Quarter Lag	13.9	12.8	14.3
L/T Benchmark: Russell 3000 + 3% 1 Quarter Lag	18.0	14.7	16.7
InvMetric All DB Private Eq Net Median	9.1	9.6	10.0
Public Credit	4.9	4.3	8.3
Policy Benchmark: 50% BofA ML High Yield II / 50% Credit Suisse Leveraged Loans	4.5	5.0	6.8
Private Credit**	7.6	6.8	8.8
Policy Benchmark: Credit Suisse Leveraged Loan + 2%	2.8	5.2	6.1

PORTFOLIO OVERVIEW (Continued)

	For the Period Ended December 31, 2020		
	Annualized		
	1 Year	3 Years	5 Years
Growth Absolute Return	10.9	5.6	6.5
Policy Benchmark: HFRI Fund of Funds Composite Index + 1%	11.8	5.9	6.2
DIVERSIFYING ASSET CATEGORY:*	8.2	4.9	-
Policy Benchmark: Blended weighted average of asset class benchmarks	7.6	4.9	-
Public Fixed Income	9.5	6.0	5.7
Policy Benchmark: Custom***	7.5	5.2	4.8
Diversifying Absolute Return	4.9	2.0	1.9
Policy Benchmark: HFRI Fund of Funds Conservative Index	6.4	3.9	4.5
REAL RETURN ASSET CATEGORY:*	(0.7)	5.0	-
Policy Benchmark: Blended weighted average of asset class benchmarks	(0.9)	3.0	-
Real Estate****	3.9	6.2	8.4
Policy Benchmark: 65% NFI-ODCE / 35% NFI-ODCE + 1%	1.3	5.0	5.9
InvMetric All DB Real Estate Net Median	0.5	4.4	5.6
Real Assets**	(7.7)	4.7	8.6
Policy Benchmark: Custom*****	(4.3)	1.7	4.0
L/T Benchmark: CPI-U Headline + 5%	6.4	6.9	6.9
Liquid Real Return	2.5	-	-
Policy Benchmark: Custom*****	1.0	-	-
OPPORTUNITIES:	0.1	3.2	4.9
Policy Benchmark: Policy Index Benchmark	10.7	7.8	9.2
CASH:	0.8	-	-
Policy Benchmark: Overnight LIBOR	0.4	-	-
TOTAL FUND:			
SCERS Total Fund - Gross	12.5%	9.4%	10.6%
SCERS Total Fund - Net	12.3	9.1	10.3
Policy Benchmark Index*****	10.7%	7.8%	9.2%
InvMetric Public DB > \$1B Gross Median	11.1	7.8	9.4

Table 3 Notes continue on page 20



PORTFOLIO OVERVIEW (Continued)**Table 3 Notes**

Notes: Unless noted, returns were prepared by Verus Advisory, Inc., and shown on a gross of fee basis (except for absolute return, private equity, private credit, real assets, and opportunities, which are net of fees), and included the overlay effect. Return calculations were prepared using a time-weighted rate of return.

* Verus asset category composite returns did not start until March 31, 2017.

** Investment return and index return are one quarter in arrears.

*** The public fixed income benchmark consists of 55.6% Bloomberg Barclays Aggregate Bond Index, 27.8% Bloomberg Barclays US Treasury Index, 13.3% Citi WGBI Index, and 3.3% JPM GBI-EM Index.

**** Non-core real estate returns are one quarter in arrears.

***** The real assets benchmark consists of 45% Cambridge Associates Private Infrastructure Index, 35% Cambridge Associates Private Energy Index, 10% NCREIF Agriculture Index, and 10% NCREIF Timber Index.

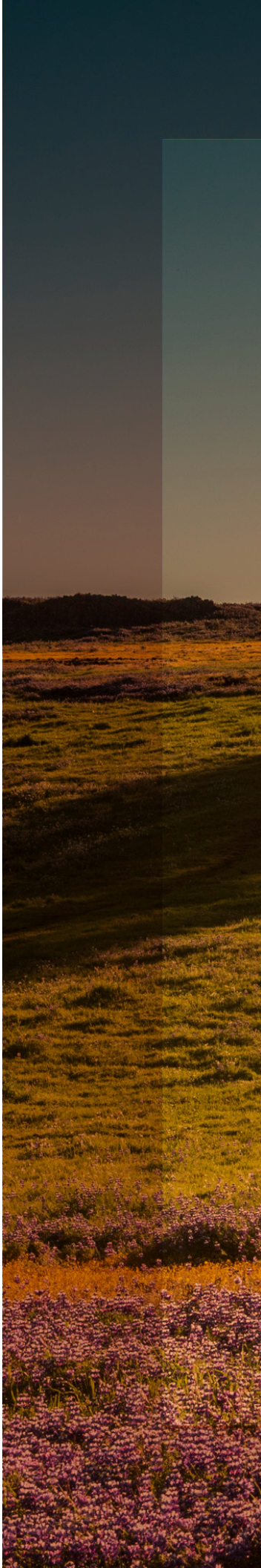
***** The liquid real return benchmark consists of 15% FTSE EPA/NAREIT Developed Liquid Index, 25% S&P Global Infrastructure Index, 10% S&P Global Large Mid Cap Commodity and Resource Index, 10% Bloomberg Roll Select Commodity Index, 30% Bloomberg Barclays 1-10 Year US TIPS Index, 10% Bloomberg Barclays US Dollar Floating Rate Note < 5 Years Index.

***** The policy index benchmark consists of (Domestic Equity - 21% Russell 3000); (International Equity - 20% MSCI ACWI ex U.S.); (Fixed Income - 10% Barclays Aggregate, 5% Barclays US Treasury, 2.4% Citigroup WGBI ex U.S. Unhedged, 0.6% JPM GBI EM Diversified, 1% BofA ML High Yield II, 1% Credit Suisse Leveraged Loans); (Private Equity - 9% Thomson Reuters C/A All PE 1 Qtr Lag); (Private Credit - 4% Credit Suisse Leveraged Loans + 2%); (Absolute Return - Growth-Oriented 3% HRFI FoF Composite + 1%, Diversifying 7% HRFI FoF Conservative); (Real Estate - 4.5% NFI-ODCE, 2.5% NFI-ODCE +1%); (Real Return - 3.1% Cambridge Assoc Private Infrastructure 1 Qtr Lag, 2.5% Cambridge Assoc Private Energy 1 Qtr Lag, 0.7% NCREIF Farmland 1 Qtr Lag, 0.7% NCREIF Timberland Index Lagged); (Liquid Real Return - 0.3% FTSE EPA/NAREIT Developed Liquid Index, 0.5% S&P Global Infrastructure Index, 0.2% S&P Global Large Mid Cap Commodity and Resource Index, 0.2% Bloomberg Roll Select Commodity Index, 0.6% Bloomberg Barclays 1-10 Year US TIPS Index, 0.2% Bloomberg Barclays US Dollar Floating Rate Note < 5 Years Index); (cash - 1% overnight Libor).

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ASSET CLASSES

DOMESTIC EQUITY

MARKET OVERVIEW

Equity markets experienced a tumultuous year in 2020, with both the sharpest market decline and quickest recovery in history occurring over the course of the year. In the first quarter, equity markets sold off as concerns surrounding the COVID-19 pandemic resulted in a dramatic shutdown of economic activity. The economic damage was severe, with the unemployment rate hitting 14.7%, over 20 million unemployed, and second quarter gross domestic product (GDP) declining -31.4% on an annualized basis, the worst quarterly contraction in U.S. history. The S&P 500 dropped more than 20% over 16 trading days. By comparison, it took nearly a year for equity markets to decline 20% during the 2008-2009 Global Financial Crisis. From the market high in mid-February to the market low in March, the broad equity market declined nearly 35%, as measured by the Russell 3000 index. Small cap stocks underperformed large cap stocks, with the Russell 2000 index experiencing a 44% peak-to-trough decline.

U.S. equity markets stabilized and began to recover during the final week of March, following unprecedented action to provide fiscal and monetary support to the economy, with both the Federal Reserve and Congress enacting stimulus measures for over \$2 trillion dollars. The initial recovery in the U.S. equity markets was driven by the technology sector, which in many ways benefited from the policy responses enacted to battle the coronavirus, such as increased adoption of ecommerce and technology developed to enable remote work and education. Other sectors struggled during the early phases of the recovery, particularly energy, financials, and real estate, as the impacts of the virus were more widespread and persistent.

The equity markets continued to recover throughout the remainder of 2020, despite growing health consequences from the pandemic and inconsistent policy responses at the state and federal levels. Economic activity rebounded from the lows in the second quarter, with third quarter GDP increasing at a 33.1% annualized rate. Equity markets also advanced despite the contentious presidential election, with the markets posting strong returns in November and December following the November 3rd election and positive announcements of vaccine development. For the full year, the equity market ended up posting strong returns and finishing at record highs, with the Russell 3000 index up 20.9% for the year. Technology stocks led the market for the year, with the NASDAQ index posting its best annual gain since 2009, up 43.6%.

Despite the strong overall returns for the year, there was significant dispersion across markets, from a sector and style perspective. In addition to strong returns from Technology stocks, the Consumer Discretionary sector advanced over 40% during the year as consumers, supported by significant federal stimulus measures, shifted spending toward household and consumer goods. By contrast, the Energy and Real Estate sectors declined -29% and -5%, respectively, as these sectors faced declining demand from reduced travel and work from home policies. Growth stocks significantly outpaced value stocks during the year, continuing a trend that has persisted for the better part of the last decade, with growth stocks up 38% compared to value up 3%, as measured by the Russell 1000 Growth and Value Indices. Large capitalization stocks outpaced small cap stocks for most of the year, as they declined less during the first quarter and led during the initial stages of the recovery. However, small cap stocks posted strong returns in the fourth quarter, with the Russell 2000 index posting its best quarterly gain in the history of the index, up 31.4%. For the year, the Russell 1000 index was up 21% compared to the Russell 2000 index up 20%.

DOMESTIC EQUITY (Continued)

SCERS DOMESTIC EQUITY PORTFOLIO

SCERS entered 2020 with an overweight to Domestic Equity following strong returns during 2019. Equity market declines during the first quarter brought the portfolio in line with the target allocation of 20%. The robust recovery in equity markets through the balance of the year brought the portfolio back above the high end of the range, ending the year at 22.8%, despite reducing the Domestic Equity exposure at the end of August. SCERS' small cap growth allocation was the best performing segment of the portfolio, outperforming its benchmark during both the market downturn and recovery, and ending the year up 61%. While the actively managed large cap portfolio underperformed during the first three quarters of the year, it generated strong outperformance in the fourth quarter, resulting in slight underperformance for the full year. SCERS made one change to its manager lineup during 2020, replacing the small cap value manager. The legacy manager was terminated in August and a replacement search was completed in the fourth quarter, with the final transition of assets occurring in January 2021. The large cap portfolio contains a combination of passive and active exposures, both managed against the Russell 1000 Index. The large actively managed segment of the portfolio takes a core approach, balanced between quantitative and fundamental investment strategies. The small cap segment is entirely actively managed with equal allocations to growth and value oriented managers.

SCERS Domestic Equity Portfolio Construction					
	Minimum	Target Allocation	Maximum	Manager Allocation	Policy Index Benchmark
Total Domestic Equity Portfolio	18%	20%	22%		Russell 3000 Index
Large Cap Passive (Russell 1000)		54%		54.0%	
Large Cap Active (Russell 1000)		36%			
Fundamental Concentrated				12.0%	
Equity Extension 130/30				12.0%	
Systematic Multi-Factor				12.0%	
Small Cap Value (Russell 2000 Value)		5%		5.0%	
Small Cap Growth (Russell 2000 Growth)		5%		5.0%	

2020 ACTIVITY

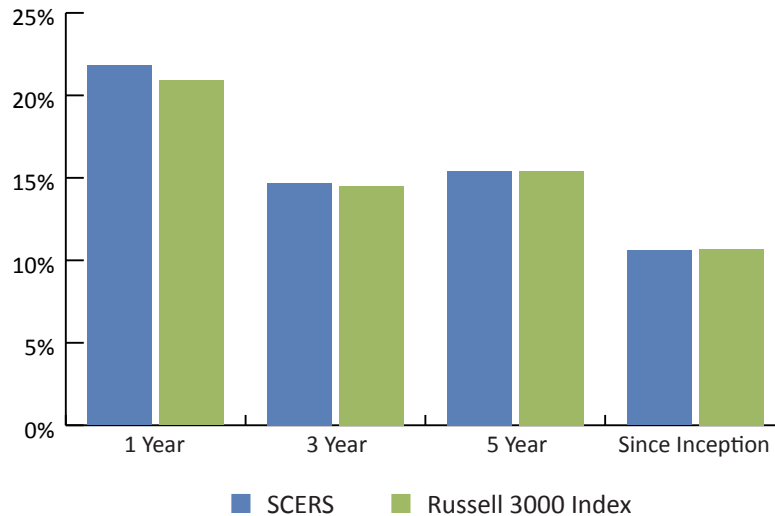
- Hired Snyder Capital Management to manage the small cap value segment of the portfolio, replacing legacy manager DGHM
- Physically rebalanced the portfolio to reduce the overweight position relative to the target allocation range, reducing the passive exposure at the end of August
- Oversaw, monitored, and held update calls with SCERS' existing Domestic Equity managers



DOMESTIC EQUITY (Continued)

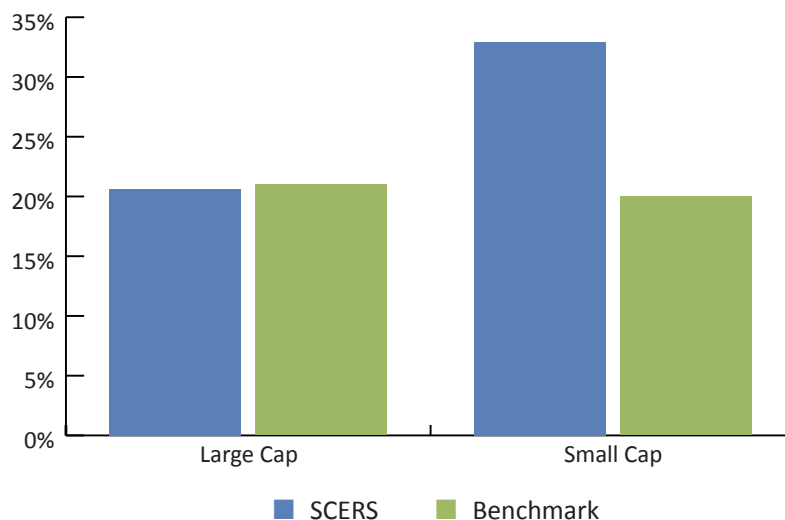
PERFORMANCE AND ATTRIBUTION

SCERS Domestic Equity Performance



SCERS' Domestic Equity portfolio outperformed the Russell 3000 Index for the year, returning 21.8% versus 20.9% for the benchmark. Over the longer term, the Domestic Equity portfolio has performed in line with the benchmark, delivering 14.7% and 15.4% annualized returns for the three and five year periods, respectively.

2020 Domestic Equity Performance



SCERS' U.S. large cap portfolio slightly underperformed the Russell 1000 index for the year, returning 20.6% versus 21.0% for the benchmark. SCERS' small cap portfolio, which is approximately 10% of the Domestic Equity portfolio, significantly outperformed the Russell 2000 benchmark, returning 32.9% compared to the benchmark return of 20.0%.

DOMESTIC EQUITY (Continued)**2021 ANNUAL PLAN**

- Monitor allocations to existing managers and rebalance the portfolio as appropriate
 - Portfolio is overweight the target allocation, with rebalancing anticipated to occur in the first quarter to bring the portfolio within the allocation range
- Evaluate the target size and portfolio structure of Domestic Equity in conjunction with the ALM study
 - Review passive, quantitative, and fundamental strategies, and role of each within the portfolio
- Evaluate potential new strategies and managers that would be additive to the portfolio
- Oversee, monitor, and meet with SCERS' existing Domestic Equity managers



INTERNATIONAL EQUITY

MARKET OVERVIEW

International equity markets experienced much of the same turbulence as U.S. equity markets during 2020, caused in response to the COVID-19 pandemic. Having previously experienced significant health scares in recent years, such as SARS and the avian influenza, many Asian countries quickly responded to the pandemic, and were therefore able to move past the worst impacts in a shorter time frame. The pandemic had a severe impact across Europe, with many countries applying similar measures as the U.S., imposing significant restrictions on activity leading to a severe reduction in economic output. The equity markets responded with a sharp decline in the first quarter, with most countries declining 20-30%. The MSCI ACWI ex USA and MSCI Emerging Markets benchmarks were down -23.3% and -23.6%, respectively, in the first quarter.

International equity markets rebounded in the second quarter, posting strong quarterly returns ranging from 8% to 20%, but generally trailed the recovery posted by the U.S. equity market. Emerging markets (EM) led developed markets in the early stages of the recovery, with low inflation and currency appreciation helping to support the returns of EM countries. Despite the recovery in equity markets, many international countries struggled with significant impacts from the virus, leading to restrictions that lasted throughout the year.

Consistent with results in the U.S., international equity markets posted extremely strong results in the fourth quarter, supported by positive news on vaccine development, additional monetary and fiscal stimulus measures, and improving expectations for the year ahead. Fourth quarter returns were strong across developed and emerging markets, with returns ranging from 15% to 20%. Similar to the U.S., value stocks led growth stocks in the fourth quarter, but still trailed significantly for the full year.

Despite the extreme volatility throughout the year, developed and emerging equity markets ended up posting strong full-year returns. Emerging markets advanced more than developed markets, with the MSCI EM index up 18.3% for the year. China, which makes up 39% of the index, was up 30% for the year. Taiwan and South Korea, which each constitute approximately 13% of the index, were both up over 40% for the year. Latin America and Middle East markets, which were significantly impacted by the decline in energy prices, generally trailed the returns in other markets, with the largest negative impact from Brazil, down -19% for the year.

International developed market returns were not as robust for the full year, with the MSCI World ex USA index up 8.1%. Japan, which is the largest constituent in the index at 23%, was up 15% for the year. Other significant contributors, from a country perspective, included Germany +13% and Canada +7%. The United Kingdom significantly trailed other developed markets, declining -8% for the year. From a style perspective, despite the strong fourth quarter returns for value stocks, growth stocks significantly outperformed value for the full year, with the MSCI ACWI ex USA Growth index up 22.6% versus the MSCI ACWI ex USA Value down slightly at -0.2%. Small cap stocks outperformed large cap stocks for the year, with the MSCI World ex USA Small Cap index up 13.2% for the year.

INTERNATIONAL EQUITY (Continued)

SCERS INTERNATIONAL EQUITY PORTFOLIO

Following restructuring that occurred in 2018 and strong returns in 2019, SCERS' International Equity portfolio started 2020 in line with the 20% target allocation. The split between developed and emerging markets was also aligned with the target allocation, with emerging markets making up 20% of the total international equity portfolio. There was a slight tilt to growth over value, due to performance differences in the prior year. Despite the strong returns in 2020, with other segments of SCERS' portfolio also delivering solid returns, the international equity portfolio remained at the 20% target allocation at the end of the year. However, with the continued divergence between growth and value styles, both across developed and emerging markets, the SCERS portfolio has a greater overweight to growth at the end of 2020. SCERS' International Equity portfolio is entirely actively managed.

SCERS International Equity Portfolio Construction				
	Minimum	Target Allocation	Maximum	Policy Index Benchmark
Total International Equity Portfolio	18%	20%	22%	MSCI ACWI ex-US Index
ACWI ex-U.S. (MSCI ACWI ex-US)		20%		
Developed Large Cap Growth (MSCI World ex-US)		25%		
Developed Large Cap Value (MSCI World ex-US)		25%		
Developed Small Cap Growth (MSCI World ex-US Small Cap)		5%		
Developed Small Cap Value (MSCI World ex-US Small Cap)		5%		
Emerging Markets All-Cap (MSCI Emerging Markets)		20%		

2020 ACTIVITY

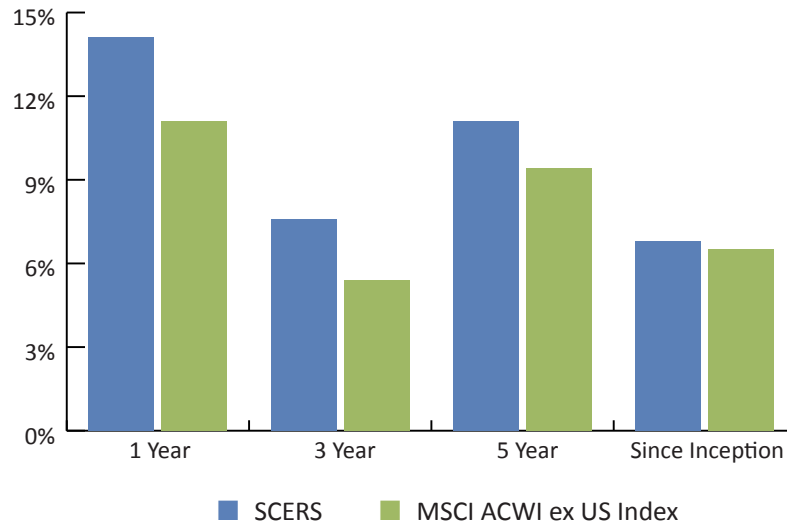
- Reviewed potential new strategies and managers, including country or regional specific mandates
- Oversaw, monitored, and held update calls with SCERS' existing International Equity managers



INTERNATIONAL EQUITY (Continued)

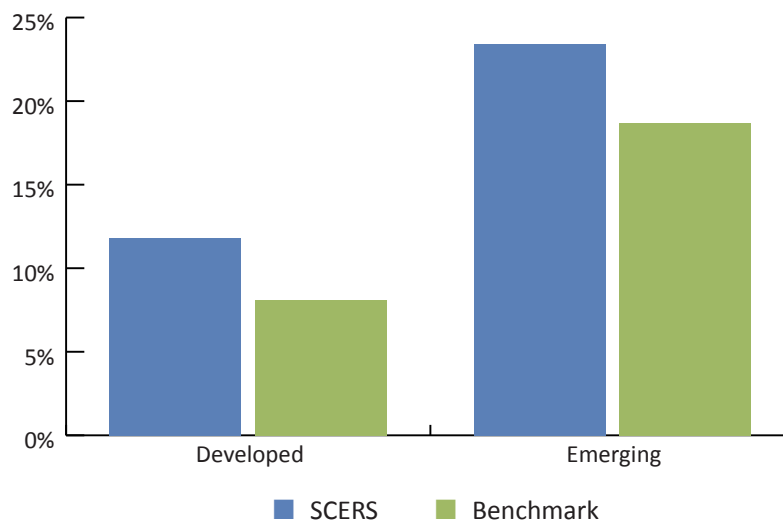
PERFORMANCE AND ATTRIBUTION

SCERS International Equity Performance



SCERS' International Equity portfolio outperformed the benchmark MSCI ACWI ex US benchmark by 3% for 2020, returning 14.1% versus 11.1% for the benchmark. The SCERS International Equity portfolio has also outperformed over longer time periods, generating 7.6% and 11.1% annualized returns for the three and five year periods, respectively, versus the benchmark returns of 5.4% and 9.4%.

2020 International Equity Performance



Developed markets underperformed emerging markets for 2020, with the SCERS portfolio outperforming its benchmarks across both segments. SCERS' Developed Markets portfolio, which includes large cap and small cap allocations, outperformed the MSCI World ex US benchmark, returning 11.8% versus 8.1% for the benchmark. SCERS' Emerging Markets portfolio significantly outperformed the MSCI Emerging Markets benchmark, returning 23.4% compared to 18.7% for the benchmark.

INTERNATIONAL EQUITY (Continued)**2021 ANNUAL PLAN**

- Monitor allocations to existing managers and rebalance the portfolio as appropriate
 - Portfolio is overweight Growth and underweight Value
- Evaluate the target size and portfolio structure of International Equity in conjunction with the ALM study
 - Evaluate country specific mandates, including Emerging Markets, for role in the portfolio
- Review style and sector exposures for unrecognized portfolio tilts
- Oversee, monitor, and meet with SCERS' existing International Equity managers



FIXED INCOME

MARKET OVERVIEW

In the most turbulent year since the global financial crisis of 2008, fixed income markets experienced significant volatility as investors were forced to navigate a global pandemic. The COVID-19 pandemic disrupted fixed income markets in the first quarter of 2020, causing a flight to safety and a wide-scale sell-off in risk assets. The market disruption led to an environment where investors saw U.S. Treasury yields fall (and prices increase) across all maturities, credit spreads widen (and credit prices fall), and liquidity dry up in the first quarter. However, this turmoil was quickly followed by unprecedented monetary and fiscal stimulus that paved the way for a rebound in credit during the remainder of 2020.

The Federal Reserve (Fed) played an important role in mitigating the damage caused by the pandemic, deploying a broad array of tools throughout 2020 to support distressed credit markets and ensure their smooth functioning. The Fed acted quickly to cut the federal funds rate by a total of 150 basis points, reinstated quantitative easing, and deployed various programs to help battle the wide-scale market turmoil. The rate cut brought the target federal funds rate down to a range of 0% to 0.25%, and it is anticipated to remain close to zero for the foreseeable future. The Fed also continued purchasing long-term Treasury securities as well as other agency securities in amounts as needed to support markets. The Fed's efforts expanded beyond supporting the financial market to include assistance to corporations and businesses, by creating facilities that allowed the Fed to purchase new and existing investment grade bonds, which were also expanded to include exchange-traded funds. Outside of the U.S., central banks across the globe also responded to the pandemic and implemented a wide range of expansionary measures. The European Central Bank (ECB) and Bank of Japan (BOJ) introduced asset purchase programs along with yield-curve controlling programs that continue to expand and support global markets. The steps taken by the Fed and other central banks helped mitigate the extreme distress in the credit markets; however, as impressive as the Fed's power and tools are, additional support could potentially be needed to manage ongoing economic impact from the pandemic.

Overall, fixed income markets delivered relatively strong returns amid the pandemic. Treasury returns for the year, measured by the Bloomberg Barclays U.S. Treasury Index, were up 8%, with the yield curve steepening throughout the year after falling in the first quarter of 2020. Within the U.S. bond market, the Bloomberg Barclays U.S. Corporate Bonds Index returned 9.9% for the year, while the Bloomberg Barclay U.S. High Yield Bond returned 7.1%. Credit spreads widened dramatically in the first quarter, but tightened and remained relatively low through the remainder of the year. However, given the low yield, they remained relatively attractive when considered as a percentage of the actual yield offered. The broad based Bloomberg Aggregate Index, which is a combination of government bonds and corporate credit, returned 7.5% for the year, while the J.P. Morgan EMBI Global Diversified, which represents the benchmark for emerging market debt, returned 5.3%.

As we look to 2021, many experts believe that the low interest rate and yield environment will create for challenging fixed income returns going forward. There is potential for longer-term rates to move higher as the economy recovers and inflation expectations continue to rise, which would put pressure on bond prices. Meanwhile, short-term rates are expected to remain near zero through 2021, resulting in a steeper yield curve as the gap between short and long-term yields expands. The lower yield environment may lead investors to seek other fixed income market segments for higher yielding securities, including high yield debt and emerging market debt.

SCERS FIXED INCOME PORTFOLIO

SCERS' Fixed Income portfolio has a 20% target allocation; however, exposures reside within different segments of the overall SCERS portfolio. A dedicated public credit mandate, which is comprised of mostly high yield corporate credit and bank loans, resides within the Growth asset category to reflect its higher risk and return profile. The traditional fixed income exposures reside within the Diversifying asset category to reflect their lower correlation to growth assets, and their ability to provide downside protection. Within the traditional fixed income allocation, a dedicated U.S. Treasury mandate complements the existing core plus and global fixed income mandates. At year-end, the aggregate Fixed Income portfolio had a weight of 17.4%, which is below the target allocation of 20%, but within range. The Fixed Income portfolio entered the year with an 18% weighting, but the strong returns of equities relative to fixed income during the year led to the increasing underweight to target. SCERS' targeted fixed income exposures are shown below:

SCERS Fixed Income Portfolio Construction					
	Asset Category	Minimum	Target Allocation	Maximum	Policy Index Benchmark
Total Fixed Income Portfolio		14%	20%	26%	Custom Blend of benchmarks below:
U.S. Treasuries	Diversifying	3%	5%*	7%	Bloomberg Barclays U.S. Treasury Index
Core Plus Fixed Income	Diversifying	8%	10%*	12%	Bloomberg Barclays U.S. Aggregate Index
Global Fixed Income	Diversifying	2%	3%*	4%	80% FTSE WGBI ex U.S. + 20% JPMorgan GBI EM Diversified
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

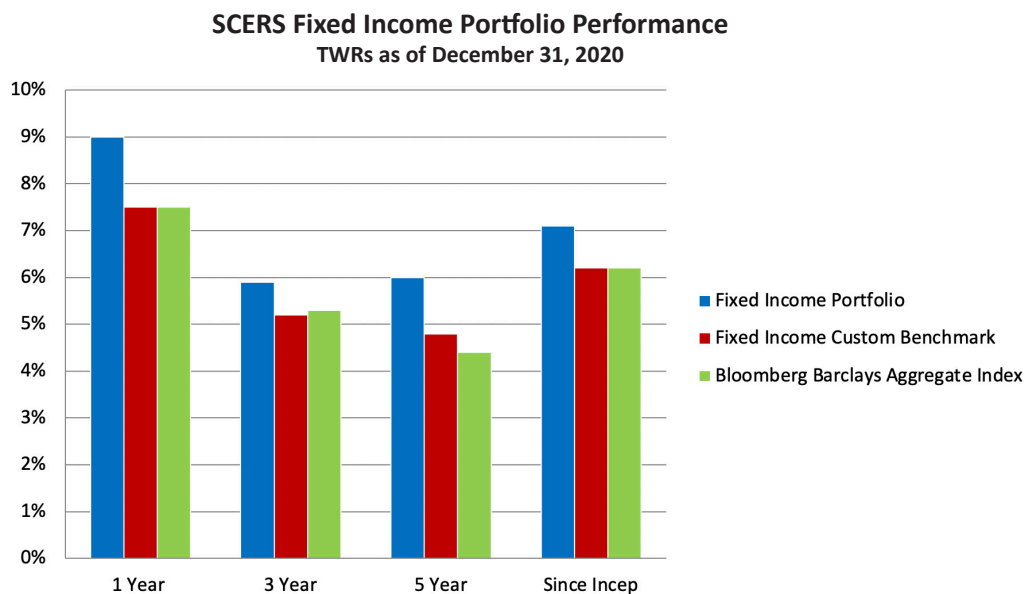
2020 ACTIVITY

- Oversaw, monitored, and held update calls with SCERS' Fixed Income managers



FIXED INCOME (Continued)**PERFORMANCE AND ATTRIBUTION**

During 2020, SCERS' Total Fixed Income portfolio returned an impressive 9.0%, outperforming the policy index custom benchmark return of 7.5%, with all underlying strategies delivering positive performance. The returns were also ahead of the Bloomberg Barclays Aggregate Index of 7.5%. Leading the way was SCERS' Global Fixed Income mandate, which returned 12.2% and made a dramatic rebound from negative performance in the first quarter, where rate and currency exposure to commodity driven countries hurt performance. SCERS' Core Plus Fixed Income mandates also generated strong returns, up 9.5% for the year. The U.S. Treasury mandate was the strong performer in the first quarter when the markets collapsed, and confirmed its roles as an anchor to safety in stressed markets, returning 7.0% for the year. The Public Credit segment also delivered positive returns, up 4.9% for the year.

**2021 ANNUAL PLAN**

- Review fixed income targets and portfolio structure as part of the broader ALM Study
 - Review roles of fixed income sectors in a forecasted low yield and return environment for bonds
- Monitor allocations to existing managers and rebalance the portfolio as appropriate
 - Portfolio is currently underweight the target allocation
- Oversee, monitor, and meet with SCERS' Fixed Income managers

ABSOLUTE RETURN

MARKET OVERVIEW

The increased volatility and dispersion between and among asset classes during 2020 created an advantageous market environment for absolute return strategies. While absolute return strategies were not immune to the equity and credit market declines in the first quarter, in general, they did provide some protection and declined less than the broader markets. The pandemic driven volatility in the first quarter did result in significant dispersion between absolute return strategies and managers, highlighting the disparate nature of investments across the category. As markets recovered throughout the year, absolute return funds incrementally added risk and increased leverage, which resulted in strong fourth quarter returns. For the full year, the Fund Weighted Composite Index was up 11.6%, reflecting the strength of the recovery following a decline of -11.6% in the first quarter. The HFRI Fund of Funds Composite Index was up 10.3% for the year, while the HFRI FoF Conservative Index was up 5.7%.

At the strategy level, equity long/short was the top performing strategy, driven by the strong recovery in equity markets. The HFRI Equity Hedge Index was up 17.4% for the year, with technology and healthcare focused sub-strategies up 28.3% and 27.3%, respectively. Perhaps surprisingly, energy/materials was the top performing sub-strategy, with the HFRI Equity Hedge Energy/Materials Index up 30.3%, as managers were able to navigate the steep decline in energy prices early in the year. Discretionary Macro and Event-Driven strategies also delivered strong results for the year. Discretionary macro managers did well at navigating turmoil in the first quarter, while also delivering positive results through the remainder of the year, resulting in 10.6% returns. The HFRI Event-Driven Index was up 9.3% for the year, with the M&A market benefitting from the record level of equity issuance from special purpose acquisition companies (SPACs) over the second half of the year. The second half recovery for event-driven strategies was notable, considering the decline of nearly 15% in the first quarter.

Relative Value (RV) and Systematic strategies were the bottom performing strategies for the year. Within RV, fixed income arbitrage strategies suffered sharp declines in the first quarter as market liquidity declined and forced liquidation occurred within certain segments of the fixed income markets, particularly asset backed securities. Despite recovering somewhat during the course of the year, the HFRI Fixed Income-Asset Backed Index was down -1.3%, while the broader HFRI Fixed Income-Sovereign Index was only up 1.3%. Quantitative equity market neutral strategies struggled to recover from first quarter losses, resulting in slightly negative performance for the year, down -0.3%. Volatility strategies faced sharp declines from short volatility positions, as markets declined and volatility spiked in the first quarter, resulting in a decline of -2.6% for the year. Systematic strategies also struggled throughout the year, as the HFRI Macro Systematic Index was only slightly positive for the year, up 2.6%, despite strong fourth quarter returns of 5.8%.



ABSOLUTE RETURN (Continued)

SCERS ABSOLUTE RETURN PORTFOLIO

SCERS' Absolute Return portfolio has an overall target of 10%, with an emphasis on the Diversifying segment, which has a 7% target allocation, while the Growth segment has a 3% target. The Diversifying Absolute Return portfolio is designed to have lower sensitivity and correlation to equity and credit markets. The Growth Absolute Return portfolio allows for higher beta and correlation, with higher corresponding return expectations and volatility targets.

	Absolute Return Portfolio Construction	
	Growth-Oriented Strategies	Diversifying Strategies
Portfolio Objective	Equity and credit like returns over the long-term with lower volatility than equities and credit markets	Positive absolute return profile over time with limited sensitivity to broad market performance
Benchmark	Policy: HFRI FoF Composite Index +1% Long-term objective: T-bills + 5%	Policy: HFRI FoF Conservative Index Long-term objective: T-bills + 2%
Risk Target	Standard Deviation < 50% of global equities	Standard Deviation < 25% of global equities
Market Sensitivity	Target an equity beta <0.5 Target equity correlation <0.8	Target an equity beta <0.1 Target equity correlation <0.1
Market Exposure	Total notional gross exposure < 250%	Total notional gross exposure < 750%

	Absolute Return Portfolio Construction	
	Growth-Oriented Strategies	Diversifying Strategies
Target Allocation	3% of total assets	7% of total assets
Allocation Range	1% to 5% of total assets	5% to 9% of total assets
Primary Strategies	Credit/Distressed Event Driven Equity Long/Short	Market Neutral Global Macro Multi Strategy
Number of Funds	Target 5 funds with a range of 2 to 8 funds	Target 10 funds with a range of 6 to 13
Non-U.S. Exposure	Expect 20% to 40% non-U.S. exposure	Expect 20% to 50% non-U.S. exposure

The Absolute Return portfolio, for both Growth and Diversifying segments, is allocated to a combination of direct fund investments and a diversified fund of funds program managed by Grosvenor Capital Management (GCM). The direct portfolio is allocated across multiple managers, to provide diversification and exposure across various hedge fund strategies.

The heightened volatility across markets during 2020 resulted in significant activity across SCERS' absolute return portfolio. Over the course of the year, SCERS placed three funds on its Watch List, and redeemed from two direct investments in the Diversifying portfolio. SCERS made new direct investments with three managers in the

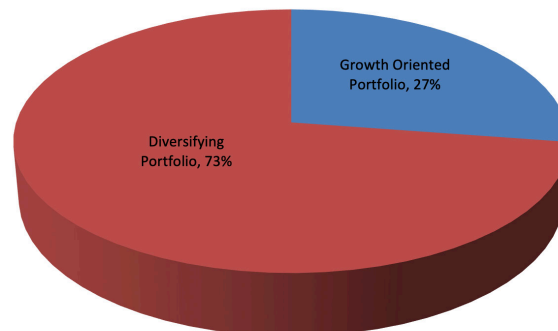
ABSOLUTE RETURN (Continued)

Diversifying portfolio, and increased the investment in one of its existing managers. As of December 31, 2020, SCERS is invested with three direct managers in the Growth portfolio and eleven managers in the Diversifying portfolio.

The fund of funds program is managed by GCM and has separate portfolios aligned with the Growth (SCARF-G) and Diversifying (SCARF-D) segments of the Absolute Return portfolio. During 2020, GCM was able to make investments with several high quality managers, some of which were previously closed to new capital, but opened up capacity for a limited time following the market drawdown in the first quarter. Entering 2020, GCM also managed an interim portfolio (SCARF-B), which was established to provide increased exposure to the Diversifying Absolute return segment as SCERS built out the allocation to direct portfolio investments. Over the past several years, SCERS has made significant progress within the direct portfolio, and therefore, as planned, SCARF-B was liquidated during 2020, with only a small residual balance left with less liquid investments.

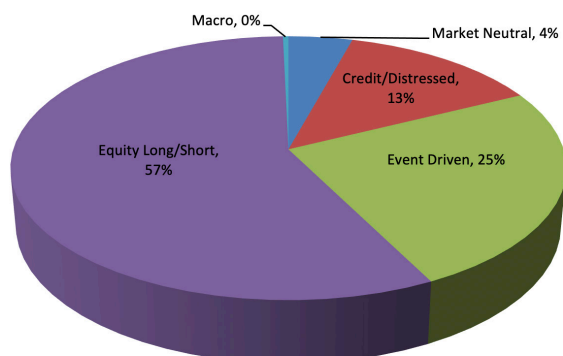
At year-end, SCERS' Absolute Return portfolio is roughly split between Growth and Diversifying as detailed in the chart below.

Total Absolute Return Portfolio
as of December 31, 2020

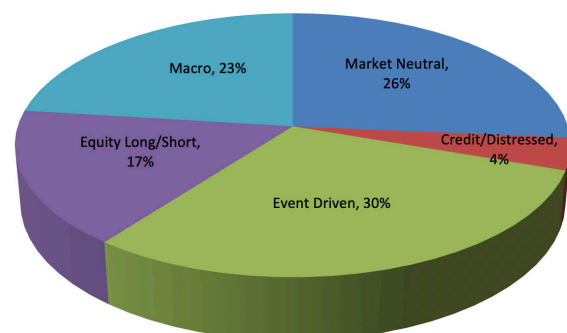


The Growth and Diversifying Absolute Return portfolios are diversified across strategies and managers. The exposure to each strategy, including the GCM separate account, is detailed in the following charts.

Growth Oriented Portfolio Strategy Allocations
as of December 31, 2020



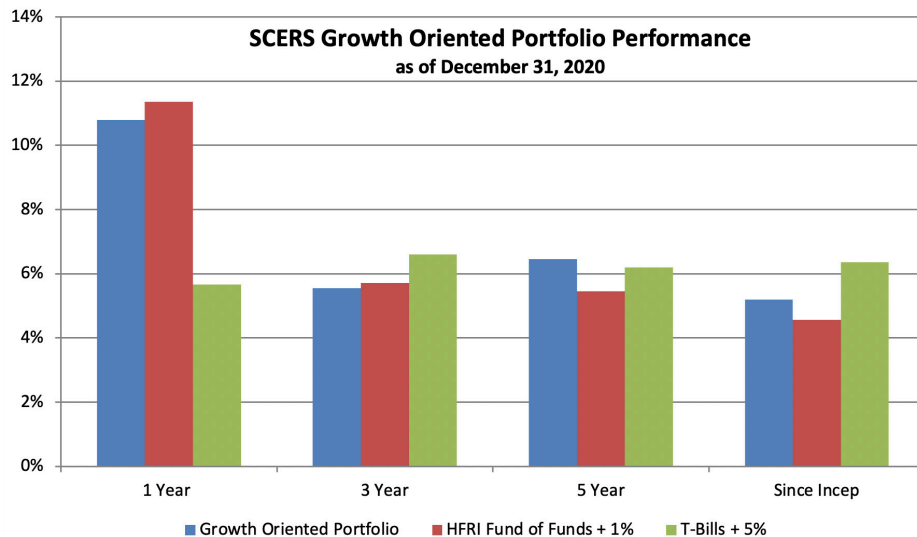
Diversifying Portfolio Strategy Allocations
as of December 31, 2020



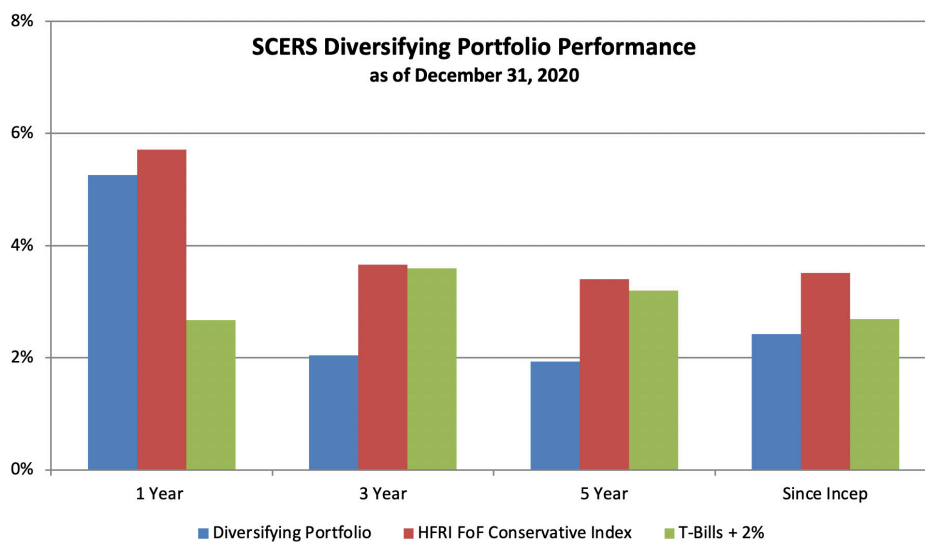
ABSOLUTE RETURN (Continued)**2020 ACTIVITY**

- Presented the 2020 Absolute Return annual investment plan
 - A range of 2-6 fund investments, with a target of 4 funds (3 within the Diversifying segment and 1 within the Growth segment)
 - An average investment size of \$45 million per fund, with a range of \$30 million to \$50 million
- Met the 2020 Annual Plan target to invest in three Diversifying Absolute Return funds during the year
 - Invested \$45 million in the Blackrock Event Driven Equity Fund (U.S. focused, event-driven equity)
 - Invested \$45 million in the PSquared Event Opportunity Fund (European focused event-driven equity and credit)
 - Invested \$45 million in Aristeia Partners (market neutral, credit relative value)
- Increased investment in Davidson Kempner Institutional Partners (multi-strategy, event driven) in March 2020 to align investment with target allocation for new direct investments
- Fully liquidated the allocation to the GCM SCARF-B portfolio, an interim solution within the Diversifying Absolute Return portfolio, and used the proceeds for direct diversifying absolute return fund investments
- Placed three investment managers on SCERS' Watch List, due to performance and organizational concerns following first quarter results
- Redeemed from AQR Delta Fund II (quantitative multi-strategy), which was placed on SCERS' Watch List in 2019, and has underperformed absolute return benchmarks
- Redeemed from Winton Diversified Futures Fund (systematic global macro), which underperformed expectations and comparable benchmarks. Winton was placed on SCERS' Watch List in July 2020
- Oversaw, monitored, and met with SCERS' existing Absolute Return managers

PERFORMANCE ATTRIBUTION



SCERS' Growth Absolute Return portfolio delivered strong results for the year, up 10.8%, slightly underperforming the policy benchmark (HFRI FoF Composite Index +1%), which was up 11.3%. Over longer time periods, the SCERS Growth Absolute Return portfolio has mixed results of outperformance and underperformance versus the policy benchmark and long-term objective (T-Bills +5%).



SCERS' Diversifying portfolio delivered solid overall results for the year, up 5.3%, but with significant dispersion between managers and strategies. Performance for the full year was negatively impacted by significant first quarter declines in market neutral and systematic strategies, followed by strong results across strategies in the second half of the year. Compared to benchmarks, the SCERS Diversifying portfolio lagged the policy benchmark (HFRI FoF Conservative Index), which was up 5.7% for the year, and outperformed the longer term objective (T-Bills +2%) return of 2.7%. Over longer time periods, the SCERS portfolio has lagged both benchmarks.



ABSOLUTE RETURN (Continued)**2021 ANNUAL PLAN**

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

SCERS Absolute Return Annual Investment Plan			
		Range	
	Target	Min	Max
Number of Funds	3	2	5
Diversifying Strategies	2	1	3
Growth Strategies	1	0	2
Investment per Fund	\$45 MM	\$30 MM	\$60 MM

- Target 3 direct Absolute Return investments in 2021, with a range of 2 to 5 funds
 - Target 2 investments within the Diversifying segment and one within the Growth segment
 - Average investment size of \$45 million, with a range between \$30 million and \$60 million.
 - Add new direct investments within SCERS' Diversifying Absolute Return direct portfolio to reach target allocation of 7%
 - Add 1-3 net new direct fund investments in 2021
- Evaluate investment levels with existing managers and rebalance direct portfolio as necessary
- Evaluate role of the Growth Absolute Return portfolio and sizing of the Diversifying Absolute Return portfolio, within the context of the upcoming ALM study and SCERS' strategic asset allocation
- Oversee, monitor, and meet with SCERS' existing Absolute Return managers

PRIVATE EQUITY

MARKET OVERVIEW

Despite drops in fundraising, deals completed, exits, and performance in the second quarter, 2020 looks to be a record year across most of the same metrics in private equity. Technology deals continued to dominate the private equity league tables as well as the headlines. The buyout market's eye-popping purchase and debt multiples are matched by the returns of venture-backed deals in some high-profile initial public offerings (IPOs) of companies like Airbnb, DoorDash, and Snowflake. Some venture funds are seeing investment multiples of over 100x cost.

As of this report's writing, the final 2020 market data has not been published, but through October 2020, 603 private equity funds raised \$268 billion for North American buyouts and venture capital. Heavily weighted towards buyouts, the top 10 funds raised over \$140 billion, or 42% of the total raised. While the new buyout transactions saw a sharp decline in the second quarter and quick recovery in the third quarter, venture capital seemed unfazed by COVID-19, with 2020 looking to be a record year for capital deployed. Venture firms invested \$78.2 billion into 2,535 late-stage companies in the U.S. through September 30, 2020, according to PitchBook data.

Companies raised \$167.2 billion through 454 offerings on U.S. exchanges in 2020, compared with the previous full-year record of \$107.9 billion at the height of the dot-com boom in 1999, according to Dealogic. The IPO market got a boost from special-purpose acquisition companies (SPAC), which are empty vehicles that raise money through listings and then search for businesses to merge with, and are a new exit option for venture capital and buyout firms.

The second quarter's slowdown for new buyout transactions was short-lived, with a steep increase in completed transactions during the third quarter. Despite the COVID-19 pandemic and restrictions on movement, deals were being completed at record prices. The median EV/EBITDA multiple for buyouts was 12.7x through Q3 2020, tying its record high. According to PitchBook, buyout funds are increasingly targeting growth-stage technology companies that tend to trade at a much higher multiple of earnings than the traditional private equity target.

Staff and consultants continue to invest with management teams with experience across economic cycles, an operational hands-on approach post-acquisition, and who have an ability to source unique transactions. Many experienced management teams with respectable track records find the COVID-19 fundraising environment transformational—due diligence by limited partners has mostly moved online. General Partners are finding the process much more efficient and are accelerating fundraising processes. Firms without substantial track records and existing limited partners find the new fundraising dynamic challenging.

As of the end of 2020, SCERS has invested in 64 active partnerships, and private equity continues to deliver exceptional returns to SCERS across distressed debt, buyouts, and venture capital. Like many private programs, the absolute fund count will continue to increase, although there will be a host of funds with de minimis net asset value; however, Staff and Cliffwater do seek to limit the number of ongoing general partner/manager relationships. SCERS has a maturing private equity portfolio that has been accretive to the absolute performance of the plan. Staff believes through careful fund selection and continued portfolio monitoring, performance should continue to deliver strong returns across economic cycles.



PRIVATE EQUITY (Continued)

SCERS PRIVATE EQUITY PORTFOLIO

SCERS' Private Equity portfolio has a target allocation of 9% and is broken out by strategy, including buyout, venture capital, distressed debt, and 'other' less defined strategies, as well as by region. The policy index benchmark that SCERS uses to assess the performance of the Private Equity asset class is the Cambridge Associates LLC Global Private Equity & Venture Capital Pooled Index. The longer-term objective of the Private Equity portfolio is to earn public equity-like returns with an additional premium (Russell 3000 Index + 3%) to compensate for the liquidity risk undertaken by investing in the asset class. The targeted range of investment exposures within Private Equity are shown below:

SCERS Private Equity Portfolio Construction				
	Minimum	Target Allocation	Maximum	Policy Index Benchmark
Total Private Equity Portfolio	7%	9%	11%	Cambridge Associates PE/VC Index
U.S Focused				
Buyout	30%	50%	70%	
Venture Capital	10%	20%	30%	
Distressed Debt	0%	10%	20%	
Other	0%	0%	15%	
Non-U.S Focused				
Buyout	10%	15%	20%	
Distressed Debt	0%	2%	10%	
Venture Capital	0%	3%	10%	
Other	0%	0%	5%	

SCERS has been building a direct Private Equity program since 2011 by making commitments to private equity funds consistent with the asset class's investment plan and investment structure. These commitments complement SCERS' legacy private equity fund-of-funds established during the 2006-08 time period. 2018 marked the year where SCERS reached its target allocation of 9%, and the current allocation to Private Equity stands at 10% as of September 2020 (based on June 2020 NAVs). Given the unique cash flow characteristics of private equity, SCERS will need to continue to commit to private equity funds across vintage years to maintain its target allocation to the asset class.

SCERS had an active year committing capital to private equity, committing to eight funds, of which four were follow-on fund investments to existing managers, one was an existing manager in a different strategy, and three were new fund investments with new investment managers. The follow-on investments comprised a range of funds, including specialist growth capital funds, specialist biotechnology funds, and IT-focused venture capital funds. With a maturing private equity portfolio that includes many existing manager relationships and general partners coming to market with follow-on funds quicker, there are more investment opportunities in private equity than capital available in the SCERS budget. Therefore, Staff and Cliffwater are prudently managing the investment pace and number of manager relationships within the portfolio. Staff and Cliffwater will balance making follow-on investments with existing investment managers while also leaving flexibility to introduce new manager relationships into the portfolio. Each follow-on investment under consideration is fully underwritten as if

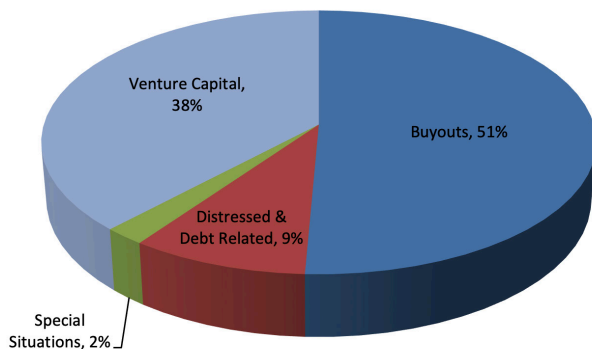
PRIVATE EQUITY (Continued)

it was a new investment. Staff is comfortable not committing capital to a follow-on fund if the opportunity is not warranted and/or if there is a new manager/fund that is a better fit in the portfolio.

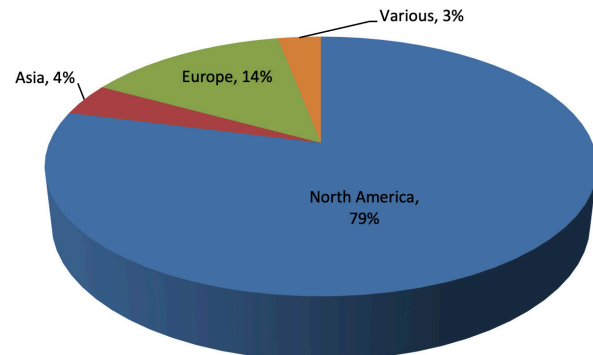
Private Equity has been an important return enhancer for SCERS' total portfolio historically, and plays a key role for the portfolio. A consideration within the upcoming ALM study is to evaluate the sizing of Private Equity, to determine if an increased allocation would benefit SCERS in achieving its long-term investment objectives.

SCERS' current Private Equity strategy and geographic breakdowns are shown in the following charts:

Private Equity Portfolio Strategy Allocations
as of September 30, 2020



Private Equity Portfolio Geographic Exposures
as of September 30, 2020



2020 ACTIVITY

- Presented the 2020 Private Equity annual investment plan
 - A range of 6-9 fund commitments, with a target of 7 funds
 - A total of \$210 million in commitments, with a range of \$170-\$250 million
 - An average commitment size of \$30 million per fund
- Made eight fund commitments in 2020 totaling approximately \$160 million in aggregate (four follow-on and four new fund investments)
 - \$20 million follow-on investment to Khosla Ventures VI, L.P. (venture capital)
 - \$20 million follow-on investment to Summit Partners Venture Capital Fund V-A, L.P. (buyout)
 - \$20 million follow-on investment to Summit Partners Europe Growth Equity Fund III, SCSp (buyout)
 - \$25 million follow-on investment to Spectrum Equity Fund IX, L.P. (buyout)
 - \$20 million to Shamrock Capital Content Fund II, L.P. (buyout)
 - \$15 million to OrbiMed Private Investments VIII, L.P. (venture Capital)
 - \$20 million to Canvas 3, L.P. (venture capital)
 - \$20 million to CRV XVIII, L.P. (venture capital)
- Identified a potential investment manager to manage a co-investment mandate for SCERS
- Oversaw, monitored, and met with SCERS' existing Private Equity managers

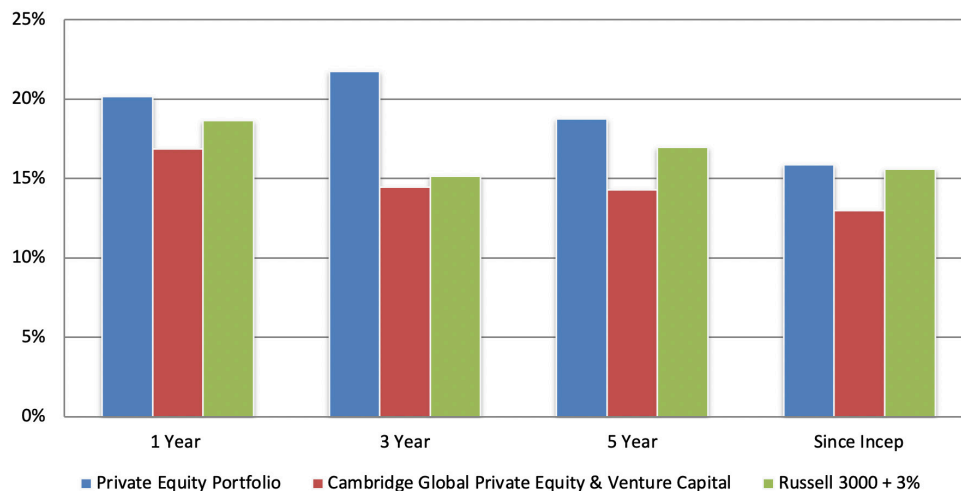


PRIVATE EQUITY (Continued)

PERFORMANCE AND ATTRIBUTION

SCERS' Private Equity portfolio continues to progress through the J-curve and is generating increasing levels of positive performance. For the one year ending September 30, 2020, SCERS' Private Equity portfolio generated a net IRR of 20.2%, which outperformed the policy index Cambridge Global Private Equity & Venture Capital benchmark return of 16.9%. The Private Equity return also outperformed SCERS' public market benchmark, the Russell 3000 + 3%, which returned 18.7%. SCERS' since inception net IRR of 15.9% is also ahead of the policy index benchmark return of 13.0%, and in line with the public market benchmark return of 15.6%. While SCERS' fund-of-funds commitments made in 2006 and 2008 were a contributor to returns early in the Private Equity portfolio, the direct private equity portfolio represents an increasing component of SCERS' overall historical Private Equity returns.

SCERS Private Equity Portfolio Performance
 IRRs as of September 30, 2020



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2021 ANNUAL PLAN

Below is the 2021 capital commitment plan for the Private Equity asset class, as recommended by Cliffwater and Staff:

SCERS Private Equity Annual Investment Plan			
		Range	
	Target	Min	Max
Commitment Level	\$200 MM	\$160 MM	\$240 MM
Number of Funds	7	5	9
Buyout fund(s)	4	3	6
Distressed fund(s)	1	0	2
VC fund(s)	2	1	3
Other fund(s)	0	0	1
Non-U.S. fund(s)	1	0	2
Commitment per Fund	\$30 MM	\$20 MM	\$50 MM

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

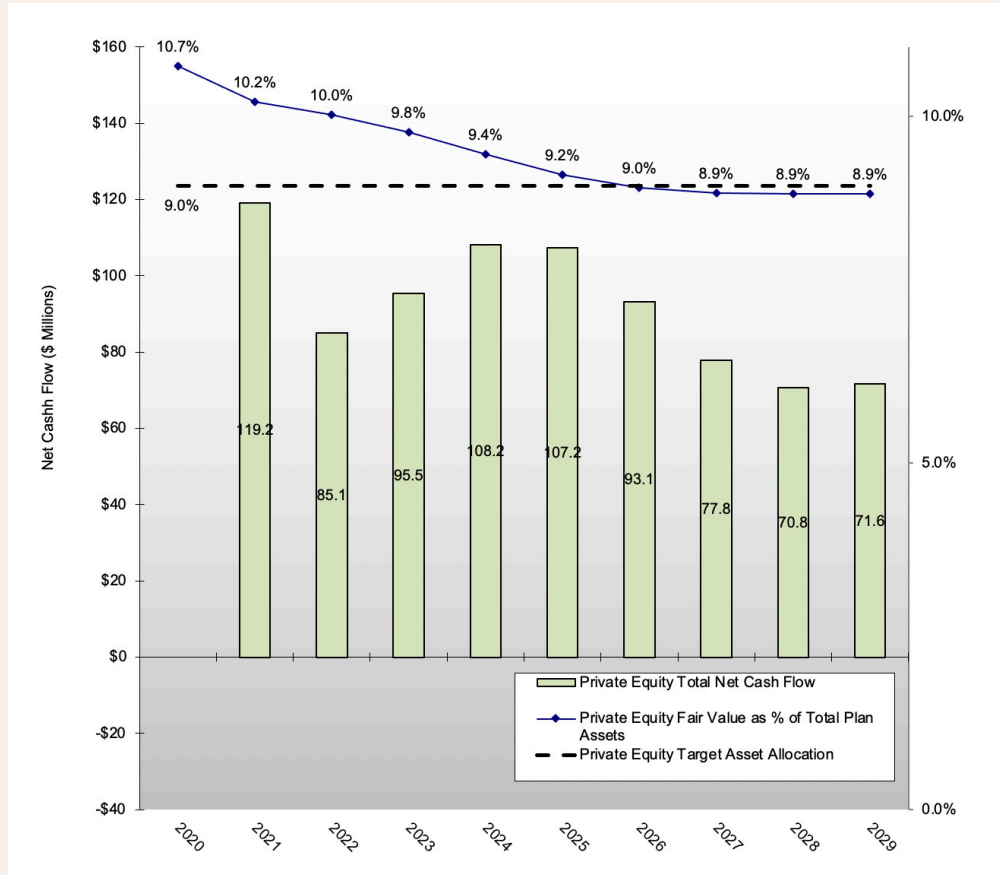
- Recommend a \$200 million commitment budget for 2020, with a range of \$160 million to \$240 million
 - Target 7 fund commitments, with a range between 5 to 9 funds
 - Target an average commitment size of \$30 million per fund, with a range between \$20 million and \$50 million per fund
 - The budget does not include any funds in which a commitment has already been made in 2020 where capital has not been called
 - The budget does include funds in which a commitment has already been made to, or is in the process of being made to, in 2021



PRIVATE EQUITY (Continued)

2021 ANNUAL PLAN (Continued)

Below is the Private Equity capital-pacing plan



- Reached the target 9% allocation in 2018, but continued strong performance in the Private Equity portfolio has outpaced the strong returns in the other parts of the portfolio, keeping the allocation slightly above the 9% target
 - Many assumptions go into the capital pacing, but SCERS will seek to maintain a consistent allocation to the target allocation going forward
- Areas of focus
 - Investment opportunities across buyout, venture capital, and distressed debt
 - Focus on select new manager relationships and follow-on investments with core existing managers that will be in the market fundraising
 - Remain cognizant of risks later in the cycle, including increasing valuations and fund sizes, while maintaining vintage year and sector diversification
 - Place particular focus on sector-specific funds where a fund manager has differentiated expertise, experience managing multiple cycles, and access to proprietary deal flow

2021 ANNUAL PLAN (Continued)

- Continue to evaluate methods to rationalize the Private Equity portfolio through the secondary market
- Recommend a co-investment manager partnership, that will capitalize on potential co-investment deal flow from SCERS' existing private equity relationships, while also participating in deal flow from the investment manager
- Evaluate the sizing of Private Equity in conjunction with the ALM study, to determine if an increased allocation would better serve SCERS in achieving its long-term investment objectives
- Oversee, monitor, and assess the existing manager lineup

PRIVATE CREDIT

MARKET OVERVIEW

Nearly every business sector has been impacted by the pandemic, whether positively (telecom, software technology, and data centers) or negatively (retail, hotels, restaurants, and airlines). Distress has been felt throughout economies from consumers, businesses, and governments.

The economic slowdown has put pressure on companies and their private credit lenders. In the U.S. through the first half of 2020, nearly 25% more businesses filed for chapter 11 bankruptcy protection than in the same period last year according to S&P data. Similarly, corporate loan defaults reached their highest levels since the global financial crisis. To combat the economic fallout, governments have provided financial relief programs, with the U.S. alone providing \$2.2 trillion in relief.

To avert a much larger economic fallout, the Federal Reserve has provided massive support and reassurances to the markets, including undertaking measures to drive interest rates to near zero, and pumping unprecedented amounts of liquidity into the financial markets. Unsurprisingly, many companies proactively drew down revolving credit lines and other credit facilities to build up their cash reserves. The liquidity provided by the Federal Reserve stabilized the economy leading to temporary reprieve for many companies. According to Proskauer, a law firm that tracks private debt loans in the U.S., the loan default rate has fell from 8.1% in the second quarter to 4.2% in the third quarter.

Private credit funds have been working with their private equity sponsors and borrowing companies to figure out the best path forward in order to minimize losses. Lenders are providing companies flexibility by amending credit terms and rates to allow companies to recover and stabilize given the uncertain duration of the pandemic.

Due to the pandemic, private debt fundraising, both in capital raised and the number of funds, is on track to end the year at its lowest levels in a while. According to Private Debt Investor, the first half of 2020 experienced a significant decline in private credit fundraising around the world, with \$63 billion in capital raised across 81 funds, compared with \$80 billion across 135 funds for the previous six months.

Despite the slowdown in 2020, managers currently in the market raising funds are seeking a record amount of capital, an aggregate \$295 billion across 521 funds according to Preqin data. This represents a 54% increase over January 2020, when managers were looking to raise \$192 billion across 436 funds. Notably, 49% of the funds in the market are direct lending strategies, with distressed and special situations representing 35% of the funds. Similar to trends in real assets and other asset classes, private debt funds are increasing in size, with fewer funds seeking a larger share of capital. According to Preqin, 20% of funds in the market are seeking 65% of aggregate capital. Combing the \$295 billion in new capital sought by private debt managers in 2021 with the unspent capital or dry powder totaling \$293 billion, there is an expected \$588 billion in private debt capital entering into an already competitive marketplace.

The pandemic has shown how important it is to understand economic conditions that could impact an industry when evaluating the business fundamentals of a borrowing company. If a manager misjudges the industry cycle and economic conditions when evaluating a company's business, or if the market changes unexpectedly, even the best loan structures will end in a bad outcome. Although company level due diligence is critical, having a team experienced in restructuring and loan workouts is a necessary and critical resource.

PRIVATE CREDIT (Continued)

Staff and Cliffwater remain measured in making new private credit commitments and are cautious of the prevalence of less experienced managers entering the space. In this highly competitive environment, Staff and Cliffwater are vigilant in selecting top tier managers that, who due to their competitive advantage, are able to access deeper deal flow with better terms. In addition, identifying managers that have workout expertise, and experience navigating a default cycle is essential.

SCERS PRIVATE CREDIT PORTFOLIO

Initiated in 2017, the Private Credit asset class sits within SCERS' Growth asset category. Private credit represents loans to primarily performing, non-public companies. An attractive feature of private credit investments is that the majority of its return is earned from contracted loan payments (interest and principal), which tend to be more predictable and less volatile. To compensate for the illiquidity of the asset class, SCERS' Private Credit investments must generate a total return exceeding publicly traded bank loan returns by 2%, the benchmark of which is the Credit Suisse Leveraged Loan Index, an index of over 1,600 publicly traded bank loans.

Within SCERS' allocation structure for Private Credit, the allocation will range from 2-6%, with a target of 4%. As of December 30, 2020, SCERS' actual Private Credit allocation is 2.2% invested and 4.7% committed. SCERS continues to make progress in building out the Private Credit portfolio, which is projected to reach its 4% invested target in 2023. The range of investment exposures within Private Credit are shown below:

SCERS Private Credit Portfolio Construction				
	Minimum	Target	Maximum	Policy Index Benchmark
Total Private Credit Portfolio	2%	4%	6%	Credit Suisse Leveraged Loan + 2%
Direct Lending	50%	70%	100%	
Opportunistic Credit	0%	30%	50%	
U.S. Private Credit	75%	85%	100%	
Non-U.S. Private Credit	0%	15%	25%	

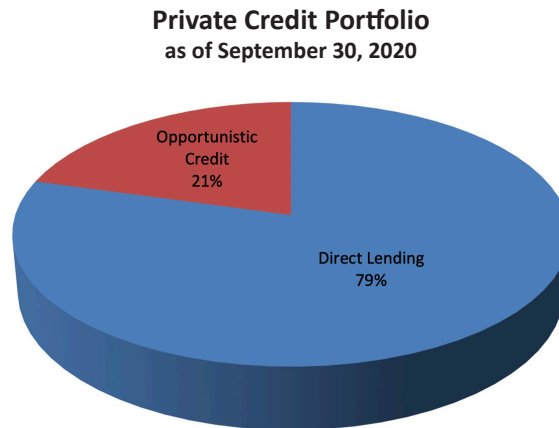
During the year, SCERS made 2 commitments totaling \$90 million, which is below the target allocation of 3 commitments totaling \$150 million. This was somewhat expected given the impact of the pandemic, which created a greater focus on portfolio liquidity and a measured approach to making new commitments.

2020 Private Credit commitments included a \$50 million follow-on investment with an existing direct lending manager and \$40 million with a new opportunistic credit manager. The market continues to exhibit competitive pressures, which has led Staff and Cliffwater to focus on investment managers with long tenured track records and experience managing through a down cycle. Since the initiation of the Private Credit mandate, Staff and Cliffwater have been focused on differentiated strategies and top tier managers globally.



PRIVATE CREDIT (Continued)

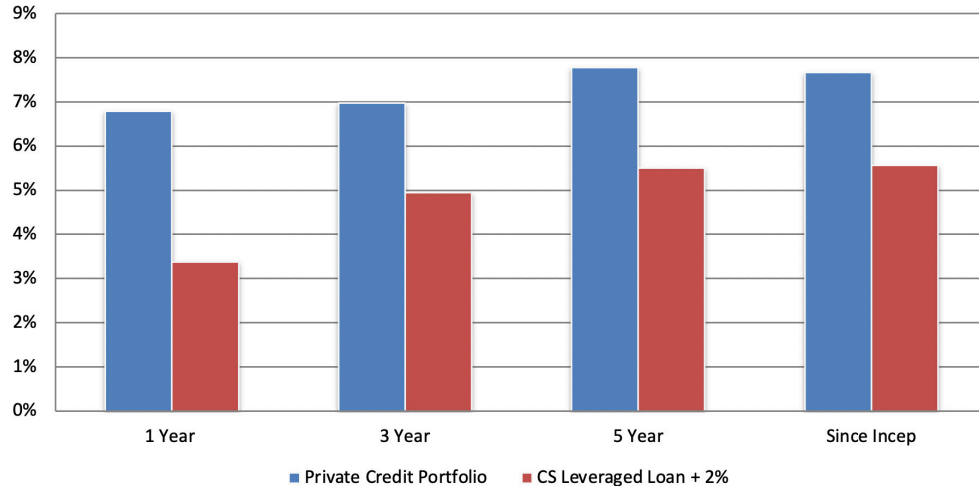
As of September 30, 2020, SCRES' Private Credit portfolio diversification by investment strategy is shown below:

**2020 ACTIVITY**

- Presented the 2020 Private Credit annual investment plan:
 - A range of 2-5 fund commitments, with a target of 3 funds
 - A total of \$150 million in commitments, with a range of \$100-\$200 million
 - An average commitment size of \$50 million per fund
- Given the uncertainty of the pandemic, Staff and Cliffwater prioritized those funds that were already in due diligence or were existing relationships. Two commitments were made totaling \$90 million:
 - \$50 million follow-on investment to Benefit Street Senior Secured Opportunities Fund II, LP (direct lending)
 - \$40 million to Silver Point Specialty Credit Fund II, LP (opportunistic credit)
- Oversaw, monitored, and assessed the existing manager lineup

PERFORMANCE AND ATTRIBUTION

SCERS Private Credit Portfolio Performance
 IRRs as of September 30, 2020



Private credit loans typically have terms ranging from 3-7 years, which means investors receive their investment capital back quicker when compared to other private market asset classes. By receiving capital sooner, private credit investors experience a much shorter J-curve, which is a distinguishing feature of the asset class. SCERS' Private Credit portfolio is still being built out, but was initiated with four credit funds previously held in SCERS' Private Equity portfolio, resulting in the longer time period returns shown above.

As shown in the chart above, SCERS' Private Credit portfolio returns have exceeded the benchmark across all reporting periods. For the one year ending September 30, 2020, SCERS' Private Credit portfolio generated a net IRR of 6.8%, which significantly outperformed the policy index Credit Suisse Leveraged Loan Index + 2% benchmark return of 3.4%. Since inception (October 2011) through September 30, 2020, SCERS' Private Credit portfolio has earned a 7.7% net IRR, outperforming the benchmark return of 5.6%.

2021 ANNUAL PLAN

Below is the Private Credit 2021 capital commitment plan, as recommended by Cliffwater and Staff:

SCERS Private Credit Annual Investment Plan			
	Target	Range	
		Min	Max
Commitment Level	\$100 MM	\$50 MM	\$150 MM
Number of Funds	3	2	5
Direct Lending fund(s)	2	1	4
Opportunistic Credit fund(s)	1	1	3
Commitment per Fund	\$35 MM	\$25 MM	\$50 MM

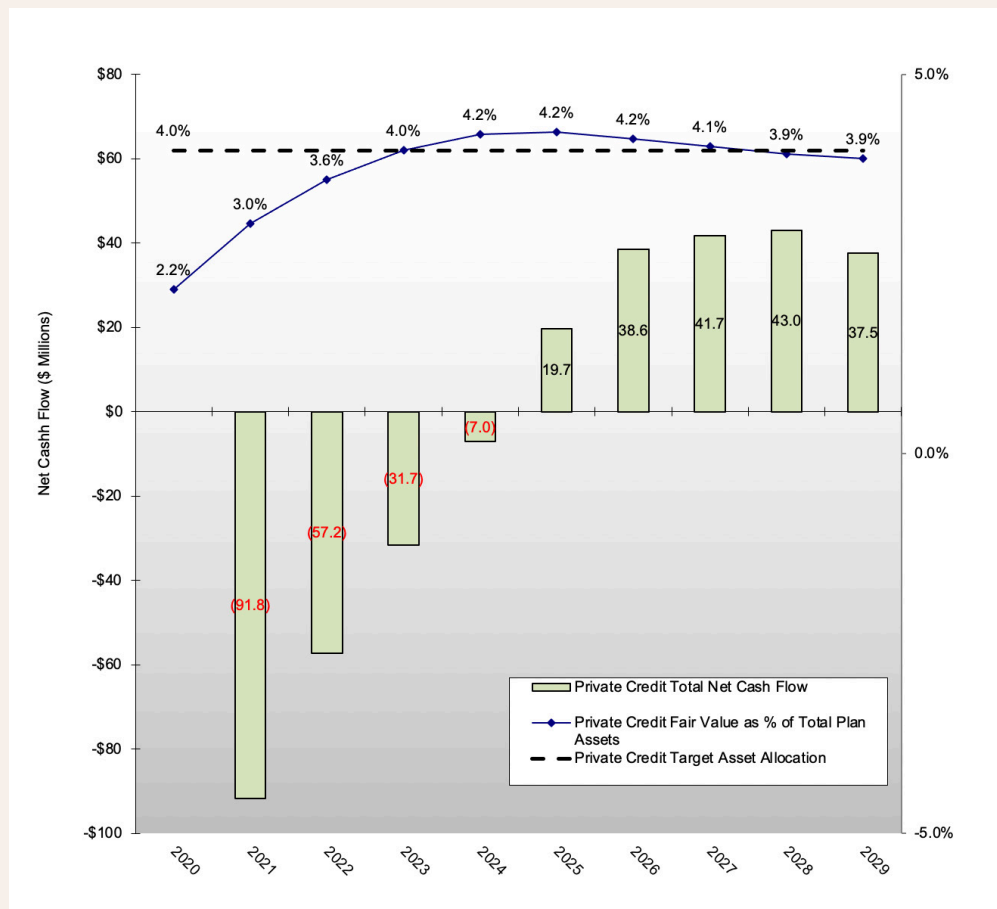


PRIVATE CREDIT (Continued)

2021 ANNUAL PLAN (Continued)

- Cliffwater and Staff recommend a \$100 million commitment budget for 2021, with a range of \$50 - \$150 million
 - Target 3 fund commitments at an average commitment size of \$35 million, with a commitment size range of \$25 - \$50 million per fund
 - Target 2-3 direct lending and 1-2 opportunistic credit funds
 - The budget does not include any funds in which a commitment has already been made in 2020 where capital has not been called
 - The budget does include funds in which a commitment has already been made to, or is in the process of being made to, in 2021

Below is the projected Private Credit capital-pacing plan:



2021 ANNUAL PLAN (Continued)

- Staff and Cliffwater continue to make progress towards building out the Private Credit portfolio, which is expected to reach its 4% target in 2023
 - Given the economic uncertainty due to the pandemic and an abundance of capital in the private credit markets, Staff and Cliffwater will remain prudent and thoughtful in making new commitments
- Investment strategies and themes of focus in 2021 include:
 - Europe and Asia direct lending strategies
 - Niche and specialty lending strategies, globally
 - Real assets lending, globally
- Evaluate the sizing of Private Credit in conjunction with the ALM study
- Oversee, monitor and assess the existing manager lineup

REAL ASSETS

MARKET OVERVIEW

Energy:

The pandemic has exacerbated disruption in the energy sector, creating upheaval in the upstream oil and gas exploration and production industry worldwide, as commodity prices fell dramatically in 2020. Even the midstream energy sector, which was considered less vulnerable and lower risk due to its contracted revenues, has felt the economic strain. Within midstream, gathering and processing assets, which are closer to the drill bit, have been particularly vulnerable. The distress in the energy markets has demonstrated that midstream contract structures are only as valid as the upstream customers' ability to be an ongoing concern.

Recent struggles with rolling blackouts in California have also highlighted the challenge with renewables. If there is no wind or sun for an extended period of time, utilities have a difficult time providing uninterrupted electricity. Developed countries in the world are moving away from hydrocarbon driven energy generation to greener alternatives. To keep up with this secular trend, there has been a flood of capital targeting renewables globally, and in the U.S., industry participants are finding the market becoming over built with investment returns compressing considerably.

Staff believes energy investments could remain challenged given the uncertainty within the space. The variability of returns and the economic sensitivity of the energy sector creates consideration as to the role energy investments should play in SCERS' Real Assets portfolio and total portfolio long-term, and where these investments should reside. This will be a consideration in conjunction with the asset liability study.

Infrastructure:

As the infrastructure asset class has matured, the definition of what is infrastructure has become more fluid. Over the last five years, infrastructure has evolved beyond monopolistic long-term contracted assets with high barriers to entry, long lives, and those which provide essential services. While assets such as roads, airports, utilities, and hospitals are still considered infrastructure, infrastructure managers are also defining assets that exhibit characteristics of infrastructure to be within the domain of infrastructure investment opportunities. These infrastructure-like characteristics include such features as an essential service or facility, barriers to entry, low price elasticity of demand, long-term stable cash flows, and less macroeconomic sensitivity.

In addition to the change in what defines an infrastructure asset, so too has the risk profiles associated with infrastructure investing. The negative economic impacts felt by the pandemic has highlighted the inadequacy of risk labels for infrastructure as lockdowns have tested infrastructure's resilience. Infrastructure assets previously considered to be core in nature such as airports have been impacted seriously by the crisis, and assets that were not considered infrastructure or were thought to be higher risk such as telecommunications, fiber, cell towers, and data centers, which were not even considered infrastructure just five years ago, have shown to be resilient and have flourished during the pandemic.

Infrastructure fundraising has had a strong year despite travel restrictions and lockdowns, with the first nine months of 2020 managing to record its second largest Q1-Q3 showing since 2015, raising a total of \$91.3 billion of capital to date (versus \$111.4 billion for the 2019 calendar year), according to Preqin data. Given the tendency for large fourth quarter closes, Preqin believes 2020 could be another record year for the infrastructure industry. And in spite of negative impacts brought on by the pandemic, investor sentiment towards infrastructure remains strong, with 56% of institutional investors looking to increase their allocation in the coming year (vs. 39% for real estate), according to Preqin surveys.

As the infrastructure sector has changed, the need for discipline is increasingly important, with fund managers willing to take on more risk and stretch industry categorizations as they search for opportunities in a crowded marketplace. In this highly competitive market, Staff and Cliffwater remain focused on selecting differentiated strategies and managers, especially managers that take an operational approach to generating returns. Staff and Cliffwater continue to favor strategies that generate more of the overall return from income and strategies that focus on operational improvements and capital investment, where the outcome is more likely to be controlled by the manager.

Agriculture:

Over the last several years, the U.S agriculture industry, which represents the largest agricultural market, has experienced a number of headwinds, in particular the U.S. and China tariff wars. The trade spat between China and the U.S. has negatively impacted a swath of row and permanent crops, as well as beef and pork products. Also during the year, U.S. farmers faced record breaking spring rainfall in the Midwest, which delayed or prevented many row crops from being planted, mostly soybeans, corn, and wheat. Then came the pandemic, which slowed agricultural export volumes due to supply chain disruptions caused by quarantine measures, port closures, and vessel delays. Food retailers immediately felt the impact of the supply distributions as countries shutdown restaurants and food establishments, forcing consumers to eat at home.

Consumer concerns over food safety and how food is produced i.e. organic, non-GMO, sustainable production methods, etc. has been as a major trend throughout the U.S. and other developed markets. Understandably, consumers are influencing how food is processed across the supply chain and to stay ahead, retailers and food distributors are requiring their food suppliers to meet stringent health and safety protocols that is altering practices throughout the supply chain. This trend has led to new agriculture products like plant-based meat substitutes, meal delivery services, and agricultural biotechnologies all requiring a high level of sophistication. The innovations in agriculture and the rapid changes in food production could potentially present exciting investment opportunities.

Staff and Cliffwater have spent considerable effort identifying opportunities in global agriculture. Unfortunately the universe of agriculture funds is limited, with many of the managers having limited track records. According to Preqin data, in 2019 there were 12 agriculture funds raised totaling \$2.8 billion, with an average fund size of \$233 million. Compare that with infrastructure fund raising, where there were 126 funds raised for a total of \$111.4 billion and an average fund size of \$969 million. Although the agriculture sector is vast and global, it has had difficulty attracting institutional capital. Nevertheless, the pandemic has shown how important food supply and the food supply chain is to our everyday life. Staff has conducted a considerable amount of research in agriculture and continues to support investing in the space, particularly since there are few investors targeting the opportunity. The global themes surrounding agriculture, including diminishing land supply, aging of farm owners, growing middle class in emerging countries, and climate change argue for more institutional investment. Staff and Cliffwater will continue to seek out interesting opportunities in agriculture.



REAL ASSETS (Continued)**SCERS REAL ASSETS PORTFOLIO**

Located in predominately developed markets worldwide, underlying real asset investments may include a broad array of sub-asset classes and strategies primarily across infrastructure, energy, agriculture, timber, and other natural resources. The asset class has been structured with significant flexibility to allow sub-asset class allocations to move within ranges, which permits SCERS to move exposures from one segment in favor of attractive risk-adjusted returns in another segment. Also, the asset class has access to a range of investment structures, including closed and open-end commingled funds, as well as customized separate accounts and secondary investments.

The investment objective of Real Assets is to generate attractive returns that adjust with inflation, provide portfolio diversification through low correlations, generate moderate income and cash flow, and lower return volatility. The range of Real Assets investment exposures are shown below:

SCERS Real Assets Portfolio Construction				
	Minimum	Target	Maximum	Policy Index Benchmark
Total Real Assets Portfolio	5%	7%	9%	Custom blend of benchmarks below:
Infrastructure	30%	45%	60%	45% Cambridge Associates Private Infrastructure
Energy	20%	35%	50%	35% Cambridge Associates Private Energy
Agriculture, Timber, Other	10%	20%	30%	10% NCREIF Farmland + 10% NCREIF Timberland

SCERS continues to make progress in building out the Real Assets portfolio, which is projected to reach its 7% invested target allocation in 2025. As of December 30, 2020, SCERS' actual Real Assets allocation is 5.2% invested versus the 7% targeted.

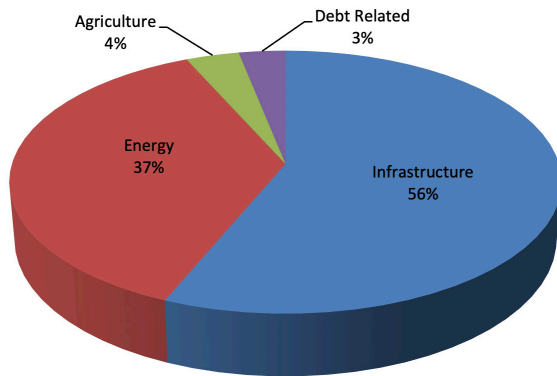
The 2020 Real Assets Investment Plan called for commitments to range from 3-7 fund investments, with a commitment range from \$170-\$270 million. During the year, SCERS made 4 commitments totaling \$140 million, which is below the target allocation of 5 commitments totaling \$220 million. This was somewhat expected given the impact of the pandemic, which created a greater focus on portfolio liquidity and a measured approach to making new commitments.

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 the worldwide economic disruption caused by the pandemic and competitive pressures in the real assets marketplace, Staff and Cliffwater are comfortable taking a measured approach to allocating capital within the asset class, even if it means extending out the timeline to reach the 7% target allocation.

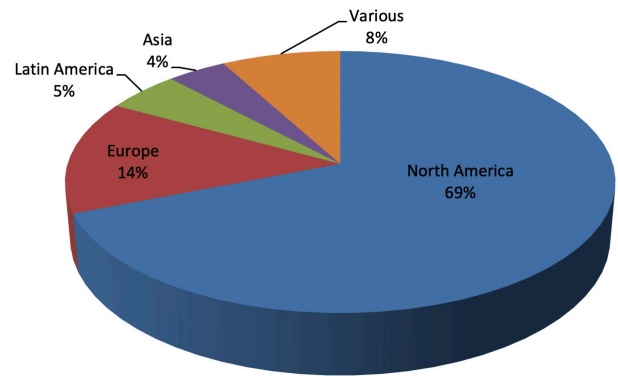
REAL ASSETS (Continued)

As of September 30, 2020, SCRES' Real Assets portfolio diversification by investment strategy and geographic region is shown below:

Real Assets Portfolio Strategy Exposures
as of September 30, 2020



Real Assets Portfolio Geographic Exposures
as of September 30, 2020



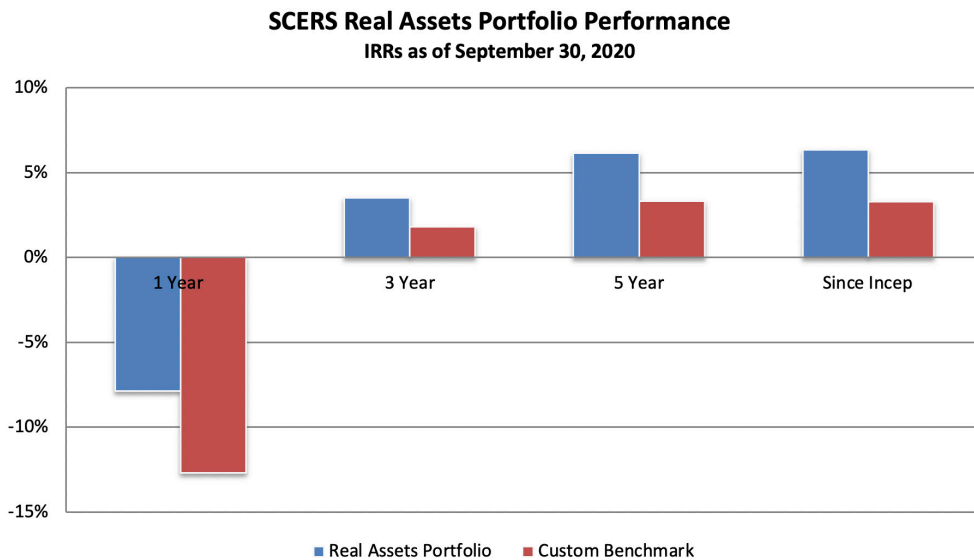
2020 ACTIVITY

- Presented the 2020 Real Assets annual investment plan:
 - A range of 3-7 fund commitments, with a target of 5 funds
 - A total of \$220 million in commitments, with a range of \$170-\$270 million
 - An average commitment size of \$40 million per fund
- Staff was conservative making new investments during the pandemic, therefore, three commitments were made totaling \$140 million:
 - \$50 million follow-on investment to ISQ Global Infrastructure Fund III, LP (infrastructure value add)
 - \$50 million to Harrison Street Social Infrastructure Fund, LP (open end infrastructure-core plus)
 - \$40 million to NGP Royalty Partners, LP (energy-oil and gas royalties)
- Oversaw, monitored, and assessed the existing manager lineup



REAL ASSETS (Continued)

PERFORMANCE AND ATTRIBUTION



As shown in the chart above, SCERS' Real Assets portfolio returns have exceeded the benchmark across all reporting periods. For the one year ending September 30, 2020, SCERS' Real Assets portfolio was negatively impacted by its upstream energy exposure and generated a -7.9% net IRR. Although negative, the return still outperformed the policy index custom benchmark (45% Cambridge Private Infrastructure + 35% Cambridge Private Energy + 20% NCREIF Agriculture/Timber) return of -12.7%. Since inception (January 2013) through September 30, 2020, SCERS' Real Assets portfolio has generated a 6.4% net IRR, significantly outperforming SCERS' custom benchmark 3.3% net return. It should be noted that the since inception return has come down from last year's net IRR of 13.0%, which demonstrates the impact that the negative energy performance had on the asset class.

2021 ANNUAL PLAN

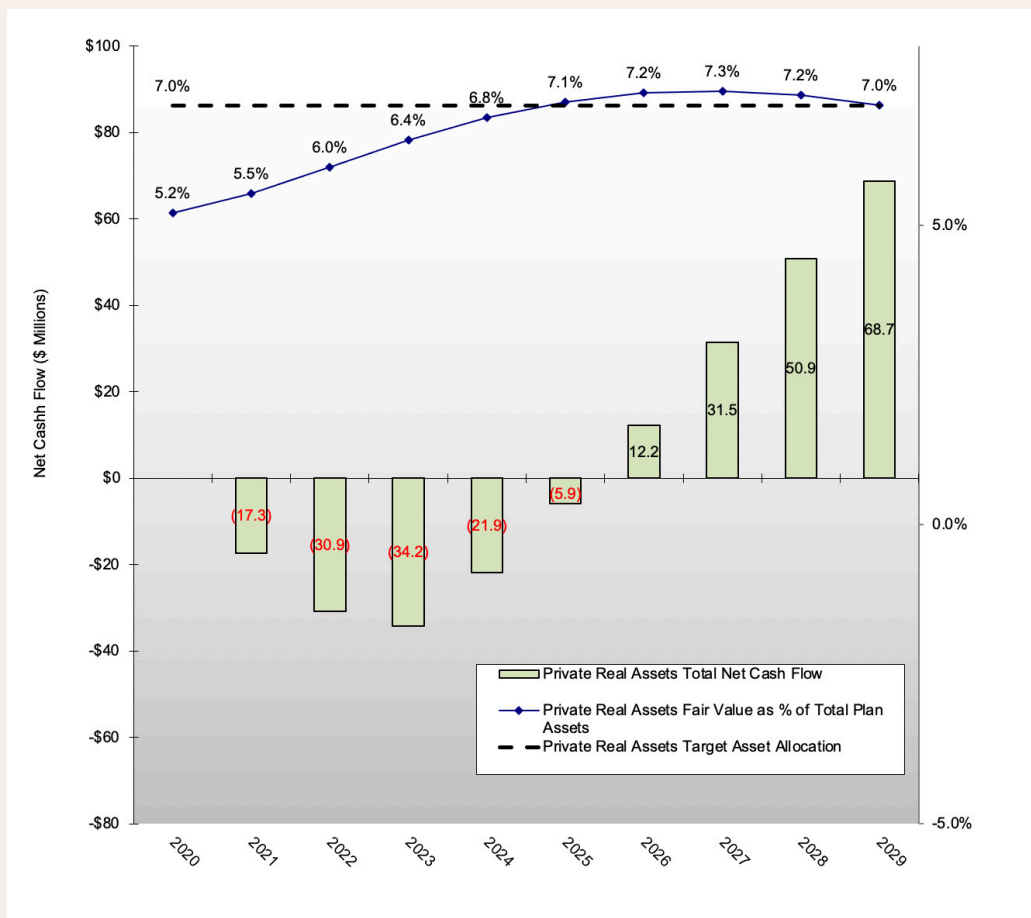
Below is the Real Assets 2021 capital commitment plan, as recommended by Cliffwater and Staff:

SCERS Real Assets Annual Investment Plan			
	Target	Range	
		Min	Max
Commitment Level	\$210 MM	\$160 MM	\$260 MM
Number of Funds	5	3	7
Energy Related	1	0	2
Infrastructure	2	1	4
Ag, Minerals, Timber	2	0	3
Other	0	0	1
Commitment per Fund	\$40 MM	\$20 MM	\$100 MM

2021 ANNUAL PLAN (Continued)

- Recommend a \$210 million commitment budget for 2021, with a range of \$160 million-\$260 million
 - Target 5 fund commitments, with a range between 3 and 7 funds
 - Target an average commitment size of \$40 million for fund, with a range between \$20 million and \$100 million per fund
 - Target 0-1 energy-related fund, 2-3 infrastructure funds, and 1-2 agriculture/natural resource funds
- The budget does not include any funds in which a commitment has already been made in 2020 where capital has not been called
- The budget does include funds in which a commitment has already been made to, or is in the process of being made to, in 2021

Below is the projected Real Assets capital-pacing plan:



REAL ASSETS (Continued)**2021 ANNUAL PLAN (Continued)**

- SCERS' actual allocation to Real Assets continues to progress towards the target 7%, which is expected to be reached by 2025
 - Capital commitments will remain thoughtful, with market dynamics and identifying differentiated investment opportunities dictating pace
 - Given the limited number of investment opportunities, future capital commitments can expect to be lumpy
 - Balance out the potential underweighting in Real Assets by maintaining an overweight to Real Estate
- Evaluate the role of energy within Real Assets and the total portfolio in conjunction with the upcoming asset liability modeling study and SCERS' strategic asset allocation
- Investment strategies and themes of focus for 2021 include:
 - Core open end global infrastructure
 - Pan-Asia infrastructure
 - North American and Australian permanent crops
 - North American controlled environments agriculture
 - Opportunities across the food value chain globally
 - Specialty and sector focused real assets strategies
 - Environmentally driven strategies
- Oversee, monitor, and assess the existing manager lineup

REAL ESTATE

MARKET OVERVIEW

Real estate markets respond according to the macroeconomic environment but tend to lag, with each property type impacted differently and to varying degrees. Although the pandemic has touched every corner of the world, the impact to real estate property types has not been uniform, with industrial and multifamily performing well, while the office, retail, and hotel sectors have suffered. However, real estate is more than just the five main property types, as many of the specialty sectors are experiencing strong performance, such as data centers, life sciences, and public storage. This bifurcation in the real estate market is being experienced throughout the U.S., Europe, and Asia.

There remains significant economic uncertainty that will continue to have negative bearing on the real estate markets, especially for the office and retail sectors. To what extent and how widely work-from-home practices are adopted long term will have consequence for office investments, while the penetration of online purchasing of food and goods could drastically change shopping centers. Until countries have successfully administered vaccines to the majority of the population, economies will be fragile and in turn so will real estate performance. Hopefully, the financial relief efforts being implemented by major governments will forestall any deepening distress and bridge economies through the vaccine rollout, which is critical to bringing peace of mind for people to return to work, eat out, and go shopping.

Because there remains uncertainty around the duration of the pandemic and a path to recovery, there is little price discovery in the real estate market place as investors pullback. Global transaction volumes dropped precipitously during the second and third quarters, with year-to-date volumes down 33% from a year ago, according to CBRE. The drop in transactions is reflective of investors holding back until there is more clarity; however, the swift movement to online shopping has created outsized demand for industrial properties both from occupiers and investors. Still, CBRE reports that industrial transaction volume is down 43% when compared to the same third quarter volume in 2019.

Office sector:

The global office market is struggling from the uncertainty caused by the pandemic and subsequent shutdown restrictions. According to JLL, global leasing activity through the third quarter was down 46% from a year earlier, with the Asia Pacific region down only 5% year-over-year, while Europe was down 52% and the U.S. was down 55%. In turn, vacancy rates are up across all economic regions, with the global vacancy rate reaching 12.1% per JLL, up nearly 1%.

Retail sector:

One of the hardest hit sectors after hospitality, retailers continue to adjust to stay-at-home measures by adopting online purchasing with non-contact store pickup. As consumers have adjusted to purchasing groceries online and utilizing food delivery services, grocers are having to completely revamp their business models, placing some level of risk in shopping center investments. The secular change to online shopping that had been occurring in the retail sector over the last 10 years has been greatly accelerated by the pandemic. What will retail look like coming out of the pandemic is yet to unfold and has dramatically altered investor interest and pricing.



REAL ESTATE (Continued)**Logistics sector:**

The logistics sector has been an outlier among the real estate property sectors due to the dramatic and swift shift to online commerce. While e-commerce had been a contributor to the growth in the logistics sector over the last 5-7 years, the pandemic has accelerated demand even more so globally, leading to near-record absorption levels in the major markets. For example, CBRE reports that in the U.S., e-commerce and e-commerce related businesses accounted for 71% of total leasing activity year-to-date, while 40% of the leasing activity in Europe was directly attributable to online retail. With the strong demand has been a tightening of vacancy rates across global markets, with the U.S. industrial rate lowering to 7.6% and Europe reaching a low of 4.6%, according to CBRE research. The increasing penetration of e-commerce across the globe, the ongoing realignment of supply chains, and increasing requirement for last mile warehouses is likely to continue to support strong demand for logistics assets globally for some time.

Residential sector:

The resilience of residential sector performance relative to other property types has been the sector's appeal, although the residential sector has not been unscathed during the pandemic. Notably, there have been material negative impacts to the student and senior housing sectors. In the U.S. where apartments are more prevalent, a divergence has emerged in residential rents and occupancy performance between high-cost coastal cities (negatively impacted) and suburban market locations (positively impacted), and between high cost class A properties and more affordable class B/class C properties.

SCERS REAL ESTATE PORTFOLIO

Real estate is a separate and dedicated SCERS asset class within SCERS' Real Return asset category, and encompasses investments across U.S. and non U.S. core and non-core strategies. The investment objective of the Real Estate portfolio is to generate current income with moderate return volatility, while providing a diversification benefit to SCERS' overall portfolio. Shown below are the range of investment exposures within the Real Estate asset class:

SCERS Real Estate Portfolio Construction				
	Minimum	Target	Maximum	Policy Index Benchmark
Total Real Estate Portfolio	5%	7%	9%	Custom blend of benchmarks below:
Core Real Estate	50%	65%	80%	65% NFI-ODCE
Non-Core Real Estate	20%	35%	50%	35% NFI-ODCE + 1%
U.S. Real Estate	60%	70%	100%	
Non-U.S. Real Estate	0%	30%	30%	

REAL ESTATE (Continued)

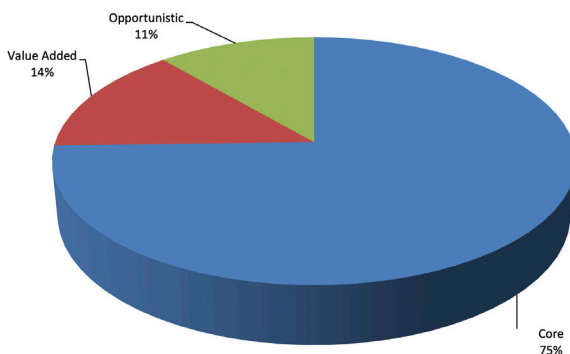
At the start of 2020, SCERS' real estate portfolio allocation was at 9%, the upper range of the target. In order to bring the exposure back within target, SCERS made redemption requests from two core open-end funds that would bring the allocation down closer to 8%. However, with the broad market recovery, lower relative real estate returns, and the two redemptions, SCERS' real estate allocation has steadily declined and as of December 31, 2020 stands at 7.3%.

As SCERS' Real Assets portfolio was being built out, SCERS was comfortable holding a higher than target Real Estate allocation as an offset. Real estate offers a wide range of sector and geographic investment strategies that offer attractive risk-return profiles, and SCERS has had good success implementing the Real Estate program over time. A consideration within the upcoming ALM study is to evaluate the sizing of Real Estate, to determine if an increased allocation would benefit SCERS in achieving its long-term investment objectives.

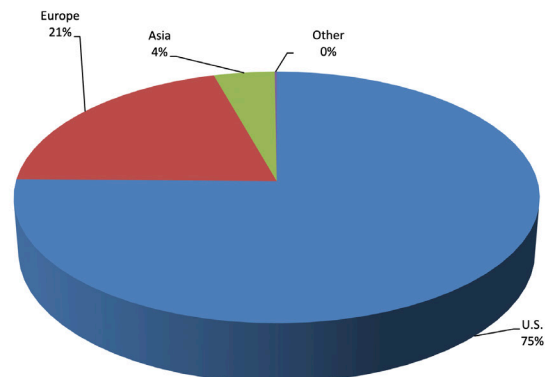
SCERS' Real Estate portfolio allocation is near target but is underweight non-core and non-U.S. strategies. Staff and Townsend have identified a number of non-core strategies, particularly in Asia, that could offer enhanced diversification, particularly from U.S. cycle risk, and the potential to generate an attractive return.

As of September 30, 2020, SCERS' Real Estate portfolio diversification by investment strategy and geographic region is shown below:

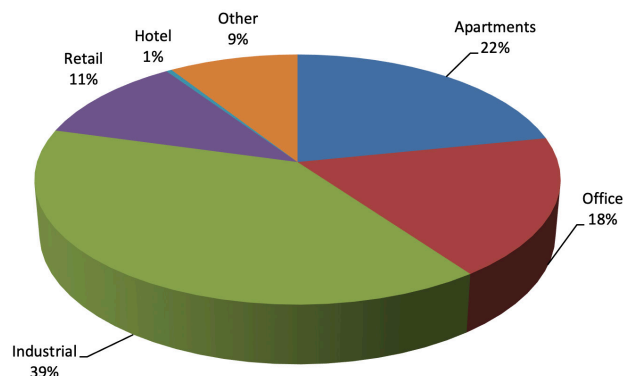
Real Estate Portfolio Strategy Exposures
as of September 30, 2020



Real Estate Portfolio Geographic Exposures
as of September 30, 2020



Real Estate Portfolio Strategy Exposures
as of September 30, 2020

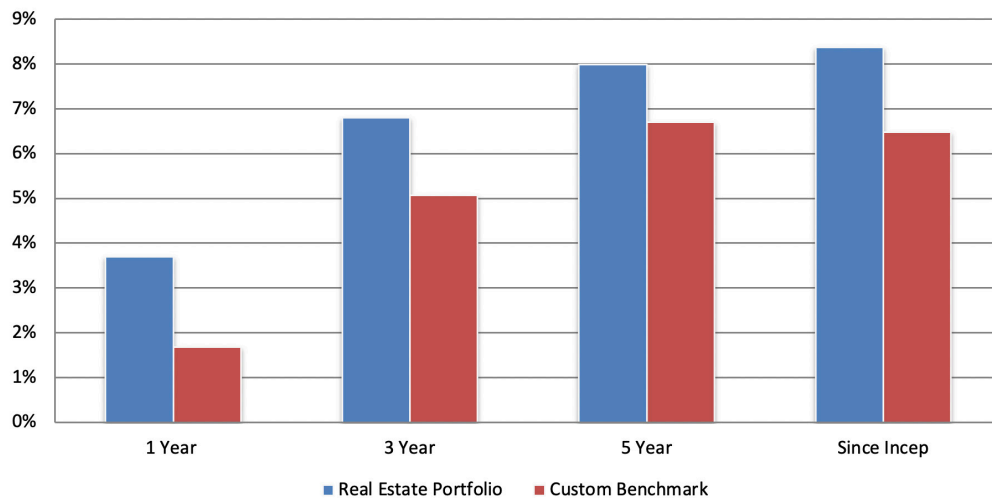


REAL ESTATE (Continued)**2020 ACTIVITY**

- Presented the 2020 Real Estate annual investment plan:
 - A range of 1-2 fund commitments, with a target of 1 fund
 - A total of \$30 million in commitments, with a range of \$30-\$50 million
 - An average commitment size of \$30 million per fund
- Made one non-core real estate commitment totaling \$30 million, a follow-on investment to Sculptor Real Estate Fund IV, LP (a niche value add closed end fund)
- Rebalanced the portfolio to reduce the actual allocation closer to the 7% target
 - As of December 31, 2020, the actual allocation is 7.3%
- Oversaw, monitored, and met with SCERS' existing Real Estate managers

PERFORMANCE AND ATTRIBUTION

SCERS Real Estate Portfolio Performance
TWRs as of September 30, 2020



As shown in the chart above, SCERS' Real Estate portfolio returns have exceeded the benchmark across all reporting periods. For the one year ending September 30, 2020, SCERS' Real Estate portfolio generated a net TWR (time-weighted return) of 3.7%, which meaningfully outperformed the policy index NFI-ODCE blended benchmark return of 1.7%. Since inception (1986) through September 30, 2020, SCERS' Real Estate portfolio has earned an 8.4% net TWR, outperforming the blended benchmark 6.5% net return.

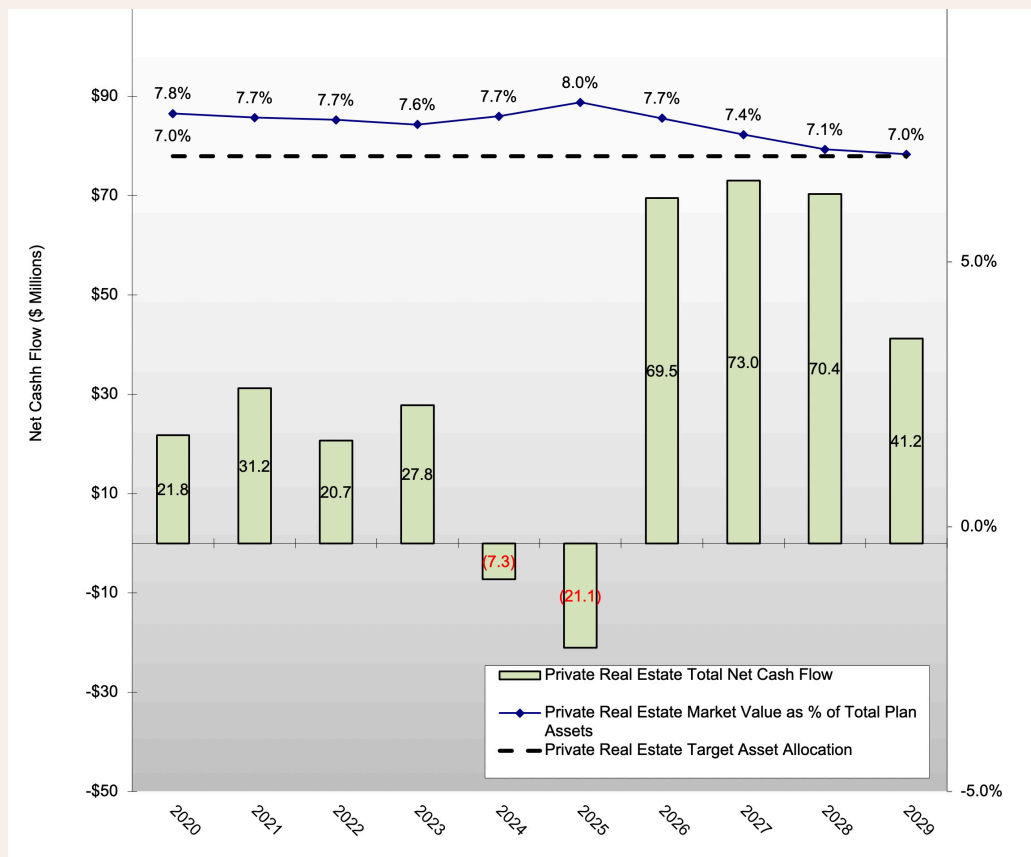
2021 ANNUAL PLAN

Below is the Real Estate 2021 capital commitment plan, as recommended by Townsend and Staff:

SCERS Real Estate Annual Investment Plan			
		Range	
	Target	Min	Max
Commitment Level	\$ 60 MM	\$ 30 MM	\$ 90 MM
Number of Funds	2	1	3
Core fund(s)	0	0	0
Non-Core fund(s)	2	1	3
Commitment per Fund	\$ 30 MM	\$ 20 MM	\$ 40 MM

- Townsend and Staff recommend a \$60 million commitment budget for 2021, with a range of \$30 - \$90 million
 - Target 2 total fund commitments at an average size of \$30 million, with a commitment size range of \$20 - \$40 million per fund
 - Target 2-3 non-core funds

Below is the projected Real Estate capital-pacing plan:



REAL ESTATE (Continued)**2021 ANNUAL PLAN (Continued)**

- Rebalance the portfolio strategy, sector, and geographic weights within targeted ranges
 - Maintain an 8% real estate allocation over the near term
 - Evaluate diversifying the core open-end allocation by reducing the U.S. exposure and adding exposure to Europe and/or Asia core open-end funds
 - Focus on non-core strategies to bring the non-core allocation closer to the 30% target
- Investment strategies and themes to focus in 2021 include:
 - European student housing
 - China logistics
 - Japan value-add
 - Refrigerated logistics and cold storage globally
- Evaluate the sizing of Real Estate in conjunction with the ALM study, to determine if an increased allocation would benefit SCERS in achieving its long-term investment objectives
 - Also evaluate property type sizing to ensure alignment with those experiencing secular tailwinds
- Oversee, monitor, and assess the existing manager lineup

OPPORTUNITIES

SCERS' Opportunities portfolio does not have a fixed allocation, but instead has a permissible range of 0% to 5%. As of December 30, 2020, the actual allocation stood at 0.1%. Investments in the Opportunities portfolio consists of tactical strategies offering attractive risk-return attributes. Potential opportunities may be short term, niche, non-traditional, or opportunistic in nature, and may exist across the range of asset classes. Any potential Opportunities investment will draw its capital allocation from the asset class that is most comparable to the risk-return characteristic of the investment. By subjecting potential Opportunities investments to this allocation process, it serves as a mechanism for the investment to compete for capital against other alternatives and subjects the investment's performance to compare against its appropriate asset class. Given the tactical approach of the Opportunities portfolio, it is possible there will be no investments made in any given year, which has occurred over the past several years, including 2020.

As part of the upcoming ALM study, the role of the Opportunities portfolio will be evaluated. SCERS' asset allocation has changed significantly since the Opportunities portfolio was first created. Many opportunistic-like investments have been allocated directly within asset classes such as Private Equity (distressed), Private Credit, and non-core Real Estate over the past number of years, and several of SCERS' hedge fund managers are structured to invest in tactical opportunities when they present themselves. Moving forward, a consideration is whether SCERS needs a dedicated Opportunities portfolio, and if so what role would it play.

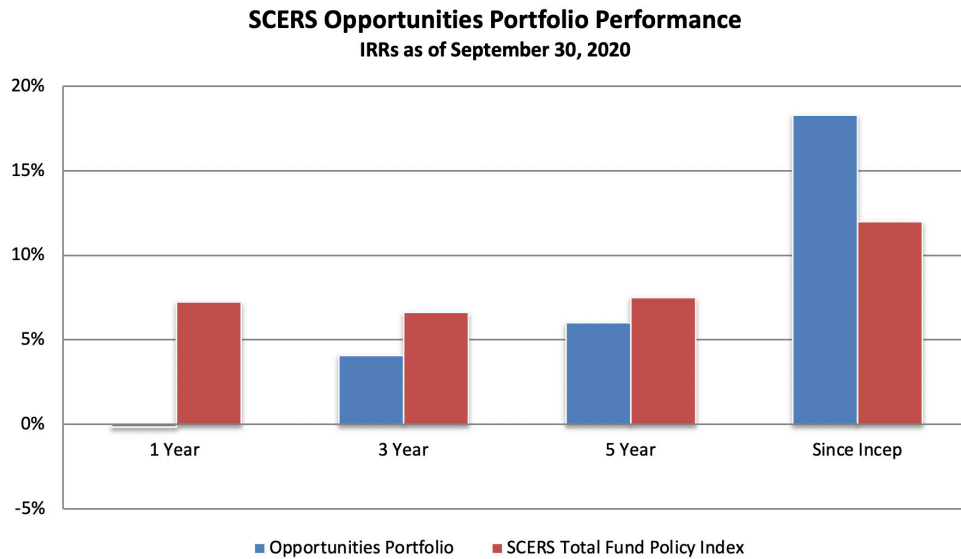
2020 ACTIVITY

- Evaluated several contingent/dislocation funds early in 2020; however, instead made a couple of asset class specific opportunistic investments across real estate and private credit
- Oversaw and monitored the existing manager lineup



OPPORTUNITIES (Continued)

PERFORMANCE AND ATTRIBUTION



As of September 30, 2020, SCERS' Opportunities portfolio generated a since inception (2007) 18.3% net IRR, significantly outperforming SCERS' policy index benchmark return of 12.0%. The strong since inception performance is due to several distressed debt funds SCERS invested in the aftermath of the GFC that have since been liquidated.

2021 ANNUAL PLAN

- Identify and evaluate any tactical opportunities in unique/differentiated investment strategies that offer an attractive risk-return profile
- Evaluate the role of the Opportunities portfolio in conjunction with the ALM study

OTHER INVESTMENT ACTIVITIES

2020 ACTIVITIES

Additional projects, activities, and enhancements within the investment program in 2020 included:

- Verus Advisory ran an updated liquidity analysis of SCERS' plan, as called for in SCERS' Cash Management Policy
- Evaluated responses and conducted interviews for the alternative assets consulting RFP, and prepared summary documentation for the Board's review
- Initiated the asset liability modeling (ALM) study that will be conducted in 2021
- To comply with California Government Code Section §7514.7, provided public disclosure of calendar year 2019 information regarding fees, expenses, and returns for alternative investment funds in which SCERS invests
- On boarded Colmore, to assist SCERS with the accounting and reporting of SCERS' growing private markets portfolio
- Appointed WTax to aid in the recovery of withholding taxes paid within the international equity portfolio
- Approved proxy voting guidelines with third-party proxy voting service provider Institutional Shareholder Services (ISS)
- Monitored and reported on SCERS' securities trading costs and commission re-capture program with State Street
- Conducted a search for an Investment Analyst
- Conducted Board education on investment matters
- Oversaw, monitored, and met with existing investment managers



OTHER INVESTMENT ACTIVITIES (Continued)**2021 INITIATIVES**

- Conduct the asset liability modeling (ALM) study, and approve a revised strategic asset allocation
- Review asset class portfolio construction and initiate implementation of the revised strategic asset allocation
- Revise investment policy statements in line with the revised strategic asset allocation
- Conclude the alternative assets consulting evaluation process, and approve a consultant
- Evaluate SCERS' Overlay Program, including underlying proxies and approaches to incorporate tactical positioning to the SCERS portfolio
- To comply with California Government Code Section §7514.7, provide public disclosure of calendar year 2020 information regarding fees, expenses, and returns for alternative investment funds in which SCERS invests
- Evaluate portfolio analytic and risk management systems for SCERS' total portfolio and asset categories/classes
- Oversee, monitor, and conduct calls with investment managers, in addition to attending manager meetings where feasible
- Attend and participate in industry conferences virtually, and in person where feasible

BOARD EDUCATION

2020 BOARD EDUCATION

- Education on global markets outlook
- Education on SCERS' portfolio allocation and rebalancing report
- Education on global markets update
- Education on fiduciary standard of care and alternative assets investing
- Education on securities lending
- Education on Asset Liability Modeling Study

2021 BOARD EDUCATION

- Market outlook presentations by SCERS investment managers
- Education and updates on SCERS' assets classes, including Real Assets, Real Estate, and Absolute Return
- Portfolio leverage/capital efficiency concepts, that are utilized to improve liquidity and diversification, and/or enhance returns
- Education on private markets secondary investments
- Education on China A-shares investing
- Strategy update presentations by SCERS' investment managers
- Other educational presentations by Consultants and Staff

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APPENDIX

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Memorandum

To: Sacramento County Employees' Retirement System Board (SCERS)
From: Verus
Date: February 17th, 2021
RE: 2020 Review and Outlook

Executive Summary

SCERS' portfolio ended 2020 up 12.5% (+12.3% net), with most asset classes showing positive results, a remarkable turnaround from the Covid-related sell-off. The results were well in excess of the Policy Index and ranked in the top third against SCERS' peers. Global Equity markets were up 16.3%, with domestic equities once again outperforming non-US markets. Fixed income was up 7.5% as measured by the Barclays Aggregate Index. Growth outperformed value during the calendar year by over 35.0% within U.S. Large Cap, which continued a trend we saw in '17, '18 and 2019. Private asset classes were mostly positive in 2020, with private equity returning 18.2%, private credit up 7.6% and real estate up modestly at 3.4% (quarterly lagged). Private real assets on the other hand struggled with exposure to commodity-related sectors and returned a negative 7.7% (quarterly lagged). SCERS' private equity portfolio has been particularly strong both on a relative and absolute basis, ranking in the top decile of its universe across most trailing time periods in the last 5 years.

In this memo we will review the investment environment in 2020 for major asset classes, detail 2020's initiatives and outline the work plan for 2021.

U.S. EQUITY

While economic growth and equity market performance have historically exhibited a positive relationship, there have been many periods throughout history when the two have diverged materially. This past year was without a doubt one of those periods—real gross domestic product shrank -2.5% in 2020, while the S&P 500 Index delivered a total return of 18.4%. To have received that 18.4%, however, investors needed to have the poise to withstand levels of volatility not seen since the 2008-2009 Global Financial Crisis, and extreme economic uncertainty. Between the beginning of the year and the February 19th pre-pandemic peak, the S&P 500 returned 5.1%. The Index proceeded to plunge -33.8% by March 23rd, and then surge +70.2% by the end of the year. The resilience of the S&P 500 Index could at least be partly attributed to unprecedented fiscal support, low interest rates and accommodative monetary policy, positive vaccine developments, and the relatively high weight of technology companies within the index which were more insulated or perhaps even benefited from the impacts of the pandemic.

Large-capitalization firms performed well throughout the year (Russell 1000 Index +21.0%) and tended to perform better on worsening COVID-19 related news flow, as many believed that a more prolonged pandemic improved the present value of future cash flows of large tech firms. As a result, the historically more cyclical tech sector experienced a somewhat defensive rotation. Small-cap stocks were hit hard in Q1 and Q2, specifically in the energy, financial, and

APPENDIX 1 — VERUS 2020 REVIEW AND OUTLOOK (Continued)

industrial sectors, but bounced back aggressively in the second half of the year. In the fourth quarter alone, the Russell 2000 Index returned +31.4%, bringing its 2020 return (+20.0%) to just 1.0% behind the large-cap benchmark.

INTERNATIONAL EQUITIES

Global equities returned 16.3% in U.S. dollar terms over the course of the year, and non-U.S. investors who had chosen not to hedge currency risk benefitted from a weaker dollar. International developed equities (MSCI EAFE USD +7.8%) underperformed the global opportunity set, as strong returns in the Netherlands (+24.1%) and Japan (+14.5%) were unable to counteract poor performance within Europe (+5.4%) more broadly, and the U.K. (-10.5%) specifically. The United Kingdom posted the poorest performance in U.S. dollar terms and was perhaps pressured by the uncertainty surrounding Brexit negotiations with the European Union, which finally concluded with the formation of an E.U.-U.K. trade arrangement on December 24th, and the completion of the separation in the final days of the year.

The policy response to pandemic-related disruptions varied widely across the international equity complex. Japan's response was widely viewed as one of the most aggressive, featuring strict and expeditious social distancing curbs, and fiscal stimulus amounting to over 40% of GDP. The experience in Europe was more fractured. While at first it appeared that the initial broad lockdowns had succeeded in slowing down the virus, relaxation of intra-European travel during the third quarter preceded a second wave in the fourth quarter that dwarfed the initial wave. This brought with it a second series of lockdowns in many countries across the continent.

European Union fiscal and monetary authorities were unable to provide the level of support seen in the U.S., U.K., and Japan, due in part to material differences in opinion between member states on how aggressive the policy response should have been, and in part due to the strings which many policymakers in Brussels sought to attach to the support packages. The European Commission eventually landed on a pandemic recovery fund sized at €750 billion (\$885 billion), comprised of both grants and loans. The European Central Bank had little appetite for cutting rates further into negative territory, leaving its deposit rate at -0.50% and pursuing an aggressive asset purchase program. In March, the ECB established a temporary Pandemic Emergency Purchase Program (PEPP) with a capacity of €750 billion, which was eventually expanded to €1.35 trillion in June and then to €1.85 trillion by December. In the U.K., the Bank of England cut its main rate from 0.75% to 0.10% in March and expanded the target for its quantitative easing program from £645 billion in May to £895 billion by year-end.

Emerging market equities (MSCI EM USD +18.3%) kept pace with large-cap U.S. equities, and outpaced the international developed equity complex despite facing headwinds from currency movements. Dispersion within the universe was wide in U.S. dollar terms – the Asian segment of the MSCI Emerging Markets Index returned +28.4%, while the Latin American segment delivered a -13.8% loss. Sector allocations played a role in the divergence, as tech-heavy Asian indices benefitted from pandemic dynamics and from lower interest rates, which boosted the present value of companies viewed as higher-duration. The Latin American universe, which tends to have a higher concentration of “old-economy” companies, fared worse as energy prices dove and exports plummeted. Additionally, Asian currencies exhibited much

APPENDIX 1 — VERUS 2020 REVIEW AND OUTLOOK (Continued)

lower volatility relative to the U.S. dollar, compared to Latin American currencies. Unhedged U.S. investors in EM Asia experienced returns of +28.4% (+25.5% in local terms) while unhedged U.S. investors in EM Latin America generated returns of -13.8% (+2.3% in local terms). Korean (+44.6%), Taiwanese (+41.0%) and Chinese (+29.5%) equities were the primary drivers of Asian outperformance, supported by rallies of 6.1%, 6.6%, and 6.7% in the Korean won, Taiwanese dollar, and onshore Chinese renminbi, respectively, relative to the U.S. dollar.

FIXED INCOME

Concerns over the pandemic led central banks around the globe to cut short-term interest rates to record lows, and longer-term interest rates fell dramatically as well, pushed lower by quantitative easing programs and broad risk-off sentiment. By year-end, the U.S. dollar value of global negative-yielding debt had risen from \$11.2 trillion to a new all-time-high level of \$17.8 trillion.

The plunge in global interest rates resulted in strong performance for Global Treasuries (+9.5%) in U.S. dollar terms. Within the United States, the 10-year U.S. Treasury yield fell from 1.92% to as low as 0.54%, before eventually recovering to 0.91% by the end of the year. The Bloomberg Barclays U.S. Treasury Index returned 8.0% over the year, and long-duration Treasuries (+17.7%) fared even better. Treasury inflation-protected securities (+11.0%) generated strong performance over the year as extensive fiscal accommodation stoked speculation for higher growth and inflation in a potential post-pandemic world. The ten-year breakeven inflation rate dove from around 1.8% to as low as 0.6%, and then recovered to 2.0% by the end of the year. While priced inflation did pick up substantially following the market turbulence in Q1, the impressive rise in TIPS breakeven inflation rates may be due to government purchases, as the Fed increased its TIPS holdings from 8% of the market to around 20%.

Within the credit space, riskier credit underperformed safer credit. Core fixed income returned +7.5%, roughly in-line with core-plus fixed income (+7.6%), while high-yield credit (+7.1%) and leveraged loans (+3.1%) underperformed. The option-adjusted spread of the Bloomberg Barclays High Yield Index spiked from around 3.5% to 11.0% in mid-March as spreads in the energy sector surged from 7.8% to 23.1%. By year-end, high-yield credit spreads in the energy sector had fallen to 5.6%, and broad high yield spreads had compressed to 3.5% — just 10 basis points above their level from the beginning of the year. Default rates crept up during 2020 and will be worth monitoring over the coming quarters.

Emerging market debt underperformed risky U.S. credit over the full year, but this performance gap began to narrow in the fourth quarter. Hard-currency denominated emerging market debt (J.P. Morgan EMBI Global Diversified +5.3%) outperformed local-currency debt (J.P. Morgan GBI-EM Global Diversified +2.7%) as emerging market currencies broadly depreciated relative to the U.S. dollar.

OUTLOOK

Exceptional returns across asset classes in 2020 likely dampened expectations for 2021. Many investors viewed last year's performance as a pulling-forward of 2021 returns, based on an assumption that sales and earnings growth would recover substantially next year. If that recovery does not take place, or if the global vaccination campaign runs into any snags, equities

APPENDIX 1 — VERUS 2020 REVIEW AND OUTLOOK (Continued)

could be vulnerable to a pullback, especially considering current valuation levels. With global real yields subdued, and credit spreads back at pre-pandemic levels, carry and value remain scarce. How best to structure portfolios effectively given the low interest rate environment will likely remain a key theme this year. In terms of expected policy, the Fed has reiterated its commitment to keeping financial conditions easy until it sees sustained progress toward its goals of full employment and stable prices. The election of Joe Biden and Democratic control of Congress have been viewed as raising the chances of substantial additional fiscal support. However, historically narrow Democratic majorities in both chambers of Congress have resulted in a more constrained policy agenda. There is likely a high degree of uncertainty regarding the future market path, and therefore, a more neutral overall risk stance may be warranted.

PORTFOLIO INITIATIVES*Updated Liquidity Model Study*

Per SCERS' investment policy, Staff and Verus provided an updated liquidity management study in 2020. While results were generally inline with expectations, SCERS's portfolio experienced a decline in its liquidity coverage ratio. Multiple factors contributed to the fall in liquidity coverage but on the bright side, a higher contribution rate, which is expected to take place in 2021, should help improve the Plan's liquidity this year.

Growth Portfolio

In growth-oriented asset classes we made the following changes during the year:

- Conducted a small cap value replacement search, hiring Snyder Small Cap Value
- Committed to several new strategies within private equity and private credit

Diversifying Portfolio

SCERS made three new manager hires within the Diversifying Absolute Return portfolio and two full redemptions within the same portfolio. No other changes were made during 2020 with the remaining Diversifying portfolio.

Real Return Portfolio

During 2020, SCERS committed to several new strategies within private real assets and real estate. No other changes were made during 2020 with the remaining real return portfolio.

Overlay

No major changes were made to the overlay during the past year. SCERS did initiate an intra-quarter rebalance during Q1 which resulted in a timely move into risk assets right around the time that the market began recovering from Covid-related market action.

PROJECTS FOR 2021

SCERS' ALM study will be the focus of 2021 as we work through the process of examining the current asset allocation and any new alternative portfolios that the Board may consider adopting. Following the completion of the ALM study, we will provide an implementation report for the Board that will detail how Staff and Consultants plan to execute on any changes to the portfolio.

APPENDIX 1 — VERUS 2020 REVIEW AND OUTLOOK (Continued)

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APPENDIX 2 — CLIFFWATER REVIEW OF SCERS' ALTERNATIVE ASSETS



To: Sacramento County Employees' Retirement System
 From: Cliffwater LLC
 Date: February 17, 2021
 Regarding: **Alternative Assets 2020 Year in Review**

The story of the year was the COVID-19 pandemic. The story of the first quarter 2020 was arguably the pandemic's impact on global financial markets. Equities and risk assets across the board sold off at a record pace in February and March, with U.S. equities, for example, racing into bear market territory over a roughly three-week period from mid-February. U.S. equities had fallen 33% in just a one-month time span before ultimately bottoming in later March. This extreme market sell-off was accompanied by an epic flight to quality, where already depressed yields on U.S. government bonds settled in at record lows.

Accommodative central bank monetary policy and government fiscal stimulus around the globe limited the market's free fall and helped to propel risk assets higher throughout most of the year. In turn, global equities rose nearly 70% from the bottom in March as markets rallied with the support of historic stimulus measures and the eventual approval of COVID-19 vaccines. All major regions posted positive equity returns in 2020 led by the U.S. and Emerging Markets. For the full year, the broad U.S. stock market gained nearly 21%. Emerging market equities returned 18%, while non-U.S. developed equity markets gained 8%. Information technology was the year's best performing sector, accounting for almost 70% of the S&P 500 Index's total return in 2020, while energy was the notable laggard. Value investing was another laggard, trailing growth by 30% in 2020. Long duration U.S. Treasuries rallied sharply with the first quarter's flight to quality, returning 19% for the year. High yield bonds returned 7% in 2020. Publicly traded BDCs, REITs, and MLPs, however, produced negative returns on the year, returning -11%, -5%, and -29%, respectively.

The Sacramento County Employees' Retirement System ("SCERS") portfolio includes a well-developed array of alternative investment strategies that span the private equity, private credit, real assets, and absolute return-oriented asset classes. These asset classes are intended to achieve multiple investment objectives for SCERS and provide differentiated sources of returns for the total SCERS portfolio.

Absolute Return Portfolio

Hedge funds ended the year on a strong note and posted their best annual performance in years. For the full year 2020, hedge funds as a whole gained more than 10%. Once again there was tremendous dispersion of performance across funds and strategies, though hedge funds generally navigated 2020 volatility well. Most strategies recovered first quarter losses by the middle of the year and thereafter added to gains. The strongest returns were in strategies which were positioned long to the risk-on rally in equities and spread tightening in credit (primarily equity long/short and event driven strategies) or were able to tactically trade around economic uncertainty (macro discretionary). Non-directional strategies posted positive returns but trailed directional strategies. The lowest returns were produced by macro systematic strategies.

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Los Angeles • New York

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APPENDIX 2 — CLIFFWATER REVIEW OF SCERS' ALTERNATIVE ASSETS (Continued)

Within market neutral, the strongest returns came from convertible arbitrage, followed by fixed income arbitrage. Fixed income arbitrage managers were significantly negatively impacted amidst the March coronavirus volatility, but largely recovered shortly after notable central bank action. Volatility arbitrage was one of the hardest hit strategies in the first quarter of 2020 as particular trades suffered large losses with volatility shooting to Global Financial Crisis levels. The dispersion of returns of volatility arbitrage managers was wide in 2020; the strategy as a whole ended the year down.

Despite improved credit performance towards year end, many credit managers (particularly within structured credit) were not able to recover their first quarter losses and finished negative for the year. Returns for event driven strategies were largely driven by equities, though most sub-strategies produced positive returns. For the year, equity long/short gains were driven by a combination of upside beta capture (market exposure) and positive alpha generation, led by crowded positions which benefitted from work and shop from home trends. However, some funds generated negative short alpha due to covering in high short interest stocks including “story” stocks such as Tesla. Value-oriented funds materially lagged growth strategies for the year.

Increased macro uncertainty in 2020 was beneficial for discretionary macro managers, and many were rewarded for tactical trading moves throughout the year. Managers saw the largest gains from long global duration themes, with smaller contributions from foreign exchange positioning, tactical equities exposure, and long positions in gold. Systematic macro strategies lagged for the year. Although systematic macro limited drawdowns in the first quarter, these strategies were not able to earn sustained positive returns during subsequent periods of choppiness or quick market reversals.

Hedge fund alpha materially improved in 2020 and exceeded 3% for the broad universe of funds. Hedge fund alpha generation has typically been the highest in post dislocation periods, and the second half of 2020 followed this trend. Strategies with the highest alpha in 2020, such as equity long/short, had exposure to companies which were winners in the COVID environment and then rotated to recovery themes in the second half of the year. Macro discretionary managers generated alpha from tactical trading. Market neutral funds' alpha failed to recover from the first quarter despite an improvement in performance for the year. As a reminder, alpha generation is being defined as returns above the risk-free rate in excess of returns generated from broad market exposure.

The SCERS Absolute Return portfolio once again saw solid gains across most of its investments, although the SCERS portfolio saw similar performance dispersion across funds and strategies as was experienced more broadly with hedge funds in 2020. The Growth Oriented Absolute Return portfolio's funds generally produced double digit gains, driving the portfolio's net return to 10.8% for the year. The Diversifying Absolute Return portfolio produced a one-year net return of 5.3%. Although the Diversifying Absolute Return portfolio's lower targeted beta (market sensitivity) effectively capped the portfolio's returns, the heightened dispersion of returns across funds also limited the impact of the portfolio's strong performing funds. This was particularly noteworthy among the portfolio's arbitrage and systematic strategies. The portfolio still produced significant alpha on the year and once again exceeded the risk-free rate by more than its targeted 2% hurdle.

New activity within Absolute Return in 2020 centered around changes in the Diversifying Absolute Return portfolio. SCERS made investments in three new funds during the year, including two within the event driven category and one market neutral fund. The event driven funds include a diversified global strategy and one focused primarily on non-U.S. investments. The market neutral fund takes a relative value approach to investing in convertible bonds and other credit instruments. SCERS largely funded the new allocations with redemptions from two funds. SCERS will continue to adjust exposures over time to appropriately position the portfolios for anticipated market conditions and adjust for manager performance expectations.

APPENDIX 2 — CLIFFWATER REVIEW OF SCERS' ALTERNATIVE ASSETS (Continued)*Private Equity*

As private equity markets confronted the same challenges (and potential opportunities) created by the pandemic-driven changing global landscape, the asset class delivered impressive results for the year overall. Private equity markets displayed continued strong performance following the downturn of the first quarter, as valuations began to improve through the second quarter and gains continued through the rest of the year. Private equity and venture-backed companies largely seemed to adapt to the new COVID operating environment, outside of the most heavily impacted sectors. Many of these companies were able to adjust their business models and products in the new environment, while several technology-driven sectors such as telehealth, fintech, ecommerce, and educational technology all benefitted from trends that were accelerated by stay at home and other socially distanced driven changes.

This strong recovery was not limited to the performance of private equity strategies, as private equity fundraising, investment activity, and realizations all picked up significantly during the second half of 2020. While changes to work processes certainly impacted fundraising and diligence processes, fundraising remained healthy for the year overall. Private equity and venture capital investment activity accelerated in the second half of the year, particularly in the fourth quarter, mostly driven by technology deals and add-on acquisitions. Distributions from private equity and venture capital funds were strong in 2020, particularly towards the end of the year, despite the slowdown around the first quarter. Buyers of private companies included strategic acquirers and financial buyers (purchases by one private equity sponsor from another), with additional liquidity provided by public listings, either through traditional IPOs or through purchases by Special Purpose Acquisition Companies (“SPACs”). The surge of SPACs, which provide for an alternative way for private companies to go public, provided an additional liquidity avenue for private companies in 2020. This was particularly prevalent for venture capital backed companies, where the SPACs provided an easier threshold for public listing of less profitable companies and companies with greater technology risk.

Venture capital in particular showed very strong momentum in the second half of 2020, ending the year at record levels for fundraising and new deal activity. Venture capital managers also racked up the second highest annual total for exits including several significant public exits through traditional IPOs and SPACs, as mentioned previously. This all contributed to strong performance from venture capital funds in the third and fourth quarters of the year.

The SCERS Private Equity portfolio continued to produce very strong results on an absolute basis and relative to its benchmarks through 2020. The Private Equity portfolio generated a net return, as measured on an IRR basis, of 20.2% for the trailing 12-month period ended September 30, 2020. Trailing three- and five-year returns were 21.8% and 18.8%, respectively. These results have significantly exceeded those of the peer universes and the SCERS long term performance objective of earning a 3% illiquidity premium above public equities. The Private Equity portfolio's strong performance continues to be broadly generated across its underlying funds rather than being driven by a few vintage years, strategies, or managers. It is this breadth and consistency of returns that gives comfort in the portfolio's ability to continue to deliver strong results in meeting its portfolio objectives.

While SCERS has always maintained a strategic, long-term view of its private equity portfolio, the significant equity market downturn earlier in the year necessitated a reassessment of the portfolio's allocations and pacing plans for new commitments. SCERS adjusted several of the portfolio assumptions used in these analyses given then-current and expected market conditions. SCERS was able to reaffirm its long-term plans as a result, and prudently continued to allocate to new fund opportunities, rather than suspending new commitment activity or taking more dramatic steps to adjust the portfolio allocation. SCERS was able to access high conviction managers by committing to nine new private equity funds during the year. SCERS was also able to access new general partner relationships during the year rather than solely relying on committing to new funds of its well-known general partners already managing capital for SCERS. SCERS maintained a good

APPENDIX 2 — CLIFFWATER REVIEW OF SCERS' ALTERNATIVE ASSETS (Continued)

balance of continuing existing relationships and adding new managers despite the challenges presented by the pandemic-altered operating environment. New commitments in 2020 were diversified across private equity strategies and included specialty buyout funds, venture capital funds, a fund focused on distressed investing, and a fund that derives steady cash flow from non-traditional asset sources.

The SCERS Private Equity portfolio has reached a state of relative maturity, as the portfolio has reached its long-term targeted allocation and includes a deep roster of top tier investment managers. The portfolio is also well-diversified across strategies, geographies, sub-sectors, market capitalization, and time, and the portfolio has consistently delivered strong results over multi-year time periods. SCERS will look to maintain its portfolio quality and manage the portfolio allocation by continuing to execute on its investment plan through the use of primary fund commitments, secondary transactions, and co-investments.

Private Credit

The SCERS Private Credit portfolio is comprised of lending-oriented strategies focused on situations where the manager expects to receive principal and interest payments. The portfolio includes directly originated, non-traded loans to middle market companies as well as other lending-oriented strategies that may include royalty investments or other asset-based lending. Investments in the former category are considered Direct Lending investments in the Private Credit portfolio. The other lending strategies are considered Opportunistic Credit investments within this portfolio.

Credit markets in 2020 were not immune to the negative impact of the global pandemic, as defaults in liquid credit markets such as broadly syndicated loans and high yield bonds peaked in the second quarter at levels not seen since the Global Financial Crisis. However, government support was effective in bolstering many pandemic-impacted businesses and instilling more investor confidence in credit markets. As a result, credit markets recovered dramatically after what was one of the largest and fastest credit downturns in history. With the rebound in credit markets, defaults for the remainder of 2020 declined to near long-term averages.

Private credit weathered the storm well as COVID-impacted businesses received much of the liquidity support needed to get through the most difficult periods of the year's downturn. This support came from private company owners, oftentimes private equity sponsors, and from government initiatives in certain cases. Many private credit managers also had limited exposure to companies in the most impacted sectors of the economy, such as Energy, Retail, and Transportation and Leisure, which had the highest levels of defaults. After two quarters of limited new loan issuance, the market rebounded dramatically with significant new supply. Despite interest rates at all-time lows, private debt continues to generate high income returns, with current pricing that remains attractive.

The SCERS Private Credit portfolio produced another year of solid returns overall, despite heightened volatility during the first half of the year. The Private Credit portfolio generated a 6.8% net return for the 12-month period ending September 30, 2020. This result helped to maintain the portfolio's steady return generation as annualized net returns for the three and five-year periods were 7.0% and 7.8%, respectively. The returns over each of these time periods have materially exceeded the returns earned in the broadly syndicated loan market plus a desired 2% illiquidity premium. The portfolio's 7.7% annualized net return since inception also exceeds the leveraged loan + 2% return target.

SCERS continued to add new exposures to its Private Credit portfolio in 2020, committing to a new private credit fund and evaluating the terms around increasing its commitment to a separately managed account held in the portfolio. The new commitment was made to a specialty lending fund that is part of the Opportunistic Credit allocation of the Private Credit portfolio. This fund focuses on primarily lending to unique company situations, with an ability to purchase existing loans or provide short term financing solutions as economic conditions change.

APPENDIX 2 — CLIFFWATER REVIEW OF SCERS' ALTERNATIVE ASSETS (Continued)*Real Assets*

The SCERS Real Assets portfolio includes allocations to private infrastructure, energy, agriculture, and other related private strategies. Private infrastructure, as compared to the other Real Assets strategies, had shown to be among the most insulated from the volatility and disruption affecting global markets in 2020 despite infrastructure transport assets experiencing a significant drop-off in demand. Energy, however, was materially impacted by the demand destruction caused by the pandemic's sheltering impact on transport and travel. The pandemic has also added a great deal of uncertainty to both timberland and farmland. Farmland was negatively impacted by pandemic related production and transportation disruptions, as well as shifting demand from foodservice companies and grocery stores.

Infrastructure fundraising held up well during the year, primarily as some of the largest managers continued to raise increasingly larger funds. This capital concentration among larger, more experienced managers is likely to continue in infrastructure. Furthermore, expectations of government support and investment in infrastructure will add to investor demand for the asset class. Private energy fundraising, already in decline through 2019, slowed further in 2020. As a result, traditional upstream energy (oil and gas exploration and production) managers are switching to or adding energy transition strategies while others are including renewable investments in their flagship funds.

Investment activity in the infrastructure asset class remains heavily influenced by sporadic large transactions. The renewable power generation segment has become a focus of many funds and is expected to represent an increasing portion of global infrastructure strategies. Additionally, the market for core infrastructure assets is highly competitive, pushing some infrastructure funds to invest in assets not perceived as traditional infrastructure. Energy new deal activity in 2020 continued to significantly lag that of prior years, representing the lowest activity since 2010. The lower deal activity is largely attributed to not only the pandemic but also the tightening of the capital markets and declining investor confidence across the sector.

The SCERS Real Assets portfolio is intended to provide income generation, inflation protection, and risk factor diversification to the overall SCERS investment portfolio. Although the Real Assets portfolio had proven its resilience despite commodity price volatility over the years, the portfolio was negatively impacted by the pandemic's material impact on travel and transportation during the year. The portfolio saw a resultant downturn in performance for the 12-month period ending September 30, 2020, declining 7.9% during this period, primarily driven by the portfolio's energy-related investments. The year's negative result weighed on longer-term performance in the portfolio, which had previously been delivering low double-digit net returns (IRRs) over multi-year periods and since inception. However, the portfolio's returns over each of these longer time periods remain ahead of the portfolio's benchmark returns and have exceeded inflation rates by several percentage points. As of September 30, 2020, the portfolio's since inception net IRR was 6.4%.

SCERS further added to its Real Assets portfolio during the year with three new commitments. Two of these commitments were made to infrastructure funds. The other commitment was made to an energy-related royalty strategy that SCERS evaluated after the onset of the pandemic. The new infrastructure fund commitments covered a global value-added infrastructure strategy and a core infrastructure strategy that specifically targets social infrastructure needs. Examples of such social infrastructure needs include facilities and services for higher education, healthcare, and other government users. The global infrastructure commitment was a re-up into a new fund pursuing a strategy currently in the SCERS portfolio being managed by an existing general partner relationship of SCERS. The other two funds represented new strategies being added into the SCERS Real Assets portfolio.

APPENDIX 2 — CLIFFWATER REVIEW OF SCERS' ALTERNATIVE ASSETS (Continued)*Looking ahead to 2021*

Despite all of the challenges presented by the events of 2020, the SCERS Board, Staff, and Cliffwater were able to continue developing the SCERS alternative investment portfolios and further build upon the program's advancements over the past decade. As we look forward into 2021, SCERS will again be reviewing its asset allocation decisions as part of a broader asset liability modeling study. This review will require not only evaluating the targeted allocations to each of the major asset classes, it will also include a review of the portfolio structure and desired role of each of the underlying asset classes, including those in the alternative investment portfolios. These decisions will potentially impact allocations and the composition of each of the asset classes.

While we would envision changes coming through this review, we continue to see the importance of the role that alternative investments should play in well-developed institutional portfolios. We continue to believe that including diversified alternatives allocations can improve return and risk profiles and provide investors with increasingly better opportunities to meet their return objectives. Our outlook remains consistent that private assets can deliver 2% to 3% return premia and believe that absolute return strategies can help to reduce portfolio risk with less return degradation than many other diversifying assets.

SCERS has developed a long history of executing a well-defined, rigorous investment process. Maintaining this well-structured and thoughtful approach to investing will remain critical to the continued success of the SCERS investment program, as SCERS continues to refine its portfolio structure and allocations.

APPENDIX 3 — TOWNSEND REVIEW OF SCERS' REAL ESTATE INVESTMENTS



MEMORANDUM

TO: Sacramento County Employees' Retirement System

DATE: February 17, 2020

SUBJECT: Real Estate Investment Year in Review (Data as of September 30, 2020)

FROM: The Townsend Group

In 2020, U.S. private real estate markets ended their ten-year expansion with the spread of the COVID-19 pandemic. Despite a year that saw the NFI-ODCE generate negative appreciation returns for the first time since 2009, SCERS achieved positive returns and continued its outperformance over the benchmark. On a trailing twelve-month basis, the SCERS real estate portfolio (the "Portfolio") outperformed its benchmark by 200 basis points, achieving a net time-weighted return of 3.7%. Additionally, the Portfolio outperformed the benchmark (0.3% vs. -0.5% net) for the year-to-date. Relative outperformance has largely resulted from an overweight to the industrial sector within the core portfolio, and successful tactical investments in the non-core portfolio that pursue particularly compelling themes with specialist managers. As of 3Q2020, real estate represented 8.0% of total plan assets, which is below the upper target limit of 9.0%.

Real Estate Return and Risk Forecasts

Long-term return expectations for real estate have decreased since last year. The following are Townsend's private real estate and real asset return forecasts as of January 2021:

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%

Core Real Estate

SCERS' core portfolio represents 6.0% of the total plan, which is well within the established range of 4.0% to 9.0%. Current core weighting reflects changes to the IPS approved in July 2017, which removed the previous restriction on core investment vehicles to allow for future execution flexibility and captures the intention of the SCERS real estate program to focus on open-end core commingled funds going forward.

APPENDIX 3 — TOWNSEND REVIEW OF SCERS' REAL ESTATE INVESTMENTS (Continued)

In 2020, the core portfolio was comprised exclusively of open-end funds, with only a negligible separate account cash balance held in reserves. As outlined in last year's Investment Year in Review, one main objective for 2020 was to further re-balance the core portfolio through redemptions in order to reduce core exposure and steer total real estate exposure towards the 7% target. As a result, a full redemption (\$64.4 million) from Morgan Stanley Prime Property Fund and a partial redemption (\$20 million) from Clarion Lion Properties Fund were requested in the first quarter of 2020. As of year-end, SCERS received \$30.0 million from Morgan Stanley and \$8.1 million from Clarion, with the remaining capital expected to be paid in 2021. In addition, the full redemption from Jamestown Premier Property Fund, which was requested in 2019, was paid in full during the first quarter of 2020.

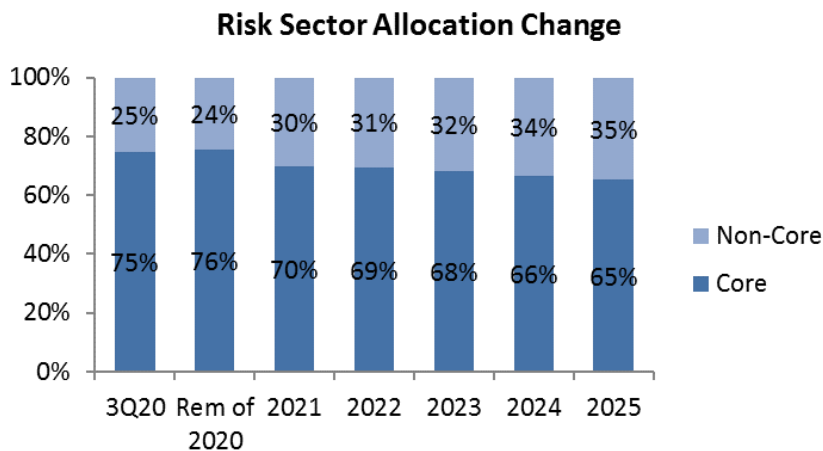
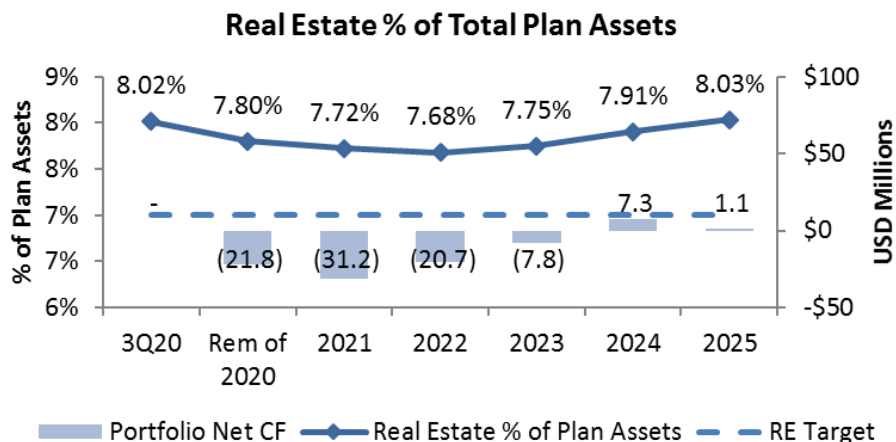
Non-Core Real Estate

Non-core real estate represents 2.1% of the total plan, within the established range of 0.0%-5.0%. Townsend and Staff continued to focus on high conviction thematic opportunities for the non-core portfolio in 2020. SCERS made one non-core investment, a \$30 million commitment to Sculptor Real Estate Fund IV, to pursue less capitalized niche sectors and credit-stressed situations through a broadly diversified opportunistic fund with a known partner. Furthermore, Townsend and Staff started due diligence on a U.S. cold storage opportunity and continued to evaluate potential opportunities in the Japanese non-core space. These two themes will likely be the main focus for 2021 non-core activity.

SCERS Private Real Estate Forecasts

Given the current overweight to private real estate and the higher-than-targeted core allocation, SCERS and Townsend are in discussions about potential additional core redemptions in 2021 to fund new non-core commitments and move towards a 35% non-core target exposure (currently at 25.5%). The below forecasted pacing assumes \$60 million of new non-core commitments per annum in 2021, 2022 and 2023. This would result in achieving the targeted core/non-core mix of 65%/35% and maintaining an 8% allocation to total real estate. If SCERS' preference is to reach the 7% target real estate allocation sooner, additional open-end fund redemptions could be used to reduce exposure to the asset class.

APPENDIX 3 — TOWNSEND REVIEW OF SCERS' REAL ESTATE INVESTMENTS (Continued)



Global Diversification

SCERS' international exposure has grown steadily since 2013. As of 3Q2020, 75.2% of the SCERS private real estate portfolio is invested in the United States. 24.8% of the real estate portfolio is invested in ex-US markets, of which approximately 83% is in Europe and 17% is in Asia. The majority of SCERS' international exposure is housed in the non-core portfolio, which was 71.1% ex-US as of 3Q 2020.

The current benchmarks for the SCERS private real estate portfolio are US-based and include:

- NFI-ODCE (core),
- NFI-ODCE + 100 basis points (non-core).

Due to the increasing importance of ex-US to the SCERS real estate portfolio, the board adopted an ancillary benchmark in July 2017. The ancillary custom global benchmark is made-up of the NFI-ODCE (core), NFI-ODCE + 100bps (non-core), GREFI core and GREFI non-core for Europe and Asia to create a global blended benchmark based on weighted average invested capital for each global region and strategy.

APPENDIX 3 — TOWNSEND REVIEW OF SCERS' REAL ESTATE INVESTMENTS (Continued)**Private Real Estate Considerations for 2021**

Townsend proposes the follow considerations to SCERS for its Real Estate Portfolio:

1. Rebalance the SCERS core portfolio to achieve optimal sector weightings and reduce overall exposure to core real estate relative to non-core.
2. Commit between \$30 and \$90 million to non-core strategies in 2021.
3. Further diversify Ex-US exposure. Staff and Townsend are currently evaluating real estate opportunities in Japan.
4. Further explore niche investment opportunities that are expected to generate outsized risk-adjusted returns, and/or provide a level of diversification to the portfolio (downside protection, sector exposure, etc.).
 - Townsend continues to conduct manager research in niche opportunities such as U.S. cold storage and emerging market logistics (mainly in China). European student housing also remains an area of interest.
5. Be prepared to take advantage of any potential market dislocation through tactical non-core commitments, possibly increasing the targeted annual commitment size if opportunity set expands.

APPENDIX 3 — TOWNSEND REVIEW OF SCERS' REAL ESTATE INVESTMENTS (Continued)**Recap and Vision for 2021**

Staff and Townsend continue to be focused on reducing SCERS' overweight to core real estate, while maintaining vintage year diversification in the non-core portfolio and pursuing attractive thematic investment opportunities.

In 2020, investment activity was limited and mainly focused on redeeming from open-end core funds to improve sector weightings and reduce the overweight to core real estate. In addition to receiving a full redemption from one core plus fund with significant office and retail exposure, one partial and one full redemption from two diversified core funds were requested during the year with final payments expected in 2021. Townsend and Staff worked to enhance expected returns for SCERS throughout this process while maintaining a well-diversified Core portfolio. On the non-core side, SCERS remained selective about investment activity and pursued one new commitment to take advantage of any pandemic-driven market dislocation across a variety of sectors and regions.

For 2021, we expect to see further non-core opportunities with high return potential as the real estate market has entered a new cycle. There are various uncertainties and risks that may impact global real estate returns; fundamentals remain strong in certain sectors such as industrial and multifamily but are under pressure in other sectors such as retail or hospitality. 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 strategic objectives for the Portfolio, as approved by SCERS board. On the sell-side, we will consider additional open-end core fund redemptions if there is a need to reduce real estate exposure, while maintaining an 8% exposure in the near-term. On the buy-side, we will continue to be selective and identify non-core opportunities accretive to the SCERS Portfolio, with a focus on evaluating investments in U.S. cold storage, Japan, and non-U.S. logistics.

APPENDIX 4 — 2020/2021 ROAD MAP

Topic	2020 Preview	2020 Actual	2021 Preview
Consultants	<ul style="list-style-type: none"> Issue RFP for alternative assets consulting and evaluate consultant responses 	<ul style="list-style-type: none"> Issued alternative assets consulting RFP, and evaluated responses and conducted interviews. Also, prepared summary documentation for the Board's review 	<ul style="list-style-type: none"> Conclude the alternative assets consulting evaluation process, and approve a consultant
Asset Allocation	<ul style="list-style-type: none"> Continue implementation of the strategic asset allocation to bring physical exposures toward their respective target allocations 	<ul style="list-style-type: none"> Replaced SCERS' U.S. equity small cap value manager, and allocated to multiple funds within the Absolute Return, Private Equity, Private Credit, Real Assets, and Real Estate asset classes 	<ul style="list-style-type: none"> Continue implementation of the strategic asset allocation to bring physical exposures toward their respective target allocations
	<ul style="list-style-type: none"> Initiate education on asset liability modeling (ALM) in anticipation for the next ALM study in 2021 	<ul style="list-style-type: none"> Initiated the ALM study that will be conducted in 2021 	<ul style="list-style-type: none"> Conduct the ALM study, and approve a revised strategic asset allocation
			<ul style="list-style-type: none"> Review asset class portfolio construction and initiate implementation of the revised strategic asset allocation
			<ul style="list-style-type: none"> Revise investment policy statements as needed
Equities	<ul style="list-style-type: none"> Evaluate potential new strategies and managers that would be additive to the Domestic and International Equity portfolios 	<ul style="list-style-type: none"> Hired Snyder Capital Management to manage the small cap value segment of the portfolio, replacing legacy manager DGHM 	<ul style="list-style-type: none"> Evaluate potential new strategies and managers that would be additive to the Domestic and International Equity portfolios
	<ul style="list-style-type: none"> Evaluate country specific mandates, including Emerging Markets, for role in the International Equity portfolio 		<ul style="list-style-type: none"> Evaluate the target size and portfolio structure of Domestic and International Equity portfolios in conjunction with the ALM study
	<ul style="list-style-type: none"> Perform a physical rebalance of SCERS' Domestic Equity portfolio, which is overweight to its target allocation 	<ul style="list-style-type: none"> Physically rebalanced the Domestic Equity portfolio to reduce the overweight position relative to the target allocation range 	<ul style="list-style-type: none"> Perform a physical rebalance of SCERS' Domestic Equity portfolio, which is again overweight to its target allocation. Review mix between growth and value in the International Equity portfolio, and consider a rebalance as appropriate.
	<ul style="list-style-type: none"> Review style and sector exposures for unrecognized portfolio tilts 		
Fixed Income	<ul style="list-style-type: none"> Review bond sector exposures, particularly levels of credit 	<ul style="list-style-type: none"> Oversaw, monitored, and met with SCERS' Fixed Income managers 	<ul style="list-style-type: none"> Review fixed income targets and portfolio structure as part of the broader ALM Study
	<ul style="list-style-type: none"> Perform a physical rebalance of SCERS' Fixed Income portfolio, which is underweight to its target allocation 		<ul style="list-style-type: none"> Perform a physical rebalance of SCERS' Fixed Income portfolio, which is underweight to its target allocation

APPENDIX 4 — 2020/2021 ROAD MAP (Continued)

Topic	2020 Preview	2020 Actual	2021 Preview
Absolute Return	<ul style="list-style-type: none"> Identify and invest in 2-6 potential absolute return funds with an average investment size of \$45 million per fund; 2-4 diversifying strategies and 0-2 growth strategies 	<ul style="list-style-type: none"> Made three diversifying absolute Return investments totaling \$135 million in aggregate 	<ul style="list-style-type: none"> Identify and invest in 2-5 potential absolute return funds with an average investment size of \$45 million per fund; 1-3 diversifying strategies and 0-2 growth strategies
	<ul style="list-style-type: none"> Wind down the interim SCARF-B portfolio with GCM, and invest proceeds in direct fund investments 	<ul style="list-style-type: none"> Fully liquidated the allocation to the GCM SCARF-B portfolio, an interim solution within the Diversifying Absolute Return portfolio, and used the proceeds for direct diversifying absolute return fund investments 	<ul style="list-style-type: none"> Evaluate role of the Growth Absolute Return portfolio and sizing of the Diversifying Absolute Return portfolio, within the context of the upcoming ALM study and SCERS' strategic asset allocation
	<ul style="list-style-type: none"> Bring in current Absolute Return managers for Board education 	<ul style="list-style-type: none"> Placed three investment managers on SCERS' Watch List, due to performance and organizational concerns, and fully redeemed capital from two managers 	
Private Equity	<ul style="list-style-type: none"> Identify and commit to 6-9 potential private equity investments with an average commitment size of \$30 million per fund; \$210 million in total with a range of \$170 to \$250 million 	<ul style="list-style-type: none"> Committed to 8 private equity funds totaling \$160 million in aggregate 	<ul style="list-style-type: none"> Identify and commit to 5-9 potential private equity investments with an average commitment size of \$30 million per fund; \$200 million in total with a range of \$160 to \$240 million
	<ul style="list-style-type: none"> Continue to evaluate methods to rationalize the Private Equity portfolio through the secondary market 		<ul style="list-style-type: none"> Continue to evaluate methods to rationalize the Private Equity portfolio through the secondary market
	<ul style="list-style-type: none"> Evaluate investment managers to assist in implementation of a co-investment portfolio with diversified deal flow, including that of SCERS' existing general partners 	<ul style="list-style-type: none"> Identified a potential investment manager to manage a co-investment mandate for SCERS 	<ul style="list-style-type: none"> Recommend a co-investment manager partnership, that will capitalize on potential co-investment deal flow from SCERS' existing private equity relationships, while also participating in deal flow from the investment manager
	<ul style="list-style-type: none"> Bring in current Private Equity managers to educate SCERS' Board 		<ul style="list-style-type: none"> Evaluate the sizing of Private Equity in conjunction with the ALM study
Private Credit	<ul style="list-style-type: none"> Identify and commit to 2-5 potential private credit investments with an average commitment size of \$50 million per fund; \$150 million in total with a range of \$100 to \$200 million 	<ul style="list-style-type: none"> Committed capital to 2 private credit funds totaling \$90 million in aggregate 	<ul style="list-style-type: none"> Identify and commit to 2-5 potential private credit investments with an average commitment size of \$35 million per fund; \$100 million in total with a range of \$50 to \$150 million
	<ul style="list-style-type: none"> Bring in current private credit managers to educate SCERS' Board 		<ul style="list-style-type: none"> Evaluate the sizing of Private Credit in conjunction with the ALM study
Real Assets	<ul style="list-style-type: none"> Identify and commit to 3-7 potential real assets investments with an average commitment size of \$40 million per fund; \$200 million in total with a range of \$150 to \$250 million 	<ul style="list-style-type: none"> Committed capital to 3 real assets funds totaling \$140 million in aggregate 	<ul style="list-style-type: none"> Identify and commit to 3-7 potential real assets investments with an average commitment size of \$40 million per fund; \$200 million in total with a range of \$150 to \$250 million
	<ul style="list-style-type: none"> Evaluate commitment level and investment pacing of the real assets asset-backed lending separate account 		<ul style="list-style-type: none"> Evaluate the role of energy within the Real Assets and the total portfolio in conjunction with the upcoming asset-liability asset liability modeling study and SCERS' strategic asset allocation
	<ul style="list-style-type: none"> Bring in current Real Assets managers to educate SCERS' Board 		

APPENDIX 4 — 2020/2021 ROAD MAP (Continued)

Topic	2020 Preview	2020 Actual	2021 Preview
Real Estate	<ul style="list-style-type: none"> Identify and commit to 0-2 potential real estate investments with an average commitment size of \$30 million per fund; \$30 million in total with a range of \$0 to \$40 million 	<ul style="list-style-type: none"> Committed capital to 1 real estate fund totaling \$35 million in aggregate 	<ul style="list-style-type: none"> Identify and commit to 0-3 potential real estate investments with an average commitment size of \$30 million per fund; \$60 million in total with a range of \$30 to \$90 million
			<ul style="list-style-type: none"> Evaluate the sizing of Real Estate in conjunction with the ALM study
	<ul style="list-style-type: none"> Rebalance and reduce the Real Estate portfolio further toward the 7% target allocation 	<ul style="list-style-type: none"> Rebalanced the Real Estate portfolio to reduce the actual allocation closer to the 7% target 	<ul style="list-style-type: none"> Rebalance the Real Estate portfolio strategy, sector, and geographic weights within targeted ranges
	<ul style="list-style-type: none"> Bring in current Real Estate managers to educate SCERS' Board 		
Opportunities	<ul style="list-style-type: none"> Review late cycle opportunities in distressed/special situations through contingent capital/dislocation funds 	<ul style="list-style-type: none"> Evaluated several contingent/dislocation funds early in 2020; however, instead made a couple of asset class specific opportunistic investments across real estate and private credit 	<ul style="list-style-type: none"> Evaluate the role of the Opportunities portfolio in conjunction with the ALM study
Other Investment Activity	<ul style="list-style-type: none"> Evaluate risk management and systems for SCERS' total portfolio and asset categories/classes 		<ul style="list-style-type: none"> Evaluate portfolio analytic and risk management and systems for SCERS' total portfolio and asset categories/classes
	<ul style="list-style-type: none"> Fully onboard third party private markets accounting service provider, Colmore 	<ul style="list-style-type: none"> On boarded Colmore, to assist SCERS with the accounting and reporting of SCERS' growing private markets portfolio 	<ul style="list-style-type: none"> Evaluate SCERS' Overlay Program, including underlying proxies and approaches to incorporate tactical positioning to the SCERS portfolio
	<ul style="list-style-type: none"> Update SCERS' fiduciary standard of care policy as it relates to entering into alternative asset investment contracts 	<ul style="list-style-type: none"> Provided education on fiduciary standard of care and alternative assets investing 	<ul style="list-style-type: none"> Update SCERS fiduciary standard of care policy
	<ul style="list-style-type: none"> Select and approve updated proxy voting guidelines with third-party proxy voting service provider Institutional Shareholder Services (ISS) 	<ul style="list-style-type: none"> Approved proxy voting guidelines with third-party proxy voting service provider Institutional Shareholder Services (ISS) 	
	<ul style="list-style-type: none"> Perform research and evaluate approaches to capital efficiency, to potentially improve liquidity, enhance returns, and/or improve diversification 	<ul style="list-style-type: none"> Performed research on portfolio leverage and capital efficiency concepts 	<ul style="list-style-type: none"> Conduct education on portfolio leverage/capital efficiency concepts, that are utilized to improve liquidity and diversification, and/or enhance returns
	<ul style="list-style-type: none"> Further evaluate SCERS' currency exposures and currency hedging solutions in the market 	<ul style="list-style-type: none"> - Appointed WTax to aid in the recovery of withholding taxes paid within the international equity portfolio 	
	<ul style="list-style-type: none"> Evaluate additional investment staffing needs in 2020 	<ul style="list-style-type: none"> - Added to the investment staff in 2020 with the hiring of an Investment Analyst 	<ul style="list-style-type: none"> Evaluate the current investment Staff structure and any additional investment staffing needs in 2021
		<ul style="list-style-type: none"> Promoted one of SCERS' Investment Officers to a Senior Investment Officer 	
	<ul style="list-style-type: none"> Oversee and monitor existing investment managers, including on-site due diligence where appropriate 	<ul style="list-style-type: none"> Oversaw and monitored existing managers including several manager on-site meetings 	<ul style="list-style-type: none"> Oversee and monitor existing investment managers, including on-site due diligence where appropriate

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