



Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 14

MEETING DATE: August 16, 2017

SUBJECT: Proposed Revisions to Real Assets Asset Class

SUBMITTED FOR: ___ Consent X **Deliberation and Action** ___ **Receive and File**

RECOMMENDATION

It is recommended that the Board approve the proposed revisions to the asset class structure, Investment Policy Statement ('IPS') and implementation plan and for the Real Assets asset class, as proposed by Cliffwater and SCERS' Investment Staff.

PURPOSE

To make the Real Assets IPS and investment plan consistent with the strategic asset allocation adopted by the Board in January 2017.

REAL ASSETS STRATEGIC CHANGES

SCERS' Board approved a revised strategic asset allocation for SCERS in January 2017, which resulted in the Real Assets target allocation being increased from 6% to 7%, which is not expected to have a material impact on expected pacing for new Real Assets commitments going forward. A revised commitment pacing schedule is shown on slide 6 of the Cliffwater presentation, and will be discussed in greater detail in the Investment Plan section of this agenda item.

As shown below, the revised asset allocation added a Real Return asset category and changed the label of the underlying Real Assets asset class, but the types of underlying investments--Infrastructure, Energy, and Agriculture, Timber and other natural resources investments—remains unchanged. However, the revised asset allocation adds target allocations and ranges for each Real Assets investment type, which the former allocation did not.

Changes to Real Return/Real Assets portion of SCERS' Asset Allocation:

As Adopted January 2017	16%	Prior to 2017	15%
<u>Real Return asset category - Target</u>		<u>Real Assets allocation - Target</u>	
Includes asset classes:	<u>Target/Sub</u>	Included investment types:	<u>Target/Sub</u>
Real Assets	7%	Private Real Assets	6%
Infrastructure	45%	Infrastructure	
Energy	35%	Energy	
Ag, Timber & Other natural resources	20%	Ag, Timber & Other natural resources	
Real Estate	7%	Core Real Estate	7%
Commodities	2%	Commodities	2%
TIPS	0%	TIPS	0%

RECOMMENDED REAL ASSETS IPS MODIFICATIONS

SCERS created a comprehensive IPS for the former Real Assets asset class in 2011. The IPS is broken out into four major sections, including: (1) Investment Objective; (2) Investment Guidelines; (3) Monitoring; and (4) Implementation Protocol.

SCERS' Investment Staff ('Staff') and Cliffwater reviewed the existing IPS for potential modifications in the context of the revisions to the strategic changes that occurred in Real Assets, and also as it related to having six years of implementation experience in real assets since the IPS was created in 2011. The key revisions to the IPS are discussed below. Other changes within the document are to better clarify existing language or general updates to the IPS.

Narrower IPS focus:

The current Real Assets IPS includes Real Estate, Commodities and TIPS with (formerly Private) Real Assets. The proposed revisions instead focus the IPS on only the sub-strategies of real assets, including Infrastructure, Energy, and Agriculture, Timber and Other natural resources investments. The Real Estate asset class has its own dedicated IPS. The Commodities and TIPS segments will be covered within a broader asset category IPS, or within a major asset class IPS, and in the interim the targets and ranges, and benchmarks for Commodities and TIPS are covered within SCERS' recently approved Master IPS.

Revised Real Assets Benchmark:

The current Policy Index benchmark for Real Assets is CPI-U (headline inflation) plus 5%. This is not an investable index, but was originally used due to the lack of available indices, particularly within the real assets universe. The CPI-U + 5% benchmark has been the policy index for the former Real Assets asset class (including Real Estate, Private Real Assets, Commodities and TIPS). SCERS is seeking to move away from objective-based benchmarks such as this, and toward more representative, investable and comparable benchmarks, as

there can be significant divergences between actual returns and benchmark returns, especially over shorter- and medium-terms, when using objective-based benchmarks.

As part of this process to move away from objective-based benchmarks, Real Estate was recently given its own real estate specific benchmark (65% NFI-ODCE/35% NFI-ODCE + 1%), and Commodities has its own benchmark (Bloomberg Commodities Index). Therefore, it makes sense for the Real Assets asset class (comprised of Infrastructure, Energy, and Agriculture, Timber and Other natural resources investments) to have a more comparable and representative index.

There have been improvements in the peer universes for real assets over the past few years. Therefore, it is recommended that SCERS change the Policy Index from CPI-U + 5% to a custom blended benchmark comprised of:

Recommended Real Assets Blended Policy Index Benchmark:

Benchmark Index	Weighting
Cambridge Associates Private Infrastructure Index	45%
Cambridge Associates Private Energy Index	35%
NCREIF Agriculture Index	10%
NCREIF Timber Index	10%

These peer universe indices are representative of what SCERS invests in within Real Assets, and the benchmark weights match the targeted weights for each sub-strategy within the asset class, as described below. The recommended policy index benchmark will represent a medium-term benchmark (3-5 years).

The CPI-U + 5% benchmark is recommended to remain as a long-term (5-10 years) objective-based benchmark for SCERS.

It should be noted that the recommended benchmark change will have no impact on how the Real Assets asset class is implemented or invested.

Real Asset Sub-Strategy Diversification Guidelines:

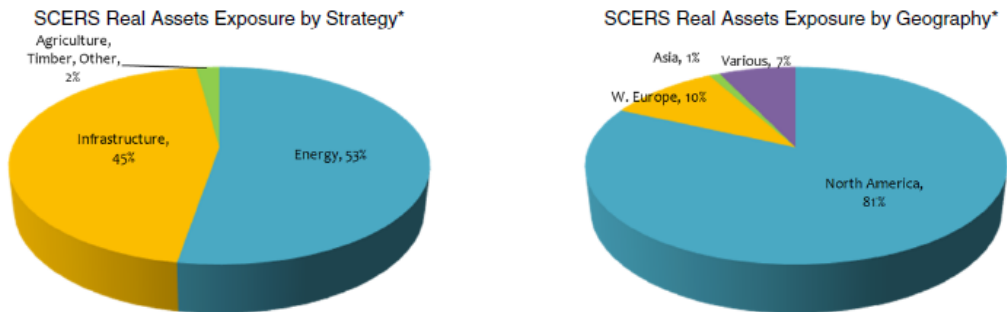
As mentioned previously, though the Infrastructure, Energy, and Agriculture, Timber and Other natural resources investments carry over as sub-strategies within the Real Assets asset class, they have historically not had defined targets and ranges.

Therefore, it is recommended that the proposed targets and ranges be approved for the Real Assets asset class:

Real Assets Sub-Strategy Targets:		
	Target Range	Target %
Infrastructure	30% - 60%	45%
Energy	20% - 50%	35%
Agriculture, Timber, Other	10% - 30%	20%

As the Real Assets asset class has been implemented since 2011, these have generally been the targets that SCERS had adhered to, but given that Real Assets is its own stand-alone asset class now, it is important to have defined targets and ranges. Infrastructure continues to be the primary focus for Real Assets, given its lower correlation to other asset classes, particularly equities, and the income and cash flow generation that the sub-strategy provides. Energy investments across the value chain (upstream, midstream, downstream and energy service businesses) are also a key focus, as well as agriculture investments. SCERS has yet to make a dedicated timber investment, but Staff and Cliffwater have been seeking potential investments opportunities in this segment.

The current composition to Real Assets is as follows (as of December 31, 2016):



SCERS currently has a 2.2% allocation to Real Assets (though it stands at 3.0% as of June 30, 2017), versus the 7.0% target, and as described below, Cliffwater projects SCERS reaching the 7.0% target in 2021. Early in the build out of the Real Assets asset class, Energy investments have comprised the largest allocation; however, it is expected that Infrastructure will increase in size within the portfolio, as well as Agriculture, Timber and Other natural resources investments.

On a geographic basis, the Real Assets portfolio is intended to be a global portfolio. Infrastructure investments are expected to have a global focus and to be made primarily within developed market countries. Energy investments are expected to be made primarily within North America, although investments outside of North America are permitted. Agriculture investments will also be global in nature, with a particular focus on investments within developed market countries and a few emerging market countries.

REAL ASSETS INVESTMENT PLAN

With the increased allocation to Real Assets (6% to 7%), Cliffwater has created a revised Capital Budget Projection schedule.

The revised investment plan calls for SCERS to annually target new commitments of \$160 million over the next several years. SCERS' previous investment plan (at the 6% target allocation) called for a \$150 million annual commitment pace. The proposed \$160 million commitment pace reflects the larger target size of 7%, but also factors in more conservative assumptions related to the growth in SCERS' plan assets, to account for potential lower expected forward returns and plan cash flow dynamics.

The objective of the investment plan is to provide a roadmap for achieving the targeted allocation to Real Assets in a prudent fashion, while managing vintage year, strategy, and geographic and investment manager diversification. As mentioned previously, it is important to understand that reaching the target allocation is a dynamic process, and therefore the allocation plan and capital budget forecasts within the asset class should be revisited on an ongoing basis. In implementing the investment plan, Staff and Cliffwater will target approximately 10-20 investment manager relationships through a variety of investment vehicles, including closed-ended and open-ended funds, as well as larger strategic partnerships.

ATTACHMENTS

Cliffwater Real Assets Structure Update Presentation
Proposed Revisions to Real Assets Investment Policy Statement - Clean
Proposed Revisions to Real Assets Investment Policy Statement - Redline

Prepared by:

Reviewed by:

/s/

Steve Davis
Chief Investment Officer

/s/

Annette St. Urbain
Interim Chief Executive Officer



Los Angeles • New York

Sacramento County Employees' Retirement System Real Assets Structure Update

August 16, 2017

Real Assets Program Strategic Changes

The real assets program saw few changes as a result of SCERS' new asset allocation study

- Real Assets is now part of a broader asset category known as Real Return
 - The Real Return category includes Real Assets, Real Estate, Commodities, and Inflation Linked Bonds

The Real Assets target allocation increased from 6% to 7%

- Have modest increases in expected pacing for new real assets commitments

More formally defining target allocations and ranges for the Real Assets sub-strategies

- Sub-strategies include Infrastructure, Energy, and Agriculture, Timber, and Other
 - These are the same sub-strategies that had previously been included within Real Assets

Proposing changes to the Real Assets Policy Index

- Primarily driven by improvements in peer universes over the last few years
- Moving away from a long-term objective to a more comparable performance benchmark

Recommended Real Assets IPS Changes

Proposing a few changes to the SCERS Real Assets IPS

- Narrowing the focus of the IPS to private real assets, consistent with the new asset allocation structure
 - The current IPS also includes Real Estate, Commodities, and TIPS
- Added formal diversification targets for the Real Assets sub-strategies (shown on the following page)
 - Includes Infrastructure, Energy, and Agriculture, Timber and Other
- Changes to Real Assets benchmarks
 - Recommend changing the Policy Index from CPI+5% to a custom blended benchmark comprised of:
 - 45% Cambridge Associates Private Infrastructure Index
 - 35% Cambridge Associates Private Energy Index
 - 10% NCREIF Agriculture Index
 - 10% NCREIF Timber Index
 - The recommended index components are peer universe indexes
 - The peer universe indexes are more representative of what SCERS invests in within Real Assets
 - Inflation (CPI) + 5% is more of a long-term objective
 - SCERS will maintain its long-term CPI+5% return objective
 - Benchmark changes will have no impact on how the real assets portfolio is implemented or invested
- Remaining changes include clarifying language or general updates since 2012
 - Also intended to maintain consistency with the current Private Equity and Private Credit IPS
 - SCERS Staff is providing the Board with a redline of the new IPS highlighting all proposed changes

Real Assets Program Summary

The SCERS' real assets portfolio is intended to provide:

- Attractive real returns and a partial hedge against inflation risk
- Portfolio diversification, including having low to negative correlation with equities
- Moderate income and cash flow generation
- Greater return consistency and muted downside risk

7% target allocation for Real Assets

- Represents a long-term target as the real assets program takes several years to prudently implement
 - Expect to reach 7% target allocation in 2021

Have also implemented sub-strategy diversification guidelines for the real assets portfolio

- Targets are most applicable when the real assets portfolio is fully invested
- Below are the proposed sub-strategy targets and ranges

SCERS Proposed Real Assets Portfolio Targets
and Allocation Ranges

	<u>Target Range</u>	<u>Target %</u>
Infrastructure	30% - 60%	45%
Energy	20% - 50%	35%
Agriculture, Timber, Other	10% - 30%	20%

Real Assets Portfolio Allocations

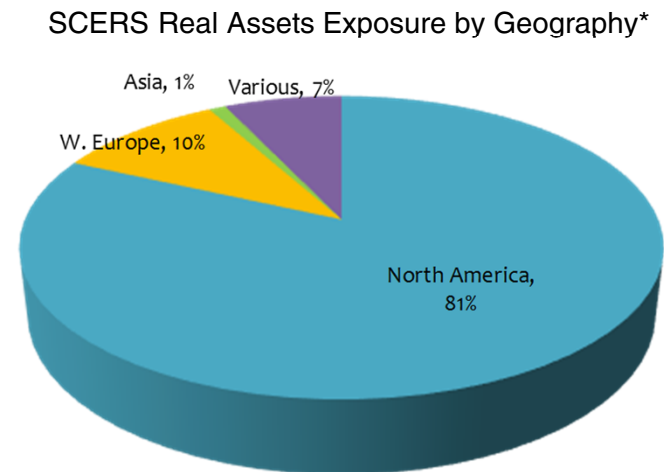
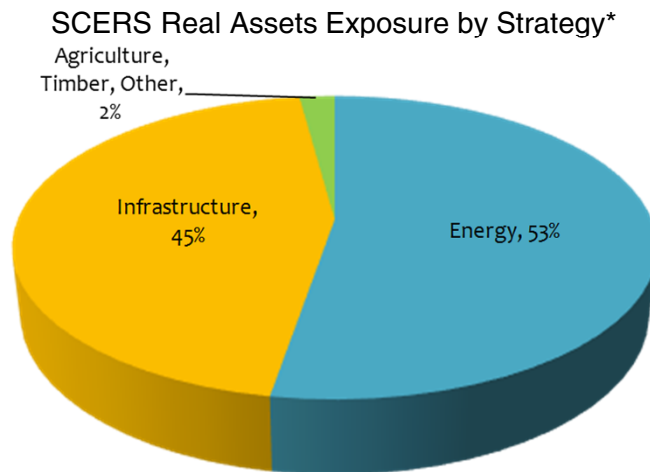
The real assets allocation is still ramping up to its 7% target allocation

- Only a 2.2% current allocation; projecting reaching the 7% target allocation in 2021

The portfolio has exposure to each of the targeted sub-strategies

- Investments thus far have been primarily within Energy and Infrastructure

Investments to date have been made primarily within North America



*Exposures are based on the market values of the portfolio's underlying investments as of March 31, 2017.

Real Assets Capital Budget Projections

Shown below are the details of the proposed real assets capital budget

- Recommend a near-term annual commitment pace of \$160 million for new real assets commitments
 - The previous Investment Plan recommendation was \$150 million per year

SCERS - Capital Budget Model		3/31/2017	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	12/31/2026	
1	Forecast Plan Total Assets	8,361,055	8,672,675	9,106,309	9,561,624	10,039,705	10,541,691	11,068,775	11,622,214	12,203,325	12,813,491	13,454,165	
2	New Commitments		160,000	160,000	160,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000	
Private Real Assets Fair Value by Sector:		3/31/2017	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	12/31/2026	
3	Private Real Assets	186,438	330,045	489,151	601,853	681,280	747,652	813,444	877,859	925,658	955,812	973,030	
4	Private Real Assets Total	186,438	330,045	489,151	601,853	681,280	747,652	813,444	877,859	925,658	955,812	973,030	
Strategy Diversification:		Target Range	3/31/2017	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	12/31/2026
5	Private Real Assets	100%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
6	Private Real Assets Fair Value as % of Total Plan Assets	2.2%	3.8%	5.4%	6.3%	6.8%	7.1%	7.3%	7.6%	7.6%	7.5%	7.2%	
7	Private Real Assets Target Asset Allocation	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	
Unfunded Commitments and Fair Value		3/31/2017	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	12/31/2026	
8	Private Real Assets Unfunded Commitments	444,559	452,189	422,784	408,922	454,027	485,293	503,152	513,360	519,222	522,611	524,589	
9	Unfunded Commitments + FV	630,997	782,234	911,936	1,010,775	1,135,307	1,232,946	1,316,596	1,391,220	1,444,880	1,478,423	1,497,619	
10	Unfunded Commitments + FV as % of Assets	7.5%	9.0%	10.0%	10.6%	11.3%	11.7%	11.9%	12.0%	11.8%	11.5%	11.1%	
11	Ratio of Unf Com + FV to Target Allocation	1.08x	1.29x	1.43x	1.51x	1.62x	1.67x	1.70x	1.71x	1.69x	1.65x	1.59x	
Net Cash Flow Requirements		12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	12/31/2026		
12	Private Real Assets	(131,246)	(130,287)	(70,388)	(27,594)	(7,841)	(1,590)	5,525	27,862	49,828	65,554		
13	Total Net Cash Flow to Private Real Assets	(131,246)	(130,287)	(70,388)	(27,594)	(7,841)	(1,590)	5,525	27,862	49,828	65,554		
Annual Commitments by Strategy		12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	12/31/2026		
14	Existing Commitments	0	0	0	0	0	0	0	0	0	0		
15	Private Real Assets	160,000	160,000	160,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000		
16	Total Annual Commitments to Private Real Assets	160,000	160,000	160,000	220,000	220,000	220,000	220,000	220,000	220,000	220,000		

General Disclosures

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SCERS Real Assets Investment Policy Statement

August 16, 2017

A. Investment Objective

The Real Assets asset class seeks to achieve the following investment objectives:

- Attractive returns on a real (net of inflation) basis and a hedge against inflation risk
- Diversification for SCERS' portfolio, including low or negative correlation to equities
- Moderate income and cash flow generation
- Greater consistency in the return distribution and muted downside risk

Given the above investment objectives, the performance of the Real Assets asset class will be compared against the following benchmarks:

1. Over the medium-term, after the program is fully invested, performance of the Real Assets asset class is expected to exceed the following weighted benchmark return, net of fees, which will serve as SCERS' Policy Index:
 - 45% Cambridge Associates Private Infrastructure Index
 - 35% Cambridge Associates Private Energy Index
 - 10% NCREIF Agriculture Index
 - 10% NCREIF Timber Index
2. Performance of each sub-asset class will be benchmarked individually by the underlying asset:
 - Performance of infrastructure investment strategies are expected to exceed the Cambridge Associates Private Infrastructure Index pooled IRR.
 - Performance of energy investment strategies are expected to exceed the Cambridge Associates Energy Index pooled IRR.
 - Performance of agriculture investment strategies are expected to exceed the NCREIF Agriculture Index.
 - Performance of timber investment strategies are expected to exceed the NCREIF Timber Index.
3. Over the long-term (5-10 years), performance of the Real Assets asset class is expected to exceed CPI-U (headline inflation) by 5%.

B. Investment Guidelines

1. **Real Assets Investments:** Investments in Real Assets can be made through investments in both public and private securities, and can include equity and debt investments. Private investments primarily involve the purchase of unlisted, illiquid common and preferred stock, and to a lesser degree, can include subordinated and senior debt of companies that are typically privately held. Underlying real asset investments can include infrastructure, energy, timber, agriculture or other natural resources related investments. Investment is authorized in a broad array of sub-asset classes and strategies including:

a. Infrastructure – Investments include ownership interests in physical structures, facilities, or systems that provide essential services to a community. Underlying investments can include:

i. Economic Infrastructure

- Transportation
 - a. Toll Roads; bridges; tunnels; airports; parking facilities; sea ports; freight rails
- Utilities
 - a. Gas and electricity transmission and distribution; water and sewage
- Energy
 - a. Oil and gas pipelines; midstream energy; electricity networks; power generation; hydrocarbon storage facilities; renewable energy
- Communications
 - a. Communications towers; satellites; fiber-optic networks

ii. Social Infrastructure

- Education facilities; healthcare facilities; judicial buildings (courthouses and police stations); correctional facilities; housing; public transportation

b. Energy - Investments include ownership interests in businesses involved in the exploration, production, processing, transportation, or distribution of energy or energy-related resources, including services businesses related to such activities. Energy-related investments may be made across the energy value chain, from upstream to midstream to downstream, and energy services businesses.

c. Agriculture - Investments include ownership interests in businesses involved in the acquisition and management of farmland primarily for crop production. Other agriculture investments may include agriculture-related storage, transportation, irrigation, and biotechnology businesses or facilities.

- d. Timber - Investments include ownership interests in properties where the majority value of the property is derived from income-producing timber.
 - e. Other natural resources - Investments include ownership interests in businesses involved in the mining and/or processing of metals and other natural resources
2. **Risk and Diversification:** Real Assets investments, like investments in most asset classes, bear an inherent risk that the actual return of capital, gains, and income will vary significantly from the return and amounts expected. The expected volatility of real assets investments in aggregate is high among major asset classes. The investment risk associated with real assets shall be addressed in several ways:

- a. *Diversification by investment strategy and geography, including target allocation and ranges.* The targeted and range of investment exposures to the identified Real Assets investment sub-asset classes and geographies are shown in the table below. These exposures should be measured on a fair value basis, once the Real Assets asset class is fully invested. The Real Assets asset class is expected to invest globally. While Infrastructure is expected to have a global focus, infrastructure investments are expected to be made primarily within developed market countries. Energy investments are expected to be made primarily within North America, although investments outside of North America are permitted. Agriculture investments will also be global in nature, with a particular focus on investments within developed market countries and a few emerging market countries.

SCERS Proposed Real Assets Portfolio Targets
and Allocation Ranges

	<u>Target Range</u>	<u>Target %</u>
Infrastructure	30% - 60%	45%
Energy	20% - 50%	35%
Agriculture, Timber, Other	10% - 30%	20%

- b. *Diversification by vintage year.* SCERS will strive to limit the potential for investments during any given year in the business cycle to negatively impact the long-term results of the Real Assets asset class by investing across business cycles and vintage years. It is anticipated that SCERS will commit to real assets over multiple years, whereby the aggregate amount will be spread across the entire business cycle. This will serve to limit the exposure or risk to investing and relying on the performance of real assets funds in any given year of the business

cycle. The Board will determine with SCERS' investment staff ('Staff') and consultant the funding allocation for real assets each year in conjunction with its annual review of the Real Assets Asset Allocation Structure and Twelve Month Real Assets Investment Plan.

- c. *Diversification by industry or business sector.* SCERS will attempt to limit the potential for any one real assets industry or business sector to negatively impact the long-term results by investing across a variety of industries.
- d. *Diversification by investment manager and general partner.* SCERS will endeavor to invest across a number of investment managers and limited partnerships to mitigate the potential negative impact of a concentrated portfolio of investment managers. SCERS will allocate approximately 5%-20% of the total Real Assets target allocation to each fund. SCERS will strive to maintain ongoing long-term relationships with approximately 15 real assets managers with an expected range of 10-20 manager relationships. The optimum number of investment vehicles in the portfolio and the maximum exposure to any one investment vehicle will vary with time and will be evaluated as part of the Real Assets Asset Allocation Structure.

3. **Investment Vehicles:** The vehicles for Real Assets investments reflect the broad scope of investments.

Real assets investments may take the form of commingled vehicles such as limited partnerships, limited liability companies or offshore corporations.

SCERS may also invest in separate account relationships established with one or more fiduciary oversight managers. These managers will make commitments to physical assets such as properties, limited partnerships, or other entities such as limited liability companies or offshore corporations, either on a discretionary or advisory basis.

SCERS may also invest directly in fund-of-funds (FoF) vehicles. In these vehicles, the FoF invests in partnerships on a discretionary basis. FoFs will own the underlying partnerships and SCERS obtains contractual rights to the FoFs' portfolio through a limited partnership. A FoF will have investors other than SCERS.

4. **Secondary Investments and Co-investments:** Secondary investments are made when an investor purchases the limited partnership interest of another investor in an existing fund. A co-investment is a direct investment in an underlying portfolio company where a real assets manager offers investors the opportunity to invest directly in an underlying company alongside the fund investment. Investments may be made in companies that are either U.S. or

non-U.S. domiciled. Neither secondary investments nor co-investments are considered separate investment strategies within Real Assets. For example, a secondary or co-investment could be in any of the strategies including infrastructure, energy, agriculture or timber. Therefore, secondary and co-investments will be categorized according to the underlying strategy and geography and will conform to the guidelines outlined in the above section on risk and diversification. SCERS will seek to allocate to secondary investments and co-investments on an opportunistic basis. It is expected that these investments will constitute a small portion of the overall Real Assets Asset Class, if any.

5. **Investment Vehicle Concentration:** SCERS will not typically comprise more than 20% of any one investment vehicle at the initiation of the investment that is a limited partnership, limited liability company, or offshore corporation. An exception to this guideline is an investment in a FoF or a separate account, whereby SCERS may be the sole investor. In these circumstances, SCERS will endeavor to ensure that it does not generate a majority of the firm's overall profits.

Liquidity: Real assets investments are often private market in nature, and therefore are illiquid and typically have long expected holding periods such as 10-15 years. Private market investments are generally held until maturity and selling prior to maturity may result in realizing a sales price that reflects a discount to fair market value. Liquidity risk is managed by minimizing the possibility of forced sales that may arise from exceeding maximum exposure limits or lowering asset allocation targets to real assets investments. In order to better assess liquidity needs, a capital budget and cash flow forecast will be developed over a ten year horizon and updated as necessary. The assumptions of this forecast are stress tested in the context of the total fund to assess the effect of worst case liquidity scenarios.

6. **Distributed Securities:** SCERS shall avoid the direct receipt of distributed securities from individual real assets funds. However, if such receipt is unavoidable, SCERS shall ordinarily direct the sale of securities distributed by its investment vehicles as soon as practically possible and strive to not impair the value of the security.

7. **Performance Evaluation:**

- a. Performance of the Real Assets asset class will be evaluated quarterly against the benchmarks outlined in the investment objective section.
- b. Individual investment vehicle performance, as measured by the IRR and the multiple of total value paid in capital ('TVPI'), will be evaluated on a quarterly basis compared to the performance of respective peer universes and vintage years, as provided in the investment objective section.

- c. It is recognized that immature real assets investments will ordinarily have a “J-curve effect” whereby there are low to negative returns in the initial years due to the payment of investment management fees during a period when investments are typically carried at cost and returns have not been realized.
8. **Investment period to ramp-up:** It is recognized that it may take five years or more for the Real Assets asset class to be fully invested and that there may be deviations from the previously mentioned targets during the ramp-up period. During the Real Assets asset class’s ramp-up period, exposures can be estimated using percentages of committed capital. During the ramp-up period for the Real Assets asset class, and subsequent to reaching the target allocation, SCERS’ Overlay Program will re-balance the Real Assets Asset Class to the target allocation, using the designated Real Assets proxy within the investment guidelines for the Overlay Program.
9. **Rebalancing to guidelines:** It is anticipated that the majority of changes to rebalance the Real Assets asset class will be made on a long-term basis due to: (1) The general illiquidity of private real assets investments with typical investment horizons of 10-15 years; and, (2) The significant discount that can be applied if and when private real assets holdings are liquidated in the secondary market. Accordingly, when these guidelines are exceeded, it is anticipated that reducing exposures will be carried out within a long-term time frame and over a period that is as soon as practical to reflect the illiquidity of many real assets vehicles.

C. Monitoring

Through the monitoring process, Staff and consultant will extend the initial due diligence into a formal quarterly, semi-annual, and annual process which regularly seeks to determine whether the manager is meeting the Real Assets asset class’s investment objectives and other requirements. In the broadest sense, the monitoring process is intended to determine whether the initial reasons for selecting the strategy and investment vehicle remain valid. The monitoring process will disclose whether there has been any material deviation from the investment philosophy and process; the personnel responsible for managing the investment vehicle are still in place; the organization continues to be stable; performance and risk meet expectations; and the investment vehicle manager adheres to its investment and other requirements. The underlying principle of the monitoring program is to determine whether all risks to which SCERS is exposed through the use of outside investment advisors have been identified, understood, and, to the extent possible, controlled. The monitoring process focuses on four areas:

- Compliance with reporting and valuation requirements;

- Continuity of investment philosophy and process;
- Stability of personnel and organization; and
- Performance and risk management.

Staff and consultant will aggregate investment vehicle data and perform analysis on the overall Real Assets portfolio, paying careful attention to individual investment vehicle allocations and strategy/sector concentrations to strive to achieve proper diversification across the Real Assets asset class. Staff and consultant also will conduct due diligence with the respective investment vehicle managers to understand the underlying drivers of performance. Additionally, Staff and consultant will conduct portfolio reviews and on-site due diligence as necessary. Site visits will also be performed to confirm that appropriate infrastructure is in place to support the investment process. Staff and consultant will provide the Board with regular performance reports and advise the Board of other matters as appropriate.

If, during the monitoring process, SCERS identifies areas of the Real Assets asset class that are not compliant with the objectives, guidelines and constraints, identified in this investment policy statement, then reasonable efforts will be made to cure the deficiency. These reasonable efforts will consider the illiquidity of the asset class and transaction costs to be incurred compared to the risk of non-compliance.

D. Implementation Protocol

The following implementation protocol describes the allocation of investment authority and responsibilities between SCERS' Board, Staff and consultants. Overall, the Real Assets implementation protocol delegates the most time intensive elements of the process to Staff and consultant, while preserving the Board's oversight of the overall Real Assets asset class.

On an annual basis, the Board will approve the long-term Real Assets Asset Allocation Structure and Twelve Month Investment Plan as developed and presented by Staff and Consultant. The long-term Real Assets Asset Allocation Structure will articulate the long-term direction and objectives of the Real Assets asset class. The Twelve Month Investment Plan will articulate the direction over the next year in taking the necessary steps to achieve the above objectives of the long-term Asset Allocation Structure.

The execution of the long-term Asset Allocation Structure and Twelve Month Investment Plan including the selection of investment managers will be delegated to Staff, subject to the Board's ability to review, discuss and object to the recommendations of Staff and consultant during the investment protocol process.

The key features of the proposed Real Assets investment protocol are as follows:

- Staff and consultant will identify the most qualified candidates for a prospective real assets investment commitment based on: (a) The Real Assets Asset Allocation Structure approved by the Board; and (b) The Twelve Month Real Assets Investment Plan approved by the Board (which takes into account SCERS' existing real assets investments and prioritizes and targets optimal new investment opportunities expected to come to market in the next twelve months).
- Staff and consultant will prepare a report for the Board outlining why a given real assets manager has been identified for closer scrutiny for a possible commitment.
- Staff and consultant will pursue more extensive due diligence on the manager candidate, including conducting extended interviews with the portfolio managers and other key members of the investment team. The consultant will complete the investment strategy and operational due diligence reports, if they have not done so already. Legal counsel will begin reviewing the documentation for the possible commitment and preliminary negotiation of deal terms will take place.
- If/When: (a) The due diligence process is completed; (b) Deal terms have been determined; (c) Staff and consultant have concluded that a commitment should be made; then (d) Staff will prepare a report outlining the basis for the decision, the proposed commitment amount, and the target date for closing on the commitment. This report will include an assessment of investment strategy and operational due diligence.
- At any point in the process, questions or concerns by any trustee regarding a proposed investment or proposed manager will be communicated to the Chief Executive Officer ('CEO'). The CEO will be responsible for assuring that a prompt response is provided. The CEO will also provide the full Board with the response. If a Board member is not satisfied with the response, the Board member can request that the matter be brought to the full Board for consideration. In such a case, the CEO will refer the matter to the Board President who will determine whether the manager search process should be suspended until the matter is resolved. As a general rule, it is anticipated that the process of identifying and vetting a proposed investment will take place over a period of time sufficient to allow, if necessary, for full Board consideration of questions or concerns before a commitment is finalized.
- Absent questions or concerns by the Board, the proposed investment will be finalized and the necessary documentation executed.
- Staff and consultant will then prepare an updated status report on SCERS' Real Assets portfolio for the Board.

HISTORY OF SCERS RETIREMENT BOARD ACTION:

Adopted: February 16, 2012
Revised: August 16, 2017

Proposed Revisions to
SCERS Real Assets Investment Policy
Statement~~REAL ASSETS INVESTMENT POLICY~~
STATEMENT
August 16, 2017

A. Investment Objectives

The Real Assets ~~asset class~~program seeks to achieve the following~~multiple~~ investment objectives:~~as outlined below:~~

- Attractive returns on a real (net of inflation) basis and a hedge against inflation risk
- Diversification for SCERS' portfolio, including low or negative correlation to equities
- Moderate income and cash flow generation
- Greater consistency in the return distribution and muted downside risk

~~The real assets class is unique because accomplishing the investment objectives will not be based on one singular investment strategy or underlying asset. Rather, the goals will be achieved by virtue of the overall construction of the total Real Assets portfolio. As an example, commodities investments can achieve some of the goals such as inflation protection and diversification for SCERS' total portfolio, but will not achieve income and cash flow generation or necessarily greater consistency in the return distribution. As another example, TIPS will achieve inflation protection, diversification and greater consistency in the return distribution, but will not achieve attractive returns.~~

~~Accordingly, unlike other asset classes within SCERS' portfolio, the scope of the Real Assets class will include: (1) A wide range of assets in both the public markets (liquid) and private markets (illiquid); (2) A number of differing investment strategies; and, (3) A variety of sub-asset classes that could be and often are deemed as stand-alone asset classes.~~

Given the above investment objectives, the performance of the ~~Real Assets Program~~Real Assets asset class will be compared against the following benchmarks:

1. Over the medium-term, after the program is fully invested, Pperformance of the ~~Real Assets Program~~Real Assets asset class is expected to exceed the following weighted benchmark return, net of fees, which will serve as SCERS' Policy Index: benchmark return of CPI-U (headline inflation) by 5%.

- 45% Cambridge Associates Private Infrastructure Index
- 35% Cambridge Associates Private Energy Index
- 10% NCREIF Agriculture Index
- 10% NCREIF Timber Index

~~4.~~

2. Performance of each sub-~~asset class~~asset class will be benchmarked individually by the underlying asset:

- Performance of infrastructure investment strategies are expected to exceed the Cambridge Associates Private Infrastructure Index pooled IRR.
- Performance of energy investment strategies are expected to exceed the Cambridge Associates Energy Index pooled IRR.
- Performance of agriculture investment strategies are expected to exceed the NCREIF Agriculture Index.
- Performance of timber investment strategies are expected to exceed the NCREIF Timber Index.
- ~~Performance of core real estate investments are expected to exceed the NCREIF Fund Index – Open-End Diversified Core Equity (‘NFI-ODCE’)~~
- ~~Performance of commodities investments are expected to exceed the Dow Jones AIG Commodities Index by 1%~~
- ~~Performance of TIPS are expected to meet or exceed the Barclays Capital US TIPS Index~~
- ~~Performance of private real assets and individual partnerships are expected to exceed the appropriate benchmark that will be chosen depending on the investment.~~

3. Over the long-term (5-10 years), performance of the Real Assets asset class is expected to exceed CPI-U (headline inflation) by 5%.

B. Investment Guidelines

1. **Real Assets Investments:** Investments in Real Assets can be made through investments in both public and private securities, and can include equity and debt investments. Private investments primarily involve the purchase of unlisted, illiquid common and preferred stock, and to a lesser degree, can include subordinated and senior debt of companies that are typically privately held. Underlying real asset investments can include infrastructure, energy, timber, agriculture or other natural resources related investments. Investment is authorized in a broad array of sub ~~asset~~-classes and strategies including:

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a. Infrastructure – Investments include ownership interests in physical structures, facilities, or systems that provide essential services to a community. Underlying investments can include:

i. Economic Infrastructure

• Transportation

a. Toll Roads; bridges; tunnels; airports; parking facilities; sea ports; freight rails

• Utilities

a. Gas and electricity transmission and distribution; water and sewage

• Energy

a. Oil and gas pipelines; midstream energy; electricity networks; power generation; hydrocarbon storage facilities; renewable energy

• Communications

a. Communications towers; satellites; fiber-optic networks

ii. Social Infrastructure

• Education facilities; healthcare facilities; judicial buildings (courthouses and police stations); correctional facilities; housing; public transportation

b. Energy - Investments include ownership interests in businesses involved in the exploration, production, processing, transportation, or distribution of energy or energy-related resources, including services businesses related to such activities. Energy-related investments may be made across the energy value chain, from upstream to midstream to downstream, and energy services businesses.

c. Agriculture - Investments include ownership interests in businesses involved in the acquisition and management of farmland primarily for crop production. Other agriculture investments may include agriculture-related storage, transportation, irrigation, and biotechnology businesses or facilities.

d. Timber - Investments include ownership interests in properties where the majority value of the property is derived from income-producing timber.

e. Other natural resources - Investments include ownership interests in businesses involved in the mining and/or processing of metals and other natural resources.

~~a. Core and Core Plus Real Estate. Investments include private market participation in commercial, industrial and residential real estate properties. These investments may comprise open end commingled funds, closed end commingled funds and separate direct ownership~~

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~~accounts. Investments may be made in either U.S. or non-U.S. domiciled entities or assets. (please refer to the real estate investment policy statement for further details)~~

~~b. *Commodities.*— Investments in underlying commodities include categories such as energy, agriculture, industrial metals, precious metals and livestock. Investments in commodities can be facilitated by: (1) Taking physical delivery of a commodity; (2) Gained by indirectly owning equity interests in companies that produce commodities; and, (3) Investing in commodity futures. Allocations to commodities will primarily be in a long-only or long-biased format compared to strategies that invests both long and short. It is not expected that investments will involve a large degree of taking physical delivery of commodity assets.~~

~~c. *TIPS.*— Investments include assets issued and backed by the U.S. government and specifically designed to protect against inflation; whereby the principal of the notes rise and fall as adjusted by changes in CPI. These investments may comprise open end commingled funds, closed end commingled funds and separate direct ownership accounts.~~

~~d. *Private Real Assets.*— Private investments involve the purchase of unlisted, illiquid common and preferred stock, and to a lesser degree, can include subordinated and senior debt of companies that are privately held. Underlying investments can include infrastructure, energy, timber, agriculture or other natural resources.~~

2. Risk and Diversification: Real Assets investments, like investments in most asset classes, bear an inherent risk that the actual return of capital, gains, and income will vary significantly from the return and amounts expected. The expected volatility of real assets investments in aggregate is high among major asset classes. The investment risk associated with real assets shall be addressed in several ways:

~~2.~~

~~a. *Diversification by sub-asset class and investment strategy including target allocation and ranges.*— The construction of the Real Assets portfolio is important because a well developed portfolio can significantly reduce risk and serve as a diversifier, lowering the overall volatility of the total fund. What distinguishes the real assets program Real Assets Asset Class is the broad scope of the Real Assets class that includes: (1) A wide range of assets in both the public~~

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markets (liquid) and private markets (illiquid); (2) A number of differing investment strategies; and, (3) A variety of sub-asset classes that could be and often are deemed as stand-alone asset classes. While not all investments included in this scope will diversify SCERS' fund, it is the combination and construction of the overall portfolio that will result in diversification.

Given the diversification benefits highlighted above, SCERS' asset allocation is targeted to be significantly diversified across the sub-asset classes. For the Real Assets Program Real Assets Asset Class, the targeted and range of investment exposures to the various sub-asset classes are shown in the table below. It is also anticipated that SCERS will seek diversification with respect to investment strategies within the sub-asset classes where warranted. The targeted percentages and ranges established for each sub-asset class form the framework for allocating assets of the Real Assets Program Real Assets Asset Class:

Core real estate and private real assets form the largest allocations due to their capabilities to fulfill the majority of goals and overall investment objective. TIPS are set at a 0% long-term allocation with a 0% to 3% range to reflect the expectation that investing in TIPS is opportune only when the imbedded expected breakeven rates of inflation are low and real yields are high. Commodities are given a 2% target allocation to reflect their diversifying and inflation hedging characteristics, but offset by no income generation and the greater volatility potential of the sub-asset class.

Sub Asset Class	Target	Ranges	
	Weight	Min	Max
Core Real Estate	7%	4%	9%
Private Real Assets	6%	3%	8%
Commodities	2%	0%	3%
TIPS	0%	0%	3%

Within these funding restrictions parameters, and in light of ever-changing market conditions, SCERS will need to allocate funds to each investment style in a manner that enhances SCERS' ability to achieve the investment objectives over the long term. In the event a sub-asset class exceeds the maximum allocation percentage or is below the minimum allocation percentage, decisions will be made to rebalance assets in a manner consistent with this Real Assets Investment Policy in order to achieve the target allocation. However, due to the illiquidity and long investment horizon associated with many of the sub-asset classes, a consideration in deciding whether to rebalance the real

~~assets portfolio, will be the liquidity premium paid to sell and purchase real assets.~~

~~b. Within the private real assets investments, there is an inherent risk that the actual return of capital, gains, and income will vary significantly from the return and amounts expected. The investment risk associated with private real assets will be addressed in several ways:~~

~~i.a. Diversification by investment strategy and geography, including target allocation and ranges, and investment strategy. The targeted and range of investment exposures to the identified Real Assets investment sub-asset classes and geographies are shown in the table below. These exposures should be measured on a fair value basis, once the Real Assets asset class is fully invested. The Real Assets asset class is expected to invest globally. While Infrastructure is expected to have a global focus, infrastructure investments are expected to be made primarily within developed market countries. Energy investments are expected to be made primarily within North America, although investments outside of North America are permitted. Agriculture investments will also be global in nature, with a particular focus on investments within developed market countries and a few emerging market countries. SCERS will endeavor to limit the potential for any concentration in a type of investment strategy or geography to negatively impact long-term returns in the Real Assets Program. Real Assets Asset Class by investing across regions and strategies.~~

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SCERS Proposed Real Assets Portfolio Targets and Allocation Ranges

	Target Range	Target %
Infrastructure	30% - 60%	45%
Energy	20% - 50%	35%
Agriculture, Timber, Other	10% - 30%	20%

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~~ii.a. Diversification by vintage year. SCERS will strive to limit the potential for investments during any given year in the business cycle to negatively impact the long-term results of the Real Assets asset class by investing across business cycles and vintage years. It is anticipated that SCERS will commit to ~~private~~ real assets over multiple years, whereby the aggregate amount will be spread across the entire business cycle. This will serve to limit the exposure or risk to investing and relying on the performance of ~~private~~ real assets funds in any given year of the business cycle. The Board will determine with SCERS' investment staff ('Staff') and ~~C~~consultant the funding allocation for ~~private~~ real assets each year in conjunction with its~~

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annual review of the Real Assets Asset Allocation Structure and Twelve Month Real Assets Investment Plan.

~~iii.b. *Diversification by industry or business sector.* SCERS will attempt to limit the potential for any one real assets industry or business sector to negatively impact the long-term results by investing across a variety of **natural resources** industries.~~

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~~iv.c. *Diversification by investment manager and general partner.* SCERS will endeavor to invest across a number of **investment managers and** limited partnerships to mitigate the potential negative impact of a concentrated portfolio of investment managers. **SCERS will allocate approximately 5%-20% of the total Real Assets target allocation to each fund. SCERS will strive to maintain ongoing long-term relationships with approximately 15 real assets managers with an expected range of 10-20 manager relationships.** The optimum number of investment vehicles in the portfolio and the maximum exposure to any one investment vehicle will vary with time and will be evaluated as part of the Real Assets Asset Allocation Structure.~~

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~~e. *Within the core real estate investments, the investment risk will be addressed through diversification by region, type of property, lease renewal terms, maximum leverage and debt renewal terms (please refer to the real estate investment policy statement for further details):*~~

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~~i. *Diversification by region and type of property.* SCERS will endeavor to limit the potential for any concentration in a type of real estate property (commercial building, industrial, apartment and retail) or geography (South, West, Midwest, and North) to negatively impact long term returns by investing across regions and strategies. This will involve comparing SCERS' core real estate portfolio against the allocation of property types and regions in the NFI-ODCE index.~~

~~ii. *Diversification by lease and debt renewal terms.* SCERS will strive to limit the potential for investments during any given year in the business cycle to negatively impact the long term results by investing in underlying properties that, in aggregate, spread the risk of lease renewals and debt renewals across a number of years in the business cycle.~~

~~iii. *Maximum leverage.* SCERS will limit the leverage to 40% of the equity in the core real estate portfolio and 30% for each of SCERS' separate core real estate accounts. Debt to equity will not exceed 60% per each property. Exceptions to either of the above guidelines may be approved by the Board.~~

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3. **Investment Vehicles:** The vehicles for Real Assets investments reflect the broad scope of investments.

Real assets investments may take the form of commingled vehicles such as limited partnerships, limited liability companies or offshore corporations.

SCERS may also invest in separate account relationships established with one or more fiduciary oversight managers. These managers will make commitments to physical assets such as properties, limited partnerships, or other entities such as limited liability companies or offshore corporations, either on a discretionary or advisory basis.

SCERS may also invest directly in fund-of-funds (FoF) vehicles. In these vehicles, the FoF invests in partnerships on a discretionary basis. FoFs will own the underlying partnerships and SCERS obtains contractual rights to the FoFs' portfolio through a limited partnership. A FoF will have investors other than SCERS.

~~SCERS may also invest in separate account relationships established with one or more fiduciary oversight managers. These managers will make commitments to physical assets such as properties, limited partnerships, or other entities such as limited liability companies or offshore corporations, either on a discretionary or advisory basis.~~

4. **Secondary Investments and Co-investments:** Secondary investments are made when an investor purchases the limited partnership interest of another investor in an existing fund. A co-investment is a direct investment in an underlying portfolio company where a ~~private~~-real assets manager offers investors the opportunity to invest directly in an underlying company alongside the fund investment. Investments may be made in companies that are either U.S. or non-U.S. domiciled. Neither secondary investments nor co-investments are considered separate investment strategies within Real Assets. For example, a secondary or co-investment could be in any of the strategies including infrastructure, energy, agriculture or timber. Therefore, secondary and co-investments will be categorized according to the underlying strategy and geography and will conform to the guidelines outlined in the above section on risk and diversification. SCERS will seek to allocate to secondary investments and co-investments on an opportunistic basis. It is expected that these investments will constitute a small portion of the overall Real Assets ~~pP~~Program, if any.
5. **Investment Vehicle Concentration:** SCERS will not typically comprise more than 20% of any one investment vehicle at the initiation of the investment that is a limited partnership, limited liability company, or offshore corporation. An exception to this guideline is an investment in a FoF or a

separate account, whereby SCERS may be the sole investor. In these circumstances, SCERS will endeavor to ensure that it does not generate a majority of the firm's overall profits.

~~6. **Liquidity:** The Real Assets portfolio will maintain low levels of liquidity overall due to the predominance of core real estate and private real assets. Liquidity varies among the underlying sub-asset classes.~~

~~TIPS and commodities are anticipated to be very liquid.~~

~~Core real estate investments are generally illiquid in nature. In particular, core separate accounts where SCERS owns the underlying properties may be difficult to liquidate. While still illiquid, investments in pooled vehicles such as commingled funds and fund of funds will typically have better liquidity than core separate accounts. (please refer to the real estate investment policy statement for further details)~~

~~Private~~ Real assets investments are often private market in nature, and therefore are illiquid and typically have long expected holding periods such as 10-15 years. Private market investments are generally held until maturity and selling prior to maturity may result in realizing a sales price that reflects a discount to fair market value. Liquidity risk is managed by minimizing the possibility of forced sales that may arise from exceeding maximum exposure limits or lowering asset allocation targets to ~~private~~ real assets investments. In order to better assess liquidity needs, a capital budget and cash flow forecast will be developed over a ten year horizon and updated as necessary. The assumptions of this forecast are stress tested in the context of the total fund to assess the ~~ae~~ effect of worst case liquidity scenarios.

~~7.6. **Distributed Securities:** SCERS shall avoid the direct receipt of distributed securities from individual ~~private~~ real assets funds. However, if such receipt is unavoidable, ~~the~~ SCERS will ordinarily direct the sale of securities distributed by its investment vehicles as soon as practically possible and strive to not impair the value of the security.~~

~~8.7. **Performance Evaluation:**~~

- ~~a. Performance of the ~~Real Assets Program~~ Real Assets asset class will be evaluated quarterly against the benchmarks ~~and absolute return benchmark~~ outlined in the investment objective section.~~
- ~~b. Individual investment vehicle performance, as measured by the IRR and the multiple of total value paid in capital ("TVPI"), will be evaluated on a quarterly basis compared to the performance of respective peer universes and vintage years, as provided in the investment objective section.~~

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- c. It is recognized that immature ~~private~~ real assets investments will ordinarily have a “J-curve effect” whereby there are low to negative returns in the initial years due to the payment of investment management fees during a period when investments are typically carried at cost and returns have not been realized.

9.8. **Investment period to ramp-up:** It is recognized that it may take five years or more for the ~~Real Assets Program~~ Real Assets asset class to be fully invested and that there may be deviations from the previously mentioned targets during the ramp-up period. During the ~~Real Assets Program~~ Real Assets asset class's ramp-up period, exposures can be estimated using percentages of committed capital. During the ramp-up period for the Real Assets asset class, and subsequent to reaching the target allocation, SCERS' Overlay Program will re-balance the Real Assets Asset Class to the target allocation, using the designated Real Assets proxy within the investment guidelines for the Overlay Program.

10.9. **Rebalancing to guidelines:** It is anticipated that the majority of changes to rebalance the Real Assets ~~portfolio~~ asset class will be made on a long-term basis due to: (1) The general illiquidity of ~~the core real estate and~~ private real assets investments with typical investment horizons of 10-15~~2~~ years; and, (2) The significant discount that can be applied if and when ~~real estate or~~ private real assets holdings are liquidated in the secondary market. Accordingly, when these guidelines are exceeded, it is anticipated that reducing exposures will be carried out within a long-term time frame and over a period that is as soon as ~~is~~ practical to reflect the illiquidity of ~~the many~~ real assets vehicles.

C. Monitoring

Through the monitoring process, Staff and consultant will extend the initial due diligence into a formal quarterly, semi-annual, and annual process which regularly seeks to determine whether the manager is meeting the Real Assets ~~program's~~ asset class's investment objectives and other requirements. In the broadest sense, the monitoring process is intended to determine whether the initial reasons for selecting the strategy and investment vehicle remain valid. The monitoring process will disclose whether there has been any material deviation from the investment philosophy and process; the personnel responsible for managing the investment vehicle are still in place; the organization continues to be stable; performance and risk meet expectations; and the investment vehicle manager adheres to its investment and other requirements. The underlying principle of the monitoring program is to determine whether all risks to which SCERS is exposed through the use of outside investment advisors have been identified, understood, and, to the extent possible, controlled. The monitoring process focuses on four areas:

- Compliance with reporting and valuation requirements;

- Continuity of investment philosophy and process;
- Stability of personnel and organization; and
- Performance and risk management.

Staff and consultant will aggregate investment vehicle data and perform analysis on the overall ~~Real Assets~~ portfolio, paying careful attention to individual investment vehicle allocations and strategy/sector concentrations to strive to achieve proper diversification across the ~~Real Assets Program~~Real Assets asset class. Staff and consultant also will conduct due diligence with the respective investment vehicle managers to understand the underlying drivers of performance. Additionally, Staff and consultant will conduct portfolio reviews and on-site due diligence as necessary. Site visits will also be performed to confirm that appropriate infrastructure is in place to support the investment process. Staff and consultant will provide the Board with regular performance reports and advise the Board of other matters as appropriate.

If, during the monitoring process, SCERS identifies areas of the ~~Real Assets Program~~Real Assets asset class that are not compliant with the objectives, guidelines and constraints, identified in this investment policy statement, then reasonable efforts will be made to cure the deficiency. These reasonable efforts will consider the illiquidity of the asset class and transaction costs to be incurred compared to the risk of non-compliance.

D. Implementation Protocol

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The following implementation protocol describes the allocation of investment authority and responsibilities between SCERS' Board, Staff and consultants. Overall, the Real Assets implementation protocol delegates the most time intensive elements of the process to Staff and consultant, while preserving the Board's oversight of the overall ~~Real Assets Program~~Real Assets asset class.

On an annual basis, the Board will approve the long-term Real Assets Asset Allocation Structure and Twelve Month Investment Plan as developed and presented by Staff and Consultant. The long-term Real Assets Asset ~~Allocation Structure~~Allocation Structure will articulate the long-term direction and objectives of the Real ~~Assets Program~~Assets asset class. The Twelve Month Investment Plan will articulate the direction over the next year in taking the necessary steps to achieve the above objectives of the long-term Asset Allocation Structure.

The execution of the long-term Asset Allocation Structure and Twelve Month Investment Plan including the selection of investment managers will be delegated to Staff, subject to the Board's ability to review, discuss and object to the recommendations of Staff and consultant during the investment protocol process. ~~include two sets of implementation protocols regarding the selection of investment managers. The first set of implementation protocols is designed for~~

~~the private real assets portion of the Real Assets portfolio and mirrors the investment protocol for private equity as outlined below.~~

The key features of the proposed ~~private r~~Real ~~a~~Assets investment protocol are as follows:

- Staff and consultant will identify the most qualified candidates for a prospective ~~private~~ real assets investment commitment based on: (a) The Real Assets Asset Allocation Structure approved by the Board; and (b) The Twelve Month Real Assets Investment Plan approved by the Board- (which takes into account SCERS' existing real assets investments and prioritizes and targets optimal new investment opportunities expected to come to market in the next twelve months).
- Staff and consultant will prepare a report for the Board outlining why a given ~~private~~ real assets manager has been identified for closer scrutiny for a possible commitment.
- Staff and consultant will pursue more extensive due diligence on the manager candidate, including conducting extended interviews with the portfolio managers and other key members of the investment team. The consultant will complete the investment strategy and operational due diligence reports, if they have not done so already. Legal counsel will begin reviewing the documentation for the possible commitment and preliminary negotiation of deal terms will take place.
- If/When: (a) The due diligence process is completed; (b) Deal terms have been determined; (c) Staff and consultant have concluded that a commitment should be made; then (d) Staff will prepare a report outlining the basis for the decision, the proposed commitment amount, and the target date for closing on the commitment. This report will include an assessment of investment strategy and operational due diligence.
- At any point in the process, questions or concerns by any trustee regarding a proposed investment or proposed manager will be communicated to the Chief Executive Officer ('CEO'). The CEO will be responsible for assuring that a prompt response is provided. The CEO will also provide the full Board with the response. If a Board member is not satisfied with the response, the Board member can request that the matter be brought to the full Board for consideration. In such a case, the CEO will refer the matter to the Board President who will determine whether the manager search process should be suspended until the matter is resolved. As a general rule, it is anticipated that the process of identifying and vetting a proposed investment will take place over a period of time sufficient to allow, if necessary, for full Board consideration of questions or concerns before a commitment is finalized.

- Absent questions or concerns by the Board, the proposed investment will be finalized and the necessary documentation executed.
- Staff and consultant will then prepare an updated status report on SCERS' ~~private~~ Real Assets portfolio for the Board.

~~The second set of implementation protocols is designed for the legacy Real Assets investments including commodities and the addition of TIPS. The real assets legacy investments differ from the private real assets investments in that, in general, one would expect both a lower number and frequency of decisions and a longer time frame to make an investment decision in the legacy investments in comparison to private real assets investments. Accordingly, there is less of a need to delegate greater responsibility to Staff and consultant compared to private real assets.~~

~~The key features of the proposed private legacy Real Assets investment protocol are as follows:~~

- ~~Staff and consultant will be responsible for evaluating the existing investment structures, investment managers and allocation levels for these assets.~~
- ~~Staff and consultant will be responsible for presenting any recommended changes to the Board with respect to the investment structures, managers or allocation levels for those assets.~~
- ~~The Board will then determine whether any changes are warranted to the investment structures, managers and/or allocation levels.~~

~~Please note that core real estate is part of SCERS' legacy investments. However, the implementation protocol for core real estate is included in the real estate investment policy statement. Please refer to the real estate investment policy statement for more details on the core real estate implementation protocol.~~

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HISTORY OF SCERS RETIREMENT BOARD ACTION:

Adopted: February 16, 2012

Revised: August 16, 2017

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