

# NEVADA SYSTEM OF HIGHER EDUCATION

## DISCUSSION MATERIALS - ENDOWMENT OCIO UPDATE



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## DISCUSSION MATERIALS – ENDOWMENT OCIO UPDATE

SEPTEMBER 30, 2022

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## 2. ENDOWMENT OCIO UPDATE



## Endowment OCIO Update – Executive Summary

### A. Performance:

- For the FYE 6/30/2022, the Total Endowment returned a *preliminary* -6.6%, outperforming the Policy Benchmark by 190bps. (Private Investments are as of 3/31/2022, due to the manager reporting lag, and we expect C|A and Legacy Assets performance to come down slightly after Private Investments results are finalized). The breakdown by sleeve is as follows:
  - -6.8% - Cambridge Associates (outperforming the benchmark by 320 bps)
  - +8.3% - Legacy Assets (outperforming the benchmark by 480 bps)
- For the calendar year to date through 8/31/2022, the Total Endowment returned a *preliminary* -10.3%, 30 bps behind the Policy Benchmark.
- Over the full OCIO track record from April 1, 2017 (start of formal track record) through March 31, 2022 (lagged to include most recent Private Investment results), the Total Endowment has returned 9.5% annualized, outperforming the Policy Benchmark by 90 basis points.
  - C|A Managed Assets returned 10.1% over the OCIO track record, outperforming the policy benchmark by 130 bps
  - Legacy Assets (representing illiquid pre-OCIO investments recommended by C|A) returned 18.2 %, outperforming their benchmark by 990 bps over the full OCIO track record.
- As requested at the March Investment Committee meeting, we review benchmarking approaches for the Endowment and Operating Pool. We provide detail on the Policy Benchmark, which is a blend of standard market indices representing portfolio exposures, weighted at long-term strategic policy targets. We are comfortable with the current benchmarks and recommend no changes.
- Per the Endowment's Investment Policy Statement, it is important to *monitor* returns on an ongoing basis and *evaluate* portfolio returns and risk over time periods that are suitably long for the long-term investment strategy of this perpetual pool. The Total Endowment 10-year return stands at 7.1%, 30bps ahead of the Policy Benchmark.

## Endowment OCIO Update – Executive Summary (*cont'd*)

### B. Asset Allocation and Guideline Compliance:

- The Total Endowment is in compliance with all investment guidelines and restrictions.
- As of June 30, we estimate that CA Managed Assets had <0.1% exposure remaining in Russian equities via one manager, which has made a commitment to exit all Russian positions as market liquidity permits.

### C. Risk/Return Characteristics – C|A Portfolio:

- Relative to a 70/30 Simple Index, the C|A Policy Targets approved by the Investment Committee in December 2016 are expected to show slightly lower volatility and sensitivity to equity beta. Although the C|A Policy Benchmark would be expected to experience meaningful short-term declines in stress environments, it is expected to materially reduce the long-term risk of failing to keep pace with the Endowment payout while maintaining purchasing power in inflation-adjusted terms.

### D. C|A Diversifiers and Private Investments:

- The C|A hedge fund portfolio is well diversified across 15 managers.
- We have committed \$46.8 million to 36 Private Investments funds as we build toward the long-term policy targets approved by the Investment Committee in December 2016. The Total Managed PI return of 28.8% since inception has strongly outperformed the public market equivalent return of 11.9% over that time period.

- E. Legacy Assets:** Since inception through 3/31/22, NSHE's Legacy Private Investments program has returned 12.8%, outperforming public markets by 580 basis points. The Legacy Private Natural Resources funds have been particularly strong, with a 25.0% return since inception (15.0 percentage points ahead of public natural resource equities).

# 2. ENDOWMENT OCIO UPDATE

## A. PERFORMANCE





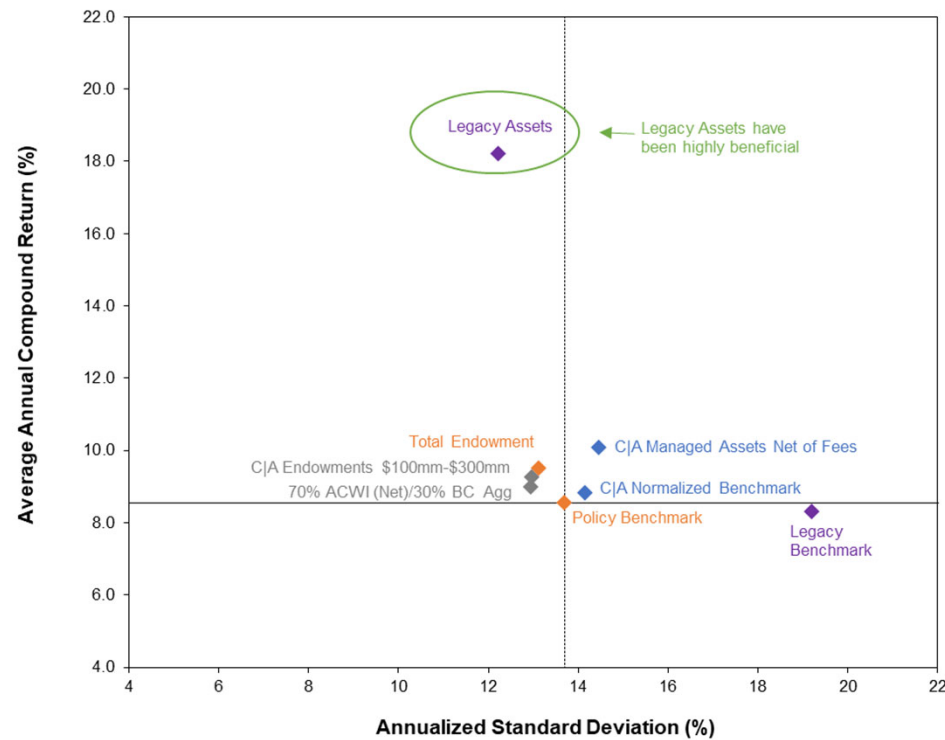
## Updated with Supplemental Information

## 8/31/2022 Performance

Returns (%)	INCEPTION DATE	CURRENT MARKET VALUE	MONTH TO DATE	FISCAL YEAR TO DATE JUN	CALENDAR YEAR TO DATE	ANNUALIZED TRAILING 10 YEARS	ANNUALIZED SINCE 03/31/17	ANNUALIZED SINCE INCEPTION
Total Endowment*	6/30/1984	\$299,667,574	-1.9	0.9	-10.3	6.9	7.3	9.6
Policy Benchmark <sup>2</sup>	6/30/1984		-2.2	1.5	-10.0	6.6	6.3	9.3
<b>Total C A Managed Assets Net of Fees*</b>	<b>11/30/2016</b>	<b>\$298,425,415</b>	<b>-2.0</b>	<b>0.8</b>	<b>-12.7</b>	<b>---</b>	<b>7.5</b>	<b>8.3</b>
C A Normalized Benchmark <sup>2</sup>	11/30/2016		-2.2	1.6	-12.4	---	6.0	---
Value Add			0.3	-0.7	-0.3	---	1.5	---
Legacy Private Equity* <sup>1</sup>	7/01/2022	\$10,296,477	---	---	---	---	---	---
Legacy Venture Capital*	7/01/2022	\$26,333,153	---	---	---	---	---	---
Legacy Natural Resources*	7/01/2022	\$8,969,560	---	---	---	---	---	---
<b>Total Non-C A OCIO Assets*</b>	<b>11/15/1998</b>	<b>\$1,238,007</b>	<b>0.0</b>	<b>0.1</b>	<b>-0.8</b>	<b>9.4</b>	<b>8.6</b>	<b>10.8</b>
Total Russell Managed Assets* <sup>12</sup>	1/31/2017	\$1,238,007	0.0	0.1	-2.8	---	5.4	5.7
Russell Normalized Benchmark <sup>2</sup>	1/31/2017		0.0	0.1	-2.8	---	7.0	7.4
Value Add			0.0	0.0	0.0	---	-1.6	-1.6

## C|A Managed Assets has outperformed benchmark by 1.3% annualized over full OCIO track record

Trailing 5 Years • Apr 1, 2017 (start of formal track record) - Mar 31, 2022 (lagged to include most recent Private Investment results)



	Average Annual Compound Return (%)	Annualized Standard Deviation (%)	Sharpe Ratio <sup>1</sup>
Total Endowment	9.5	13.1	0.64
Policy Benchmark	8.6	13.7	0.54
Total C A Managed Assets Net of Fees	10.1	14.5	0.62
C A Normalized Benchmark	8.8	14.2	0.54
Legacy Assets	18.2	12.2	1.40
Legacy Benchmark	8.3	19.2	0.37
C A Endowments \$100mm-\$300m <sup>2</sup>	9.3	13.0	0.68
70% MSCI ACWI (Net)/30% Barclays Agg	9.0	13.0	0.61



<sup>1</sup> Sharpe Ratio: to calculate this number, subtract the average T-Bill return (risk free rate) from the manager's average return then divide by the manager's standard deviation. The amount of return over the risk-free rate that can be expected for each unit of risk accepted.

<sup>2</sup> From 4/1/2017 to 3/30/2022, C|A Endowments \$100-\$300mm include 82-109 institutions over time. Data is as of 3/31/22.

Note: Based on quarterly data to incorporate peer data and Private Investments. With only 12 data points, standard deviation and Sharpe metrics have statistical limitations.

## Value-add has been driven by manager selection

Fiscal Year Ended 6/30/22  
(Preliminary -- Private Investments as of 3/31/2022)

12 months ending June 30, 2022 • USD



## Value-add has been driven by manager selection

Trailing 5-years ended March 31, 2022  
(Lagged to reflect most recent Private Investment results)

5 Years ending March 31, 2022 • USD




## Benchmarking Review

- As requested at the March Investment Committee meeting, we review benchmarks for the Endowment and Operating Pool. As described on the following slide, the Endowment Investment Policy Statement memorializes several benchmarks assessing different measures of performance and risk over varying time periods relevant to the long-term investment strategy of this perpetual pool.
- Of the three benchmarks, the Policy Benchmark is a blend of standard market indices representing portfolio exposures, weighted at long-term strategic policy targets:
  - Traditional asset classes are most straightforward: the **Public Equity** allocation is benchmarked against the MSCI All Country World Index (the global opportunity set) while **Fixed Income** is benchmarked against the Bloomberg Aggregate Index (a domestic index encompassing US government bonds, investment-grade corporate bonds & securitized credit). The Operating Fund is comprised exclusively of Public Equity and US Fixed Income, so its Policy Benchmark is quite simple.
  - Other Endowment asset classes are benchmarked against their closest relevant public market indices (which have the benefits of being simple, transparent and passively investable):
    - While we benchmark individual **Private Investment** (PI) funds against peer medians (as shown on page 33 of these materials), the PI components of the Endowment Policy Benchmark consist of the closest relevant public market proxies, which represent both the opportunity cost and the source of funding for the PI allocations:
      - *Private Equity/Venture Capital* – MSCI All Country World Index (global public equities)
      - *Private Real Estate* – FTSE EPRA/NAREIT Developed Real Estate Index (global real estate securities)
      - *Private Natural Resources* - S&P Global Natural Resources Index (global energy, metals/mining and agriculture equities)
    - The **Diversifiers** allocation (primarily hedge funds) is benchmarked against a blend of 30% global public equities/70% T-bills, representing the targeted risk profile/factor exposure of the allocation, thereby isolating the value added beyond what could be attributable to public equity market exposure.
    - We employ a “basket approach” to implementing *and* benchmarking the inflation-sensitive **Public Real Assets** allocation, currently split equally across (1) global natural resource equities (energy, metals/mining & ag), (2) global real estate securities and (3) global listed infrastructure.
- We are comfortable with the current benchmarks and recommend no changes.

## Monitor Performance Regularly, while Evaluating over Relevant Time Periods

Per Investment Policy Statement, several benchmarks assess different measures of performance and risk over varying time periods relevant to the long-term investment strategy of this perpetual pool



	Benchmark	Description	Question Answered	Expectation	Evaluation Period
1	<b>Policy Benchmark</b>	Weighted blend of benchmarks for each role in portfolio category	Have manager selection and tactical asset allocation been additive relative to the strategic target policy?	Outperform with comparable volatility	Rolling 3-year periods
2	<b>Simple Risk-Equivalent Benchmark</b>  70% MSCI ACWI Index (net) / 30% Bloomberg Aggregate	Weighted blend of global equities (MSCI All Country World Index) and U.S. fixed income (Bloomberg Barclays Aggregate Bond Index)	Have asset allocation and implementation been additive relative to simple, passive alternatives; has risk profile been consistent with expectations?	Outperform with equal or less volatility	Rolling 5- to 10-year periods <i>(full equity market cycle)</i>
3	<b>Long-Term Objective</b>  All-in Distribution Policy (4.625%) + Inflation (CPI-U)	Static benchmark not directly related to market performance	Is the portfolio meeting NSHE's financial objectives to support a 4.625% payout and maintain purchasing power?	Outperform	Rolling 10-year periods

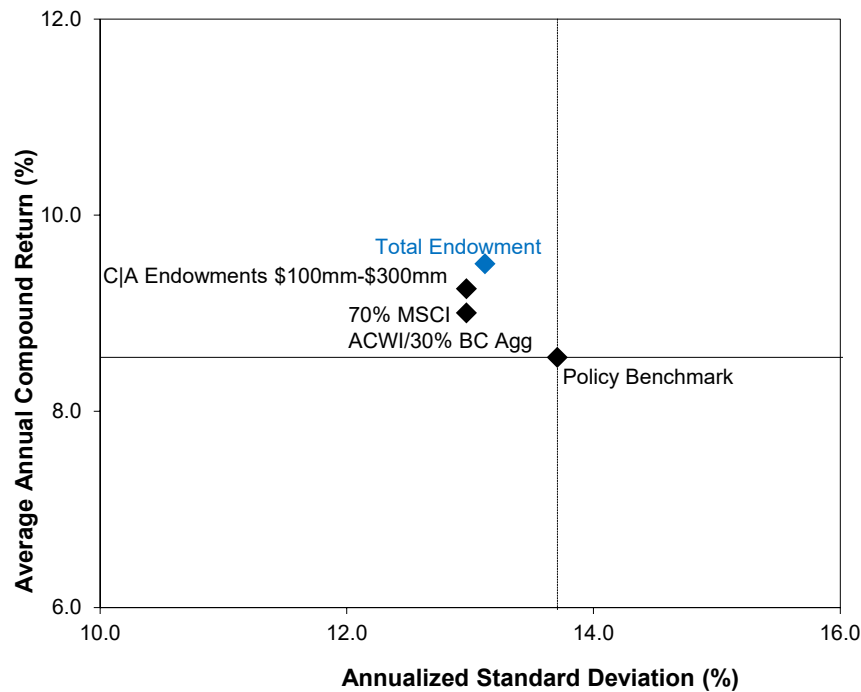
## NSHE Endowment Policy Benchmark

Roles	Long-Term Target	Asset Class	Benchmark Index
Growth	62%	US Equity	MSCI ACWI Index (net)
		Global Equity	
		Int'l Developed Equity	
		Emerging Markets Equity	
		Private Equity/Venture Capital	
Diversifiers	18%	Public Diversifiers	30% MSCI ACWI (net) / 70% 91-Day T-Bills
		Private Diversifiers	
Real Assets	10%	Public Real Assets	33% S&P Global Natural Resources Index / 33% FTSE EPRA/NAREIT Developed Real Estate Index / 33% MSCI World Core Infrastructure Index
		Private Real Estate	FTSE EPRA/NAREIT Developed Real Estate Index
		Private Natural Resources	S&P Global Natural Resources Index
Fixed Income & Cash	10%	Fixed Income	Bloomberg Aggregate
		Cash	91-Day T-Bills

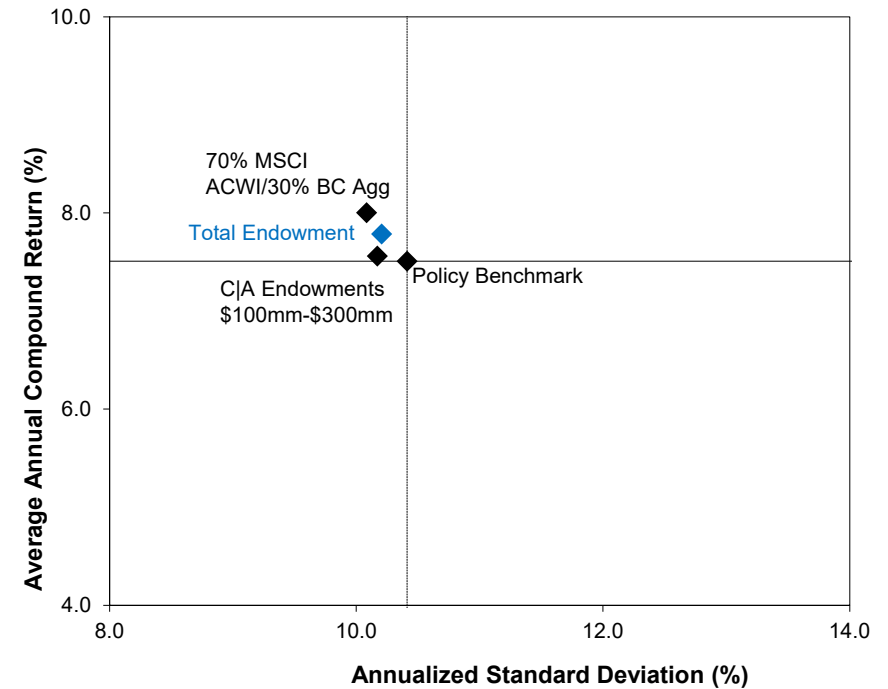
## Risk/Return Analyses

As of March 31, 2022 – lagged to include most recent Private Investments results

Trailing 5Y – April 01, 2017 – March 31, 2022



Trailing 10Y – April 01, 2012 – March 31, 2022



	Average Annual Compound Return (%)	Annualized Standard Deviation (%)	Sharpe Ratio <sup>1</sup>
Total Endowment	9.5	13.1	0.64
Policy Benchmark	8.6	13.7	0.54
CJA Endowments \$100mm-\$300m <sup>2</sup>	9.3	13.0	0.68
70% MSCI ACWI/30% BC Agg	9.0	13.0	0.61

	Average Annual Compound Return (%)	Annualized Standard Deviation (%)	Sharpe Ratio <sup>1</sup>
Total Endowment	7.8	10.2	0.70
Policy Benchmark	7.5	10.4	0.66
CJA Endowments \$100mm-\$300m <sup>2</sup>	7.6	10.2	0.72
70% MSCI ACWI/30% BC Agg	8.0	10.1	0.73

<sup>1</sup> Sharpe Ratio: to calculate this number, subtract the average T-Bill return (risk free rate) from the manager's average return then divide by the manager's standard deviation. The amount of return over the risk-free rate that can be expected for each unit of risk accepted.

<sup>2</sup> From 4/1/2012 to 3/31/2022, CJA Endowments \$100-\$300mm include 67-109 institutions over time. Data is as of 3/31/22.



## Policy Benchmark Analysis: Rolling 3-Year Average Annualized Compound Returns

As of March 31, 2022 – lagged to include most recent Private  
Investment results

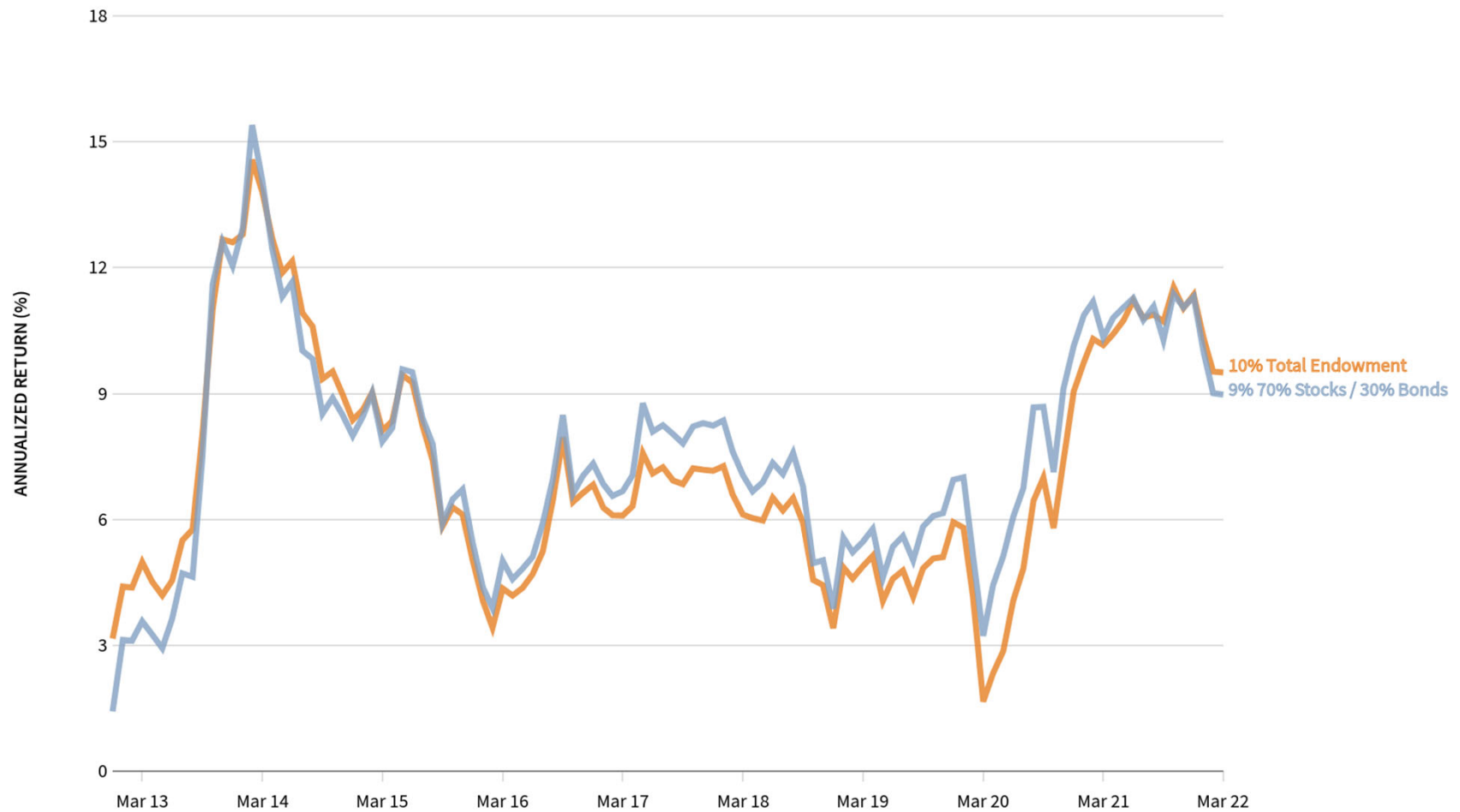
Rolling 3 Years • Jan 1, 2008 – Mar 31, 2022 • USD



## Simple Benchmark Analysis: Rolling 5-Year Average Annualized Compound Returns

As of March 31, 2022 – lagged to include most recent Private  
Investment results

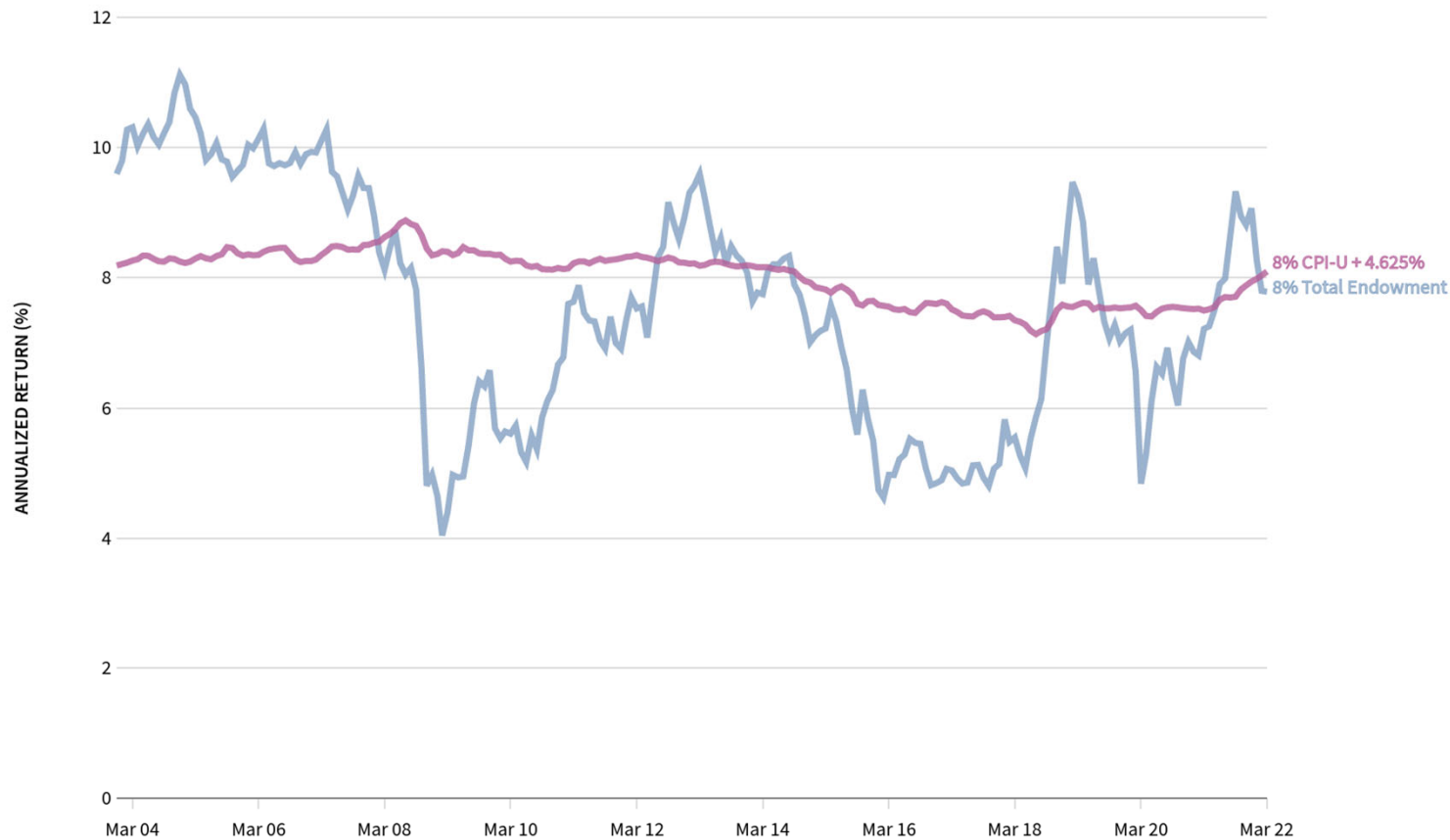
Rolling 5 Years • Jan 1, 2008 - Mar 31, 2022 • USD



## Long-Term Financial Objective: Rolling 10-Year Average Annualized Compound Returns

As of March 31, 2022 – *lagged to include most recent Private  
Investment results*

Rolling 10 Years • Jan 1, 1994 - Mar 31, 2022 • USD



## 2. ENDOWMENT OCIO UPDATE

### B. ASSET ALLOCATION AND GUIDELINE COMPLIANCE



## Total Endowment Asset Allocation Is Well Within Policy Ranges

Portfolio Role	06/30/2022 Asset Allocation	Total Endowment Long-Term Policy Targets	Total Endowment Allowable Range
<b>Growth</b>	<b>57.8%</b>	<b>61.5%</b>	<b>50% - 70%</b>
Public Growth	50.5%	48.0%	
Private Growth	7.3%	13.5%	
<b>Diversifiers</b>	<b>21.1%</b>	<b>15.0%</b>	<b>5% - 25%</b>
Liquid Diversifiers (liquidity w/in 3 years)	19.0%	12.5%	
Private Diversifiers	2.1%	2.5%	
<b>Real Assets</b>	<b>9.0%</b>	<b>11.0%</b>	<b>5% - 20%</b>
Public Real Assets	6.6%	4.5%	
Private Real Assets	2.4%	6.5%	
<b>Fixed Income &amp; Cash</b>	<b>12.1%</b>	<b>12.5%</b>	<b>5% - 25%</b>
Fixed Income	10.4%	12.5%	
Cash	1.6%	0.0%	

## Endowment Liquidity Is Well Within Guidelines

### Endowment Portfolio Liquidity Summary

Market values estimated as of 7/31/2022, pro forma for pending CJA transactions

Managers	7/31/2022 MV (\$ mm)	Exit Terms	Dollar Liquidity					
			Daily	Weekly/ Monthly	Quarterly	Semiannual/ Annual	Biennial	Illiquid
<b>U.S. Equity</b>	<b>51.4</b>		<b>6.1</b>	<b>30.2</b>	<b>15.1</b>			
CJA U.S. Equity	51.4	Daily; monthly; quarterly	6.1	20.2	15.1			
<b>Global Equity</b>	<b>29.1</b>		<b>0.0</b>	<b>29.1</b>				
CJA Global Equity	29.1	Daily; monthly	0.0	29.1				
<b>International Developed Equity</b>	<b>28.5</b>		<b>4.4</b>	<b>24.1</b>				
CJA International Developed Equity	28.5	Daily; monthly	4.4	24.1				
<b>Emerging Markets Equity</b>	<b>18.0</b>		<b>5.8</b>	<b>9.5</b>		<b>2.7</b>		
CJA Emerging Markets Equity	18.0	Daily; weekly; monthly; quarterly (2 year initial lock-up)	5.8	9.5		2.7		
<b>Diversifiers</b>	<b>53.4</b>		<b>0.0</b>	<b>4.9</b>	<b>28.9</b>	<b>12.2</b>	<b>2.2</b>	<b>5.1</b>
CJA Marketable Alternatives	47.4	Daily; monthly; quarterly; semi-annual; annual; biennial; illiquid	0.0	4.7	28.2	12.2	2.2	4.9
Farallon Capital Illiquid Sidepocket**	0.1	Illiquid						0.1
<b>Russell Hedge Funds*</b>	<b>0.9</b>			<b>0.2</b>	<b>0.7</b>			
<b>Private Growth</b>	<b>56.0</b>	<b>Illiquid</b>						<b>56.0</b>
Managed Private Equity/Growth	6.3	Illiquid						6.3
Managed Venture Capital	12.8	Illiquid						12.8
Legacy Private Equity**	10.6	Illiquid						10.6
Legacy Venture Capital**	26.3	Illiquid						26.3
<b>Real Assets</b>	<b>31.8</b>		<b>16.8</b>	<b>0.0</b>	<b>0.0</b>			<b>15.1</b>
CJA Real Assets	22.9	Daily; monthly; illiquid	16.8	0.0				6.1
Legacy Private Natural Resources**	9.0	Illiquid						9.0
<b>Fixed Income</b>	<b>25.5</b>		<b>22.3</b>		<b>3.2</b>			
CJA Fixed Income	25.5	Daily	22.3					
<b>Cash and Cash Equivalents</b>	<b>4.1</b>	<b>Daily</b>	<b>4.1</b>					
<b>TOTAL ASSETS</b>	<b>297.8</b>		<b>59.5</b>	<b>97.8</b>	<b>47.2</b>	<b>14.9</b>	<b>2.2</b>	<b>76.2</b>
<b>PERCENT OF TOTAL ASSETS</b>	<b>100%</b>		<b>20%</b>	<b>33%</b>	<b>16%</b>	<b>5%</b>	<b>1%</b>	<b>26%</b>

<b>Liquidity Guidelines - CJA Managed Assets:</b>	<b>Guideline Compliance?</b>
<i>No new commitments while:</i>	
(1) Private Investment NAV > 39%	Yes
(2) Private Investment NAV + Unfunded Commitments > 54%	Yes

\* *Italicized assets are excluded from CJA mandate.*

\*\* Legacy assets are excluded from OCIO performance but are considered for purposes of asset allocation & guideline compliance.

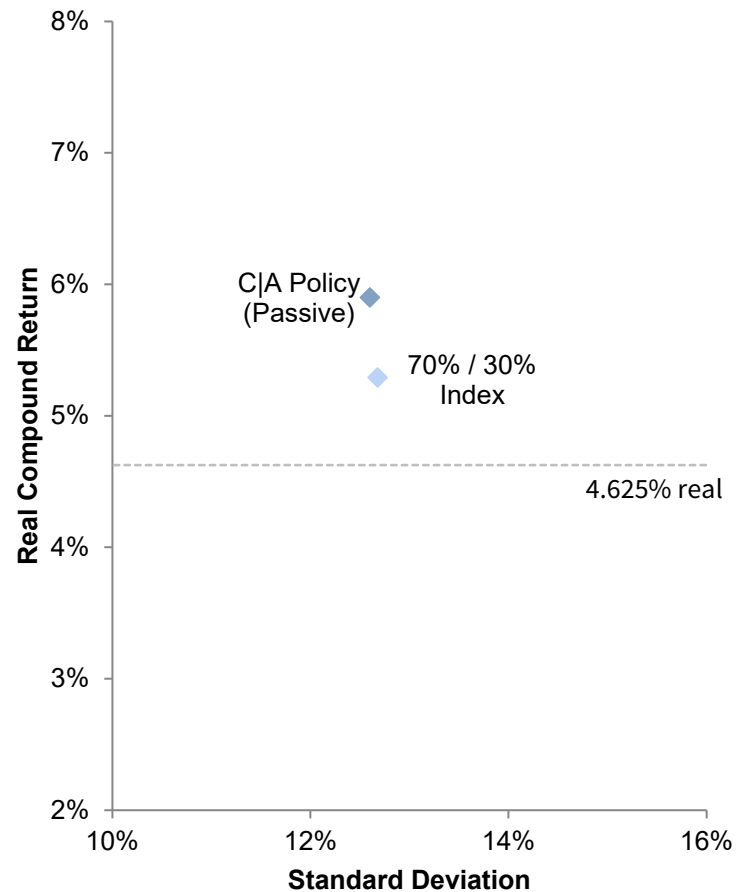
## 2. ENDOWMENT OCIO UPDATE

### C. RISK/RETURN CHARACTERISTICS – CIA PORTFOLIO



## C|A Portfolio – Long-Term Risk/Return Expectations

### Long-Term Real Risk/Return Projections



### Summary Statistics – Real Returns

	C A Policy (Passive)	70% / 30% Index
Estimated Long-Term Real Compound Return	5.9%	5.3%
Estimated Range of Returns (25th-75th %ile)	3.7 - 7.1%	3.6 - 7.0%
Estimated Volatility (Standard Deviation)	12.6%	12.7%
Estimated Beta to Global Equity	0.68	0.70
<b>Long-Term Risk:</b> Estimated Probability of Not Achieving 4.625% Real Compound Return Over 25 Years	39%	43%
<b>Short-Term Risk:</b> Estimated Cumulative Decline, 2008 Financial Crisis	-34%	-37%

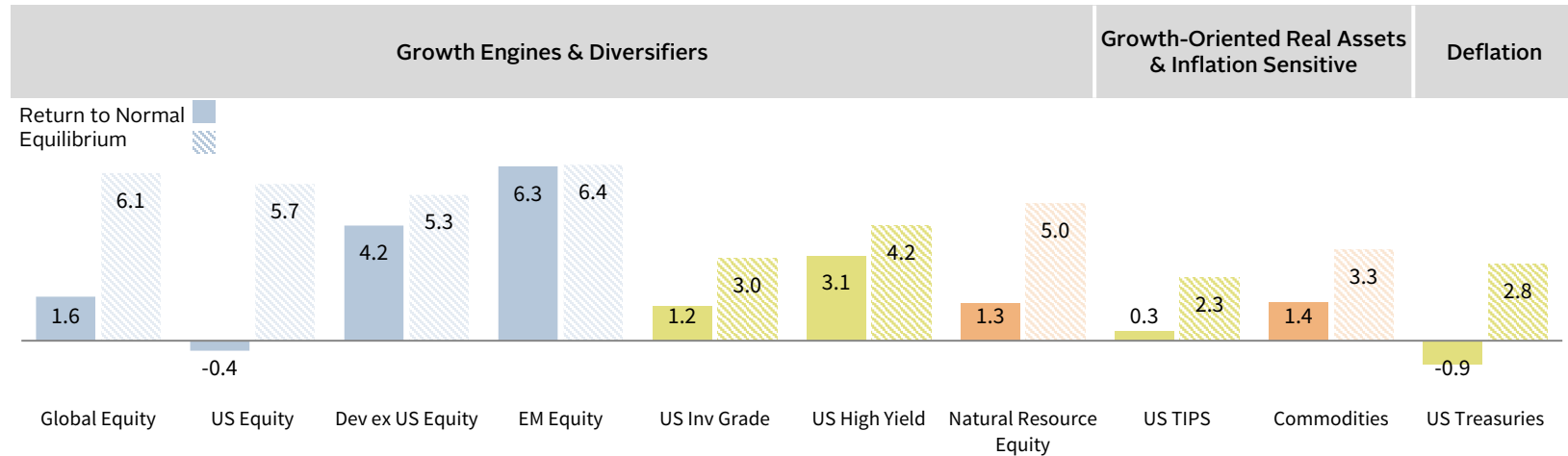
\* Assumes no positive or negative alpha from active management.  
Notes: Decline statistics use real cumulative asset class returns from November 1, 2007 to February 28, 2009.



## Even after 2022 market pullback, valuations still look likely to challenge intermediate-term market returns

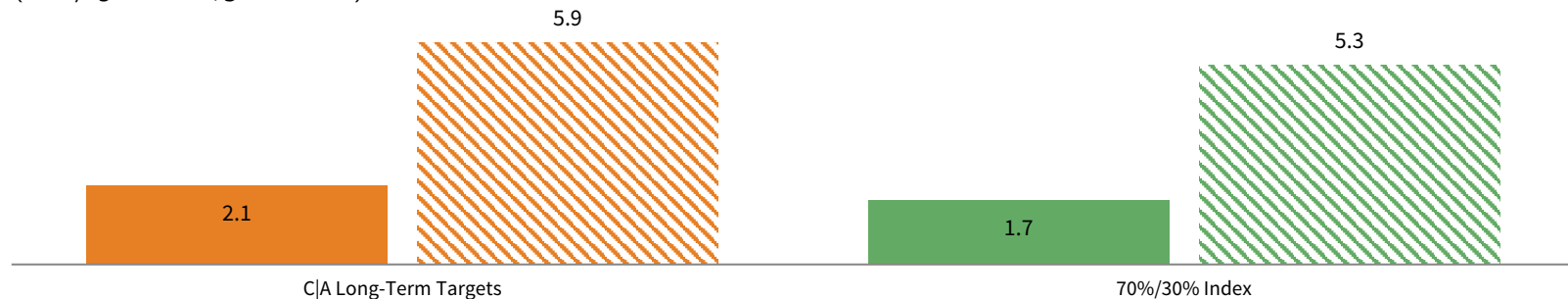
INTERMEDIATE-TERM (10-YEAR) "RETURN TO NORMAL" SCENARIO, ASSUMING VALUATIONS NORMALIZE OVER NEXT 10 YEARS  
LONG-TERM (25-PLUS YEAR) STEADY STATE "EQUILIBRIUM" ASSUMPTIONS: REAL RETURNS (ADJUSTED FOR INFLATION)

Based on Current Market Valuations as of July 31, 2022 (3.0% Inflation)



### Comparative Return Analysis

LONG-TERM "EQUILIBRIUM" REAL RETURNS  
INTERMEDIATE-TERM "RETURN TO NORMAL" REAL RETURNS  
(10-Yr/25Yr Horizon, 3.0% Inflation)



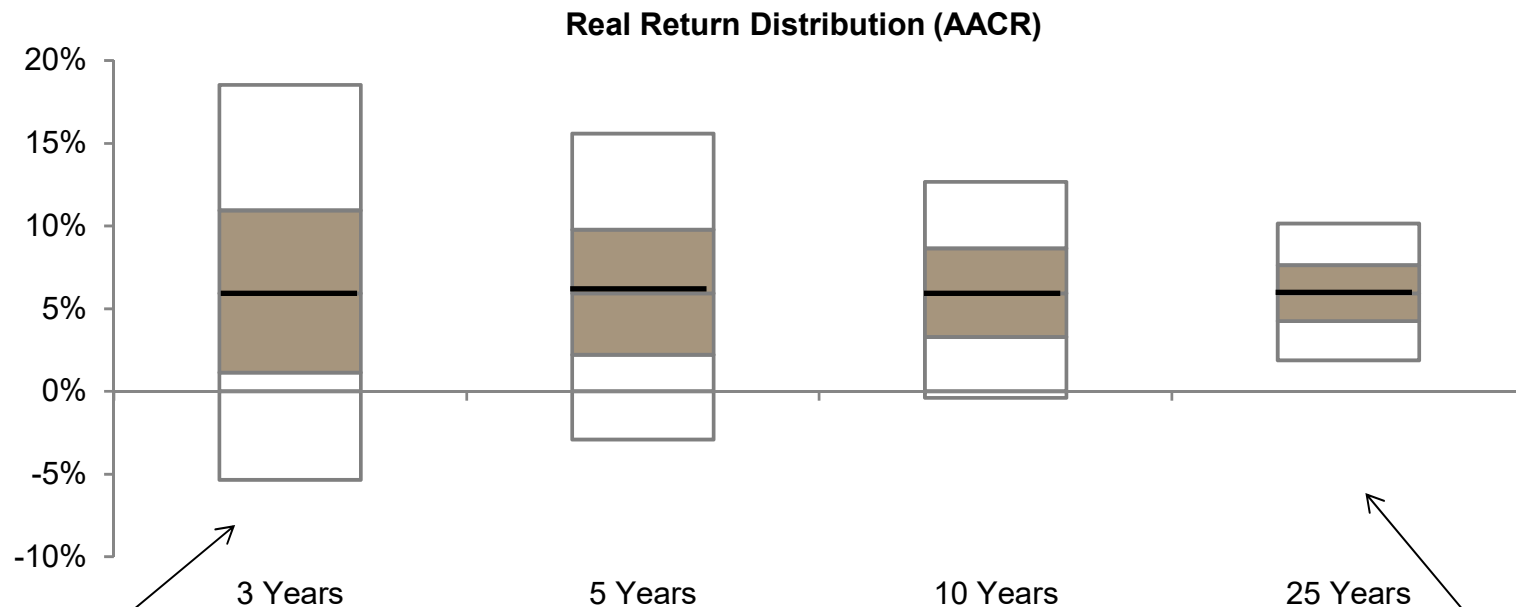
**Key Assumptions:** Inflation: 3%; Real EPS Growth: 2% for US and Dev ex US, 3% for EMs; Ending 10-Yr US Treasury Yield: 5.0%, Ending 10-Yr US TIPS yield: 2.0%

Sources: Barclays, Cambridge Associates LLC, Global Financial Data, Inc., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

## Short-Term Expected Returns Have a Significantly Wider Range than Long-Term Expectations

While the C|A Policy Benchmark has a 5.9% expected real compound return over the long term (i.e. 25+ years), there is a wide range of potential outcomes, particularly over shorter time periods.

### Real Return Expectations



Over any given 3-year period the C|A Policy Benchmark has a 50% likelihood of a return between 1.2% and 10.9%

	3 Years	5 Years	10 Years	25 Years
5th	18.5%	15.6%	12.7%	10.1%
25th	10.9%	9.8%	8.6%	7.6%
50th	5.9%	5.9%	5.9%	5.9%
75th	1.2%	2.2%	3.3%	4.2%
95th	-5.3%	-2.9%	-0.4%	1.9%

Over any given 25-year period the C|A Policy Benchmark has a 50% likelihood of a return between 4.2% and 7.6%

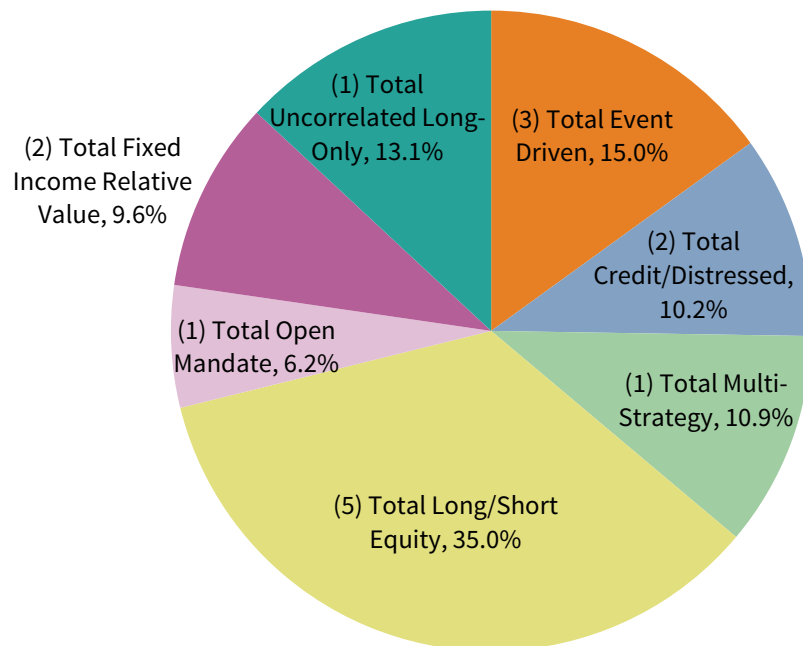
## 2. ENDOWMENT OCIO UPDATE

### D. C/A DIVERSIFIERS & PRIVATE INVESTMENTS



## C|A Diversifiers Program Snapshot

**Manager Percentages of Total Hedge Funds as of June 30, 2022**



### Event-Driven

- Goal is to profit from mispricings in the capital structures of companies subject to corporate events
  - Buying stock in acquisition targets, shorting acquirers
  - Other events: spin-offs, divestitures, reorganization, and restructuring

### Credit / Distressed

- Goal is to identify credit opportunities
  - Invest long and short in bonds, loans, credit default swaps and other credit markets.
  - Stressed and distressed debt, capital structure arbitrage, post-reorg equities.

### Multi-Strategy

- Goal is to generate meaningful alpha through a variety of trading strategies

### Long/Short Equity

- Goal is to limit exposure to “beta” and add meaningful “alpha”
  - Short positions to generate returns (alpha) and reduce market risk (beta)
  - Fundamental analysis identifies attractive companies (alpha)

### Open Mandate

- Flexible mandate that targets the most attractive return opportunistically across capital markets, geographies, and strategies

### Fixed Income Relative Value

- Goal is to generate uncorrelated returns from price inconsistencies among related government bond and rates markets and instruments. Trade strategies implemented through cash bonds, futures and swaps instruments.

### Uncorrelated Long-Only

- Goal is to provide uncorrelated returns and inflation sensitivity through exposure to the California Carbon Allowance Market

## Private Investment Snapshot

Current Allocation (\$mm) as of July 31, 2022 <sup>1</sup>							Target Commitment by Strategy (\$mm)			
	NAV		Unfunded		Total		Annual Targets	Annual Range	2022 Actual Commitments	LT Targets
	(\$)	(%)	(\$)	(%)	(\$)	(%)	(\$)	(\$)	(\$)	(%)
Venture / Growth Capital	39.1	12.8%	6.1	2.0%	45.2	14.8%	4.0	\$0 - \$8	4.2	7.0%
Private Equity / Distressed	15.9	5.2%	7.9	2.6%	23.8	7.8%	7.0	\$0 - \$10	5.0	10.0%
<b>Total VC &amp; PE</b>	<b>\$55.0</b>	<b>18.0%</b>	<b>\$14.0</b>	<b>4.6%</b>	<b>\$69.0</b>	<b>22.6%</b>	<b>\$11.0</b>	<b>\$0 - \$18</b>	<b>\$9.2</b>	<b>17.0%</b>
<b>Total Private Diversifiers</b>	<b>\$4.9</b>	<b>1.6%</b>	<b>\$8.7</b>	<b>2.8%</b>	<b>\$13.6</b>	<b>4.5%</b>	<b>\$4.0</b>	<b>\$0 - \$7</b>	<b>\$2.0</b>	<b>5.0%</b>
Private Real Estate	2.3	0.8%	4.8	1.6%	7.1	2.3%	3.0	\$0 - \$6	---	4.0%
Private Natural Resources	12.9	4.2%	3.6	1.2%	16.5	5.4%	3.0	\$0 - \$6	---	4.0%
<b>Total Private RE &amp; NR</b>	<b>\$15.2</b>	<b>5.0%</b>	<b>\$8.4</b>	<b>2.8%</b>	<b>\$23.6</b>	<b>7.7%</b>	<b>\$6.0</b>	<b>\$0 - \$12</b>	<b>\$0.0</b>	<b>8.0%</b>
<b>Total</b>	<b>\$75.1</b>	<b>24.6%</b>	<b>\$31.1</b>	<b>10.2%</b>	<b>\$106.2</b>	<b>34.8%</b>	<b>\$21.0</b>	<b>\$0 - \$37</b>	<b>\$11.2</b>	<b>30.0%</b>

<sup>1</sup> Current allocation based on net asset values (NAV) and Total Endowment market value of \$305.4 million as of 7/31/22.

Asset Class	2018 (C A Capital)		2019 (C A Capital)		2020 (C A Capital)		2021 (C A Capital)		2022 (C A Capital)	
	Number of Funds	Commit. Amt. (\$mm)	Number of Funds	Commit. Amt. (\$mm)	Number of Funds	Commit. Amt. (\$mm)	Number of Funds	Commit. Amt. (\$mm)	Number of Funds	Commit. Amt. (\$mm)
Venture / Growth Capital										
<b>Sub-Total</b>	<b>1</b>	<b>\$1.0</b>	<b>1</b>	<b>\$1.0</b>	<b>0</b>	<b>---</b>	<b>3</b>	<b>\$4.0</b>	<b>4</b>	<b>\$4.2</b>
Private Equity / Distressed										
<b>Sub-Total</b>	<b>0</b>	<b>---</b>	<b>4</b>	<b>\$5.1</b>	<b>0</b>	<b>---</b>	<b>1</b>	<b>\$1.0</b>	<b>2</b>	<b>\$5.0</b>
<b>Total VC &amp; PE</b>	<b>1</b>	<b>\$1.0</b>	<b>5</b>	<b>\$6.1</b>	<b>0</b>	<b>---</b>	<b>4</b>	<b>\$5.0</b>	<b>6</b>	<b>\$9.2</b>
Private Diversifiers										
<b>Total Private Diversifiers</b>	<b>3</b>	<b>\$3.0</b>	<b>0</b>	<b>---</b>	<b>1</b>	<b>\$2.5</b>	<b>2</b>	<b>\$4.0</b>	<b>1</b>	<b>\$2.0</b>
Private Real Estate										
<b>Private RESub-Total</b>	<b>1</b>	<b>\$1.0</b>	<b>1</b>	<b>\$1.0</b>	<b>0</b>	<b>---</b>	<b>3</b>	<b>\$4.0</b>	<b>0</b>	<b>---</b>
Private Natural Resources										
<b>Private NR Sub-Total</b>	<b>1</b>	<b>\$1.0</b>	<b>1</b>	<b>\$1.0</b>	<b>0</b>	<b>---</b>	<b>1</b>	<b>\$1.0</b>	<b>0</b>	<b>---</b>
<b>Total Private RE &amp; NR</b>	<b>2</b>	<b>\$2.0</b>	<b>2</b>	<b>\$2.0</b>	<b>0</b>	<b>---</b>	<b>4</b>	<b>\$5.0</b>	<b>0</b>	<b>---</b>
<b>Total Privates</b>	<b>6</b>	<b>\$6.0</b>	<b>7</b>	<b>\$8.1</b>	<b>1</b>	<b>\$2.5</b>	<b>10</b>	<b>\$14.0</b>	<b>7</b>	<b>\$11.2</b>

## FUNDING STATUS & PERFORMANCE OVERVIEW

As of March 31, 2022, Nevada System of Higher Education had committed \$126.4 million to 52 private investment partnerships, of which \$96.3 million had been drawn down. Distributions of \$108.5 million at market value, or 112.7% of paid-in capital, had been received. The total program return of 13.3% is net of fees, expenses, and carried interest associated with each partnership and is weighted according to the amount that has been drawn down from each partnership as of March 31, 2022.

Changes to the portfolio included the initial drawdowns for Atalaya Special Opportunities Fund VIII LP and Peppertree Capital Fund IX QP, LP. In the period following March 31, 2022, Nevada System of Higher Education made an additional commitment to NFX Capital Fund II, LP (\$0.4 million).

Reporting Currency: U.S. Dollars (\$), in millions

<u>Asset Classes</u>	<u>Commitment(s)</u>	<u>Paid-In Capital</u>	<u>Unfunded Commitment(s)</u>	<u>Distributions at Market</u>	<u>Current Net Asset Value (NAV)</u>	<u>Total Value/ Paid In Multiple</u>	<u>Asset Class IRR</u>	<u>mPME IRR</u>
Legacy Private Equity	46.0	41.5	3.8	61.4	10.8	1.7	11.5%	5.8%
Legacy Venture Capital	17.6	17.1	0.5	16.6	26.6	2.5	10.0%	7.9%
Legacy Private Natural Resources	14.0	13.0	0.9	18.2	9.2	2.1	25.0%	10.0%
<b>TOTAL LEGACY</b>	<b>77.6</b>	<b>71.6</b>	<b>5.3</b>	<b>96.2</b>	<b>46.6</b>	<b>2.0</b>	<b>12.8%</b>	<b>7.0%</b>
Managed Private Equity/Distressed	9.1	6.0	4.1	4.8	5.1	1.7	34.5%	14.5%
Managed Venture Capital	10.2	4.6	5.6	0.8	12.1	2.8	75.2%	10.8%
Managed Private Diversifiers	14.4	7.5	8.7	4.5	4.2	1.2	10.1%	5.2%
Managed Private Natural Resources	6.0	3.9	2.7	0.9	3.6	1.1	8.0%	23.1%
Managed Real Estate	7.0	2.8	4.8	1.3	2.2	1.2	12.7%	7.4%
<b>TOTAL MANAGED</b>	<b>46.8</b>	<b>24.8</b>	<b>25.9</b>	<b>12.3</b>	<b>27.2</b>	<b>1.6</b>	<b>28.8%</b>	<b>11.9%</b>
<b>TOTAL PORTFOLIO</b>	<b>124.4</b>	<b>96.3</b>	<b>31.1</b>	<b>108.5</b>	<b>73.8</b>	<b>1.9</b>	<b>13.3%</b>	<b>7.3%</b>

Legacy PI have outperformed public markets by 580 bps

C/A Managed PI have outperformed public markets by 1690 bps

Paid-In Capital: Capital paid in to the partnership, which includes fees and capital for investments.

Distributions at Market: Capital distributed to an investor from the partnership.

Current Net Asset Value (NAV): The residual value of an investor's interest, which is reported by the partnership in its financial statements.

IRR: The investor's return on its investment in the partnership, net of fees, expenses, and carried interest received by the general partners.

Total Value: Total value is calculated by adding the NAV and Distributions at Market.

## 2. ENDOWMENT OCIO UPDATE

### E. LEGACY ASSETS





## Legacy PI Program Returned 12.8% Annualized Since Inception (vs. 7.0% for public markets)

Multi-year performance detail as of 3/31/2022

Reporting Currency: U.S. Dollars (\$)

		IRR (%) <sup>1</sup>					
	Vintage Year	Current Quarter	1 Year	3 Years	5 Years	10 Years	Inception to Date
<u>Private Investments Partnerships</u>							
<u>Legacy Private Equity</u>							
Drum Capital Management SS Partners II, L.P.	2006	9.4	34.3	20.3	9.6	8.3	8.2
Dover Street VIII, L.P.	2012	-0.8	4.9	12.7	15.1	---	19.4
Blackstone Strategic Partners VI, L.P.	2014	-3.0	20.2	7.5	7.9	---	14.1
Dover Street IX, L.P.	2016	-1.1	18.0	23.8	26.1	---	27.8
<b>Total Legacy Private Equity</b>		<b>2.9</b>	<b>22.4</b>	<b>17.2</b>	<b>13.1</b>	<b>11.5</b>	<b>11.5</b>
<b>mPME Benchmark: MSCI World Index (Net)</b>		<b>-5.2</b>	<b>11.3</b>	<b>15.3</b>	<b>12.4</b>	<b>10.5</b>	<b>5.8</b>
<u>Legacy Venture Capital</u>							
Endowment Venture Partners IV, L.P.	1998	-0.5	-1.2	-24.5	7.1	4.9	1.5
Endowment Venture Partners V, L.P.	2000	-14.4	-18.1	-3.5	-3.6	-2.8	-0.2
Commonfund Capital Venture Partners X, L.P.	2012	-6.2	26.7	31.3	29.6	---	25.2
Commonfund Capital Venture Partners XI, L.P.	2015	-5.7	24.3	39.6	36.7	---	33.6
<b>Total Legacy Venture Capital</b>		<b>-6.0</b>	<b>25.2</b>	<b>34.3</b>	<b>31.5</b>	<b>23.3</b>	<b>10.0</b>
<b>mPME Benchmark: Russell 2000® Index</b>		<b>-7.5</b>	<b>-5.4</b>	<b>12.3</b>	<b>9.9</b>	<b>10.6</b>	<b>7.9</b>
<u>Legacy Private Natural Resources</u>							
Commonfund Capital Natural Resources IX, L.P.	2012	14.2	28.4	4.2	5.5	---	6.2
Commonfund Capital Natural Resources X	2015	12.3	26.9	6.3	11.1	---	13.5
<b>Total Legacy Private Natural Resources</b>		<b>13.3</b>	<b>27.7</b>	<b>5.1</b>	<b>7.4</b>	<b>10.1</b>	<b>25.0</b>
<b>mPME Benchmark: S&amp;P North American Natural Resources Sector Index</b>		<b>29.4</b>	<b>51.4</b>	<b>15.6</b>	<b>9.1</b>	<b>7.4</b>	<b>10.0</b>
<b>TOTAL LEGACY</b>		<b>-0.7</b>	<b>25.0</b>	<b>22.6</b>	<b>19.7</b>	<b>15.1</b>	<b>12.8</b>
<b>mPME Benchmark: Subtotal Blend of Above</b>		<b>1.9</b>	<b>11.7</b>	<b>14.1</b>	<b>10.6</b>	<b>10.0</b>	<b>7.0</b>



## Legacy PI Program Has Meaningfully Outperformed Public Markets

Funding status and performance summary:  
Inception through 03/31/2022

- ◆ **Notable contributors:** Commonfund Venture X and XI, Dover Street IX, Endowment Energy IV
- ◆ **Notable detractors:** Endowment Venture IV and V, Commonfund Natural Resources IX

Reporting Currency: U.S. Dollars (\$)

	Cash Flow & Valuation							Multiples				IRR			
	Vintage Year	Commitment	Paid-In Capital	Unfunded Commitment	Distributions at Market	Current Net Asset Value (NAV)	Total Value Creation <sup>11</sup>	Distributed / Paid In <sup>2</sup>	CA <sup>4</sup>	Total Value / Paid In <sup>2</sup>	CA <sup>4</sup>	Fund Quartile Rank	Fund IRR <sup>3</sup>	CA Median <sup>4</sup>	Fund Quartile Rank
<u>Private Investments Partnerships</u>															
<u>Legacy Private Equity</u>															
Dover Street IV, L.P.	1999	8,000,000	7,560,000	0	10,532,539	0	2,972,539	1.39	1.42	1.39	1.42	NA	8.6%	11.4%	NA
Endowment Private Equity Partners IV, L.P.	2000	5,000,000	4,880,000	0	10,261,639	0	5,381,639	2.10	1.86	2.10	1.89	2	16.8%	14.9%	5.9 2
Commonfund International Partners IV, L.P.	2001	4,000,000	3,912,000	0	7,215,395	0	3,303,395	1.84	1.75	1.84	1.81	2	12.9%	14.8%	6.9 3
Commonfund Private Equity Partners V, L.P.	2002	4,000,000	3,860,000	0	6,951,781	0	3,091,781	1.80	1.77	1.80	1.77	2	10.8%	12.3%	5.9 3
Drum Capital Management SS Partners II, L.P.	2006	10,000,000	9,112,118	887,881	11,889,622	4,711,827	7,489,331	1.30	1.44	1.82	1.50	2	8.2%	9.0%	1.9 3
Dover Street VIII, L.P.	2012	5,000,000	4,600,000	400,000	6,878,175	906,808	3,184,983	1.50	1.19	1.69	1.61	2	19.4%	13.4%	1
Blackstone Strategic Partners VI, L.P.	2014	5,000,000	3,330,786	1,723,563	3,889,435	1,236,612	1,795,261	1.17	1.19	1.54	1.63	4	14.1%	16.2%	3
Dover Street IX, L.P.	2016	5,000,000	4,200,000	800,000	3,738,563	3,911,758	3,450,321	0.89	0.74	1.82	1.78	2	27.8%	19.4%	1
Total Legacy Private Equity		46,000,000	41,454,904	3,811,444	61,357,149	10,767,005	30,669,250	1.48	1.43	1.74	1.64		11.5%	13.1%	10
mPME Benchmark: MSCI World Index (Net)								1.13		1.34			5.8%		12
<u>Legacy Venture Capital</u>															
Endowment Venture Partners IV, L.P.	1998	5,000,000	4,912,500	87,500	5,390,621	32,192	510,313	1.10	0.85	1.10	0.86	2	1.5%	-1.7%	9 2
Endowment Venture Partners V, L.P.	2000	2,640,000	2,571,881	68,119	2,456,699	70,359	-44,823	0.96	0.94	0.98	0.98	2	-0.2%	-0.2%	9 3
Commonfund Capital Venture Partners X, L.P.	2012	5,000,000	4,837,500	162,500	6,352,661	12,966,409	14,481,570	1.31	0.90	3.99	2.70	2	25.2%	20.5%	9 2
Commonfund Capital Venture Partners XI, L.P.	2015	5,000,000	4,797,500	202,500	2,425,543	13,558,575	11,186,618	0.51	0.35	3.33	2.52	2	33.6%	23.9%	8.9 2
Total Legacy Venture Capital		17,640,000	17,119,381	520,619	16,625,524	26,627,535	26,133,678	0.97	0.74	2.53	1.86		10.0%	12.0%	10
mPME Benchmark: Russell 2000® Index								0.92		1.64			7.9%		12
<u>Legacy Private Natural Resources</u>															
Endowment Energy Partners IV, L.P.	1997	4,000,000	3,910,228	0	14,825,504	0	10,915,276	3.79	2.14	3.79	2.20	1	25.7%	19.1%	9 2
Commonfund Capital Natural Resources IX, L.P.	2012	5,000,000	4,677,500	322,500	1,858,204	4,550,643	1,731,347	0.40	0.45	1.37	1.07	2	6.2%	1.4%	9 2
Commonfund Capital Natural Resources X	2015	5,000,000	4,400,000	600,000	1,559,229	4,633,217	1,792,446	0.35	0.43	1.41	1.31	2	13.5%	8.3%	9 1
Total Legacy Private Natural Resources		14,000,000	12,987,728	922,500	18,242,937	9,183,860	14,439,069	1.40	0.95	2.11	1.49		25.0%	9.1%	10
mPME Benchmark: S&P North American Natural Resources Sector Index								0.76		1.45			10.0%		12
TOTAL LEGACY		77,640,000	71,562,013	5,254,563	96,225,610	46,578,400	71,241,997	1.34	1.18	2.00	1.66		12.8%	12.1%	10
mPME Benchmark: Subtotal Blend of Above								1.02		1.43			7.0%		12

NSHE's Legacy Private Equity has delivered 5.7% excess return over public equities

NSHE's Legacy Private Natural Resources have delivered 15.0% excess return over public natural resources equities.

## Legacy Assets Summary

As of March 31, 2022  
(lagged to reflect most recent Private Investments Results)

Fund	Vintage Year	Current Net Asset Value (NAV) (\$mm)	% of Total Endowment	Manager	Strategy/Portfolio Description
Legacy Private Equity					
Dover Street VIII	2011	0.9	0.3%	HarbourVest Partners LLC	<b>Global secondaries manager</b> that will pursue three types of private equity/venture capital secondary transactions: - LP Interest: HarbourVest purchases one or more interests in existing private equity and venture capital funds from an institutional investor. - Synthetic: HarbourVest purchases a portfolio of direct company interests typically from a bank or large corporation. At purchase, the portfolio's management team usually agrees to continue managing the portfolio independent from its former employer. - Structured: HarbourVest purchases a large LP interest portfolio and sets up a structure such as a joint venture to accommodate the seller's liquidity needs.
Dover Street IX	2015	3.9	1.2%		
Drum Capital Management Special Situations Partners II	2006	4.7	1.4%	Drum Capital Management LLC	<b>Fund of Funds manager</b> focused on distressed debt, turnarounds, and restructuring partnerships. As of 3/31/18, SSP was invested with about two-thirds of the portfolio in 11 partnerships across various US & European strategies (e.g., control, trading, turnarounds, arbitrage) and almost a third in three co-investments. In December 2018, the manager's second 1-year extension of the Partnership is scheduled to end, and the fund will enter the orderly liquidation period pursuant to its Limited Partnership Agreement.
Strategic Partners VI	2013	1.2	0.4%	The Blackstone Group	<b>Secondaries manager</b> that purchases primarily North American/European leveraged buyout funds that are 75% to 85% funded at purchase. The manager will also purchase LP interests in mezzanine, venture capital, fund of funds, and real assets funds.
Legacy Venture Capital					
Endowment Venture Partners IV	1998	0.0	0.0%	Commonfund Capital Inc.	<b>Venture Capital Fund of Funds manager</b> that commits capital to a diverse set of venture capital and growth funds, mostly in China, Europe, Israel, and India. These investments range from early-stage funds to later-stage funds.
Endowment Venture Partners V	2000	0.1	0.0%		
Commonfund Capital Vanture Partners X	2012	13.0	4.0%		
Commonfund Capital Venture Partners XI	2014	13.6	4.1%		
Legacy Private Natural Resources					
Commonfund Capital Natural Resources IX	2011	4.6	1.4%	Commonfund Capital Inc.	<b>Natural Resources Fund of Funds manager</b> that focuses on a diversified group of natural resources-focused private equity funds in North America. A portion of investments are held in the gas and oil sector while also including other sectors such as clean energy, agriculture, and timber. A majority of investments are seen in primary commitments with secondary and direct coinvestments taking a smaller role.
Commonfund Capital Natural Resources X	2014	4.6	1.4%		
Legacy Liquidating Positions					
Farallon Capital Sidepocket	2012	0.1	0.0%	Farallon Capital Management	Special Situations account established prior to 2010 holding liquidating assets in real estate (75%) and illiquid equity/debt (25%)

## **PORTFOLIO PERFORMANCE NOTES**

<sup>1</sup> In the period following March 31, 2022, Nevada System of Higher Education made an additional commitment to NFX Capital Fund II, LP (\$0.4 million).

<sup>2</sup> The Distributed / Paid In Multiple is calculated by dividing the total distributions from the fund by the total paid into the fund. The Total Value / Paid In Multiple is calculated by dividing the sum of the remaining investment NAV and total distributions from the fund by the total paid into the fund.

<sup>3</sup> Fund internal rate of return includes the cash-on-cash return net of fees, expenses, and carried interest, as well as the net asset value of Nevada System of Higher Education's interest in the partnership.

<sup>4</sup> CA vintage year benchmarks are as of March 31, 2022. All benchmarks are in U.S. Dollars and are considered final. The Legacy Private Equity asset class utilizes the Secondary Funds benchmark. The Legacy Private Natural Resources asset class utilizes the Natural Resources benchmark. The Legacy Venture Capital asset class utilizes the U.S. Venture Capital benchmark. The Managed Private Diversifiers asset class utilizes the Private Credit benchmark. The Managed Private Equity / Distressed asset class utilizes the Private Equity benchmark. The Managed Private Natural Resources asset class utilizes Natural Resources benchmark. The Managed Real Estate asset class utilizes the Real Estate benchmark. The Managed Venture Capital Asset Class utilizes the U.S. Venture Capital benchmark.

<sup>5</sup> Fund utilizes the U.S. Private Equity benchmark.

<sup>6</sup> Fund utilizes the Ex U.S. Private Equity and Venture Capital benchmark.

<sup>7</sup> Fund utilizes the Distressed Securities benchmark.

<sup>8</sup> Fund utilizes the Venture Capital benchmark.

<sup>9</sup> CA Median comparisons reflect the median of the pooled benchmarks for the vintage year of the three respective fund and two subsequent vintage years, based on the assumption that a fund of funds would typically make commitments over three years.

<sup>10</sup> Cambridge Associates' asset class and portfolio benchmark medians are calculated using the middle breakpoint fund in each asset class vintage year, and are weighted by member's paid-in capital to each asset class and vintage year.

<sup>11</sup> Total Value Creation is equal to:  $[(\text{Distributions at Market}) + (\text{Current Net Asset Value}) - (\text{Paid-In Capital})]$ .

<sup>12</sup> The mPME IRR evaluates what Nevada System of Higher Education's return would have been if the dollars invested in private funds had been deployed in a public market index. The mPME calculation assumes that a public index's shares are purchased and sold according to the cash flow stream of the private portfolio, with distributions calculated in the same proportion as the private portfolio's. The mPME NAV (the value of the shares held by the public equivalent) is a function of mPME cash flows and public index returns. All mPME values are as of March 31, 2022, and are calculated using U.S. Dollars.

<sup>13</sup> Fund utilizes the Ex U.S. Private Equity benchmark.

<sup>14</sup> Fund utilizes the Secondary Funds benchmark.

<sup>15</sup> Fund utilizes the Infrastructure benchmark.

<sup>16</sup> Fund data is rolled forward with cash flows.

Funds with NA (not applicable) are too young to have produced meaningful returns or have not yet commenced operations. Benchmarks with NA (not applicable) have an insufficient number of funds in the vintage year sample to produce a meaningful return.

Italicized funds have an inception date that is fewer than 6 years from the report date. Analysis and comparison of these partnerships' returns to benchmark statistics may not be meaningful.

Fund vintage year is determined based on the fund's first cash flow, defined as the year of the fund's first drawdown or capital call from its investors. In instances where a fund has not yet called capital, the vintage year shown is based on the legal inception date as noted in the fund's closing documents and financial statements.

## END NOTES

JUNE 30, 2022

Due to the nature of Exchange Traded Funds (ETFs), passive index funds, and futures, options and other derivatives, these investments/contracts are not subject to the same monitoring or due diligence requirement as active managers. A list of investments in this portfolio that are excluded from monitoring can be provided upon request.

1. Performance and market values are as of 03/31/2022 (with 10 funds/6% of PI NAV as of 12/31/21), all adjusted with cash flows through the current period.
2. For benchmark details, please refer to the Custom Benchmark Compositions exhibit.
3. From 01/31/88 to 01/31/01 benchmark consists of the MSCI ACWI (G). Prior to 01/31/88 benchmark consists of the MSCI World Index (N).
4. Performance, when denoted as preliminary (\*) for this manager, utilizes a gross return figure.
5. Prior to 02/01/01, benchmark consists of MSCI Emerging Markets Index.
6. Prior to 04/01/19 this benchmark consisted of 100% CSI 300 Index.
7. From 12/01/16 to present the benchmark consists of the lagged 0.3 beta-adjusted MSCI ACWI (N). Prior to 12/01/16 benchmark consists of HFRI Fund of Funds Diversified Index.
8. For benchmark details, please refer to the Custom Benchmark Compositions exhibit. Benchmark composition did not match the Benchmark Composition sheet on previous reports. This has since been revised.
9. Benchmark since 06/30/18. The previous benchmark was FTSE Developed Core Infrastructure 50/50 Hedged Index.
10. Market Value is preliminary and consists of \$112k from Bertram Growth Capital III, L.P., \$187k from Athanor International Fund redemption, and \$66k from Parametric Global NR.
11. Market value and performance is preliminary.
12. Legacy benchmark lag date has been adjusted to align with Private Investment data as of 12/31/21.
13. Farallon Capital fully redeemed on 12/31/12. Market value represents illiquid Special Situations Account.



## BENCHMARK END NOTES

JUNE 30, 2022

## Policy Benchmark

	CJA Normalized Benchmark	Russell Normalized Benchmark	Wilshire 5000 Total Market Index	MSCI EAFE Index (N)	MSCI ACWI ex U.S. Index (N)	MSCI Emerging Markets Index (G)	MSCI Emerging Markets Index (N)	Adjusted MSCI ACWI (N) <sup>(2)</sup>	CA Global Private Equity & Venture Capital Benchmark	HFRI FOF Diversified Index	0.3 beta-adjusted MSCI ACWI (N)
Inception to 03/31/96:	X	X	60%	10%	X	X	X	X	X	X	X
04/01/96 to 09/30/99:	X	X	45%	15%	X	5%	X	X	X	X	X
10/01/99 to 06/30/00:	X	X	42%	15%	X	5%	X	X	X	8%	X
07/01/00 to 03/31/06:	X	X	42%	10%	X	X	3%	X	X	12%	X
04/01/06 to 06/30/13:	X	X	38%	X	17%	X	X	X	X	12%	X
07/01/13 to 11/30/16:	X	X	24%	16%	X	X	8%	X	10%	14%	X
12/01/16 to Present:	ACB <sup>(4)</sup>	ACB <sup>(4)</sup>	X	X	X	X	X	ACB <sup>(4)</sup>	X	X	ACB <sup>(4)</sup>

	FTSE NAREIT All Equity REITs Index	FTSE EPRA NAREIT Global RE Index	BBG Barc U.S. TIPS Index	Wilshire DIH Benchmark	S&P NA Natural Resources Index	S&P GSCI	Alerian MLP Index	CA Private Natural Resources Benchmark	BBG Barc Government / Credit Bond Index	BBG Barc Aggregate Bond Index	JP Morgan Global Govt Bond Index	Citigroup 3-Month T-Bill Index
Inception to 03/31/96:	X	X	X	X	X	X	X	X	30%	X	X	X
04/01/96 to 09/30/99:	5%	X	X	X	X	X	X	X	X	30%	X	X
10/01/99 to 06/30/00:	5%	X	X	X	X	X	X	X	X	25%	X	X
07/01/00 to 03/31/06:	5%	X	5%	X	X	X	X	X	X	23%	X	X
04/01/06 to 06/30/13:	3%	X	X	7%	X	X	X	X	X	23%	X	X
07/01/13 to 11/30/16:	X	2%	X	X	5%	X	X	1%	X	14%	2%	4%
12/01/16 to Present:	X	X	X	X	ACB <sup>(4)</sup>	X	X	X	X	X	X	ACB <sup>(4)</sup>

## CIA Normalized Benchmark

	Adjusted MSCI ACWI (N) <sup>(1)(2)</sup>	Adjusted Diversifiers Benchmark <sup>(1)(7)</sup>	Adjusted Real Assets Benchmark <sup>(1)(3)</sup>	BBG Barc Aggregate Bond Index <sup>(1)</sup>
12/01/16 to Present:	62%	18%	10%	10%

## Russell Normalized Benchmark

	MAC + Custom Benchmark <sup>(1)(5)</sup>	Bloomberg Barclays US 1-3M T-Bill index <sup>(1)</sup>	LIBOR + 4% <sup>(1)</sup>	0.3 beta-adjusted MSCI ACWI (N) <sup>(1)</sup>	NCREIF <sup>(6)</sup>	BBG Barc Aggregate Bond Index	BBG Barc 3M USD LIBOR Cash Index <sup>(1)</sup>	Actual Portfolio Returns During Liquidation Period
01/05/17 to 01/31/17:	73%	12%	X	X	X	10%	5%	X
02/01/17 to 03/31/17:	73%	X	12%	X	X	10%	5%	X
04/01/17 to 09/30/20:	68%	X	12%	X	5%	10%	5%	X
10/01/20 to 11/30/2021:	68%	X	X	12%	5%	10%	5%	X
12/01/2021 to Present	X	X	X	X	X	X	X	100%

(1) Adjusted by 50% of Legacy Assets per Section 5.4.d of NSHE IPS.

(2) Adjusted Managed Growth Benchmark consists of two parts: (1) MSCI All Country World Index (N) weighted by the actual Public Growth allocation &amp; (2) MSCI All Country World Index (N) weighted by the actual Private Growth allocation (updated on a lagged quarterly basis to match Private Investments reporting), this has been historically done.

(3) Adjusted Managed Real Assets Benchmark consists of three parts: (1) CJA Managed Real Assets benchmark weighted by the actual Public Real Assets allocation, (2) FTSE EPRA-NAREIT Developed RE Index (N) weighted by the actual Private Real Estate allocation &amp; (3) S&amp;P Global Natural Resources Index (N) weighted by the actual Private Natural Resources allocation (with 2 &amp; 3 updated on a lagged quarterly basis to match Private Investments reporting).

(4) Benchmark is dynamically adjusted on a monthly basis to reflect the Average Capital Base weightings of CJA Managed Assets, Russell Assets and Legacy Assets.

(5) Benchmark consists of a custom blend of the Russell Global Index (N) 50% Hedged, Bloomberg Commodity Index, FTSE EPRA/NAREIT Developed RE Index (N), S&amp;P Global Infrastructure Index (N), BofAML Developed HY Constrained Bond Index USD Hedged, JP EMBI Diversified Index, and BBG Barc US 1-3 month Treasury Bill Index provided by Russell Investments.

(6) NCREIF Fund Index Open-End Diversified Core Equity-Equal Weight-Endowment &amp; Foundation Eligible (NFI-ODCE-EQ-E&amp;F).

(7) Adjusted Managed Diversifiers Benchmark consists of two parts: (1) 0.3 Beta-Adjusted MSCI ACWI (N) weighted by the actual Public Diversifiers allocation &amp; (2) MSCI All Country World Index (N) weighted by the actual Private Growth allocation (updated on a lagged quarterly basis to match Private Investments reporting), this has been historically done.

## BENCHMARK END NOTES

JUNE 30, 2022

### CJA Managed Diversifiers Benchmark<sup>(7)</sup>

	HFRI FOF Diversified Index	0.3 beta- adjusted MSCI ACWI (N)
Inception to 11/30/16:	100%	X
12/01/16 to Present:	X	100%

### CJA Managed Real Assets Benchmark<sup>(3)</sup>

	FTSE NAREIT All Equity REITs Index	Wellington DIH Benchmark	S&P NA Natural Resources Index	S&P Global Natural Resources Index	FTSE EPRA NAREIT Global RE Index	S&P GSCI	Alerian MLP Index	MSCI World Core Infrastructure Index
Inception to 11/30/04:	100%	X	X	X	X	X	X	X
12/01/04 to 03/31/06:	65%	35%	X	X	X	X	X	X
04/01/06 to 06/30/13:	30%	70%	X	X	X	X	X	X
07/01/13 to 11/30/16:	X	X	70%	X	30%	X	X	X
12/01/16 to 09/30/20:	X	X	25%	X	25%	25%	25%	X
10/01/20 to Present:	X	X	X	33%	33%	X	X	33%

### CJA Managed Fixed Income Benchmark

	BBG Barc Aggregate Bond Index	JP Morgan Global Government Bond Index	Citigroup 3 - Month T-Bill Index
Inception to 06/30/13:	100%	X	X
07/01/13 to 11/30/16:	70%	10%	20%
12/01/16 to Present:	100%	X	X

### Legacy Benchmark

	MSCI ACWI (N)	S&P NA Natural Resources Index	0.3 beta- adjusted MSCI ACWI (N)	91-Day T-Bill Index
Inception to Present:	ACB	ACB	ACB	ACB

(3) Adjusted Managed Real Assets Benchmark consists of three parts: (1) CJA Managed Real Assets benchmark weighted by the actual Public Real Assets allocation, (2) FTSE EPRA-NAREIT Developed RE Index (N) weighted by the actual Private Real Estate allocation & (3) S&P Global Natural Resources Index (N) weighted by the actual Private Natural Resources allocation (with 2 & 3 updated on a lagged quarterly basis to match Private Investments reporting).

(7) Adjusted Managed Diversifiers Benchmark consists of two parts: (1) 0.3 Beta-Adjusted MSCI ACWI (N) weighted by the actual Public Diversifiers allocation & (2) MSCI All Country World Index (N) weighted by the actual Private Growth allocation (updated on a lagged quarterly basis to match Private Investments reporting), this has been historically done.

# 3. ANNUAL SPENDING REVIEW



## Annual Spending Policy Review – Overview

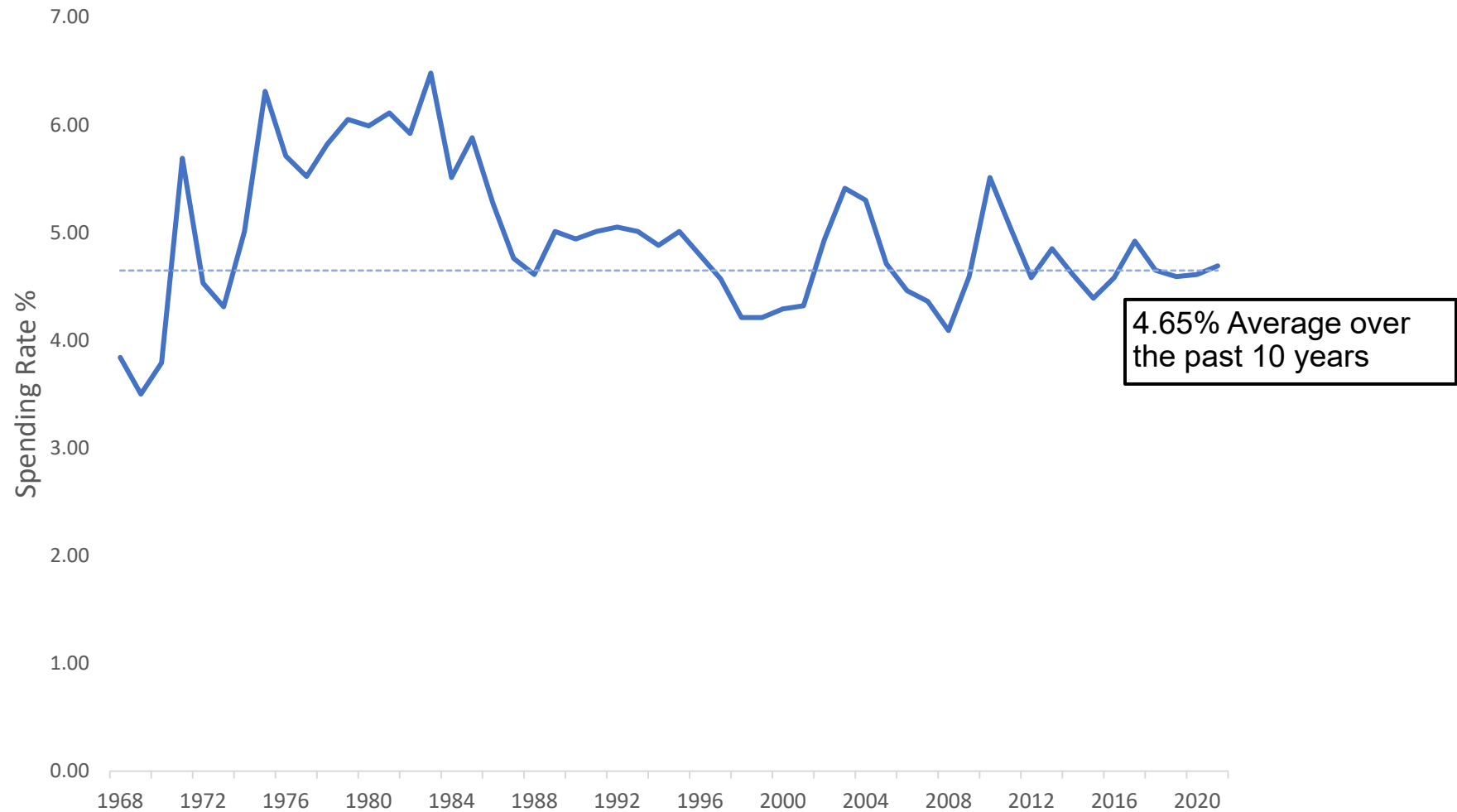
- At the heart of endowment investment planning is the attempt to mediate among the following **conflicting objectives**:
  - **Maximize long-term total return**
  - **Maximize annual spending** from the fund
  - **Preserve the real value** (purchasing power) of the fund's principal and of its spending distributions over the long term
  - **Maximize the stability and predictability of spending distributions.** In other words, minimize year-to-year volatility of the spending stream or spending shortfall risk.
- This leads to the following quandaries:
  - The **higher the spending rate**, the **lower the growth rate of the spending amount** for any given level of return
  - **Investment returns are inherently volatile**, while **program expense growth is relatively stable**.
- This section presents comparative data on the spending rates of peer endowments. This is meant to be informative, not prescriptive; we find that clients consider this a helpful reference point, but we recognize that needs and resources differ among institutions.
  - Endowment spending rates have fluctuated over time but have been relatively stable at around 5% over the last ten years.
  - A fiscal year 2021 survey of colleges & universities reveals more decreases than increases in the target rate over the past five years.



## For Perspective, What Do Peers Spend?

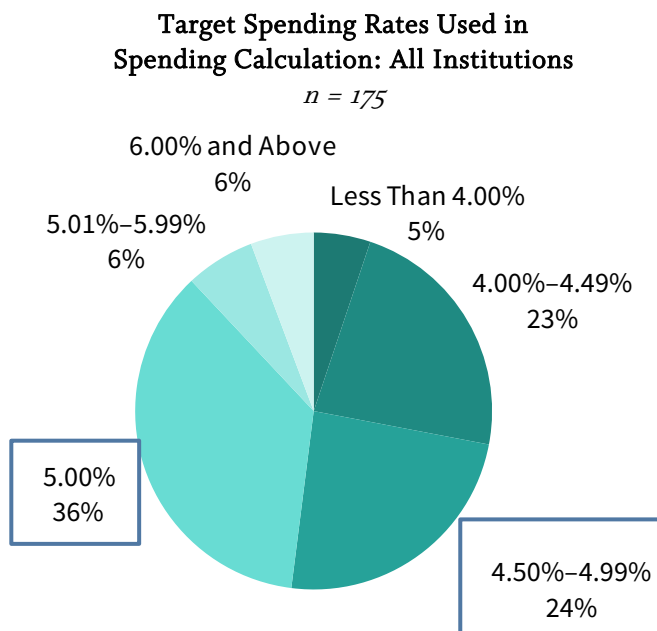
### Historical Endowment Spending Rates

1968–2022



## Spending Rates – Peer Comparisons

- The vast majority of institutions have target spending rates of 4% to 5%; NSHE's current all-in distribution rate of 4.625% is in line with that of other similarly sized institutions as well as other educational institutions.



### By Asset Size

	Less Than 4.00%	4.00%– 4.49%	4.50%– 4.99%	5.00%	5.01%– 5.99%	6.00% and Above
Less Than \$200M	5%	20%	25%	39%	2%	9%
<i>n</i>	2	9	11	17	1	4
\$200M–\$500M	8%	13%	24%	34%	11%	11%
<i>n</i>	3	5	9	13	4	4
\$500M–\$1B	7%	29%	14%	39%	7%	4%
<i>n</i>	2	8	4	11	2	1
\$1B–\$3B	3%	30%	30%	30%	3%	3%
<i>n</i>	1	10	10	10	1	1
More Than \$3B	3%	25%	25%	38%	9%	—
<i>n</i>	1	8	8	12	3	—

### By Institution Type

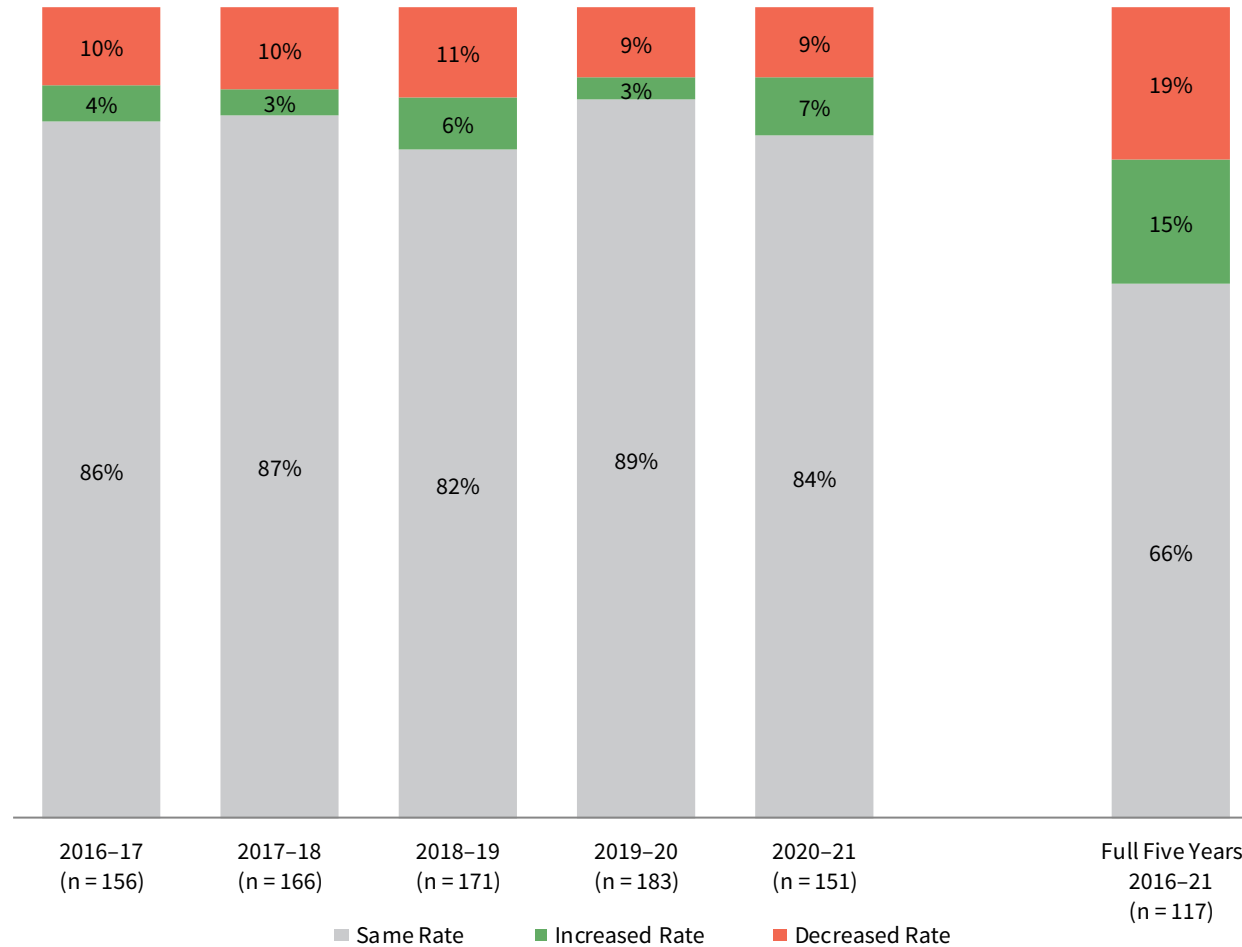
	Less Than 4.00%	4.00%– 4.49%	4.50%– 4.99%	5.00%	5.01%– 5.99%	6.00% and Above
Colleges & Universities	4%	26%	24%	32%	7%	7%
<i>n</i>	4	27	24	33	7	7
Independent Schools	—	31%	62%	8%	—	—
<i>n</i>	—	4	8	1	—	—
Cultural & Environmental	6%	9%	16%	53%	13%	3%
<i>n</i>	2	3	5	17	4	1
Healthcare	—	27%	18%	36%	—	18%
<i>n</i>	—	3	2	4	—	2
Other Nonprofits	18%	18%	18%	47%	—	—
<i>n</i>	3	3	3	8	—	—

Source: Spending policy data as reported to Cambridge Associates LLC., as of 6/30/2021.

Notes: Market value–based spending policies base spending on a pre-specified percentage of a moving average of market values. Chart reflects data for the 243 institutions that provided detailed data on their target spending rate. If a range was provided, the target spending rate was calculated using the midpoint of the range.

## Most peers have maintained target spending rate in recent years, but decreases have outpaced increases

INSTITUTIONS CHANGING TARGET RATES IN MARKET VALUE-BASED SPENDING POLICIES

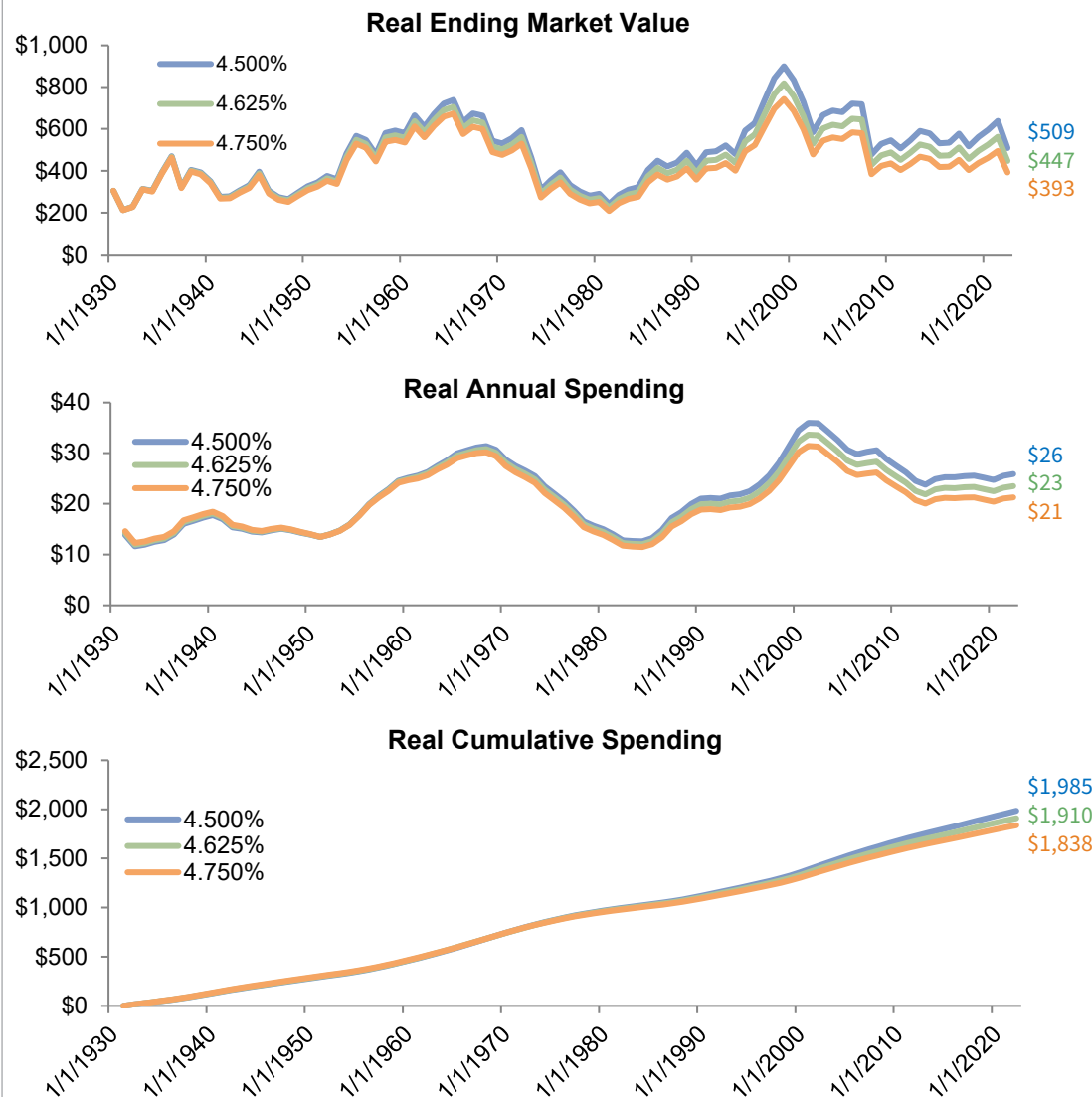


Source: Spending policy data as reported to Cambridge Associates LLC., as of 6/30/2021.

Notes: Market value-based spending policies base spending on a pre-specified percentage of a moving average of market values. Chart reflects data for the institutions using a market value-based spending policy that provided the target rate used in their spending calculation. If a range was provided, the target spending rate was calculated using the midpoint of the range.

## Balancing Current / Future Spending: A Historical Perspective

January 1, 1930 – June 30, 2022



- Spending rates have an impact on the ability to maintain purchasing power. Historically, spending rates of 5% or below have maintained endowment corpia over the long term (albeit with a few challenging shorter-term periods).
- Over time, a lower spending rate results in more dollars available to spend (in real terms). For example, if NSHE had started with a \$298 million endowment in 1930 (adjusted for inflation over the past 90 years), a 4.625% spending rate would result in an annual distribution amount of \$23 million in 2022 in today's dollars – or ~\$2 million more than if a 4.75% spending rate had been applied over that time period.

Sources: BofA Merrill Lynch, Citigroup Global Markets, Federal Reserve, Global Financial Data, Inc., Standard and Poor's, and U.S. Department of Labor - Bureau of Labor Statistics.

Notes: Prior to June 30, 1984 portfolio return assumes a 75% allocation to stocks and 25% allocation to bonds since 1930, rebalanced quarterly and spends a given percentage of the portfolio's 5-year trailing average market value. U.S. common equity series consists of Standard & Poor's 500 Index (1900 to date). The long-term bonds series is composed of Citigroup AAA/AA Corporate (High-Grade) Bond Index from 1930 to date. From June 30, 1984 to present, returns represent the Nevada System of Higher Education Endowment Fund's real returns (adjusted using the CPI-U).