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**Oklahoma Law Enforcement Retirement System**

***Market Update and Portfolio Review***

January 31, 2023



2018    2019    2020    2021

**We are proud to announce that ACG has again been named a Greenwich Associates Quality Leader – recognized as one of the top consultants in the industry.**

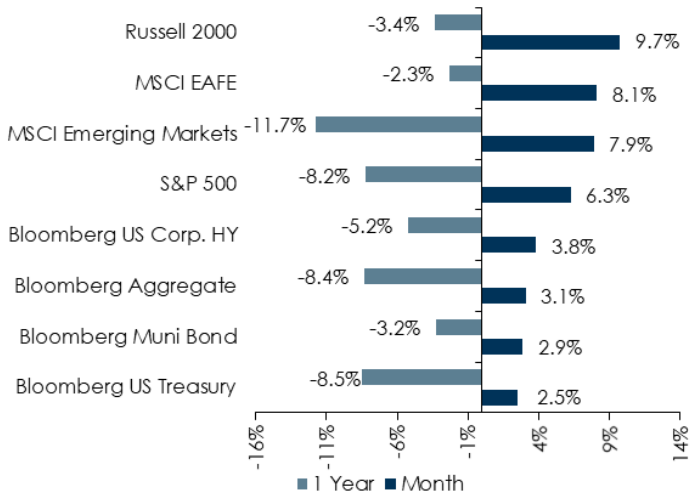
**Methodology and Disclosure:** Between July and October 2021, Coalition Greenwich (previously known as Greenwich Associates), conducted in-person and phone interviews and online surveys with 811 professionals at 661 of the largest tax-exempt funds in the United States, including corporate and union funds, public funds, endowments and foundations, insurance general accounts, and healthcare organizations, with either pension or investment pool assets greater than \$150 million. Study participants were asked to provide quantitative and qualitative evaluations of their asset managers and investment consultants, including qualitative assessments of those firms soliciting their business and detailed information on important market trends. ACG is one of four firms recognized in the mid-size investment consultant category. The ratings may not be representative of any one client's experience with ACG; rather they are representative of those clients that chose to participate in the survey. The results are not indicative of ACG's future performance. ACG does not pay to have its clients participate in the study.

## Economic Overview

- US GDP growth remained strong with an annualized growth rate of 2.9% in Q4 and 2.1% overall increase for calendar year 2022
- Data supported a deceleration in Fed tightening, with headline CPI declining to 6.5% in December and wage growth declining to 4.6%
- Global growth remains under pressure, but China's reopening and a mild European winter helped those regions exceed Q4 GDP expectations

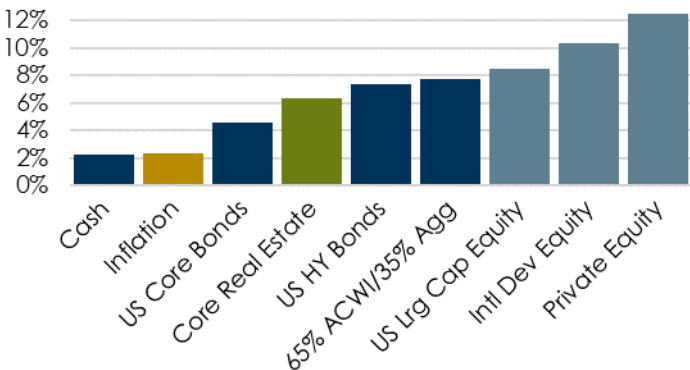
### Market Returns

- GDP growth, lower inflation helped equity markets rally
- Bond indices performed well amid strong investor demand



Source: Bloomberg, ACG Research (as of 1/31/2023)

### Average Annual Return Assumptions (Next 10 Years)



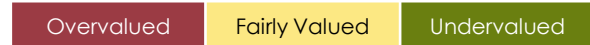
### Asset Class Valuations - Rebalancing Rationale

- Equity valuations improved as prices fell in 2022
- Favor investment grade credit over high yield
- Cash yields remain attractive

Asset Class	Current Valuation	Rationale
US Large Cap	Fairly Valued	Balanced upside/downside risks
US Small Cap	Fairly Valued	Balanced upside/downside risks
Intl Developed	Overvalued	Favorable valuations, currency tailwinds
Emerging Mkt	Fairly Valued	Balanced upside/downside risks

Cash	Overvalued	High current yield
Core Bonds	Overvalued	Favor high quality
Multi-Sector	Fairly Valued	Duration, spreads balanced
Unconstrained	Fairly Valued	Duration, spreads balanced

Core Real Estate	Overvalued	Historically low (but rising) cap rates
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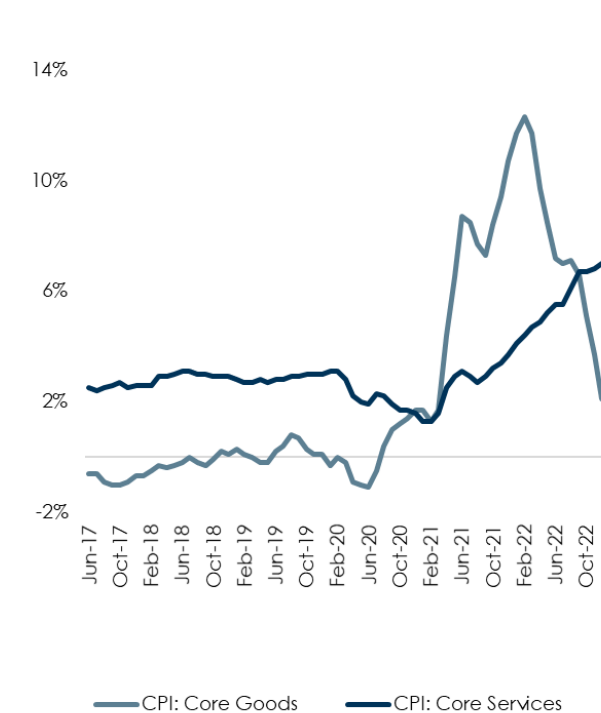
### Recent Articles (click on links below)

- [China Reopening \(January\)](#)
- [Restoring the Fixed Income Foundation \(December\)](#)
- [Mid-Term Elections \(October\)](#)

### Key Risk Factors We Are Watching

- Inflation and labor market data
- Tightening financial conditions
- Downward revisions to corporate earnings
- Ongoing geopolitical tensions
- Regulatory policy shifts (US and China in particular)

### Elevated Services Inflation Still a Fed Concern



Source: Bloomberg





## Oklahoma Law Enforcement Retirement System

For the Periods Ending January 31, 2023

	Jan 2023 Market Value (\$000s)	Dec 2022 Market Value (\$000s)	Actual Allocation (%)	1 Month (%)	FYTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	Since Inception (%)
<b>Equity</b>										
<b>US Large Cap Equity</b>										
Hotchkis and Wiley (30 bp) (05/90)	77,122	70,276	7.01	9.74	19.46	1.94	13.49	8.28	12.53	10.87
<i>Russell 1000 Value</i>				5.18	11.60	-0.43	8.54	6.94	10.15	9.94
NT S&P 500 Index Fund (1 bp) (08/08)	99,780	93,882	9.07	6.28	8.74	-8.21	9.91	9.55	12.68	10.63
<i>S&amp;P 500</i>				6.28	8.74	-8.22	9.88	9.54	12.68	10.61
Polen (50 bp) (01/19)	68,384	61,203	6.22	11.73	5.77	-23.17	4.49	--	--	12.66
<i>Russell 1000 Growth</i>				8.33	6.73	-16.02	9.89	11.22	14.53	16.26
<b>US Small Cap Equity</b>										
Kennedy Capital (89 bp) (07/93)	66,264	61,021	6.02	8.59	17.47	0.84	14.42	8.06	11.34	12.61
<i>Russell 2000 Value</i>				9.54	13.29	-0.52	9.94	5.78	8.84	9.68
Wellington (80 bp) (09/16)	67,063	61,338	6.10	9.30	13.06	-9.80	3.72	5.03	--	9.06
<i>Russell 2000 Growth</i>				9.95	14.77	-6.50	4.26	4.68	9.54	8.39
<b>International Developed Markets Equity</b>										
Mondrian International (52 bp) (01/05)	75,894	70,204	6.90	8.10	8.41	-4.51	2.63	1.00	4.72	4.85
<i>MSCI EAFE</i>				8.11	15.13	-2.33	4.74	2.63	5.44	5.09
<i>MSCI EAFE Value</i>				7.74	15.94	1.34	5.09	1.23	4.28	4.26
Barings Focused EAFE Plus Equity (40 bp) (02/12)	68,579	64,063	6.24	7.05	12.86	-5.82	3.58	1.84	5.21	5.47
<i>MSCI ACWI ex US</i>				8.13	11.54	-5.22	4.12	1.85	4.68	5.53
<b>Emerging Markets Equity</b>										
William Blair EM Leaders (76 bp) (10/16)	42,411	39,410	3.86	7.62	4.45	-15.09	0.17	0.02	--	5.55
<i>MSCI Emerging Markets</i>				7.91	4.95	-11.73	1.77	-1.11	2.45	4.90
Wasatch Advisors (110 bp) (07/12)	16,407	15,406	1.49	6.62	6.25	-26.50	5.58	5.17	5.14	6.31
<i>MSCI EM SC</i>				5.94	9.00	-8.61	9.12	1.52	3.91	5.26
<b>Long/Short Equity</b>										
Grosvenor (80 bp) (02/08)	300	306	0.03	-1.74	-7.95	-10.28	0.43	1.41	4.61	3.30
<i>MSCI ACWI</i>				7.19	9.88	-7.54	7.33	6.06	8.80	6.49
<i>HFRI FOF: Strategic</i>				2.75	3.48	-4.87	3.36	2.05	3.40	1.88
K2 Ascent (27 bp) (08/20)	36,568	38,729	3.32	4.96	8.65	-6.66	--	--	--	-0.00
<i>MSCI ACWI</i>				7.19	9.88	-7.54	7.33	6.06	8.80	8.81
<i>HFRI FOF: Strategic</i>				2.75	3.48	-4.87	3.36	2.05	3.40	3.68
<b>Private Equity (12/01) *</b>	<b>119,135</b>	<b>121,187</b>	<b>10.83</b>	<b>0.07</b>	<b>-2.19</b>	<b>-3.05</b>	<b>18.04</b>	<b>14.47</b>	<b>12.06</b>	<b>6.24</b>

\* Performance is reported net of fees.

## Oklahoma Law Enforcement Retirement System

For the Periods Ending January 31, 2023

	Jan 2023 Market Value (\$000s)	Dec 2022 Market Value (\$000s)	Actual Allocation (%)	1 Month (%)	FYTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	Since Inception (%)
<b>Fixed Income</b>										
<b>Core Bonds</b>										
NT Aggregate Index Fund (2 bp) (04/04) <i>Bloomberg US Aggregate</i>	53,614	52,033	4.87	3.04 3.08	0.07 0.02	-8.26 -8.36	-2.32 -2.35	0.91 0.86	1.46 1.43	3.10 3.10
<b>Core Plus Bonds</b>										
TCW Asset Management (34 bp) (10/93) <i>Bloomberg US Aggregate</i>	107,765	104,022	9.80	3.59 3.08	0.23 0.02	-8.97 -8.36	-1.42 -2.35	1.76 0.86	2.29 1.43	5.10 4.43
<b>Multi Sector Fixed Income</b>										
Loomis Sayles (35 bp) (09/21) <i>Bloomberg Gov't/Credit</i>	54,545	52,395	4.96	4.11 3.01	3.27 0.08	-6.54 -8.75	-- -2.37	-- 1.04	-- 1.55	-6.70 -8.45
<b>Real Assets</b>										
<b>Real Estate</b>										
JPM Strategic Property Fund (92 bp) (04/12) <i>NFI ODCE Net</i>	108,323	108,894	9.85	-0.30 0.00	-6.46 -4.84	3.10 6.59	8.43 8.98	7.46 7.73	9.46 9.11	9.67 9.07
UBS Trumbull Property Fund (68 bp) (01/13) <i>NFI ODCE Net</i>	17,888	18,904	1.63	-5.20 0.00	-5.19 -4.84	5.90 6.59	5.71 8.98	4.34 7.73	6.98 9.11	6.92 9.03
Colcord Center (11/07) <sup>3</sup>	4,800	4,800	0.44	-0.40	5.72	1.68	6.17	5.62	5.85	5.39
Value Add Real Estate (02/22)	8,303	8,303	0.75	0.00	8.10	19.98	--	--	--	19.98
Cash and Equivalents (03/10)	6,752	1,510	0.61	0.42	1.98	2.24	0.98	1.51	1.02	0.88

<sup>3</sup> Performance is based on monthly cash flows and an annual appraisal valuation.

Investment management fee estimates stated after the manager names are calculated based on March 31, 2021 market values and exclude performance based fees.

## Global Private Equity

For the Period Ending January 31, 2023

### Summary of Cash Flows for 1 Month

Cash Outflows	Cash Inflows	Net Cash Flows
-	2,132,636	2,132,636

### Summary of Portfolio Inception to Date

	Inception Date	Committed	Drawn to Date	Remaining Commitment	Distributions to Date	Adjusted Ending Value	Total Value	Total Value to Paid-in
<b>Total</b>	<b>Dec-01</b>	<b>200,185,000</b>	<b>135,782,367</b>	<b>68,378,673</b>	<b>74,473,499</b>	<b>119,134,789</b>	<b>193,608,288</b>	<b>1.43x</b>
AMR I	Dec-01	8,000,000	8,352,692	-	9,400,696	-	9,400,696	1.13x
Knightsbridge VI	Dec-04	10,000,000	9,506,658	493,342	15,170,861	<b>2,138,198</b>	17,309,059	1.82x
AMR / APEP II	Dec-05	10,000,000	10,110,724	18,407	12,616,531	<b>27,721</b>	12,644,252	1.25x
Knightsbridge VII	Aug-08	7,500,000	6,247,505	1,252,495	12,607,622	<b>6,228,501</b>	18,836,123	3.01x
Apollo VIII	Feb-14	10,000,000	10,509,941	1,127,375	11,176,070	<b>3,889,727</b>	15,065,797	1.43x
Warburg Pincus XII	Dec-15	10,000,000	9,865,000	135,000	10,234,297	<b>10,548,665</b>	20,782,962	2.11x
Apollo IX	Mar-19	8,500,000	7,589,230	2,692,672	2,710,546	<b>7,297,652</b>	10,008,198	1.32x
Warburg Pincus Global Growth	Mar-19	40,000,000	35,180,000	4,820,000	290,000	<b>46,728,430</b>	47,018,430	1.34x
FirstMark Capital Opportunity Fund III	Jun-20	5,000,000	5,075,000	-	126,123	<b>5,217,718</b>	5,343,841	1.05x
CVI Credit Value Fund A V LP	Jul-20	15,000,000	9,750,000	5,250,000	-	<b>10,028,246</b>	10,028,246	1.03x
FirstMark Capital Fund V	Jul-20	5,000,000	3,200,000	1,800,000	114,914	<b>4,238,906</b>	4,353,820	1.36x
Oaktree Opportunities Fund XI	Aug-20	15,000,000	7,500,000	7,500,000	25,839	<b>9,108,358</b>	9,134,197	1.22x
Francisco Partners Agility II	Sep-20	4,050,000	1,970,325	2,079,675	-	<b>2,180,797</b>	2,180,797	1.11x
Francisco Partners VI	Jan-21	12,135,000	8,925,292	3,209,708	-	<b>9,569,333</b>	9,569,333	1.07x
Warburg Pincus Global Growth 14	Jun-22	10,000,000	2,000,000	8,000,000	-	<b>1,932,537</b>	1,932,537	0.97x
FirstMark Capital OF IV		5,000,000	-	5,000,000	-	-	-	-
FirstMark Capital VI		5,000,000	-	5,000,000	-	-	-	-
Francisco Partners Agility III		5,000,000	-	5,000,000	-	-	-	-
Francisco Partners VII		15,000,000	-	15,000,000	-	-	-	-

### Cash Flow Activity for 1 Month

Fund Name	Date	Transaction Type	Cash Outflows	Cash Inflows	Net Cash Flows
<b>Total</b>			<b>-</b>	<b>2,132,636</b>	<b>2,132,636</b>
Warburg Pincus XII	1/09/2023	Distribution	-	2,072,600	
FirstMark Capital Fund V	1/17/2023	Distribution	-	60,036	



## Value Add Real Estate

For the Period Ending January 31, 2023

### Summary of Cash Flows for 1 Month

Cash Outflows	Cash Inflows	Net Cash Flows
-	-	-

### Summary of Portfolio Inception to Date

	Inception Date	Committed	Drawn to Date	Remaining Commitment	Distributions to Date	Adjusted Ending Value	Total Value	Total Value to Paid-in
<b>Total</b>	Jan-22	69,000,000	7,400,000	61,600,000	-	8,303,049	8,303,049	1.12x
Starwood Distressed Opp. Fund XII	Jan-22	30,000,000	6,000,000	24,000,000	-	<b>6,903,049</b>	6,903,049	1.15x
Angelo Gordon XI	Oct-22	20,000,000	1,400,000	18,600,000	-	<b>1,400,000</b>	1,400,000	1.00x
Blackstone Real Estate Partners X		19,000,000	-	19,000,000	-	-	-	-

### Cash Flow Activity for 1 Month

Fund Name	Date	Transaction Type	Cash Outflows	Cash Inflows	Net Cash Flows
<b>Total</b>			-	-	-

## Market Overview

For the Periods Ending January 31, 2023

	1 Month (%)	FYTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)
<b>Equity Markets - Core</b>						
S&P 500	6.28	8.74	-8.22	9.88	9.54	12.68
Russell 1000	6.70	9.16	-8.55	9.66	9.38	12.51
Russell Mid Cap	8.30	14.18	-3.33	9.02	8.02	11.11
Russell 2000	9.75	14.03	-3.38	7.51	5.54	9.36
<b>Equity Markets - Growth</b>						
Russell 1000 Growth	8.33	6.73	-16.02	9.89	11.22	14.53
Russell Mid Cap Growth	8.73	15.47	-8.52	6.46	8.26	11.67
Russell 2000 Growth	9.95	14.77	-6.50	4.26	4.68	9.54
<b>Equity Markets - Value</b>						
Russell 1000 Value	5.18	11.60	-0.43	8.54	6.94	10.15
Russell Mid Cap Value	8.08	13.49	-0.69	9.31	6.89	10.17
Russell 2000 Value	9.54	13.29	-0.52	9.94	5.78	8.84
<b>International Markets</b>						
MSCI EAFE	8.11	15.13	-2.33	4.74	2.63	5.44
MSCI ACWI ex US	8.13	11.54	-5.22	4.12	1.85	4.68
MSCI World	7.10	10.53	-6.99	8.10	7.05	9.64
MSCI Emerging Markets	7.91	4.95	-11.73	1.77	-1.11	2.45
MSCI EM SC	5.94	9.00	-8.61	9.12	1.52	3.91
<b>Fixed Income</b>						
ICE BofA ML 1-3 Yr Treasury	0.69	-0.16	-2.35	-0.36	0.97	0.74
Bloomberg Intermediate Agg	2.36	0.12	-5.99	-1.56	0.97	1.28
Bloomberg Intermediate G/C	1.87	0.27	-5.13	-1.12	1.28	1.34
Bloomberg US Aggregate	3.08	0.02	-8.36	-2.35	0.86	1.43
Bloomberg Gov't/Credit	3.01	0.08	-8.75	-2.37	1.04	1.55
ICE BofA ML High Yield Master II	3.91	7.32	-5.14	1.05	2.77	4.20
FTSE World Govt Bond	3.19	-1.02	-13.84	-5.27	-2.25	-0.78
Bloomberg Multiverse	3.32	0.87	-11.42	-3.71	-1.17	0.13

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