Callan

Executive Summary Second Quarter 2022

Arkansas Judicial Retirement System

Brianne Weymouth, CAIA Senior Vice President

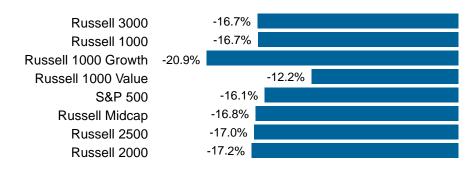
John Jackson, CFA Senior Vice President

U.S. Equity Performance: 2Q22

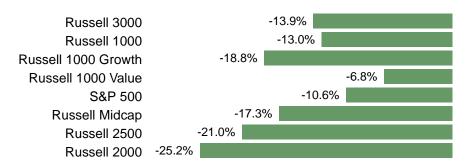
Worst first half since 1970

- -The S&P 500 dropped by 16.1% in 2Q22; all major U.S. indices across styles and market cap ranges were negative in the quarter.
- All sectors posted negative returns over the quarter. Energy continues to be the best-performing sector, and it is the only sector that has posted positive returns YTD 2022.
- Large cap stocks nominally outpaced smaller cap stocks in the quarter. The performance spread between the Russell 1000 and the Russell 2000 Index was around 50 basis points.
- Value stocks have outperformed growth stocks across the market capitalization spectrum.
- Consumer Discretionary (-26%), Communication Services (-21%), and Information Technology (-20%) were the worst-performing sectors.
- Rising interest rates and inflation along with geopolitical headlines all contributed to a volatile and risk-averse environment.

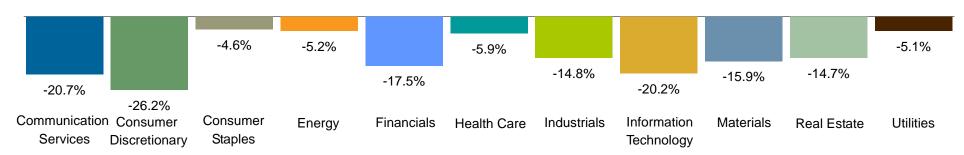
U.S. Equity: Quarterly Returns



U.S. Equity: One-Year Returns



Industry Sector Quarterly Performance (S&P 500)



Sources: FTSE Russell. S&P Dow Jones Indices



Global/Global ex-U.S. Equity Performance: 2Q22

Fears of Recession

- The war in Ukraine pushed an already fragile supply chain, energy demand/supply imbalances, and inflationary environment into fears of a recession.
- Slowing global growth and recession risk became clearer toward quarter-end, leading investors toward higher-quality and lower-volatility areas of the market to offer protection.

Wide divergence in country returns

- Optimism that the worst is behind China's COVID-19 lockdown buoyed the country to the only positive return in the quarter.
- Meanwhile Japan suffered from a weak yen, slowing growth, and continued supply chain disruptions.

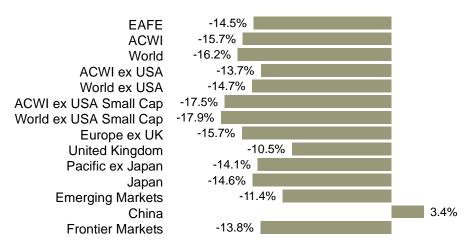
Growth vs. value

- Value continues to outperform growth as most monetary policies focus on tightening.
 - Energy was the only sector with positive year-to-date results.
- Information Technology had the worst sector return as interest rate increases dampened long duration growth attractiveness.

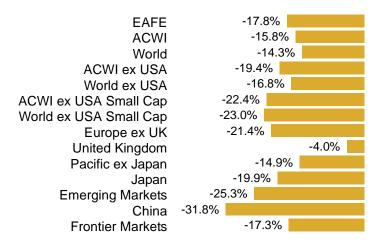
U.S. dollar vs. other currencies

 The U.S. dollar strengthened further against other major currencies given its global dominance and perceived safety.

Global Equity: Quarterly Returns



Global Equity: One-Year Returns





U.S. Fixed Income Performance: 2Q22

Bonds hit hard as rates rose sharply (again)

- -Worst six-month return for Bloomberg US Aggregate in history
- Yield curve flirted with inversion but 2-year/10-year yield spread was slightly positive at quarter-end.
- -TIPS underperformed nominal Treasuries, and 10-year breakeven spreads fell to 2.33% from 2.84% at 3/31/22.
- Fed raised rates by 75 bps, the largest increase since 1994, with further hikes expected.
 - Market pricing reflects Fed Funds rate of 3.4% at year-end.

Spread sectors underperformed

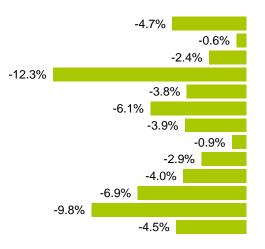
- Investment grade corporates underperformed like-duration
 U.S. Treasuries by 205 bps, RMBS by 98 bps.
- High yield underperformed as spreads widened; excess return vs. U.S. Treasuries was -792 bps.
 - Hurt by equity market performance and worries over the impact of higher rates on the economy
 - Yield-to-worst 8.9%
- Leveraged loans held up relatively well with lower-quality credits generally underperforming.

Securitized sectors continue to hang in

- Agency RMBS spreads widened in response to increased rate volatility.
- -ABS spreads tightened, led by credit cards.

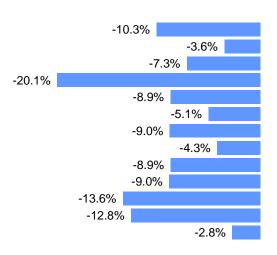
U.S. Fixed Income: Quarterly Returns

Bloomberg Aggregate
Bloomberg Gov/Credit 1-3 Yr
Bloomberg Intmdt Gov/Credit
Bloomberg Long Gov/Credit
Bloomberg Treasury
Bloomberg TIPS
Bloomberg Securitized
Bloomberg ABS
Bloomberg CMBS
Bloomberg MBS
Bloomberg Invst Grd Credit
Bloomberg High Yield Corp
S&P/LSTA Leveraged Loans



U.S. Fixed Income: One-Year Returns

Bloomberg Aggregate
Bloomberg Gov/Credit 1-3 Yr
Bloomberg Intmdt Gov/Credit
Bloomberg Long Gov/Credit
Bloomberg Treasury
Bloomberg TIPS
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Bloomberg ABS
Bloomberg CMBS
Bloomberg MBS
Bloomberg Invst Grd Credit
Bloomberg High Yield Corp
S&P/LSTA Leveraged Loans



Sources: Bloomberg, S&P Dow Jones Indices



Asset Allocation Review

Change in AJRS Market Value during the Quarter:

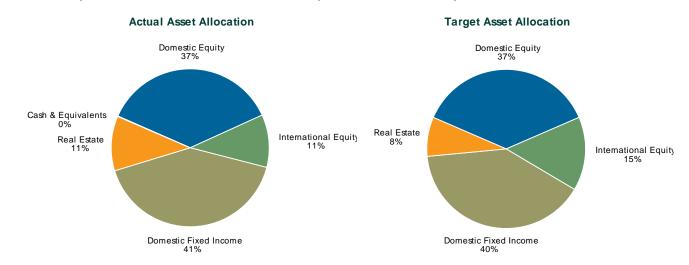
Beginning-of-Quarter Market Value: \$ 334,377,710

Net Increase in Market Value: \$ -37,386,944

End-of-Quarter Market Value: \$ 296,990,766

Asset Allocation of AJRS Assets at June 30, 2022

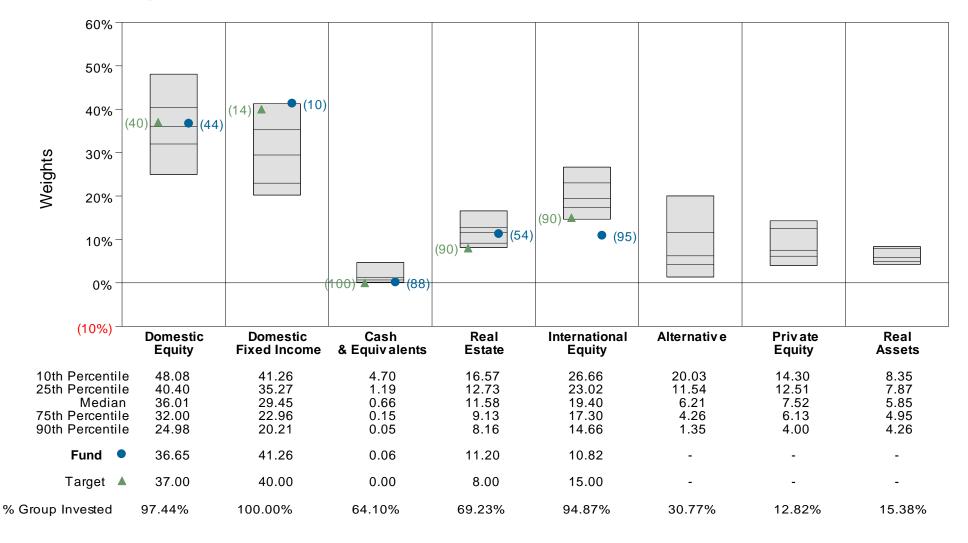
As of the quarter end, all asset classes are within the target allocation range established in the Investment Policy. International Equity is the largest underweight asset class at 4.2% below the target allocation. Domestic Equity is also 0.4% below its stated target. The fund is overweight Real Estate by 3.2%, Domestic Fixed Income by 1.3%, and cash by 0.1%.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	108,838	36.6%	37.0%	(0.4%)	(1,048)
International Equity	32,143	10.8%	15.0%	(4.2%)	(12,406)
Domestic Fixed Income	122,551	41.3%	40.0%	`1.3%′	3,75 5
Real Estate	33,268	11.2%	8.0%	3.2%	9,509
Cash & Equivalents	190	0.1%	0.0%	0.1%	190
Total	296,991	100.0%	100.0%		

Asset Allocation Review

Asset Class Weights vs Callan Public Fund Spons- Mid (100M-1B)





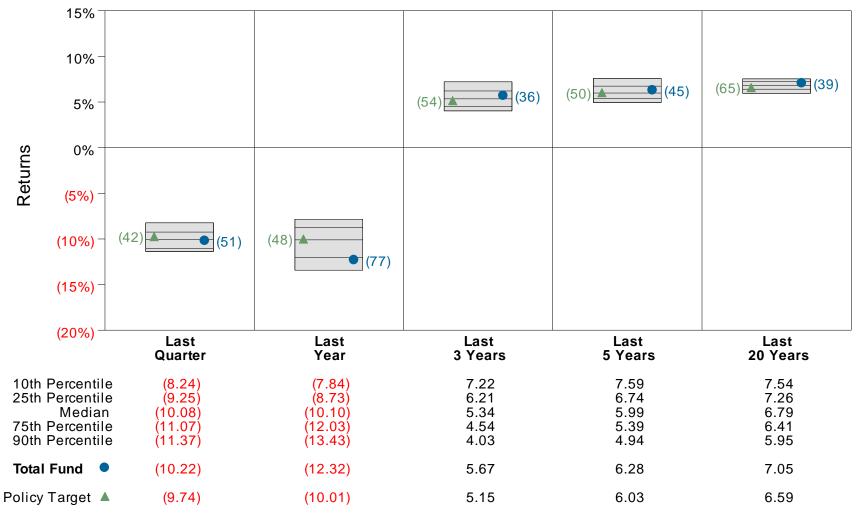
Asset Allocation Review

	June 30, 2	2022			March 31,	2022
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	\$108,838,494	36.65%	\$(3,217,169)	\$(20,198,347)	\$132,254,011	39.55%
Mellon Russell 1000 Growth Index	41,885,679	14.10%	(3,105,352)	(11,644,615)	56,635,646	16.94%
Boston Partners	50,526,937	17.01%	(74,313)	(6,254,826)	56,856,075	17.00%
Aristotle Capital Boston	16,425,878	5.53%	(37,505)	(2,298,907)	18,762,290	5.61%
International Equity	\$32,142,503	10.82%	\$0	\$(6,814,837)	\$38,957,340	11.65%
Baillie Gifford	32,142,503	10.82%	0	(6,814,837)	38,957,340	11.65%
Fixed Income	\$122,551,376	41.26%	\$(97,865)	\$(8,611,324)	\$131,260,565	39.26%
MacKay Shields LLC	122,551,376	41.26%	(97,865)	(8,611,324)	131,260,565	39.26%
Real Estate	\$33,267,936	11.20%	\$(24,520)	\$1,542,875	\$31,749,581	9.50%
Invesco Core Real Estate	33,267,936	11.20%	(24,520)	1,542,875	31,749,581	9.50%
Cash & Equivalents	\$190,457	0.06%	\$33,689	\$555	\$156,214	0.05%
AJRS General Fund	190,457	0.06%	33,689	555	156,214	0.05%
Total Fund	\$296,990,766	100.0%	\$(3,305,865)	\$(34,081,079)	\$334,377,710	100.0%



Total Fund Performance Review

Callan Public Fund Spons- Mid (100M-1B)



Policy Target consists of 40% Blmbg Aggregate, 37% Russell 3000 Index, 15% MSCI ACWI ex-US and 8% NCREIF NFI-ODCE Equal Weight Net. Note: Numbers adjacent to return number represent the portfolio's rank relative to the corresponding peer group. 1 = Highest Ranking; 100 = Lowest Ranking.

Total Fund Performance Attribution

Relative Attribution Effects for Quarter ended June 30, 2022

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	39%	37%	(15.42%)	(16.70%)	0.50%	(0.15%)	0.35%
Domestic Fixed Income	e 39%	40%	`(6.56%)	`(4.69%)	(0.74%)	(0.03%)	(0.76%)
Real Estate	10%	8%	4.86%	4.37%	`0.05%´	0.22%	0.27%
International Equity	12%	15%	(17.49%)	(13.54%)	(0.46%)	0.13%	(0.34%)
Cash & Equivalents	0%	0%	0.17%	0.17%	0.00%	0.01%	<u>0.01%´</u>
Total			(10.22%)=	(9.74%) +	(0.65%)+	0.17%	(0.48%)

One Year Relative Attribution Effects

Asset Class Domestic Equity Domestic Fixed Income Real Estate International Equity Cash & Equivalents	Effective Actual Weight 38% e 40% 8% 13% 0%	Effective Target Weight 37% 40% 8% 15% 0%	Actual Return (11.77%) (12.08%) 27.17% (35.65%) 0.19%	Target Return (13.87%) (10.29%) 28.93% (19.01%) 0.19%	Manager Effect 0.82% (0.74%) (0.10%) (2.51%) 0.00%	Asset Allocation (0.15%) (0.03%) 0.23% 0.18% (0.01%)	Total Relative Return 0.67% (0.77%) 0.12% (2.33%) (0.01%)
Total			(12.32%)=	(10.01%) +	(2.54%)+	0.23%	(2.31%)

Total Fund Performance Attribution

Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	38%	37%	10.78%	9.77%	0.41%	(0.17%)	0.24%
Domestic Fixed Income	e 38%	40%	0.01%	(0.93%)	0.25%	0.02%	0.28%
Real Estate	9%	8%	11.57%	12.29%	(0.06%)	(0.00%)	(0.06%)
International Equity	15%	15%	0.31%	1.81%	(0.00%)	0.12%	0.11%
Cash & Equivalents	0%	0%	0.57%	0.57%	0.00%	(0.05%)	_(0.05%)_
							•
Total			5.67% =	5.15% +	+ 0.60% +	(0.07%)	0.52%

Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	39%	37%	10.81%	10.60%	0.10%	(0.10%)	(0.00%)
Domestic Fixed Income	e 37%	40%	1.67%	0.88%	0.23%	`0.03%´	`0.26%′
Real Estate	9%	8%	9.98%	10.07%	(0.01%)	(0.02%)	(0.02%)
International Equity	15%	15%	2.02%	2.98%	(0.00%)	`0.06%	`0.06%
Cash & Equivalents	0%	0%	1.08%	1.08%	0.00%	(0.03%)	(0.03%)
Total			6.28% =	6.03%	+ 0.32% +	(0.07%)	0.25%



					Last		Last	
	Last		Fiscal		3		5	
	Quarter		Year		Years		Years	
Domestic Equity	(15.42%)	16	(11.77%)	18	10.78%	4	10.81%	21
Domestic Equity Benchmark	(16.70%)	78	(13.87%)	58	9.77%	17	10.60%	28
Russell 3000 Index	(16.70%)	78	(13.87%)	58	9.77%	17	10.60%	28
S&P 500 Index	(16.10%)	41	(10.62%)	12	10.60%	8	11.31%	4
Med Public Fd - Dom Eqty	(16.33%)		(13.30%)		9.29%		10.02%	
Mellon Russell 1000 Growth Index	(20.92%)	48	(18.90%)	34	-		-	
Russell 1000 Growth Index	(20.92%)	48	(18.77%)	34	12.58%	11	14.29%	16
Callan Large Cap Growth	(21.41%)		(22.20%)		9.32%		12.68%	
Boston Partners	(11.01%)	37	(3.18%)	29	10.08%	25	9.15%	32
Russell 1000 Value Index	(12.21%)	66	(6.82%)	79	6.87%	91	7.17%	77
Callan Large Cap Value	(11.75%)		(4.90%)		8.32%		8.50%	
Aristotle Capital Boston	(12.26%)	12	(14.54%)	29	-		-	
Russell 2000 Index	(17.20%)	85	(25.20%)	96	4.21%	87	5.17%	82
Callan Small Cap Core	(15.40%)		(17.02%)		6.89%		6.70%	
International Equity	(17.49%)	95	(35.65%)	95	0.31%	86	2.02%	85
International Equity Benchmark	(13.54%)	74	(19.01%)	30	1.81%	69	2.98%	45
Med Public Fd - Int Eqty	(13.09%)		(20.57%)		2.19%		2.80%	
Baillie Gifford Intl Choice Fd	(17.49%)	91	(35.65%)	97	0.31%	83	2.02%	76
MSCI ACWIXUS Gross	(13.54%)	43	(19.01%)	50	1.81%	60	2.98%	53
Callan NonUS Eq	(13.91%)		(19.04%)		2.42%		3.16%	



	Last Quarter		Fiscal Year		Last 3 Years		Last 5 Years	
Domestic Fixed Income	(6.56%)	94	(12.08%)	91	0.01%	46	1.67%	24
Domestic Fixed Income Benchmark	(4.69%)	58	(10.29%)	76	(0.93%)	93	0.88%	94
Med Public Fd - Dom Fixed	(4.40%)		(9.26%)		(0.08%)		1.37%	
MacKay Shields LLC	(6.56%)	83	(12.08%)	87	0.01%	32	1.67%	31
Blmbg Aggregate Index	(4.69%)	13	(10.29%)	31	(0.93%)	93	0.88%	96
Callan Core Plus FI	(5.69%)		(10.89%)		(0.25%)		1.53%	
Real Estate	4.86%	13	27.17%	53	11.57%	47	9.98%	33
Med Public Fd - Real Est	3.12%		27.32%		11.54%		9.52%	
Invesco Core Real Estate	4.86%	49	27.17%	40	11.57%	38	9.98%	38
NFI-ODCE Equal Weight Net**	4.37%	71	28.93%	25	12.29%	26	10.07%	37
Callan OE Core Cmngld RE	4.83%		26.29%		10.77%		9.29%	
Total Fund Callan Public Fd Mid DB	(10.22%) (10.08%)	51	(12.32%) (10.10%)	77	5.67% 5.34%	36	6.28% 5.99%	45
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Total Fund ex Cash	(10.23%)	52	(12.32%)	77	5.76%	34	6.34%	42
Target Benchmark*	(9.74%)	42	(10.01%)	48	5.15%	54	6.03%	50
Callan Public Fd Mid DB	(10.08%)		(10.10%)		5.34%		5.99%	

^{*}Current Quarter Target = 40.0% Blmbg Aggregate, 37.0% Russell 3000 Index, 15.0% MSCI ACWI ex-US Gross and 8.0% NCREIF NFI-ODCE Eq Wt Net. **The second quarter 2022 NFI-ODCE Equal Weight ldx return is based on preliminary data.



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 15 Years
NET OF FEE RETURNS	Quarter	i cai	Icais	ieais	icais
Domestic Equity					
Mellon Russell 1000 Growth Index	(20.92%)	(18.93%)	-	-	-
Russell 1000 Growth Index	(20.92%)	(18.77%)	12.58%	14.29%	10.67%
Boston Partners	(11.14%)	(3.70%)	9.49%	8.56%	7.50%
Russell 1000 Value Index	(12.21%)	(6.82%)	6.87%	7.17%	6.10%
Aristotle Capital Boston	(12.45%)	(15.23%)	-	-	-
Russell 2000 Index	(17.20%)	(25.20%)	4.21%	5.17%	6.33%
International Equity					
Baillie Gifford Intl Choice Fd	(17.60%)	(35.98%)	(0.18%)	1.50%	_
MSCI ACWIXUS Gross	(13.54%)	(19.01%)	1.81%	2.98%	2.05%
Domestic Fixed Income					
MacKay Shields LLC	(6.63%)	(12.35%)	(0.29%)	1.37%	-
Blmbg Aggregate Index	(4.69%)	(10.29%)	(0.93%)	0.88%	3.26%
Real Estate					
Invesco Core Real Estate	4.79%	26.82%	11.26%	9.49%	-
NFI-ODCE Equal Weight Net	4.37%	28.93%	12.29%	10.07%	6.09%
Total Fund	(10.30%)	(12.62%)	5.31%	5.84%	5.52%
Total Fund ex Cash	(10.31%)	(12.62%)	5.39%	5.90%	5.73%
Target Benchmark*	(9.74%)	(10.01%)	5.15%	6.03%	5.79%

^{*}Current Quarter Target = 40.0% Blmbg Aggregate, 37.0% Russell 3000 Index, 15.0% MSCI ACWI ex-US Gross and 8.0% NCREIF NFI-ODCE Eq Wt Net.



The Total Fund returned -10.22% in the second quarter and lagged the benchmark which was down 9.74%. The Total Fund's second quarter performance ranked at the 51st percentile of peers. For the fiscal year, the Total Fund returned -12.32% compared to the -10.01% benchmark return and ranked in the bottom quartile of peers. Despite recent results, intermediate- and long-term performance remains favorable. The fund beat its benchmark return and ranks in the top half of its peer group in the trailing 3-, 5-, 10-, 15-, and 20-year periods.

The AJRS Domestic Equity Composite ended the quarter down 15.42%, and outperformed the broad U.S. equity market, as measured by the Russell 3000 Index. Second quarter returns ranked at the 16th percentile of peers. For the fiscal year, Domestic Equity returned -11.77%.

- The **Mellon** Russell 1000 Growth Index Fund is passively invested in the Russell 1000 Growth Index. The Fund matched the benchmark return of -20.92% and finished at the 48th percentile in the Callan Large Cap Growth peer universe. For the trailing year, the Fund is down 18.90% and ranks at the 34th percentile of peers.
- In large cap value equity, **Boston Partners** outperformed the Russell 1000 Value Index (-12.21%) by 120 basis points and ranked at the 37th percentile of the Callan Large Cap Value peer group. Over the last year, the Fund returned -3.18% versus the benchmark return of -6.82% and ranked at the 29th percentile of peers. Stock selection added value in Technology, Health Care and Financials. The Fund outperformed its benchmarks and ranks in the top quartile of peers over longer periods.
- In small cap equity, **Aristotle Capital** returned -12.26%, which beat the Russell 2000 Index by 4.94% and ranked at the 12th percentile of peers. Stock selection and sector allocation added value in the quarter. Over the trailing year, the Fund led its benchmark by 10.66% and ranked at the 29th percentile of peers.

The AJRS International Equity Composite returned -17.49% during the quarter relative to the -13.54% return of the MSCI ACWI ex US Index and ranked at the 95th percentile of peers. For the fiscal year, the International Equity Composite (-35.65%) trailed the benchmark return of -19.01%.

• **Baillie Gifford** trailed the index by 3.95% and ranked at the 91st percentile of peers. Active security selection was a detractor while country selection was positive. Results over the last year have weighed on longer-term performance, as the Fund trails the benchmark and ranks in the bottom quartile of its peer group over the trailing 3-and 5-year periods.

The AJRS Domestic Fixed Income Composite returned -6.56% in the second quarter and trailed the Bloomberg Aggregate Index by 187 basis points. For the fiscal year, Fixed Income returned -12.08% and trailed the benchmark by 179 basis points.

• **MacKay Shields**, the only manager in the fixed income composite, underperformed the Bloomberg Aggregate and ranked at the 83rd percentile of its peer group during the quarter. The Fund's overweight to corporate bonds and underweight to treasuries detracted in the second quarter. The Fund leads its benchmark and ranks in the top third of peers over the trailing 3-, 5-, 7-, and 10-year periods.

The AJRS Real Estate Composite returned 4.86% in the second quarter and 27.17% for the fiscal year.

• The **Invesco Core Real Estate** fund led the NFI-ODCE Equal Weight Net Index by 49 basis points and ranked at the 49th percentile of peers for the quarter. Over the last year, the fund returned 27.17% relative to the 28.93% return of the benchmark and ranked at the 40th percentile of peers. The Fund ranks in the top half of its peer groups over longer periods.