

Investment Performance Review  
Period Ending September 30, 2023

**Austin Police**

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# 3rd Quarter 2023 Market Environment



## The Economy

- The US Federal Reserve Bank (the Fed) continued to increase interest rates during the quarter with an additional 0.25% increase in the Fed Funds rate in late July, followed by a pause at the September Federal Open Market Committee (FOMC) meeting. The Fed continues to prioritize fighting high inflation with the press release from the July meeting detailing the FOMC's commitment to returning inflation to its 2% target rate. In addition, the committee members have agreed to continue reducing the Fed's balance sheet by reducing holdings in Treasuries, agency debt and agency mortgage-backed securities.
- The US labor market continues to show signs of weakening. Private payroll growth for the month of September showed growth well below estimates, coming in at just 89,000 new jobs for the month.
- Capital market yields have risen to their highest levels in over a decade as market participants are demanding a greater premium on long-term Treasury securities. The 30-year Treasury yield jumped 0.88% during the quarter signaling that market participants are anticipating higher levels of both inflation and policy interest rates.
- The Atlanta Fed's GDPNow model's projected third-quarter GDP growth has been revised upward from the original estimates of 3.5% in July to 4.9% at the end of September. The main drivers of the upward revisions came in August upon the release of personal consumption and private domestic investment data from the US Bureau of Labor and Statistics.

## Equity (Domestic and International)

- US equities moved broadly lower during the third quarter. The selloff was agnostic to size and style as all major domestic equity benchmarks finished the quarter with losses in the mid to high single-digit territory. After its encouraging performance in the second quarter, the large-cap S&P 500 benchmark fell by -3.3% for the third quarter. Small-cap stocks faced a deeper drawdown over the period with the Russell 2000 returning -5.1%. Contributing factors to this quarter's performance were, unsurprisingly, related to interest rates and the overall level of inflation in the economy.
- International stocks also came under pressure during the third quarter, reversing their positive results from last quarter. China continues to show signs of weakness as the cost of debt increases globally. Given China's large weight in the MSCI Emerging Market Index and its economic influence in the region, future prospects of growth for southeast Asia will be largely dependent on the strength of future growth for the country.

## Fixed Income

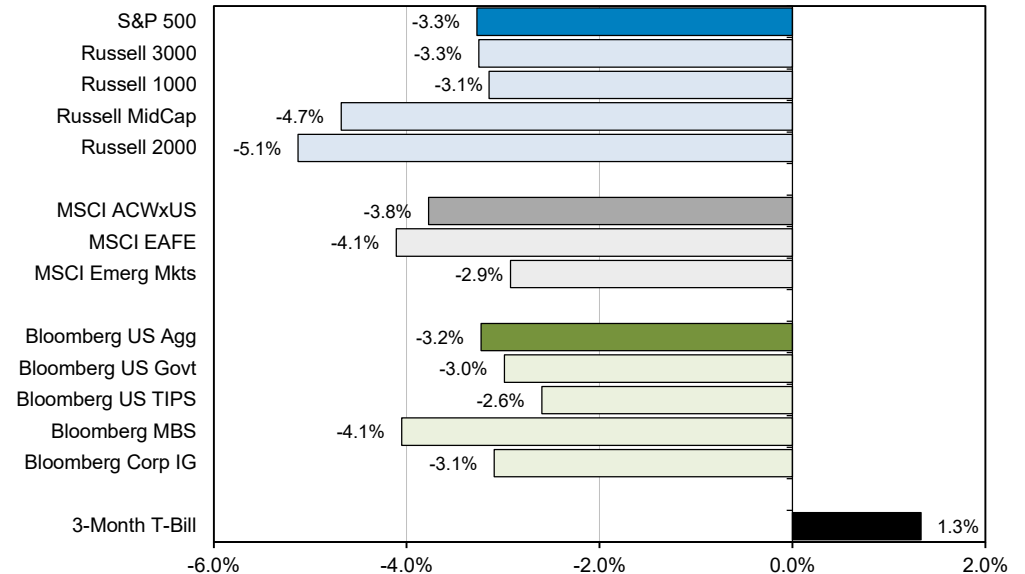
- While the US economy continues to see signs of disinflation, many of the Fed's preferred gauges continue to show inflation above their long-term target. During the quarter, the Fed maintained its inflation-fighting policy stance, increasing interest rates by 0.25% in July but opting to pause in September. The additional rate hike in July along with the possibility that additional rate hikes could occur later in the year, drove capital market yields sharply higher during the quarter.
- The mortgage-backed sector was the worst-performing sector during the quarter as the 10-year Treasury yield hit its highest level in 16 years. US Government securities were the worst-performing sector during the previous 12 months. US Treasuries have lagged corporate and securitized sectors as yields at longer maturities rose significantly and credit availability has tightened since last year.
- High-yield corporate bonds have held up better than higher-quality issues, aided by narrowing credit spreads, higher coupons, and generally shorter maturities. High-yield bonds were the best-performing segment of the domestic bond market during the quarter and on a trailing 12-month basis.

## Market Themes

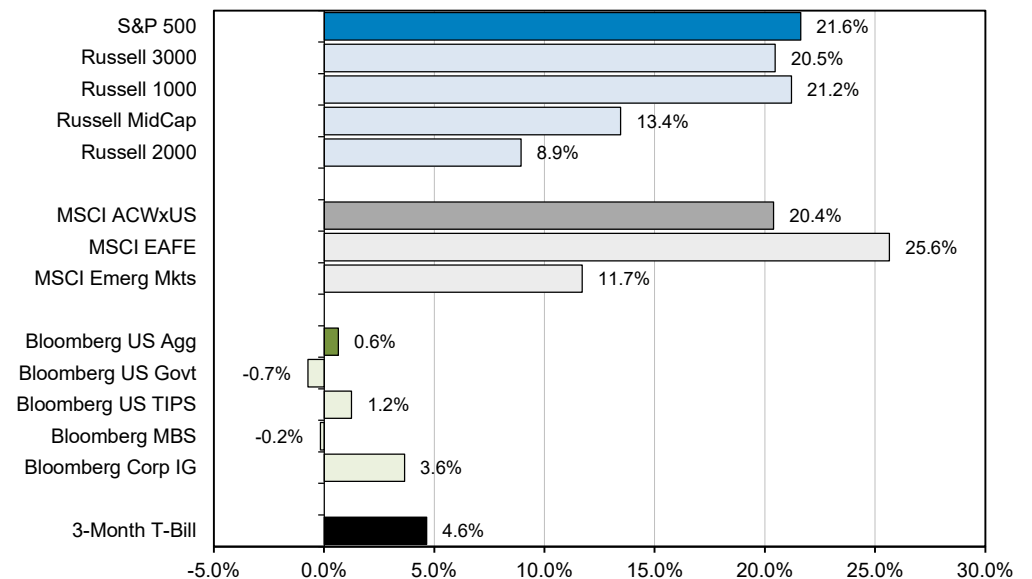
- Economies around the globe continue to struggle with taming inflation. Markets are beginning to experience pressures brought on by higher costs of debt and pricing in expectations of higher interest rates for longer than originally anticipated. US Treasury yields on the long end of the par curve have risen sharply which threatens to undercut the economy by markedly raising borrowing costs.
- While energy costs have subsided from the initial shock of the Russian invasion in 2022, oil prices have been driven higher in recent months due to cuts in global production. This was soon followed by consumer-led demand destruction and expectations are that prices could soon subside.
- Despite concerns about slowing economic growth, lower-quality corporate bonds continue to outperform the government sector.
- US and international equity markets have struggled to maintain their recovery after last year's disappointment. Expectations that inflation would continue to moderate and central banks would slow the pace of their monetary tightening cycles have not taken shape as quickly as originally anticipated, leaving the consumer disadvantaged by higher price levels, higher interest rates, and weak availability of credit.

- Domestic equity markets struggled in the third quarter, reverting from the performance posted in the first half of 2023. Strong performance from domestic equities markets earlier in the year was enough to overshadow the third quarter's negative returns, leading to positive results for most domestic equity benchmarks on a trailing one-year basis. Macroeconomic challenges faced by the US economy for the past several quarters finally weighed on market participants, leading to dismal market returns. For the period, the Russell 1000 large-cap benchmark returned -3.1 % versus -4.7% for the Russell Mid Cap Index and -5.1% for the Russell 2000 small-cap index.
- International developed and emerging market equities also delivered disappointing results, in line with their domestic counterparts. Europe continues to face geopolitical risks related to the conflict in Ukraine and rising interest rates. However, inflation has eased somewhat due to higher rates and more manageable energy prices. The developed-market MSCI EAFE Index returned -4.1% for the quarter and the MSCI Emerging Markets Index fell by -2.9%.
- The domestic bond market continued its decline during the quarter due to the Fed's decision to hike policy rates an additional 0.25% and a re-shaping of the Treasury yield curve. The Bloomberg US Aggregate Index returned -3.2% for the quarter and investment-grade corporate bonds returned a similar -3.1%.
- Over the one-year trailing period, US equity markets were positive as the disappointing performance from much of 2022 rolled off. The S&P 500 Index climbed 21.6% for the trailing 12 months. The weakest relative performance for the year was the Russell 2000 Index, which still rose 8.9% over the last 12 months.
- International markets also shook off their poor 2022 performance. Over the trailing one-year period, the MSCI EAFE Index was the best-performing equity benchmark, returning 25.6% while the MSCI Emerging Markets Index posted a more modest 11.7%.
- Bond markets were generally flat over the previous 12 months. Investment-grade corporate bonds were the best-performing sector, posting a return of 3.6%. Meanwhile, Treasuries were negative, returning -0.7% over the previous 12 months. The bellwether fixed-income benchmark, the Bloomberg US Aggregate Index, returned a small, positive 0.6%.

### Quarter Performance



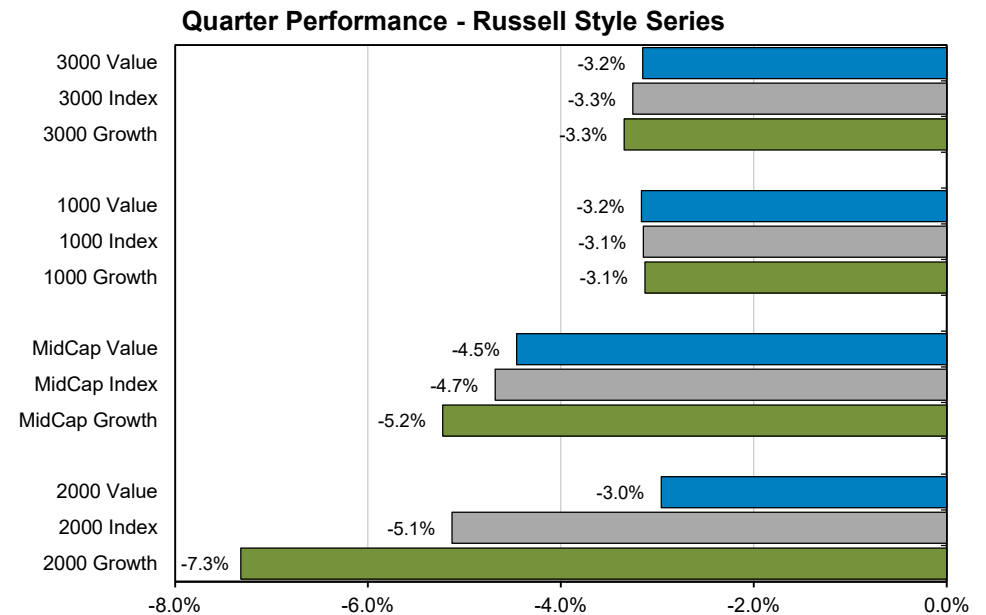
### 1-Year Performance



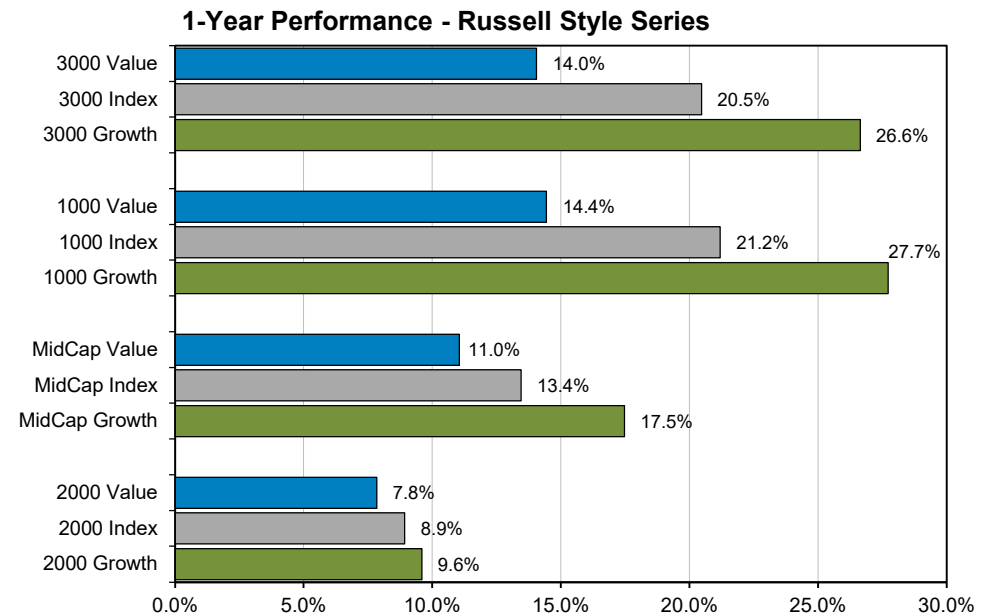
Source: Investment Metrics



- During the third quarter, core domestic equity benchmarks reversed course from their encouraging first-half 2023 performance. The selloff was agnostic to style as growth and value were down -3.3% and -3.2% respectively for the Russell 3000 Index, the broad market benchmark.
- Large-cap stocks once again led results for the capitalization-based benchmarks, besting both the mid-cap and small-cap indices for the quarter. Russell 1000 Index fell by -3.1% while the Russell 2000 Index fell by -5.1%.
- Among large-cap stocks, performance was relatively uniform across the style spectrum as growth fell by -3.1% and value fell by -3.2%. However, among small-cap stocks, performance across the style spectrum was disparate as growth fell by -7.3% and value fell by just -3.0%.



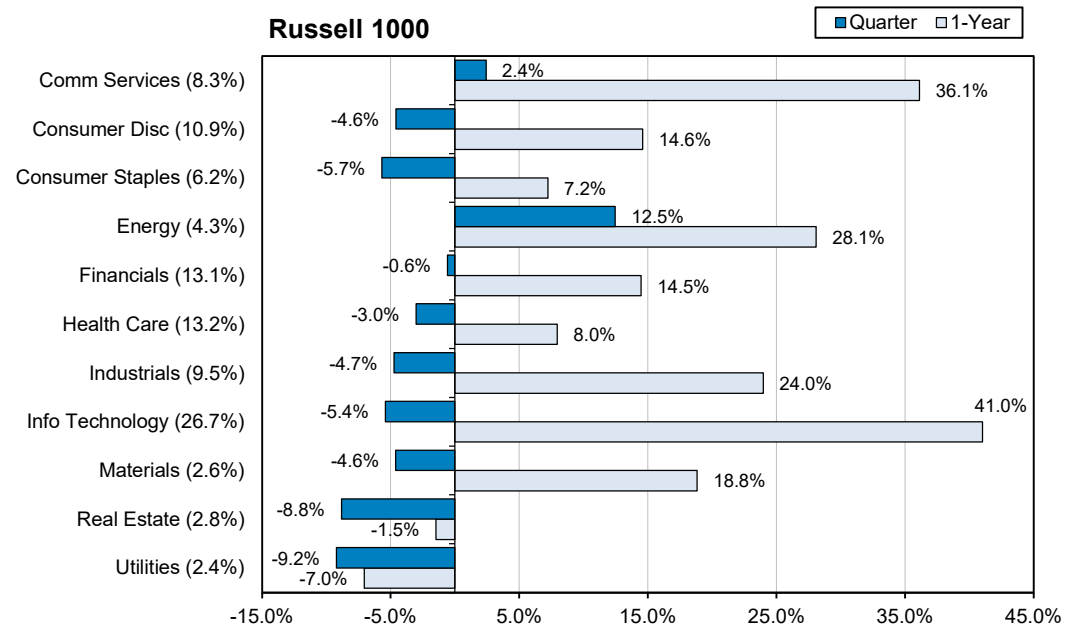
- The third quarter's reversal for domestic equity markets did not eclipse the rebound seen in the asset class during the first half of 2023 as each of the Russell indices were positive on a trailing 12-month basis. Within large-cap stocks, the Russell 1000 Growth Index maintains sizable dominance, returning 27.7% and leading the way among style-and-market-capitalization classifications. The worst-performing sub-index was the Russell 2000 Value, which posted a modest 7.8% return for the trailing 12 months.
- Growth rebounded from disappointing results in early 2022 and continues to lead value-based benchmarks in all market capitalization ranges over the trailing year. The Russell 2000 Growth Index returned 9.6%, outpacing the Russell 2000 Value Index return of 7.8%. The Russell 1000 Growth and Russell Midcap Growth benchmarks gained 27.7% and 17.5%, respectively, while their corresponding value index counterparts returned solid, but lagging, performance of 14.4% and 11.0%, respectively.



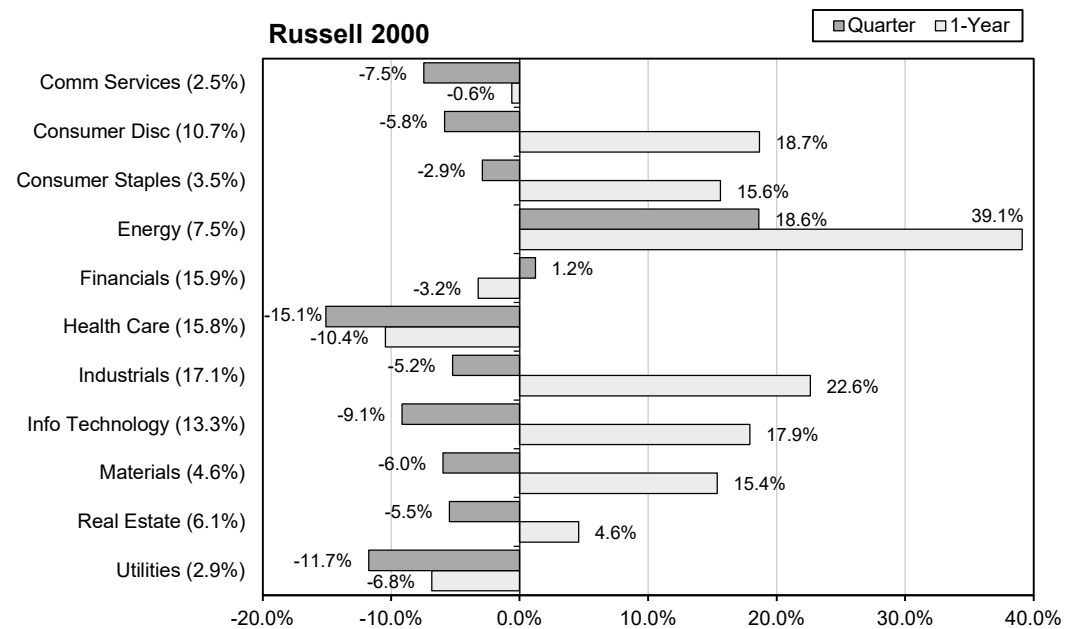
Source: Investment Metrics



- Performance of the large-cap Russell 1000 Index was affected by negative performance in nine of 11 economic sectors during the quarter. However, four of the 11 sectors managed to outpace the core large-cap index.
- While domestic equities experienced challenges during the quarter, the energy sector managed a solid return of 12.5%. The other three sectors that outpaced the headline large-cap index's -3.1% return for the quarter were communication services (2.4%), financials (-0.6%) and health care (-3.0%). The worst-performing sectors during the quarter were utilities (-9.2%), and real estate (-8.8%).
- For the full year, four economic sectors exceeded the return of the broad large-cap index, and nine of the 11 sectors posted positive performance. The weakest economic sectors in the Russell 1000 for the year were utilities, and real estate which declined by -7.0% and -1.5%, respectively. Both sectors have been heavily impacted by rising energy costs and a market rotation away from defensive names.



- Nine of 11 economic sectors in the small-cap benchmark posted negative results during the quarter while just three exceeded the -5.1% return of the Russell 2000 Index. The health care (-15.1%) and utilities (-11.7%) sectors detracted the most from small-cap performance, lagging the broad benchmark for the quarter. The two economic sectors that were positive for the quarter were energy (18.6%), and financials (1.2%).
- Similar to their large-cap peers, seven small-cap sectors were positive for the trailing 12 months. Energy posted the strongest sector result (39.1%) while the industrials sector also posting a return of more than 20% for the last 12 months. Just four of the 11 economic sectors fell short of the core small-cap benchmark's return of 8.9% over the trailing year. The worst-performing sector for the year was health care with a return of -10.4%. The utilities (-6.8%), financials (-3.2%), and communication services (-0.6%) sectors also posted negative results for the year.



Source: Morningstar Direct  
 As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of September 30, 2023

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.4%	-11.6%	24.6%	Information Technology
Microsoft Corp	5.9%	-7.1%	36.9%	Information Technology
Amazon.com Inc	2.9%	-2.5%	12.5%	Consumer Discretionary
NVIDIA Corp	2.6%	2.8%	258.6%	Information Technology
Alphabet Inc Class A	2.0%	9.3%	36.8%	Communication Services
Tesla Inc	1.7%	-4.4%	-5.7%	Consumer Discretionary
Alphabet Inc Class C	1.7%	9.0%	37.1%	Communication Services
Meta Platforms Inc Class A	1.7%	4.6%	121.3%	Communication Services
Berkshire Hathaway Inc Class B	1.6%	2.7%	31.2%	Financials
Exxon Mobil Corp	1.2%	10.6%	39.1%	Energy

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
AppLovin Corp Ordinary Shares	0.0%	55.3%	105.0%	Information Technology
Vertiv Holdings Co Class A	0.0%	50.2%	283.0%	Industrials
Capri Holdings Ltd	0.0%	46.6%	36.9%	Consumer Discretionary
Rivian Automotive Inc Class A	0.0%	45.7%	-26.2%	Consumer Discretionary
Texas Pacific Land Corp	0.0%	38.8%	3.3%	Energy
Affirm Holdings Inc Ordinary Shares	0.0%	38.7%	13.4%	Financials
Splunk Inc	0.1%	37.9%	94.5%	Information Technology
H&R Block Inc	0.0%	36.2%	4.5%	Consumer Discretionary
Ollie's Bargain Outlet Holdings Inc	0.0%	33.2%	49.6%	Consumer Discretionary
Zions Bancorp NA	0.0%	31.4%	-28.4%	Financials

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
AMC Entertainment Holdings Inc	0.0%	-79.4%	-87.0%	Communication Services
Hawaiian Electric Industries Inc	0.0%	-65.0%	-62.4%	Utilities
NovoCure Ltd	0.0%	-61.1%	-78.7%	Health Care
Apellis Pharmaceuticals Inc	0.0%	-58.2%	-44.3%	Health Care
Viasat Inc	0.0%	-55.3%	-38.9%	Information Technology
Petco Health and Wellness Co Inc	0.0%	-54.0%	-63.4%	Consumer Discretionary
Driven Brands Holdings Inc	0.0%	-53.5%	-55.0%	Industrials
Olaplex Holdings Inc	0.0%	-47.6%	-79.6%	Consumer Staples
Masimo Corp	0.0%	-46.7%	-37.9%	Health Care
Spirit AeroSystems Holdings Inc	0.0%	-44.7%	-26.4%	Industrials

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Super Micro Computer Inc	0.6%	10.0%	397.9%	Information Technology
Chart Industries Inc	0.3%	5.8%	-8.3%	Industrials
ChampionX Corp	0.3%	15.1%	84.2%	Energy
Chord Energy Corp Ordinary Shares	0.3%	6.3%	29.3%	Energy
Murphy Oil Corp	0.3%	19.1%	32.3%	Energy
Matador Resources Co	0.3%	14.0%	22.8%	Energy
Light & Wonder Inc Ordinary Shares	0.3%	3.7%	66.3%	Consumer Discretionary
Weatherford International PLC	0.3%	36.0%	179.7%	Energy
Simpson Manufacturing Co Inc	0.3%	8.4%	93.1%	Industrials
SPS Commerce Inc	0.3%	-11.2%	37.3%	Information Technology

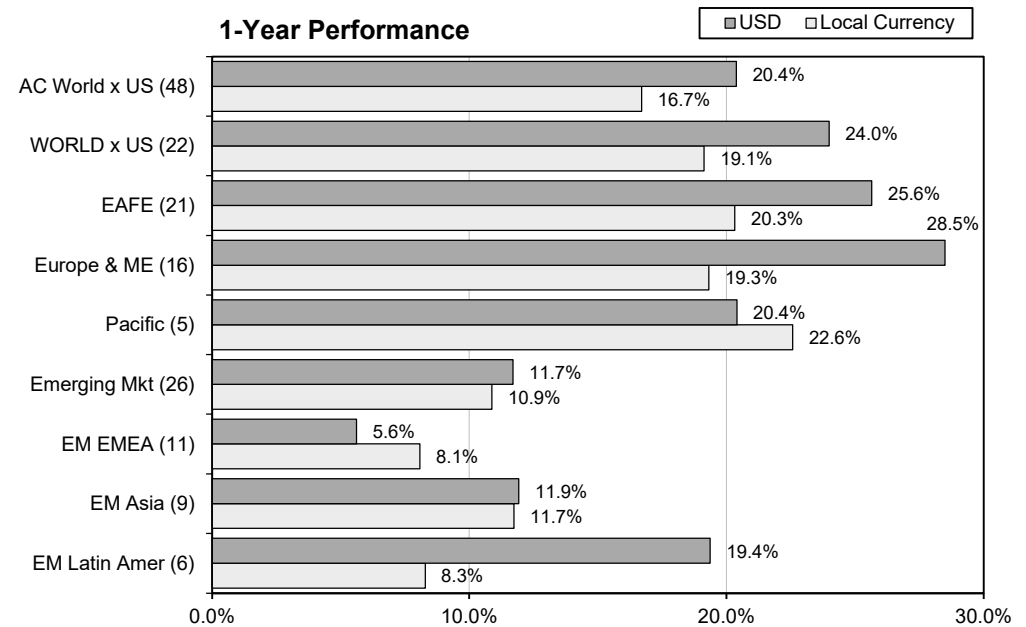
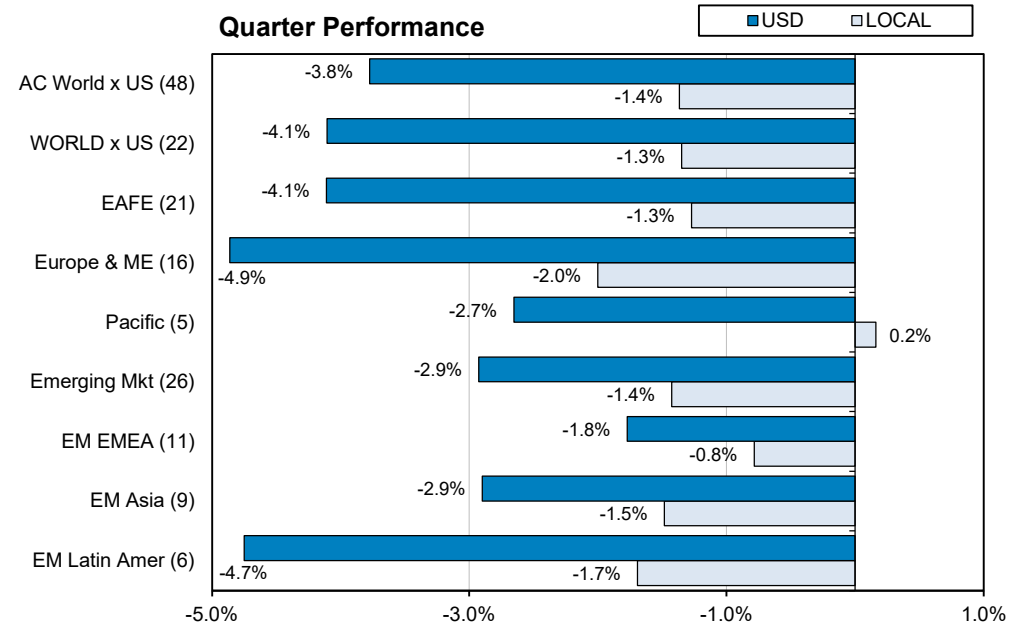
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Tango Therapeutics Inc	0.0%	239.2%	211.0%	Health Care
PolyMet Mining Corp	0.0%	166.3%	-22.3%	Materials
Cardlytics Inc	0.0%	161.1%	75.5%	Communication Services
Telephone and Data Systems Inc	0.1%	124.8%	41.3%	Communication Services
Thorne HealthTech Inc	0.0%	116.8%	115.4%	Consumer Staples
Immunovant Inc	0.1%	102.4%	588.0%	Health Care
Tetra Technologies Inc	0.0%	88.8%	77.7%	Energy
NextNav Inc	0.0%	74.8%	91.1%	Information Technology
Centrus Energy Corp Class A	0.0%	74.3%	38.5%	Energy
Hallador Energy Co	0.0%	68.3%	156.6%	Energy

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Outlook Therapeutics Inc	0.0%	-87.3%	-81.9%	Health Care
CXApp Inc Ordinary Shares	0.0%	-83.4%	-81.9%	Information Technology
Cano Health Inc Ordinary Shares	0.0%	-81.8%	-97.1%	Health Care
Loop Media Inc	0.0%	-79.2%	-88.9%	Communication Services
Akoustis Technologies Inc	0.0%	-76.3%	-74.6%	Information Technology
Benson Hill Inc	0.0%	-74.5%	-87.9%	Consumer Staples
TPI Composites Inc	0.0%	-74.4%	-76.5%	Industrials
Kodiak Sciences Inc	0.0%	-73.9%	-76.7%	Health Care
System1 Inc	0.0%	-73.1%	-80.8%	Communication Services
Presto Automation Inc	0.0%	-72.6%	-30.2%	Information Technology

Source: Morningstar Direct



- International developed and emerging market benchmarks struggled in both US Dollar (USD) and local currency (LCL) terms. The strengthening USD contributed to weaker USD performance for non-US indices during the quarter. The developed-market MSCI EAFE Index struggled with a -4.1% return in USD and -1.3% in LCL terms for the period. The MSCI Emerging Markets Index fell by less than most developed market indices, returning -2.9% in USD and -1.4% in LCL terms.
- The EMEA index had the smallest drawdown for the quarter in USD terms, falling -1.8%. In local currency terms, the Pacific regional index exhibited a slight 0.2% gain during the quarter, the only positive return among its peers.



Source: MSCI Global Index Monitor (Returns are Net)





**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of September 30, 2023

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.1%	-3.4%	14.4%
Consumer Discretionary	12.0%	-8.3%	32.8%
Consumer Staples	9.8%	-7.1%	9.9%
Energy	4.8%	11.6%	34.3%
Financials	19.1%	0.8%	33.9%
Health Care	13.4%	-3.1%	19.0%
Industrials	15.9%	-6.0%	32.9%
Information Technology	7.7%	-10.7%	29.2%
Materials	7.5%	-3.2%	23.7%
Real Estate	2.3%	-1.1%	5.4%
Utilities	3.4%	-8.8%	22.5%
<b>Total</b>	<b>100.0%</b>	<b>-4.1%</b>	<b>25.6%</b>

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.5%	-4.9%	13.0%
Consumer Discretionary	11.9%	-5.6%	22.3%
Consumer Staples	8.4%	-6.4%	9.0%
Energy	6.0%	9.0%	27.3%
Financials	21.2%	-0.7%	22.0%
Health Care	9.7%	-2.8%	17.2%
Industrials	13.1%	-5.8%	28.2%
Information Technology	11.3%	-8.7%	29.0%
Materials	7.9%	-3.3%	16.2%
Real Estate	2.0%	-1.1%	4.7%
Utilities	3.1%	-7.9%	11.4%
<b>Total</b>	<b>100.0%</b>	<b>-3.8%</b>	<b>20.4%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	9.6%	-5.9%	12.5%
Consumer Discretionary	13.7%	0.8%	5.1%
Consumer Staples	6.2%	-4.4%	4.6%
Energy	5.3%	6.3%	23.8%
Financials	22.3%	-1.7%	10.2%
Health Care	3.8%	-0.8%	4.1%
Industrials	6.7%	-4.6%	11.5%
Information Technology	20.2%	-6.8%	25.8%
Materials	8.0%	-3.1%	6.5%
Real Estate	1.7%	-0.6%	1.5%
Utilities	2.6%	-3.0%	-5.5%
<b>Total</b>	<b>100.0%</b>	<b>-2.9%</b>	<b>11.7%</b>

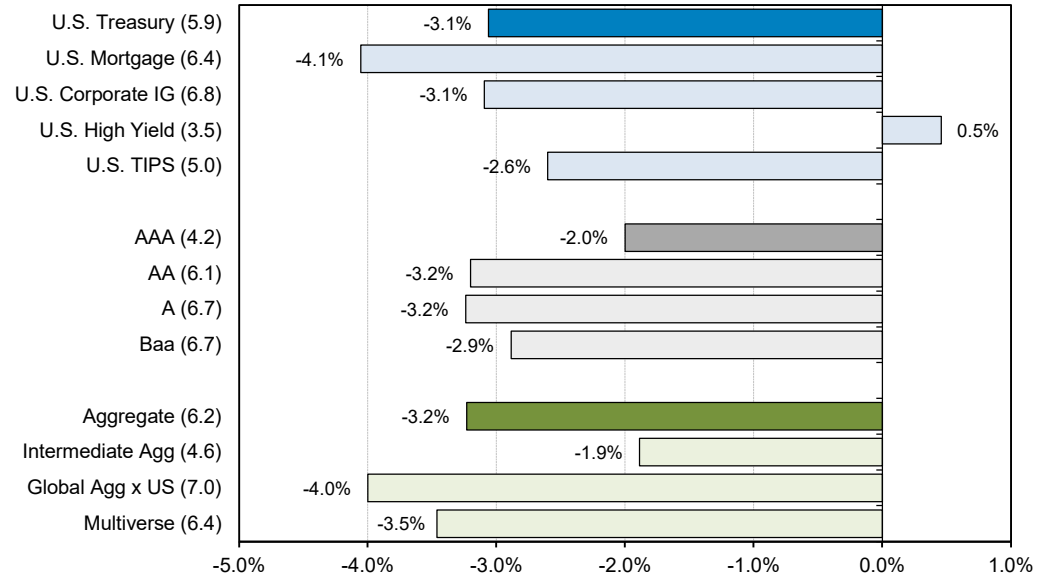
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	22.9%	14.7%	-2.4%	23.3%
United Kingdom	15.3%	9.8%	-2.8%	20.0%
France	12.1%	7.7%	-7.1%	31.4%
Switzerland	9.9%	6.4%	-5.5%	13.7%
Germany	8.3%	5.3%	-7.7%	32.3%
Australia	7.4%	4.7%	-4.7%	10.4%
Netherlands	4.3%	2.7%	-14.1%	24.8%
Denmark	3.3%	2.1%	2.0%	52.0%
Sweden	3.1%	2.0%	-5.7%	17.9%
Spain	2.6%	1.7%	-4.1%	40.4%
Italy	2.6%	1.7%	-2.4%	47.8%
Hong Kong	2.3%	1.5%	-12.1%	-6.1%
Singapore	1.5%	0.9%	-2.1%	6.2%
Belgium	1.0%	0.6%	-0.2%	20.0%
Finland	0.9%	0.6%	-6.0%	-1.9%
Norway	0.7%	0.5%	10.7%	12.9%
Israel	0.7%	0.4%	4.5%	0.1%
Ireland	0.5%	0.4%	-7.7%	40.6%
Portugal	0.2%	0.1%	-8.9%	7.1%
New Zealand	0.2%	0.1%	-10.0%	12.2%
Austria	0.2%	0.1%	-0.6%	34.9%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>64.1%</b>	<b>-4.1%</b>	<b>25.6%</b>
Canada		7.6%	-4.7%	8.7%
<b>Total Developed Countries</b>		<b>71.7%</b>	<b>-4.1%</b>	<b>24.0%</b>
China		8.5%	-1.9%	5.2%
India		4.5%	2.7%	10.1%
Taiwan		4.2%	-7.4%	21.8%
Korea		3.5%	-6.6%	26.2%
Brazil		1.5%	-3.6%	15.3%
Saudi Arabia		1.2%	-4.4%	-5.9%
South Africa		0.9%	-4.6%	6.7%
Mexico		0.7%	-6.5%	33.7%
Indonesia		0.6%	-3.4%	1.5%
Thailand		0.5%	-4.5%	0.1%
United Arab Emirates		0.4%	6.1%	2.2%
Malaysia		0.4%	4.5%	5.2%
Qatar		0.3%	0.1%	-17.8%
Kuwait		0.2%	-2.7%	-1.9%
Poland		0.2%	-12.7%	59.1%
Turkey		0.2%	32.7%	74.9%
Philippines		0.2%	-3.8%	17.7%
Chile		0.1%	-9.8%	3.3%
Greece		0.1%	-7.8%	70.6%
Peru		0.1%	-4.0%	29.9%
Hungary		0.1%	0.5%	75.9%
Czech Republic		0.0%	1.0%	35.7%
Colombia		0.0%	0.1%	15.9%
Egypt		0.0%	15.3%	48.4%
<b>Total Emerging Countries</b>		<b>28.3%</b>	<b>-2.9%</b>	<b>11.7%</b>
<b>Total ACWixUS Countries</b>		<b>100.0%</b>	<b>-3.8%</b>	<b>20.4%</b>

Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)  
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

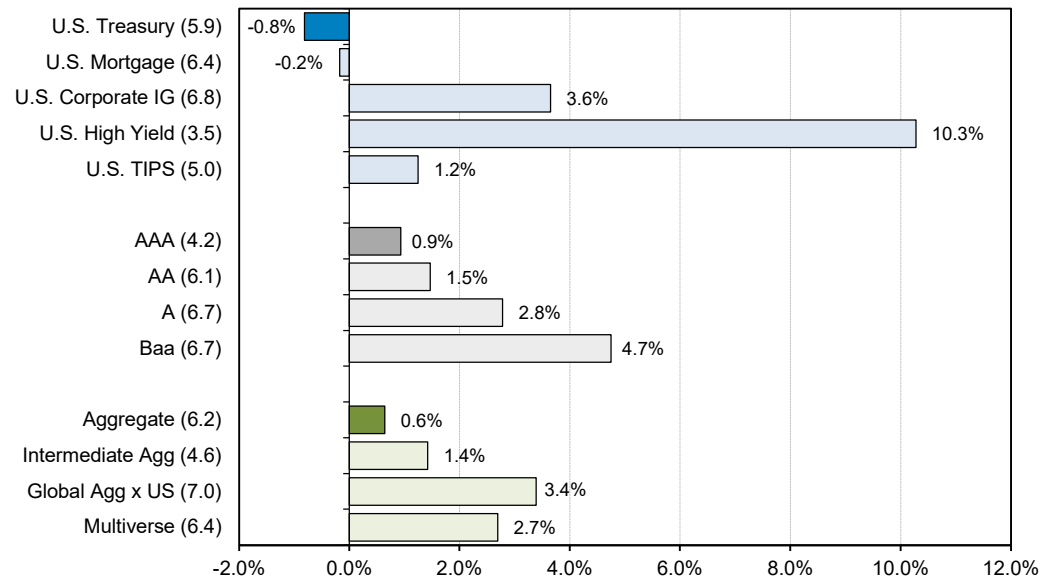


- Fixed income markets continued the decline that began in the second quarter. Yields remain elevated on the back of FOMC actions to hike policy rates throughout the year. After a challenging 2022 in fixed-income markets brought on by the largest and most rapid increase in interest rates since the early 1980s, higher yields and an expected slower pace of rate increases led investors to expect better outcomes in 2023. That expectation was challenged during the second and third quarters, as the additional 0.25% rate hike in July, and guidance toward potential future rate hikes weighed on the asset class and many of the major domestic fixed-income indices posted discouraging returns.
- The Bloomberg US Aggregate Bond Index, the bellwether US investment grade benchmark, declined -3.2% for the quarter. Beneath the headline benchmark, the Bloomberg US Corporate Investment Grade Index returned -3.1% and the US Mortgage Index posted a weaker -4.1%.
- Outside of the aggregate index's sub-components, high-yield bonds continued their rise with a return of 0.5% as credit spreads narrowed during the quarter. Additionally, US TIPS fell -2.6% for the quarter. The Bloomberg Global Aggregate ex-US Index lagged most domestic fixed-income indexes and the multiverse benchmark, posting a loss of -4.0% for the quarter.
- Over the trailing one-year period, the Bloomberg US Aggregate Bond Index gained just 0.6%. The benchmark's sub-components were highly dispersed with Treasuries falling -0.8% while corporate investment grade issues were up 3.6% over the previous 12 months. US TIPS, which are excluded from the aggregate index, increased by 1.2% for the year. High-yield corporate bonds, which have a much shorter duration, nearly tripled the returns of their investment grade counterparts with the Bloomberg US High Yield Index returning an impressive 10.3% for the trailing year.
- Performance for non-US bonds overcame the disappointing performance in 2022 with the Bloomberg Global Aggregate ex-US Index gaining 3.4%.

**Quarter Performance**



**1-Year Performance**

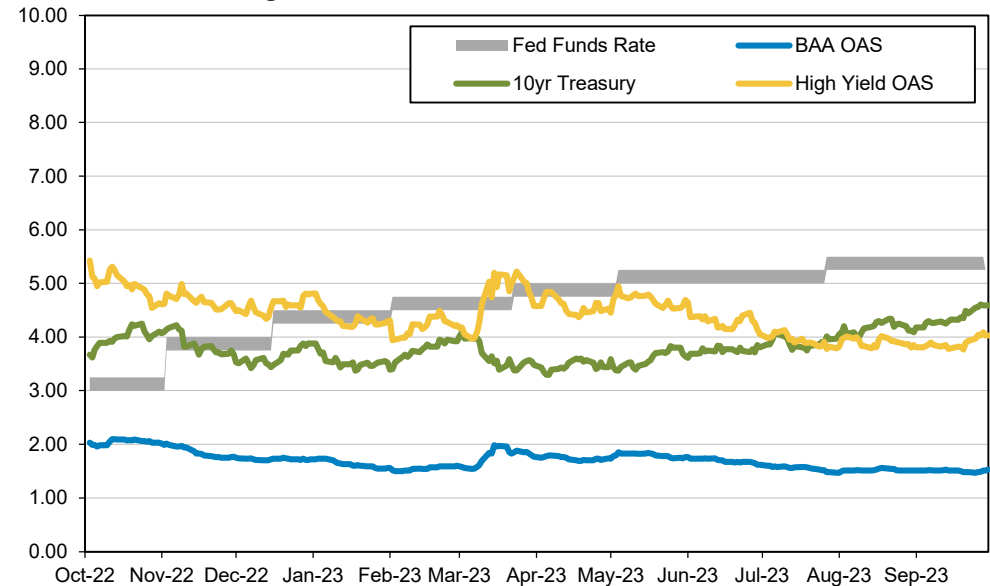


Source: Bloomberg

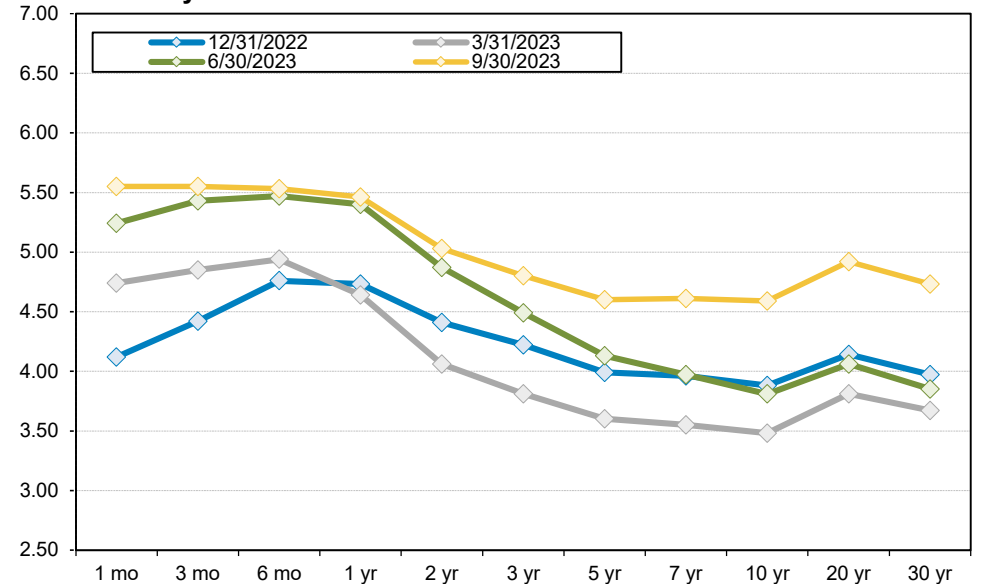


- The gray band across the graph illustrates the range of the current Fed Funds target rate. During the third quarter, the FOMC raised the lower end of its target rate range from 5.00% to 5.25% at their July meeting. While the FOMC paused further rate increases at their September meeting, several speeches and public comments since that meeting have made it clear that additional rate hikes should not be ruled out. While the overwhelming consensus has been that the Fed is moving towards the end of its rate hiking cycle, several statements and key macroeconomic statistics have shed doubt on timing of these expectations.
- The yield on the US 10-Year Treasury (green line) rose 0.78% largely due to increases in the policy rate and the potential for expected future inflationary pressure. The closing yield on the 10-Year Treasury was 4.59% as of September 29, 2023, and is up 71 basis points from its 3.88% yield at 2022 year-end. Capital market rates have now reached their highest levels in 16 years.
- The blue line illustrates changes in the BAA (Option Adjusted Spread) OAS for BAA-rated corporate bonds. This measure quantifies the additional yield premium that investors require to purchase and hold non-US Treasury investment grade issues with the lowest investment grade rating. For the full year, the spread narrowed from 2.05% to 1.53%, signaling a lower premium for credit risk than was the case a year prior. High-yield OAS spreads have narrowed from 5.92% in July 2022 to 4.03% as of the end of the quarter. Spikes in both the BAA OAS and High Yield spread measures were visible in the first quarter of 2023 following a short-lived crisis of confidence in the banking sector, which has since been addressed. Both spread measures traded lower on the news of the government's intervention, and as fears of possible contagion waned, credit spreads returned to their levels prior to February.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. Short-term rates continued to rise during the third quarter as the FOMC increased policy interest rates to continue combatting inflation. The Treasury yield curve has quickly exhibited a re-steepening with longer-term yields increasing at a faster pace than shorter-term yields. During the quarter, the 30-year yield jumped from 3.85% to 4.73% (an increase of 0.88%). Historically, a persistent inversion of the yield curve has been a precursor of an economic recession within six to 24 months.

1-Year Trailing Market Rates



Treasury Yield Curve



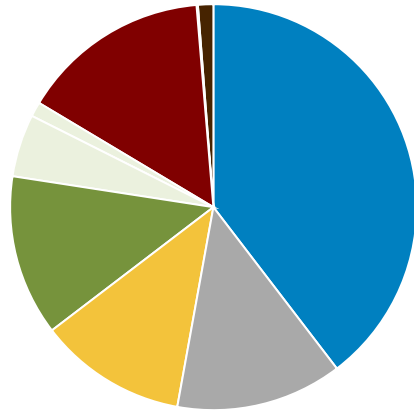
Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)



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**Asset Allocation by Segment**  
Sep-2023 : \$951,503,806.6

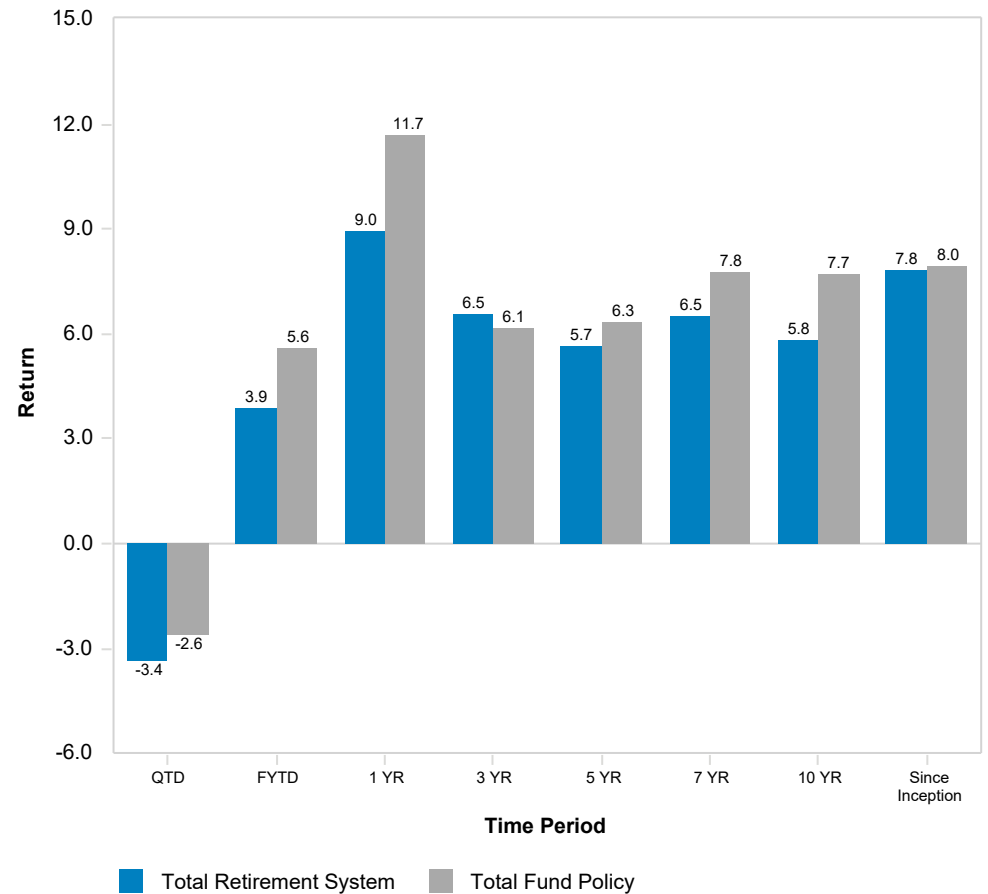


Allocation	Market Value	Allocation
Total Domestic Equity	377,010,787	39.6
Total International Equity	125,824,402	13.2
Total Other Equity	112,009,708	11.8
Total Core Fixed Income	122,066,958	12.8
Total Non Core Fixed Income	47,391,241	5.0
Total Other Fixed Income	11,084,847	1.2
Total Real Estate	143,396,114	15.1
Total Timber Funds	1,024,754	0.1
Cash Account	11,694,997	1.2

**Gain/Loss Summary**

	QTD	FYTD	1 YR
Total Retirement System			
Beginning Market Value	992,108,775	933,934,678	893,974,810
Net Contributions	-7,274,803	-18,773,194	-22,857,158
Return on Investment	-32,384,111	38,776,557	83,219,942
Ending Market Value	951,503,807	951,503,807	951,503,807

**Comparative Performance**



Market values subject to availability from Northern Trust and individual managers. All performance data is Net of Fees. Please refer to the end of the report for Investment Pricing Summary and Additional Notes.



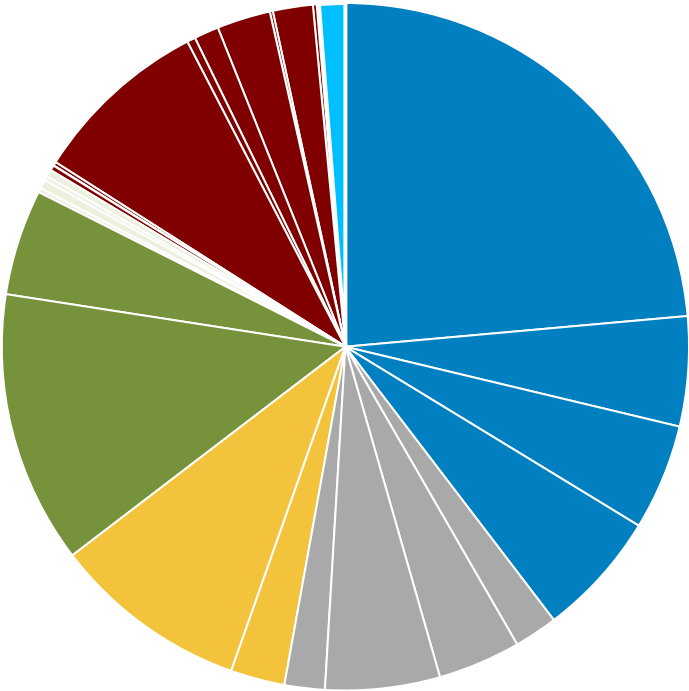
**Asset Allocation by Manager  
Total Fund**

**As of September 30, 2023**

**Sep-2023 : \$951,503,806.6**

**Allocation**

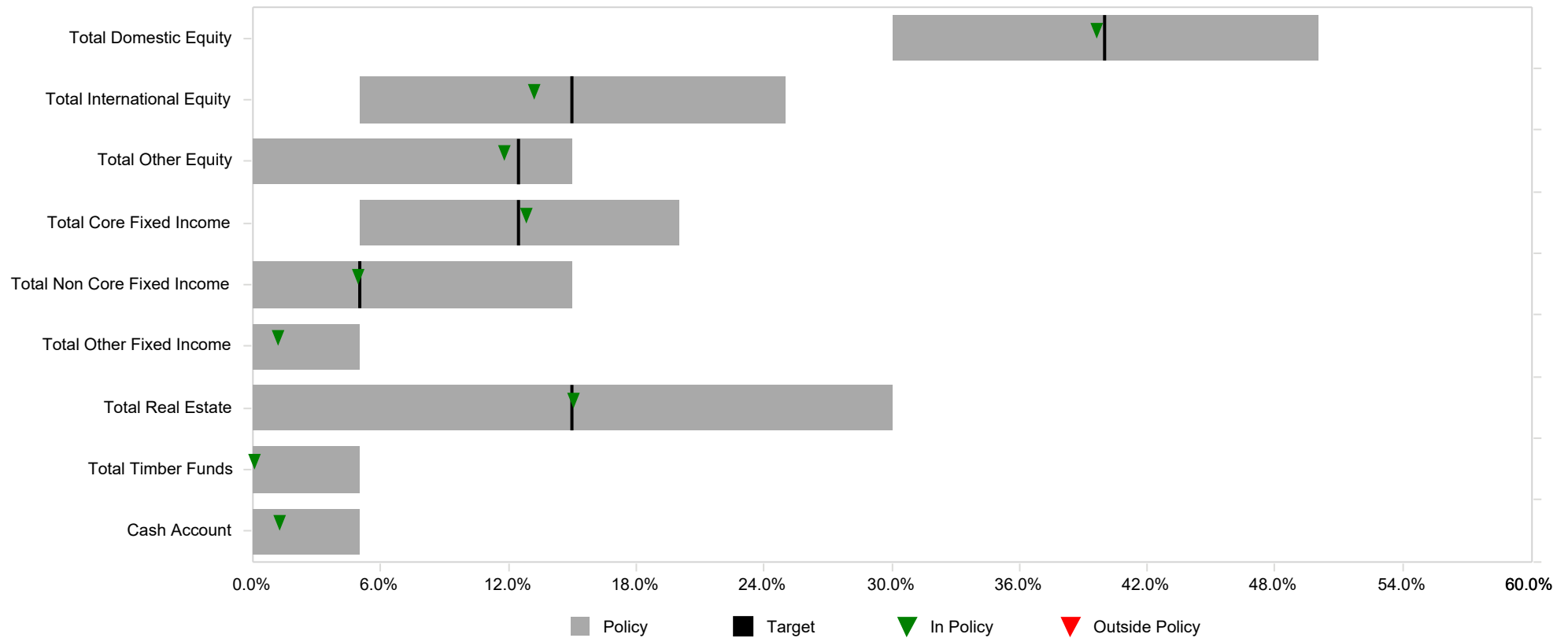
	<b>Market Value</b>	<b>Allocation</b>
NT Collective Russell 3000 Index	224,308,639	23.6
Baird Mid Cap Growth	49,104,616	5.2
Nuance Mid Cap Value	47,359,021	5.0
Kennedy Small Cap Value	56,238,511	5.9
Driehaus International Small Cap Growth	19,451,485	2.0
WCM Focused Intl Growth LP	37,055,790	3.9
Thompson Siegel & Walmsley	51,291,938	5.4
Wellington Emerging Markets Fund	18,025,188	1.9
Huff Energy Fund	24,253,938	2.5
Franklin Park Private Equity	87,755,770	9.2
Orleans Capital	122,066,958	12.8
Pimco Diversified Income Fund	47,391,241	5.0
LBC Credit Partners III	1,864,079	0.2
LBC Credit Partners IV	4,049,501	0.4
Providence Debt Fund III	1,985,955	0.2
Capital Point Partners (Princeton Capital)	3,185,311	0.3
Edison Investments	2,333,235	0.2
India Property Fund	128,722	0.0
Gainesville Property	1,644,315	0.2
Morgan Stanley	79,579,871	8.4
AEW Partners Fund VIII	3,751,884	0.4
GreenOak US III	11,032,931	1.2
Brookfield Premier RE Partners	23,973,332	2.5
Artemis Real Estate IV	1,381,925	0.1
Stockbridge Smart Markets	17,868,524	1.9
APRS Building	1,701,375	0.2
Domain Environmental Investments II	1,024,754	0.1
Cash Account	11,694,997	1.2



Market values subject to availability from Northern Trust and individual managers. Please refer to the end of the report for Investment Pricing Summary and Additional Notes.



Executive Summary



Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)
<b>Total Retirement System</b>	<b>951,503,807</b>	<b>100.0</b>	<b>N/A</b>	<b>N/A</b>	<b>100.0</b>
Total Domestic Equity	377,010,787	39.6	30.0	50.0	40.0
Total International Equity	125,824,402	13.2	5.0	25.0	15.0
Total Other Equity	112,009,708	11.8	0.0	15.0	12.5
Total Core Fixed Income	122,066,958	12.8	5.0	20.0	12.5
Total Non Core Fixed Income	47,391,241	5.0	0.0	15.0	5.0
Total Other Fixed Income	11,084,847	1.2	0.0	5.0	0.0
Total Real Estate	143,396,114	15.1	0.0	30.0	15.0
Total Timber Funds	1,024,754	0.1	0.0	5.0	0.0
Cash Account	11,694,997	1.2	0.0	5.0	0.0



Financial Reconciliation Quarter to Date											
	Market Value 07/01/2023	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 09/30/2023	
<b>Total Retirement System</b>	<b>992,108,775</b>	<b>-</b>	<b>16,544,493</b>	<b>-23,819,295</b>	<b>-896,695</b>	<b>-49,360</b>	<b>4,152,289</b>	<b>-36,536,400</b>	<b>-32,384,111</b>	<b>951,503,807</b>	
<b>Total Equity</b>	<b>654,306,930</b>	<b>-12,180,028</b>	<b>-</b>	<b>-</b>	<b>-641,991</b>	<b>-</b>	<b>904,808</b>	<b>-27,544,823</b>	<b>-26,640,015</b>	<b>614,844,897</b>	
<b>Total Domestic Equity</b>	<b>411,391,210</b>	<b>-14,717,934</b>	<b>-</b>	<b>-</b>	<b>-282,084</b>	<b>-</b>	<b>781,459</b>	<b>-20,161,863</b>	<b>-19,380,404</b>	<b>377,010,787</b>	
NT Collective Russell 3000 Index	246,820,877	-14,987,678	-	-	-12,341	-	-	-7,512,219	-7,512,219	224,308,639	
Baird Mid Cap Growth	53,730,237	93,066	-	-	-93,066	-	96,131	-4,721,752	-4,625,621	49,104,616	
Nuance Mid Cap Value	52,155,961	45,228	-	-	-45,228	-	382,550	-5,179,490	-4,796,939	47,359,021	
Kennedy Small Cap Value	58,684,135	131,450	-	-	-131,450	-	302,777	-2,748,402	-2,445,624	56,238,511	
<b>Total International Equity</b>	<b>133,084,012</b>	<b>34,638</b>	<b>-</b>	<b>-</b>	<b>-34,638</b>	<b>-</b>	<b>123,349</b>	<b>-7,382,960</b>	<b>-7,259,610</b>	<b>125,824,402</b>	
Driehaus International Small Cap Growth	19,959,406	-	-	-	-	-	-	-507,921	-507,921	19,451,485	
Thompson Siegel & Walmsley	53,716,474	-	-	-	-	-	-	-2,424,536	-2,424,536	51,291,938	
WCM Focused Intl Growth LP	40,615,253	-	-	-	-	-	-	-3,559,463	-3,559,463	37,055,790	
Wellington Emerging Markets Fund	18,792,879	34,638	-	-	-34,638	-	123,349	-891,040	-767,691	18,025,188	
<b>Total Other Equity</b>	<b>109,831,708</b>	<b>2,503,268</b>	<b>-</b>	<b>-</b>	<b>-325,268</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>112,009,708</b>	
Huff Energy Fund	24,253,938	-	-	-	-	-	-	-	-	24,253,938	
Franklin Park Private Equity	85,577,770	2,503,268	-	-	-325,268	-	-	-	-	87,755,770	
<b>Total Fixed Income</b>	<b>185,157,145</b>	<b>-148,197</b>	<b>-</b>	<b>-</b>	<b>-40,245</b>	<b>-</b>	<b>2,057,799</b>	<b>-6,483,457</b>	<b>-4,425,658</b>	<b>180,543,045</b>	
Orleans Capital	125,978,856	40,245	-	-	-40,245	-	1,366,992	-5,278,891	-3,911,899	122,066,958	
Pimco Diversified Income Fund	47,905,000	-	-	-	-	-	595,878	-1,109,637	-513,760	47,391,241	
<b>Total Other Fixed Income</b>	<b>11,273,288</b>	<b>-188,442</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>94,929</b>	<b>-94,929</b>	<b>-</b>	<b>11,084,847</b>	
Capital Point Partners (Princeton Capital)	3,185,311	-	-	-	-	-	-	-	-	3,185,311	
LBC Credit Partners III	1,864,079	-	-	-	-	-	-	-	-	1,864,079	
LBC Credit Partners IV	4,208,083	-158,582	-	-	-	-	65,069	-65,069	-	4,049,501	
Providence Debt Fund III	2,015,815	-29,860	-	-	-	-	29,860	-29,860	-	1,985,955	



Financial Reconciliation

Total Fund

1 Quarter Ending September 30, 2023

	Market Value 07/01/2023	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 09/30/2023
<b>Total Real Estate &amp; Timber</b>	<b>145,483,533</b>	<b>678,685</b>	-	-	<b>-214,460</b>	<b>-7,344</b>	<b>988,574</b>	<b>-2,508,121</b>	<b>-1,519,547</b>	<b>144,420,868</b>
<b>Total Real Estate</b>	<b>144,458,779</b>	<b>678,685</b>	-	-	<b>-214,460</b>	<b>-7,344</b>	<b>988,574</b>	<b>-2,508,121</b>	<b>-1,519,547</b>	<b>143,396,114</b>
Edison Investments	2,324,204	-11,382	-	-	-	-	11,382	9,031	20,413	2,333,235
India Property Fund	157,833	-29,111	-	-	-	-	-	-	-	128,722
Gainesville Property	1,644,315	-	-	-	-	-	-	-	-	1,644,315
Morgan Stanley	79,754,088	-	-	-	-	-	787,566	-961,783	-174,217	79,579,871
AEW Partners Fund VIII	3,751,884	-	-	-	-	-	-	-	-	3,751,884
GreenOak US III	10,794,414	294,525	-	-	-56,008	-	-	-	-	11,032,931
Brookfield Premier Real Estate Partners	25,182,071	-	-	-	-	-	-	-1,208,739	-1,208,739	23,973,332
Artemis Real Estate IV	1,081,327	424,654	-	-	-116,712	-7,344	-	-	-	1,381,925
Stockbridge Smart Markets	18,067,268	-	-	-	-41,740	-	189,625	-346,629	-157,004	17,868,524
APRS Building	1,701,375	-	-	-	-	-	-	-	-	1,701,375
<b>Total Timber Funds</b>	<b>1,024,754</b>	-	-	-	-	-	-	-	-	<b>1,024,754</b>
Domain Environmental Investments II	1,024,754	-	-	-	-	-	-	-	-	1,024,754
<b>Cash Account</b>	<b>7,161,167</b>	<b>11,649,540</b>	<b>16,544,493</b>	<b>-23,819,295</b>	-	<b>-42,016</b>	<b>201,109</b>	-	<b>201,109</b>	<b>11,694,997</b>

Please refer to the end of the report for additional notes.



Financial Reconciliation Year to Date										
	Market Value 01/01/2023	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 09/30/2023
<b>Total Retirement System</b>	<b>933,934,678</b>	<b>-</b>	<b>54,628,289</b>	<b>-73,401,483</b>	<b>-2,198,728</b>	<b>-235,507</b>	<b>12,917,017</b>	<b>25,859,541</b>	<b>38,776,557</b>	<b>951,503,807</b>
<b>Total Equity</b>	<b>616,613,154</b>	<b>-45,197,357</b>	<b>-</b>	<b>-</b>	<b>-1,817,028</b>	<b>-</b>	<b>2,897,485</b>	<b>42,348,642</b>	<b>45,246,127</b>	<b>614,844,897</b>
<b>Total Domestic Equity</b>	<b>397,664,840</b>	<b>-49,287,715</b>	<b>-</b>	<b>-</b>	<b>-1,187,304</b>	<b>-</b>	<b>2,553,912</b>	<b>27,267,054</b>	<b>29,820,966</b>	<b>377,010,787</b>
NT Collective Russell 3000 Index	223,929,044	-27,428,802	-	-	-46,217	-	-	27,854,614	27,854,614	224,308,639
Baird Mid Cap Growth	53,296,257	-7,725,223	-	-	-274,777	-	308,216	3,500,143	3,808,359	49,104,616
Nuance Mid Cap Value	63,994,131	-14,673,979	-	-	-326,021	-	1,373,837	-3,008,947	-1,635,110	47,359,021
Kennedy Small Cap Value	56,445,407	540,289	-	-	-540,289	-	871,860	-1,078,756	-206,896	56,238,511
<b>Total International Equity</b>	<b>120,605,613</b>	<b>100,630</b>	<b>-</b>	<b>-</b>	<b>-102,496</b>	<b>-</b>	<b>341,013</b>	<b>4,879,642</b>	<b>5,220,655</b>	<b>125,824,402</b>
Driehaus International Small Cap Growth	18,794,285	-1,866	-	-	-	-	-	659,066	659,066	19,451,485
Thompson Siegel & Walmsley	48,366,324	-	-	-	-	-	-	2,925,614	2,925,614	51,291,938
WCM Focused Intl Growth LP	35,451,214	-	-	-	-	-	-	1,604,576	1,604,576	37,055,790
Wellington Emerging Markets Fund	17,993,789	102,496	-	-	-102,496	-	341,013	-309,614	31,399	18,025,188
<b>Total Other Equity</b>	<b>98,342,702</b>	<b>3,989,728</b>	<b>-</b>	<b>-</b>	<b>-527,228</b>	<b>-</b>	<b>2,560</b>	<b>10,201,946</b>	<b>10,204,506</b>	<b>112,009,708</b>
Huff Energy Fund	19,396,200	-	-	-	-	-	-	4,857,738	4,857,738	24,253,938
Sail Venture Fund I	1	-	-	-	-	-	-	-1	-1	-
Sail Venture Fund II	1	-	-	-	-	-	-	-1	-1	-
Sail Pre-Exit Acceleration Fund	1	-	-	-	-	-	-	-1	-1	-
Excelsior Investors, Ltd.	122,366	-83,465	-	-	-	-	-	-38,901	-38,901	-
Franklin Park Private Equity	78,824,133	4,073,193	-	-	-527,228	-	2,560	5,383,112	5,385,672	87,755,770
<b>Total Fixed Income</b>	<b>104,845,570</b>	<b>76,110,946</b>	<b>-</b>	<b>-</b>	<b>-81,074</b>	<b>-</b>	<b>5,368,893</b>	<b>-5,701,290</b>	<b>-332,397</b>	<b>180,543,045</b>
Orleans Capital	46,504,138	77,819,810	-	-	-82,313	-	3,281,935	-5,456,613	-2,174,678	122,066,958
Pimco Diversified Income Fund	46,278,146	-	-	-	-	-	1,714,090	-600,995	1,113,095	47,391,241
<b>Total Other Fixed Income</b>	<b>12,063,285</b>	<b>-1,708,864</b>	<b>-</b>	<b>-</b>	<b>1,239</b>	<b>-</b>	<b>372,868</b>	<b>356,319</b>	<b>729,187</b>	<b>11,084,847</b>
Capital Point Partners (Princeton Capital)	3,257,754	-	-	-	-	-	-	-72,443	-72,443	3,185,311
LBC Credit Partners III	1,531,158	-48,896	-	-	1,239	-	47,658	332,921	380,579	1,864,079
LBC Credit Partners IV	4,295,655	-700,011	-	-	-	-	201,180	252,677	453,857	4,049,501
Providence Debt Fund III	2,978,718	-959,957	-	-	-	-	124,030	-156,836	-32,806	1,985,955

## Financial Reconciliation

## Total Fund

Year To Date Ending September 30, 2023

	Market Value 01/01/2023	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 09/30/2023
<b>Total Real Estate &amp; Timber</b>	<b>150,592,903</b>	<b>2,301,940</b>	-	-	<b>-300,626</b>	<b>-106,725</b>	<b>3,493,763</b>	<b>-11,560,388</b>	<b>-8,066,625</b>	<b>144,420,868</b>
<b>Total Real Estate</b>	<b>148,252,053</b>	<b>3,508,641</b>	-	-	<b>-300,626</b>	<b>-106,725</b>	<b>3,493,763</b>	<b>-11,450,993</b>	<b>-7,957,230</b>	<b>143,396,114</b>
Edison Investments	2,304,992	-28,456	-	-	-	-	28,456	28,243	56,699	2,333,235
India Property Fund	173,212	-29,111	-	-	-	-	-	-15,379	-15,379	128,722
Gainesville Property	1,644,315	16,618	-	-	-	-16,618	-	-	-	1,644,315
Morgan Stanley	82,607,316	-	-	-	-	-	2,409,412	-5,436,857	-3,027,446	79,579,871
AEW Partners Fund VIII	3,725,317	-118,422	-	-	-	-	-	144,989	144,989	3,751,884
GreenOak US III	10,019,132	789,328	-	-	-56,008	-	-	280,479	280,479	11,032,931
Brookfield Premier Real Estate Partners	28,185,074	-	-	-	-	-	475,976	-4,687,718	-4,211,742	23,973,332
Artemis Real Estate IV	399,234	1,177,310	-	-	-116,712	-90,107	11,051	1,149	12,200	1,381,925
Stockbridge Smart Markets	19,193,461	-	-	-	-127,906	-	568,869	-1,765,900	-1,197,032	17,868,524
APRS Building	-	1,701,375	-	-	-	-	-	-	-	1,701,375
<b>Total Timber Funds</b>	<b>2,340,850</b>	<b>-1,206,701</b>	-	-	-	-	-	<b>-109,395</b>	<b>-109,395</b>	<b>1,024,754</b>
Capitol Timberland Investments	1,021,897	-996,701	-	-	-	-	-	-25,196	-25,196	-
Domain Environmental Investments II	1,318,953	-210,000	-	-	-	-	-	-84,199	-84,199	1,024,754
<b>Total Multi Asset Funds</b>	<b>53,241,377</b>	<b>-54,737,498</b>	-	-	-	-	<b>717,929</b>	<b>778,192</b>	<b>1,496,121</b>	<b>-</b>
BlackRock Multi Asset Fund	53,241,377	-54,737,498	-	-	-	-	717,929	778,192	1,496,121	-
<b>Cash Account</b>	<b>6,940,300</b>	<b>23,223,343</b>	<b>54,628,289</b>	<b>-73,401,483</b>	-	<b>-128,783</b>	<b>438,946</b>	<b>-5,615</b>	<b>433,331</b>	<b>11,694,997</b>
<b>APRS Building</b>	<b>1,701,375</b>	<b>-1,701,375</b>	-	-	-	-	-	-	-	-

Please refer to the end of the report for additional notes.



## Comparative Performance Trailing Returns

	Performance (%)								
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
<b>Total Retirement System (Net)</b>	<b>-3.37</b>	<b>3.87</b>	<b>8.98</b>	<b>6.55</b>	<b>5.67</b>	<b>6.52</b>	<b>5.84</b>	<b>7.79</b>	<b>10/01/1992</b>
<b>Total Retirement System (Gross)</b>	<b>-3.28 (80)</b>	<b>4.10 (71)</b>	<b>9.26 (77)</b>	<b>6.78 (16)</b>	<b>5.93 (26)</b>	<b>6.78 (45)</b>	<b>6.10 (68)</b>	<b>8.10 (19)</b>	<b>10/01/1992</b>
Total Fund Policy	-2.61	5.60	11.69	6.15	6.31	7.76	7.73	7.96	
Variance	-0.67	-1.50	-2.43	0.63	-0.38	-0.98	-1.63	0.14	
All Public Plans-Total Fund Median	-2.57	4.74	10.66	4.90	5.37	6.67	6.51	7.67	
<b>Total Equity</b>	<b>-4.25</b>	<b>7.03</b>	<b>15.38</b>	<b>8.63</b>	<b>7.17</b>	<b>9.01</b>	<b>8.28</b>	<b>8.66</b>	<b>01/01/1994</b>
Total Equity Policy	-3.44	11.12	21.62	8.75	7.89	10.19	9.29	8.48	
Variance	-0.81	-4.09	-6.24	-0.12	-0.72	-1.18	-1.01	0.18	
<b>Domestic Equity</b>	<b>-4.95 (75)</b>	<b>7.13 (46)</b>	<b>15.18 (57)</b>	<b>8.43 (58)</b>	<b>7.59 (46)</b>	<b>10.10 (47)</b>	<b>9.51 (52)</b>	<b>9.85 (62)</b>	<b>05/01/2013</b>
Russell 3000 Index	-3.25	12.39	20.46	9.38	9.14	11.64	11.28	11.57	
Variance	-1.70	-5.26	-5.28	-0.95	-1.55	-1.54	-1.77	-1.72	
IM U.S. Equity (SA+CF+MF) Median	-3.41	6.30	16.41	9.51	7.26	9.87	9.56	10.51	
NT Collective Russell 3000 Index	-3.26 (51)	12.37 (29)	20.46 (41)	9.41 (53)	9.15 (47)	11.65 (41)	N/A	10.50 (34)	01/01/2014
Russell 3000 Index	-3.25	12.39	20.46	9.38	9.14	11.64	11.28	10.49	
Variance	-0.01	-0.02	0.00	0.03	0.01	0.01	N/A	0.01	
IM U.S. All Cap Core Equity (SA+CF) Median	-3.24	9.38	19.60	9.45	8.94	11.24	10.63	9.93	
Baird Mid Cap Growth	-8.77 (94)	6.23 (83)	10.27 (90)	3.59 (38)	7.84 (49)	11.66 (39)	N/A	9.12 (73)	07/01/2014
Russell Midcap Growth Index	-5.22	9.88	17.47	2.61	6.97	10.40	9.94	9.10	
Variance	-3.55	-3.65	-7.20	0.98	0.87	1.26	N/A	0.02	
IM U.S. Mid Cap Growth Equity (SA+CF) Median	-5.57	9.15	16.00	2.20	7.66	11.19	10.28	9.79	
Nuance Mid Cap Value	-9.20 (100)	-4.25 (99)	7.66 (95)	6.19 (100)	N/A	N/A	N/A	5.71 (87)	04/01/2019
Russell Midcap Value Index	-4.46	0.54	11.05	10.98	5.18	6.83	7.92	6.43	
Variance	-4.74	-4.79	-3.39	-4.79	N/A	N/A	N/A	-0.72	
IM U.S. Mid Cap Value Equity (SA+CF) Median	-3.55	3.52	15.45	14.25	6.45	8.47	8.94	8.60	
Kennedy Small Cap Value	-4.37 (84)	-1.28 (94)	6.05 (100)	13.89 (76)	3.28 (89)	5.91 (93)	N/A	7.64 (95)	03/01/2016
Russell 2000 Value Index	-2.96	-0.53	7.84	13.32	2.59	5.94	6.19	8.39	
Variance	-1.41	-0.75	-1.79	0.57	0.69	-0.03	N/A	-0.75	
IM U.S. Small Cap Value Equity (SA+CF) Median	-2.16	4.14	15.90	16.19	5.43	8.08	8.10	10.13	

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Comparative Performance

Total Fund

As of September 30, 2023

	Performance (%)								Inception	Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR			
<b>International Equity</b>	<b>-5.48 (70)</b>	<b>4.31 (64)</b>	<b>19.83 (56)</b>	<b>2.86 (54)</b>	<b>1.31 (84)</b>	<b>3.64 (85)</b>	<b>3.47 (77)</b>	<b>4.12 (82)</b>	<b>05/01/2013</b>	
MSCI AC World ex USA	-3.68	5.82	21.02	4.24	3.07	5.24	3.83	3.98		
Variance	-1.80	-1.51	-1.19	-1.38	-1.76	-1.60	-0.36	0.14		
IM International Equity (SA+CF+MF) Median	-4.17	5.57	20.63	3.45	3.38	5.41	4.53	5.25		
Driehaus International Small Cap Growth	-2.54 (10)	3.11 (36)	20.00 (32)	1.91 (35)	4.17 (4)	6.89 (4)	6.54 (2)	8.51 (6)	09/01/2012	
MSCI AC World ex USA Small Growth	-3.63	3.85	16.08	0.02	2.37	4.67	4.66	6.17		
Variance	1.09	-0.74	3.92	1.89	1.80	2.22	1.88	2.34		
IM International SMID Cap Growth Equity (MF) Median	-5.02	1.83	16.19	-0.74	0.98	3.89	3.88	5.77		
Thompson Siegel & Walmsley	-4.51 (56)	6.05 (56)	25.03 (40)	6.90 (24)	2.86 (78)	4.58 (85)	N/A	3.56 (87)	10/01/2014	
MSCI EAFE (Net) Index	-4.11	7.08	25.65	5.75	3.24	5.29	3.82	3.78		
Variance	-0.40	-1.03	-0.62	1.15	-0.38	-0.71	N/A	-0.22		
IM International Large Cap Core Equity (SA+CF) Median	-4.04	6.81	23.55	5.32	3.64	5.72	4.81	4.58		
WCM Focused Intl Growth LP	-8.76 (78)	4.53 (47)	17.56 (68)	N/A	N/A	N/A	N/A	-2.66 (61)	12/01/2020	
MSCI AC World ex USA Growth (Net)	-7.31	2.61	15.84	-1.86	2.54	4.66	3.92	-4.67		
Variance	-1.45	1.92	1.72	N/A	N/A	N/A	N/A	2.01		
IM International Large Cap Growth Equity (MF) Median	-7.10	4.42	18.88	0.89	3.23	5.02	3.96	-1.64		
Wellington Emerging Markets Fund	-4.25 (75)	-0.37 (83)	9.96 (78)	-3.65 (77)	N/A	N/A	N/A	-2.90 (93)	02/01/2020	
MSCI Emerging Markets (Net) Index	-2.93	1.82	11.70	-1.73	0.55	3.22	2.07	-0.44		
Variance	-1.32	-2.19	-1.74	-1.92	N/A	N/A	N/A	-2.46		
IM Emerging Markets Equity (SA+CF) Median	-2.96	4.63	14.89	-0.16	2.60	4.53	3.49	1.34		
<b>Total Other Equity</b>	<b>-0.30</b>	<b>9.85</b>	<b>10.64</b>	<b>17.34</b>	<b>19.37</b>	<b>N/A</b>	<b>N/A</b>	<b>6.96</b>	<b>01/01/2017</b>	
Huff Energy Fund										
Franklin Park Private Equity										

Returns for periods greater than one year are annualized. Returns are expressed as percentages. All performance data is Net of Fees. Please refer to the end of the report for additional notes.



Comparative Performance

Total Fund

As of September 30, 2023

	Performance (%)								Inception	Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR			
<b>Total Fixed Income</b>	<b>-2.41</b>	<b>-0.06</b>	<b>3.04</b>	<b>-2.48</b>	<b>-0.30</b>	<b>0.08</b>	<b>0.50</b>	<b>5.51</b>	<b>12/01/1993</b>	
Total Fixed Income Policy	-3.03	-0.54	3.21	-5.32	-0.31	-0.44	0.62	4.00		
Variance	0.62	0.48	-0.17	2.84	0.01	0.52	-0.12	1.51		
Orleans Capital	-3.14 (50)	-1.61 (96)	0.79 (61)	-5.12 (73)	-0.07 (99)	-0.04 (86)	N/A	1.20 (88)	01/01/2014	
Blmbg. U.S. Aggregate Index	-3.23	-1.21	0.64	-5.21	0.10	-0.09	1.13	1.17		
Variance	0.09	-0.40	0.15	0.09	-0.17	0.05	N/A	0.03		
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-3.14	-0.81	1.06	-4.84	0.54	0.39	1.58	1.61		
Pimco Diversified Income Fund	-1.07 (23)	2.41 (12)	7.23 (8)	-2.57 (20)	N/A	N/A	N/A	-1.59 (19)	07/01/2020	
Blmbg. Global Credit (Hedged)	-1.32	1.90	5.27	-3.36	1.04	1.23	2.51	-2.52		
Variance	0.25	0.51	1.96	0.79	N/A	N/A	N/A	0.93		
IM Global Fixed Income (MF) Median	-2.42	-0.28	2.65	-4.89	-0.65	-0.50	0.32	-3.83		
<b>Total Other Fixed Income</b>	<b>0.00</b>	<b>6.69</b>	<b>6.68</b>	<b>9.42</b>	<b>5.32</b>	<b>N/A</b>	<b>N/A</b>	<b>4.25</b>	<b>01/01/2017</b>	
Capital Point Partners (Princeton Capital)										
LBC Credit Partners III										
LBC Credit Partners IV										
Providence Debt Fund III										

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Comparative Performance

Total Fund

As of September 30, 2023

	Performance (%)								Inception	Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR			
<b>Alternative Investments</b>										
<b>Other Assets</b>										
Cash Account	1.31	3.55	4.25	1.64	1.60	1.43	1.03	4.14		06/01/1988
<b>Other Alternative Assets</b>										
Total Real Estate	-1.20	-5.47	-9.46	7.84	5.77	4.93	7.71	4.43		08/01/2005
NCREIF Property Index	-1.37	-5.07	-8.39	6.04	5.26	5.76	7.40	7.39		
Variance	0.17	-0.40	-1.07	1.80	0.51	-0.83	0.31	-2.96		
Morgan Stanley	-0.22	-3.66	-7.22	8.02	6.37	6.99	N/A	7.18		01/01/2016
NCREIF Fund Index-ODCE (EW)	-2.12	-8.42	-13.08	6.69	5.22	5.84	7.55	6.09		
Variance	1.90	4.76	5.86	1.33	1.15	1.15	N/A	1.09		
Brookfield Premier Real Estate Partners	-4.80	-14.94	-20.63	6.45	N/A	N/A	N/A	4.84		11/01/2019
NCREIF Fund Index-ODCE (EW)	-2.12	-8.42	-13.08	6.69	5.22	5.84	7.55	5.33		
Variance	-2.68	-6.52	-7.55	-0.24	N/A	N/A	N/A	-0.49		
Stockbridge Smart Markets	-1.10	-6.90	-10.91	N/A	N/A	N/A	N/A	-8.95		08/01/2022
NCREIF Fund Index-ODCE (EW)	-2.12	-8.42	-13.08	6.69	5.22	5.84	7.55	-10.73		
Variance	1.02	1.52	2.17	N/A	N/A	N/A	N/A	1.78		
Total Timber Funds	0.00	-7.72	-9.54	6.90	4.10	0.99	1.91	2.28		08/01/2005
NCREIF Timberland Index	1.37	4.90	10.03	9.15	5.87	5.23	5.93	6.61		
Variance	-1.37	-12.62	-19.57	-2.25	-1.77	-4.24	-4.02	-4.33		

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## Comparative Performance Fiscal Year Returns

	Performance (%)									
	YTD	2022	2021	2020	2019	2018	2017	2016	2015	
<b>Total Retirement System (Net)</b>	<b>3.87</b>	<b>-11.54</b>	<b>17.68</b>	<b>11.65</b>	<b>20.92</b>	<b>-6.18</b>	<b>11.89</b>	<b>7.67</b>	<b>-1.05</b>	
<b>Total Retirement System (Gross)</b>	<b>4.10 (71)</b>	<b>-11.36 (31)</b>	<b>17.86 (12)</b>	<b>11.99 (60)</b>	<b>21.23 (15)</b>	<b>-5.95 (88)</b>	<b>12.17 (91)</b>	<b>7.87 (45)</b>	<b>-0.83 (70)</b>	
Total Fund Policy	5.60	-11.70	16.63	13.40	19.81	-3.12	15.79	8.04	2.43	
Variance	-1.50	0.34	1.23	-1.41	1.42	-2.83	-3.62	-0.17	-3.26	
All Public Plans-Total Fund Median	4.74	-12.85	14.01	12.63	18.63	-4.11	15.10	7.61	-0.12	
<b>Total Equity</b>	<b>7.03</b>	<b>-15.13</b>	<b>21.06</b>	<b>15.97</b>	<b>29.88</b>	<b>-9.83</b>	<b>18.49</b>	<b>11.41</b>	<b>-2.87</b>	
Total Equity Policy	11.12	-17.82	22.48	17.62	29.04	-7.34	22.07	9.61	-0.51	
Variance	-4.09	2.69	-1.42	-1.65	0.84	-2.49	-3.58	1.80	-2.36	
<b>Domestic Equity</b>	<b>7.13 (46)</b>	<b>-18.31 (58)</b>	<b>24.49 (56)</b>	<b>19.11 (42)</b>	<b>31.15 (36)</b>	<b>-7.18 (54)</b>	<b>17.39 (59)</b>	<b>15.76 (36)</b>	<b>-3.09 (70)</b>	
Russell 3000 Index	12.39	-19.21	25.66	20.89	31.02	-5.24	21.13	12.74	0.48	
Variance	-5.26	0.90	-1.17	-1.78	0.13	-1.94	-3.74	3.02	-3.57	
IM U.S. Equity (SA+CF+MF) Median	6.30	-16.42	25.60	15.39	28.76	-6.57	19.23	12.51	-0.61	
NT Collective Russell 3000 Index	12.37 (29)	-19.15 (76)	25.68 (59)	20.83 (40)	31.02 (36)	-5.23 (54)	21.15 (48)	12.79 (38)	0.49 (47)	
Russell 3000 Index	12.39	-19.21	25.66	20.89	31.02	-5.24	21.13	12.74	0.48	
Variance	-0.02	0.06	0.02	-0.06	0.00	0.01	0.02	0.05	0.01	
IM U.S. All Cap Core Equity (SA+CF) Median	9.38	-17.10	26.31	18.60	29.00	-5.10	20.92	10.86	0.37	
Baird Mid Cap Growth	6.23 (83)	-27.51 (52)	21.76 (9)	35.15 (57)	36.27 (50)	-1.60 (34)	26.98 (36)	5.35 (50)	-3.03 (82)	
Russell Midcap Growth Index	9.88	-26.72	12.73	35.59	35.47	-4.75	25.27	7.33	-0.20	
Variance	-3.65	-0.79	9.03	-0.44	0.80	3.15	1.71	-1.98	-2.83	
IM U.S. Mid Cap Growth Equity (SA+CF) Median	9.15	-27.38	13.84	38.03	36.20	-4.23	25.96	5.34	1.17	
Nuance Mid Cap Value	-4.25 (99)	-3.68 (16)	12.23 (100)	5.24 (45)	N/A	N/A	N/A	N/A	N/A	
Russell Midcap Value Index	0.54	-12.03	28.34	4.96	27.06	-12.29	13.34	20.00	-4.78	
Variance	-4.79	8.35	-16.11	0.28	N/A	N/A	N/A	N/A	N/A	
IM U.S. Mid Cap Value Equity (SA+CF) Median	3.52	-8.49	29.45	4.63	29.05	-13.44	15.65	19.53	-3.02	
Kennedy Small Cap Value	-1.28 (94)	-17.75 (90)	38.92 (15)	4.93 (51)	25.37 (47)	-19.83 (94)	12.51 (43)	N/A	N/A	
Russell 2000 Value Index	-0.53	-14.48	28.27	4.63	22.39	-12.86	7.84	31.74	-7.47	
Variance	-0.75	-3.27	10.65	0.30	2.98	-6.97	4.67	N/A	N/A	
IM U.S. Small Cap Value Equity (SA+CF) Median	4.14	-10.84	29.80	5.16	24.96	-14.06	11.58	27.22	-4.30	

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Comparative Performance

Total Fund

As of September 30, 2023

	Performance (%)									
	YTD	2022	2021	2020	2019	2018	2017	2016	2015	
<b>International Equity</b>	<b>4.31 (64)</b>	<b>-21.97 (70)</b>	<b>11.90 (38)</b>	<b>12.54 (55)</b>	<b>20.92 (69)</b>	<b>-16.28 (65)</b>	<b>27.37 (65)</b>	<b>0.67 (70)</b>	<b>-2.40 (61)</b>	
MSCI AC World ex USA	5.82	-15.57	8.29	11.13	22.13	-13.78	27.77	5.01	-5.25	
Variance	-1.51	-6.40	3.61	1.41	-1.21	-2.50	-0.40	-4.34	2.85	
IM International Equity (SA+CF+MF) Median	5.57	-17.69	10.20	14.07	23.43	-14.94	29.69	2.84	-0.55	
Driehaus International Small Cap Growth	3.11 (36)	-24.34 (45)	12.49 (49)	29.79 (17)	30.57 (11)	-16.92 (32)	41.19 (6)	-6.24 (89)	12.59 (11)	
MSCI AC World ex USA Small Growth	3.85	-25.85	11.83	23.99	24.96	-18.07	33.99	-0.04	6.74	
Variance	-0.74	1.51	0.66	5.80	5.61	1.15	7.20	-6.20	5.85	
IM International SMID Cap Growth Equity (MF) Median	1.83	-25.69	12.40	14.79	24.29	-19.24	34.22	-0.76	6.36	
Thompson Siegel & Walmsley	6.05 (56)	-13.89 (33)	13.82 (29)	6.62 (80)	21.18 (71)	-15.93 (74)	22.70 (93)	0.47 (65)	1.38 (39)	
MSCI EAFE (Net) Index	7.08	-14.45	11.26	7.82	22.01	-13.79	25.03	1.00	-0.81	
Variance	-1.03	0.56	2.56	-1.20	-0.83	-2.14	-2.33	-0.53	2.19	
IM International Large Cap Core Equity (SA+CF) Median	6.81	-15.93	12.06	11.60	23.58	-14.32	27.82	1.67	0.57	
WCM Focused Intl Growth LP	4.53 (47)	-28.63 (88)	17.64 (3)	N/A	N/A	N/A	N/A	N/A	N/A	
MSCI AC World ex USA Growth (Net)	2.61	-23.05	5.09	22.20	27.34	-14.43	32.01	0.12	-1.25	
Variance	1.92	-5.58	12.55	N/A	N/A	N/A	N/A	N/A	N/A	
IM International Large Cap Growth Equity (MF) Median	4.42	-20.24	8.88	20.00	27.50	-14.67	28.61	-1.94	0.25	
Wellington Emerging Markets Fund	-0.37 (83)	-24.51 (78)	-2.23 (64)	N/A	N/A	N/A	N/A	N/A	N/A	
MSCI Emerging Markets (Net) Index	1.82	-20.09	-2.54	18.31	18.42	-14.57	37.28	11.19	-14.92	
Variance	-2.19	-4.42	0.31	N/A	N/A	N/A	N/A	N/A	N/A	
IM Emerging Markets Equity (SA+CF) Median	4.63	-19.50	0.94	18.28	20.15	-15.20	36.91	10.00	-12.11	
<b>Total Other Equity</b>	<b>9.85</b>	<b>26.45</b>	<b>13.85</b>	<b>-5.66</b>	<b>65.17</b>	<b>-22.42</b>	<b>-17.60</b>	<b>N/A</b>	<b>N/A</b>	
Huff Energy Fund										
Franklin Park Private Equity										

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Comparative Performance

Total Fund

As of September 30, 2023

	Performance (%)								
	YTD	2022	2021	2020	2019	2018	2017	2016	2015
<b>Total Fixed Income</b>	<b>-0.06</b>	<b>-11.28</b>	<b>1.69</b>	<b>4.10</b>	<b>4.08</b>	<b>0.06</b>	<b>2.86</b>	<b>4.36</b>	<b>-0.97</b>
Total Fixed Income Policy	-0.54	-14.66	-2.05	8.28	7.93	-0.66	5.60	2.77	-1.37
Variance	0.48	3.38	3.74	-4.18	-3.85	0.72	-2.74	1.59	0.40
Orleans Capital	-1.61 (96)	-12.93 (47)	-1.34 (56)	7.16 (93)	8.80 (68)	0.07 (46)	3.87 (58)	3.79 (28)	0.57 (74)
Blmbg. U.S. Aggregate Index	-1.21	-13.01	-1.55	7.51	8.72	0.01	3.54	2.65	0.55
Variance	-0.40	0.08	0.21	-0.35	0.08	0.06	0.33	1.14	0.02
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-0.81	-12.97	-1.24	8.43	9.18	0.06	4.01	3.07	0.81
Pimco Diversified Income Fund	2.41 (12)	-13.81 (50)	0.26 (5)	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Global Credit (Hedged)	1.90	-13.75	-0.41	7.53	12.08	-0.81	5.89	7.33	-0.20
Variance	0.51	-0.06	0.67	N/A	N/A	N/A	N/A	N/A	N/A
IM Global Fixed Income (MF) Median	-0.28	-14.66	-2.73	8.29	8.08	-1.78	6.82	2.92	-3.83
<b>Total Other Fixed Income</b>	<b>6.69</b>	<b>4.87</b>	<b>12.76</b>	<b>0.48</b>	<b>3.66</b>	<b>1.27</b>	<b>-0.49</b>	<b>N/A</b>	<b>N/A</b>
Capital Point Partners (Princeton Capital)									
LBC Credit Partners III									
LBC Credit Partners IV									
Providence Debt Fund III									

Returns for periods greater than one year are annualized. Returns are expressed as percentages. All performance data is Net of Fees. Please refer to the end of the report for additional notes.



Comparative Performance

Total Fund

As of September 30, 2023

	Performance (%)								
	YTD	2022	2021	2020	2019	2018	2017	2016	2015
<b>Alternative Investments</b>									
<b>Other Assets</b>									
Cash Account	3.55	1.38	0.01	0.43	2.11	1.72	0.76	0.27	0.01
<b>Other Alternative Assets</b>									
Total Real Estate	-5.47	6.27	24.27	-0.45	5.75	5.14	2.90	0.76	5.40
NCREIF Property Index	-5.07	5.52	17.70	1.60	6.42	6.72	6.96	7.97	13.33
Variance	-0.40	0.75	6.57	-2.05	-0.67	-1.58	-4.06	-7.21	-7.93
Morgan Stanley	-3.66	6.14	21.48	1.26	6.16	7.96	8.74	9.20	N/A
NCREIF Fund Index-ODCE (EW)	-8.42	7.56	21.88	0.75	5.18	7.30	6.92	8.36	14.18
Variance	4.76	-1.42	-0.40	0.51	0.98	0.66	1.82	0.84	N/A
Brookfield Premier Real Estate Partners	-14.94	10.55	25.66	0.57	N/A	N/A	N/A	N/A	N/A
NCREIF Fund Index-ODCE (EW)	-8.42	7.56	21.88	0.75	5.18	7.30	6.92	8.36	14.18
Variance	-6.52	2.99	3.78	-0.18	N/A	N/A	N/A	N/A	N/A
Stockbridge Smart Markets	-6.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Fund Index-ODCE (EW)	-8.42	7.56	21.88	0.75	5.18	7.30	6.92	8.36	14.18
Variance	1.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Timber Funds	-7.72	21.88	6.99	1.43	-1.12	0.13	-3.94	-6.92	1.93
NCREIF Timberland Index	4.90	12.90	9.17	0.81	1.30	3.21	3.63	2.59	4.97
Variance	-12.62	8.98	-2.18	0.62	-2.42	-3.08	-7.57	-9.51	-3.04

Returns for periods greater than one year are annualized. Returns are expressed as percentages. All performance data is Net of Fees. Please refer to the end of the report for additional notes.



**Comparative Performance - IRR**  
**Other Alternative Investments**  
As of September 30, 2023

<b>Comparative Performance - IRR</b>									
	<b>Market Value (\$)</b>	<b>MTH</b>	<b>QTR</b>	<b>YTD</b>	<b>1 YR</b>	<b>3 YR</b>	<b>5 YR</b>	<b>Inception IRR</b>	<b>Inception Date</b>
<b>Total Real Estate Investments</b>	<b>143,396,114</b>	<b>-1.12</b>	<b>-1.20</b>	<b>-5.55</b>	<b>-9.51</b>	<b>7.03</b>	<b>5.31</b>	<b>6.54</b>	<b>07/31/2005</b>
Edison Investments	2,333,235	0.88	0.88	2.48	3.31	3.12	3.04	11.92	09/30/1996
India Property Fund	128,722	0.00	0.00	-8.90	-11.80	-21.32	-29.81	-8.15	05/24/2007
Gainesville Property	1,644,315	0.00	0.00	-1.00	-1.08	-0.88	-0.89	-6.17	01/31/2008
Morgan Stanley	79,579,871	-0.22	-0.22	-3.66	-7.22	8.02	6.36	7.04	12/31/2015
AEW Partners Fund VIII	3,751,884	0.00	0.00	3.93	4.65	33.79	23.59	19.38	06/26/2017
GreenOak US III	11,032,931	-0.51	-0.52	2.16	0.80	4.51	1.46	0.06	06/22/2018
Brookfield Premier Real Estate Partners	23,973,332	-4.80	-4.80	-14.94	-20.63	6.45	N/A	4.73	10/01/2019
Artemis Real Estate IV	1,381,925	0.00	-9.38	-20.34	-38.36	N/A	N/A	-39.39	06/23/2022
Stockbridge Smart Markets	17,868,524	-1.10	-1.10	-6.90	-10.95	N/A	N/A	-9.66	07/01/2022
<b>Total Timber Funds</b>	<b>1,024,754</b>	<b>0.00</b>	<b>0.00</b>	<b>-8.31</b>	<b>-9.63</b>	<b>10.67</b>	<b>2.78</b>	<b>0.16</b>	<b>07/31/2005</b>
Domain Environmental Investments II	1,024,754	0.00	0.00	-6.98	-15.25	-12.17	-6.31	-2.60	04/30/2008
<b>Total Other Equity</b>	<b>112,009,708</b>	<b>0.00</b>	<b>-0.29</b>	<b>9.80</b>	<b>10.70</b>	<b>17.62</b>	<b>17.66</b>	<b>28.32</b>	<b>01/01/2017</b>
Huff Energy Fund	24,253,938	0.00	0.00	25.04	25.04	17.12	21.74	7.08	12/31/2006
Franklin Park Private Equity	87,755,770	0.00	-0.38	6.12	7.16	18.01	16.11	15.86	01/31/2018
<b>Total Other Fixed Income</b>	<b>11,084,847</b>	<b>0.00</b>	<b>0.00</b>	<b>6.52</b>	<b>6.23</b>	<b>10.64</b>	<b>4.08</b>	<b>N/A</b>	<b>12/21/2016</b>
Capital Point Partners (Princeton Capital)	3,185,311	0.00	0.00	-2.22	-2.09	24.87	2.70	0.37	03/31/2007
LBC Credit Partners III	1,864,079	0.00	0.00	25.33	20.42	5.27	2.16	8.00	03/07/2014
LBC Credit Partners IV	4,049,501	0.00	0.00	11.46	14.04	8.62	6.88	8.01	09/19/2016
Providence Debt Fund III	1,985,955	0.00	0.00	-1.33	-3.03	7.65	1.39	6.12	04/21/2014



**Summary of Partnerships  
Other Alternative Investments**

As of September 30, 2023

<b>Private Equity Summary of Partnership</b>						
<b>Partnerships</b>	<b>Drawn Down \$</b>	<b>Market Value \$</b>	<b>Distributed \$</b>	<b>IRR (%)</b>	<b>TVPI Multiple</b>	
<b>Total Real Estate Investments</b>						
Edison Investments	8,146,177	2,333,235	20,002,271	11.9	2.7	
India Property Fund	4,354,162	128,722	2,388,478	-8.2	0.6	
Gainesville Property	5,510,156	1,644,315	746,061	-6.2	0.4	
Morgan Stanley	50,000,000	79,579,871	-	7.0	1.6	
AEW Partners Fund VIII	15,381,261	3,751,884	18,441,894	19.4	1.4	
GreenOak US III	12,445,865	11,032,931	1,434,323	0.1	1.0	
Brookfield Premier Real Estate Partners	20,000,000	23,973,332	-	4.7	1.2	
Artemis Real Estate IV	2,145,534	1,381,925	360,908	-39.4	0.8	
Stockbridge Smart Markets	20,000,000	17,868,524	-	-9.7	0.9	
<b>Total Timber Investments</b>						
Domain Environmental Investments II	7,623,603	1,024,754	5,213,231	-2.6	0.8	

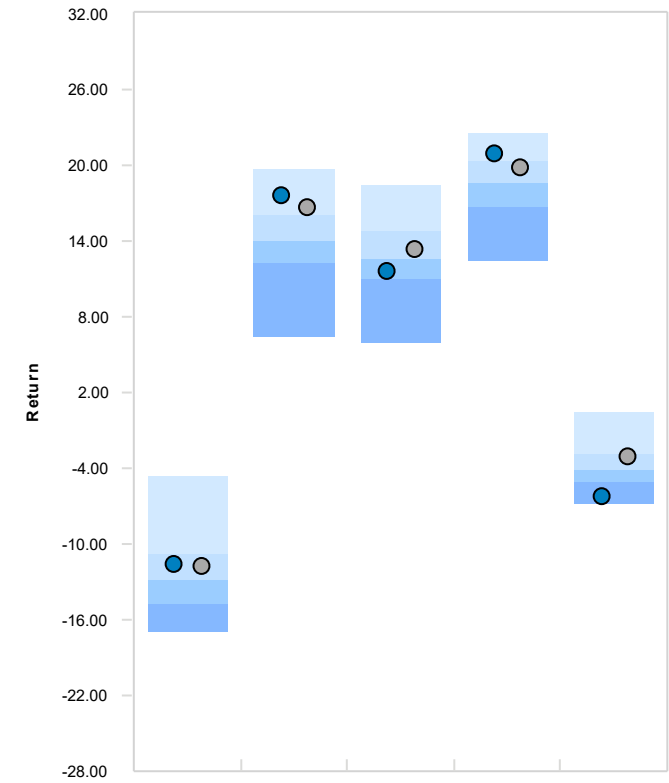
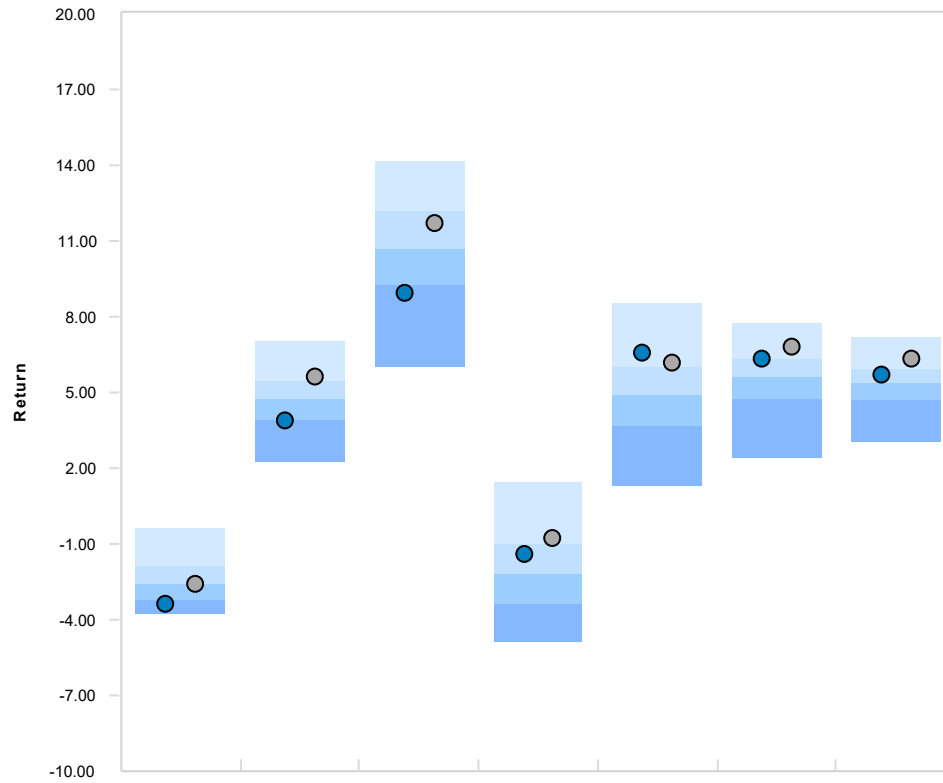


**Summary of Partnerships  
Other Alternative Investments  
As of September 30, 2023**

Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
<b>Total Other Equity</b>					
Huff Energy Fund	11,095,509	24,253,938	1,786,358	7.1	2.3
Franklin Park Private Equity	69,719,427	87,755,770	8,859,478	15.9	1.4
<b>Total Other Fixed Income</b>					
Capital Point Partners (Princeton Capital)	12,058,210	3,185,311	9,145,851	0.4	1.0
LBC Credit Partners III	18,851,406	1,864,079	21,545,155	8.0	1.2
LBC Credit Partners IV	18,000,000	4,049,501	18,127,737	8.0	1.2
Providence Debt Fund III	11,128,113	1,985,955	12,329,165	6.1	1.3



Plan Sponsor Peer Group Analysis - All Public Plans-Total Fund



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Retirement System	-3.37 (83)	3.87 (76)	8.98 (81)	-1.36 (34)	6.55 (18)	6.33 (27)	5.67 (36)
● Total Fund Policy	-2.61 (52)	5.60 (22)	11.69 (35)	-0.79 (22)	6.15 (23)	6.83 (18)	6.31 (18)
Median	-2.57	4.74	10.66	-2.17	4.90	5.65	5.37

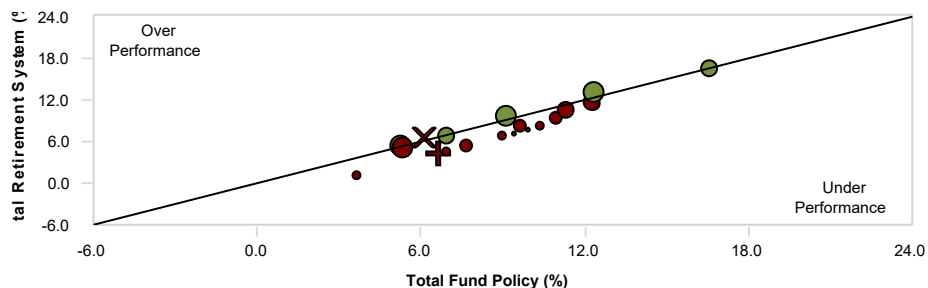
	2022	2021	2020	2019	2018
● Total Retirement System	11.54 (34)	17.68 (13)	11.65 (65)	20.92 (18)	-6.18 (90)
● Total Fund Policy	11.70 (37)	16.63 (22)	13.40 (39)	19.81 (34)	-3.12 (31)
Median	12.85	14.01	12.63	18.63	-4.11

Comparative Performance

	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022
Total Retirement System	2.78 (67)	4.59 (33)	4.91 (71)	-3.49 (19)	-9.89 (50)	-3.04 (22)
Total Fund Policy	3.46 (32)	4.81 (27)	5.76 (46)	-3.68 (25)	-10.63 (68)	-3.01 (21)
All Public Plans-Total Fund Median	3.08	4.18	5.63	-4.32	-9.94	-4.31

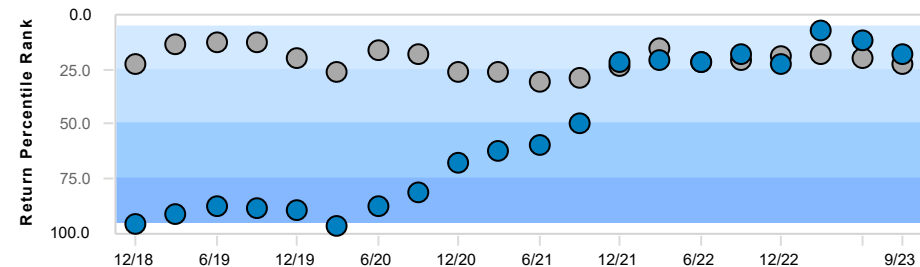


### 3 Yr Rolling Under/Over Performance - 5 Years



- Over Performance
- Under Performance
- + Earliest Date
- X Latest Date

### 3 Yr Rolling Percentile Ranking - 5 Years



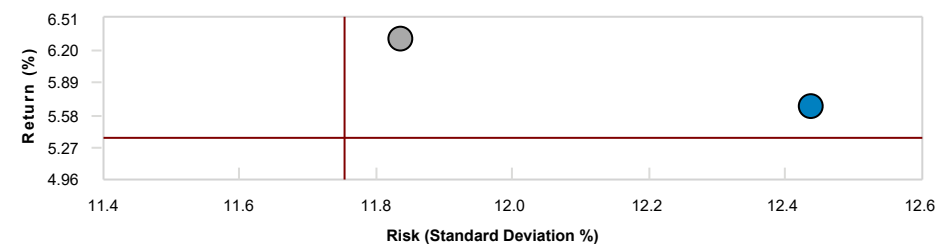
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
<span style="color: blue;">●</span> Total Retirement System	20	8 (40%)	1 (5%)	3 (15%)	8 (40%)
<span style="color: grey;">●</span> Total Fund Policy	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)

### Peer Group Scattergram - 3 Years



	Return	Standard Deviation
<span style="color: blue;">●</span> Total Retirement System	6.55	11.20
<span style="color: grey;">●</span> Total Fund Policy	6.15	11.23
<span style="color: red;">—</span> Median	4.90	11.24

### Peer Group Scattergram - 5 Years



	Return	Standard Deviation
<span style="color: blue;">●</span> Total Retirement System	5.67	12.44
<span style="color: grey;">●</span> Total Fund Policy	6.31	11.84
<span style="color: red;">—</span> Median	5.37	11.75

### Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	1.38	100.66	98.17	0.44	0.27	0.47	0.99	6.80
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.44	1.00	7.09

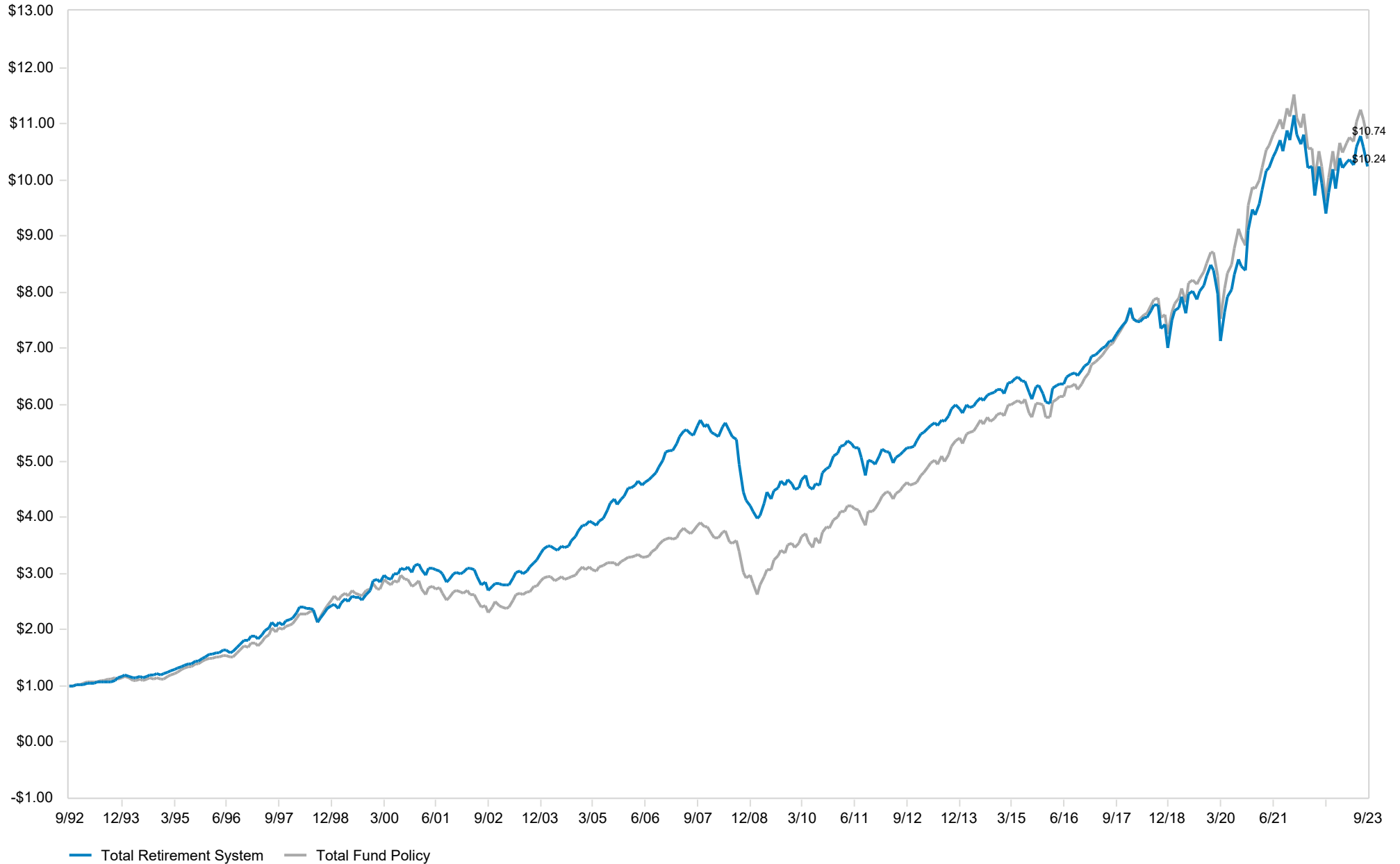
### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	1.78	102.01	106.86	-0.80	-0.30	0.37	1.04	8.40
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.43	1.00	7.94





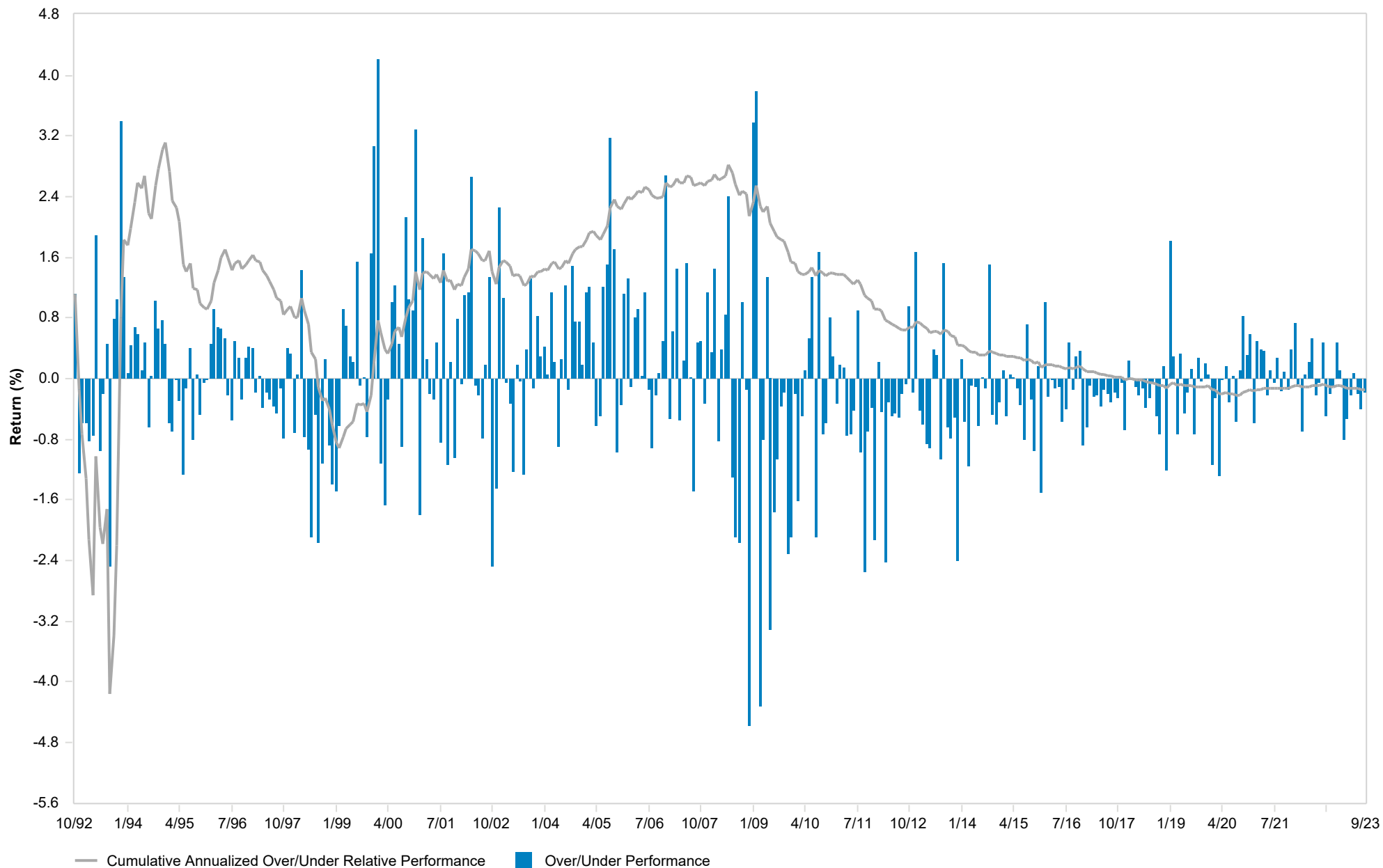
**Growth of \$1**



Calculation based on monthly periodicity.



Relative Performance



Calculation based on monthly periodicity.



<b>Total Fund Compliance:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
The total plan return equaled or exceeded the total plan benchmark over the trailing three and five year periods.		•	
The total plan return ranked within the top 50th percentile of its peer group over the trailing three and five year periods.	•		
The total plan return equaled or exceeded the actuarial earnings assumption of 7.25% over the three and five year periods.		•	
<b>Equity Compliance:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
Total domestic equity return equaled or exceeded the benchmark over the trailing three and five year periods.		•	
Total domestic equity return ranked within the top 50th percentile of its peer group over the trailing three and five year periods.		•	
Total international equity return equaled or exceeded the benchmark over the trailing three and five year periods.		•	
Total international equity return ranked within the top 50th percentile of its peer group over the trailing three and five year periods.		•	
The total equity allocation was less than or equal to 90% but greater than or equal to 35% of the total fund value at market.	•		
The total domestic equity allocation was less than or equal to 50% but greater than or equal to 30% of the total fund value at market.	•		
The total international equity allocation was less than or equal to 25% but greater than or equal to 5% of the total fund value at market.	•		
<b>Fixed Income Compliance:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
Total core fixed income return equaled or exceed the benchmark over the trailing three and five year periods.		•	
Total core fixed income return ranked within the top 50th percentile of its peer group over the trailing three and five year periods.		•	
Total non-US fixed income return equaled or exceed the benchmark over the trailing three and five year periods.	•		
Total non-US fixed income return ranked within the top 50th percentile of its peer group over the trailing three and five year periods.	•		
The total fixed income allocation was less than or equal to 40% but greater than or equal to 5% of the total fund value at market.	•		
The core fixed income allocation was less than or equal to 20% but greater than or equal to 5% of the total fund value at market.	•		
The total non-US fixed income allocation was less than or equal to 15% of the total fund value at market.	•		



	Baird Mid Cap			Nuance MC			Kennedy SC			Driehaus			TS&W		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
	Manager outperformed the index over the trailing three and five year periods.	•				•		•			•				•
Manager ranked within the top 50%-tile over trailing three and five year periods.	•				•			•		•				•	
Less than four consecutive quarters of under performance relative to the benchmark.	•			•			•			•			•		
Three and five-year downside capture ratios less than 100%	•			•			•			•				•	
Manager maintained style consistency for the mandate	•			•			•			•			•		
Manager maintained low turnover in portfolio team or senior management.	•			•			•			•			•		
Benchmark and index remained the same for the portfolio.	•			•			•			•			•		
Manager sustained compliance with IPS.	•			•			•			•			•		
No investigation by SEC was conducted on the manager.	•			•			•			•			•		
Manager did not experience significant asset flows into or out of the company.	•			•			•			•			•		
Manager is charging the same fee.	•			•			•			•			•		
No reported servicing issues with manager.	•			•			•			•			•		

	WCM			Wellington			Orleans			PIMCO		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
	Manager outperformed the index over the trailing three and five year periods.			•		•			•		•	
Manager ranked within the top 50%-tile over trailing three and five year periods.			•		•			•		•		
Less than four consecutive quarters of under performance relative to the benchmark.	•			•			•			•		
Three and five-year downside capture ratios less than 100%			•		•			•			•	
Manager maintained style consistency for the mandate	•			•			•			•		
Manager maintained low turnover in portfolio team or senior management.	•			•			•			•		
Benchmark and index remained the same for the portfolio.	•			•			•			•		
Manager sustained compliance with IPS.	•			•			•			•		
No investigation by SEC was conducted on the manager.	•			•			•			•		
Manager did not experience significant asset flows into or out of the company.	•			•			•			•		
Manager is charging the same fee.	•			•			•			•		
No reported servicing issues with manager.	•			•			•			•		

\*The 3 & 5 year periods used for evaluation represent the historical performance of composite portfolios. As such, this data represents a combination of current managers, strategies and allocations as well as the realized performance of terminated portfolios and prior allocation strategies. The peer universes used are gross of fees therefore the manager returns used for the purpose of measuring compliance are also gross.



**Austin Police Retirement System**  
**Investment Pricing Summary**  
as of 9/30/2023

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
<b>Total Retirement System</b>			
<b>Total Equity</b>			
<b>Total Domestic Equity</b>			
NT Collective Russell 3000 Fund	9/30/2023	Monthly	Custodian
Baird Mid Cap Growth	9/30/2023	Monthly	Custodian
Nuance Mid Cap Value	9/30/2023	Monthly	Custodian
Kennedy Small Cap Value	9/30/2023	Monthly	Custodian
<b>Total International Equity</b>			
Thompson Siegel & Walmsley	9/30/2023	Monthly	Custodian
Driehaus International Small Cap Growth	9/30/2023	Monthly	Custodian
WCM Focused Intl	9/30/2023	Monthly	Custodian
Wellington Emerging Markets	9/30/2023	Monthly	Custodian
<b>Total Other Equity</b>			
Huff Energy Fund	12/31/2022	Quarterly	Manager
Franklin Park	6/30/2023	Quarterly	Manager
<b>Total Fixed Income</b>			
<b>Total Fixed Income Funds</b>			
Orleans Capital	9/30/2023	Monthly	Custodian
PIMCO Diversified	9/30/2023	Monthly	Custodian
<b>Total Other Fixed Income Funds</b>			
Capital Point Partners	6/30/2023	Quarterly	Manager
LBC Credit Partners III	6/30/2023	Quarterly	Manager

**Austin Police Retirement System**  
**Investment Pricing Summary**  
as of 9/30/2023

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
LBC Credit Partners IV	6/30/2023	Quarterly	Manager
Providence Debt Fund III	6/30/2023	Quarterly	Manager
<b>Total Alternatives</b>			
<b>Total Real Estate (Composite)(6091100)</b>			
Edison Investments	9/30/2023	Quarterly	Manager
India Property Fund	6/30/2023	Quarterly	Manager
Gainesville Property	12/31/2017	N/A	Manager
Morgan Stanley	9/30/2023	Quarterly	Manager
AEW Parters VIII	6/30/2023	Quarterly	Manager
GreenOak US III	6/30/2023	Quarterly	Manager
Brookfield	6/30/2023	Quarterly	Manager
Artemis IV	6/30/2023	Quarterly	Manager
Stockbridge	9/30/2023	Quarterly	Manager
APRS Building	9/30/2021	N/A	Client
<b>Total Timber Funds</b>			
Domain Environmental	6/30/2023	Quarterly	Manager
Cash Account	9/30/2023	Monthly	Custodian

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
<b>Total Domestic Equity</b>	<b>0.34</b>	<b>377,010,787</b>	<b>1,271,313</b>	
NT Collective Russell 3000 Index	0.02	224,308,639	44,862	0.02 % of Assets
Baird Mid Cap Growth	0.70	49,104,616	343,732	0.70 % of First \$50 M 0.60 % Thereafter
Nuance Mid Cap Value	0.68	47,359,021	320,334	0.70 % of First \$25 M 0.65 % Thereafter
Kennedy Small Cap Value	1.00	56,238,511	562,385	1.00 % of Assets
<b>Total International Equity</b>	<b>0.76</b>	<b>125,824,402</b>	<b>958,624</b>	
Thompson Siegel & Walmsley	0.65	51,291,938	333,398	0.65 % of Assets
Driehaus International Small Cap Growth	0.90	19,451,485	175,063	0.90 % of Assets
WCM Focused Intl Growth LP	0.85	37,055,790	314,974	0.85 % of Assets
Wellington Emerging Markets Fund	0.75	18,025,188	135,189	0.75 % of Assets
<b>Total Other Equity</b>	<b>0.33</b>	<b>112,009,708</b>	<b>369,389</b>	
Huff Energy Fund	0.62	24,253,938	150,000	
*Franklin Park Private Equity	0.25	87,755,770	219,389	0.25 % of Assets
*In addition to the 25 bps management fee, a 1% commitment fee for the first year of that commitment and can potentially earn an incentive fee of 5% after APRS receives an 8% IRR preferred return on its investment.				
<b>Total Fixed Income</b>	<b>0.36</b>	<b>180,543,045</b>	<b>653,322</b>	
Orleans Capital	0.13	122,066,958	161,480	0.15 % of First \$50 M 0.12 % Thereafter
Pimco Diversified Income Fund	0.75	47,391,241	355,434	0.75 % of Assets
<b>Total Other Fixed Income</b>	<b>1.23</b>	<b>11,084,847</b>	<b>136,407</b>	
Capital Point Partners (Princeton Capital)	1.65	3,185,311	52,558	
LBC Credit Partners III	1.25	1,864,079	23,301	
LBC Credit Partners IV	1.25	4,049,501	50,619	
Providence Debt Fund III	0.50	1,985,955	9,930	

Fee information on this page is an illustrative estimate of management fees based on current reported portfolio values. Fee estimates do not reflect actual calculation methodologies or applicable carried interest.



	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
<b>Total Real Estate</b>	<b>0.93</b>	<b>143,396,114</b>	<b>1,340,060</b>	
Edison Investments	1.00	2,333,235	23,332	1.00 % of Assets
India Property Fund	2.00	128,722	2,574	2.00 % of Assets
Gainesville Property	0.00	1,644,315	-	0.00 % of Assets
Morgan Stanley	0.90	79,579,871	716,219	0.90 % of Assets
AEW Partners Fund VIII	1.25	3,751,884	46,899	1.25 % of Assets
GreenOak US III	1.50	11,032,931	165,494	1.50 % of Assets
Brookfield Premier Real Estate Partners	1.00	23,973,332	239,733	1.00 % of Assets
Artemis Real Estate IV	1.50	1,381,925	20,729	1.50 % of Assets
Stockbridge Smart Markets	0.70	17,868,524	125,080	0.70 % of Assets
APRS Building	0.00	1,701,375	-	0.00 % of Assets
<b>Total Timber Funds</b>	<b>1.25</b>	<b>1,024,754</b>	<b>12,809</b>	
Domain Environmental Investments II	1.25	1,024,754	12,809	1.25 % of Assets
Cash Account	0.00	11,694,997	-	0.00 % of Assets
<b>Total Retirement System</b>	<b>0.48</b>	<b>951,503,807</b>	<b>4,605,518</b>	

Fee information on this page is an illustrative estimate of management fees based on current reported portfolio values. Fee estimates do not reflect actual calculation methodologies or applicable carried interest.





<b>Total Fund Policy</b>			
<b>Allocation Mandate</b>	<b>Weight (%)</b>	<b>Allocation Mandate</b>	<b>Weight (%)</b>
<b>Jan-1976</b>		<b>Jan-2021</b>	
S&P 500 Index	60.00	Russell 3000 Index	42.50
Blmbg. U.S. Aggregate Index	40.00	MSCI World ex U.S.	15.00
<b>Jan-2014</b>		Blmbg. U.S. Aggregate Index	10.00
Russell 3000 Index	30.00	Blmbg. Global Credit	5.00
MSCI World ex U.S.	15.00	NCREIF Property Index	15.00
Blmbg. U.S. Aggregate Index	5.00	HFRI Fund of Funds Composite Index	5.00
Blmbg. Global Multiverse	5.00	Credit Suisse Leveraged Loan Index	5.00
NCREIF Property Index	15.00	Cambridge Associates Private Equity Index	2.50
NCREIF Timberland Index (Monthly)	5.00	<b>Mar-2022</b>	
Russell 3000 + 300 bps	12.50	Russell 3000 Index	45.00
HFRI Fund of Funds Composite Index	10.00	MSCI World ex U.S.	15.00
FTSE 3 Month T-Bill	2.50	Blmbg. U.S. Aggregate Index	5.00
<b>Jan-2017</b>		Blmbg. Global Credit	5.00
Russell 3000 Index	45.00	NCREIF Property Index	15.00
MSCI World ex U.S.	15.00	HFRI Fund of Funds Composite Index	5.00
Blmbg. U.S. Aggregate Index	5.00	Credit Suisse Leveraged Loan Index	2.50
Blmbg. Global Multiverse	5.00	Cambridge Associates Private Equity Index	7.50
NCREIF Property Index	15.00	<b>Apr-2023</b>	
NCREIF Timberland Index (Monthly)	2.50	Russell 3000 Index	40.00
HFRI Fund of Funds Composite Index	5.00	MSCI World ex U.S.	15.00
Credit Suisse Leveraged Loan Index	5.00	Blmbg. U.S. Aggregate Index	12.50
Cambridge Associates Private Equity Index	2.50	Blmbg. Global Credit	5.00
<b>Jan-2018</b>		NCREIF Property Index	15.00
Russell 3000 Index	42.50	Cambridge Associates Private Equity Index	12.50
MSCI World ex U.S.	15.00		
Blmbg. U.S. Aggregate Index	10.00		
Blmbg. Global Multiverse	5.00		
NCREIF Property Index	15.00		
HFRI Fund of Funds Composite Index	5.00		
Credit Suisse Leveraged Loan Index	5.00		
Cambridge Associates Private Equity Index	2.50		



<b>Total Equity Policy</b>		<b>Total Private Equity Policy</b>		<b>Wellington Energy Hybrid</b>	
<b>Allocation Mandate</b>	<b>Weight (%)</b>	<b>Allocation Mandate</b>	<b>Weight (%)</b>	<b>Allocation Mandate</b>	<b>Weight (%)</b>
<b>Jan-1979</b>		<b>May-2013</b>		<b>Jan-1999</b>	
Russell 3000 Index	67.00	Russell 3000 Index	100.00	Russell 3000 Energy SP	100.00
MSCI World ex U.S.	33.00				
<b>Jan-2017</b>		<b>Jan-2017</b>		<b>Oct-2015</b>	
Russell 3000 Index	75.00	Credit Suisse Leveraged Loan Index	67.00	S&P 500 Energy	100.00
MSCI World ex U.S.	25.00	Cambridge Associates Private Equity Index	33.00		
		<b>Apr-2023</b>			
		Cambridge Associates Private Equity Index	100.00		
<b>Total Hedge Fund Policy</b>					
<b>Allocation Mandate</b>		<b>Weight (%)</b>			
<b>Jan-1990</b>					
HFRI Fund of Funds Composite Index		100.00			
<b>Total Fixed Income Policy</b>					
<b>Allocation Mandate</b>		<b>Weight (%)</b>			
<b>Dec-1993</b>					
Blmbg. U.S. Aggregate Index		100.00			
<b>Jan-1999</b>					
Blmbg. U.S. Aggregate Index		50.00			
Blmbg. Global Multiverse		50.00			
<b>Jan-2021</b>					
Blmbg. U.S. Aggregate Index		50.00			
Blmbg. Global Credit		50.00			
<b>Apr-2023</b>					
Blmbg. U.S. Aggregate Index		75.00			
Blmbg. Global Credit		25.00			
<b>Total Timber Policy</b>					
<b>Allocation Mandate</b>		<b>Weight (%)</b>			
<b>Apr-1987</b>					
NCREIF Timberland Index		100.00			
<b>Total Real Estate Policy</b>					
<b>Allocation Mandate</b>		<b>Weight (%)</b>			
<b>Jan-1978</b>					
NCREIF Property Index		100.00			



- All market value and performance information through April 30, 2013 is provided by the previous consultant, CSG.
- All historical return data is presented Net of Fees.
- Best efforts have been made to acquire the most accurate data but due to reporting lag times Private Fixed Income, Real Estate, Timber, Private Equity and Hedge Fund information may not be current. Market values for these investments are subject to revision in future reports as more current information becomes available.
- NCREIF Property Index is updated quarterly. One month return information is shown as 0.00%.
- Effective May 1, 2013 the Sail Xtreme APRS Fund, LP and Xtreme Power, Inc. investments have been reclassified as Private Fixed Income under the Alternative Investments category. Prior to that they were listed as Fixed Income by the prior consultant.
- Returns for all Real Estate, Timber and Private Equity managers are Internal Rates of Return. All other managers are Time Weighted Rates of Return.
- Actuarial Assumption is currently 7.25%
- Prior to 1/1/2009 Capital Point (Princeton Capital) and Clinton Magnolia performance is included in the Total Fixed Income performance.
- The information contained in this report is obtained from third party sources and is not warranted to be accurate, complete or timely. All returns and market values are preliminary and subject to revision in future reports upon final reconciliation.
- Pricing may differ between the custodian and manager for reasons beyond the control of AndCo Consulting. Every effort will be made to use the most accurate and timely information available when the report is generated.
- \* Xtreme Power declared bankruptcy in January 2014. After discussions with the Fund's Accountant, Auditor and Legal Counsel the investments in this company have been marked down to \$0.00 as of December 31st.  
If any proceeds are recovered in the bankruptcy process they will be credited to the Fund at that time.
- As of 12/31/14 the Excelsior Investors, LTD position was reclassified to from the Hedge Fund composite to the Private Equity composite.

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<b>Active Return</b>	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
<b>Alpha</b>	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
<b>Beta</b>	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
<b>Consistency</b>	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
<b>Distributed to Paid In (DPI)</b>	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
<b>Down Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
<b>Downside Risk</b>	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
<b>Excess Return</b>	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
<b>Excess Risk</b>	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
<b>Information Ratio</b>	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
<b>Public Market Equivalent (PME)</b>	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
<b>R-Squared</b>	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
<b>Return</b>	- Compounded rate of return for the period.
<b>Sharpe Ratio</b>	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
<b>Standard Deviation</b>	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
<b>Total Value to Paid In (TVPI)</b>	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
<b>Tracking Error</b>	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
<b>Treynor Ratio</b>	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
<b>Up Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



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AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

The strategies listed may not be suitable for all investors. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. Past performance is not an indication of future performance. Any information contained in this report is for informational purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting, or investment management services.

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