

Investment Performance Review  
Period Ending December 31, 2022

## Austin Police

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On behalf of everyone at AndCo, we want to Thank You for the opportunity to serve you and for the trust you place in us! We take our role as your consultant and trusted advisor seriously and will continue working hard to maintain your confidence.

Looking back at the year, we would like to provide a brief update on where we stand as a firm. 2022 marked the 22nd straight year of revenue growth for the firm and we advise on approximately \$90 billion in client assets as of December 31st. We reinvested 100% of our net profits back into the organization so we can continue to evolve and adapt within a market environment that is constantly changing and challenging. As we have stated in previous updates, we do not believe the "status quo" is an effective strategy and we are convicted in our belief that a firm not focused on moving forward in our industry is moving backward.

To execute on our commitment to evolve and continue to enhance the organization, we made additional personnel and technology investments in 2022. Specifically, we hired a Chief Information Officer (Bharat Kumta) after a national search led by a specialized executive recruiting firm. We believe technology is going to drive successful firms in our industry and we plan to invest heavily within this business function to support digital transformation. We also integrated a new Chief Human Resources Officer (Stacie Runion) through a national search led by an executive recruiter. We believe our firm's most important asset is our people, so we need to ensure we have the right leadership team in HR to focus on that asset. We also hired team members in Finance, Human Resources, Consulting, Research, Solutions & Growth, Technology and Performance & Reporting. These personnel investments focused on further enhancing functional areas, departmental service levels, and narrowing potential gaps. We also continued to invest in our proprietary software system to compile and share information firmwide to better serve our clients more effectively and efficiently. Finally, we engaged several outside consulting firms to help us better assess and invest in areas within our firm we believe will drive value for our clients going forward. Some examples include working with an outside group to evaluate and enhance our Operational Due Diligence efforts with investment managers and a separate group to help us review and analyze our current Discretionary Services offerings and how to make this service stronger for our clients.

As we start 2023, we are 93 team members strong with plans to grow. We are targeting several new positions for the year as we thoughtfully continue to invest in our firm to provide the quality services you expect from AndCo. These talent enhancements cover multiple functions and departments at AndCo including Consulting, Research, Performance & Reporting, Marketing, Technology and Compliance. While adding additional resources to a firm our size is a significant investment, it is one we embrace due to the impact we believe it will have on our ability to continue serving our clients at a high level and will push us closer to our vision of being a transformational organization viewed as the leader in our industry. We thoughtfully grow while helping to ensure that service will not suffer at AndCo at the expense of growth. Rather, we utilize growth to enhance our value proposition and overall service to our valued clients.

At the beginning of each year, we also discuss the AndCo partnership and, when earned, announce new partners.

This year I am thrilled to share three new team members were named partners at AndCo – Jon Breth, Tyler Grumbles and Brooke Wilson. Jon has been with AndCo for 11-years and Tyler has been with AndCo for 15-years. Jon and Tyler are both members of our Consulting Department. Brooke was recently promoted to Executive Director of our Performance & Reporting Department and has been with AndCo 7-years. We could not be happier for Jon, Tyler, and Brooke or more grateful for the contributions they have made to AndCo since joining the firm. Jon, Tyler, and Brooke represent what it means to be an AndCo team member, and we are honored and fortunate to have them as partners at our firm.

While three new members will be added to the partnership in 2023, we will also be losing one valuable team member. Donna Sullivan retired on December 31, 2022. Donna joined AndCo at its inception in September of 2000. Donna has been integral in the success of the firm and for many years was the glue that held everything together. Her contributions and sacrifices are too many to reference in this letter. While we are extraordinarily excited for her and the next chapter of her life, she will be greatly missed as a partner and team member. We will be honoring Donna and her legacy with the Donna Sullivan Believe Award. This award will be given each year to the team member at AndCo that best demonstrates their belief in AndCo's Mission, Vision, and Values. Donna believed in what AndCo stood for before anyone else did, and she carried that belief for 23 years. Thank you, Donna!

With the addition of Jon, Tyler, and Brooke, and Donna's retirement, we now have 15 partners representing various functions and departments at AndCo. Our growing partnership group provides great perspective and insight which continues to strengthen AndCo and reaffirm our belief that 100% employee management is vital to the long-term success of our organization. We have great team members at AndCo and this partnership group will continue to expand as we move forward.

In closing, we know that 2022 was a dramatically different environment for investing as compared to 2021, with record high inflation and double-digit losses in both equity AND fixed income assets - all resulting in challenging client portfolio results. Please know our team works tirelessly to provide the advice and guidance you need regardless of the market environment. Our name, AndCo, reminds us of who we work for every day - "Our Client" & Co. You are first in our service model. As we continue to discuss strategic decisions and reinvestments regarding our firm, please know that our decisions are filtered through the following question: "How does this keep our clients' interests first?" If it doesn't meet this standard, we don't do it - it's that simple.

Thank you again for your valued partnership and the opportunity to serve you.  
Happy New Year!



Mike Welker, CFA®  
CEO



# Organizational Chart



## PARTNERSHIP

**Mike Welker, CFA®**  
**Brian Green**  
**Brooke Wilson, CIPM®**  
**Bryan Bakardjiev, CFA®**  
**Dan Johnson**  
**Dan Osika, CFA®**  
**Evan Scussel, CFA®, CAIA®**  
**Jacob Peacock, CPFA**

**Jason Purdy**  
**Jon Breth, CFP®**  
**Kerry Richardville, CFA®**  
**Kim Spurlin, CPA**  
**Steve Gordon**  
**Troy Brown, CFA®**  
**Tyler Grumbles, CFA®, CIPM®, CAIA®**

## LEADERSHIP & MANAGEMENT

**Mike Welker, CFA®**  
 CEO  
**Bharat Kumta**  
 CIO  
**Bryan Bakardjiev, CFA®**  
 COO  
**Evan Scussel, CFA®, CAIA®**  
 Executive Director of Research  
**Kim Spurlin, CPA**  
 CFO  
**Sara Searle**  
 CCO  
**Stacie Runion**  
 CHRO  
**Steve Gordon**  
 Solutions & Growth Director  
**Troy Brown, CFA®**  
 Executive Director of Consulting

**Brooke Wilson, CIPM®**  
 Executive Director of Performance Reporting  
**Dan Johnson**  
 Consulting Director  
**Jack Evatt**  
 Consulting Director  
**Jacob Peacock, CPFA**  
 Consulting Director  
**Jason Purdy**  
 I.T. Director  
**Molly Halcom**  
 Solutions & Growth Director  
**Philip Schmitt**  
 Research Director  
**Rachel Brignoni, MHR**  
 People & Culture Director

## INVESTMENT POLICY COMMITTEE

**Bryan Bakardjiev, CFA®**  
**Mike Welker, CFA®**

**Sara Searle**  
**Troy Brown, CFA®**

## CONSULTING

**Annette Bidart**  
**Brad Hess, CFA®, CPFA**  
**Brendon Vavrica, CFP®**  
**Brian Green**  
**Chris Kuhn, CFA®, CAIA®**  
**Christiaan Brokaw, CFA®**  
**Dave West, CFA®**  
**Doug Anderson, CPFA**  
**Frank Burnette**  
**Gwelda Swilley**  
**Ian Jones**

**James Ross**  
**Jeff Kuchta, CFA®, CPFA**  
**Jennifer Brozstek**  
**Jennifer Gainfort, CFA®, CPFA**  
**John Mellinger**  
**John Thinnies, CFA®, CAIA®, CPFA**  
**Jon Breth, CFP®**  
**Jorge Friguls, CPFA**  
**Justin Lauver, Esq.**  
**Kerry Richardville, CFA®**

**Mary Nye**  
**Michael Fleiner**  
**Michael Holycross**  
**Mike Bostler**  
**Oleg Sydyak, CFA®, FSA, EA**  
**Paul Murray, CPFA**  
**Peter Brown**  
**Tim Walters**  
**Tony Kay**  
**Tyler Grumbles, CFA®, CIPM®, CAIA®**

## PERFORMANCE REPORTING

**Albert Sauerland**  
**Amy Steele**  
**Bob Bulas**  
**David Gough, CPFA**  
**Don Delaney**  
**Donnell Lehr, CPFA**

**Edward Cha**  
**Grace Niebrzydowski**  
**James Culpepper**  
**James Reno**  
**Jeff Pruniski**  
**Joe Carter, CPFA**

**Julio Garcia Rengifo**  
**Kim Hummel**  
**Rotchild Dorson**  
**Yoon Lee-Choi**

## OPERATIONS

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**Michelle Boff**  
**Robert Marquetti**

**HUMAN RESOURCES**  
**Kelly Pearce**  
**Shelley Berthold**

**I.T. & OPERATIONS**  
**Geoffrey Granger**  
**Jerry Camel**  
**Kenneth Day**

**COMPLIANCE**  
**Allen Caldwell**  
**Thay Arroyo**

**MARKETING**  
**Lauren Kaufmann**

**SOLUTIONS & GROWTH**  
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**John Rodak, CIPM®**  
**Paola Gervasi**

## RESEARCH

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 Public Equity & Fixed Income  
**Ben Baldridge, CFA®, CAIA®**  
 Private & Hedged Fixed Income  
**Chester Wyche**  
 Real Estate & Real Assets  
**Dan Lomelino, CFA®**  
 Fixed Income  
**David Julier**  
 Real Estate & Real Assets  
**Elizabeth Wolfe**  
 Capital Markets & Asset Allocation  
**Evan Scussel, CFA®, CAIA®**  
 Private & Public Equity  
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**Justin Ellsesser, CFA®, CAIA®**  
 Private Equity  
**Kevin Laake, CFA®, CAIA®**  
 Private Equity  
**Michael Kosoff**  
 Hedge Funds  
**Philip Schmitt**  
 Fixed Income & Capital Markets  
**Ryan McCuskey**  
 Real Estate & Real Assets  
**Xinxin Liu, CFA®, FRM**  
 Private Equity and Private Debt  
**Zac Chichinski, CFA®, CIPM®**  
 Public Equity



93  
EMPLOYEES

37 ADVANCED  
DEGREES

23 CFA®

8 CAIA®

11 CPFA 5 CIPM®

Employee counts are as of 1/1/2023 and reflect only full time employees and do not include any who are part time, temporary or independent contractors.



## **4th Quarter 2022 Market Environment**



## **The Economy**

- US GDP growth is expected to remain strong in the 4th quarter. While the final measure of 3rd quarter GDP was revised upward to 3.2%, global GDP growth remains challenged with higher energy prices continuing to act as a headwind, especially in Europe. However, China is beginning the process of reopening its economy which should boost emerging markets.
- The US Federal Reserve Bank (the Fed) continued to increase interest rates during the quarter with a 0.75% increase in November and a 0.50% increase in December. Importantly, the Fed signaled it remains committed to fighting inflation through additional rate hikes if needed.
- The US labor market continued to show its resiliency by adding roughly 680 thousand jobs during the 4th quarter. As a result, the unemployment rate fell to 3.5% in December. Despite these gains, the number of announced layoffs during the quarter increased, which could impact labor markets in the future periods.
- Global markets were broadly positive during the 4th quarter. Despite persistent inflation, tighter central bank monetary policy, slowing GDP growth, and continuing geopolitical risks investors were focused on the potential of central banks slowing the pace of tightening as inflation moderated.

## **Equity (Domestic and International)**

- US equities moved higher during the 4th quarter despite concerns regarding inflation, the potential for higher interest rates, and a slowing global GDP growth. Large cap value was the best performing domestic segment of the equity market relative to other US market capitalizations and styles during the period while large cap growth performed the worst.
- International stocks also experienced strong returns during the 4th quarter. While local currency performance was solid, the primary catalyst for outsized returns was a weakening USD, which fell against most major and emerging market currencies. GDP growth, especially in Europe, remained under pressure as central bank policies remained restrictive and elevated energy prices acted as a headwind. Finally, China began to relax its zero-tolerance policy regarding Covid-19, which positively contributed to both global GDP growth and equity market performance.

## **Fixed Income**

- While inflation declined during the 4th quarter, the Fed continued increasing interest rates with two increases totaling 1.25%. Despite the short-term increases, long-term interest rates remained relatively stable during the period. US interest rates moved slightly higher during the quarter with the US 10-Year Treasury bond rising 0.08% to close the year at a yield of 3.88%.
- Performance across domestic bond market sectors was positive during the quarter, led by US high yield and corporate investment grade bonds. Much like equities, global bonds outperformed their domestic peers mainly due to a weaker USD.
- The combination of higher coupons, a shorter maturity profile relative to high quality government bonds, and narrower credit spreads were the primary drivers of relative return during the period.
- US Treasury bonds lagged their corporate bond peers during the quarter as investors' concerns about rising interest rates and the need for safety subsided.

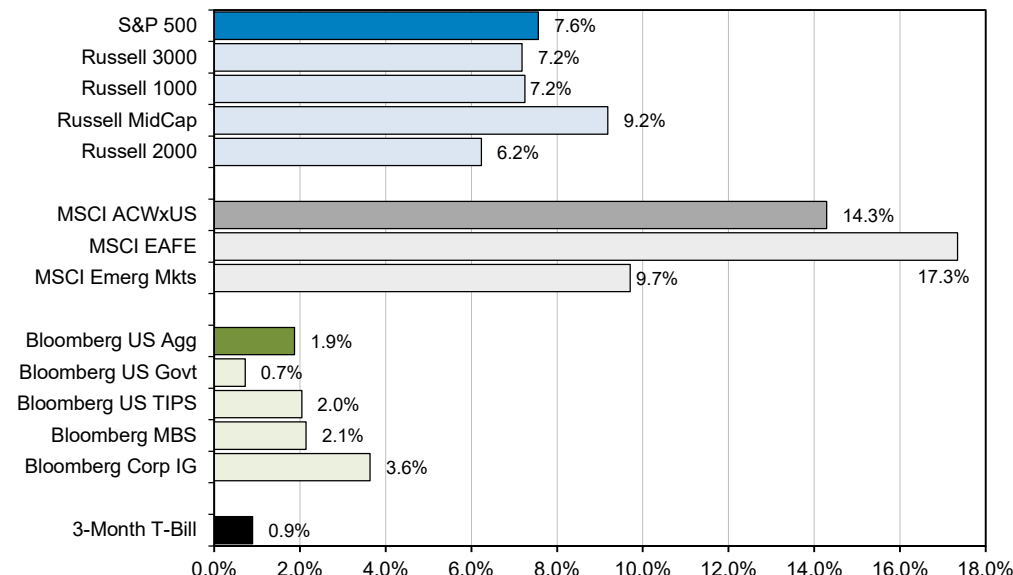
## **Market Themes**

- Central banks remained vigilant in their fight against inflation with the Fed, the Bank of England, and the European Central Bank all raising interest rates during the quarter. Additionally, the Bank of Japan relaxed their targeting of interest rates, allowing the 10-Year Japanese Government Bond to float to 0.50%, above the previous 0.25% level.
- The conflict in Ukraine continues to disrupt global energy markets, in addition to the ongoing humanitarian crisis. Energy costs remain elevated which could further negatively impact economic growth.
- Both US and international equity markets rebounded during the quarter on expectations that inflation would continue to moderate, which could lead central banks to begin the process of slowing the pace of monetary tightening. Value-oriented stocks outperformed growth stocks as investors remained concerned about the pace of future growth.
- Short-term interest rates rose across most developed markets as central banks continued to tighten. Despite concerns about the potential for slowing economic growth, lower quality corporate bonds outperformed higher quality government bonds and USD weakness acted as a tailwind for global bonds during the quarter.

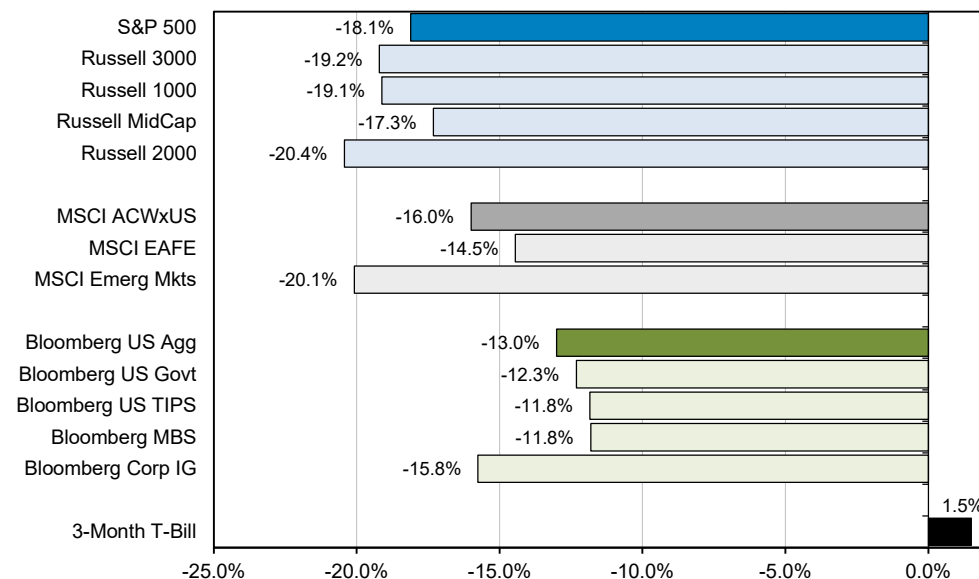


- Equity markets moved higher during the 4th quarter, but it was not sufficient to offset prior quarter pullbacks. Factors that contributed to performance included declining inflation, expectations that the Fed would slow the pace of future interest rate increases, and expectations that China would begin to open its economy. For the period, the S&P 500 large cap benchmark returned 7.6%, compared to 9.2% for mid-cap and 6.2% for small cap benchmarks.
- Like domestic equities, developed markets international and emerging market equities delivered positive results for the 4th quarter. Europe continues to face headwinds from higher-than-expected inflation, elevated energy prices, geopolitical risks related to the conflict in Ukraine, and rising interest rates. Emerging markets were positively impacted by China's decision to loosen restrictions related to the pandemic. Importantly, global equities were positively impacted by a decline in the USD. For the quarter, the MSCI EAFE Index returned 17.3% while the MSCI Emerging Markets Index rose by 9.7%.
- For the quarter, performance of the bond market was broadly positive due to lower inflation and lower interest rate volatility. The Bloomberg (BB) US Aggregate Index returned 1.9%, for the period while investment grade corporate bonds posted a return of 3.6%.
- Performance for developed equity markets was strongly negative over the trailing 1-year period. The bellwether S&P 500 Index dropped -18.1% for the year. The primary drivers of return during the period were concerns related to rising inflation, tighter monetary policy from global central banks, and slowing global economic growth. The weakest relative performance outlier was the Russell 2000 Index which declined by -20.4% for the year.
- Over the trailing 1-year period, international markets declined similarly to domestic markets. The MSCI EAFE Index returned -14.5% while the MSCI Emerging Markets Index fell by -20.1%. Continued concerns related to Ukraine, elevated inflation, and slowing global economic growth negatively impacted markets. However, a weakening USD acted as a tailwind to international performance in the second half of the year.
- Bond market returns were widely negative over the trailing 1-year period due primarily to concerns about persistently high inflation and the expectation of higher future interest rates. US TIPS and mortgage-backed bonds were the least negative sectors with both returning -11.6% for the year. Investment grade corporate bonds suffered the year's largest loss, falling -15.8%.

### Quarter Performance



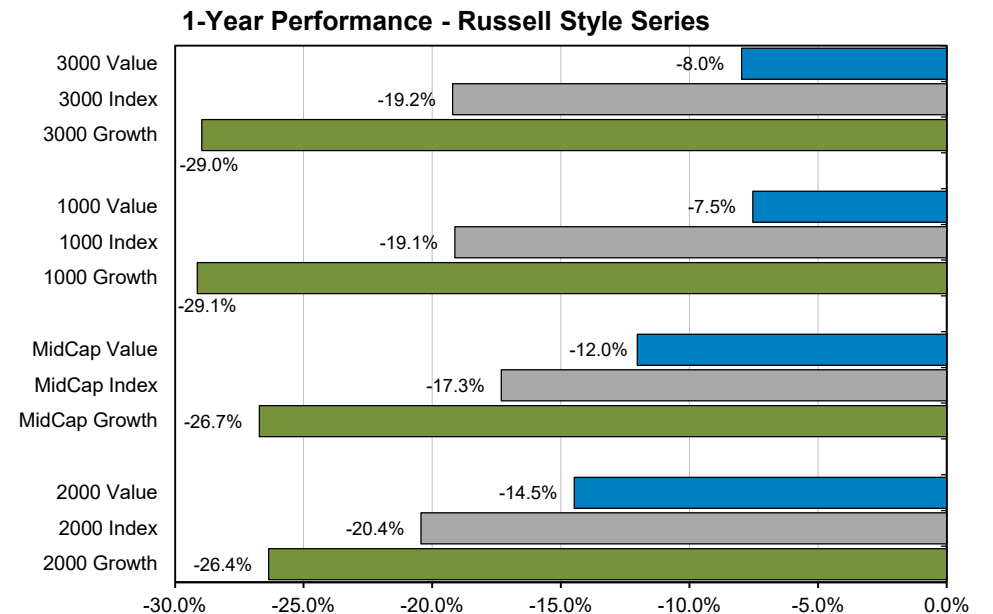
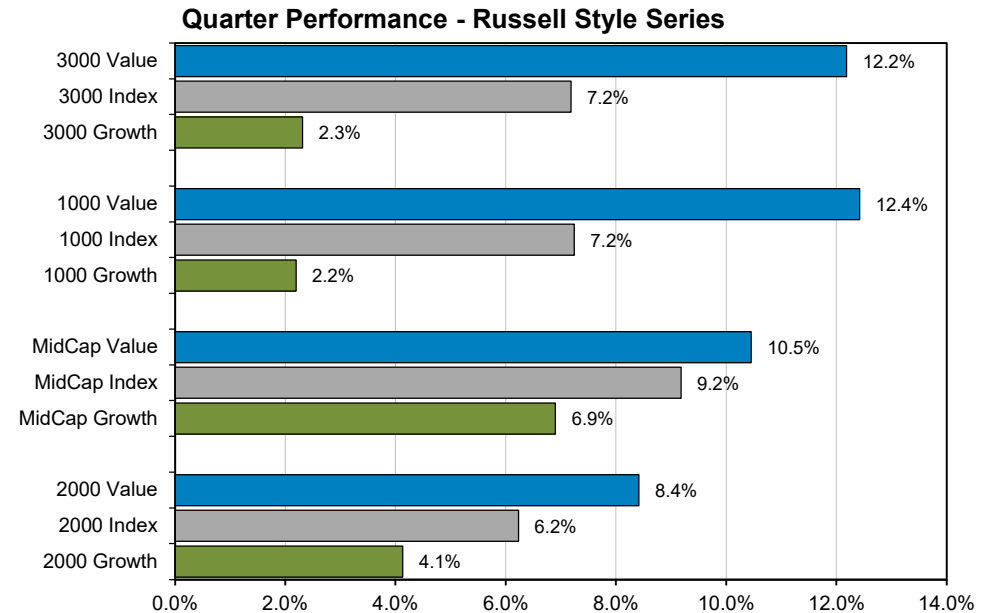
### 1-Year Performance



Source: Investment Metrics



- Despite a pullback in December, equity markets broadly experienced strong absolute returns during the 4th quarter across both the style and market capitalization spectrums. With concerns about the potential for slowing economic conditions, large cap stocks resumed their leadership, followed by mid and small cap stocks. The Russell 1000 Value Index delivered 12.4% for the quarter, followed by while the Russell Mid Cap Value Index and the Russell 2000 Index, which rose by 10.5% and 8.4%, respectively.
- Performance across styles and market capitalizations was disparate during the quarter. Large, mid, and small cap value stocks all outperformed their growth counterparts. For the period, the Russell 1000 Value Index was the best relative performing style index, posting a return of 12.4%. Large and small cap growth stocks were the laggards during the period with the Russell Large Cap Growth Index and Russell 2000 Growth Index returning 2.2% and 4.1%, respectively.
- In contrast to the 4th quarter's positive performance, there was a wide range of negative results across market capitalizations over the trailing 1-year period. The Russell 2000 Index returned a disappointing -20.4% for the year, which underperformed both its large and mid cap index counterparts.
- There was also a wide performance dispersion across the style-based indexes for the year with growth stocks down significantly more than their value counterparts at all capitalization ranges. Within large cap stocks, the Russell 1000 Value Index returned -7.5% compared to much larger -29.1% decline for the Russell Large Cap Growth benchmark. The Russell Mid Cap Value Index returned -12.0% while the Russell 2000 Value Index returned -14.5% for the period. While these value benchmark results represented double-digit losses for the year, the Russell Mid Cap Growth Index fell a much larger -26.7% and the Russell 2000 Growth Index declined by a similar -26.4%.

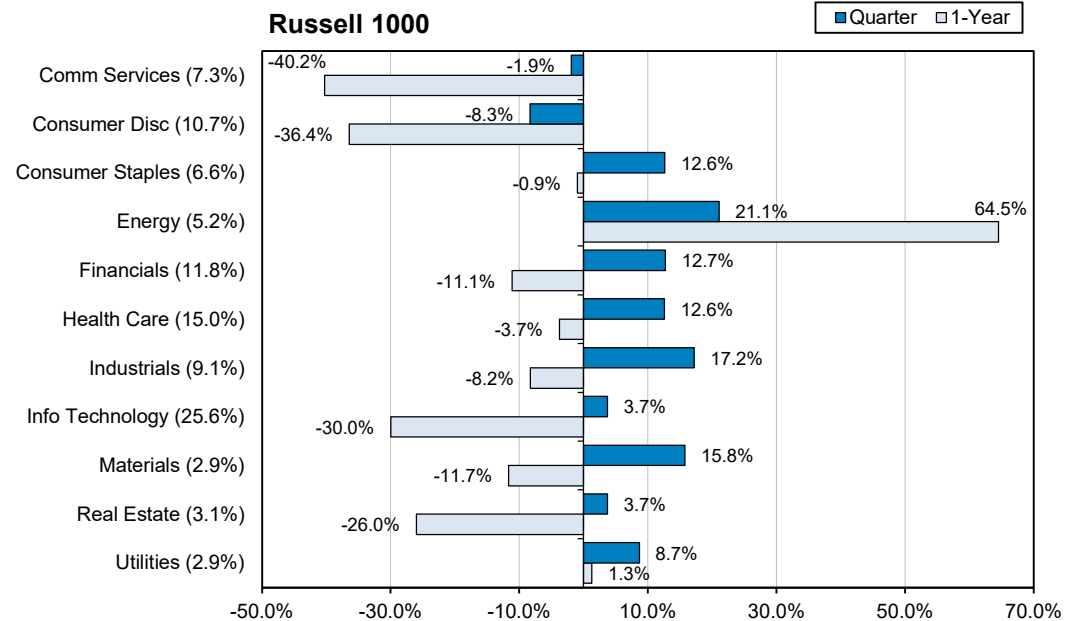


Source: Investment Metrics

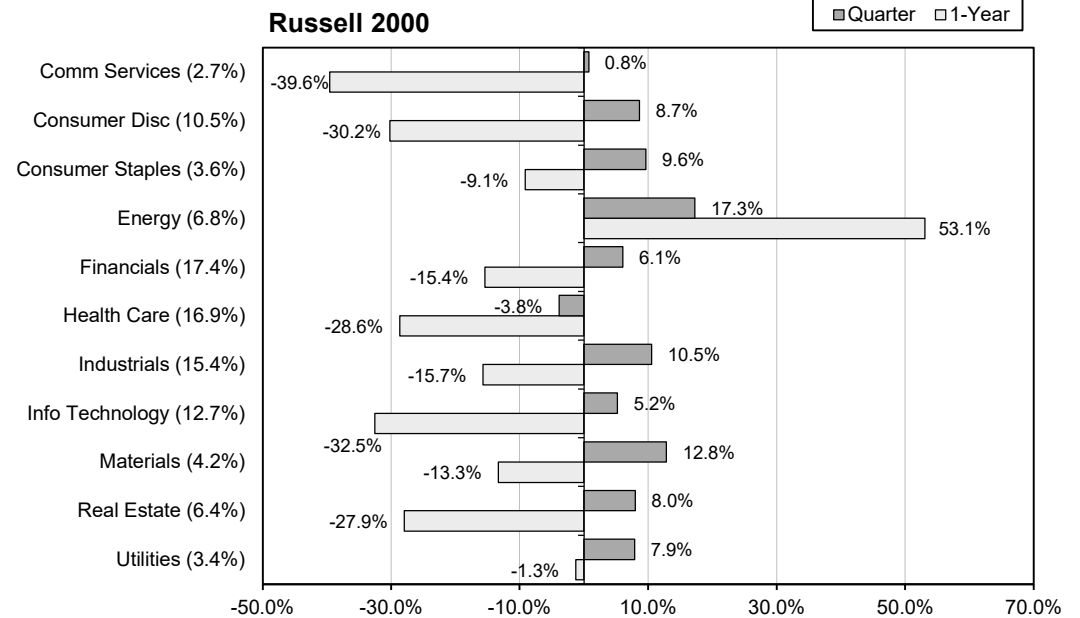




- Economic sector performance was positive for nine of the eleven large cap economic sectors for the 4th quarter. Seven sectors outpaced the return of the broad index on a relative basis during the period.
- Energy continued its strong 2022 performance with a 4th quarter return of 21.1%. Other sectors that outpaced the headline index's return for the quarter included industrials (17.2%), materials (15.8%), financials (12.7%), healthcare (12.6%), consumer staples (12.6%), and utilities (8.7%). The real estate (3.7%), information technology (3.7%), communication services (-1.9%), and consumer discretionary (-8.3%) sectors all trailed the Russell 1000 Index return for the period.
- For the full year, seven economic sectors exceeded the return of the broad large cap benchmark but only the energy (64.5%) and utilities (1.3%) sectors managed to post positive, albeit vastly different, results. The weakest economic sector performance in the Russell 1000 for the year was communication services which declined by a staggering -40.2%.



- Ten small cap economic sectors posted positive returns during the quarter and seven exceeded the 6.2% return of the broader Russell 2000 Index. The energy (17.3%), materials (12.8%), and industrials (10.5%) sectors each posted double-digit positive results for the quarter. The only small cap economic sector that posted negative performance for the quarter was health care which fell by -3.8%.
- For the trailing 1-year period, six of the eleven economic sectors were down less than the broad small cap benchmark's return of -20.4%. Energy was the best performing and only positive economic sector for the year with a strong return of 53.1%. The utilities (-1.3%) and consumer staples (-9.1%) sectors were only small cap index segments to fall less than double-digit amounts for the year. The worst performing sector for the full year was communication services with a return of -39.6%. In addition, the information technology (-32.5%), consumer discretionary (-30.2%), health care (28.6%), and real estate (-27.9%) sectors all were down significantly for the year.



Source: Morningstar Direct





**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of December 31, 2022

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	5.5%	-5.8%	-26.4%	Information Technology
Microsoft Corp	5.1%	3.3%	-28.0%	Information Technology
Amazon.com Inc	2.1%	-25.7%	-49.6%	Consumer Discretionary
Berkshire Hathaway Inc Class B	1.6%	15.7%	3.3%	Financials
Alphabet Inc Class A	1.5%	-7.8%	-39.1%	Communication Services
UnitedHealth Group Inc	1.4%	5.3%	7.0%	Health Care
Alphabet Inc Class C	1.3%	-7.7%	-38.7%	Communication Services
Johnson & Johnson	1.3%	8.8%	6.0%	Health Care
Exxon Mobil Corp	1.3%	27.4%	87.4%	Energy
JPMorgan Chase & Co	1.1%	29.5%	-12.6%	Financials

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Horizon Therapeutics PLC	0.1%	83.9%	5.6%	Health Care
Burlington Stores Inc	0.0%	81.2%	-30.4%	Consumer Discretionary
Halliburton Co	0.1%	60.4%	74.5%	Energy
Universal Health Services Inc Class B	0.0%	60.0%	9.4%	Health Care
PVH Corp	0.0%	57.7%	-33.7%	Consumer Discretionary
Spectrum Brands Holdings Inc	0.0%	57.4%	-38.6%	Consumer Staples
Boeing Co	0.3%	57.3%	-5.4%	Industrials
Under Armour Inc A	0.0%	52.8%	-52.1%	Consumer Discretionary
Exact Sciences Corp	0.0%	52.4%	-36.4%	Health Care
Moderna Inc	0.2%	51.9%	-29.3%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Carvana Co Class A	0.0%	-76.7%	-98.0%	Consumer Discretionary
Opendoor Technologies Inc Class A	0.0%	-62.7%	-92.1%	Real Estate
Tesla Inc	0.9%	-53.6%	-65.0%	Consumer Discretionary
Lucid Group Inc Shs	0.0%	-51.1%	-82.1%	Consumer Discretionary
Guardant Health Inc	0.0%	-49.5%	-72.8%	Health Care
Affirm Holdings Inc - Class A	0.0%	-48.5%	-90.4%	Information Technology
WeWork Inc	0.0%	-46.0%	-83.4%	Real Estate
AppLovin Corp - Class A	0.0%	-46.0%	-88.8%	Information Technology
Ginkgo Bioworks Holdings Inc	0.0%	-45.8%	-79.7%	Materials
Olaplex Holdings Inc	0.0%	-45.5%	-82.1%	Consumer Staples

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Halozyne Therapeutics Inc	0.3%	43.9%	41.5%	Health Care
ShockWave Medical Inc	0.3%	-26.1%	15.3%	Health Care
Inspire Medical Systems Inc	0.3%	42.0%	9.5%	Health Care
EMCOR Group Inc	0.3%	28.4%	16.8%	Industrials
Crocs Inc	0.3%	57.9%	-15.4%	Consumer Discretionary
Matador Resources Co	0.3%	17.2%	55.9%	Energy
Iridium Communications Inc	0.3%	15.8%	24.5%	Communication Services
Murphy Oil Corp	0.3%	22.9%	68.3%	Energy
Agree Realty Corp	0.3%	6.0%	3.5%	Real Estate
Texas Roadhouse Inc	0.3%	4.7%	4.1%	Consumer Discretionary

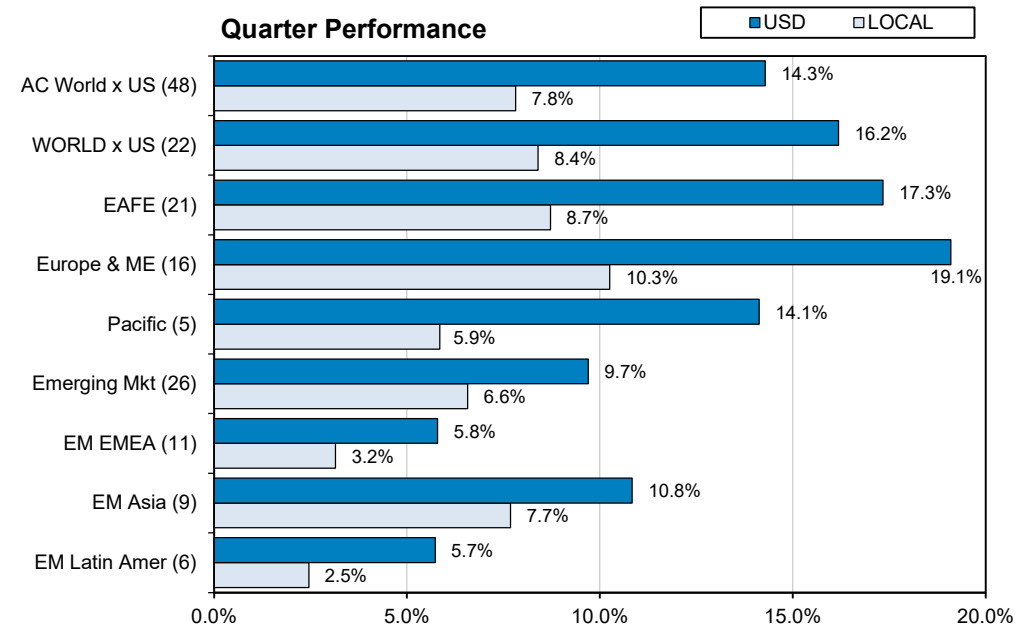
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Madrigal Pharmaceuticals Inc	0.2%	346.6%	242.5%	Health Care
Immunovant Inc	0.0%	218.1%	108.3%	Health Care
Rayonier Advanced Materials Inc	0.0%	204.8%	68.1%	Materials
Maxar Technologies Inc	0.2%	176.5%	75.5%	Industrials
4D Molecular Therapeutics Inc	0.0%	176.2%	1.2%	Health Care
Icosavax Inc	0.0%	151.3%	-65.3%	Health Care
Imago BioSciences Inc	0.0%	138.9%	51.6%	Health Care
Provention Bio Inc	0.0%	134.9%	88.1%	Health Care
Biohaven Ltd	0.0%	120.3%	N/A	Health Care
Oceaneering International Inc	0.1%	119.7%	54.6%	Energy

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Tricida Inc	0.0%	-98.5%	-98.4%	Health Care
Relmada Therapeutics Inc	0.0%	-90.6%	-84.5%	Health Care
Avaya Holdings Corp	0.0%	-87.7%	-99.0%	Information Technology
Instil Bio Inc	0.0%	-87.0%	-96.3%	Health Care
Greenidge Generation Holdings Inc.	0.0%	-85.5%	-98.2%	Information Technology
Eiger BioPharmaceuticals Inc	0.0%	-84.3%	-77.3%	Health Care
Cano Health Inc - Class A	0.0%	-84.2%	-84.6%	Health Care
Gossamer Bio Inc	0.0%	-81.9%	-80.8%	Health Care
Rockley Photonics Holdings Ltd	0.0%	-80.3%	-96.8%	Information Technology
Boxed Inc	0.0%	-78.9%	-98.6%	Consumer Discretionary

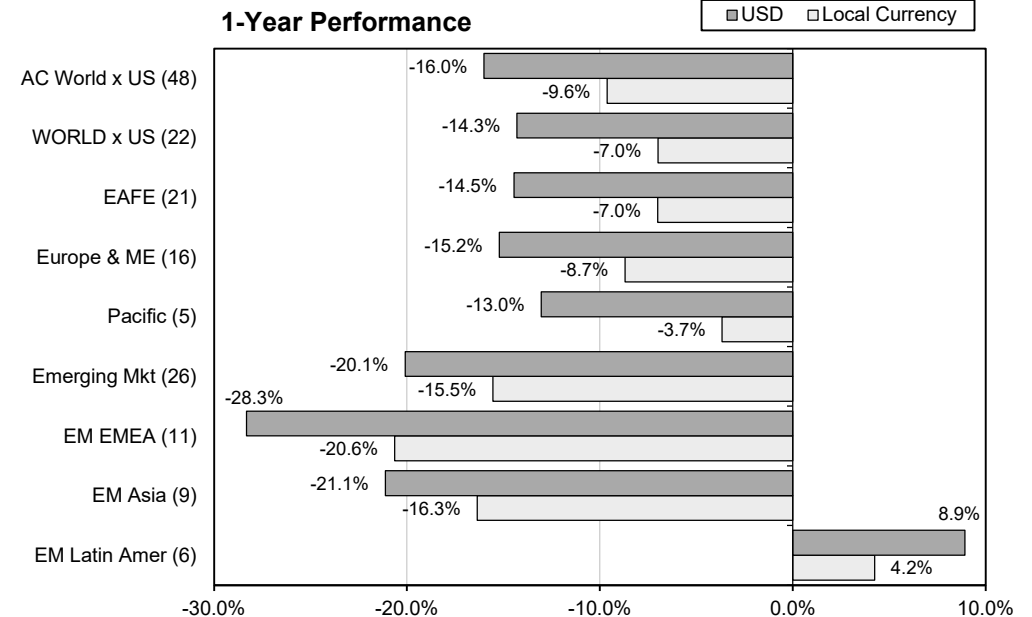
Source: Morningstar Direct



- Each of the developed and emerging market international equity indexes tracked in the chart posted positive returns in both US dollar (USD) and local currency (LC) terms for the 4th quarter. A weaker USD acted as a tailwind for non-US index performance during the quarter. Higher energy prices and the reopening of China also drove performance, especially in emerging markets. The developed market MSCI EAFE Index returned a strong 17.3% in USD and 8.7% in LC terms for the period, and the MSCI Emerging Markets Index rose by 9.7% in USD and 6.6% in LC terms.



- The trailing 1-year results for international developed and emerging markets were negative across most regions and currencies. The MSCI EAFE Index returned -14.5% in USD for the year and -7.0% in LC terms. Similarly, returns across emerging markets were broadly lower except for Latin America which returned 8.9% in USD and 4.2% in LC terms. The MSCI Emerging Markets Index declined by -20.1% in USD and -15.5% in LC terms for the year. Performance in the EMEA regional benchmark significantly detracted from emerging market index performance with the EMEA Index posting returns of -28.3% in USD and -20.6% in LC terms.



Source: MSCI Global Index Monitor (Returns are Net)



**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of December 31, 2022

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.8%	10.1%	-16.8%
Consumer Discretionary	5.0%	17.8%	-22.4%
Consumer Staples	18.7%	10.6%	-13.0%
Energy	4.5%	19.8%	27.7%
Financials	15.1%	23.9%	-4.6%
Health Care	13.6%	14.2%	-11.0%
Industrials	10.5%	19.0%	-20.6%
Information Technology	7.8%	14.9%	-32.4%
Materials	11.1%	20.7%	-10.3%
Real Estate	3.5%	11.0%	-20.9%
Utilities	2.6%	19.4%	-12.4%
<b>Total</b>	<b>100.0%</b>	<b>17.3%</b>	<b>-14.5%</b>

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	8.4%	12.0%	-21.6%
Consumer Discretionary	6.0%	14.7%	-21.7%
Consumer Staples	21.0%	9.8%	-11.9%
Energy	5.9%	13.3%	8.1%
Financials	12.3%	15.6%	-7.3%
Health Care	9.8%	14.1%	-12.9%
Industrials	8.9%	17.3%	-18.4%
Information Technology	10.8%	13.5%	-34.5%
Materials	11.4%	16.6%	-11.2%
Real Estate	3.4%	10.4%	-20.6%
Utilities	2.3%	13.0%	-11.1%
<b>Total</b>	<b>100.0%</b>	<b>14.3%</b>	<b>-16.0%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	8.9%	58.8%	1.8%
Consumer Discretionary	4.9%	46.2%	5.6%
Consumer Staples	22.1%	77.4%	48.9%
Energy	9.9%	92.9%	40.2%
Financials	6.1%	44.6%	24.5%
Health Care	4.1%	53.5%	3.8%
Industrials	6.4%	49.7%	18.8%
Information Technology	18.6%	9.8%	-34.7%
Materials	14.1%	45.6%	10.6%
Real Estate	3.0%	13.8%	-15.4%
Utilities	1.9%	38.8%	26.8%
<b>Total</b>	<b>100.0%</b>	<b>9.7%</b>	<b>-20.1%</b>

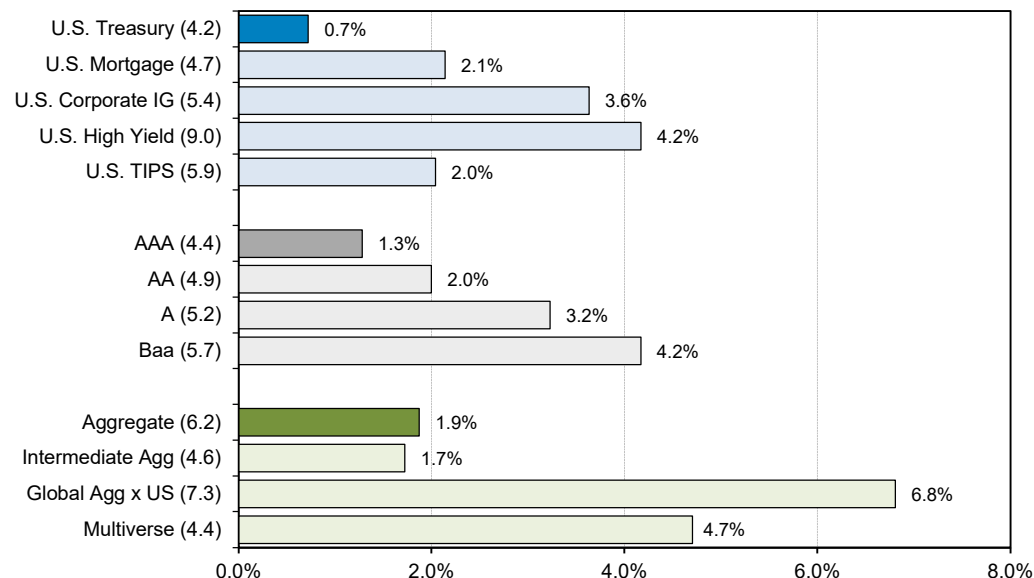
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	21.9%	14.0%	13.2%	-16.6%
United Kingdom	15.3%	9.8%	17.0%	-4.8%
France	11.8%	7.6%	22.2%	-13.3%
Switzerland	10.1%	6.5%	10.4%	-18.3%
Australia	7.9%	5.1%	15.7%	-5.3%
Germany	8.2%	5.2%	24.6%	-22.3%
Netherlands	4.3%	2.7%	21.0%	-27.7%
Sweden	3.3%	2.1%	18.1%	-28.4%
Hong Kong	3.0%	1.9%	18.2%	-4.7%
Denmark	3.0%	1.9%	31.6%	-4.8%
Spain	2.4%	1.5%	22.9%	-7.3%
Italy	2.3%	1.5%	26.4%	-14.4%
Singapore	1.5%	1.0%	10.5%	-11.0%
Belgium	1.0%	0.7%	22.6%	-12.5%
Finland	1.0%	0.7%	16.3%	-15.3%
Norway	0.8%	0.5%	16.9%	-7.0%
Israel	0.7%	0.5%	0.4%	-26.7%
Ireland	0.7%	0.4%	21.5%	-26.2%
Portugal	0.2%	0.1%	17.2%	0.2%
Austria	0.2%	0.1%	31.1%	-26.4%
New Zealand	0.2%	0.1%	24.5%	-13.6%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>63.9%</b>	<b>17.3%</b>	<b>-14.5%</b>
Canada		7.7%	7.4%	-12.9%
<b>Total Developed Countries</b>		<b>71.6%</b>	<b>16.2%</b>	<b>-14.3%</b>
China		9.2%	13.5%	-21.9%
Taiwan		3.9%	9.6%	-29.8%
India		4.1%	2.0%	-8.0%
Korea		3.2%	18.1%	-29.4%
Brazil		1.5%	2.4%	14.2%
Saudi Arabia		1.2%	-7.4%	-5.1%
South Africa		1.0%	18.3%	-3.9%
Mexico		0.6%	12.5%	-2.0%
Thailand		0.6%	16.1%	5.0%
Indonesia		0.5%	-3.6%	3.6%
Malaysia		0.4%	14.0%	-5.8%
United Arab Emirates		0.4%	-1.5%	-6.2%
Qatar		0.3%	-15.3%	-6.9%
Kuwait		0.3%	5.7%	10.1%
Philippines		0.2%	21.1%	-13.9%
Poland		0.2%	47.7%	-27.2%
Chile		0.2%	6.2%	19.4%
Turkey		0.2%	62.9%	90.4%
Peru		0.1%	17.4%	9.4%
Greece		0.1%	29.1%	0.3%
Colombia		0.0%	19.7%	-6.0%
Czech Republic		0.0%	6.5%	-14.4%
Hungary		0.1%	36.3%	-31.1%
Egypt		0.0%	28.5%	-22.6%
<b>Total Emerging Countries</b>		<b>28.4%</b>	<b>9.7%</b>	<b>-20.1%</b>
<b>Total ACWixUS Countries</b>		<b>100.0%</b>	<b>14.3%</b>	<b>-16.0%</b>

Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

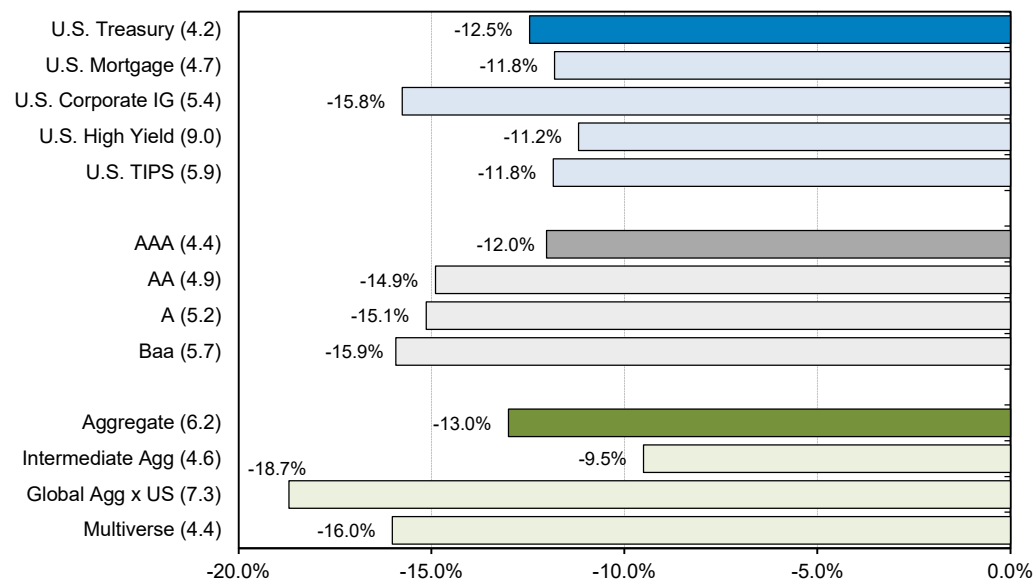


- After an extremely challenging year in fixed income markets, the 4th quarter's positive bond benchmark results were a welcome relief. Despite two rate increases during the quarter, bond performance was aided by lower investor concerns about rising inflation as US CPI declined. This was reflected in both intermediate and long-term interest rates which remained relatively stable during the quarter.
- The return for the BB US Aggregate Bond Index, the bellwether US investment grade benchmark, rose by 1.9% for the period.
- Performance across the investment grade index's segments was also positive during the period with the US Corporate Investment Grade Index returning 3.6% and the US Mortgage Index component posting a return of 2.1%.
- High yield bonds outperformed their investment grade counterparts, surging 4.2% during the quarter. US TIPS, which have delivered strong performance in recent periods, rose by 2.0% as investors' expectations of future inflation declined.
- Outside of domestic markets, the Bloomberg Global Aggregate ex US Index posted a strong return of 6.8% for the quarter. Like domestic bonds, global bond index performance was positively impacted declining inflation, but the benchmark also received a boost from the decline in the USD for the quarter.
- Over the trailing 1-year period, the bellwether BB US Aggregate Bond Index declined by -13.0% and each of the benchmark's components fell by more than -10%. US TIPS, which are excluded from the bellwether index, dropped by -11.8% for the year.
- Lower quality high yield corporate bonds were down less than their investment grade counterparts on a relative basis with the Bloomberg US High Yield Index posting still discouraging return of -11.2% for the period.
- Performance for non-US bonds was also strongly negative for the year with the developed market Bloomberg Global Aggregate ex US Index falling by -18.7%. The combination of rising interest rates overseas, elevated inflation, geopolitical risks, and USD strength earlier in the year hindered non-US index performance.

### Quarter Performance



### 1-Year Performance

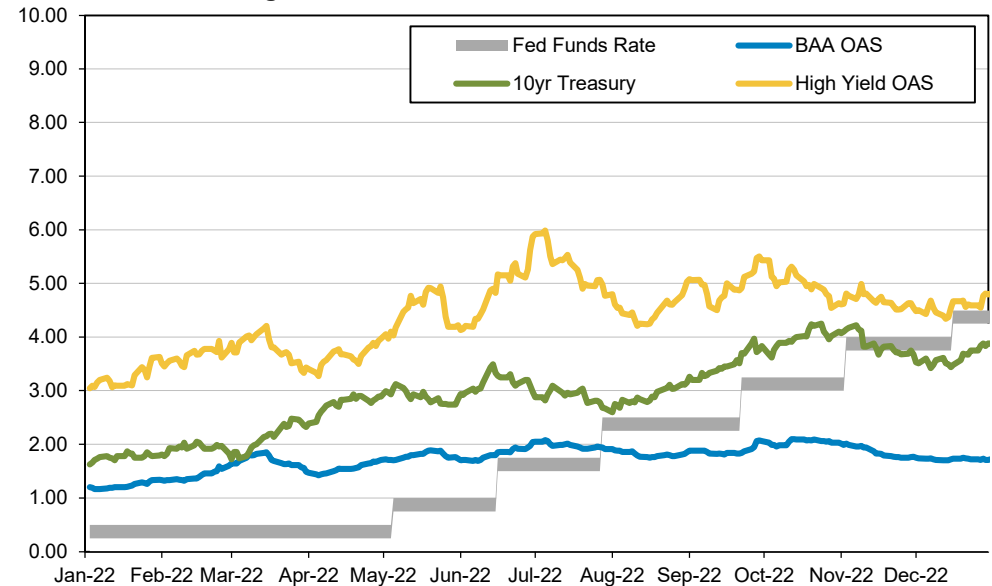


Source: Bloomberg

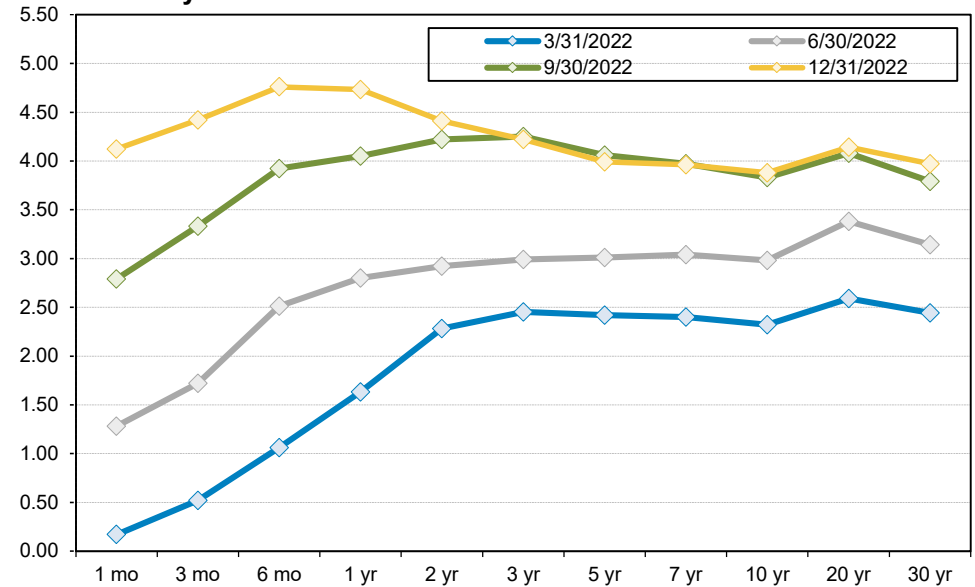


- The gray band across the graph illustrates the range of the current Fed Funds Rate. In the 4th quarter this year, the Fed raised the lower end of its target rate range from 3.00% to 4.25% through a 0.75% increase in November and a 0.50% increase in December. During its December meeting, the Federal Open Market Committee (FOMC) stated it intends to monitor economic growth closely and will continue to raise interest rates to fight inflation if needed. The FOMC also stated that it would continue its policy of removing liquidity from the market by allowing bonds held on its balance sheet to mature without reinvesting those proceeds.
- The yield on the US 10-year Treasury (green line) ended the period slightly higher as concerns over the pace of inflation, combined with the Fed's announced rate increase, drove yields. The closing yield on the 10-Year Treasury was 3.88% at year-end, an increase of 0.08% from its 3rd quarter closing yield. The benchmark's rate peaked in October, reaching a high of roughly 4.25% before declining to end the quarter.
- The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-US Treasury investment grade issues. For the full year, the spread widened slightly from 1.17% to 1.72%. High Yield OAS spreads rose from roughly 3.05% at the beginning of the year to 4.81% at year-end. During 2022, high yield spreads reached a level of 5.80% in early July before trading lower the remainder of the year.
- 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 4th quarter as the FOMC increased interest rates twice to combat elevated inflation. Despite these short-term rate increases, both intermediate and longer-term rates remained largely unchanged during the quarter. The yield curve remained inverted between 2-year and 10-year rates. Said differently, the short-term rate was higher than the long-term rate. Historically, a persistent inversion of these two key rates has been an indication of a future recession withing 6- to 24-months.

**1-Year Trailing Market Rates**



**Treasury Yield Curve**



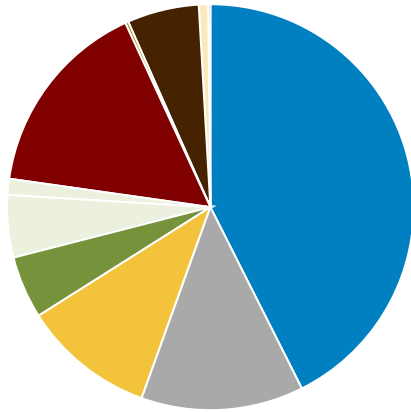
Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)



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Asset Allocation by Segment  
Dec-2022 : \$933,934,678



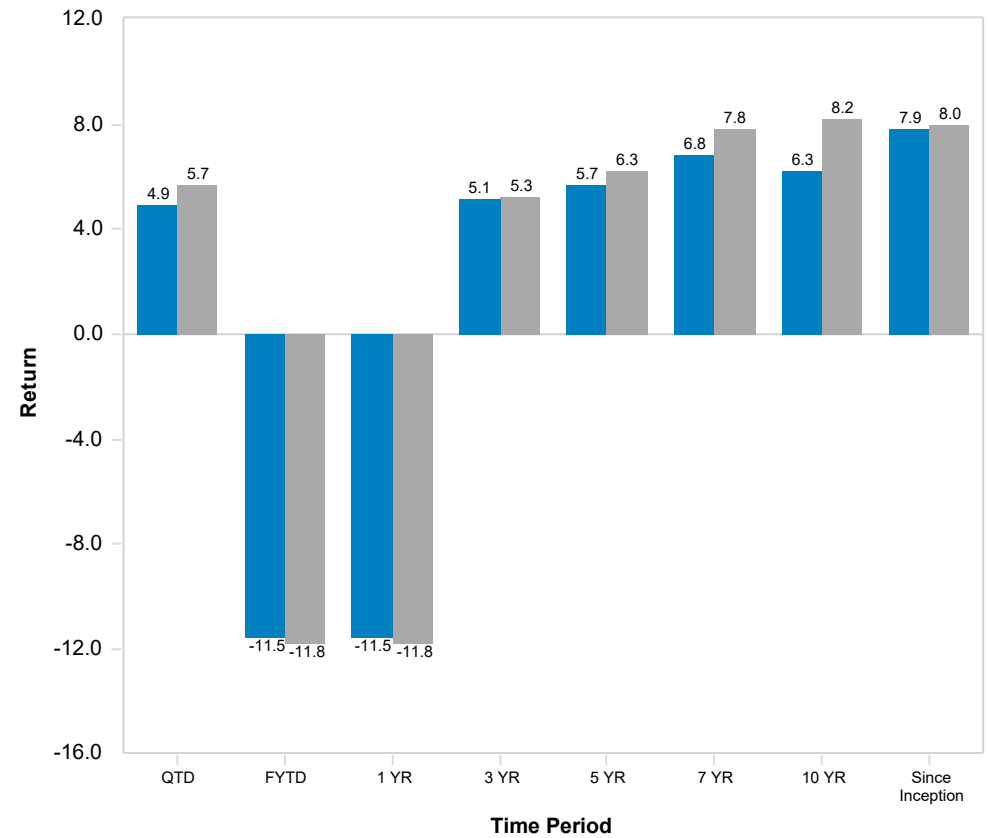
Allocation

	Market Value	Allocation
Total Domestic Equity	397,664,840	42.6
Total International Equity	120,605,613	12.9
Total Other Equity	98,342,702	10.5
Total Core Fixed Income	46,504,138	5.0
Total Non Core Fixed Income	46,278,146	5.0
Total Other Fixed Income	12,063,285	1.3
Total Real Estate	148,252,053	15.9
Total Timber Funds	2,340,850	0.3
Total Multi Asset Funds	53,241,377	5.7
Cash Account	6,940,300	0.7
Cash Account PE	-	0.0
APRS Building	1,701,375	0.2

Gain/Loss Summary

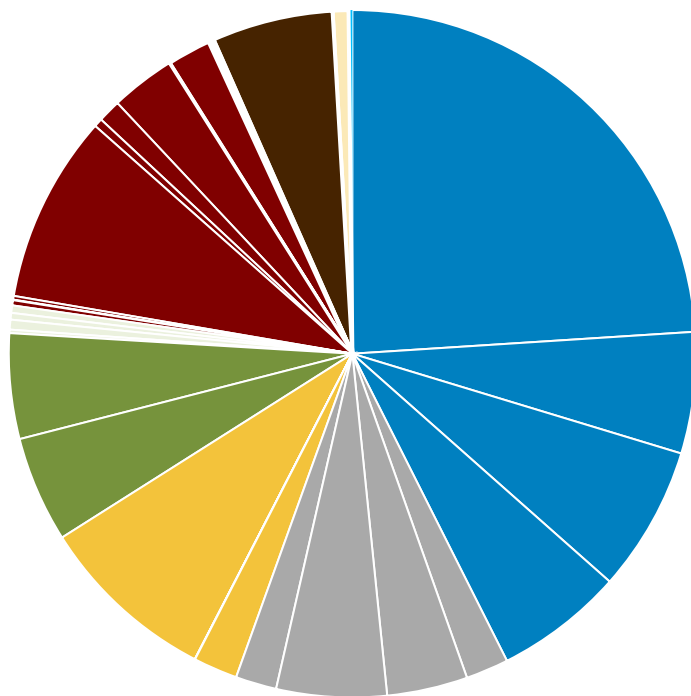
	QTD	FYTD	1 YR
Total Retirement System			
Beginning Market Value	893,974,810	1,079,736,817	1,079,736,817
Net Contributions	-4,083,964	-20,902,394	-20,902,394
Return on Investment	44,443,385	-122,658,058	-122,658,058
Ending Market Value	933,934,678	933,934,678	933,934,678

Comparative Performance





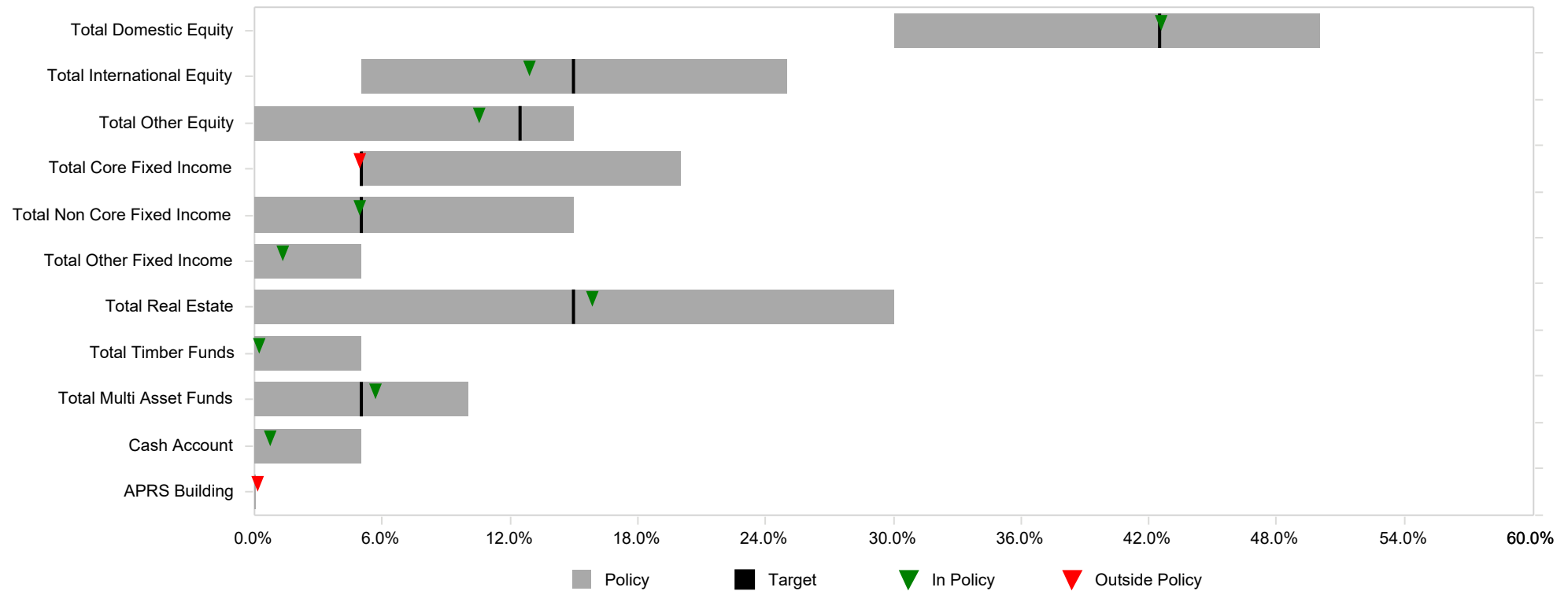
Dec-2022 : \$933,934,678



## Allocation

	Market Value	Allocation
NT Collective Russell 3000 Index	223,929,044	24.0
Baird Mid Cap Growth	53,296,257	5.7
Nuance Mid Cap Value	63,994,131	6.9
Kennedy Small Cap Value	56,445,407	6.0
Driehaus International Small Cap Growth	18,794,285	2.0
WCM Focused Intl Growth LP	35,451,214	3.8
Thompson Siegel & Walmsley	48,366,324	5.2
Wellington Emerging Markets Fund	17,993,789	1.9
Huff Energy Fund	19,396,200	2.1
Sail Venture Fund I	1	0.0
Sail Venture Fund II	1	0.0
Sail Pre-Exit Acceleration Fund	1	0.0
Excelsior Investors, Ltd.	122,366	0.0
Franklin Park Private Equity	78,824,133	8.4
Orleans Capital	46,504,138	5.0
Pimco Diversified Income Fund	46,278,146	5.0
LBC Credit Partners III	1,531,158	0.2
LBC Credit Partners IV	4,295,655	0.5
Providence Debt Fund III	2,978,718	0.3
Capital Point Partners (Princeton Capital)	3,257,754	0.3
Edison Investments	2,304,992	0.2
India Property Fund	173,212	0.0
Gainesville Property	1,644,315	0.2
Morgan Stanley	82,607,316	8.8
AEW Partners Fund VIII	3,725,317	0.4
GreenOak US III	10,019,132	1.1
Brookfield Premier RE Partners	28,185,074	3.0
Artemis Real Estate IV	399,234	0.0
Stockbridge Smart Markets	19,193,461	2.1
Capitol Timberland Investments	1,021,897	0.1
Domain Environmental Investments II	1,318,953	0.1
BlackRock Multi Asset Fund	53,241,377	5.7
Cash Account	6,940,300	0.7
Cash Account PE	-	0.0
APRS Building	1,701,375	0.2

## Executive Summary



## Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)
<b>Total Retirement System</b>	<b>933,934,678</b>	<b>100.0</b>	<b>N/A</b>	<b>N/A</b>	<b>100.0</b>
Total Domestic Equity	397,664,840	42.6	30.0	50.0	42.5
Total International Equity	120,605,613	12.9	5.0	25.0	15.0
Total Other Equity	98,342,702	10.5	0.0	15.0	12.5
Total Core Fixed Income	46,504,138	5.0	5.0	20.0	5.0
Total Non Core Fixed Income	46,278,146	5.0	0.0	15.0	5.0
Total Other Fixed Income	12,063,285	1.3	0.0	5.0	0.0
Total Real Estate	148,252,053	15.9	0.0	30.0	15.0
Total Timber Funds	2,340,850	0.3	0.0	5.0	0.0
Total Multi Asset Funds	53,241,377	5.7	0.0	10.0	5.0
Cash Account	6,940,300	0.7	0.0	5.0	0.0
APRS Building	1,701,375	0.2	0.0	0.0	0.0

## Financial Reconciliation Quarter to Date

	Market Value 10/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2022
<b>Total Retirement System</b>	<b>893,974,810</b>	<b>-</b>	<b>18,099,199</b>	<b>-22,183,162</b>	<b>-357,407</b>	<b>-42,146</b>	<b>6,444,127</b>	<b>37,999,258</b>	<b>44,443,385</b>	<b>933,934,678</b>
<b>Total Equity</b>	<b>572,747,677</b>	<b>-821,137</b>	<b>-</b>	<b>-</b>	<b>-295,807</b>	<b>-</b>	<b>1,989,349</b>	<b>42,993,073</b>	<b>44,982,422</b>	<b>616,613,154</b>
<b>Total Domestic Equity</b>	<b>374,302,341</b>	<b>-4,867,232</b>	<b>-</b>	<b>-</b>	<b>-183,958</b>	<b>-</b>	<b>798,918</b>	<b>27,614,771</b>	<b>28,413,689</b>	<b>397,664,840</b>
NT Collective Russell 3000 Index	213,587,521	-5,051,190	-	-	-	-	-	15,392,713	15,392,713	223,929,044
Baird Mid Cap Growth	51,260,723	89,369	-	-	-89,369	-	104,358	1,931,177	2,035,535	53,296,257
Nuance Mid Cap Value	56,912,148	94,589	-	-	-94,589	-	419,819	6,662,164	7,081,983	63,994,131
Kennedy Small Cap Value	52,541,949	-	-	-	-	-	274,741	3,628,717	3,903,458	56,445,407
<b>Total International Equity</b>	<b>105,918,507</b>	<b>-1,083,845</b>	<b>-</b>	<b>-</b>	<b>-33,099</b>	<b>-</b>	<b>1,185,361</b>	<b>14,618,689</b>	<b>15,804,050</b>	<b>120,605,613</b>
Driehaus International Small Cap Growth	17,105,179	-1,116,944	-	-	-	-	1,116,944	1,689,107	2,806,051	18,794,285
Thompson Siegel & Walmsley	41,022,744	-	-	-	-	-	-	7,343,580	7,343,580	48,366,324
WCM Focused Intl Growth LP	31,521,280	-	-	-	-	-	-	3,929,934	3,929,934	35,451,214
Wellington Emerging Markets Fund	16,269,304	33,099	-	-	-33,099	-	68,417	1,656,069	1,724,485	17,993,789
<b>Total Other Equity</b>	<b>92,526,829</b>	<b>5,129,940</b>	<b>-</b>	<b>-</b>	<b>-78,750</b>	<b>-</b>	<b>5,070</b>	<b>759,613</b>	<b>764,683</b>	<b>98,342,702</b>
Huff Energy Fund	19,396,200	-	-	-	-	-	-	-	-	19,396,200
Sail Venture Fund I	1	-	-	-	-	-	-	-	-	1
Sail Venture Fund II	1	-	-	-	-	-	-	-	-	1
Sail Pre-Exit Acceleration Fund	1	-	-	-	-	-	-	-	-	1
Excelsior Investors, Ltd.	122,366	-	-	-	-	-	-	-	-	122,366
Franklin Park Private Equity	73,008,260	5,129,940	-	-	-78,750	-	5,070	759,613	764,683	78,824,133
<b>Total Fixed Income</b>	<b>102,879,730</b>	<b>-1,224,004</b>	<b>-</b>	<b>-</b>	<b>-16,437</b>	<b>-</b>	<b>2,226,368</b>	<b>979,913</b>	<b>3,206,281</b>	<b>104,845,570</b>
Orleans Capital	45,378,751	17,017	-	-	-17,017	-	420,573	704,814	1,125,388	46,504,138
Pimco Diversified Income Fund	44,195,347	-	-	-	-	-	776,017	1,306,783	2,082,800	46,278,146
<b>Total Other Fixed Income</b>	<b>13,305,633</b>	<b>-1,241,021</b>	<b>-</b>	<b>-</b>	<b>580</b>	<b>-</b>	<b>1,029,778</b>	<b>-1,031,685</b>	<b>-1,906</b>	<b>12,063,285</b>
Capital Point Partners (Princeton Capital)	4,117,144	-859,390	-	-	-	-	859,390	-859,390	-	3,257,754
LBC Credit Partners III	1,706,607	-119,765	-	-	580	-	49,855	-106,118	-56,264	1,531,158
LBC Credit Partners IV	4,323,593	-130,436	-	-	-	-	74,251	28,246	102,497	4,295,655
Providence Debt Fund III	3,158,288	-131,430	-	-	-	-	46,283	-94,423	-48,140	2,978,718

## Financial Reconciliation

## Total Fund

1 Quarter Ending December 31, 2022

	Market Value 10/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2022
<b>Total Real Estate &amp; Timber</b>	<b>148,251,612</b>	<b>8,907,610</b>	-	-	<b>-45,162</b>	<b>-1,255</b>	<b>1,320,375</b>	<b>-7,840,276</b>	<b>-6,519,901</b>	<b>150,592,903</b>
<b>Total Real Estate</b>	<b>145,503,908</b>	<b>9,267,294</b>	-	-	<b>-44,876</b>	<b>-1,255</b>	<b>1,320,375</b>	<b>-7,793,392</b>	<b>-6,473,017</b>	<b>148,252,053</b>
<b>Rockspring Capital Land Funds (I - VI)</b>	<b>1,435,908</b>	<b>-1,249,696</b>	-	-	-	-	-	<b>-186,212</b>	<b>-186,212</b>	-
Rockspring Capital Land Fund II	824,595	-718,906	-	-	-	-	-	-105,689	-105,689	-
Rockspring Capital Land Fund III	611,313	-530,790	-	-	-	-	-	-80,523	-80,523	-
Edison Investments	2,294,809	-8,537	-	-	-	-	8,537	10,183	18,720	2,304,992
India Property Fund	178,913	-	-	-	-	-	-	-5,701	-5,701	173,212
Gainesville Property	1,644,315	1,255	-	-	-	-1,255	-	-	-	1,644,315
Morgan Stanley	85,773,719	-	-	-	-	-	847,952	-4,014,354	-3,166,402	82,607,316
AEW Partners Fund VIII	4,537,601	-841,193	-	-	-	-	-	28,909	28,909	3,725,317
GreenOak US III	10,160,283	-	-	-	-	-	-	-141,151	-141,151	10,019,132
Brookfield Premier Real Estate Partners	30,204,866	-	-	-	-	-	310,469	-2,330,261	-2,019,792	28,185,074
Artemis Real Estate IV	25,398	557,192	-	-	-	-	3,775	-187,131	-183,356	399,234
Stockbridge Smart Markets	9,248,096	10,808,273	-	-	-44,876	-	149,642	-967,674	-818,031	19,193,461
<b>Total Timber Funds</b>	<b>2,747,704</b>	<b>-359,684</b>	-	-	<b>-286</b>	-	-	<b>-46,884</b>	<b>-46,884</b>	<b>2,340,850</b>
Capitol Timberland Investments	1,244,881	-299,684	-	-	-286	-	-	76,986	76,986	1,021,897
Domain Environmental Investments II	1,502,823	-60,000	-	-	-	-	-	-123,870	-123,870	1,318,953

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



## Financial Reconciliation

## Total Fund

1 Quarter Ending December 31, 2022

	Market Value 10/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2022
<b>Total Multi Asset Funds</b>	<b>50,531,234</b>	-	-	-	-	-	<b>832,368</b>	<b>1,877,775</b>	<b>2,710,143</b>	<b>53,241,377</b>
BlackRock Multi Asset Fund	50,531,234	-	-	-	-	-	832,368	1,877,775	2,710,143	53,241,377
<b>Cash Account</b>	<b>17,863,183</b>	<b>-6,862,469</b>	<b>18,099,199</b>	<b>-22,183,162</b>	-	<b>-40,891</b>	<b>75,666</b>	<b>-11,226</b>	<b>64,441</b>	<b>6,940,300</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.



## Financial Reconciliation Year to Date

	Market Value 01/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2022
<b>Total Retirement System</b>	<b>1,079,736,817</b>	<b>-</b>	<b>67,216,412</b>	<b>-88,118,805</b>	<b>-2,039,123</b>	<b>-202,565</b>	<b>18,833,477</b>	<b>-141,491,535</b>	<b>-122,658,058</b>	<b>933,934,678</b>
<b>Total Equity</b>	<b>719,550,764</b>	<b>6,127,741</b>	<b>-</b>	<b>-</b>	<b>-1,892,243</b>	<b>-</b>	<b>4,977,104</b>	<b>-112,150,213</b>	<b>-107,173,108</b>	<b>616,613,154</b>
<b>Total Domestic Equity</b>	<b>500,819,086</b>	<b>-11,530,251</b>	<b>-</b>	<b>-</b>	<b>-1,238,513</b>	<b>-</b>	<b>2,848,326</b>	<b>-93,233,808</b>	<b>-90,385,482</b>	<b>397,664,840</b>
NT Collective Russell 3000 Index	293,239,825	-12,729,037	-	-	-39,727	-	-	-56,542,018	-56,542,018	223,929,044
Baird Mid Cap Growth	73,001,233	405,291	-	-	-405,291	-	316,236	-20,021,212	-19,704,975	53,296,257
Nuance Mid Cap Value	66,439,229	355,428	-	-	-355,428	-	1,538,757	-3,983,855	-2,445,097	63,994,131
Kennedy Small Cap Value	68,138,799	438,067	-	-	-438,067	-	993,332	-12,686,724	-11,693,392	56,445,407
<b>Total International Equity</b>	<b>155,796,142</b>	<b>-961,478</b>	<b>-</b>	<b>-</b>	<b>-155,467</b>	<b>-</b>	<b>1,747,535</b>	<b>-35,821,120</b>	<b>-34,073,586</b>	<b>120,605,613</b>
Driehaus International Small Cap Growth	26,312,000	-1,116,944	-	-	-	-	1,116,944	-7,517,714	-6,400,770	18,794,285
Thompson Siegel & Walmsley	56,167,444	-	-	-	-	-	-	-7,801,120	-7,801,120	48,366,324
WCM Focused Intl Growth LP	49,673,250	-	-	-	-	-	-	-14,222,036	-14,222,036	35,451,214
Wellington Emerging Markets Fund	23,643,448	155,467	-	-	-155,467	-	630,590	-6,280,250	-5,649,659	17,993,789
<b>Total Other Equity</b>	<b>62,935,535</b>	<b>18,619,470</b>	<b>-</b>	<b>-</b>	<b>-498,263</b>	<b>-</b>	<b>381,244</b>	<b>16,904,716</b>	<b>17,285,960</b>	<b>98,342,702</b>
Huff Energy Fund	6,749,813	-	-	-	-	-	-	12,646,387	12,646,387	19,396,200
Sail Venture Fund I	1	-	-	-	-	-	-	-	-	1
Sail Venture Fund II	1	-	-	-	-	-	-	-	-	1
Sail Pre-Exit Acceleration Fund	1	-	-	-	-	-	-	-	-	1
Excelsior Investors, Ltd.	192,563	-124,563	-	-	-	-	-	54,366	54,366	122,366
Franklin Park Private Equity	55,993,156	18,744,033	-	-	-498,263	-	381,244	4,203,963	4,585,207	78,824,133
<b>Total Fixed Income</b>	<b>122,271,847</b>	<b>-3,743,042</b>	<b>-</b>	<b>-</b>	<b>-68,659</b>	<b>-</b>	<b>5,471,507</b>	<b>-19,086,082</b>	<b>-13,614,575</b>	<b>104,845,570</b>
Orleans Capital	53,328,462	73,684	-	-	-73,684	-	1,617,970	-8,442,294	-6,824,323	46,504,138
Pimco Diversified Income Fund	53,696,036	-	-	-	-	-	2,268,290	-9,686,180	-7,417,890	46,278,146
<b>Total Other Fixed Income</b>	<b>15,247,349</b>	<b>-3,816,726</b>	<b>-</b>	<b>-</b>	<b>5,024</b>	<b>-</b>	<b>1,585,248</b>	<b>-957,609</b>	<b>627,638</b>	<b>12,063,285</b>
Capital Point Partners (Princeton Capital)	3,269,282	-859,390	-	-	-	-	859,390	-11,528	847,862	3,257,754
LBC Credit Partners III	2,427,674	-577,113	-	-	5,024	-	235,979	-560,406	-324,426	1,531,158
LBC Credit Partners IV	5,977,334	-1,847,409	-	-	-	-	306,112	-140,382	165,730	4,295,655
Providence Debt Fund III	3,573,059	-532,814	-	-	-	-	183,766	-245,293	-61,527	2,978,718

## Financial Reconciliation

## Total Fund

Year To Date Ending December 31, 2022

	Market Value 01/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2022
<b>Total Real Estate &amp; Timber</b>	<b>130,796,803</b>	<b>11,795,546</b>	-	-1,264	-78,221	-37,206	4,768,573	3,348,673	8,117,246	150,592,903
<b>Total Real Estate</b>	<b>125,398,749</b>	<b>15,793,479</b>	-	-1,264	-66,519	-37,206	4,768,573	2,396,242	7,164,815	148,252,053
Edison Investments	2,265,439	-31,302	-	-	-	-	31,302	39,553	70,855	2,304,992
India Property Fund	219,287	-	-	-	-	-	-	-46,075	-46,075	173,212
Gainesville Property	1,644,315	13,744	-	-1,264	-	-12,480	-	-	-	1,644,315
Morgan Stanley	77,832,113	-	-	-	-	-	3,282,641	1,492,563	4,775,203	82,607,316
AEW Partners Fund VIII	6,067,306	-3,252,246	-	-	-	-	-	910,257	910,257	3,725,317
GreenOak US III	10,105,027	-	-	-	-	-	-	-85,895	-85,895	10,019,132
Brookfield Premier Real Estate Partners	25,496,230	-	-	-	-	-	1,237,534	1,451,310	2,688,844	28,185,074
Artemis Real Estate IV	-	607,316	-	-	-	-24,726	3,775	-187,131	-183,356	399,234
Stockbridge Smart Markets	-	20,000,000	-	-	-66,519	-	213,322	-953,341	-740,020	19,193,461
<b>Total Timber Funds</b>	<b>5,398,054</b>	<b>-3,997,933</b>	-	-	-11,702	-	-	952,431	952,431	2,340,850
Capitol Timberland Investments	3,555,618	-3,637,933	-	-	-11,702	-	-	1,115,914	1,115,914	1,021,897
Domain Environmental Investments II	1,842,436	-360,000	-	-	-	-	-	-163,483	-163,483	1,318,953

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





# Financial Reconciliation

## Total Fund

Year To Date Ending December 31, 2022

	Market Value 01/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Return On Investment	Market Value 12/31/2022
<b>Total Multi Asset Funds</b>	<b>83,396,375</b>	<b>-20,000,000</b>	-	-	-	-	<b>3,437,689</b>	<b>-13,592,687</b>	<b>-10,154,998</b>	<b>53,241,377</b>
BlackRock Multi Asset Fund	83,396,375	-20,000,000	-	-	-	-	3,437,689	-13,592,687	-10,154,998	53,241,377
<b>Cash Account</b>	<b>22,019,654</b>	<b>5,819,755</b>	<b>67,216,412</b>	<b>-88,117,541</b>	-	<b>-165,359</b>	<b>178,604</b>	<b>-11,226</b>	<b>167,379</b>	<b>6,940,300</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	
Total Retirement System (Net)	4.91	-11.54	-11.54	5.14	5.69	6.83	6.27	7.86	10/01/1992	
Total Retirement System (Gross)	4.95 (70)	-11.36 (29)	-11.36 (29)	5.37 (21)	5.93 (27)	7.08 (48)	6.55 (74)	8.16 (18)	10/01/1992	
Total Fund Policy	5.67	-11.77	-11.77	5.28	6.25	7.82	8.23	7.97		
Variance	-0.72	0.41	0.41	0.09	-0.32	-0.74	-1.68	0.19		
All Public Plans-Total Fund Median	5.64	-12.90	-12.90	4.07	5.22	7.00	7.22	7.69		
Total Equity	7.80	-15.13	-15.13	6.02	6.89	9.12	9.34	8.63	01/01/1994	
Total Equity Policy	9.45	-17.82	-17.82	5.79	7.20	9.55	10.07	8.31		
Variance	-1.65	2.69	2.69	0.23	-0.31	-0.43	-0.73	0.32		
Domestic Equity	7.51 (60)	-18.31 (58)	-18.31 (58)	6.60 (54)	8.08 (47)	10.44 (48)	N/A	9.87 (67)	05/01/2013	
Russell 3000 Index	7.18	-19.21	-19.21	7.07	8.79	11.04	12.13	11.17		
Variance	0.33	0.90	0.90	-0.47	-0.71	-0.60	N/A	-1.30		
IM U.S. Equity (SA+CF+MF) Median	8.63	-16.41	-16.41	6.86	7.88	10.35	11.45	10.71		
NT Collective Russell 3000 Index	7.20 (73)	-19.15 (76)	-19.15 (76)	7.08 (73)	8.80 (49)	11.05 (51)	N/A	9.99 (52)	01/01/2014	
Russell 3000 Index	7.18	-19.21	-19.21	7.07	8.79	11.04	12.13	9.98		
Variance	0.02	0.06	0.06	0.01	0.01	0.01	N/A	0.01		
IM U.S. All Cap Core Equity (SA+CF) Median	8.78	-17.15	-17.15	7.67	8.69	11.06	12.17	10.01		
Baird Mid Cap Growth	3.80 (80)	-27.51 (50)	-27.51 (50)	6.06 (32)	9.85 (28)	11.48 (32)	N/A	9.19 (65)	07/01/2014	
Russell Midcap Growth Index	6.90	-26.72	-26.72	3.85	7.64	9.95	11.41	8.73		
Variance	-3.10	-0.79	-0.79	2.21	2.21	1.53	N/A	0.46		
IM U.S. Mid Cap Growth Equity (SA+CF) Median	6.16	-27.56	-27.56	5.01	8.93	10.79	11.94	9.64		
Nuance Mid Cap Value	12.44 (37)	-3.68 (17)	-3.68 (17)	4.39 (89)	N/A	N/A	N/A	8.14 (64)	04/01/2019	
Russell Midcap Value Index	10.45	-12.03	-12.03	5.82	5.72	8.73	10.11	7.61		
Variance	1.99	8.35	8.35	-1.43	N/A	N/A	N/A	0.53		
IM U.S. Mid Cap Value Equity (SA+CF) Median	12.07	-8.49	-8.49	7.47	6.86	9.89	11.04	9.35		
Kennedy Small Cap Value	7.43 (93)	-17.75 (91)	-17.75 (91)	6.24 (67)	3.80 (92)	N/A	N/A	8.72 (88)	03/01/2016	
Russell 2000 Value Index	8.42	-14.48	-14.48	4.70	4.13	8.23	8.48	9.43		
Variance	-0.99	-3.27	-3.27	1.54	-0.33	N/A	N/A	-0.71		
IM U.S. Small Cap Value Equity (SA+CF) Median	11.03	-10.86	-10.86	7.56	5.74	9.59	10.44	10.62		

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 December 31, 2022

	Performance (%)									
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date	
International Equity	14.88 (50)	-21.97 (70)	-21.97 (70)	-0.58 (71)	-0.11 (76)	3.54 (91)	N/A	4.00 (76)	05/01/2013	
MSCI AC World ex USA	14.37	-15.57	-15.57	0.53	1.36	5.30	4.28	3.69		
Variance	0.51	-6.40	-6.40	-1.11	-1.47	-1.76	N/A	0.31		
IM International Equity (SA+CF+MF) Median	14.80	-17.78	-17.78	1.00	1.60	5.46	5.24	4.96		
Driehaus International Small Cap Growth	16.38 (25)	-24.34 (45)	-24.34 (45)	3.37 (7)	3.68 (5)	6.81 (10)	8.24 (6)	8.83 (7)	09/01/2012	
MSCI AC World ex USA Small Growth	11.78	-25.85	-25.85	0.93	1.03	5.03	5.62	6.24		
Variance	4.60	1.51	1.51	2.44	2.65	1.78	2.62	2.59		
IM International SMID Cap Growth Equity (MF) Median	14.83	-25.69	-25.69	-0.46	0.14	4.35	5.14	5.79		
Thompson Siegel & Walmsley	17.90 (16)	-13.89 (32)	-13.89 (32)	1.48 (52)	1.26 (74)	3.96 (83)	N/A	3.15 (84)	10/01/2014	
MSCI EAFE (Net) Index	17.34	-14.45	-14.45	0.87	1.54	4.53	4.67	3.27		
Variance	0.56	0.56	0.56	0.61	-0.28	-0.57	N/A	-0.12		
IM International Large Cap Core Equity (SA+CF) Median	15.56	-15.91	-15.91	1.56	2.20	5.24	5.59	4.10		
WCM Focused Intl Growth LP	12.47 (83)	-28.63 (88)	-28.63 (88)	N/A	N/A	N/A	N/A	-5.63 (59)	12/01/2020	
MSCI AC World ex USA Growth (Net)	12.89	-23.05	-23.05	-0.40	1.49	5.17	4.68	-7.44		
Variance	-0.42	-5.58	-5.58	N/A	N/A	N/A	N/A	1.81		
IM International Large Cap Growth Equity (MF) Median	14.64	-20.24	-20.24	0.92	2.00	4.86	4.81	-4.19		
Wellington Emerging Markets Fund	10.37 (55)	-24.51 (76)	-24.51 (76)	N/A	N/A	N/A	N/A	-3.52 (92)	02/01/2020	
MSCI Emerging Markets (Net) Index	9.70	-20.09	-20.09	-2.69	-1.40	5.17	1.44	-1.17		
Variance	0.67	-4.42	-4.42	N/A	N/A	N/A	N/A	-2.35		
IM Emerging Markets Equity (SA+CF) Median	10.59	-19.77	-19.77	-1.00	-0.11	5.87	2.82	0.49		
Total Other Equity	0.72	26.45	26.45	10.74	11.72	N/A	N/A	6.19	01/01/2017	
Huff Energy Fund										
Excelsior Investors, Ltd.										
Franklin Park Private Equity										
Sail Venture Fund I										
Sail Venture Fund II										
Sail Pre-Exit Acceleration Fund										

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 December 31, 2022

	Performance (%)								Inception Date
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	
<b>Total Fixed Income</b>	<b>3.10</b>	<b>-11.28</b>	<b>-11.28</b>	<b>-2.07</b>	<b>-0.44</b>	<b>0.70</b>	<b>0.21</b>	<b>5.66</b>	<b>12/01/1993</b>
Total Fixed Income Policy	3.76	-14.66	-14.66	-3.27	-0.60	0.74	0.48	4.12	
Variance	-0.66	3.38	3.38	1.20	0.16	-0.04	-0.27	1.54	
Orleans Capital	2.44 (5)	-12.93 (48)	-12.93 (48)	-2.72 (88)	0.05 (88)	1.11 (77)	N/A	1.49 (84)	01/01/2014
Blmbg. U.S. Aggregate Index	1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	1.40	
Variance	0.57	0.08	0.08	-0.01	0.03	0.22	N/A	0.09	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.80	-12.95	-12.95	-2.20	0.44	1.36	1.48	1.84	
Pimco Diversified Income Fund	4.71 (34)	-13.81 (50)	-13.81 (50)	N/A	N/A	N/A	N/A	-2.99 (25)	07/01/2020
Blmbg. Global Credit (Hedged)	3.31	-13.75	-13.75	-2.61	0.53	2.23	2.26	-3.99	
Variance	1.40	-0.06	-0.06	N/A	N/A	N/A	N/A	1.00	
IM Global Fixed Income (MF) Median	3.81	-14.66	-14.66	-3.68	-0.90	0.72	0.01	-4.84	
<b>Total Other Fixed Income</b>	<b>-0.01</b>	<b>4.87</b>	<b>4.87</b>	<b>5.92</b>	<b>4.52</b>	<b>N/A</b>	<b>N/A</b>	<b>3.67</b>	<b>01/01/2017</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 December 31, 2022

	Performance (%)								
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Alternative Investments									
Multi Asset Funds	5.36	-11.47	-11.47	0.38	2.18	1.72	1.57	4.65	12/01/2008
HFRI Fund of Funds Composite Index	1.72	-5.31	-5.31	3.69	3.01	3.31	3.50	3.48	
Variance	3.64	-6.16	-6.16	-3.31	-0.83	-1.59	-1.93	1.17	
BlackRock Multi Asset Fund	5.36	-11.47	-11.47	0.36	N/A	N/A	N/A	1.88	02/01/2018
BlackRock Multi Hybrid	5.87	-15.33	-15.33	1.47	3.41	N/A	N/A	3.04	
Variance	-0.51	3.86	3.86	-1.11	N/A	N/A	N/A	-1.16	
Other Assets									
Cash Account	0.68	1.38	1.38	0.61	1.13	0.95	0.68	4.12	06/01/1988
Cash Account PE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	03/01/2014
Retiree Death Benefit Account	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12/01/2004
Other Alternative Assets									
Total Real Estate	-4.21	6.27	6.27	9.55	7.89	6.12	8.73	4.96	08/01/2005
NCREIF Property Index	-3.50	5.52	5.52	8.06	7.46	7.46	8.82	8.04	
Variance	-0.71	0.75	0.75	1.49	0.43	-1.34	-0.09	-3.08	
Morgan Stanley	-3.69	6.14	6.14	9.30	8.40	8.56	N/A	8.56	01/01/2016
NCREIF Fund Index-ODCE (EW)	-5.08	7.56	7.56	9.72	8.31	8.12	9.46	8.12	
Variance	1.39	-1.42	-1.42	-0.42	0.09	0.44	N/A	0.44	
Brookfield Premier Real Estate Partners	-6.69	10.55	10.55	11.79	N/A	N/A	N/A	11.58	11/01/2019
NCREIF Fund Index-ODCE (EW)	-5.08	7.56	7.56	9.72	8.31	8.12	9.46	9.63	
Variance	-1.61	2.99	2.99	2.07	N/A	N/A	N/A	1.95	
Stockbridge Smart Markets	-4.30	N/A	N/A	N/A	N/A	N/A	N/A	-3.72	08/01/2022
NCREIF Fund Index-ODCE (EW)	-5.08	7.56	7.56	9.72	8.31	8.12	9.46	-4.35	
Variance	0.78	N/A	N/A	N/A	N/A	N/A	N/A	0.63	
Total Timber Funds	-1.98	21.88	21.88	9.77	5.54	2.28	2.40	2.85	08/01/2005
NCREIF Timberland Index	4.89	12.90	12.90	7.51	5.37	4.72	5.80	6.61	
Variance	-6.87	8.98	8.98	2.26	0.17	-2.44	-3.40	-3.76	

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 Fiscal Year Returns

	Performance (%)								
	YTD	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Retirement System (Net)</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>5.61</b>
<b>Total Retirement System (Gross)</b>	<b>-11.36 (29)</b>	<b>17.86 (11)</b>	<b>11.99 (59)</b>	<b>21.23 (13)</b>	<b>-5.95 (89)</b>	<b>12.17 (92)</b>	<b>7.87 (47)</b>	<b>-0.83 (70)</b>	<b>5.94 (61)</b>
Total Fund Policy	-11.77	16.63	13.40	19.81	-3.12	15.79	8.04	2.43	8.08
Variance	0.41	1.23	-1.41	1.42	-2.83	-3.62	-0.17	-3.26	-2.14
All Public Plans-Total Fund Median	-12.90	14.01	12.54	18.57	-4.02	15.17	7.72	-0.10	6.37
<b>Total Equity</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>	<b>5.30</b>
Total Equity Policy	-17.82	22.48	17.62	29.04	-7.34	22.07	9.61	-0.51	6.91
Variance	2.69	-1.42	-1.65	0.84	-2.49	-3.58	1.80	-2.36	-1.61
<b>Domestic Equity</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>	<b>8.03 (64)</b>
Russell 3000 Index	-19.21	25.66	20.89	31.02	-5.24	21.13	12.74	0.48	12.56
Variance	0.90	-1.17	-1.78	0.13	-1.94	-3.74	3.02	-3.57	-4.53
IM U.S. Equity (SA+CF+MF) Median	-16.41	25.61	15.39	28.77	-6.57	19.22	12.51	-0.59	10.14
NT Collective Russell 3000 Index	-19.15 (76)	25.68 (58)	20.83 (41)	31.02 (36)	-5.23 (54)	21.15 (48)	12.79 (38)	0.49 (47)	12.55 (48)
Russell 3000 Index	-19.21	25.66	20.89	31.02	-5.24	21.13	12.74	0.48	12.56
Variance	0.06	0.02	-0.06	0.00	0.01	0.02	0.05	0.01	-0.01
IM U.S. All Cap Core Equity (SA+CF) Median	-17.15	26.28	18.60	29.00	-5.10	20.92	10.86	0.37	12.26
Baird Mid Cap Growth	-27.51 (50)	21.76 (9)	35.15 (58)	36.27 (51)	-1.60 (33)	26.98 (37)	5.35 (50)	-3.03 (82)	N/A
Russell Midcap Growth Index	-26.72	12.73	35.59	35.47	-4.75	25.27	7.33	-0.20	11.90
Variance	-0.79	9.03	-0.44	0.80	3.15	1.71	-1.98	-2.83	N/A
IM U.S. Mid Cap Growth Equity (SA+CF) Median	-27.56	13.70	38.57	36.32	-4.26	25.98	5.29	1.22	8.69
Nuance Mid Cap Value	-3.68 (17)	12.23 (100)	5.24 (45)	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Value Index	-12.03	28.34	4.96	27.06	-12.29	13.34	20.00	-4.78	14.75
Variance	8.35	-16.11	0.28	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Mid Cap Value Equity (SA+CF) Median	-8.49	29.45	4.63	29.05	-13.44	15.65	19.53	-3.02	11.86
Kennedy Small Cap Value	-17.75 (91)	38.92 (15)	4.93 (51)	25.37 (47)	-19.83 (94)	12.51 (42)	N/A	N/A	N/A
Russell 2000 Value Index	-14.48	28.27	4.63	22.39	-12.86	7.84	31.74	-7.47	4.22
Variance	-3.27	10.65	0.30	2.98	-6.97	4.67	N/A	N/A	N/A
IM U.S. Small Cap Value Equity (SA+CF) Median	-10.86	30.09	5.16	25.07	-14.11	11.58	27.34	-4.30	5.71

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 December 31, 2022

	Performance (%)									
	YTD	2021	2020	2019	2018	2017	2016	2015	2014	
International Equity	-21.97 (70)	11.90 (38)	12.54 (55)	20.92 (69)	-16.28 (64)	27.37 (65)	0.67 (70)	-2.40 (60)	-0.27 (26)	
MSCI AC World ex USA	-15.57	8.29	11.13	22.13	-13.78	27.77	5.01	-5.25	-3.44	
Variance	-6.40	3.61	1.41	-1.21	-2.50	-0.40	-4.34	2.85	3.17	
IM International Equity (SA+CF+MF) Median	-17.78	10.15	14.29	23.42	-14.92	29.73	2.84	-0.60	-3.32	
Driehaus International Small Cap Growth	-24.34 (45)	12.49 (49)	29.79 (17)	30.57 (11)	-16.92 (32)	41.19 (6)	-6.24 (89)	12.59 (11)	-4.32 (39)	
MSCI AC World ex USA Small Growth	-25.85	11.83	23.99	24.96	-18.07	33.99	-0.04	6.74	-3.35	
Variance	1.51	0.66	5.80	5.61	1.15	7.20	-6.20	5.85	-0.97	
IM International SMID Cap Growth Equity (MF) Median	-25.69	12.40	14.79	24.29	-19.24	34.22	-0.76	6.36	-5.14	
Thompson Siegel & Walmsley	-13.89 (32)	13.82 (29)	6.62 (79)	21.18 (70)	-15.93 (74)	22.70 (93)	0.47 (64)	1.38 (39)	N/A	
MSCI EAFE (Net) Index	-14.45	11.26	7.82	22.01	-13.79	25.03	1.00	-0.81	-4.90	
Variance	0.56	2.56	-1.20	-0.83	-2.14	-2.33	-0.53	2.19	N/A	
IM International Large Cap Core Equity (SA+CF) Median	-15.91	11.97	11.78	23.61	-14.32	27.84	1.56	0.61	-3.66	
WCM Focused Intl Growth LP	-28.63 (88)	17.64 (3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
MSCI AC World ex USA Growth (Net)	-23.05	5.09	22.20	27.34	-14.43	32.01	0.12	-1.25	-2.65	
Variance	-5.58	12.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
IM International Large Cap Growth Equity (MF) Median	-20.24	8.88	20.00	27.50	-14.67	28.61	-1.94	0.25	-4.47	
Wellington Emerging Markets Fund	-24.51 (76)	-2.23 (63)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
MSCI Emerging Markets (Net) Index	-20.09	-2.54	18.31	18.42	-14.57	37.28	11.19	-14.92	-2.19	
Variance	-4.42	0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
IM Emerging Markets Equity (SA+CF) Median	-19.77	0.78	18.75	20.62	-15.24	36.84	9.71	-12.21	0.04	
Total Other Equity	26.45	13.85	-5.66	65.17	-22.42	-17.60	N/A	N/A	N/A	
Huff Energy Fund										
Excelsior Investors, Ltd.										
Franklin Park Private Equity										
Sail Venture Fund I										
Sail Venture Fund II										
Sail Pre-Exit Acceleration Fund										

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 December 31, 2022

	Performance (%)								
	YTD	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Fixed Income</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>	<b>1.69</b>
Total Fixed Income Policy	-14.66	-2.05	8.28	7.93	-0.66	5.60	2.77	-1.37	3.20
Variance	3.38	3.74	-4.18	-3.85	0.72	-2.74	1.59	0.40	-1.51
Orleans Capital	-12.93 (48)	-1.34 (57)	7.16 (93)	8.80 (69)	0.07 (47)	3.87 (59)	3.79 (29)	0.57 (73)	5.08 (94)
Blmbg. U.S. Aggregate Index	-13.01	-1.55	7.51	8.72	0.01	3.54	2.65	0.55	5.97
Variance	0.08	0.21	-0.35	0.08	0.06	0.33	1.14	0.02	-0.89
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-12.95	-1.23	8.51	9.19	0.06	4.01	3.09	0.82	6.14
Pimco Diversified Income Fund	-13.81 (50)	0.26 (5)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Global Credit (Hedged)	-13.75	-0.41	7.53	12.08	-0.81	5.89	7.33	-0.20	6.64
Variance	-0.06	0.67	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM Global Fixed Income (MF) Median	-14.66	-2.73	8.15	8.08	-1.78	6.82	2.92	-3.83	1.90
<b>Total Other Fixed Income</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>	<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 December 31, 2022

	Performance (%)								
	YTD	2021	2020	2019	2018	2017	2016	2015	2014
<b>Alternative Investments</b>									
<b>Multi Asset Funds</b>	<b>-11.47</b>	<b>7.17</b>	<b>6.62</b>	<b>13.23</b>	<b>-2.74</b>	<b>0.81</b>	<b>0.37</b>	<b>-1.70</b>	<b>-6.00</b>
HFRI Fund of Funds Composite Index	-5.31	6.17	10.88	8.39	-4.02	7.77	0.51	-0.27	3.37
Variance	-6.16	1.00	-4.26	4.84	1.28	-6.96	-0.14	-1.43	-9.37
BlackRock Multi Asset Fund	-11.47	7.17	6.55	14.21	N/A	N/A	N/A	N/A	N/A
BlackRock Multi Hybrid	-15.33	9.69	12.49	18.11	-4.19	N/A	N/A	N/A	N/A
Variance	3.86	-2.52	-5.94	-3.90	N/A	N/A	N/A	N/A	N/A
<b>Other Assets</b>									
Cash Account	1.38	0.01	0.43	2.11	1.72	0.76	0.27	0.01	0.06
Cash Account PE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Retiree Death Benefit Account	N/A	0.01	0.45	2.12	1.72	0.77	0.27	0.02	0.01
<b>Other Alternative Assets</b>									
Total Real Estate	6.27	24.27	-0.45	5.75	5.14	2.90	0.76	5.40	31.16
NCREIF Property Index	5.52	17.70	1.60	6.42	6.72	6.96	7.97	13.33	11.82
Variance	0.75	6.57	-2.05	-0.67	-1.58	-4.06	-7.21	-7.93	19.34
Morgan Stanley	6.14	21.48	1.26	6.16	7.96	8.74	9.20	N/A	N/A
NCREIF Fund Index-ODCE (EW)	7.56	21.88	0.75	5.18	7.30	6.92	8.36	14.18	11.42
Variance	-1.42	-0.40	0.51	0.98	0.66	1.82	0.84	N/A	N/A
Brookfield Premier Real Estate Partners	10.55	25.66	0.57	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Fund Index-ODCE (EW)	7.56	21.88	0.75	5.18	7.30	6.92	8.36	14.18	11.42
Variance	2.99	3.78	-0.18	N/A	N/A	N/A	N/A	N/A	N/A
Stockbridge Smart Markets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Fund Index-ODCE (EW)	7.56	21.88	0.75	5.18	7.30	6.92	8.36	14.18	11.42
Variance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Timber Funds	21.88	6.99	1.43	-1.12	0.13	-3.94	-6.92	1.93	10.81
NCREIF Timberland Index	12.90	9.17	0.81	1.30	3.21	3.63	2.59	4.97	10.48
Variance	8.98	-2.18	0.62	-2.42	-3.08	-7.57	-9.51	-3.04	0.33

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 December 31, 2022

Comparative Performance - IRR									
	Market Value (\$)	MTH	QTR	YTD	1 YR	3 YR	5 YR	Inception IRR	Inception Date
<b>Total Real Estate Investments</b>	<b>148,252,053</b>	<b>-4.21</b>	<b>-4.21</b>	<b>5.42</b>	<b>5.42</b>	<b>9.11</b>	<b>7.85</b>	<b>7.14</b>	<b>07/31/2005</b>
Edison Investments	2,304,992	0.82	0.82	3.15	3.15	3.03	9.30	11.94	09/30/1996
India Property Fund	173,212	-3.19	-3.19	-21.01	-21.01	-30.59	-32.25	-8.10	05/24/2007
Gainesville Property	1,644,315	0.00	-0.08	-0.76	-0.76	-0.86	-0.88	-6.39	01/31/2008
Morgan Stanley	82,607,316	-3.69	-3.69	6.14	6.14	9.29	8.47	8.59	12/31/2015
AEW Partners Fund VIII	3,725,317	0.78	0.73	22.29	22.29	25.36	22.50	20.07	06/26/2017
GreenOak US III	10,019,132	-1.39	-1.39	-0.85	-0.85	1.20	N/A	-0.71	06/22/2018
Brookfield Premier Real Estate Partners	28,185,074	-6.69	-6.69	10.55	10.55	11.78	N/A	11.42	10/01/2019
Artemis Real Estate IV	399,234	-40.28	-52.16	N/A	N/A	N/A	N/A	-78.06	06/23/2022
Stockbridge Smart Markets	19,193,461	-4.30	-4.38	N/A	N/A	N/A	N/A	-5.55	07/01/2022
<b>Total Timber Funds</b>	<b>2,340,850</b>	<b>-1.96</b>	<b>-1.93</b>	<b>28.76</b>	<b>28.76</b>	<b>5.80</b>	<b>1.95</b>	<b>0.18</b>	<b>07/31/2005</b>
Capitol Timberland Investments	1,021,897	8.15	7.97	63.08	63.08	11.77	5.06	3.94	09/30/2004
Domain Environmental Investments II	1,318,953	-8.59	-8.39	-10.18	-10.18	-8.55	-7.55	-2.46	04/30/2008
<b>Total Other Equity</b>	<b>98,342,702</b>	<b>0.81</b>	<b>0.73</b>	<b>23.91</b>	<b>23.91</b>	<b>14.05</b>	<b>14.94</b>	<b>34.05</b>	<b>01/01/2017</b>
Huff Energy Fund	19,396,200	0.00	0.00	187.36	187.36	2.20	10.18	5.71	12/31/2006
Franklin Park Private Equity	78,824,133	1.01	0.93	6.42	6.42	20.99	18.79	18.79	01/31/2018
Sail Venture Fund I	1	0.00	0.00	0.00	0.00	0.00	0.00	-62.57	12/31/2008
Sail Venture Fund II	1	0.00	0.00	0.00	0.00	0.00	0.00	-74.06	02/28/2009
Sail Pre-Exit Acceleration Fund	1	0.00	0.00	0.00	0.00	0.00	0.00	-78.97	01/31/2013
<b>Total Other Fixed Income</b>	<b>12,063,285</b>	<b>-0.01</b>	<b>-0.01</b>	<b>4.65</b>	<b>4.65</b>	<b>5.09</b>	<b>3.69</b>	<b>149.57</b>	<b>12/21/2016</b>
Capital Point Partners (Princeton Capital)	3,257,754	0.00	0.00	25.97	25.97	5.78	-0.48	0.48	03/31/2007
LBC Credit Partners III	1,531,158	-3.39	-3.29	-14.76	-14.76	2.70	1.68	7.66	03/07/2014
LBC Credit Partners IV	4,295,655	2.44	2.41	3.43	3.43	6.27	6.78	7.66	09/19/2016
Providence Debt Fund III	2,978,718	-1.57	-1.54	-1.85	-1.85	3.74	3.19	6.33	04/21/2014



**Summary of Partnerships  
Other Alternative Investments  
As of December 31, 2022**

**Private Equity Summary of Partnership**

Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
<b>Total Real Estate Investments</b>					
Edison Investments	8,146,177	2,304,992	19,973,815	11.9	2.7
India Property Fund	4,354,162	173,212	2,359,366	-8.1	0.6
Gainesville Property	5,493,538	1,644,315	746,061	-6.4	0.4
Morgan Stanley	50,000,000	82,607,316	-	8.6	1.7
AEW Partners Fund VIII	15,381,261	3,725,317	18,323,472	20.1	1.4
GreenOak US III	10,551,648	10,019,132	329,434	-0.7	1.0
Brookfield Premier Real Estate Partners	20,000,000	28,185,074	-	11.4	1.4
Artemis Real Estate IV	637,782	399,234	30,466	-78.1	0.7
Stockbridge Smart Markets	20,000,000	19,193,461	-	-5.6	1.0
<b>Total Timber Investments</b>					
Capitol Timberland Investments	14,563,993	1,021,897	22,016,735	3.9	1.6
Domain Environmental Investments II	7,623,603	1,318,953	5,003,231	-2.5	0.8

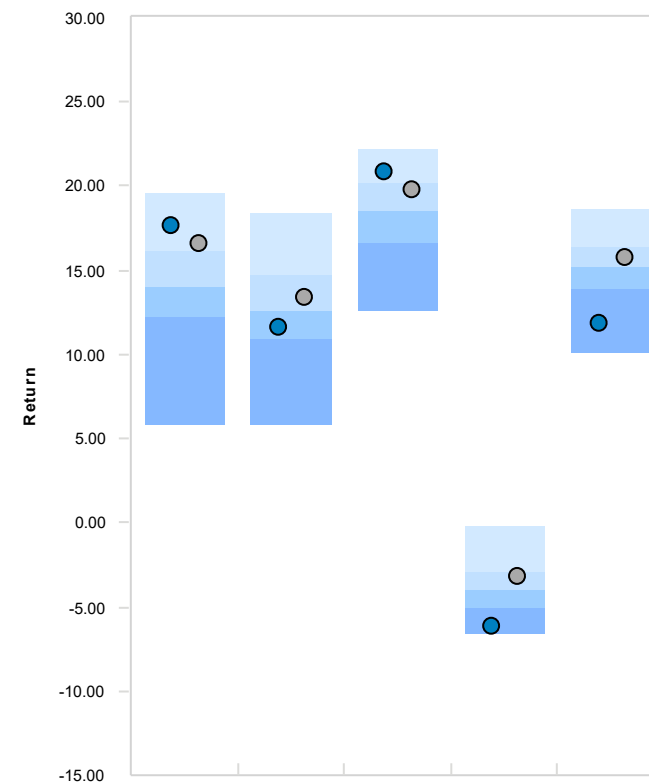
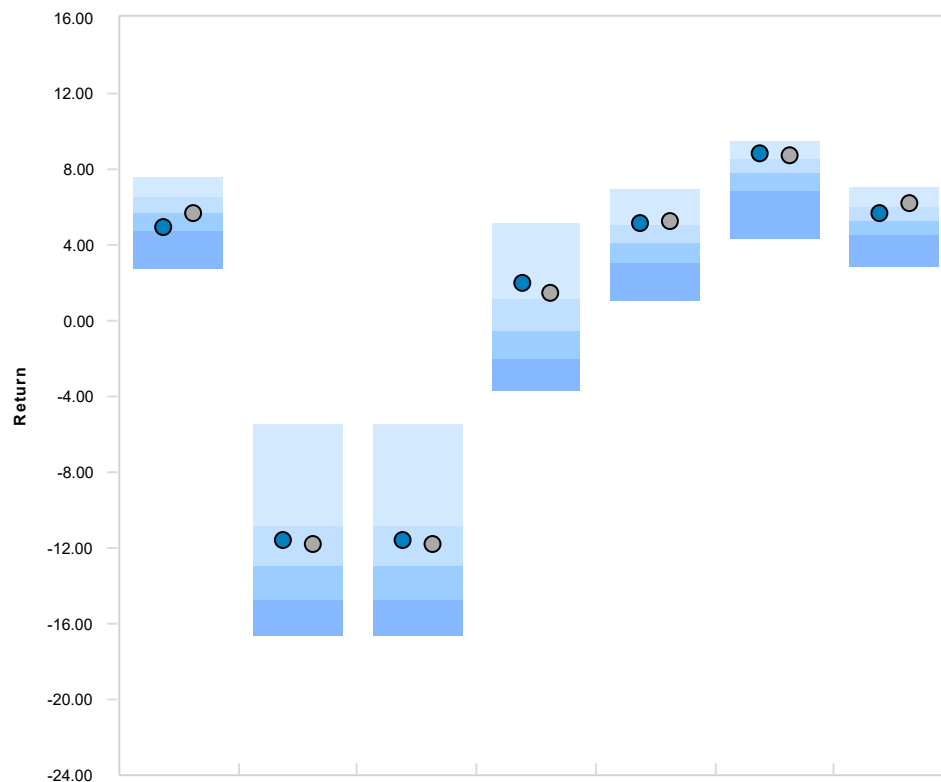


**Summary of Partnerships**  
**Other Alternative Investments**  
As of December 31, 2022

Partnerships	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
<b>Total Other Equity</b>					
Huff Energy Fund	11,095,509	19,396,200	1,786,358	5.7	1.9
Excelsior Investors, Ltd.	1,018,466	122,366	478,641	-8.6	0.6
Franklin Park Private Equity	64,539,199	78,824,133	7,752,443	18.8	1.3
Sail Venture Fund I	5,000,000	1	343,503	-62.6	0.1
Sail Venture Fund II	5,366,749	1	688,247	-74.1	0.1
Sail Pre-Exit Acceleration Fund	4,947,894	1	-	-79.0	0.0
<b>Total Other Fixed Income</b>					
Capital Point Partners (Princeton Capital)	12,058,210	3,257,754	9,145,851	0.5	1.0
LBC Credit Partners III	18,851,406	1,531,158	21,496,258	7.7	1.2
LBC Credit Partners IV	18,000,000	4,295,655	17,427,726	7.7	1.2
Providence Debt Fund III	11,128,113	2,978,718	11,369,208	6.3	1.3



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



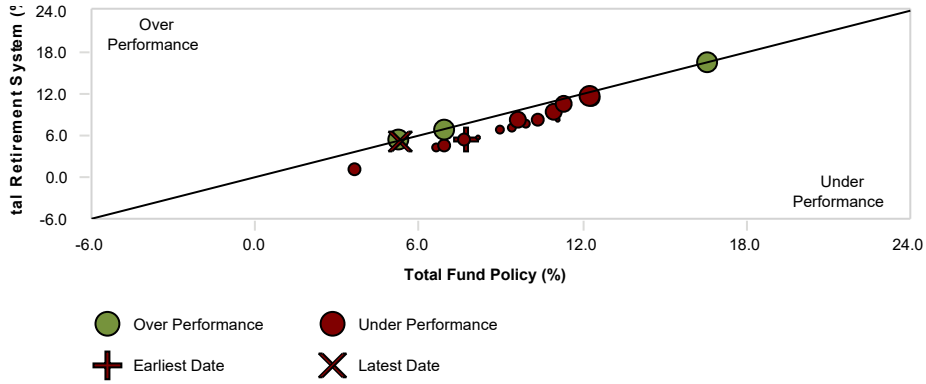
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Retirement System	4.91 (71)	-11.54 (32)	-11.54 (32)	2.03 (19)	5.14 (24)	8.88 (18)	5.69 (35)
● Total Fund Policy	5.67 (49)	-11.77 (36)	-11.77 (36)	1.44 (22)	5.28 (22)	8.74 (20)	6.25 (16)
Median	5.64	-12.90	-12.90	-0.49	4.07	7.79	5.22

	2021	2020	2019	2018	2017
● Total Retirement System	17.68 (13)	11.65 (64)	20.92 (17)	-6.18 (91)	11.89 (92)
● Total Fund Policy	16.63 (22)	13.40 (38)	19.81 (32)	-3.12 (31)	15.79 (38)
Median	14.01	12.54	18.57	-4.02	15.17

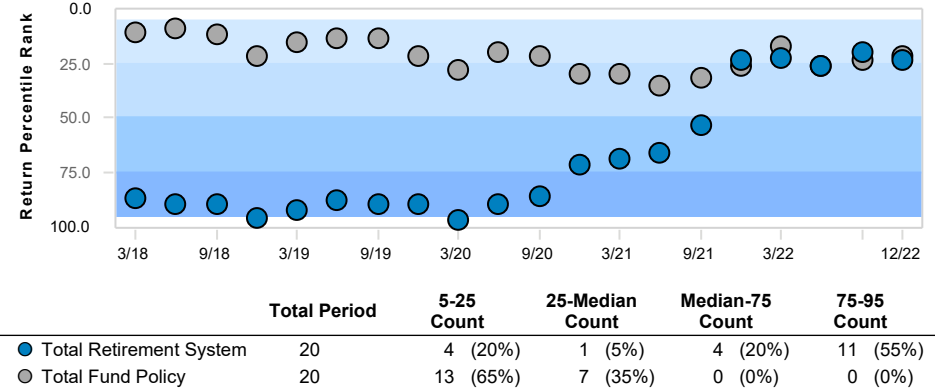
Comparative Performance

	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Total Retirement System	-3.49 (18)	-9.89 (51)	-3.04 (22)	5.88 (7)	0.97 (19)	6.05 (21)
Total Fund Policy	-3.69 (24)	-10.63 (69)	-3.01 (22)	5.54 (13)	0.92 (20)	5.78 (31)
All Public Plans-Total Fund Median	-4.31	-9.88	-4.27	4.35	0.04	5.44

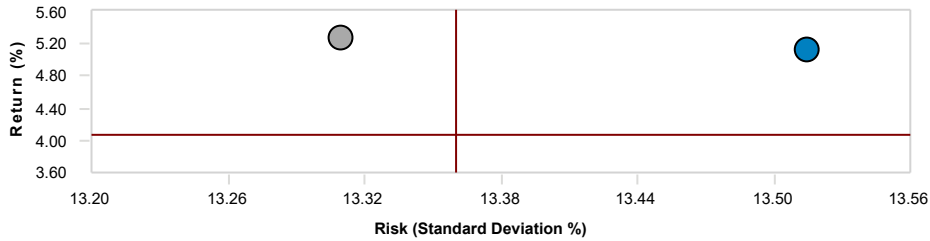
### 3 Yr Rolling Under/Over Performance - 5 Years



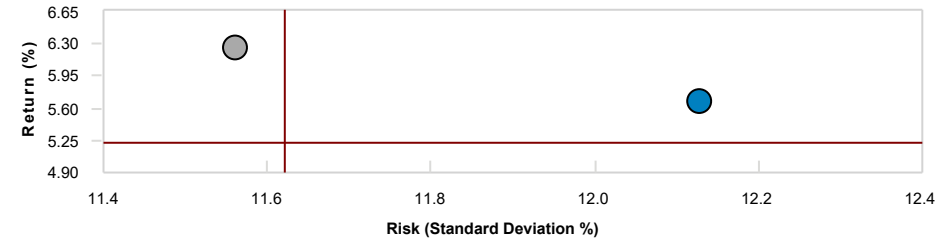
### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



### Peer Group Scattergram - 5 Years



### Historical Statistics - 3 Years

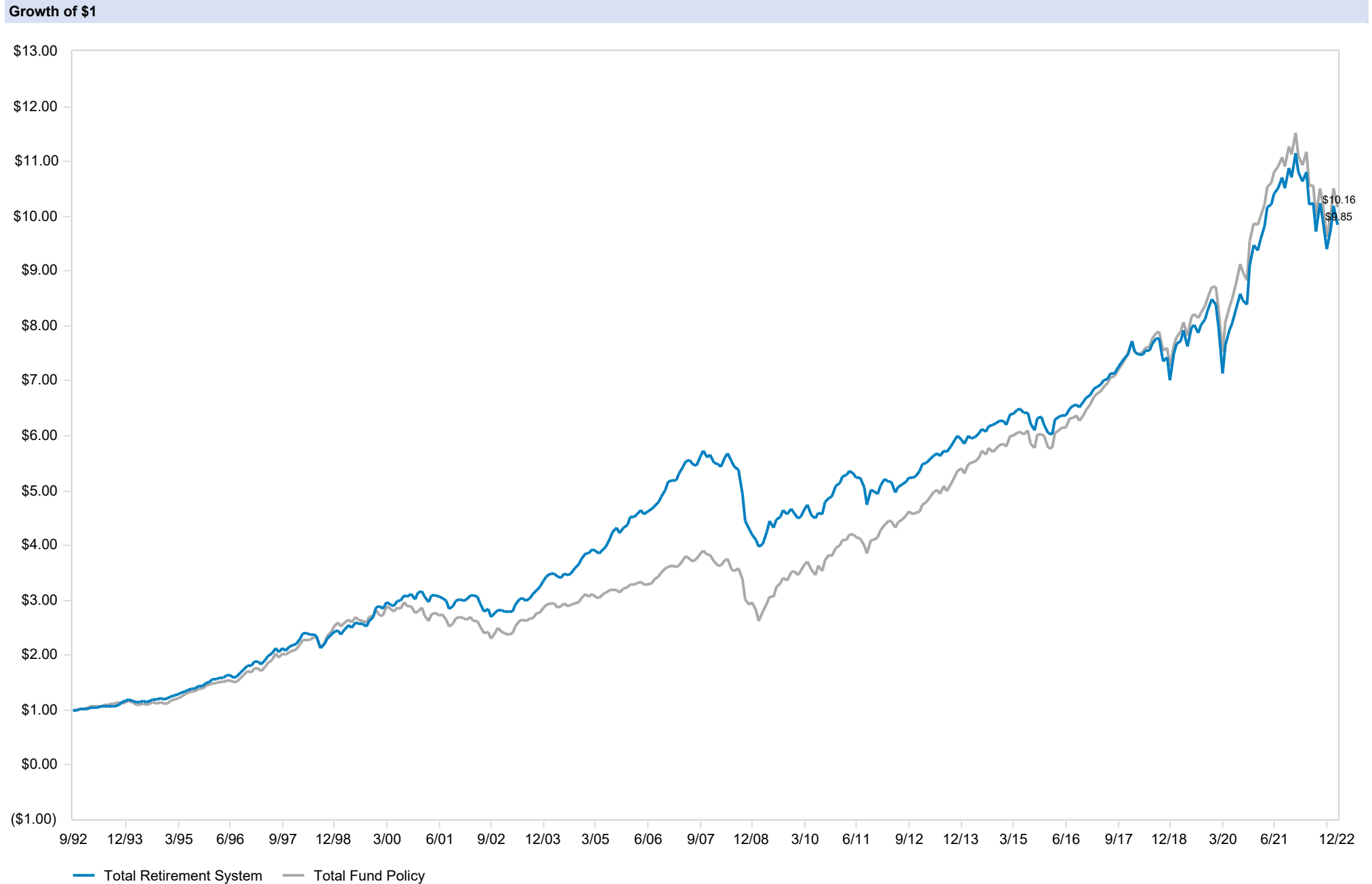
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	1.57	100.94	101.93	-0.15	-0.07	0.38	1.01	9.30
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.40	1.00	9.10

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Retirement System	1.73	101.73	106.25	-0.73	-0.27	0.41	1.04	8.28
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.47	1.00	7.84



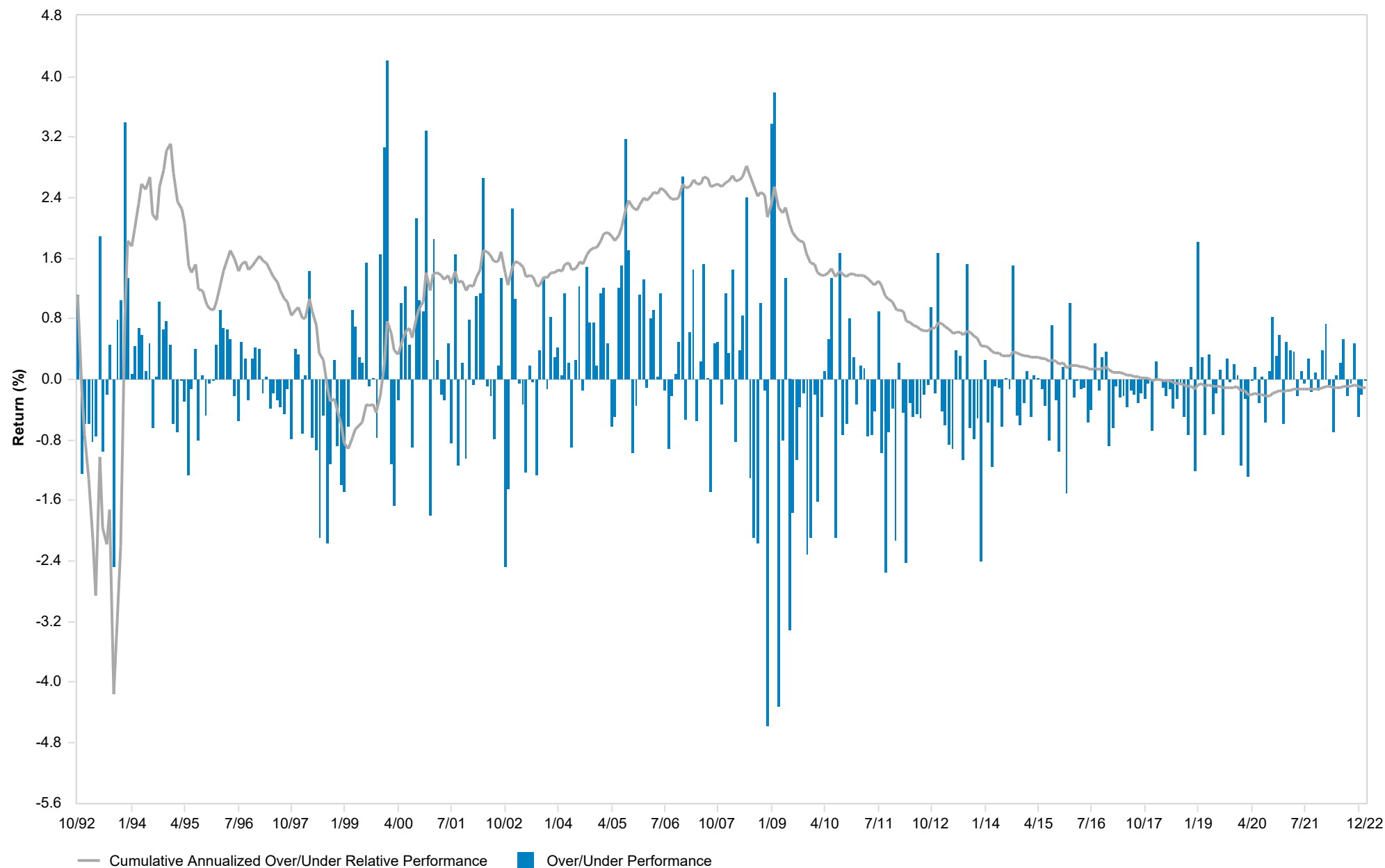




Calculation based on monthly periodicity.



## Relative Performance



Calculation based on monthly periodicity.



<b>Total Fund Compliance:</b>			
	Yes	No	N/A
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>			
	Yes	No	N/A
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>			
	Yes	No	N/A
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	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 12/31/2022

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	12/31/2022	Monthly	Custodian
Baird Mid Cap Growth	12/31/2022	Monthly	Custodian
Nuance Mid Cap Value	12/31/2022	Monthly	Custodian
Kennedy Small Cap Value	12/31/2022	Monthly	Custodian
<b>Total International Equity</b>			
Thompson Siegel & Walmsley	12/31/2022	Monthly	Custodian
Driehaus International Small Cap Growth	12/31/2022	Monthly	Custodian
WCM Focused Intl	12/31/2022	Monthly	Custodian
Wellington Emerging Markets	12/31/2022	Monthly	Custodian
<b>Total Other Equity</b>			
Huff Energy Fund	12/31/2021	Quarterly	Manager
Sail Venture Fund I	12/31/2014	Quarterly	Manager
Sail Venture Fund II	12/31/2014	Quarterly	Manager
Sail Pre-Exit Acceleration Fund	12/31/2014	Quarterly	Manager
Excelsior Investors, Ltd.	12/31/2022	Quarterly	Manager
Franklin Park	12/31/2022	Quarterly	Manager
<b>Total Fixed Income</b>			
<b>Total Fixed Income Funds</b>			
Orleans Capital	12/31/2022	Monthly	Custodian

**Austin Police Retirement System**  
**Investment Pricing Summary**  
as of 12/31/2022

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
PIMCO Diversified	12/31/2022	Monthly	Custodian
<b>Total Other Fixed Income Funds</b>			
Capital Point Partners	9/30/2022	Quarterly	Manager
LBC Credit Partners III	12/31/2022	Quarterly	Manager
LBC Credit Partners IV	12/31/2022	Quarterly	Manager
Providence Debt Fund III	12/31/2022	Quarterly	Manager
<b>Total Alternatives</b>			
<b>Total Real Estate (Composite)(6091100)</b>			
Edison Investments	12/31/2022	Quarterly	Manager
India Property Fund	12/31/2022	Quarterly	Manager
Gainesville Property	12/31/2017	Quarterly	Manager
Morgan Stanley	12/31/2022	Quarterly	Manager
AEW Parters VIII	12/31/2022	Quarterly	Manager
GreenOak US III	12/31/2022	Quarterly	Manager
Brookfield	12/31/2022	Quarterly	Manager
Artemis IV	12/31/2022	Quarterly	Manager
Stockbridge	12/31/2022	Quarterly	Manager
<b>Total Timber Funds</b>			
Capitol Timberland Investments	12/31/2022	Quarterly	Manager
Domain Environmental	12/31/2022	Quarterly	Manager
<b>Total Multi Asset Funds</b>			
BlackRock Multi Asset	12/31/2022	Monthly	Manager

**Austin Police Retirement System**  
**Investment Pricing Summary**  
as of 12/31/2022

Plan	Most Recent Statement Date	Statement Frequency	Statement Source
Cash Account	12/31/2022	Monthly	Custodian
PE Cash Account	12/31/2022	Monthly	Custodian
APRS Building			

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
<b>Total Domestic Equity</b>	<b>0.35</b>	<b>397,664,840</b>	<b>1,407,479</b>	
NT Collective Russell 3000 Index	0.02	223,929,044	44,786	0.02 % of Assets
Baird Mid Cap Growth	0.69	53,296,257	369,778	0.70 % of First \$50 M 0.60 % Thereafter
Nuance Mid Cap Value	0.67	63,994,131	428,462	0.70 % of First \$25 M 0.65 % Thereafter
Kennedy Small Cap Value	1.00	56,445,407	564,454	1.00 % of Assets
<b>Total International Equity</b>	<b>0.82</b>	<b>120,605,613</b>	<b>983,719</b>	
Thompson Siegel & Walmsley	0.65	48,366,324	314,381	0.65 % of Assets
Driehaus International Small Cap Growth	1.24	18,794,285	233,049	1.24 % of Assets
WCM Focused Intl Growth LP	0.85	35,451,214	301,335	0.85 % of Assets
Wellington Emerging Markets Fund	0.75	17,993,789	134,953	0.75 % of Assets
<b>Total Other Equity</b>	<b>0.36</b>	<b>98,342,702</b>	<b>357,060</b>	
Huff Energy Fund	0.77	19,396,200	150,000	
Sail Venture Fund I	0.00	1	-	
Sail Venture Fund II	0.00	1	-	
Sail Pre-Exit Acceleration Fund	0.00	1	-	
Excelsior Investors, Ltd.	8.17	122,366	10,000	
*Franklin Park Private Equity	0.25	78,824,133	197,060	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>0.55</b>	<b>104,845,570</b>	<b>573,218</b>	
Orleans Capital	0.15	46,504,138	69,756	0.15 % of Assets
Pimco Diversified Income Fund	0.75	46,278,146	347,086	0.75 % of Assets
<b>Total Other Fixed Income</b>	<b>1.30</b>	<b>12,063,285</b>	<b>156,375</b>	
Capital Point Partners (Princeton Capital)	1.65	3,257,754	53,753	
LBC Credit Partners III	1.25	1,531,158	19,139	
LBC Credit Partners IV	1.25	4,295,655	53,696	
Providence Debt Fund III	1.00	2,978,718	29,787	



	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
<b>Total Real Estate</b>	<b>0.94</b>	<b>148,252,053</b>	<b>1,389,027</b>	
Edison Investments	1.00	2,304,992	23,050	1.00 % of Assets
India Property Fund	2.00	173,212	3,464	2.00 % of Assets
Gainesville Property	0.00	1,644,315	-	0.00 % of Assets
Morgan Stanley	0.90	82,607,316	743,466	0.90 % of Assets
AEW Partners Fund VIII	1.25	3,725,317	46,566	1.25 % of Assets
GreenOak US III	1.50	10,019,132	150,287	1.50 % of Assets
Brookfield Premier Real Estate Partners	1.00	28,185,074	281,851	1.00 % of Assets
Artemis Real Estate IV	1.50	399,234	5,989	1.50 % of Assets
Stockbridge Smart Markets	0.70	19,193,461	134,354	0.70 % of Assets
<b>Total Timber Funds</b>	<b>1.14</b>	<b>2,340,850</b>	<b>26,706</b>	
Capitol Timberland Investments	1.00	1,021,897	10,219	1.00 % of Assets
Domain Environmental Investments II	1.25	1,318,953	16,487	1.25 % of Assets
<b>Total Multi Asset Funds</b>	<b>0.57</b>	<b>53,241,377</b>	<b>303,476</b>	
BlackRock Multi Asset Fund	0.57	53,241,377	303,476	0.57 % of Assets
Cash Account	0.00	6,940,300	-	0.00 % of Assets
APRS Building	0.00	1,701,375	-	0.00 % of Assets
<b>Total Retirement System</b>	<b>0.54</b>	<b>933,934,678</b>	<b>5,040,685</b>	

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

Total Equity Policy		Total Private Equity Policy		Wellington Energy Hybrid	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
<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		

Total Hedge Fund Policy	
Allocation Mandate	Weight (%)
<b>Jan-1990</b>	
HFRI Fund of Funds Composite Index	100.00

Total Fixed Income Policy	
Allocation Mandate	Weight (%)
<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

Total Timber Policy	
Allocation Mandate	Weight (%)
<b>Apr-1987</b>	
NCREIF Timberland Index	100.00

Total Real Estate Policy	
Allocation Mandate	Weight (%)
<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.

<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.

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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