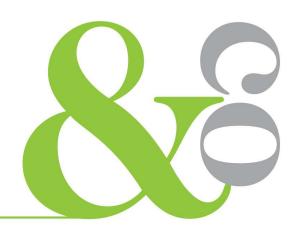
Investment Performance Review Period Ending December 31, 2022

# City of Key West General Employees' Pension Fund



On behalf of everyone at AndCo, we want to <u>Thank You</u> 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®



# **Organizational Chart**

**Jason Purdy** 

Jon Breth, CFP®

Steve Gordon

CIPM®, CAIA®

**Trov Brown, CFA®** 

Tyler Grumbles, CFA®,



# **PARTNERSHIP**

Mike Welker, CFA® **Brian Green** 

Brooke Wilson, CIPM® Kerry Richardville, CFA® Bryan Bakardjiev, CFA® Kim Spurlin, CPA

**Dan Johnson** Dan Osika, CFA®

Evan Scussel, CFA®. **CAIA®** 

Jacob Peacock, CPFA

# **LEADERSHIP & MANAGEMENT**

Mike Welker, CFA® CEO

**Bharat Kumta** 

**Bryan Bakardjiev, CFA®** 

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 Consultina

**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

Director

**Molly Halcom** Solutions & Growth

**Philip Schmitt** Research Director

Rachel Brignoni, MHR People & Culture Director

# INVESTMENT POLICY COMMITTEE

Bryan Bakardjiev, CFA Mike Welker. CFA®

**Sara Searle** Trov 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 Thinnes, 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 Delanev** 

**Donnell Lehrer, CPFA** 

**Edward Cha** 

**Grace Niebrzydowski** 

**James Culpepper James Reno** 

**Jeff Pruniski** 

Joe Carter, CPFA

I.T. & OPERATIONS

**Geoffrey Granger** 

Julio Garcia Rengifo

Kim Hummel

**Rotchild Dorson** Yoon Lee-Choi

# **OPERATIONS**

**FINANCE** 

Kahjeelia Pope **Michelle Boff** 

**Kelly Pearce** 

**Robert Marquetti** 

**Shelley Berthold** 

**HUMAN RESOURCES** 

**Jerry Camel** Kenneth Day

> **COMPLIANCE Allen Caldwell**

Thay Arroyo

**MARKETING** 

**Lauren Kaufmann** 

**SOLUTIONS & GROWTH** 

Dan Osika, CFA® John Rodak, CIPM®

**Paola Gervasi** 

Fixed Income & Capital Markets

Ryan McCuskey

RESEARCH

**Andrew Mulhall** 

**Chester Wyche** 

Fixed Income

**David Julier** 

**Elizabeth Wolfe** 

Joseph Ivaszuk

Public Equity

Private Equity

Private Equity

Hedge Funds

**Philip Schmitt** 

Michael Kosoff

Public Equity & Fixed Income

Real Estate & Real Assets

Real Estate & Real Assets

Private & Public Equity

Operational Due Diligence

Julie Baker, CFA®, CAIA®

Kevin Laake, CFA®, CAIA®

Justin Ellsesser, CFA®, CAIA®

Private & Hedged Equity

Capital Markets & Asset Allocation

Josue Christiansen, CFA®, CIPM®

Evan Scussel, CFA®, CAIA®

Dan Lomelino, CFA®

Ben Baldridge, CFA®, CAIA® Private & Hedged Fixed Income

Real Estate & Real Assets

Xinxin Liu, CFA®, FRM

Private Equity and Private Debt

Zac Chichinski, CFA®, CIPM® Public Equity



ADVANCED 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**

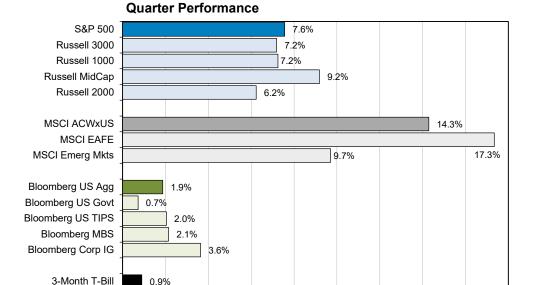
- While inflation declined during the 4th quarter, the Fed continued increasing interest rates with two increases totaling 1.25%. Despite the short-term increases, long-term interest rates remained relatively stable during the period. US interest rates moved slightly higher during the quarter with the 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. Valueoriented 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%.



# 1-Year Performance

4.0%

6.0%

8.0%

10.0%

12.0%

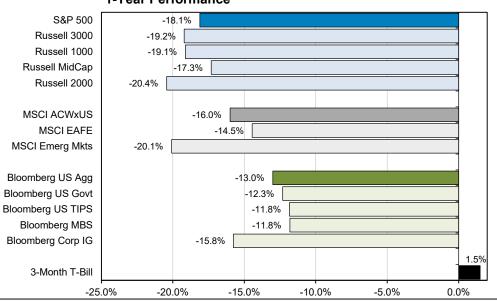
14.0%

16.0%

18.0%

2.0%

0.0%



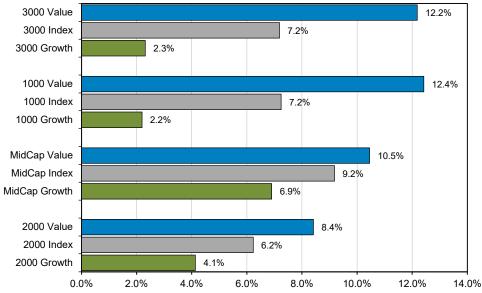
Source: Investment Metrics



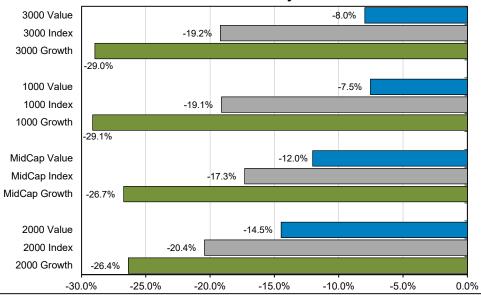
- Despite a pullback in December, equity markets broadly experienced strong absolute returns during the 4th quarter across both the style and market capitalization spectrums. With concerns about the potential for slowing economic conditions, large cap stocks resumed their leadership, followed by mid 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%, respectfully.

- 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%.

# **Quarter Performance - Russell Style Series**



# 1-Year Performance - Russell Style Series

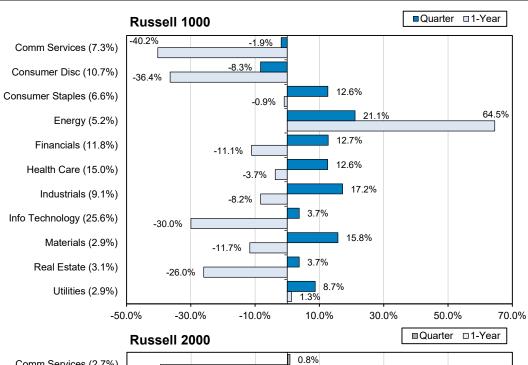


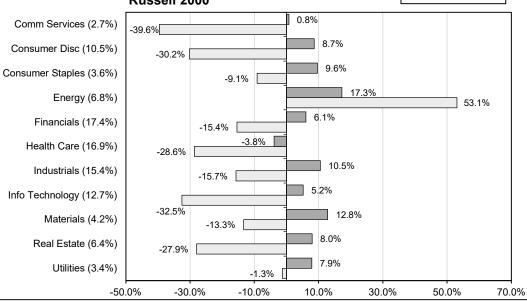
Source: Investment Metrics



- 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



Top 10 Weighted Stocks						
Russell 1000	sell 1000 Weight R		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 Weighted Stocks						
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector		
Halozyme 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		

Тор	10 Performir	ng Stocks (b	y 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

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 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		

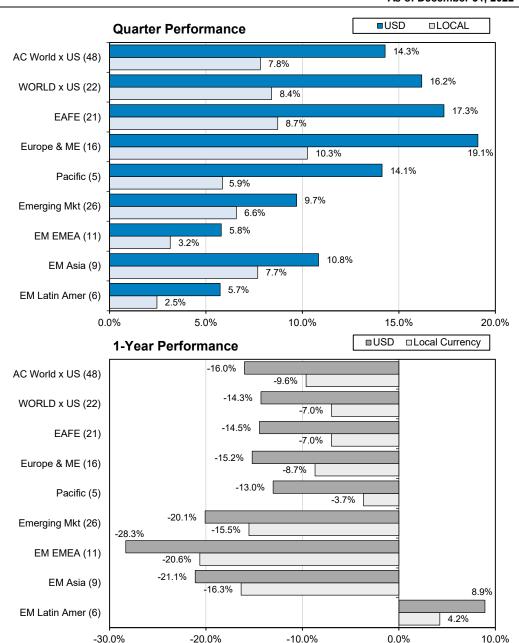
Bottom 10 Performing Stocks (by Quarter)						
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector		
Tricida Inc	0.0%	-98.5%	-98.4%	Health Care		
Relmada Therapeutics Inc	0.0%	-90.6%	-84.5%	Health Care		
Avaya Holdings Corp	0.0%	-87.7%	-99.0%	Information Technology		
Instil Bio Inc	0.0%	-87.0%	-96.3%	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)



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%
Total	100.0%	17.3%	-14.5%

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%
Total	100.0%	14.3%	-16.0%

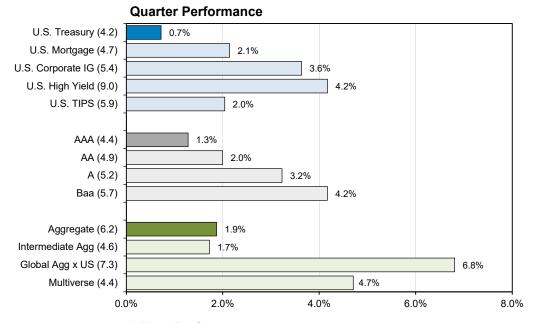
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	8.9%	58.8%	1.8%
Consumer Discretionary	4.9%	46.2%	5.6%
Consumer Staples	22.1%	77.4%	48.9%
Energy	9.9%	92.9%	40.2%
Financials	6.1%	44.6%	24.5%
Health Care	4.1%	53.5%	3.8%
Industrials	6.4%	49.7%	18.8%
Information Technology	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%
Total	100.0%	9.7%	-20.1%

	MSCI-EAFE	MSCI-ACWIxUS	Quarter	1- Year
Country	Weight	Weight	Return	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%
Total EAFE Countries	100.0%	63.9%	17.3%	-14.5%
Canada	1001070	7.7%	7.4%	-12.9%
Total Developed Countries		71.6%	16.2%	-14.3%
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%
Total Emerging Countries		28.4%	9.7%	-20.1%
Total ACWIXUS Countries		100.0%	14.3%	-16.0%

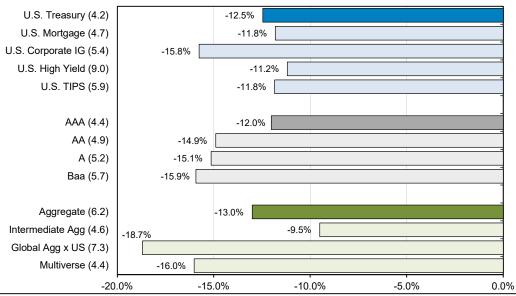
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)



- 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.



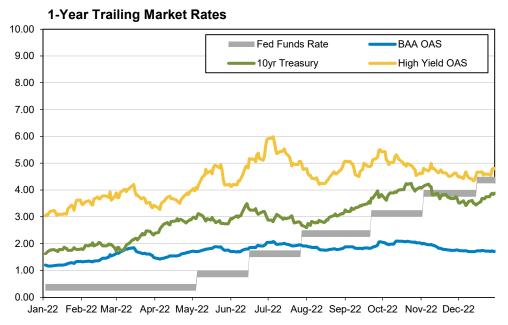
# 1-Year Performance

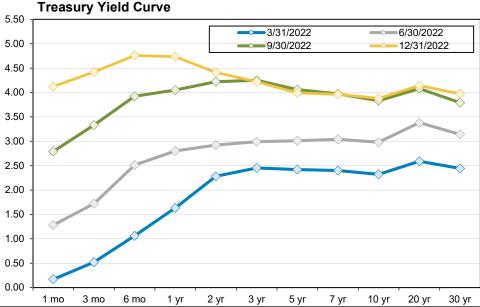


Source: Bloomberg



- 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.



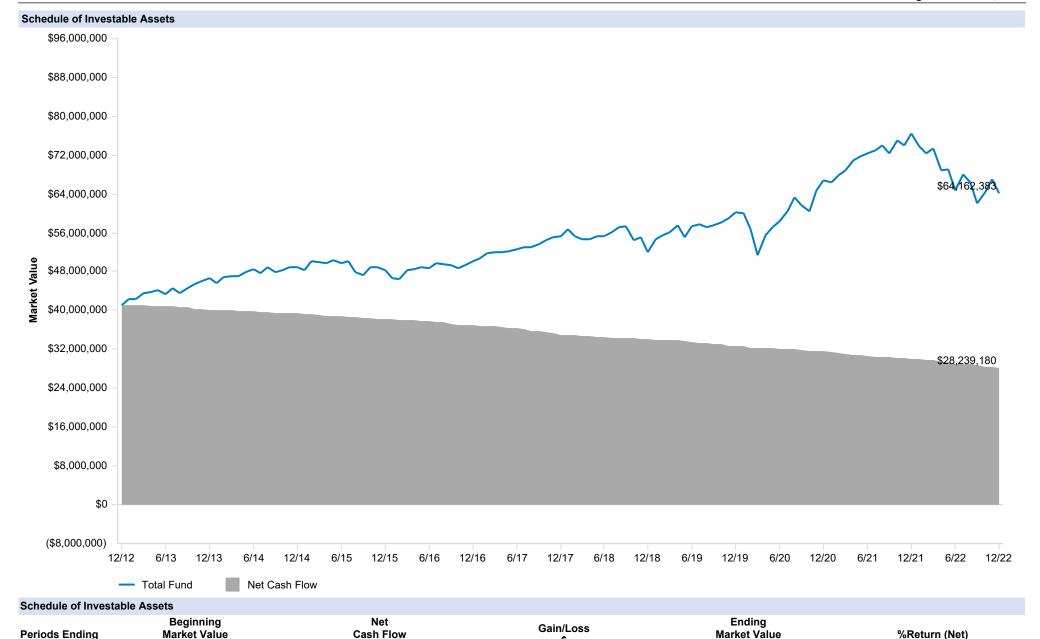


Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)



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\$

35,923,203

64,162,383

\$

-12,918,665

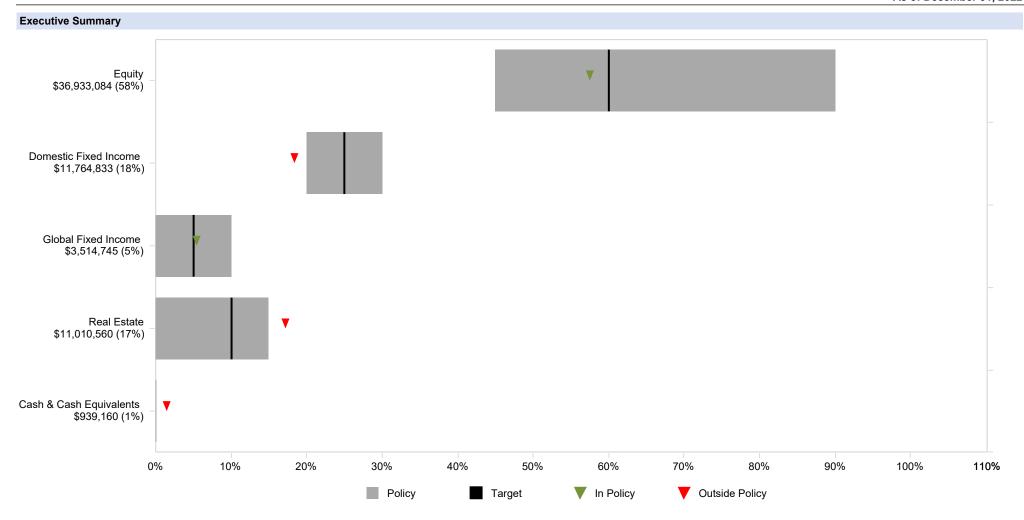


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10 YR

**Periods Ending** 

41,157,845

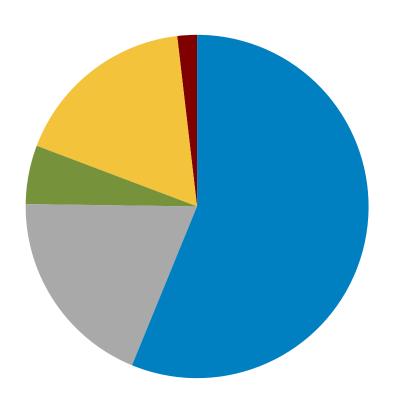


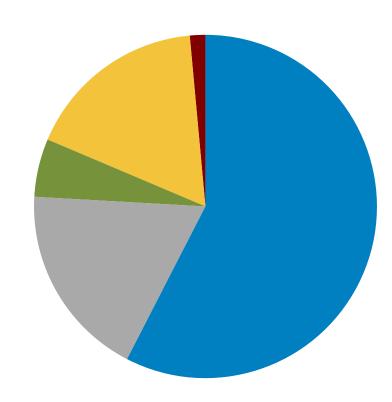
Asset Allocation Compliand	ce							
	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)	Min. Rebal.	Target Rebal.	Max. Rebal.
Equity	36,933,084	57.6	45.0	60.0	90.0	-8,060,012	1,564,345	20,813,060
Domestic Fixed Income	11,764,833	18.3	20.0	25.0	30.0	1,067,644	4,275,763	7,483,882
Global Fixed Income	3,514,745	5.5	0.0	5.0	10.0	-3,514,745	-306,626	2,901,493
Real Estate	11,010,560	17.2	0.0	10.0	15.0	-11,010,560	-4,594,322	-1,386,202
Cash & Cash Equivalents	939,160	1.5	0.0	0.0	0.0	-939,160	-939,160	-939,160
Total Fund	64,162,383	100.0	N/A	100.0	N/A	-	-	-



Asset Allocation By Segment as of September 30, 2022 : \$62,084,504

Asset Allocation By Segment as of December 31, 2022 : \$64,162,383



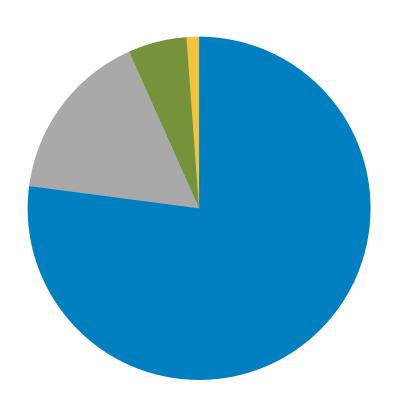


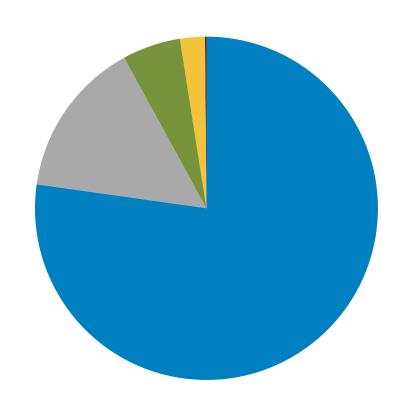
ation Allocation						
Segments	Market Value	Allocation	Segments	Market Value	Allocation	
■ Equity	34,888,443	56.2	Equity	36,933,084	57.6	
■ Domestic Fixed Income	11,813,793	19.0	Domestic Fixed Income	11,764,833	18.3	
■ Global Fixed Income	3,430,982	5.5	Global Fixed Income	3,514,745	5.5	
Real Estate	10,802,360	17.4	Real Estate	11,010,560	17.2	
■ Cash Equivalent	1,148,927	1.9	Cash Equivalent	939,160	1.5	



Asset Allocation By Manager as of Sep-2022 : \$62,084,504

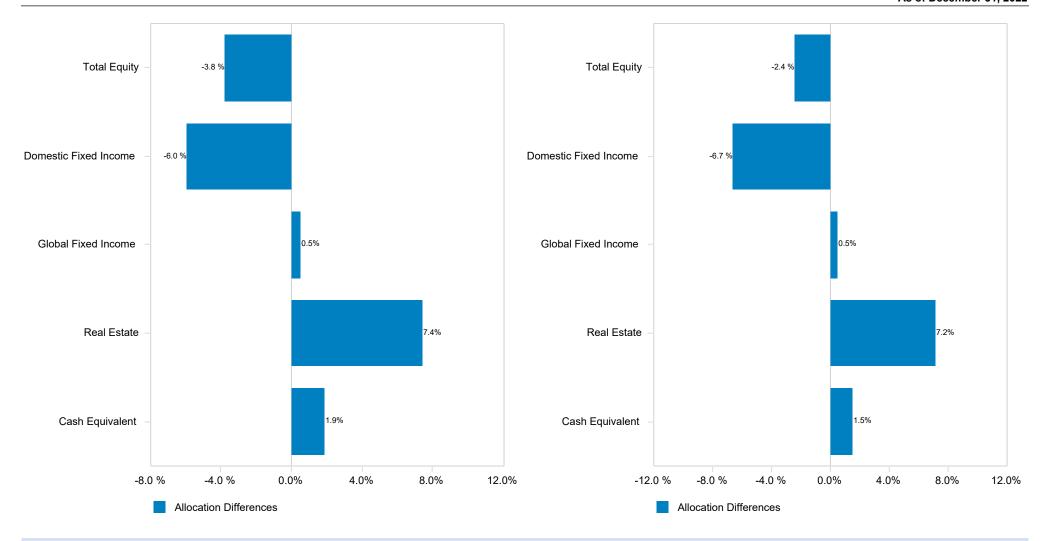
Asset Allocation By Manager as of Dec-2022 : \$64,162,383





cation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Highland Capital	47,851,162	77.1	■ Highland Capital	49,548,266	77.2
ARA Core Property Fund	10,073,505	16.2	ARA Core Property Fund	9,501,254	14.8
■ Pimco Global Bond Opp (Hedged) (PGBIX)	3,430,982	5.5	■ Pimco Global Bond Opp (Hedged) (PGBIX)	3,514,745	5.5
American Strategic Value Fund	728,855	1.2	American Strategic Value Fund	1,509,305	2.4
■ Mutual Fund Cash	1	0.0	■ Mutual Fund Cash	88,812	0.1

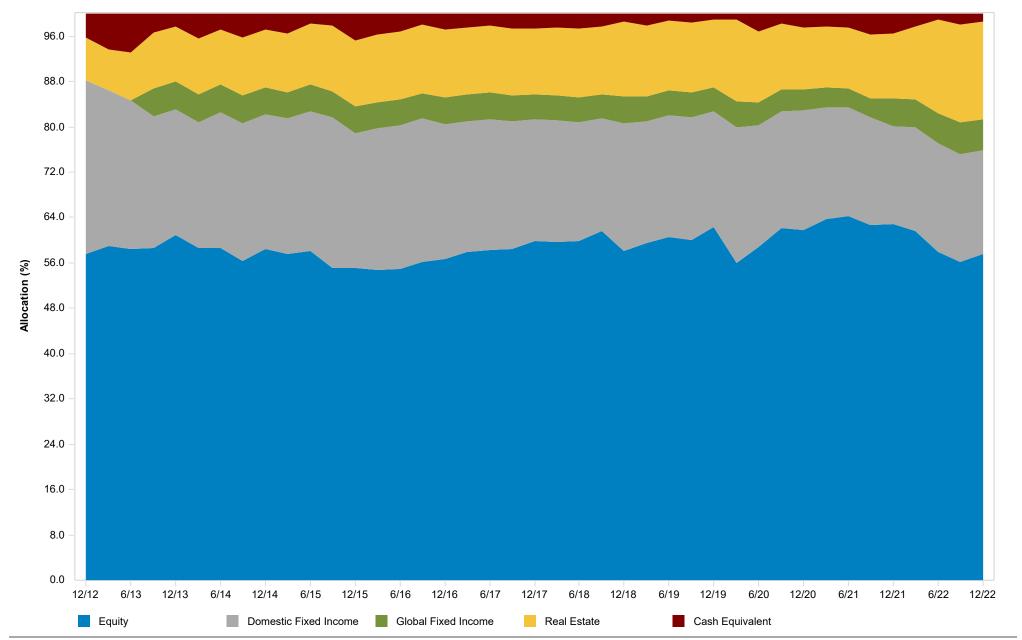




	As of Septe	mber 30, 2022			As of Dece	mber 31, 2022	
	Market Value \$	Allocation (%)	Target (%)		Market Value \$	Allocation (%)	Target (%)
Total Equity	34,888,443	56.2	60.0	Total Equity	36,933,084	57.6	60.0
Domestic Fixed Income	11,813,793	19.0	25.0	Domestic Fixed Income	11,764,833	18.3	25.0
Global Fixed Income	3,430,982	5.5	5.0	Global Fixed Income	3,514,745	5.5	5.0
Real Estate	10,802,360	17.4	10.0	Real Estate	11,010,560	17.2	10.0
Cash Equivalent	1,148,927	1.9	0.0	Cash Equivalent	939,160	1.5	0.0
Total Fund	62,084,504	100.0	100.0	Total Fund	64,162,383	100.0	100.0



# **Historical Asset Allocation by Segment**





Financial Reconciliation Quarter to Date									
	Market Value 10/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 12/31/2022
Highland Capital	47,851,162	-817,700	547,046	-1,181,864	-7,860	-41,225	292,377	2,906,329	49,548,266
Pimco Global Bond Opp (Hedged) (PGBIX)	3,430,982	-	-	-	-	-	223,033	-139,270	3,514,745
ARA Core Property Fund	10,073,505	-	-	-	-26,201	-	74,535	-620,585	9,501,254
American Strategic Value Fund	728,855	817,700	-	-	-3,192	-	-	-34,058	1,509,305
Mutual Fund Cash	1	-	88,660	-	-	-	151	-	88,812
Total Fund	62,084,504	-	635,706	-1,181,864	-37,252	-41,225	590,096	2,112,417	64,162,383

Financial Reconciliation Fiscal Year to Dat	e								
	Market Value 10/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 12/31/2022
Highland Capital	47,851,162	-817,700	547,046	-1,181,864	-7,860	-41,225	292,377	2,906,329	49,548,266
Pimco Global Bond Opp (Hedged) (PGBIX)	3,430,982	-	-	-	-	-	223,033	-139,270	3,514,745
ARA Core Property Fund	10,073,505	-	-	-	-26,201	-	74,535	-620,585	9,501,254
American Strategic Value Fund	728,855	817,700	-	-	-3,192	-	-	-34,058	1,509,305
Mutual Fund Cash	1	-	88,660	-	-	-	151	-	88,812
Total Fund	62,084,504	-	635,706	-1,181,864	-37,252	-41,225	590,096	2,112,417	64,162,383



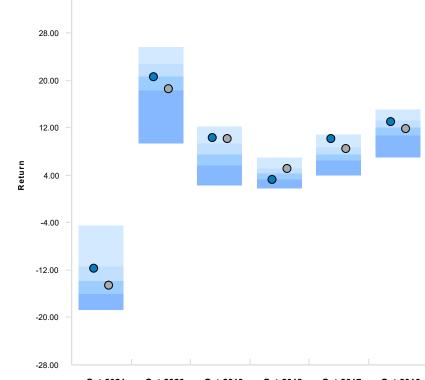
	QT	R	FY	ΓD	1 Y	R	3 Y	'R	5 Y	R	10 \	/R	Incep	tion	Inceptior Date
Total Fund (Net)	4.29		4.29		-13.50		4.59		5.56		7.31		6.66		01/01/1998
Total Fund Policy	5.60		5.60		-14.18		3.78		5.33		7.49		6.41		
Total Fund (Gross)	4.36	(83)	4.36	(83)	-13.08	(54)	5.06	(24)	6.04	(22)	7.80	(23)	7.08	(14)	01/01/1998
Total Fund Policy	5.60	(53)	5.60	(53)	-14.18	(69)	3.78	(56)	5.33	(44)	7.49	(34)	6.41	(59)	
All Public Plans-Total Fund Median	5.65		5.65		-12.79		3.98		5.17		7.19		6.60		
Highland Capital Equity (Gross)	9.11	(45)	9.11	(45)	-18.13	(58)	7.26	(62)	8.12	(69)	10.88	(74)	8.53	(55)	01/01/1998
Total Equity Policy	9.03	(46)	9.03	(46)	-18.20	(59)	5.48	(91)	6.96	(87)	10.36	(85)	6.83	(100)	
IM U.S. All Cap Core Equity (SA+CF) Median	8.73		8.73		-17.31		7.67		8.62		11.97		8.98		
Highland Capital Fixed (Gross)	-0.09	(100)	-0.09	(100)	-13.47	(78)	-2.14	(45)	0.28	(73)	1.27	(76)	3.88	(98)	01/01/1998
Total Fixed Policy	1.87	(42)	1.87	(42)	-13.01	(55)	-2.71	(90)	0.02	(92)	1.02	(98)	4.02	(89)	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.82		1.82		-12.95		-2.20		0.45		1.50		4.39		
Pimco Global Bond Opp (Hedged) (PGBIX) (Net)	2.44	(63)	2.44	(63)	-5.35	(7)	N/A		N/A		N/A		-1.42	(5)	09/01/2020
Bloomberg Global Agg Index (Hedged)	0.99	(89)	0.99	(89)	-11.22	(30)	-2.59	(30)	0.36	(22)	1.70	(10)	-5.04	(31)	
IM Global Fixed Income (MF) Median	3.81		3.81		-14.66		-3.68		-0.90		0.01		-6.13		
ARA Core Realty Fund (Gross)	-5.42	(57)	-5.42	(57)	9.33	(16)	10.59	(37)	9.35	(38)	10.10	(60)	10.13	(55)	07/01/2012
NCREIF Fund Index-Open End Diversified Core (EW)	-4.90	(40)	-4.90	(40)	8.41	(30)	10.64	(37)	9.23	(40)	10.38	(55)	10.39	(51)	
IM U.S. Open End Private Real Estate (SA+CF) Median	-5.18		-5.18		6.78		9.72		9.01		10.56		10.49		
American Strategic Value Fund (Gross)	-3.25	(26)	-3.25	(26)	N/A		N/A		N/A		N/A		-1.46	(19)	07/01/2022
NCREIF Fund Index-Open End Diversified Core (EW)	-4.90	(40)	-4.90	(40)	8.41	(30)	10.64	(37)	9.23	(40)	10.38	(55)	-3.98	(33)	
IM U.S. Open End Private Real Estate (SA+CF) Median	-5.18		-5.18		6.78		9.72		9.01		10.56		-5.19		



	Oct-2 To Sep-2	0	Oct-2 To Sep-2	)														
Total Fund (Net)	-12.11		20.28		9.83		2.83		9.71		12.52		7.49		1.11		10.06	
Total Fund Policy	-14.52		18.68		10.16		5.20		8.58		11.87		11.23		0.03		11.18	
Total Fund (Gross)	-11.63	(29)	20.73	(50)	10.34	(15)	3.31	(76)	10.22	(8)	13.13	(28)	7.99	(89)	1.48	(8)	10.65	(33)
Total Fund Policy	-14.52	(58)	18.68	(74)	10.16	(16)	5.20	(25)	8.58	(29)	11.87	(53)	11.23	(12)	0.03	(28)	11.18	(19)
All Public Plans-Total Fund Median	-13.79		20.73		7.52		4.28		7.52		12.06		9.80		-0.88		9.91	
Highland Capital Equity (Gross)	-18.92	(80)	32.18	(43)	15.40	(41)	0.72	(68)	16.31	(57)	20.57	(26)	9.30	(74)	-0.41	(46)	14.17	(76)
Total Equity Policy	-19.42	(82)	30.03	(56)	12.06	(57)	2.04	(63)	13.62	(69)	19.14	(36)	13.68	(41)	-3.37	(72)	15.61	(65)
IM U.S. All Cap Core Equity (SA+CF) Median	-16.73		31.46		13.77		3.01		16.81		17.86		12.14		-0.61		17.08	
Highland Capital Fixed (Gross)	-12.91	(7)	1.38	(16)	6.56	(87)	9.68	(89)	-1.07	(72)	0.85	(39)	7.00	(9)	2.18	(89)	3.95	(80)
Total Fixed Policy	-14.60	(60)	-0.90	(84)	6.98	(77)	10.30	(69)	-1.22	(88)	0.07	(84)	5.19	(80)	2.94	(62)	3.85	(88)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-14.50		-0.03		7.53		10.42		-0.74		0.63		5.66		3.02		4.44	
Pimco Global Bond Opp (Hedged) (PGBIX) (Net)	-8.12	(6)	2.41	(27)	N/A													
Bloomberg Global Agg Index (Hedged)	-12.05	(20)	-0.56	(80)	4.14	(66)	10.65	(13)	0.83	(11)	-0.17	(72)	6.54	(63)	3.14	(1)	5.50	(25)
IM Global Fixed Income (MF) Median	-17.63		0.89		5.39		7.65		-1.33		1.10		7.40		-3.88		3.35	
ARA Core Realty Fund (Gross)	25.79	(20)	13.51	(74)	1.62	(50)	6.81	(49)	8.50	(63)	7.52	(55)	9.04	(89)	13.98	(60)	12.49	(67)
NCREIF Fund Index-Open End Diversified Core (EW)	22.76	(43)	15.75	(52)	1.74	(44)	6.17	(69)	8.82	(58)	7.81	(51)	10.62	(68)	14.71	(56)	12.39	(69)
IM U.S. Open End Private Real Estate (SA+CF) Median	21.16		15.91		1.62		6.80		8.98		7.83		11.18		15.20		12.90	
American Strategic Value Fund (Gross)	N/A																	
NCREIF Fund Index-Open End Diversified Core (EW)	22.76	(43)	15.75	(52)	1.74	(44)	6.17	(69)	8.82	(58)	7.81	(51)	10.62	(68)	14.71	(56)	12.39	(69)
IM U.S. Open End Private Real Estate (SA+CF) Median	21.16		15.91		1.62		6.80		8.98		7.83		11.18		15.20		12.90	



# Plan Sponsor Peer Group Analysis - All Public Plans-Total Fund 16.00 12.00 8.00 0.00 -8.00 -12.00 -16.00 -



36.00

	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
<ul><li>Total Fund</li></ul>	4.36 (83)	4.36 (83)	-13.08 (54)	1.11 (27)	5.06 (24)	8.61 (22)	6.04 (22)
<ul><li>Fund Policy</li></ul>	5.60 (53)	5.60 (53)	-14.18 (69)	-1.12 (61)	3.78 (56)	7.66 (52)	5.33 (44)
Median	5.65	5.65	-12.79	-0.49	3.98	7.74	5.17

	Oct-2021 To Sep-2022	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017
<ul><li>Total Fund</li></ul>	-11.63 (29)	20.73 (50)	10.34 (15)	3.31 (76)	10.22 (8)	13.13 (28)
Fund Policy	y -14.52 (58)	18.68 (74)	10.16 (16)	5.20 (25)	8.58 (29)	11.87 (53)
Median	-13.79	20.73	7.52	4.28	7.52	12.06

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 Fund	-3.55 (21)	-10.63 (69)	-3.37 (26)	6.10 (5)	0.34 (35)	5.82 (29)
Total Fund Policy	-4.86 (73)	-10.84 (72)	-4.18 (48)	5.18 (20)	0.21 (40)	5.50 (47)
All Public Plans-Total Fund Median	-4.30	-9.88	-4.29	4.34	0.04	5.44



-20.00

-24.00

# 3 Yr Rolling Under/Over Performance - 5 Years 20.0 Over Performance **Lotal Fund** (%) 15.0 10.0 5.0 Under Performance 0.0 5.0 10.0 15.0 20.0 0.0 Total Fund Policy (%) Over Performance Under Performance X Latest Date Earliest Date

#### 3 Yr Rolling Percentile Ranking - 5 Years Return Percentile Rank 25.0 50.0 75.0 100.0 3/18 9/18 3/19 9/19 9/20 3/21 9/21 3/22 12/22 3/20

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul><li>Total Fund</li></ul>	20	10 (50%)	10 (50%)	0 (0%)	0 (0%)	
<ul><li>Fund Policy</li></ul>	20	6 (30%)	12 (60%)	2 (10%)	0 (0%)	



Pee	r Group Scatter	gram - 5 Years			
	6.38				
<u>@</u>	6.09				
<u>و</u> ء	5.80 — 5.51 —				
etni	5.51 —				
œ	5.22				
	4.93				
	11.4	11.6	11.8	12.0	12.2
		Ris	k (Standard Deviation %)		

	Return	Standard Deviation
<ul><li>Total Fund</li></ul>	5.06	13.60
<ul><li>Fund Policy</li></ul>	3.78	13.31
Median	3.98	13.27

	Return	Standard Deviation
<ul><li>Total Fund</li></ul>	6.04	11.99
<ul><li>Fund Policy</li></ul>	5.33	11.57
Median	5.17	11.54

		Up	Down					
	Tracking Error	Market Capture	Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.69	106.70	100.98	1.21	0.75	0.38	1.01	9.33
Fund Policy	0.00	100.00	100.00	0.00	N/A	0.29	1.00	9.20
Historical Statistics	s - 5 Years							
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.58	106.87	104.47	0.56	0.46	0.44	1.03	8.20
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.40	1.00	7.89



**Historical Statistics - 3 Years** 

00

Oct-2016

To

Sep-2017

20.57 (26)

19.14 (36)

00

Oct-2018

To

2.04 (63)

30.03 (56)

12.06 (57)

Oct-2017

To

Sep-2018

16.31 (57)

13.62 (69)

#### Peer Group Analysis - IM U.S. All Cap Core Equity (SA+CF) 28.00 65.00 20.00 50.00 12.00 0 35.00 00 0 0 00 00 4.00 00 20.00 Return Return lacksquare0 -4.00 5.00 -12.00 -10.00 0 0 -20.00 00 -25.00 -28.00 -36.00 -40.00 Oct-2021 Oct-2020 Oct-2019 To Τo To QTR **FYTD** 4 YR 1 YR 2 YR 3 YR 5 YR Sep-2022 Sep-2021 Sep-2020 Sep-2019 9.11 (45) 7.26 (62) 8.12 (69) 32.18 (43) Highland Eq 9.11 (45) -18.13 (58) 0.90 (72) 12.49 (66) ● Highland Eq -18.92 (80) 15.40 (41) 0.72 (68) 9.03 (46) □ Equity Policy -19.42 (82)

10.88 (88)

Median	8.73	8.73	-17.31	2.58	7.67	12.80	8.62		Median	-16.73	31.46	13.77	3.01	16.81	17.86
Comparative Performance															
				1 Qtr Ending Sep-2022		1 Qtr Ending un-2022		1 Qtr Ending ar-2022		1 Qtr Ending Dec-2021		1 Qtr Ending Sep-202		1 Qı Endi Jun-2	ng
Highland Eq			-	5.20 (64)	-16	.65 (79)	-5	04 (51)		8.05 (78)		-0.38 (	69)	7.46	(51)
Total Equity Po	olicy		-	5.80 (82)	-15	.91 (65)	-5	28 (57)		7.41 (85)		-0.79 (	79)	7.61	(49)
IM U.S. All Cap	Core Equity (SA-	+CF) Media	n -	4.52	-15	.00	-5	02		9.37		0.04		7.48	

6.96 (87)



Equity Policy

9.03 (46)

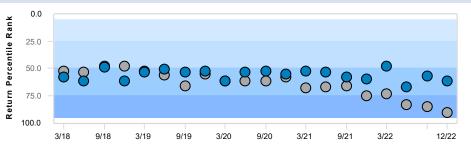
-18.20 (59)

-0.45 (83)

5.48 (91)

#### 3 Yr Rolling Under/Over Performance - 5 Years 32.0 Over Performance **2**4.0 X 94 - 0000 Highland 8.0 8.0 Under Performance -8.0 0.0 8.0 16.0 24.0 32.0 -8.0 Total Equity Policy (%) Over Performance Under Performance

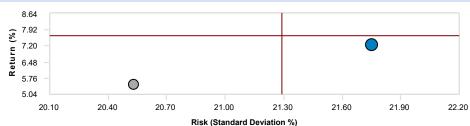
# 3 Yr Rolling Percentile Ranking - 5 Years



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
<ul><li>Highland Eq</li></ul>	20	0 (0%)	2 (10%)	18 (90%)	0 (0%)
<ul><li>Equity Policy</li></ul>	20	0 (0%)	2 (10%)	15 (75%)	3 (15%)

# Peer Group Scattergram - 3 Years

Earliest Date



X Latest Date

Peer G	roup Scatte	rgram - 5	Years
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	Return	Standard Deviation
<ul><li>Highland Eq</li></ul>	7.26	21.75
<ul><li>Equity Policy</li></ul>	5.48	20.53
Median	7.67	21.29

	Return	Standard Deviation
<ul><li>Highland Eq</li></ul>	8.12	19.35
<ul><li>Equity Policy</li></ul>	6.96	18.19
Median	8.62	19.00

# **Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Highland Eq	2.34	108.90	103.97	1.53	0.82	0.40	1.05	14.62
Equity Policy	0.00	100.00	100.00	0.00	N/A	0.33	1.00	14.08

# **Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Highland Eq	2.17	107.99	105.06	0.81	0.60	0.44	1.06	13.15
Equity Policy	0.00	100.00	100.00	0.00	N/A	0.39	1.00	12.49



#### Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF) 8.00 20.00 5.00 15.00 00 2.00 10.00 0 0 00 -1.00 5.00 -4.00 0.00 Return -5.00 -7.00 0 -10.00 -10.00 0 00 -13.00 -15.00 -16.00 -20.00 -25.00 -19.00 Oct-2021 Oct-2020 Oct-2019 Oct-2018 Oct-2017 Oct-2016 To Τo To To Τo To QTR FYTD 1 YR 2 YR 3 YR 4 YR 5 YR Sep-2022 Sep-2021 Sep-2020 Sep-2019 Sep-2018 Sep-2017 -0.09 (100) -13.47 (78) Highland Fixed -0.09 (100) -6.40 (12) -2.14 (45) 0.41 (62) 0.28 (73) ● Highland Fixed -12.91 (7) 9.68 -1.07 (72) 0.85 (39) 1.38 (16) 6.56 (89)Fixed Policy 1.87 (42) -13.01 (55) -7.45 (67) -2.71 (90) 0.03 (90) 0.02 (92) Fixed Policy -14.60 (60) 1.87 (42) -0.90 (84) 6.98 (77) 10.30 (69) -1.22 (88) 0.07 (84) Median 1.82 1.82 -12.95 -7.27 -2.20 0.53 0.45 Median -14.50 -0.03 7.53 10.42 -0.74 0.63 **Comparative Performance** 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr 1 Qtr Ending Ending Ending Ending Ending **Ending** Sep-2022 Jun-2022 Mar-2022 Dec-2021 Sep-2021 Jun-2021 Highland Fixed -4.22 (16) -4.18 (12) -5.63 (31) 0.56 (2) -0.24 (100) 3.08 **Total Fixed Policy** -4.75 (77) -4.69 (38)-5.93 (70)(32)0.05 (69) 1.83 (86)0.01 IM U.S. Broad Market Core Fixed Income (SA+CF) Median -0.04 0.10 1.98 -4.56 -4.76 -5.81

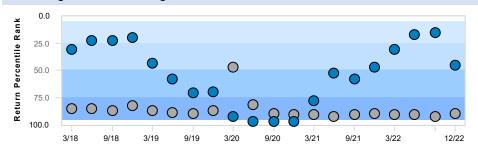


Standard

# 3 Yr Rolling Under/Over Performance - 5 Years

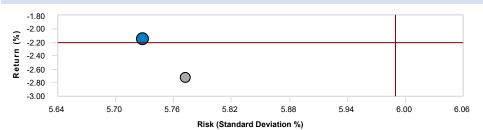


# 3 Yr Rolling Percentile Ranking - 5 Years

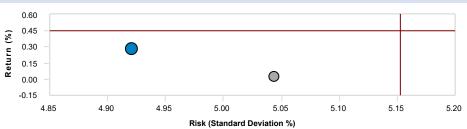


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul><li>Highland Fixed</li></ul>	20	5 (25%)	5 (25%)	5 (25%)	5 (25%)	
<ul> <li>Fixed Policy</li> </ul>	20	0 (0%)	1 (5%)	0 (0%)	19 (95%)	

# Peer Group Scattergram - 3 Years



Peer Gro	up Scattergr	ram - 5 Years
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	Return	Standard Deviation
<ul><li>Highland Fixed</li></ul>	-2.14	5.73
<ul><li>Fixed Policy</li></ul>	-2.71	5.77
Median	-2.20	5.99

Return	Deviation
0.28	4.92
0.02	5.04
0.45	5.15
	0.28 0.02

# **Historical Statistics - 3 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Highland Fixed	2.84	100.63	93.93	0.25	0.21	-0.47	0.87	4.46
Fixed Policy	0.00	100.00	100.00	0.00	N/A	-0.57	1.00	4.66

# **Historical Statistics - 5 Years**

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Highland Fixed	2.23	97.47	93.42	0.27	0.11	-0.17	0.88	3.56
Fixed Policy	0.00	100.00	100.00	0.00	N/A	-0.22	1.00	3.72



0

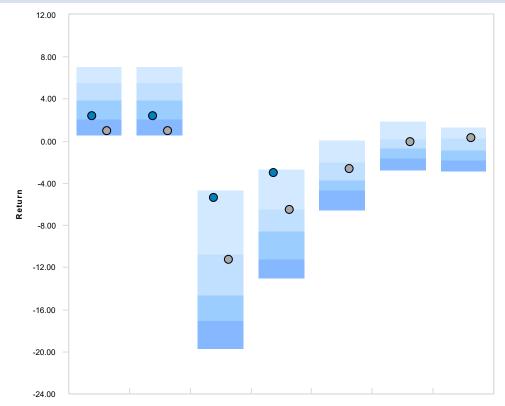
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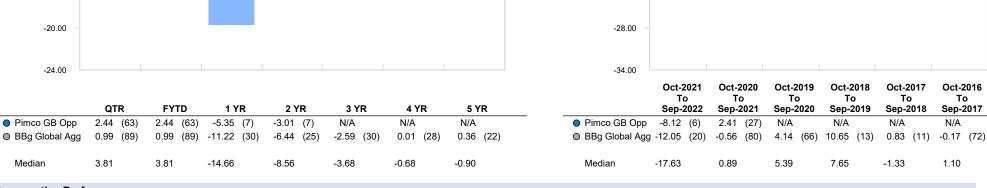
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# Plan Sponsor Peer Group Analysis - IM Global Fixed Income (MF)





20.00

14.00

8.00

2.00

-4.00

-10.00

-16.00

-22.00

0

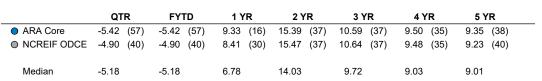
Return

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
Pimco GB Opp	-2.03 (17)	-3.39 (10)	-2.39 (6)	-0.55 (41)	0.12 (17)	0.06 (89)
Bloomberg Global Agg Index (Hedged)	-3.34 (35)	-4.30 (13)	-4.97 (33)	0.04 (8)	0.09 (20)	0.98 (77)
IM Global Fixed Income (MF) Median	-4.13	-7.00	-5.48	-0.70	-0.40	1.33



# Plan Sponsor Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)





	40.00						
	35.00 -						
	30.00 -						
	25.00 —	•					
	20.00 —						
Return	15.00 —		•				
	10.00 —					• •	00
	5.00 —				• •		
	0.00 —			• •			
	-5.00 —						
	-10.00						

	Oct-2021 To Sep-2022	То	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017
<ul><li>ARA Core</li></ul>	25.79 (20	) 13.51 (74)	1.62 (50)	6.81 (49)	8.50 (63)	7.52 (55)
<ul><li>NCREIF ODCE</li></ul>	22.76 (43	3) 15.75 (52)	1.74 (44)	6.17 (69)	8.82 (58)	7.81 (51)
Median	21.16	15.91	1.62	6.80	8.98	7.83

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
ARA Core	1.66 (20)	4.84 (35)	8.46 (12)	8.81 (34)	5.62 (78)	4.03 (56)
NCREIF ODCE	0.96 (39)	4.55 (41)	7.99 (17)	7.70 (47)	6.96 (32)	4.39 (41)
IM U.S. Open End Private Real Estate (SA+CF) Median	0.60	4.39	6.86	7.58	6.33	4.17



12/22

3/22

9/21

# 3 Yr Rolling Under/Over Performance - 5 Years 15.0 Over Performance **ARACore** (%) 9.0 9.0 6.0 Under Performance 3.0 6.0 9.0 12.0 15.0 3.0 NCREIF ODCE (%) Over Performance Under Performance

# 3 Yr Rolling Percentile Ranking - 5 Years 0.0 25.0 75.0 100.0

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul><li>ARA Core</li></ul>	20	0 (0%)	5 (25%)	14 (70%)	1 (5%)	
NCREIF ODCE	20	0 (0%)	6 (30%)	14 (70%)	0 (0%)	

3/20

9/20

3/21

#### Peer Group Scattergram - 3 Years 10.85 10.54 Return (%) 10.23 9.92 9.61 7.28 7.35 7.42 7.49 7.56 7.63 7.70 7.77 7.84 Risk (Standard Deviation %)

X Latest Date

Earliest Date

**Historical Statistics - 3 Years** 

Pee	r Gro	oup Scattergra	ım - 5 Years				
	9.40						
(%) u	9.20	_	$\circ$				
Return	9.00	_					_
	8.80					ı	
		5.7	5.8	5.9	6.0	6.1	6.2
				Risk (Standard Deviation	on %)		

	Return	Standard Deviation
<ul><li>ARA Core</li></ul>	10.59	7.74
<ul><li>NCREIF ODCE</li></ul>	10.64	7.38
Median	9.72	7.70

	Return	Standard Deviation
<ul><li>ARA Core</li></ul>	9.35	6.06
<ul> <li>NCREIF ODCE</li> </ul>	9.23	5.80
Median	9.01	6.06

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
ARA Core	1.33	101.16	107.83	-0.27	-0.01	1.09	1.02	3.21
NCREIF ODCE	0.00	100.00	100.00	0.00	N/A	1.13	1.00	2.92
<b>Historical Statistic</b>	s - 5 Years							
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
ARA Core	1.05	102.13	107.83	-0.10	0.12	1.10	1.02	2.49
NCREIF ODCE	0.00	100.00	100.00	0.00	N/A	1.12	1.00	2.26

3/18

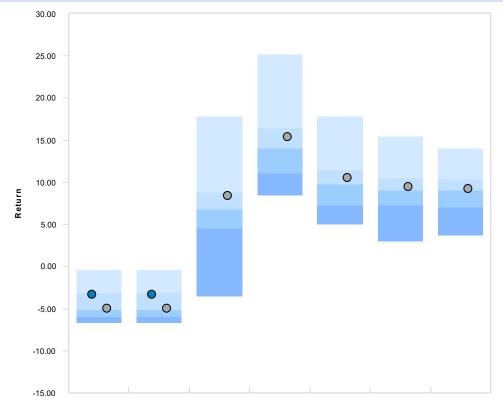
9/18

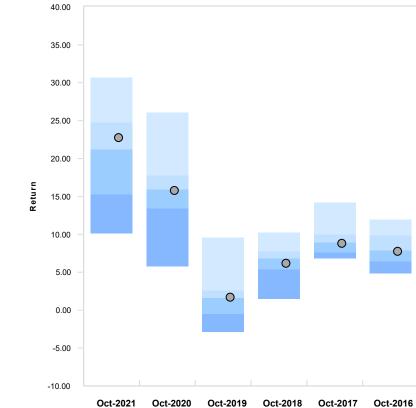
3/19

9/19



# Plan Sponsor Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)





	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
<ul><li>Am Strategic Val</li></ul>	-3.25 (26)	-3.25 (26)	N/A	N/A	N/A	N/A	N/A
<ul><li>NCREIF ODCE</li></ul>	-4.90 (40)	-4.90 (40)	8.41 (30)	15.47 (37)	10.64 (37)	9.48 (35)	9.23 (40)
Median	-5.18	-5.18	6.78	14.03	9.72	9.03	9.01

	To Sep-2022	To Sep-2021	To Sep-2020	To Sep-2019	To Sep-2018	To Sep-2017
<ul><li>Am Strategic Val</li></ul>	N/A	N/A	N/A	N/A	N/A	N/A
<ul><li>NCREIF ODCE</li></ul>	22.76 (43)	15.75 (52)	1.74 (44)	6.17 (69)	8.82 (58)	7.81 (51)
Median	21.16	15.91	1.62	6.80	8.98	7.83

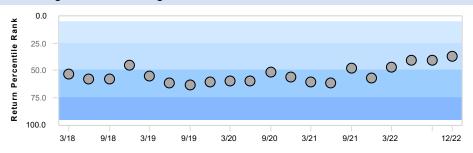
Comparative Performance						
	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Am Strategic Val	1.85 (13)	N/A	N/A	N/A	N/A	N/A
NCREIF ODCE	0.96 (39)	4.55 (41)	7.99 (17)	7.70 (47)	6.96 (32)	4.39 (41)
IM U.S. Open End Private Real Estate (SA+CF) Median	0.60	4.39	6.86	7.58	6.33	4.17



# 3 Yr Rolling Under/Over Performance - 5 Years

No data found.

# 3 Yr Rolling Percentile Ranking - 5 Years



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count	
<ul><li>Am Strategic Val</li></ul>	0	0	0	0	0	
NCREIF ODCE	20	0 (0%)	6 (30%)	14 (70%)	0 (0%)	

#### Peer Group Scattergram - 3 Years 10.85 10.54 Return (%) 10.23 9.92 9.61 7.42 7.28 7.35 7.49 7.56 7.63 7.70 7.77

	Return	Standard Deviation
<ul><li>Am Strategic Val</li></ul>	N/A	N/A
<ul><li>NCREIF ODCE</li></ul>	10.64	7.38
Median	9.72	7.70

Risk (Standard Deviation %)

# Peer Group Scattergram - 5 Years



Return	Standard Deviation
N/A	N/A
9.23	5.80
9.01	6.06
	N/A 9.23

Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
N/A	N/A	N/A	N/A	N/A	N/A	N/A
100.00	100.00	0.00	N/A	1.13	1.00	2.92
Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
N/A	N/A	N/A	N/A	N/A	N/A	N/A
100.00	100.00	0.00	N/A	1.12	1.00	2.26
	Market Capture  N/A 100.00  Up Market Capture  N/A	Market Capture  N/A  N/A  100.00  100.00  Up Market Market Capture  N/A  N/A  N/A	Market Capture Capture  N/A N/A N/A N/A  100.00 100.00 0.00  Up Down Market Market Capture  N/A N/A N/A N/A  N/A N/A N/A	Market Capture Capture Alpha Ratio  N/A N/A N/A N/A N/A  100.00 100.00 0.00 N/A  Up Down Market Market Capture Alpha Information Ratio  N/A N/A N/A N/A N/A N/A	Market Capture     Market Capture     Alpha Ratio     Information Ratio     Sharpe Ratio       N/A     N/A     N/A     N/A     N/A       100.00     100.00     0.00     N/A     1.13       Up Market Capture     Market Capture     Alpha Ratio     Information Ratio     Sharpe Ratio       N/A     N/A     N/A     N/A     N/A	Market Capture         Market Capture         Alpha         Information Ratio         Sharpe Ratio         Beta           N/A         N/A         N/A         N/A         N/A         N/A         N/A           100.00         100.00         0.00         N/A         1.13         1.00           Up Market Capture         Market Capture         Market Ratio         Sharpe Ratio         Beta           N/A         N/A         N/A         N/A         N/A         N/A



Total Fund Compliance	YES	NO
The total plan gross return equaled or exceeded the total plan benchmark over the trailing three year period.	х	
The total plan gross return equaled or exceeded the total plan benchmark over the trailing five year period.	х	
The total plan gross return ranked within the top 40th percentile of its peer group over the trailing three year period.	х	
The total plan gross return ranked within the top 40th percentile of its peer group over the trailing five year period.	х	
The total plan gross return equaled or exceeded the actuarial earnings assumption over the trailing three year period.		X
The total plan gross return equaled or exceeded the actuarial earnings assumption over the trailing five year period.		Х
Equity Compliance	YES	NO
The total equity returns meet or exceed the benchmark over the trailing three year period.	Х	
The total equity returns meet or exceed the benchmark over the trailing five year period.	Х	
The total equity returns ranked within the top 40th percentile of its peer group over the trailing three year period.		X
The total equity returns ranked within the top 40th percentile of its peer group over the trailing five year period.		Х
The total equity allocation was less than 70% of the total plan assets at market.	x	
The total foreign equity was less than 25% of the total plan assets at market.	x	
Fixed Income Compliance	YES	NO
The total domestic fixed income returns meet or exceed the benchmark over the trailing three year period.	х	
The total domestic fixed income returns meet or exceed the benchmark over the trailing five year period.	х	
The total domestic fixed income returns ranked within the top 40th percentile of its peer group over the trailing three year period.		Х
The total domestic fixed income returns ranked within the top 40th percentile of its peer group over the trailing five year period.		X
The average weight of the fixed income portfolio was "AA" or better.	х	

Managar Compliance	High	land - E	quity	High	ıland - F	ixed	Pin	nco Glo	bal	ARA	Core R	ealty
Manager Compliance	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.	Х			Х					Х		Х	
Manager ranked within the top 40th percentile over trailing three and five year periods.		Χ			Х				Х	Х		
Less than four consecutive quarters of under performance relative to the benchmark.	Х			Х			Х			Х		
Three and five year down-market capture ratio less than the index.		Χ		Х					Χ			Х
										Ameri	can Stra	ategic
										YES	NO	N/A
Manager outperformed the index over the trailing three and five year periods.												Х
Manager ranked within the top 40th percentile over trailing three and five year periods.												Х
Less than four consecutive quarters of under performance relative to the benchmark.												Х
Three and five year down-market capture ratio less than the index.												Х



# Key West General Employees Pension Fund Fee Analysis

As of December 31, 2022

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Total Fund	0.50	64,162,383	322,038	
Highland Capital	0.40	49,548,266	198,193	0.40 % of Assets
American Core Realty	1.10	9,501,254	104,514	1.10 % of Assets
Pimco Global Bond Opp	0.55	3,514,745	19,331	0.55 % of Assets
Mutual Fund Cash		88,812	-	





Parentheses contain percentile rankings.
Calculation based on <Periodicity> periodicity.



Total Fund Policy		
Allocation Mandate	Weight (%)	
Dec-1975		
S&P 500 Index	50.00	
ICE BofAML Govt/ Corp Master	50.00	
Oct-2004		
S&P 500 Index	50.00	
ICE BofAML US Domestic Master	40.00	
MSCI EAFE Index	10.00	
Jan-2014		
Russell 3000 Index	45.00	
MSCI AC World ex USA	15.00	
Blmbg. U.S. Aggregate Index	25.00	
FTSE World Government Bond Index	5.00	
NCREIF Fund Index-Open End Diversified Core (EW)	10.00	

Total Equity Policy		
Allocation Mandate	Weight (%)	
Jan-1998		
S&P 500 Index	100.00	
Oct-2004		
S&P 500 Index	85.00	
MSCI EAFE Index	15.00	
Jan-2014		
Russell 3000 Index	75.00	
MSCI AC World ex USA	25.00	

Total Fixed Income Policy		
Allocation Mandate	Weight (%)	
Jan-1998		
ICE BofAML Govt/ Corp Master	100.00	
Oct-2004		
ICE BofAML US Domestic Master	100.00	
Jan-2014		
Blmbg. U.S. Aggregate Index	100.00	



Active I	Rei	turi	n
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- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.

## Alpha

- 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.

#### Beta

- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.

# Consistency

- 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.

# Distributed to Paid In (DPI)

- 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.

# **Down Market Capture**

- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance

# **Downside Risk**

- 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.

#### **Excess Return**

- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.

# Excess Risk

- A measure of the standard deviation of a portfolio's performance relative to the risk free return.

#### Information Ratio

- 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.

#### **Public Market Equivalent (PME)**

- 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.

# R-Squared

- 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.

#### Return

- Compounded rate of return for the period.

#### Sharpe Ratio

- 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.

#### **Standard Deviation**

- 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.

# Total Value to Paid In (TVPI)

- 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

#### **Tracking Error**

- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.

#### **Treynor Ratio**

- 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.

# **Up Market Capture**

- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



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AndCo 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.

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