

# City of Miami Fire Fighters' and Police Officers' Retirement Trust

February 16, 2023

**Investment Meeting** 





Agenda

### Agenda

- 1. Fiscal Year Roadmap
- 2. Economic and Market Update
- 3. Performance Report as of December 31, 2022
- 4. 2023 Asset Study/Asset Allocation Review
- 5. Manager Presentation: JPMorgan Real Estate
- 6. Disclaimer

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## **Fiscal Year Roadmap**



### City of Miami Firefighters' and Police Officers' Retirement Trust

Fiscal year Roadmap

### Items for This Fiscal Year

### → Asset Allocation

- Today
- Asset Liability review at May Investment Meeting

### → Possible Allocations

- Private Debt Q2/Q3
- Infrastructure Q2/Q3

### → Education

- Private Market Performance Reporting Today
- Bond Markets Today

### → Manager Due Diligence Presentations

- JPM Real Estate Today
- Other managers invited (ad-hoc) based on performance or personal changes

### **Economic and Market Update**

Data as of December 31, 2022



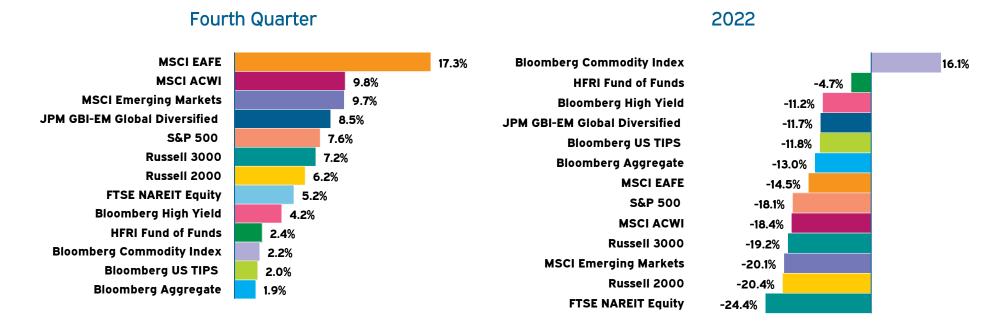
### Commentary

- → Ending a very tough year, most asset classes posted gains in the fourth quarter on signs that policy tightening would slow given cooling inflation.
  - Chairman Powell's testimony in November reiterated previous messaging on persistent and high inflation and the need for an extended period of monetary tightening weighing on assets in December. Markets remained focused though on signs that inflation is falling and that the size of future Fed rate hikes could be lower.
  - US equity markets sold off (-5.9%) in December but returned 7.2% in the fourth quarter as investors balanced the Fed's caution with improving inflation data.
  - In developed equity markets outside the US, sentiment deteriorated somewhat in December, but they posted
    a strong fourth quarter return of 17.3% driven by a falling US dollar and results in Europe where inflation started
    to slow.
  - Emerging market equities declined in December too (-1.4%) but less than the US and also had a strong fourth quarter (+9.7%). A weaker US dollar, declining inflation globally, and signs of China reopening its economy all contributed to the results.
  - Bonds experienced one of the worst years on record given inflation levels and the rapid rise in interest rates.
     Optimism over declining inflation and a slower pace of policy tightening benefited bonds overall in the fourth quarter though.
- → Looking to 2023, the path of inflation and monetary policy, slowing growth globally, China reopening its economy, and the war in Ukraine will all be key.

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#### Index Returns<sup>1</sup>



- → After broad declines in Q3 driven by expectations for further policy tightening, most major asset classes were up in the fourth quarter on hopes of inflation and policy tightening peaking.
- → Outside of commodities, all other public market asset classes declined in 2022. It was the first time since the 1960s that both stocks and bonds declined together in a calendar year.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg and FactSet. Data is as of December 31, 2022.



### **Domestic Equity Returns**<sup>1</sup>

	December	Q4	1 YR	3 YR	5 YR	10 YR
Domestic Equity	(%)	(%)	(%)	(%)	(%)	(%)
S&P 500	-5.8	7.6	-18.1	7.7	9.4	12.6
Russell 3000	-5.9	7.2	-19.2	7.1	8.8	12.1
Russell 1000	-5.8	7.2	-19.1	7.3	9.1	12.4
Russell 1000 Growth	-7.7	2.2	-29.1	7.8	11.0	14.1
Russell 1000 Value	-4.0	12.4	-7.5	6.0	6.7	10.3
Russell MidCap	-5.4	9.2	-17.3	5.9	7.1	11.0
Russell MidCap Growth	-6.0	6.9	-26.7	3.9	7.6	11.4
Russell MidCap Value	-5.1	10.5	-12.0	5.8	5.7	10.1
Russell 2000	-6.5	6.2	-20.4	3.1	4.1	9.0
Russell 2000 Growth	-6.4	4.1	-26.4	0.6	3.5	9.2
Russell 2000 Value	-6.6	8.4	-14.5	4.7	4.1	8.5

US Equities: Russell 3000 Index declined 5.9% for December but gained 7.2% for the quarter. Historic inflation and rapidly rising interest rates led to significant declines (-19.2%) for the full year.

- → US stocks fell broadly in December on the Federal Reserve signaling its continued resolve to raise rates but gained overall for the quarter on hopes that interest rates could be peaking soon given slowing inflation.
- → All sectors declined during December, led by consumer discretionary and technology with defensive sectors declining less. For the quarter though, most sectors were up led by energy and industrials.
- → In a continuation on the overall trend in 2022 value stocks outperformed growth stocks in the fourth quarter given higher interest rates and slowing growth.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.



### Foreign Equity Returns<sup>1</sup>

Foreign Equity	December (%)	<b>Q4</b> (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-0.7	14.3	-16.0	0.1	0.9	3.8
MSCI EAFE	0.1	17.3	-14.5	0.9	1.5	4.7
MSCI EAFE (Local Currency)	-3.0	8.7	-7.0	3.6	3.8	7.6
MSCI EAFE Small Cap	1.1	15.8	-21.4	-0.9	0.0	6.2
MSCI Emerging Markets	-1.4	9.7	-20.1	-2.7	-1.4	1.4
MSCI Emerging Markets (Local Currency)	-2.0	6.6	-15.5	0.1	1.3	4.6
MSCI China	5.2	13.5	-21.9	-7.5	-4.5	2.4

Developed international equities (MSCI EAFE) rose 0.1% in December and an impressive 17.3% in the fourth quarter. Emerging markets (MSCI EM) fell -1.4% in December but gained 9.7% for the quarter. Inflation and rising rates also weighed on international equities last year, as well as a strong US dollar for most of the year.

- → International developed market equities, specifically Europe, held up better relative to the rest of the world in December with the MSCI EAFE up 0.1%. In the fourth quarter, they returned a significant 17.3% due in part to the recent weakness in the US dollar (they returned only 8.7% in local terms) leading to lower declines for the year.
- → In December emerging markets outperformed the US but trailed developed market equities as China's rally was not enough to offset weakness elsewhere (e.g., India -5.5%). For the quarter, a weakening US dollar and China reopening led to strong results (+9.7%), but emerging markets remained the weakest for 2022 due to China.
- → Like the US, value outpaced growth globally in 2022.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.



#### Fixed Income Returns<sup>1</sup>

							Current	
Fixed Income	December (%)	<b>Q4</b> (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Yield (%)	Duration (Years)
Bloomberg Universal	-0.3	2.2	-13.0	-2.5	0.2	1.3	5.1	6.2
Bloomberg Aggregate	-0.5	1.9	-13.0	-2.7	0.0	1.1	4.7	6.4
Bloomberg US TIPS	-1.0	2.0	-11.8	1.2	2.1	1.1	4.4	6.7
Bloomberg High Yield	-0.6	4.2	-11.2	0.0	2.3	4.0	9.0	4.4
JPM GBI-EM Global Diversified (USD)	2.2	8.5	-11.7	-6.1	-2.5	-2.0	5.8	4.9

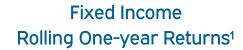
Fixed Income: The Bloomberg Universal fell -0.3% in December but rose 2.2% for the fourth quarter. Last year was one of the worst on record, with the broad bond market declining 13%.

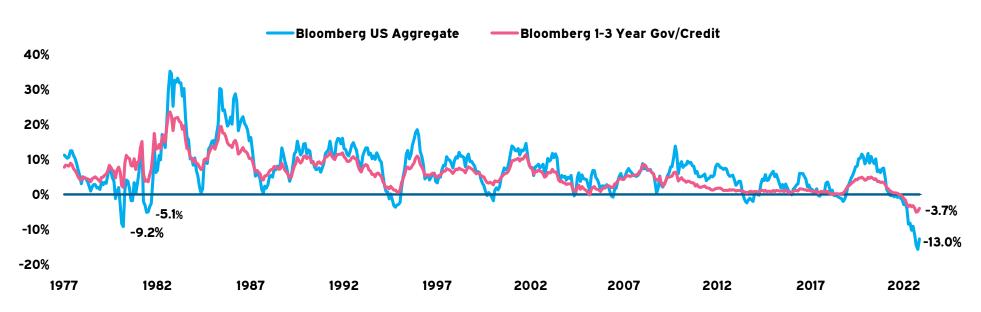
- → The Federal Reserve reconfirming its commitment to tighten policy in the face of high inflation weighed on US fixed income in December. For the quarter though the broad US bond market (Bloomberg Aggregate) was up 1.9% on hopes that inflation would continue to decline and corresponding expectations for the slowing of policy rate hikes.
- → TIPS produced similar results to the broad US bond market for the quarter but outperformed for the year given their inflation adjustment.
- → Riskier bonds outperformed for the quarter due to improving risk sentiment with emerging market bonds performing particularly well.

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Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of December 31, 2022. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.





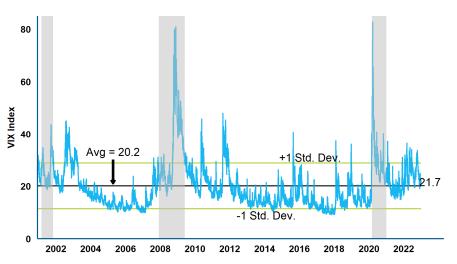


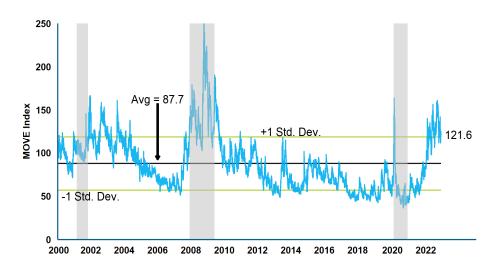
- → Last year was one of the worst return periods for the US bond market given the historic inflation levels and the corresponding rapid rise in interest rates.
- → The broad bond market (Bloomberg US Aggregate) declined 13% in 2022 making it one of the worst periods on record.
- → Short-term bond declines were far smaller (-3.7%) last year, but also were one of the worst on record.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.



### Equity and Fixed Income Volatility<sup>1</sup>





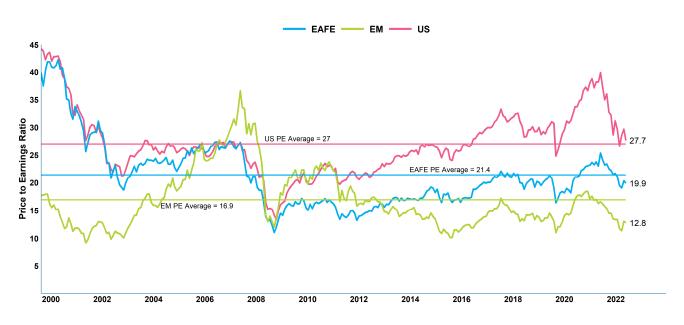
- → Volatility in equities (VIX) finished the year down from its highs and near its long run average as investors anticipated the potential end of Fed rate hikes this year.
- → Fixed income (MOVE) remained elevated and well above its long-run average at year-end due to the uncertain path of US interest rates as the Federal Reserve continues its hawkish stance on inflation.

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<sup>&</sup>lt;sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of December 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the recent month-end respectively.



### Equity Cyclically Adjusted P/E Ratios<sup>1</sup>



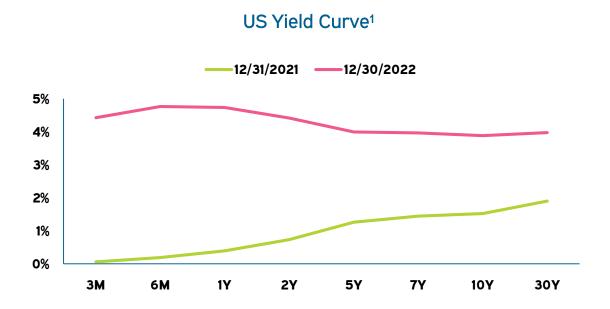
- → After December's sell-off, US equity price-to-earnings ratio finished the year near its long-term (21st century) average.
- → International developed market valuations rose but remain below their own long-term average, with those for emerging markets the lowest and well under the long-term average.
- → Price declines have been the main driver of recent multiple compression as earnings have remained resilient.

  Concerns remain over whether earnings strength will continue in the face of slowing growth.

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<sup>&</sup>lt;sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of December 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



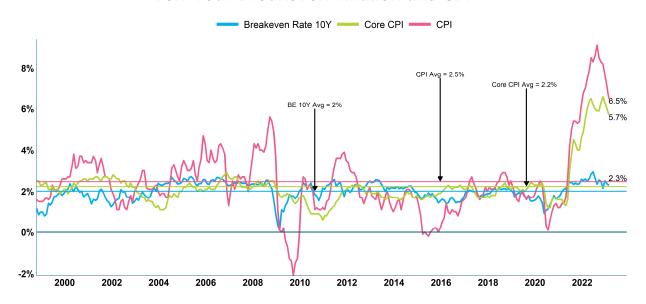


- → In December, policy-sensitive interest rates at the front-end of the curve continued to rise with the two-year Treasury yield increasing from 4.3% to 4.4%. Longer dated ten-year Treasury yields also increased (3.6% to 3.9%). For the year, the yield curve rose dramatically across maturities and moved from steep to inverted.
- → The Fed remains strongly committed to fighting inflation, as it increased rates another 50 basis points to a range of 4.0% to 4.5% at its December meeting. This brought the total number of increases for 2022 to seven.
- → The yield spread between two-year and ten-year Treasuries narrowed somewhat to -0.54% after finishing November at -0.70%. The more closely watched measure by the Fed of three-month and ten-year Treasuries also remained inverted. Historically, inversions in the yield curve have often preceded recessions.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.



### Ten-Year Breakeven Inflation and CPI<sup>1</sup>



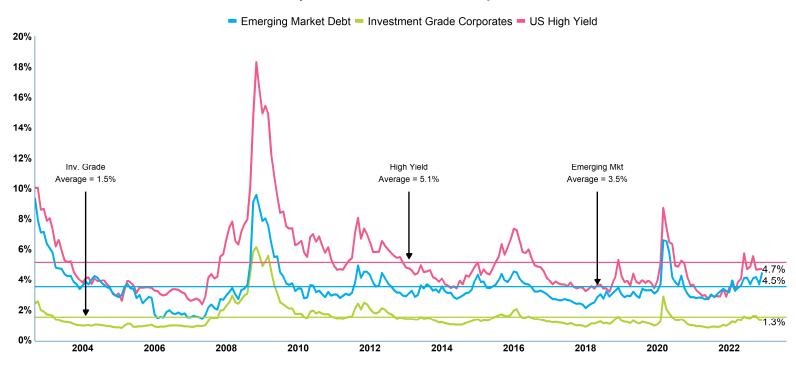
- → In December inflation continued to decline (6.5% versus 7.1%) matching expectations and providing support for the Fed to slow the pace of policy tightening. Energy prices fell again for the month but remain up 7.3% from a year prior, while food prices fell slightly, and stickier service prices continued to increase.
- → Core inflation excluding food and energy also continued to decline in December (5.7% versus 6.0%) and matched estimates.
- → Inflation expectations (breakevens) declined slightly for the month (2.3% versus 2.4%) and remain well below current inflation levels as investors anticipate a significant moderation in inflation.

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<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of December 2022. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end respectively. Breakeven values represent month-end values for comparative purposes.



### Credit Spreads vs. US Treasury Bonds<sup>1</sup>



- → High yield spreads (the added yield above a comparable maturity Treasury) finished December at 4.7% (the same as the end of November) remaining below their long-run average.
- → Investment grade spreads also held steady at 1.3% as attractive yields and strong balance sheets continued to attract investors, while emerging market spreads rose (4.5% versus 3.6%) due to concerns regarding slower growth and lower commodity prices.

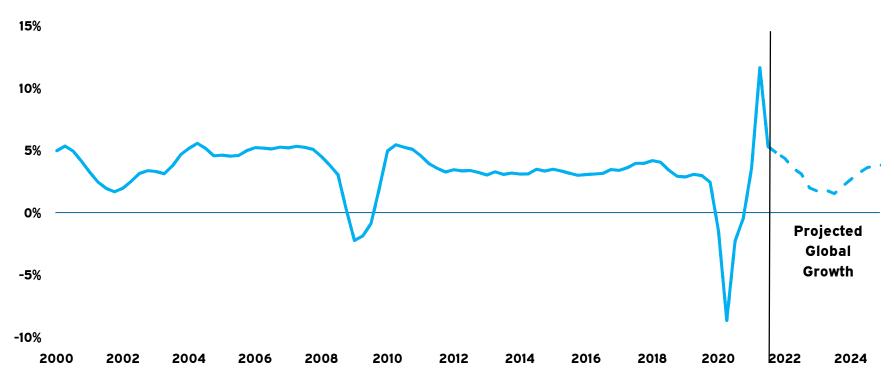
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<sup>1</sup> Sources: Bloomberg. Data is as of December 31, 2022. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end respectively.

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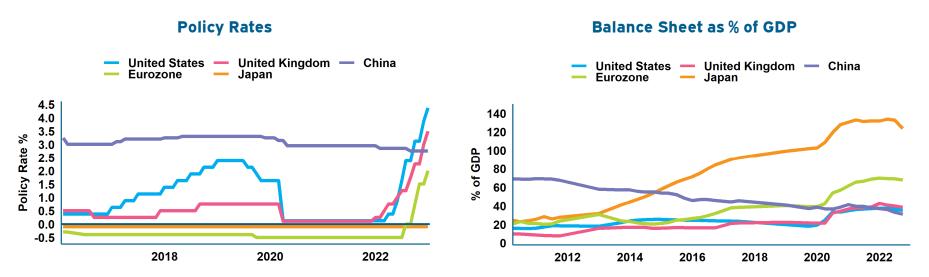


- → Global economies are expected to slow in 2023 compared to 2022, with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- → The delicate balancing act of central banks trying to reduce inflation without dramatically impacting growth will remain key.

<sup>&</sup>lt;sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated December 2022.



### Central Bank Response<sup>1</sup>



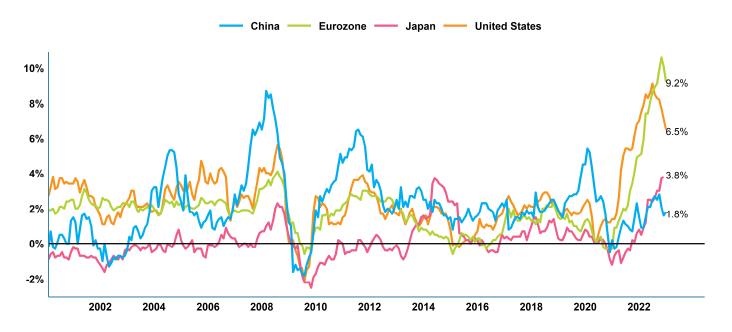
- → In 2022 many central banks aggressively reduced pandemic-era policy support in the face of high inflation with the US taking a more aggressive approach.
- → In December, the Bank of Japan relaxed its target yield for the 10-year bond which may mark an incremental step toward policy normalization after eight years of quantitative easing.
- → The one notable central bank outlier is China, where the central bank has lowered rates and reserve requirements in response to slowing growth.
- → The risk remains for a policy error, particularly overtightening, as record inflation and aggressive tightening to date could heavily weigh on global growth. The Federal Reserve's policy rate path could diverge from others this year given their strong early start to tightening.

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Source: Bloomberg. Policy rate data is as of December 31, 2022. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of December 31, 2022.



### Inflation (CPI Trailing Twelve Months)1



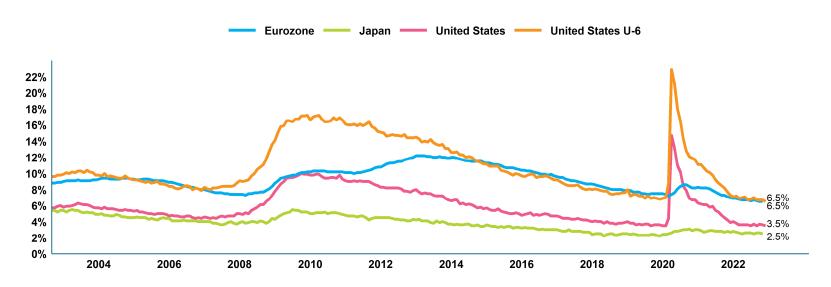
- → Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it has reached levels not seen in many decades.
- → Inflation pressures are slowly declining in the US, but they remain elevated, while in Europe they have reached historic levels due to skyrocketing energy prices and a weak euro.
- → Supply issues related to the pandemic, record monetary and fiscal stimulus, strict COVID-19 restrictions in China, and higher commodity prices driven by the war in Ukraine have been key global drivers of inflation.

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<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of December 2022. The most recent Japanese inflation data is as of November 2022.







- → As economies have largely reopened, helped by vaccines for the virus, improvements have been seen in the labor market.
- → Despite slowing growth and high inflation, the US labor market remains a bright spot. Unemployment in the US, which experienced the steepest rise from the pandemic, has remained in a tight 3.5%-3.7% range for most of the year.
- → The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, likely leading to higher unemployment.

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<sup>1</sup> Source: Bloomberg. Data is as December 31, 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of November 30, 2022.





- → Overall, the US dollar continued to weaken from its recent peak in December as declining inflation supported the case for the Federal Reserve to slow its tightening.
- → The dollar finished the year much higher than it started though due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- → As we look to 2023, the track of inflation across economies and the corresponding monetary policy will likely be key drivers of currency moves.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data as of December 31, 2022.



### Summary

### **Key Trends:**

- → The impacts of record high inflation will remain key, with market volatility likely to stay high.
- → Monetary policy could diverge in 2023 with the Fed pausing and others continuing to tighten. The risk of policy errors in both directions remains.
- → Growth will continue to slow globally next year, with many economies likely falling into recessions. Inflation, monetary policy, and the war will all be key.
- → In the US the end of many fiscal programs is expected to put the burden of continued growth on consumers.

  Higher energy and food prices could weigh on consumer spending.
- → Valuations have significantly declined in the US to around long-term averages, largely driven by price declines. The key going forward will be whether earnings can remain resilient if growth continues to slow.
- → Outside the US, equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation particularly weighing on Europe, and China's rushed exit from COVID-19 restrictions and on-going weakness in the real estate sector.

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# Performance Report as of December 31, 2022



# City of Miami Firefighters' and Police Officers' Retirement Trust

**Executive Summary** 

### Q4 2022 Executive Summary

Category	Results	Notes
Total Fund Performance	Positive	5.2% net of fees (~\$83 mm)
Performance vs. Benchmark	Underperformed	5.2% net of fees vs. 5.8% policy benchmark
Performance vs. Peers	Outperformed	48th percentile (5.2% vs. 5.1% peer median)
Asset Allocation Attribution Effects	Detracted	Overweight private equity and real estate
Active Public <sup>1</sup> Managers vs. Benchmarks	Outperformed	6 out of 11 active managers beat/matched their respective benchmarks after fees
Compliance with Targets	In Compliance	All exposure within policy ranges

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<sup>&</sup>lt;sup>1</sup> All strategies that have liquidity, i.e. Includes open-end real estate, but not closed-end real estate, private equity, infrastructure.

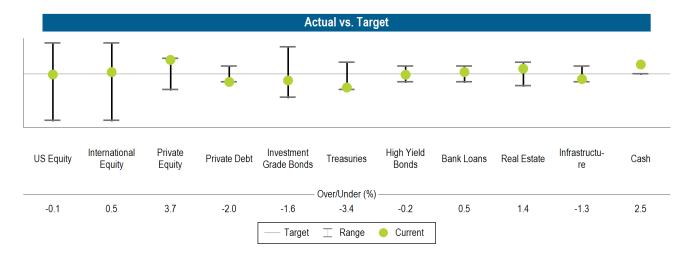


### Total Plan | As of December 31, 2022



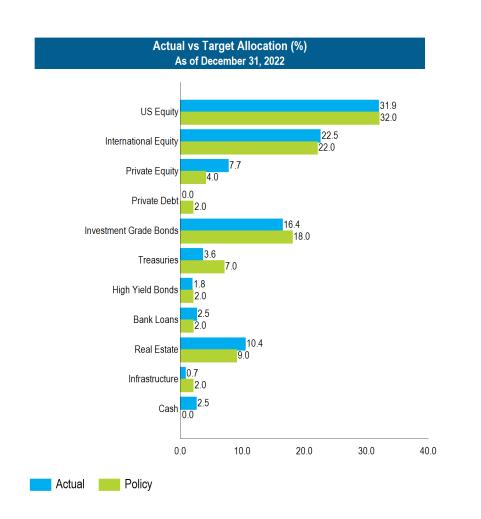
	Allocation vs. Targ	ets and Polic	<b>:</b> у		
	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
US Equity	\$515,619,025	32%	32%	20% - 40%	Yes
International Equity	\$363,832,918	23%	22%	10% - 30%	Yes
Private Equity	\$123,822,459	8%	4%	0% - 8%	Yes
Private Debt			2%	0% - 4%	Yes
Investment Grade Bonds	\$264,654,269	16%	18%	12% - 25%	Yes
Treasuries	\$57,406,912	4%	7%	3% - 10%	Yes
High Yield	\$29,807,709	2%	2%	0% - 4%	Yes
Bank Loans	\$40,984,504	3%	2%	0% - 4%	Yes
Real Estate	\$168,165,398	10%	9%	6% - 12%	Yes
Infrastructure	\$11,716,907	1%	2%	0% - 4%	Yes
Cash & Cash Alternatives	\$40,194,542	2%	0%	0% - 5%	Yes
Total	\$1,616,204,641	100%	100%		

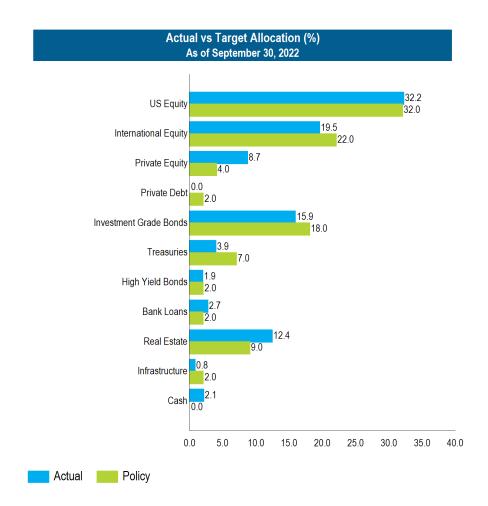
Throughout the entire report, cash includes investment in the BlackRock Liquid Policy portfolio.





### Total Plan | As of December 31, 2022



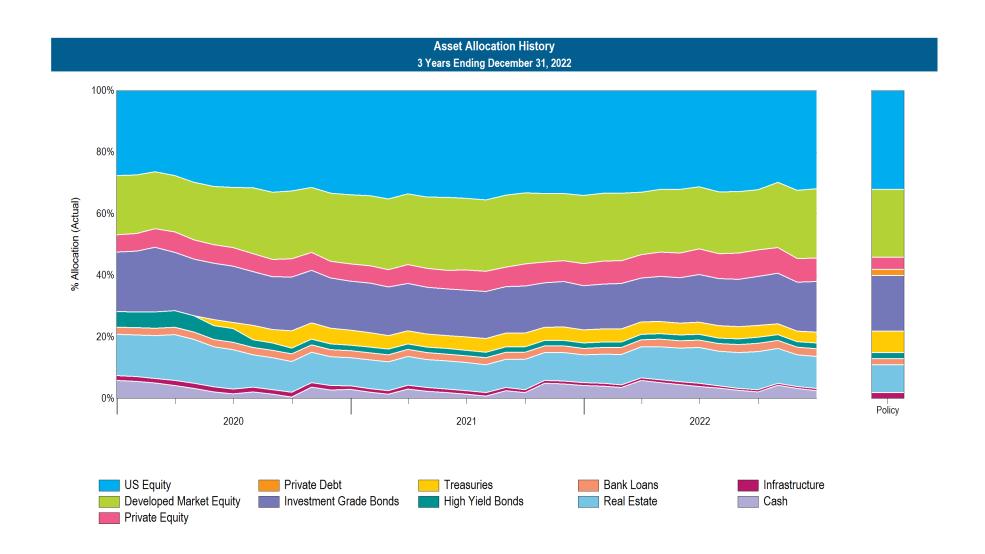


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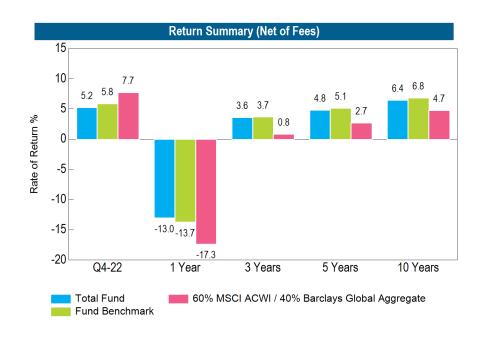
Total Plan | As of December 31, 2022

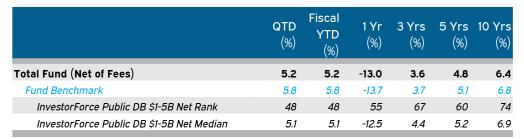


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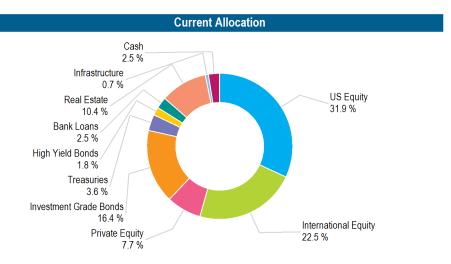
#### Total Plan | As of December 31, 2022





As of 7/1/2022, the total fund benchmark consists of 32% Russell 3000, 22% MSCI EAFE, 9% NCREIF ODCE, 4% MSCI ACWI IMI (Lagged) +2%, 2% Barclays US High Yield 1Q Lagged + 2%, 18% Barclays US Aggregate, 2% Credit Suisse Leveraged Loans, 2% ICE BofA Merrill Lynch US High Yield, 7% Barclays US Long Treasury, and 2% Consumer Price Index + 5%

Benchmark returns prior to 9/30/2019 provided by prior consultant.

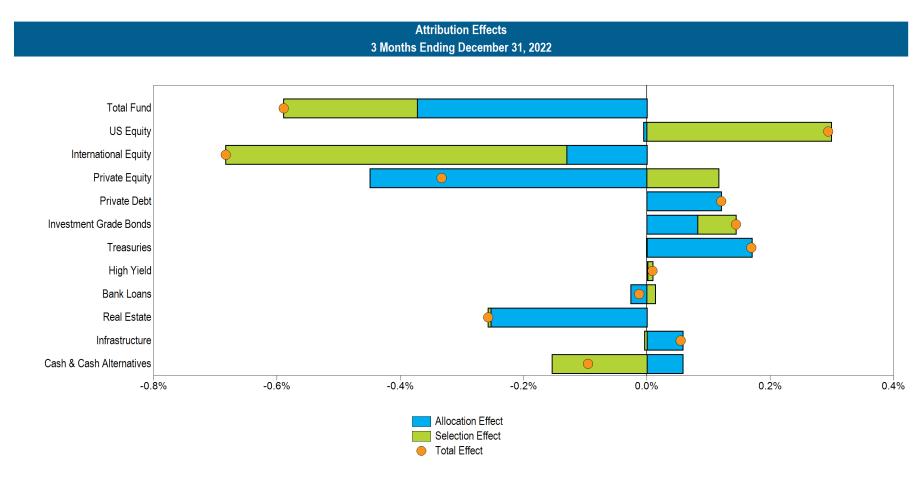


Ann	ualized Sta	andard De	eviation		Sharpe Rati	0					
	Tota	al Fund		Total Fund							
13.0 12.0 11.0				0.8							
10.0 - 9.0 - 8.0 -		-		0.6							
7.0 – 6.0 – 5.0 –		-		0.4							
4.0 - 3.0 - 2.0 - 1.0 -				0.2							
0.0	3 Yrs	5 Yrs	10 Yrs	0.0 3 Yrs	5 Yrs	10 Yrs					

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### Total Plan | As of December 31, 2022



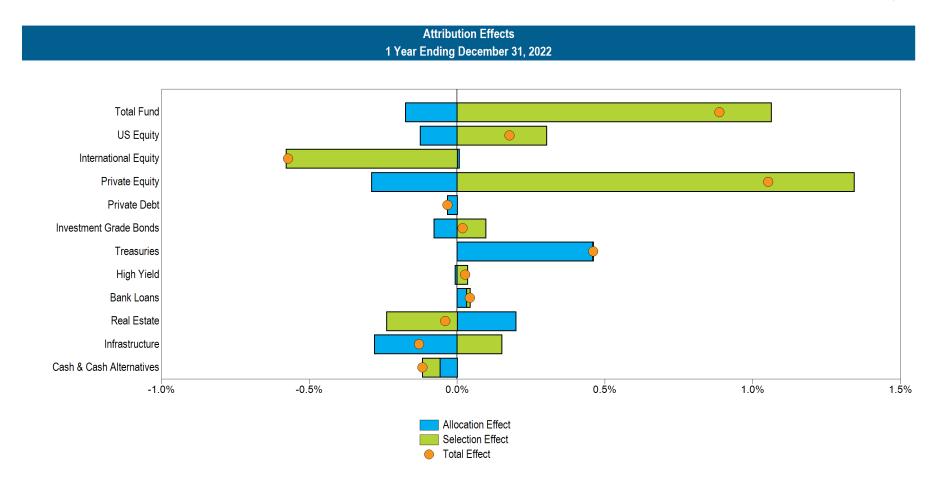
Wtd. Ac	tual Wtd. Index	Excess	Selection	Allocation	Total
Rei	urn Return	Return	Effect	Effect	Effects
Total !	5.2% 5.8%	-0.6%	-0.4%	-0.2%	-0.6%

The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed. Values may not sum due to rounding.

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### Total Plan | As of December 31, 2022



	Wtd. Actual	Wtd. Index	Excess	Selection	Allocation	Total
	Return	Return	Return	Effect	Effect	Effects
Total	-13.1%	-14.0%	0.9%	0.9%	-0.1%	0.9%

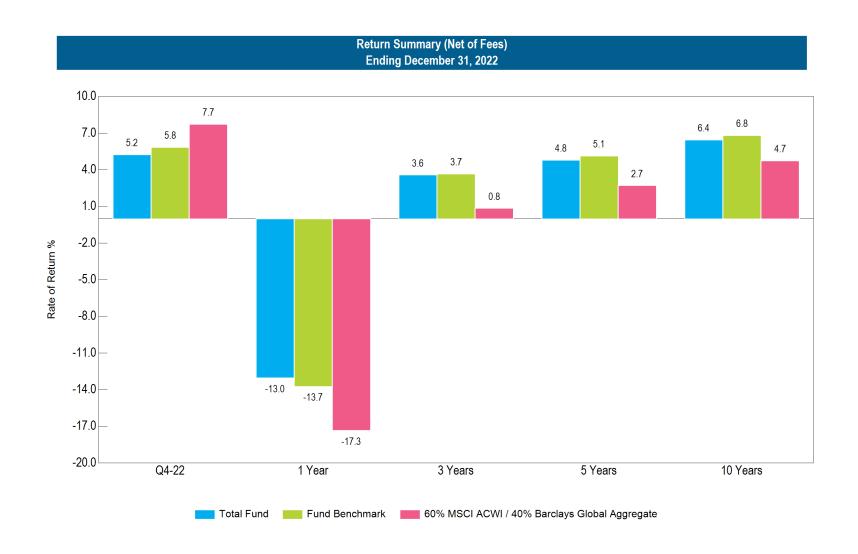
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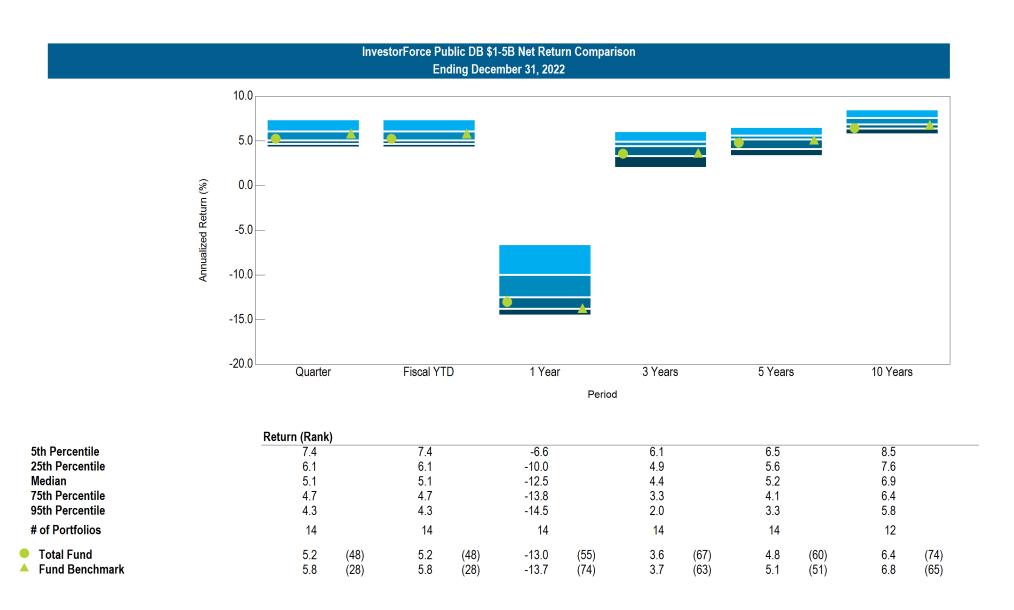
### Total Plan | As of December 31, 2022



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Total Plan | As of December 31, 2022





Total Plan | As of December 31, 2022

Asset (	Class Performance	Summary	(Net of I	Fees)					
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. Date	S.I. (%)
Total Fund	1,616,204,641	100.0	5.2	-13.0	3.6	4.8	6.4	Jan-94	7.6
Fund Benchmark			5.8	-13.7	3.7	5.1	6.8	Jan-94	7.3
US Equity	515,619,025	31.9	8.2	-18.3	6.3	8.0	11.5	Jan-94	
Russell 3000	1		7.2	-19.2	7.1	8.8	12.1	Jan-94	9.5
International Equity	363,832,918	22.5	14.4	-16.9	1.2	2.4	5.4	Jan-94	
MSCI EAFE			17.3	-14.5	0.9	1.5	4.7	Jan-94	4.8
Private Equity	123,822,459	7.7	-3.7	-1.7	19.2	16.9	13.5	Jan-94	
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Jan-94	
Investment Grade Bonds	264,654,269	16.4	2.3	-12.4	-2.4	0.2	1.2	Jan-94	4.4
Bloomberg US Aggregate TR			1.9	-13.0	-2.7	0.0	1.1	Jan-94	4.4
Treasuries	57,406,912	3.6	-0.6	-29.2				Jun-20	-14.9
Bloomberg US Govt Long TR			-0.6	-29.2	-7.4	-2.2	0.6	Jun-20	-15.0
High Yield	29,807,709	1.8	4.4	-9.2	1.0	2.8	4.2	Jan-94	
ICE BofA US High Yield TR			4.0	-11.2	-0.2	2.1	<i>3.9</i>	Jan-94	6.4
Bank Loans	40,984,504	2.5	2.8 2.3	-0.5	2.4	3.3	3.8	Jan-94	<u></u> 5.0
Credit Suisse Leveraged Loans				-1.1 -	2.3	3.2		Jan-94	5.0
Real Estate  NCREIF ODCE	168,165,398	10.4	-4.8 - <u>5.0</u>	5.6 7.5	7.9 9.9	<b>7.5</b> <i>8.7</i>	8.5 10.1	Jan-94 <i>Jan-94</i>	9.0
							- 1		
Infrastructure CPI + 500 bps	11,716,907	0.7	0.8 1.2	43.1 <i>11.7</i>	11.9 <i>10.1</i>	9.0		Jan-94 <i>Jan-94</i>	
	40 10 4 7 40	<b>.</b> -							
Cash & Cash Alternatives  BlackRock Custom Benchmark	40,194,542	2.5	2.8 7.9	-18.8 <i>-15.3</i>	- <b>7.7</b>	-2.5 <i>4.5</i>	-	Jan-94 <i>Jan-94</i>	<del></del>
DIACKROCK CUSCOIII DEIICIIIIIAI K			1.9	-10.5	3.0	4.3		Ja11-94	

Fiscal year end is September 30.

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Total Plan | As of December 31, 2022

	Performance Summ	ary (Net	of Fees)						
	Market Value (\$)	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. Date	S.I. (%)
Total Fund	1,616,204,641		5.2	-13.0	3.6	4.8	6.4	Jan-94	7.6
Fund Benchmark			5.8	-13.7	3.7	5.1	6.8	Jan-94	7.3
InvestorForce Public DB \$1-5B Net Median			5.1	-12.5	4.4	5.2	6.9	Jan-94	7.2
InvestorForce Public DB \$1-5B Net Rank			48	55	67	60	74	Jan-94	10
US Equity	515,619,025	31.9	8.2	-18.3	6.3	8.0	11.5	Jan-94	
Russell 3000			7.2	-19.2	7.1	8.8	12.1	Jan-94	9.5
Northern Trust S&P500 Index Fund	304,783,555	59.1	7.6	-18.1				Aug-20	8.5
S&P 500			7.6	-18.1	7.7	9.4	12.6	Aug-20	8.5
Waycross Partners Core Equity	52,951,664	10.3						Nov-22	2.5
S&P 500			7.6	-18.1	7.7	9.4	12.6	Nov-22	-0.5
eV US Large Cap Core Equity Net Median			8.4	-16.4	7.2	8.6	11.8	Nov-22	0.3
eV US Large Cap Core Equity Net Rank								Nov-22	12
Boston Partners Mid Cap Value	54,182,895	10.5	13.4	-6.9	7.9	7.0	11.9	Jun-98	9.4
Russell MidCap Value			10.5	-12.0	<i>5.8</i>	<i>5.7</i>	10.1	Jun-98	8.7
eV US Mid Cap Value Equity Net Median			11.8	-8.6	6.7	6.1	10.0	Jun-98	9.2
eV US Mid Cap Value Equity Net Rank			23	36	32	30	15	Jun-98	46
Champlain Mid Cap	44,600,747	8.6	7.0	-26.1	6.6	10.0	13.4	Jul-09	14.0
Russell MidCap			9.2	-17.3	<i>5.9</i>	7.1	11.0	<i>Jul</i> -09	13.0
eV US Mid Cap Core Equity Net Median			8.9	-15.3	6.5	7.3	11.1	Jul-09	13.0
eV US Mid Cap Core Equity Net Rank			85	94	50	7	3	Jul-09	16
Champlain Small Cap	59,100,163	11.5	9.1	-20.0	4.2	6.9	11.2	Jan-04	10.6
Russell 2000			6.2	-20.4	3.1	4.1	9.0	Jan-04	7.7
eV US Small Cap Core Equity Net Median			8.9	-16.6	6.1	6.2	10.2	Jan-04	8.7
eV US Small Cap Core Equity Net Rank			48	73	79	37	25	Jan-04	5

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### Total Plan | As of December 31, 2022

	Market Value (\$)	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. Date	S.I. (%)
International Equity	363,832,918	22.5	14.4	-16.9	1.2	2.4	5.4	Jan-94	
MSCI EAFE			17.3	-14.5	0.9	1.5	4.7	Jan-94	4.8
Northern Trust EAFE Index Fund	129,199,317	35.5	18.5	-13.9				Aug-20	5.7
MSCI EAFE			17.3	-14.5	0.9	1.5	4.7	Aug-20	5.2
Wellington International Quality Growth (IQG)	119,096,964	32.7	12.5	-27.1	-0.3	2.5		Nov-14	6.1
MSCI ACWI ex USA Growth			12.9	-23.1	-0.4	1.5	4.7	Nov-14	4.0
eV ACWI ex-US Growth Equity Net Median			13.1	-26.3	1.0	2.3	6.1	Nov-14	5.2
eV ACWI ex-US Growth Equity Net Rank			63	54	65	48		Nov-14	32
First Eagle International Equity	115,483,842	31.7	11.9					Sep-22	3.3
MSCI EAFE Value			19.6	<b>-5</b> .6	0.6	0.2	3.5	Sep-22	8.9
MSCI EAFE			17.3	-14.5	0.9	1.5	4.7	Sep-22	6.4
eV EAFE Value Equity Net Median			18.4	-8.6	1.7	1.0	4.5	Sep-22	7.3
eV EAFE Value Equity Net Rank			99				-	Sep-22	96
Private Equity	123,822,459	7.7	-3.7	-1.7	19.2	16.9	13.5	Jan-94	
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	<i>5.7</i>	6.2	9.4	Jan-94	
Adams Street 2012 Global Fund	12,642,945	10.2	-4.0	-13.0	21.1	18.1	12.8	Jul-12	8.0
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	<i>5.7</i>	6.2	9.4	Jul-12	9.1
Adams Street Venture Innovation Fund	12,161,310	9.8	-2.9	-5.4	48.4	30.9		Dec-17	23.4
MSCI ACWI IMI(1Q Lagged)+2%			-6.2	-19.6	<i>5.7</i>	6.2	9.4	Dec-17	6.6
Catalyst III	2,071,334	1.7	5.9	6.1	15.7	12.0	23.5	Oct-12	15.0
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	<i>5.7</i>	6.2	9.4	Oct-12	9.9
Catalyst IV	6,735,516	5.4	-2.7	-32.4	10.9	17.0		Nov-15	12.9
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	<i>5.7</i>	6.2	9.4	Nov-15	7.6

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Total Plan | As of December 31, 2022

	Market Value (\$)	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. Date	S.I. (%)
Coller Fund VI	2,312,527	1.9	-9.0	-6.3	10.9	13.8	16.9	Oct-12	19.1
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	<i>5.7</i>	6.2	9.4	Oct-12	9.9
Coller Fund VII	5,556,732	4.5	-9.5	-4.0	14.7	18.7		Oct-16	26.2
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Oct-16	9.3
Coller Fund VIII	10,236,716	8.3	-8.6	16.0				Jun-20	39.6
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Jun-20	6.8
JP Morgan Global Fund V	10,096,873	8.2	-5.6	-1.2	19.6	20.0		May-14	18.9
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	May-14	8.0
JP Morgan Global Fund VI	15,931,233	12.9	-0.6	13.1	16.3	10.8		Dec-17	22.1
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Dec-17	6.6
JP Morgan Global Fund VIII	13,806,339	11.2	0.0	16.4	8.0			Mar-19	12.7
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Mar-19	6.9
JPMorgan US Corporate Finance III	586,901	0.5	-16.7	-18.4	20.1	17.5	17.7	Oct-06	
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Oct-06	7.6
JPMorgan Venture Capital Fund III	1,325,255	1.1	-14.6	-26.0	6.7	7.0	8.1	Oct-06	
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Oct-06	7.6
Lexington Capital Partners VIII	9,049,876	7.3	-5.4	-0.7	16.6	16.7		Aug-15	16.1
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Aug-15	7.2
Lexington Capital Partners IX	14,992,359	12.1	-4.7	9.4	19.2			Mar-19	
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	<i>5.7</i>	6.2	9.4	Mar-19	6.9

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#### Total Plan | As of December 31, 2022

	Market Value (\$)	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. Date	S.I. (%)
Pantheon USA Fund VII	1,573,817	1.3	-2.6	-3.1	16.0	11.6	12.6	Sep-07	9.2
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Sep-07	6.4
Standard Life Europe Smaller Funds I	4,093,261	3.3	8.0	-1.2	6.8	4.7	-4.3	Oct-12	-19.3
MSCI ACWI IMI (1Q Lagged) +2%			-6.2	-19.6	5.7	6.2	9.4	Oct-12	9.9
Coller Fund V	49,762	0.0					- 1		
JPMorgan European Corporate Finance III	132,865	0.1							
Lexington Capital Partners VI-B	146,807	0.1							
Pantheon Europe Fund V-B	320,031	0.3					- 1		
Investment Grade Bonds	264,654,269	16.4	2.3	-12.4	-2.4	0.2	1.2	Jan-94	4.4
Bloomberg US Aggregate TR			1.9	-13.0	-2.7	0.0	1.1	Jan-94	4.4
NT US Aggregate Bond	176,217,225	66.6	1.9	-12.9				Aug-20	-6.3
Bloomberg US Aggregate TR			1.9	-13.0	-2.7	0.0	1.1	Aug-20	-6.3
Dodge & Cox Core Fixed Income	88,437,044	33.4	3.1	-11.0	-0.9	1.1	2.0	Jan-02	4.1
Bloomberg US Aggregate TR			1.9	-13.0	-2.7	0.0	1.1	Jan-02	3.4
eV US Core Fixed Inc Net Median			1.8	-13.1	-2.4	0.2	1.3	Jan-02	3.7
eV US Core Fixed Inc Net Rank			1	7	2	2	4	Jan-02	11
Treasuries	57,406,912	3.6	-0.6	-29.2			-	Jun-20	-14.9
Bloomberg US Govt Long TR			-0.6	-29.2	-7.4	-2.2	0.6	Jun-20	-15.0
NT Long-Term Gov. Bond Index Fund	57,406,912	100.0	-0.6	-29.2				Jun-20	-14.9
Bloomberg US Govt Long TR			-0.6	-29.2	-7.4	-2.2	0.6	Jun-20	-15.0

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#### Total Plan | As of December 31, 2022

	Market Value (\$)	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. Date	S.I. (%)
High Yield	29,807,709	1.8	4.4	-9.2	1.0	2.8	4.2	Jan-94	
ICE BofA US High Yield TR			4.0	-11.2	-0.2	2.1	3.9	Jan-94	6.4
AXA High Yield	29,807,709	100.0	4.4	-9.2	1.0	2.8		Mar-14	3.4
ICE BofA US High Yield TR			4.0	-11.2	-0.2	2.1	3.9	Mar-14	<i>3.3</i>
eV US High Yield Fixed Inc Net Median			3.9	-10.0	0.4	2.3	3.8	Mar-14	3.1
eV US High Yield Fixed Inc Net Rank			23	36	31	19	-	Mar-14	29
Bank Loans	40,984,504	2.5	2.8	-0.5	2.4	3.3		Jan-94	
Credit Suisse Leveraged Loans			2.3	-1.1	2.3	3.2	3.8	Jan-94	5.0
Pacific Asset Management	40,984,504	100.0	2.8	-0.5	2.4	3.3		May-14	3.7
Credit Suisse Leveraged Loans			2.3	-1.1	2.3	3.2	3.8	May-14	<i>3.5</i>
eV US Float-Rate Bank Loan Fixed Inc Net Median			2.6	-1.4	1.9	2.7	3.2	May-14	3.0
eV US Float-Rate Bank Loan Fixed Inc Net Rank			37	26	16	9	-	May-14	6
Real Estate	168,165,398	10.4	-4.8	5.6	7.9	7.5	8.5	Jan-94	
NCREIF ODCE			-5.0	7.5	9.9	8.7	10.1	Jan-94	9.0
Centersquare Value Fund IV	11,783,614	7.0	5.0	42.0	25.1			Oct-18	6.9
NCREIF Property +300bps 1QLAG			1.3	19.5	13.2	11.9	-	Oct-18	12.1
JP Morgan SPF	123,008,840	73.1	-5.2	3.7	7.7	6.7	8.5	Jan-10	
NCREIF ODCE			-5.0	7.5	9.9	8.7	10.1	Jan-10	11.1
JP Morgan SSPF	29,767,508	17.7	-7.2	-1.9	7.1	7.2	10.2	Jan-10	
NCREIF ODCE + 100bps			-4.7	8.5	11.0	9.8	11.2	Jan-10	12.2
Retirement Office	3,605,436	2.1							

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#### Total Plan | As of December 31, 2022

	Market Value (\$)	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. Date	S.I. (%)
Infrastructure	11,716,907	0.7	0.8	43.1	11.9			Jan-94	
CPI + 500 bps			1.2	11.7	10.1	9.0		Jan-94	
BlackRock NTR Renewable Power Fund	367,545	3.1	-2.2	40.8	-2.3	3.0		Apr-13	1.1
CPI + 500 bps			1.2	11.7	10.1	9.0		Apr-13	7.6
BlackRock Global Renewable Power Fund II	11,349,362	96.9	0.9	34.0	14.5	9.6		Sep-16	7.0
CPI + 500 bps			1.2	11.7	10.1	9.0		Sep-16	8.5
Cash & Cash Alternatives	40,194,542	2.5	2.8	-18.8	-7.7	-2.5	-	Jan-94	
BlackRock Custom Benchmark			7.9	-15.3	3.0	4.5	-	Jan-94	
BlackRock Liquid Policy Portfolio	27,230,342	67.7	7.7	-15.4	3.0	4.4		Jul-14	5.4
BlackRock Custom Benchmark			7.9	-15.3	3.0	4.5		Jul-14	5.5
Main Account	12,964,200	32.3							_

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Total Plan | As of December 31, 2022

Ass	set Class Performa	nce Sun	nmary (I	Net of Fe	es)					
	Fiscal YTD (%)	Fiscal 2022 (%)	Fiscal 2021 (%)	Fiscal 2020 (%)	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)
Total Fund	5.2	-12.9	19.1	6.2	4.8	6.7	9.0	8.6	1.9	8.3
Fund Benchmark	5.8	-14.7	18.5	9.0	6.1	7.2	10.8	9.9	0.1	9.1
US Equity	8.2	-17.2	32.8	8.7	1.1	18.7	16.9	13.9	2.1	14.0
Russell 3000	7.2	-17.6	31.9	15.0	2.9	17.6	18.7	15.0	-0.5	17.8
Northern Trust S&P500 Index Fund	7.6	-15.5	30.0							
S&P 500	7.6	<i>-15.5</i>	30.0	<i>15.1</i>	4.3	17.9	18.6	15.4	-0.6	19.7
Waycross Partners Core Equity										
S&P 500	7.6	<i>-15.5</i>	30.0	<i>15.1</i>	4.3	17.9	18.6	15.4	-0.6	19.7
Boston Partners Mid Cap Value	13.4	-11.5	44.0	-7.5	2.3	7.8	16.1	15.4	5.3	17.4
Russell MidCap Value	10.5	-13.6	42.4	-7.3	1.6	8.8	13.4	17.3	-2.1	17.5
Champlain Mid Cap	7.0	-26.3	39.2	17.7	6.0	24.7	17.6	21.0	1.2	13.2
Russell MidCap	9.2	-19.4	38.1	4.6	3.2	14.0	<i>15.3</i>	14.2	-0.2	15.8
Champlain Small Cap	9.1	-22.8	36.2	5.4	-4.6	23.5	19.4	24.7	4.0	2.6
Russell 2000	6.2	-23.5	47.7	0.4	-8.9	15.2	20.7	15.5	1.2	3.9
International Equity	14.4	-25.4	20.1	8.4	1.8	3.5	14.2	11.3	-2.4	4.7
MSCI EAFE	17.3	-25.1	<i>25.7</i>	0.5	-1.3	<i>2.</i> 7	19.1	6.5	-8.7	4.3
Northern Trust EAFE Index Fund	18.5	-25.0	25.5							
MSCI EAFE	17.3	<i>-25.1</i>	<i>25.7</i>	0.5	-1.3	<i>2</i> .7	19.1	6.5	<i>-8.7</i>	4.3
Wellington International Quality Growth (IQG)	12.5	-33.4	20.8	19.9	1.3	8.0	20.0	10.5		
MSCI ACWI ex USA Growth	12.9	-30.2	17.0	17.5	2.0	3.1	17.7	11.5	-8.1	4.3
First Eagle International Equity	11.9									
MSCI EAFE Value	19.6	-20.2	30.7	-11.9	-4.9	-0.4	22.5	3.5	-12.6	<i>5.7</i>

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#### Total Plan | As of December 31, 2022

	Fiscal YTD (%)	Fiscal 2022 (%)	Fiscal 2021 (%)	Fiscal 2020 (%)	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)
Private Equity	-3.7	12.4	56.5	4.1	11.6	14.1	6.9	6.4	11.4	16.9
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	<i>25.8</i>
Adams Street 2012 Global Fund	-4.0	-1.6	74.9	7.1	15.1	16.6	11.0	7.2	5.6	10.4
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	<i>25.8</i>
Adams Street Venture Innovation Fund	-2.9	16.4	147.5	22.6	20.3					
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	<i>25.8</i>
Catalyst III	5.9	20.2	24.3	-4.7	11.8	8.2	7.0	13.2	14.6	21.6
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	25.8
Catalyst IV	-2.7	-27.3	59.7	47.5	16.7	14.6	17.3			
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	25.8
Coller Fund VI	-9.0	13.6	57.5	-12.2	13.9	23.0	7.6	15.3	7.9	30.2
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	<i>25.8</i>
Coller Fund VII	-9.5	18.1	47.5	-3.2	6.0	63.0	62.0			
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	<i>25.8</i>
Coller Fund VIII	-8.6	44.1	87.1							
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	25.8
JP Morgan Global Fund V	-5.6	15.9	59.8	-7.3	36.9	13.5	9.1	27.2	30.1	
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	<i>25.8</i>
JP Morgan Global Fund VI	-0.6	24.8	34.8	3.9	0.7					
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	25.8
JP Morgan Global Fund VIII	0.0	23.7	19.7	7.0						
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	<i>25.8</i>

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#### Total Plan | As of December 31, 2022

	Fiscal YTD (%)	Fiscal 2022 (%)	Fiscal 2021 (%)	Fiscal 2020 (%)	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)
JPMorgan US Corporate Finance III	-16.7	19.3	107.9	14.8	-1.6	-0.3	23.5	4.6	26.8	20.6
MSCI ACWI IMI (1Q Lagged) +2%	-6.2	-14.8	43.7	3.2	6.6	13.3	21.4	-1.9	2.8	25.8
JPMorgan Venture Capital Fund III  MSCI ACWI IMI (1Q Lagged) +2%	-14.6 -6.2	-5.0 <i>-14.8</i>	57.7 <i>43.</i> 7	0.5 <i>3.2</i>	0.5 <i>6.6</i>	10.7 <i>13.3</i>	5.1 <i>21.4</i>	-6.2 <i>-1.9</i>	19.2 <i>2.8</i>	24.6 <i>25.8</i>
Lexington Capital Partners VIII  MSCI ACWI IMI (1Q Lagged) +2%	-5.4 -6.2	14.0 <i>-14.8</i>	51.9 <i>43.7</i>	-1.0 <i>3.2</i>	3.1 <i>6.6</i>	42.4 <i>13.3</i>	15.1 <i>21.4</i>	10.0 <i>-1.9</i>	<u></u> 2.8	<u></u> 25.8
Lexington Capital Partners IX  MSCI ACWI IMI (1Q Lagged) +2%	-4.7 -6.2	28.2 <i>-14.8</i>	63.9 <i>43.7</i>	-15.5 <i>3.2</i>	<del></del> 6.6	 13.3	<u></u> 21.4	 -1.9	<u></u> 2.8	<del></del> 25.8
Pantheon USA Fund VII  MSCI ACWI IMI (1Q Lagged) +2%	-2.6 -6.2	3.8 <i>-14.8</i>	55.2 <i>43.7</i>	9.8 <i>3.2</i>	-9.3 <i>6.6</i>	13.8 <i>13.3</i>	14.5 <i>21.4</i>	7.2 -1.9	9.2 <i>2.8</i>	20.7 <i>25.8</i>
Standard Life Europe Smaller Funds I  MSCI ACWI IMI (1Q Lagged) +2%	8.0 - <i>6.2</i>	-7.2 <i>-14.8</i>	21.3 <i>43.7</i>	3.5 <i>3.2</i>	5.4 6.6	10.6 <i>13.3</i>	-5.6 <i>21.4</i>	9.3 <i>-1.9</i>	-20.1 <i>2.8</i>	-10.2 <i>25.8</i>
Coller Fund V	0.2	14.0	40.7	<b>5.</b> L	0.0	70.0	21.4		2.0	20.0
JPMorgan European Corporate Finance III										
Lexington Capital Partners VI-B										
Pantheon Europe Fund V-B										
Investment Grade Bonds	2.3	-14.4	-0.1	7.0	9.4	-0.8	1.2	5.6	1.3	4.0
Bloomberg US Aggregate TR	1.9	-14.6	-0.9	7.0	10.3	-1.2	0.1	5.2	<i>2</i> .9	4.0
NT US Aggregate Bond	1.9	-14.6	-0.9							
Bloomberg US Aggregate TR	1.9	-14.6	-0.9	7.0	10.3	-1.2	0.1	5.2	<i>2</i> .9	4.0
Dodge & Cox Core Fixed Income	3.1	-14.0	2.4	7.5	8.8	-0.2	1.3	5.5	2.0	5.7
Bloomberg US Aggregate TR	1.9	-14.6	-0.9	7.0	10.3	-1.2	0.1	<i>5.2</i>	2.9	4.0

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#### Total Plan | As of December 31, 2022

	Fiscal YTD	Fiscal 2022	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Treasuries	-0.6	-26.5	-10.2							
Bloomberg US Govt Long TR	-0.6	-26.6	-10.1	16.2	24.6	<i>-3.5</i>	-6.1	13.0	8.6	11.6
NT Long-Term Gov. Bond Index Fund	-0.6	-26.5	-10.2							
Bloomberg US Govt Long TR	-0.6	-26.6	-10.1	16.2	24.6	<i>-3.5</i>	-6.1	13.0	8.6	11.6
High Yield	4.4	-12.3	9.4	5.6	5.9	3.5	9.7	8.7	-3.6	6.8
ICE BofA US High Yield TR	4.0	-14.1	11.5	2.3	6.4	2.9	9.1	12.8	<i>-3.6</i>	7.2
AXA High Yield	4.4	-12.3	9.4	5.6	5.9	3.5	9.7	8.7	-3.6	
ICE BofA US High Yield TR	4.0	-14.1	11.5	2.3	6.4	2.9	9.1	12.8	<i>-3.6</i>	7.2
Bank Loans	2.8	-2.4	7.3	1.2	3.6	5.5	5.9	5.5	1.9	
Credit Suisse Leveraged Loans	2.3	-2.6	8.5	0.8	3.1	5.6	5.4	<i>5.3</i>	1.2	4.3
Pacific Asset Management	2.8	-2.4	7.3	1.2	3.6	5.5	5.9	5.5	1.9	
Credit Suisse Leveraged Loans	2.3	-2.6	8.5	0.8	3.1	5.6	5.4	<i>5.3</i>	1.2	4.3
Real Estate	-4.8	19.5	16.1	-3.5	7.4	7.0	5.1	10.9	11.3	10.0
NCREIF ODCE	-5.0	22.1	14.6	1.4	5.6	8.7	7.7	10.1	15.0	12.4
Centersquare Value Fund IV	5.0	42.3	27.5	-0.9	-29.6					
NCREIF Property +300bps 1QLAG	1.3	<i>25.0</i>	10.6	<i>5.8</i>	9.7	10.4	10.2	13.9		
JP Morgan SPF	-5.2	18.0	13.0	0.8	2.9	6.9	6.5	8.6	13.4	11.0
NCREIF ODCE	-5.0	22.1	14.6	1.4	<i>5.6</i>	8.7	7.7	10.1	15.0	12.4
JP Morgan SSPF	-7.2	13.4	16.6	1.2	5.9	9.1	8.2	10.3	19.0	14.5
NCREIF ODCE + 100bps	-4.7	23.3	15.8	2.4	6.6	9.8	8.7	11.2	16.1	13.5
Retirement Office										

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#### Total Plan | As of December 31, 2022

	Fiscal YTD (%)	Fiscal 2022 (%)	Fiscal 2021 (%)	Fiscal 2020 (%)	Fiscal 2019 (%)	Fiscal 2018 (%)	Fiscal 2017 (%)	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)
Infrastructure	0.8	48.1	-7.7	2.4	7.2					
CPI + 500 bps	1.2	13.6	10.6	6.4	6.8	7.4	7.3	6.5	5.0	6.7
BlackRock NTR Renewable Power Fund	-2.2	38.7	-27.6	-5.7	14.2	7.4	6.5	1.2	6.1	1.3
CPI + 500 bps	1.2	13.6	10.6	6.4	6.8	7.4	7.3	6.5	5.0	6.7
BlackRock Global Renewable Power Fund II	0.9	41.2	-0.7	8.3	-2.6	4.3	-2.1			
CPI + 500 bps	1.2	13.6	10.6	6.4	6.8	7.4	7.3	6.5	5.0	6.7
Cash & Cash Alternatives	2.8	-18.9	1.8	-2.9	5.1	2.3	6.9	11.2	-11.2	
BlackRock Custom Benchmark	7.9	-17.4	22.3	6.2	3.9	7.5	12.5	11.6	-1.1	
BlackRock Liquid Policy Portfolio	7.7	-17.2	21.9	6.3	3.9	7.2	12.2	11.4	-1.3	
BlackRock Custom Benchmark	7.9	-17.4	22.3	6.2	3.9	7.5	12.5	11.6	-1.1	
Main Account										

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#### Total Plan | As of December 31, 2022

Statistics Summary (Net of Fees)						
	5	Years Ending Decen	nber 31, 2022			
	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Fund	4.8%	10.3%	-0.3	1.0	0.4	1.4%
Fund Benchmark	5.1%	10.3%		1.0	0.4	0.0%
US Equity	8.0%	19.5%	-0.4	1.0	0.3	1.9%
Russell 3000	8.8%	19.2%		1.0	0.4	0.0%
International Equity	2.4%	15.4%	0.2	0.9	0.1	4.5%
MSCI EAFE	1.5%	17.5%		1.0	0.0	0.0%
Private Equity	16.9%	11.9%	0.5	0.1	1.3	20.1%
MSCI ACWI IMI (1Q Lagged) +2%	6.2%	17.5%		1.0	0.3	0.0%
Private Debt						
BBarc HY 1Q Lagged + 2%						
Investment Grade Bonds	0.2%	5.2%	0.1	1.0	-0.2	1.5%
Bloomberg US Aggregate TR	0.0%	5.1%		1.0	-0.2	0.0%
Treasuries						
Bloomberg US Govt Long TR	-2.2%	13.5%		1.0	-0.3	0.0%
High Yield	2.8%	8.0%	0.4	0.9	0.2	1.7%
ICE BofA US High Yield TR	2.1%	9.2%		1.0	0.1	0.0%
Bank Loans	3.3%	5.7%	0.0	0.8	0.4	2.1%
Credit Suisse Leveraged Loans	3.2%	7.1%		1.0	0.3	0.0%
Real Estate	7.5%	5.3%	-0.2	0.5	1.2	5.7%
NCREIF ODCE	8.7%	6.8%		1.0	1.1	0.0%

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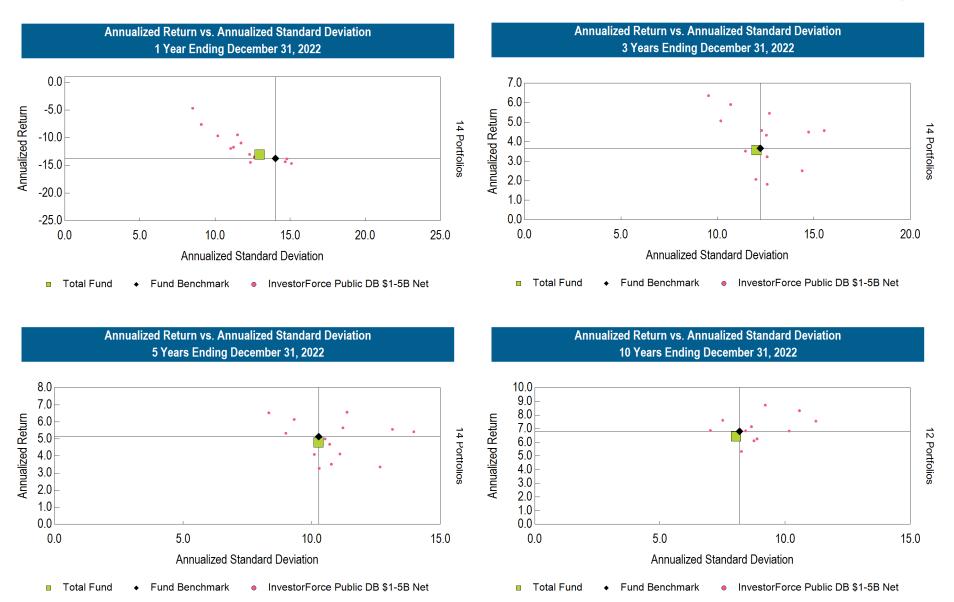
#### Total Plan | As of December 31, 2022

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Infrastructure						
CPI + 500 bps	9.0%	1.4%		1.0	5.6	0.0%
Cash & Cash Alternatives	-2.5%	9.3%	-1.0	0.6	-0.4	6.8%
BlackRock Custom Benchmark	4.5%	13.5%		1.0	0.2	0.0%

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#### Total Plan | As of December 31, 2022



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#### Public Manager Expense Analysis | As of December 31, 2022

	Public Manager Expens	e Analysis		
	As Of December 31,	2022		
Name	Market Value	% of Portfolio	Estimated Fee	Estimated Fee Value
AXA High Yield	\$29,807,709	2.1%	0.33%	\$96,875
BlackRock Liquid Policy Portfolio	\$27,230,342	1.9%	0.09%	\$24,507
Boston Partners Mid Cap Value	\$54,182,895	3.7%	0.64%	\$345,914
Champlain Mid Cap	\$44,600,747	3.1%	0.55%	\$245,304
Champlain Small Cap	\$59,100,163	4.1%	0.55%	\$325,051
Dodge & Cox Core Fixed Income	\$88,437,044	6.1%	0.23%	\$207,656
First Eagle International Equity	\$115,483,842	8.0%	0.55%	\$635,161
JP Morgan SPF	\$123,008,840	8.5%	0.86%	\$1,052,566
JP Morgan SSPF	\$29,767,508	2.0%	1.25%	\$372,094
Northern Trust EAFE Index Fund	\$129,199,317	8.9%	0.01%	\$16,150
Northern Trust S&P500 Index Fund	\$304,783,555	21.0%	0.00%	\$7,620
NT Long-Term Gov. Bond Index Fund	\$57,406,912	4.0%	0.03%	\$17,222
NT US Aggregate Bond	\$176,217,225	12.1%	0.02%	\$30,838
Pacific Asset Management	\$40,984,504	2.8%	0.37%	\$151,643
Waycross Partners Core Equity	\$52,951,664	3.6%	0.45%	\$236,807
Wellington International Quality Growth (IQG)	\$119,096,964	8.2%	0.59%	\$705,033
Total	\$1,452,259,231	100.0%	0.31%	\$4,470,441

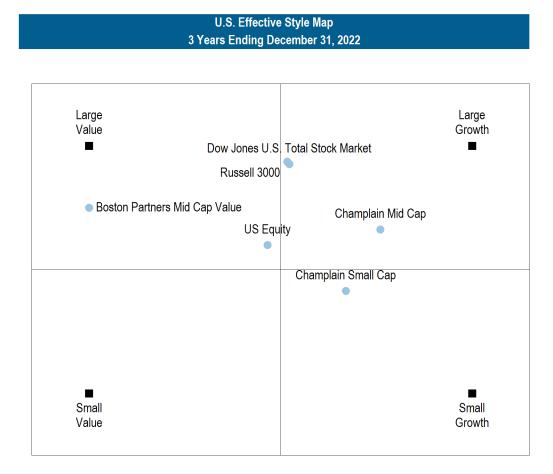
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## **US Equity**



#### US Equity | As of December 31, 2022

Asset Allocation on Dec	ember 31, 2022	
	Actual	Actual
Northern Trust S&P500 Index Fund	\$304,783,555	59.1%
Waycross Partners Core Equity	\$52,951,664	10.3%
Boston Partners Mid Cap Value	\$54,182,895	10.5%
Champlain Mid Cap	\$44,600,747	8.6%
Champlain Small Cap	\$59,100,163	11.5%
Total	\$515,619,025	100.0%

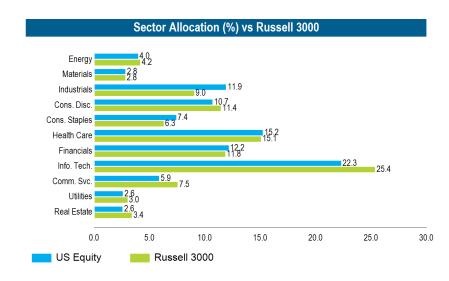


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#### US Equity | As of December 31, 2022

US Equity Characteristics					
vs Russell 3000					
	Portfolio	Index			
	Q4-22	Q4-22			
Market Value					
Market Value (\$M)	462.7				
Number Of Holdings	632	2960			
Characteristics					
Weighted Avg. Market Cap. (\$B)	285.2	360.3			
Median Market Cap (\$B)	22.3	2.5			
P/E Ratio	20.0	18.5			
Yield	1.6	1.7			
EPS Growth - 5 Yrs.	15.6	17.2			
Price to Book	3.6	3.6			
Beta (returns-based)	1.0	1.0			
Company Size Distribution					
Weighted Avg. Market Cap. (\$B)	285.2	360.3			
Median Market Cap. (\$B)	22.3	2.5			
Large Cap. (%)	60.3	71.7			
Medium Cap. (%)	33.7	22.7			
Small Cap. (%)	6.0	5.6			



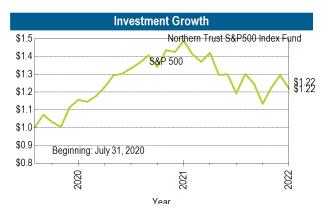
Top Holdings	
APPLE INC	4.3%
MICROSOFT CORP	3.9%
AMAZON.COM INC	1.7%
ALPHABET INC	1.3%
ABBVIE INC	1.1%
JPMORGAN CHASE & CO	1.1%
BERKSHIRE HATHAWAY INC	1.0%
NVIDIA CORPORATION	1.0%
ELI LILLY AND CO	1.0%
MASTERCARD INC	1.0%
Total	17.3%

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#### Northern Trust S&P500 Index Fund | As of December 31, 2022

Ac	count Information
Account Name	Northern Trust S&P500 Index Fund
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	8/01/20
Account Type	US Equity
Benchmark	S&P 500
Universe	



Characteristics		
	Portfolio	S&P 500
Number of Holdings	508	503
Weighted Avg. Market Cap. (\$B)	413.6	415.6
Median Market Cap. (\$B)	29.6	29.6
Price To Earnings	19.3	19.5
Price To Book	3.9	3.9
Price To Sales	2.5	2.5
Return on Equity (%)	30.2	30.0
Yield (%)	1.8	1.7

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Northern Trust S&P500 Index Fund	7.6	-18.1				8.5	Aug-20
S&P 500	7.6	-18.1	7.7	9.4	12.6	8.5	Aug-20

Characteristics		
	Portfolio	S&P 500
COMPANY SIZE DISTRIBUTION		
Weighted Avg. Market Cap. (\$B)	413.6	415.6
Median Market Cap. (\$B)	29.6	29.6
Large Cap. (%)	83.7	83.7
Medium Cap. (%)	16.3	16.2
Small Cap. (%)	0.0	0.1

Top Holdings	
APPLE INC	6.0%
MICROSOFT CORP	5.6%
AMAZON.COM INC	2.3%
BERKSHIRE HATHAWAY INC	1.7%
ALPHABET INC	1.6%
UNITEDHEALTH GROUP INC	1.5%
ALPHABET INC	1.5%
JOHNSON & JOHNSON	1.4%
EXXON MOBIL CORP	1.4%
JPMORGAN CHASE & CO	1.2%

Sector Allocation		
	Portfolio	S&P 500
INDUSTRY SECTOR DISTRIBUTION (% E	quity)	
Energy	5.2	5.1
Materials	2.7	2.7
Industrials	8.7	8.6
Consumer Discretionary	9.8	10.0
Consumer Staples	7.2	7.8
Health Care	15.8	15.4
Financials	11.7	12.0
Information Technology	25.7	25.3
Communication Services	7.3	7.5
Utilities	3.1	3.0
Real Estate	2.7	2.6

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### Waycross Partners Core Equity | As of December 31, 2022

	Account Information
Account Name	<b>Waycross Partners Core Equity</b>
Account Structure	Separate Account
Investment Style	Active
Inception Date	11/01/22
Account Type	US Equity
Benchmark	S&P 500
Universe	eV US Large Cap Core Equity Net



Characteristics		
	Portfolio	S&P 500
Number of Holdings	31	503
Weighted Avg. Market Cap. (\$B)	419.1	415.6
Median Market Cap. (\$B)	115.9	29.6
Price To Earnings	20.9	19.5
Price To Book	4.7	3.9
Price To Sales	2.9	2.5
Return on Equity (%)	44.0	30.0
Yield (%)	1.4	1.7

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Waycross Partners Core Equity						2.5	Nov-22
S&P 500	7.6	-18.1	7.7	9.4	12.6	-0.5	Nov-22

Characteristics		
	Portfolio	S&P 500
COMPANY SIZE DISTRIBUTION		
Weighted Avg. Market Cap. (\$B)	419.1	415.6
Median Market Cap. (\$B)	115.9	29.6
Large Cap. (%)	88.5	83.7
Medium Cap. (%)	11.5	16.2
Small Cap. (%)	0.0	0.1

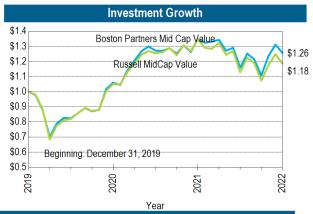
Top Holdings	
APPLE INC	6.2%
MICROSOFT CORP	5.6%
ABBVIE INC	5.0%
ULTA BEAUTY INC	4.8%
INTUITIVE SURGICAL INC	4.5%
ELI LILLY AND CO	3.9%
STARBUCKS CORP	3.9%
ANALOG DEVICES INC	3.9%
GOLDMAN SACHS GROUP INC (THE)	3.8%
CISCO SYSTEMS INC	3.8%

Sector Allocation	1	
	Portfolio	S&P 500
NDUSTRY SECTOR DISTRIBUTION (% I	Equity)	
Energy	0.0	5.1
Materials	0.0	2.7
ndustrials	6.5	8.6
Consumer Discretionary	15.5	10.0
Consumer Staples	2.5	7.8
Health Care	18.2	15.4
Financials	16.0	12.0
nformation Technology	34.7	25.3
Communication Services	5.9	7.5
Utilities	0.0	3.0
Real Estate	0.0	2.6



#### Boston Partners Mid Cap Value | As of December 31, 2022

	Account Information
Account Name	Boston Partners Mid Cap Value
Account Structure	Separate Account
Investment Style	Active
Inception Date	6/01/98
Account Type	US Stock Mid Cap Value
Benchmark	Russell MidCap Value
Universe	eV US Mid Cap Value Equity Net



Characteristics		
	Portfolio	Russell MidCap Value
Number of Holdings	131	699
Veighted Avg. Market Cap. (\$B)	25.4	20.1
Median Market Cap. (\$B)	15.8	9.2
Price To Earnings	16.6	14.5
Price To Book	2.7	2.3
Price To Sales	1.7	1.5
Return on Equity (%)	20.6	14.8
/ield (%)	1.9	2.2

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Boston Partners Mid Cap Value	13.4	-6.9	7.9	7.0	11.9	9.4	Jun-98
Russell MidCap Value	10.5	-12.0	5.8	5.7	10.1	8.7	Jun-98

Sector Allocation		
	Portfolio	Russell MidCap Value
INDUSTRY SECTOR DISTRIBUTION (%	Equity)	
Energy	6.1	5.3
Materials	5.8	7.6
Industrials	23.2	15.7
Consumer Discretionary	14.9	9.9
Consumer Staples	2.1	3.9
Health Care	8.2	7.5
Financials	15.7	18.3
Information Technology	8.8	8.9
Communication Services	1.0	3.1
Utilities	5.5	9.2
Real Estate	5.8	10.6

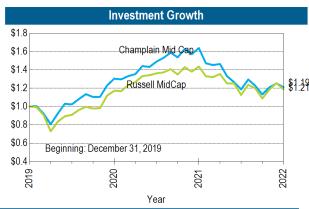
Characteristics		
	Portfolio	Russell MidCap Value
COMPANY SIZE DISTRIBUTION		
Weighted Avg. Market Cap. (\$B)	25.4	20.1
Median Market Cap. (\$B)	15.8	9.2
Large Cap. (%)	23.3	10.8
Medium Cap. (%)	75.7	85.0
Small Cap. (%)	1.0	4.1

Top Holdings	
CASH - USD	2.8%
AMERIPRISE FINANCIAL INC	2.4%
AUTOZONE INC	1.9%
CENTERPOINT ENERGY INC.	1.8%
AMETEK INC	1.7%
DOVER CORP	1.6%
KEYCORP	1.5%
AMERISOURCEBERGEN CORP	1.5%
HUNTINGTON BANCSHARES INC	1.5%
FIFTH THIRD BANCORP	1.5%



#### Champlain Mid Cap | As of December 31, 2022

Accol	unt Information
Account Name	Champlain Mid Cap
Account Structure	Separate Account
Investment Style	Active
Inception Date	7/01/09
Account Type	US Stock Mid Cap Core
Benchmark	Russell MidCap
Universe	eV US Mid Cap Core Equity Net



Characteristics		
	Portfolio	Russell MidCap
Number of Holdings	60	818
Veighted Avg. Market Cap. (\$B)	19.5	21.5
Median Market Cap. (\$B)	16.4	9.7
Price To Earnings	28.8	16.7
Price To Book	4.1	2.9
Price To Sales	3.5	1.8
Return on Equity (%)	20.4	17.8
field (%)	0.9	1.7

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Champlain Mid Cap	7.0	-26.1	6.6	10.0	13.4	14.0	Jul-09
Russell MidCap	9.2	-17.3	5.9	7.1	11.0	13.0	Jul-09

rs 10 Yrs S.I. (%) S.I. Date	
140 1410	
7.1 11.0 13.0 Jul-09	7.1 11.0

Characteristics		
	Portfolio	Russell MidCap
COMPANY SIZE DISTRIBUTION		
Weighted Avg. Market Cap. (\$B)	19.5	21.5
Median Market Cap. (\$B)	16.4	9.7
Large Cap. (%)	10.3	14.5
Medium Cap. (%)	86.2	81.3
Small Cap. (%)	3.5	4.2

Top Holdings	
EVEREST RE GROUP LTD	3.7%
AMETEK INC	3.6%
FORTIVE CORP	3.4%
CASH - USD	3.3%
TORO CO (THE)	2.9%
WORKDAY INC	2.9%
TOWERS WATSON & CO.CL.A	2.7%
ROCKWELL AUTOMATION INC.	2.7%
WATERS CORP	2.6%
NORDSON CORP	2.4%

Sector Allocation		
	Portfolio	Russell MidCap
INDUSTRY SECTOR DISTRIBUTION (% E	Equity)	
Energy	0.0	4.9
Materials	1.8	6.3
Industrials	25.6	15.8
Consumer Discretionary	8.3	11.8
Consumer Staples	10.3	3.6
Health Care	22.8	11.0
Financials	11.1	14.0
Information Technology	16.3	15.4
Communication Services	0.0	3.4
Utilities	0.0	6.1
Real Estate	0.0	7.6



#### Champlain Small Cap | As of December 31, 2022

	Account Information
Account Name	Champlain Small Cap
Account Structure	Separate Account
Investment Style	Active
Inception Date	1/01/04
Account Type	US Stock Small Cap Core
Benchmark	Russell 2000
Universe	eV US Small Cap Core Equity Net



Characteristics		
	Portfolio	Russell 2000
Number of Holdings	68	1,950
Weighted Avg. Market Cap. (\$B)	3.8	2.8
Median Market Cap. (\$B)	2.9	1.1
Price To Earnings	26.6	12.2
Price To Book	3.1	2.2
Price To Sales	2.9	1.3
Return on Equity (%)	2.7	5.3
Yield (%)	0.8	1.6

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Champlain Small Cap	9.1	-20.0	4.2	6.9	11.2	10.6	Jan-04
Russell 2000	6.2	-20.4	3.1	4.1	9.0	7.7	Jan-04

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Champlain Small Cap	9.1	-20.0	4.2	6.9	11.2	10.6	Jan-04
Russell 2000	6.2	-20.4	3.1	4.1	9.0	7.7	Jan-04

Characteristics		
	Portfolio	Russell 2000
COMPANY SIZE DISTRIBUTION		
Weighted Avg. Market Cap. (\$B)	3.8	2.8
Median Market Cap. (\$B)	2.9	1.1
Large Cap. (%)	0.0	0.0
Medium Cap. (%)	52.3	29.8
Small Cap. (%)	47.7	70.2

Top Holdings	
CASH - USD	3.5%
MSA SAFETY INC	3.4%
PENUMBRA INC	3.1%
INSPIRE MEDICAL SYSTEMS INC	3.0%
PURE STORAGE INC	2.9%
AQUACELL TECHS.	2.9%
JOHN BEAN TECHNOLOGIES CORP	2.7%
GLOBUS MEDICAL INC	2.6%
INTEGRA LIFESCIENCES HOLDINGS CORP	2.6%
WORKIVA INC	2.3%

Sector Allocation				
	Portfolio	Russell 2000		
INDUSTRY SECTOR DISTRIBUTION (% I	Equity)			
Energy	0.0	6.8		
Materials	4.0	4.3		
Industrials	20.7	15.5		
Consumer Discretionary	3.2	10.3		
Consumer Staples	12.7	3.6		
Health Care	19.2	16.9		
Financials	15.4	17.2		
Information Technology	16.3	12.8		
Communication Services	1.5	2.5		
Utilities	0.0	3.5		
Real Estate	0.0	6.4		

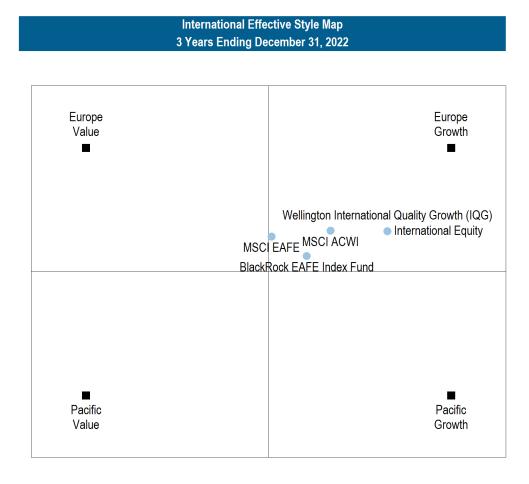
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## **International Equity**



#### International Equity | As of December 31, 2022

Asset Allocation on December 31, 2022				
	Actual	Actual		
First Eagle International Equity	\$115,483,842	31.7%		
Northern Trust EAFE Index Fund	\$129,199,317	35.5%		
Wellington International Quality Growth (IQG)	\$119,096,964	32.7%		
Total	\$363,780,123	100.0%		

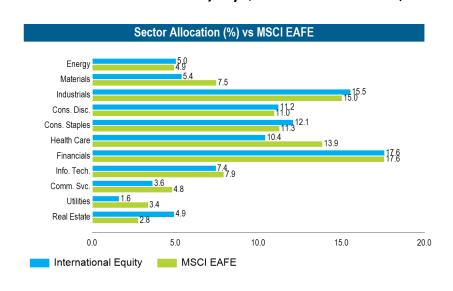


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#### **International Equity Characteristics VS MSCI EAFE** Portfolio Index Q4-22 Q4-22 Market Value Market Value (\$M) 363.8 **Number Of Holdings** 935 796 Characteristics Weighted Avg. Market 68.5 78.1 Cap. (\$B) Median Market Cap (\$B) 12.0 11.8 P/E Ratio 13.7 13.7 Yield 2.6 3.4 EPS Growth - 5 Yrs. 9.3 9.9 Price to Book 2.2 2.4 Beta (returns-based) 0.9 1.0 Weighted Avg. Market 68.5 78.1 Cap. (\$B) Median Market Cap. (\$B) 12.0 11.8 Large Cap. (%) 61.8 69.0 Medium Cap. (%) 30.1 24.5 Small Cap. (%) 8.1 6.5

## Miami Fire and Police Retirement Trust International Equity | As of December 31, 2022



Top Holdings	
NESTLE SA, CHAM UND VEVEY	1.6%
IMPERIAL OIL LTD	1.5%
CIE FINANCIERE RICHEMONT AG, ZUG	1.4%
BRITISH AMERICAN TOBACCO PLC	1.3%
UNILEVER PLC COMMON STOCK GBP.0311	1.2%
DANONE	1.2%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.2%
ASTRAZENECA PLC	1.2%
WILLIS TOWERS WATSON PLC	1.1%
ROCHE HOLDING AG	1.1%
Total	12.6%

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#### International Equity | As of December 31, 2022

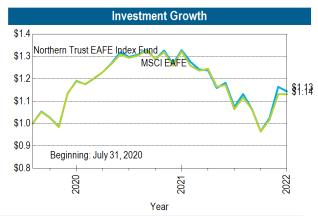
International Equity Region Allocation								
vs MSCI EAFE								
Region	% of Total	% of Bench	% Diff					
North America ex U.S.	4.2%	0.0%	4.2%					
United States	4.8%	0.0%	4.8%					
Europe Ex U.K.	43.0%	49.4%	-6.4%					
United Kingdom	12.5%	15.3%	-2.8%					
Pacific Basin Ex Japan	9.3%	12.7%	-3.3%					
Japan	16.5%	21.9%	-5.4%					
Emerging Markets	8.0%	0.0%	8.0%					
Other	1.7%	0.7%	0.9%					
Total	100.0%	100.0%	0.0%					

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#### Northern Trust EAFE Index Fund | As of December 31, 2022

Account Information							
Account Name	Northern Trust EAFE Index Fund						
Account Structure	Commingled Fund						
Investment Style	Passive						
Inception Date	8/01/20						
Account Type	International						
Benchmark	MSCI EAFE						
Universe							



Characteristics		
	Portfolio	MSCI EAFE
Number of Holdings	861	796
Weighted Avg. Market Cap. (\$B)	77.4	78.1
Median Market Cap. (\$B)	11.1	11.8
Price To Earnings	13.7	13.7
Price To Book	2.5	2.4
Price To Sales	1.3	1.3
Return on Equity (%)	15.5	15.2
Yield (%)	3.4	3.4

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Northern Trust EAFE Index Fund	18.5	-13.9				5.7	Aug-20
MSCI EAFE	17.3	-14.5	0.9	1.5	4.7	5.2	Aug-20

F	Portfolio Perforn	nance	Summ	ary			
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Northern Trust EAFE Index Fund	18.5	-13.9				5.7	Aug-20
MSCI EAFE	17.3	-14.5	0.9	1.5	4.7	5.2	Aug-20

Characteristics						
	Portfolio	MSCI EAFE				
COMPANY SIZE DISTRIBUTION						
Weighted Avg. Market Cap. (\$B)	77.4	78.1				
Median Market Cap. (\$B)	11.1	11.8				
Large Cap. (%)	67.6	69.0				
Medium Cap. (%)	26.6	24.5				
Small Cap. (%)	5.8	6.5				

Top Holdings				
NESTLE SA, CHAM UND VEVEY	2.4%			
NOVO NORDISK 'B'	1.7%			
ROCHE HOLDING AG	1.7%			
ASML HOLDING NV	1.6%			
SHELL PLC	1.5%			
LVMH MOET HENNESSY LOUIS VUITTON SE	1.5%			
NOVARTIS AG	1.5%			
BHP GROUP LTD	1.2%			
TOTALENERGIES SE	1.2%			
TOYOTA MOTOR CORP	1.1%			

Sector Allocation						
	Portfolio	MSCI EAFE				
INDUSTRY SECTOR DISTRIBUTIO	N (% Equity)					
Energy	4.4	5.0				
Materials	7.6	7.8				
Industrials	15.5	15.1				
Consumer Discretionary	11.6	11.1				
Consumer Staples	9.3	10.5				
Health Care	12.8	13.6				
Financials	18.2	18.7				
Information Technology	8.2	7.8				
Communication Services	4.7	4.5				
Utilities	3.5	3.5				
Real Estate	2.8	2.6				

Sector allocation total is less than 100% due to cash holdings.



### Wellington International Quality Growth (IQG) $\mid$ As of December 31, 2022

Account Information						
Account Name	Wellington International Quality Growth (IQG)					
Account Structure	Separate Account					
Investment Style	Active					
Inception Date	11/01/14					
Account Type	International					
Benchmark	MSCI ACWI ex USA Growth					
Universe	eV ACWI ex-US Growth Equity Net					



Characteristics							
		MSCI					
	Portfolio	ACWI ex					
	Fortiono	USA					
		Growth					
Number of Holdings	57	1,241					
Weighted Avg. Market Cap. (\$B)	78.4	101.4					
Median Market Cap. (\$B)	30.3	9.2					
Price To Earnings	14.4	20.0					
Price To Book	3.2	3.3					
Price To Sales	1.9	2.6					
Return on Equity (%)	100.5	18.7					
Yield (%)	0.6	1.9					

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Wellington International Quality Growth (IQG)	12.5	-27.1	-0.3	2.5		6.1	Nov-14
MSCI ACWI ex USA Growth	12.9	-23.1	-0.4	1.5	4.7	4.0	Nov-14

Portfolio I	Perform	iance :	Summ	ary			
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
Wellington International Quality Growth (IQG)	12.5	-27.1	-0.3	2.5		6.1	Nov-14
MSCI ACWI ex USA Growth	12.9	-23.1	-0.4	1.5	4.7	4.0	Nov-14

Characteristics				
	Portfolio	MSCI ACWI ex USA Growth		
COMPANY SIZE DISTRIBUTION				
Weighted Avg. Market Cap. (\$B)	78.4	101.4		
Median Market Cap. (\$B)	30.3	9.2		
Large Cap. (%)	66.1	66.7		
Medium Cap. (%)	31.8	22.6		
Small Cap. (%)	2.0	10.7		

Top Holdings	
TENCENT HOLDINGS LTD	4.4%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	3.8%
ASTRAZENECA PLC	3.8%
ROCHE HOLDING AG	3.6%
AIRBUS SE	3.1%
SAFRAN SA	2.7%
ZTO EXPRESS (CAYMAN) INC	2.5%
VINCI SA	2.3%
H WORLD GROUP LIMITED	2.3%
BRITISH AMERICAN TOBACCO PLC	2.2%

Sector Allocation	1	
	Portfolio	MSCI ACWI ex USA Growth
INDUSTRY SECTOR DISTRIBUTION (% I	Equity)	
Energy	4.8	1.7
Materials	2.1	6.3
Industrials	22.2	15.0
Consumer Discretionary	16.1	14.1
Consumer Staples	4.3	12.9
Health Care	14.3	13.6
Financials	11.6	11.3
Information Technology	10.0	15.4
Communication Services	3.0	7.4
Utilities	0.0	1.3
Real Estate	1.9	1.0

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#### First Eagle International Equity | As of December 31, 2022

	Account Information
Account Name	First Eagle International Equity
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	9/01/22
Account Type	Non-US Stock Developed
Benchmark	MSCI EAFE Value
Universe	eV EAFE Value Equity Net



Characteristics				
	Portfolio	MSCI EAFE Value		
Number of Holdings	84	482		
Weighted Avg. Market Cap. (\$B)	52.4	63.9		
Median Market Cap. (\$B)	15.2	11.6		
Price To Earnings	13.5	9.6		
Price To Book	1.7	1.7		
Price To Sales	1.3	0.9		
Return on Equity (%)	12.1	12.0		
Yield (%)	3.1	4.9		

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
First Eagle International Equity	11.9					3.3	Sep-22
MSCI EAFE Value	19.6	-5.6	0.6	0.2	3.5	8.9	Sep-22

Portfolio Performance Summary							
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	S.I. (%)	S.I. Date
First Eagle International Equity	11.9					3.3	Sep-22
MSCI EAFE Value	19.6	-5.6	0.6	0.2	3.5	8.9	Sep-22

Characteristics				
	Portfolio	MSCI EAFE Value		
COMPANY SIZE DISTRIBUTION				
Weighted Avg. Market Cap. (\$B)	52.4	63.9		
Median Market Cap. (\$B)	15.2	11.6		
Large Cap. (%)	52.7	66.8		
Medium Cap. (%)	32.5	25.6		
Small Cap. (%)	14.8	7.6		

Top Holdings	
IMPERIAL OIL LTD	4.1%
BRITISH AMERICAN TOBACCO PLC	3.7%
UNILEVER PLC COMMON STOCK GBP.0311	3.4%
CIE FINANCIERE RICHEMONT AG, ZUG	3.3%
WILLIS TOWERS WATSON PLC	3.2%
DANONE	3.1%
GROUPE BRUXELLES LAMBERT SA	2.9%
SHELL PLC	2.8%
FANUC CORP	2.2%
JARDINE MATHESON HOLDINGS LTD	2.1%

Sector Allocation				
	Portfolio	MSCI EAFE Value		
NDUSTRY SECTOR DISTRIBUTION (%	Equity)			
Energy	6.9	9.3		
Materials	4.9	10.6		
Industrials	15.6	12.3		
Consumer Discretionary	11.8	7.9		
Consumer Staples	24.3	6.1		
Health Care	4.1	8.4		
Financials	20.5	27.7		
nformation Technology	3.5	2.7		
Communication Services	1.3	4.7		
Utilities	0.0	6.0		
Real Estate	5.4	4.2		

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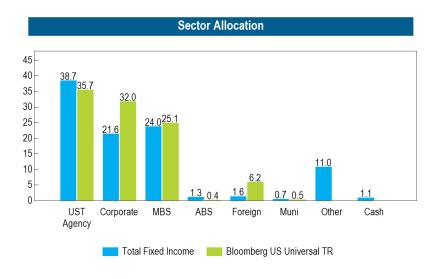
## **Fixed Income**

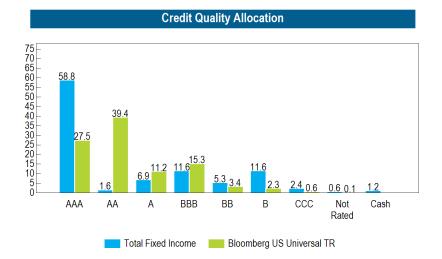


#### Total Fixed Income | As of December 31, 2022

Asset Allocation on December 31, 2022				
	Actual	Actual		
NT US Aggregate Bond	\$176,217,225	44.9%		
Dodge & Cox Core Fixed Income	\$88,437,044	22.5%		
NT Long-Term Gov. Bond Index Fund	\$57,406,912	14.6%		
AXA High Yield	\$29,807,709	7.6%		
Pacific Asset Management	\$40,984,504	10.4%		
Total	\$392,853,393	100.0%		

Total Fixed Income Characteristics vs. Bloomberg US Universal TR					
	Portfolio	Index			
	Q4-22	Q4-22			
Fixed Income Characteristics					
Yield to Maturity	5.6	5.1			
Average Duration	6.9	6.0			
Average Quality	А	AA			
Weighted Average Maturity	10.5	12.2			





Weighted Average Maturity of BBgBarc US Universal TR is 8.3 as reported by Barclays Live.

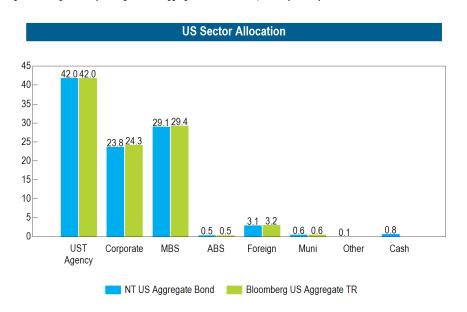
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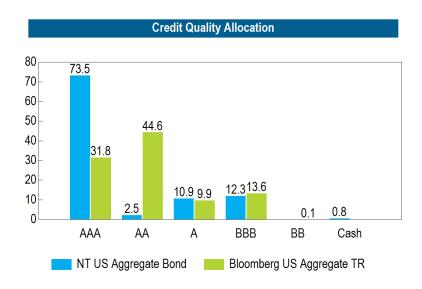


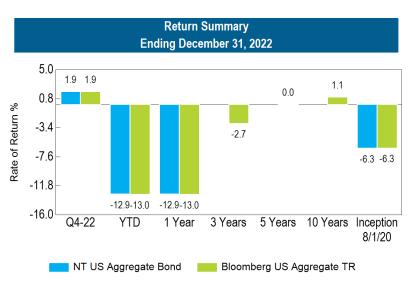
# Miami Fire and Police Retirement Trust NT US Aggregate Bond | As of December 31, 2022

NT US Aggregate Bond Characteristics vs. Bloomberg US Aggregate TR						
	Portfolio	Index	Portfolio			
	Q4-22	Q4-22	Q3-22			
Fixed Income Characteristics						
Yield to Maturity	4.6	4.6	4.6			
Average Duration	6.5	6.2	6.6			
Average Quality	AA	AA	AA			
Weighted Average Maturity	8.8	13.1	8.9			

Weighted Average Maturity of BBgBarc US Aggregate TR is 8.4 as reported by Barclays Live.







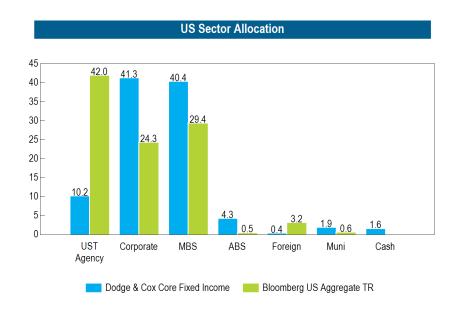
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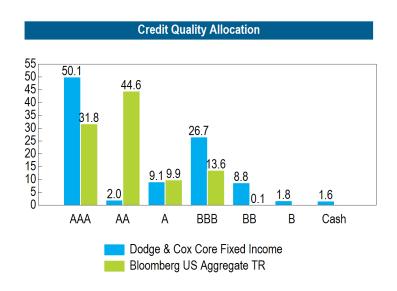


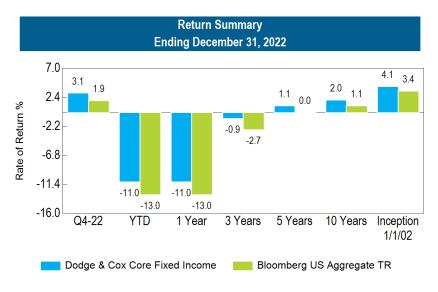
#### Dodge & Cox Core Fixed Income | As of December 31, 2022

Dodge & Cox Characteristics vs. Bloomberg US Aggregate TR						
	Portfolio	Index	Portfolio			
	Q4-22	Q4-22	Q3-22			
Fixed Income Characteristics						
Yield to Maturity	5.6	4.6	5.7			
Average Duration	5.5	6.2	5.5			
Average Quality	Α	AA	Α			
Weighted Average Maturity	10.2	13.1	10.1			

Weighted Average Maturity of BBgBarc US Aggregate TR is 8.4 as reported by Barclays Live.





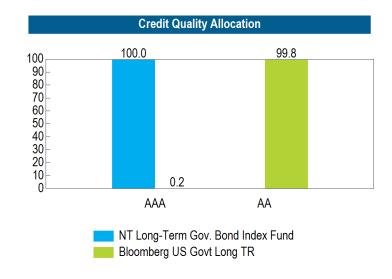


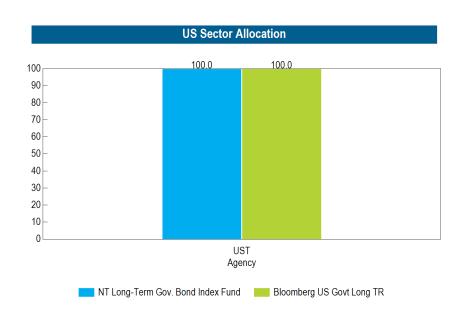
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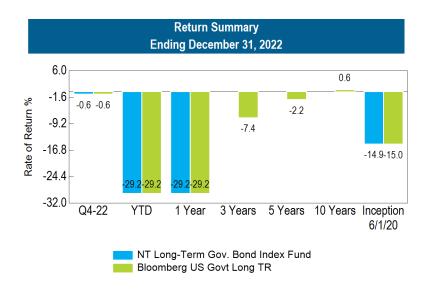


#### NT Long-Term Gov. Bond Index Fund | As of December 31, 2022

NT Long-Term Gov. Bond Index Fund Characteristics vs. Bloomberg US Govt Long TR					
	Portfolio	Index	Portfolio		
	Q4-22	Q4-22	Q3-22		
Fixed Income Characteristics					
Yield to Maturity	4.1	4.1	4.0		
Average Duration	16.2	16.1	16.4		
Average Quality	AAA	AA	AAA		
Weighted Average Maturity	23.2	23.2	23.2		





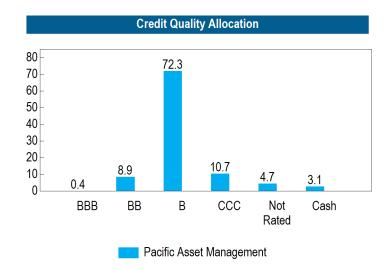


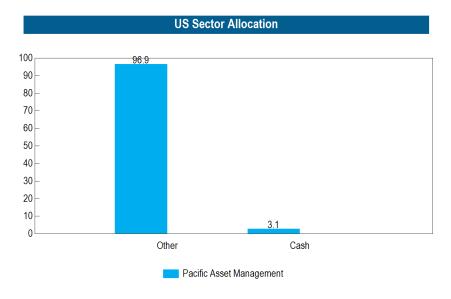
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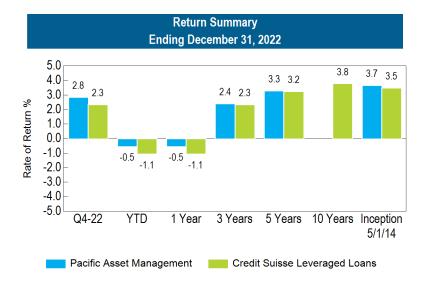


#### Pacific Asset Management | As of December 31, 2022

Pacific Asset Management Characteristics							
	Portfolio	Portfolio					
	Q4-22	Q3-22					
Fixed Income Characteristics							
Yield to Maturity	9.8	10.2					
Average Duration	0.3	0.4					
Average Quality	В	В					
Weighted Average Maturity	4.2	4.1					







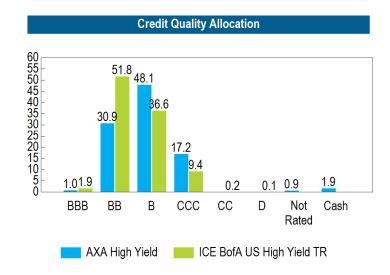
Characteristics unavailable for the Credit Suisse Leveraged Loans index. "Other" refers to bank loans.

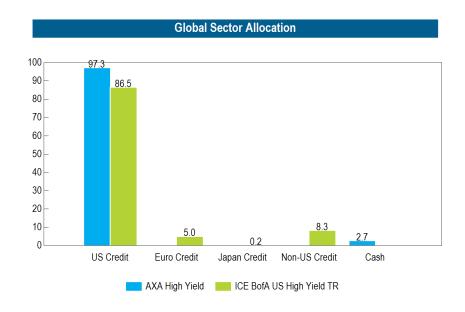
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#### AXA High Yield | As of December 31, 2022

AXA High Yield Characteristics vs. ICE BofA US High Yield TR					
	Portfolio	Portfolio			
	Q4-22	Q3-22			
Fixed Income Characteristics					
Yield to Maturity	8.7	9.2			
Average Duration	3.9	4.0			
Average Quality	В	В			
Weighted Average Maturity	5.3	5.5			







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**Private Markets Analysis** 



#### Private Markets Analysis | As of December 31, 2022

Private Market Investments Overview										
Investments	Commitments		Contributions & Distributions		Valuations		Performance			
Investment Name	Vintage Year	Commitment (\$)	Unfunded Commitment (\$)	Cumulative Contributions (\$)	Cumulative Distributions (\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	IRR (%)
CenterSquare Value-Added Fund IV, L.P.	2018	25,000,000	4,032,257	20,967,743	20,806,452	11,783,614	32,590,065	1.0	1.6	17.0
CenterSquare Value-Added Fund III, L.P.	2015	20,000,000	1,242,484	22,737,967	30,180,543	0	30,180,543	1.3	1.3	9.7
Total		45,000,000	5,274,741	43,705,710	50,986,994	11,783,614	62,770,608	1.2	1.4	12.6

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#### Miami Fire and Police Retirement Trust

#### Private Markets Analysis | As of December 31, 2022

Private Market Investments Overview										
Investments		Commit	Commitments		Contributions & Distributions		Valuations		Performance	
Investment Name	Vintage Year	Commitment (\$)	Unfunded Commitment (\$)	Cumulative Contributions (\$)	Cumulative Distributions (\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	IRR (%)
Adams Street 2012 Global Fund, L.P.	2012	14,000,000	1,325,370	12,674,630	14,165,536	12,642,945	26,808,481	1.1	2.1	14.3
Adams Street Venture Innovation Fund, L.P.	2017	5,000,000	597,500	4,402,500	2,052,445	12,161,310	14,213,755	0.5	3.2	40.4
Catalyst Fund Limited Partnership III	2012	5,000,000	74,612	5,925,388	7,804,357	2,071,334	9,875,691	1.3	1.7	10.1
Catalyst Fund Limited Partnership IV	2015	7,000,000	399,730	7,465,768	9,920,508	6,735,516	16,656,024	1.3	2.2	21.4
Coller International Partners V, L.P.	2007	14,000,000	3,052,000	10,948,000	15,398,430	49,762	15,448,192	1.4	1.4	7.4
Coller International Partners VI, L.P.	2012	14,000,000	4,161,257	9,838,743	15,449,564	2,312,527	17,762,091	1.6	1.8	15.2
Coller International Partners VII, L.P.	2015	10,000,000	3,056,975	7,670,766	6,776,937	5,556,732	12,333,669	0.9	1.6	13.7
Coller International Partners VIII, L.P.	2020	15,000,000	8,368,872	7,620,793	1,032,876	10,236,716	11,269,593	0.1	1.5	NM
JP Morgan Global Fund V, L.P.	2013	10,000,000	201,812	9,798,188	10,932,834	10,096,873	21,029,707	1.1	2.1	17.1
JP Morgan Global Fund VI, L.P.	2017	15,000,000	1,641,860	13,479,129	4,845,868	15,931,233	20,777,101	0.4	1.5	14.5
JP Morgan Global Fund VIII, L.P.	2019	15,000,000	4,037,519	11,206,700	1,335,613	13,806,339	15,141,952	0.1	1.4	18.6
JP Morgan Corp Fin Pool III LLC	2006	7,000,000	62,915	6,937,085	13,569,848	586,901	14,156,749	2.0	2.0	13.3
JP Morgan European Corporate Finance Fund III, L.P.	2006	3,281,250	0	3,306,187	5,146,731	132,865	5,279,596	1.6	1.6	6.2
JP Morgan Venture Capital Fund III, L.P.	2006	3,458,000	9,589	3,475,806	5,358,285	1,325,255	6,683,540	1.5	1.9	9.5
Lexington Capital Partners VI-B, L.P.	2006	14,000,000	0	14,858,579	20,359,713	146,807	20,506,520	1.4	1.4	6.6
Lexington Capital Partners VIII, L.P.	2014	14,000,000	1,590,443	12,746,031	11,990,321	9,049,876	21,040,197	0.9	1.7	16.7
Lexington Capital Partners IX Offshore, L.P.	2018	15,000,000	3,762,945	11,982,807	2,853,998	14,992,359	17,846,357	0.2	1.5	36.5
Pantheon USA Fund VII, L.P.	2006	10,500,000	714,000	9,786,000	16,763,260	1,573,817	18,337,077	1.7	1.9	10.1
Pantheon Europe Fund V B, L.P.	2006	3,695,271	164,351	3,530,920	4,945,989	320,031	5,266,020	1.4	1.5	6.5
SL Capital European Smaller Funds I, L.P.	2012	9,817,787	1,043,135	8,774,652	7,865,709	4,093,261	11,958,970	0.9	1.4	6.6
Total		204,752,308	34,264,885	176,428,672	178,568,822	123,822,459	302,391,282	1.0	1.7	13.1

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#### Miami Fire and Police Retirement Trust

#### Private Markets Analysis | As of December 31, 2022

Private Market Investments Overview										
Investments	Commitments		Contributions & Distributions		Valuations		Performance		ce	
Investment Name	Vintage Year	Commitment (\$)	Unfunded Commitment (\$)	Cumulative Contributions (\$)	Cumulative Distributions (\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	IRR (%)
BlackRock NTR Renewable Power Fund, L.P.	2012	20,000,000	0	22,303,751	26,798,474	367,545	27,166,019	1.2	1.2	4.4
BlackRock Renewable Power Fund II	2016	20,000,000	1,317,243	19,352,881	13,334,596	11,349,362	24,683,958	0.7	1.3	6.7
Total		40,000,000	1,317,243	41,656,631	40,133,070	11,716,907	51,849,977	1.0	1.2	5.3

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# Asset Study Comparison: 2023 Projections vs. 2022 Projections



Asset Study Comparison: 2023 Projections vs. 2022 Projections

#### **Asset Allocation Review Introduction**

- → The purpose of this review is to ensure FIPO's asset allocation targets are still appropriate moving forward.
- → The backbone of the analysis is based on a modeling technique called Mean Variance Optimization (MVO).
- → MVO analysis seeks to predict what the long term expected return will be based on a selected asset mix.
- → MVO is a very useful tool, but it is imperfect. Qualitative analysis must be applied when evaluating the forecasts.
- → In the first quarter of each year, Meketa Investment Group typically prepares its capital market assumptions which serve as the backbone of the MVO analysis.
- → The capital market assumptions seek to predict individual asset class returns and volatility over the next twenty-year period.
- → They do not predict returns or volatility in any given single year.

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Asset Study Comparison: 2023 Projections vs. 2022 Projections

# **Building our forecasts**

- → Each return assumption is based on the most important factors that drive returns for that asset class.
- → The common components are income, growth and valuation.

Asset Class Category	Major Factors
Equities	Dividend Yield, GDP Growth, Valuation
Bonds	Yield to Worst, Default Rate, Recovery Rate
Real Estate	Cap Rate, Income Yield, Growth
Private Equity	EBITDA Multiple, Debt Multiple, Public Eq Valuation
Infrastructure	Public IS Valuation, Income, Growth

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Asset Study Comparison: 2023 Projections vs. 2022 Projections

# **Current Asset Allocation Policy**

	Target (%)	Ranges (%)
U.S. Equity	32	20% - 40%
International Developed Non-U.S. Equity	22	10% - 30%
Private Equity Fund of Funds	4	0% - 8%
Private Debt	2	0% - 4%
Investment Grade Bonds	18	12% - 25%
Treasuries	7	3% - 10%
High Yield Bonds	2	0% - 4%
Bank Loans	2	0% - 4%
Real Estate	9	6% - 12%
Non-Core Infrastructure	2	0% - 4%
Total	100	

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Asset Study Comparison: 2023 Projections vs. 2022 Projections

#### **Annual Asset Study**

→ The following table illustrates the changes in expected return for each sub asset class that FIPO is invested in.

# **Expected Return<sup>1</sup> Assumptions**

	2022 Study Return Assumptions (%)	2023 Study Return Assumptions (%)	Return Difference (%)	Notes
U.S. Equity	6.8	8.7	+1.9	Lower Valuations
International Developed Non-U.S. Equity	7.5	9.8	+2.3	Lower Valuations
Private Equity Fund of Funds	8.6	9.8	+1.2	Higher earnings and lower valuations
Private Debt	7.3	9.0	+1.7	Higher yields
Investment Grade Bonds	2.4	4.7	+2.3	Higher yields
Treasuries	2.8	5.0	+2.2	Higher yields
High Yield Bonds	4.4	7.3	+2.9	Higher yields
Bank Loans	4.0	7.0	+3.0	Higher yields
Real Estate	7.4	7.8	+0.4	Higher yields, offset by higher borrowing costs
Non-Core Infrastructure	9.3	9.5	+0.2	Lower valuations, offset by higher borrowing costs
FIPO's 20 Year Expected Return	6.5%	8.4%	+1.9	

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<sup>&</sup>lt;sup>1</sup> Twenty-year annualized return assumptions.



Asset Study Comparison: 2023 Projections vs. 2022 Projections

#### Expected Risk<sup>1</sup> Assumptions

- → There have been minimal changes in our expected standard deviation assumptions.
- → Our expectations are based on historical 15-year averages, with subjective adjustments.

	2022 Study Risk Assumptions (%)	2023 Study Risk Assumptions (%)	Risk Difference (%)
U.S. Equity	18.0	18.0	-
International Developed Non-U.S. Equity	19.0	19.0	-
Private Equity Fund of Funds	24.0	27.0	+3.0
Private Debt	16.0	15.0	-1.0
Investment Grade Bonds	4.0	4.0	-
Treasuries	12.0	12.0	-
High Yield Bonds	11.0	11.0	-
Bank Loans	10.0	10.0	-
Real Estate	17.0	16.0	-1.0
Non-Core Infrastructure	22.0	22.0	-
FIPO's 20 YR Expected Standard Deviation	12.1%	12.3%	+0.2

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<sup>&</sup>lt;sup>1</sup> Twenty-year annualized assumptions.



Asset Study Comparison: 2023 Projections vs. 2022 Projections

#### Summary

- → Return expectations for nearly all assets increased, because:
  - Higher yields in fixed income result in higher forward looking return expectations.
  - Lower valuations for public equities result in higher forward looking return expectations.
- → Risk expectations remained the same for most classes.

#### 2022 vs. 2023 Asset Study<sup>1</sup> Comparison

	Expectations based on 2022 Asset Study (%)	Expectations based on 2023 Asset Study (%)	Difference (%)
Expected Return	6.5	8.4	+1.9
Expected Standard Deviation	12.1	12.3	+0.2

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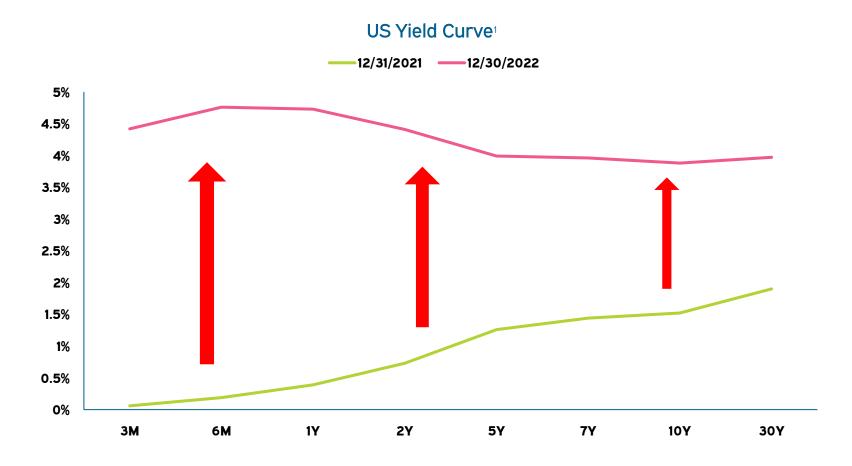
<sup>&</sup>lt;sup>1</sup> Twenty year annualized assumptions.

Why have projections gone up so much?

Asset Study Comparison: 2023 Projections vs. 2022 Projections

# Rising Interest Rates

→ The US Treasury yield curve rose significantly in 2022.



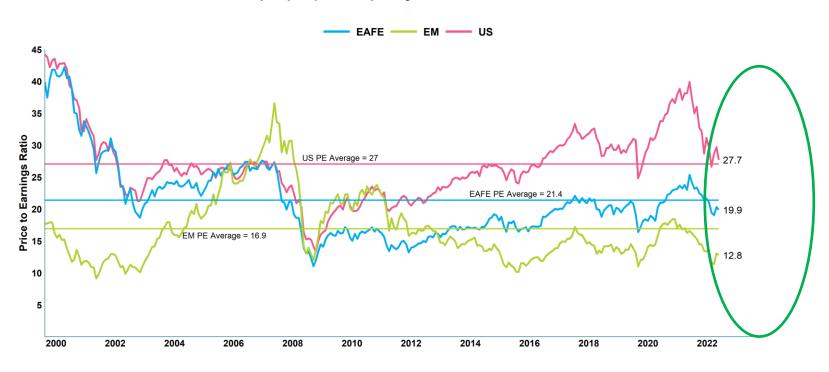
<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of December 31, 2022.

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Asset Study Comparison: 2023 Projections vs. 2022 Projections

#### Equity Cyclically Adjusted P/E Ratios<sup>1</sup>



- → Equity price-to-earnings ratios (valuations) ended 2022 much lower than the start of the year.
- → Price declines have been the main driver of recent multiple compression as earnings have remained resilient. Concerns remain over whether earnings strength will continue in the face of slowing growth.

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<sup>&</sup>lt;sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of December 2022. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



Asset Study Comparison: 2023 Projections vs. 2022 Projections

#### The Impact on Return Expectations?

#### $\rightarrow$ Bonds

- Higher yields are driving higher return expectations.
- Yields are up ~2.0% 4.0% across the yield curve vs. the beginning of 2022.

#### → Equities

- Starting valuation is a key component.
  - "Expensive" valuations = low future return expectations
  - "Cheap" valuations = high future return expectations.
- Valuations across equities are at or below historical averages, as of December 31, 2022.
  - o Domestic Equities were down ~19%. International Equities were down ~15% during calendar year 20221.
- → Fortunately, future projected returns are now much more favorable. Bond yields are higher than the start of 2022, and equity valuations are lower, indicating more return potential going forward.

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<sup>&</sup>lt;sup>1</sup> Domestic equities is proxied by the Russell 3000. International Equities is proxied by MSCI EAFE.



Asset Study Comparison: 2023 Projections vs. 2022 Projections

#### What Did We Say the Last Two Years?

- → Keep the long term in mind.
- $\rightarrow$  Recognize the goal is a **long-term** return over your actuarial target (**not every single year**).
- $\rightarrow$  Trust the long-term asset allocation.
- → Don't let the tail wag the dog.
- $\rightarrow$  Rebalance.
- $\rightarrow$  Increase risk assets when expectations are higher.

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Asset Study Comparison: 2023 Projections vs. 2022 Projections

#### Today's Message

- → For the first time in practically a decade, you have good options!
  - Option 1 you can keep the target allocation "as-is" and likely earn higher return going forward.
  - Option 2 you can be more conservative (e.g. fixed income) and earn more than you have in a very long time for owning investment grade bonds.
  - Option 3 you can be more aggressive (take advantage of the opportunity set i.e. take on more risk when the models indicate you could be compensated for doing so)
  - Option 4 you can make minor adjustments around the edges but still generally "stick with the allocation plan".

#### Remember!

- $\rightarrow$  These are long term (20-year) projections
- → Not a guide to what next year (or any specific) year will do

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Asset Study Comparison: 2023 Projections vs. 2022 Projections

# Other Mixes (Conversation Starter)

	12/31 Exposure <sup>,</sup> (%)	Option 1: Current Target (%)	Option 2: Conservative (%)	Option 3: Aggressive (%)	Option 4: Tweaks to Plan (%)
U.S. Equity	32	32	30	33	32
International Developed Non-U.S. Equity	23	22	20	23	22
Private Equity Fund of Funds	8	4	4	6	4
Private Debt	0	2	2	4	3
Investment Grade Bonds	17	18	24	15	18
Treasuries	4	7	7	4	5
High Yield Bonds	2	2	0	2	2
Bank Loans	3	2	2	2	2
Real Estate	10	9	9	9	9
Infrastructure (Non-Core)	1	2	0	2	0
Infrastructure (Core)	0	0	2	0	3
Expected Return (20 years)	8.5%	8.4%	8.1%	8.6%	8.4%
Expected Standard Deviation	13.2%	12.3%	11.3%	13.3%	12.3%

→ There is no "right or wrong" answer. Our preference would be to lean towards Option 4 or some similar iteration.

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<sup>12/31</sup> exposure had 2% in cash and Blackrock Liquid Policy Portfolio. For modeling we added 1% to investment grade bonds, and 1% to US equity to proxy the true exposure.

# Manager Presentation: JPMorgan Real Estate



JPMorgan Real Estate

#### JPMorgan Strategic Property Fund

- → The JPMorgan Strategic Property Fund focuses on investing in established U.S. real estate with stabilized occupancies, primarily within the four traditional real estate asset classes of office, retail, industrial and residential/multi-family rental properties. The Fund's return objectives are income generation, capital appreciation and low risk. The leverage guideline at the property level is 65%, and 35% at the portfolio level.
- → The fourth quarter of 2022 proved to be challenging for Real Estate, and the performance of the Strategic Property Fund reflects this. The Fund was down -5.2% (net) during the quarter, with these losses driven by depreciation within the portfolio. Depreciation within the industrial sector was the largest detractor for the quarter, due to increased discount and exit cap rates throughout the portfolio. Depreciation within the office and residential portfolios also detracted from performance.
- → As of December 31, 2022, Miami FIPO had \$123 million invested in the strategy. Miami FIPO funded the strategy in January 2010. The Fund has made a number of quarterly distributions to investors, with the latest distribution of \$933K taking place in January 2023.
- → JPMorgan SPF has generated a 10-year annualized return of 8.5%, versus the NCREIF ODCE return of 10.1% for the same period.

#### JPM Special Situations Property Fund

- → The JPM Special Situations Property Fund focuses on investing in diversified U.S. based real estate opportunities, primarily within the office, retail, industrial and residential/multi-family sectors. The Fund takes a value-add approach, with opportunities including new development and redevelopment of existing properties. The Fund's return objectives are moderate income and higher capital appreciation (than traditional core real estate strategies). The leverage guideline at the property level is 75% and 60% at the portfolio level.
- → The Fund was down -7.2% (net) during the quarter, driven by **depreciation**. Valuation activity of direct real estate investments across all sectors drove the losses experienced during the quarter, with losses reported within the industrials, office, and residential spaces. There were no acquisitions during the quarter, and there were three successful sales during the quarter generating a combined \$152 million in net proceeds.
- → As of December 31, 2022, Miami FIPO has \$29.8 million invested in the strategy. Miami FIPO funded the strategy in January 2010. JPMorgan SSPF has generated a 10-year annualized return of 10.2%, versus the NCREIF ODCE+100bps return of 11.2%.

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