

June 30, 2023

Performance Report





Agenda

# Agenda

- 1. Economic and Market Update
- 2. Executive Summary
- 3. Performance Report as of June 30, 2023
- 4. Disclaimer

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# **Economic and Market Update**

Data as of June 30, 2023



#### Commentary

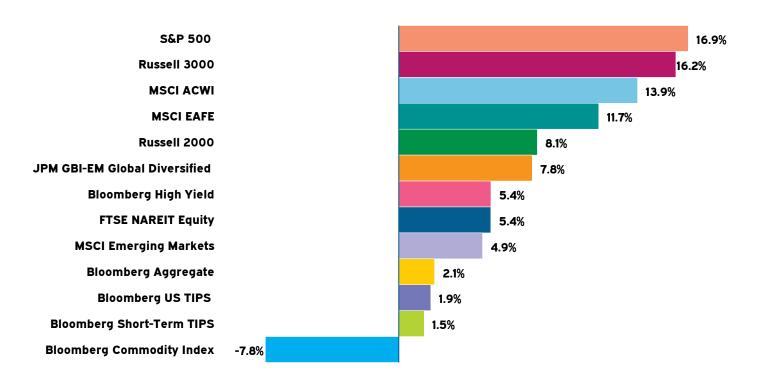
- → Asset returns were positive in June with US and Non-US equities posting gains, while most fixed income sectors sold-off on expectations for further interest rate hikes later this year. Except for commodities, most public market asset classes remain up for the year.
  - Although the Fed skipped a rate-hike in June, Fed comments signaled further rate hikes in the 2H 2023; the US economy appears to be resilient supporting domestic demand and low unemployment.
  - US equity markets (Russell 3000) rose in June (+6.8%) adding to YTD gains (+16.2%). Some of the largest technology names drove positive results. Growth stocks continued to outpace value stocks, particularly in the large cap space.
  - Non-US developed equity markets rose in June (MSCI EAFE 4.6%) falling behind US equities in 2023 (+16.2% versus +11.7%). A strengthening US dollar weighed on returns.
  - Emerging market equities rose in June (+3.8%) supported by positive returns in China (+4.0%). They significantly trail developed market equities YTD returning +4.9%, due partly to higher US-China tensions.
  - Rates generally rose in June leading to bond markets declining, with the broad US bond market (Bloomberg Aggregate) falling 0.4% for the month. It remains positive (+2.1%) year-to-date, though, on declining inflation and expectations for the Fed to end their rate hikes soon.
- → This year, the paths of inflation and monetary policy, slowing global growth and the war in Ukraine will all be key.

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

#### Calendar YTD 2023

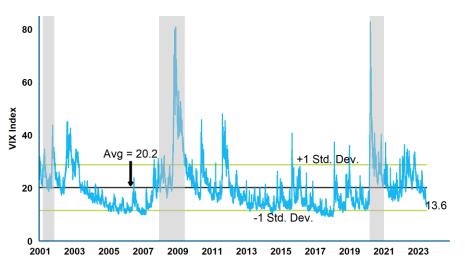


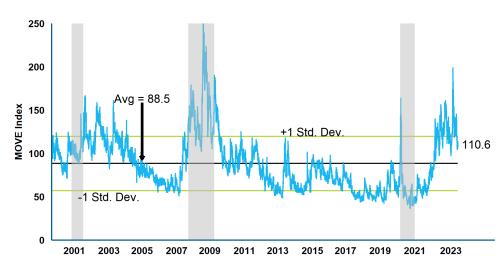
- → Most public market assets are up thus far in 2023, building on gains from the fourth quarter of last year.
- → Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall, and growth has slowed.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg and FactSet. Data is as of June 30, 2023.



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





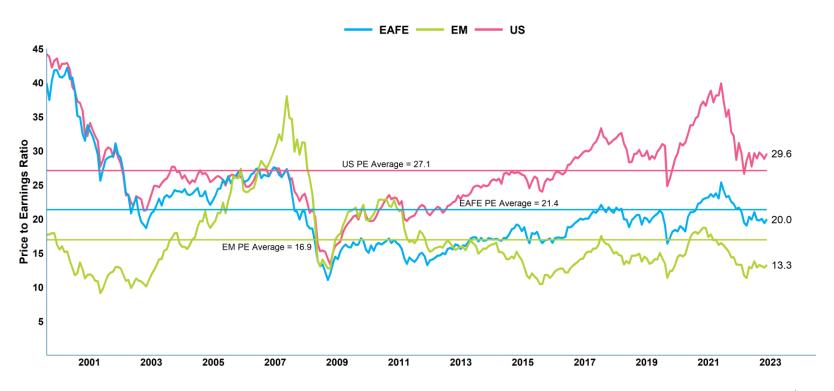
- → Volatility in equities (VIX) declined in June and remains low as investors continue to anticipate the end of the Fed's policy tightening.
- → In comparison, the bond market remains on edge after last year's historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above (110.6) its long-run average (88.4), but off its recent peak during the heart of the banking crisis.

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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 June 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2023.



#### Equity Cyclically Adjusted P/E Ratios¹

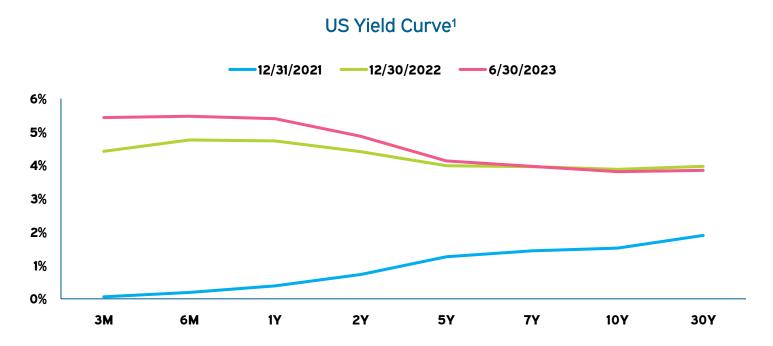


- → After its dramatic decline last year the US equity price-to-earnings ratio remains above its long-run (21st century) average.
- → International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

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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 June 2023. 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.



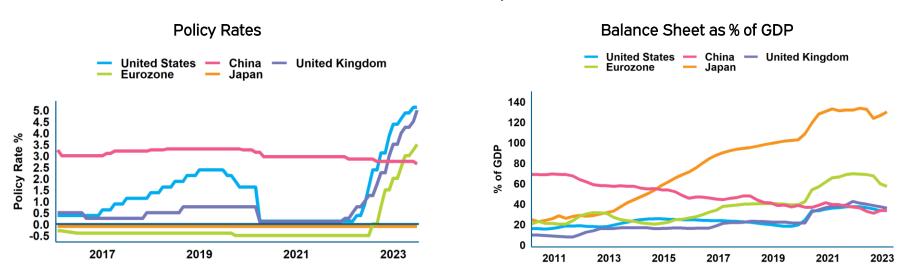


- → Interest rates have started rising again across the curve given policy maker guidance that policy rates are likely to rise further and potentially stay longer at the terminal rate than market participants expect. The rise in rates was particularly acute at the very front-end (< 1 year). Maturities from two years out also drifted higher as market participants considered the possibility of additional policy rate increases as economic data (mainly inflation and labor markets) remains strong.
- → The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -1.06%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.62%. Inversions in the yield curve have often preceded recessions.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as of June 30, 2023.



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



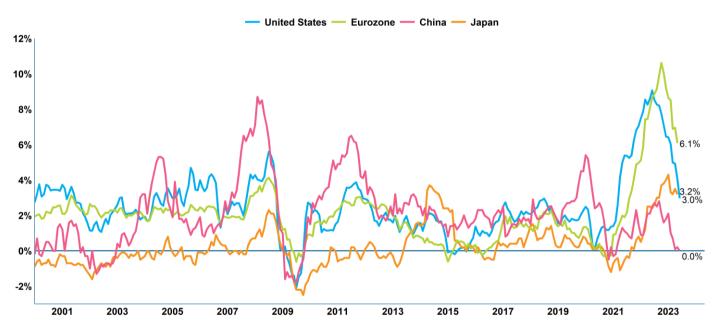
- → In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and growth have led to expectations for reductions in policy tightening going forward.
- → In May the Fed raised rates another 25 basis points to a range of 5.0% to 5.25%. After month-end, the FOMC paused its tightening campaign but hinted that one or two additional rate hikes could come later this year.
- → In China, the central bank has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- → Looking ahead, risks remain for a policy error as central banks attempt to balance multiple goals, bringing down inflation, maintaining financial stability, and supporting growth.

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<sup>1</sup> Source: Bloomberg. Policy rate data is as of June 30, 2023. 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 March 31, 2023.



## Inflation (CPI Trailing Twelve Months)1

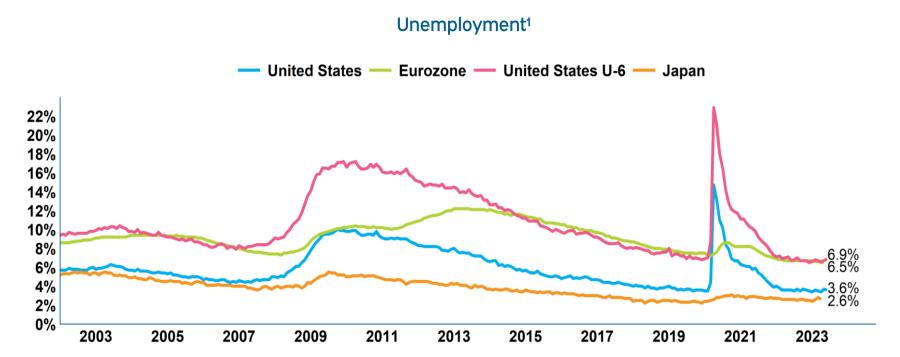


- → Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.
- → In the US, inflation fell to 3.0% at month-end, while eurozone inflation also fell (6.1% from 7.0%) a level well off its peak. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- → Inflation remains lower in China and Japan. In China, inflation levels were only slightly above 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

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<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data is as June 30, 2023. The most recent Japanese inflation data is as of May 2023





- → Despite slowing growth and high inflation, the US labor market still shows signs of resiliency. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.9% but also declined dramatically from their peak.
- → The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, leading to higher unemployment.
- → Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

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<sup>1</sup> Source: Bloomberg. Data is as June 30, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of May 2023.



DXY Index



→ The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.

- → Late last year and into this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. In June, we did see a slight decline in the dollar though.
- → This year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

<sup>&</sup>lt;sup>1</sup> Source: Bloomberg. Data as of June 30, 2023.



#### Summary

#### **Key Trends:**

- → The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.
- → Recent issues related to the banking sector seem to have subsided for now but are a reminder that there is a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.
- → Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- → Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.
- → In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing cost are elevated, and the job market may weaken.
- → The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.
- → Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector.

# **Executive Summary**



**Executive Summary** 

#### → Asset Growth

• The Metropolitan Government of Nashville and Davidson County Plan was valued at \$4.1 billion at the end of 2Q23, an investment gain of approximately \$72.0 million over the three-month period. Net cash outflows of \$29.1 million occurred in the quarter.

#### → Notable Changes in the quarter

- At the May 2023 meeting, Meketa, Staff and the Committee reviewed the current asset allocation and agreed on new policy targets.
- Three international equity strategies were terminated, and three new strategies were funded.
- Marathon bank loans strategy was terminated.

#### → Asset Allocation

- All asset classes ended the quarter within policy ranges.
- Domestic Equity and Real Assets were slightly underweight at the end of the second quarter, while Private Equity and Fixed Income were slightly overweight compared to policy weights.

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**Executive Summary** 

#### → Net Performance

	1 YR	3 YR	5 YR	10 YR
Metro Nashville (net)	0.7%	9.7%	8.1%	8.4%
Policy Benchmark	9.4%	6.6%	5.5%	6.9%
Excess Return	-8.7%	3.1%	2.6%	1.5%
Peer Ranking	100th	15 <sup>th</sup>	<b>4</b> <sup>th</sup>	5 <sup>th</sup>

→ Returns over the trailing one year lagged the policy benchmark significantly (primarily a function of private market assets with public market benchmarks) but longer term results (absolute, relative and peer rankings) remain quite strong.

#### → Positive notables during the quarter

- Absolute performance was driven by US public equities and private debt. Domestic equity was up 7.6%, net of fees, in 2Q23, while private debt was up 2.7%, net of fees.
- PIMCO Managed Volatility outperformed its benchmark by 0.7%.
- Within international equities, the new Arrowstreet EM strategy outperformed its benchmark by 0.7%.
- Within fixed income, PIMCO Tactical Opportunities Fund and PIMCO Core Plus Total Return Fund outperformed their benchmarks by 1.7% and 0.4%, respectively.
- Real Assets also outperformed its benchmark by 3.1%.

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**Executive Summary** 

#### → Negative notables during the quarter

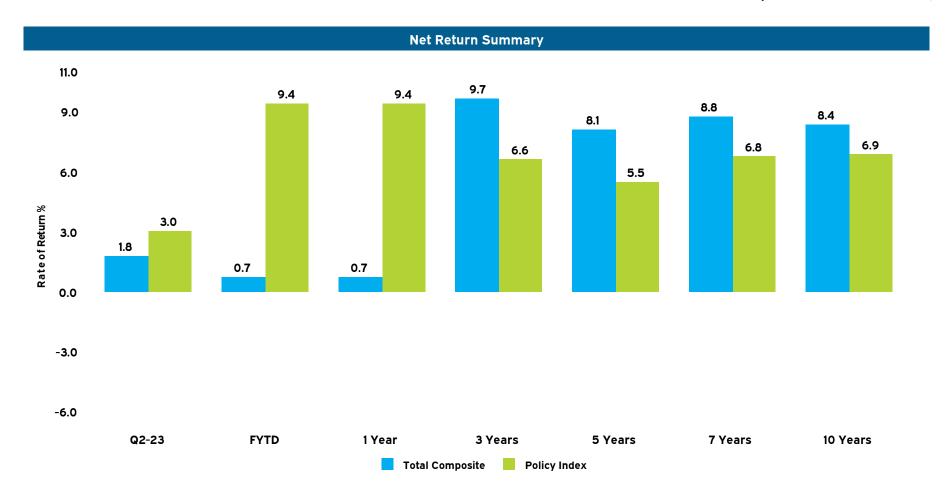
- Private equity generated a negative absolute return (-0.6%) and trailed its benchmark by 5.8% over the quarter (despite very positive long term absolute and relative performance).
- Developed international equity (Arrowstreet EAFE) underperformed the MSCI EAFE Index by 2.6%.

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Performance Report as of June 30, 2023



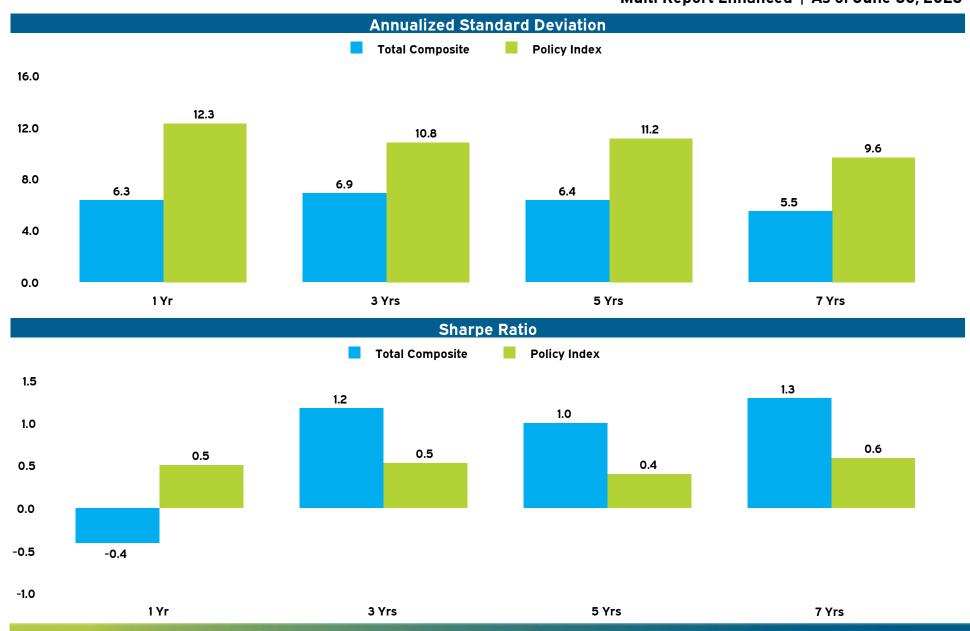
Total Composite | As of June 30, 2023



All returns in report are net of fees unless explicity noted otherwise.

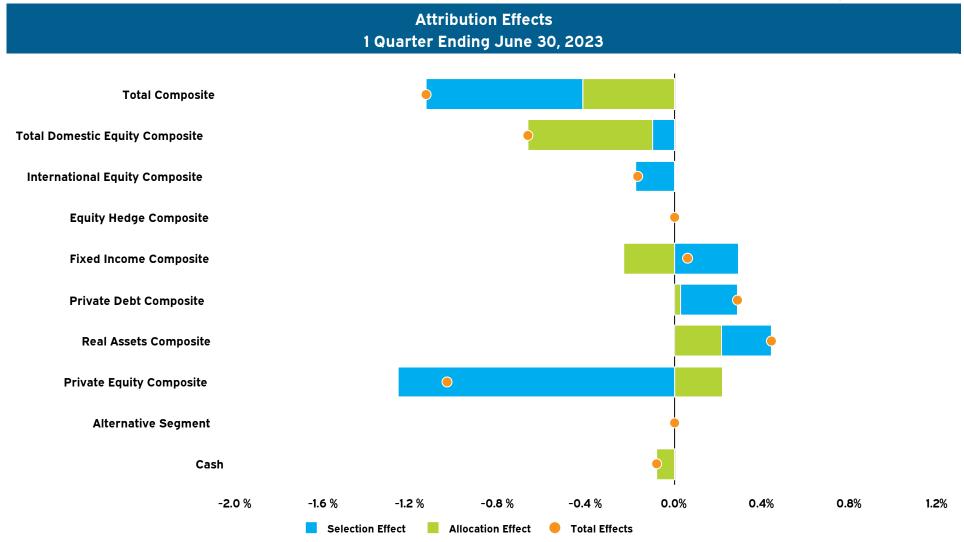


Multi Report Enhanced | As of June 30, 2023





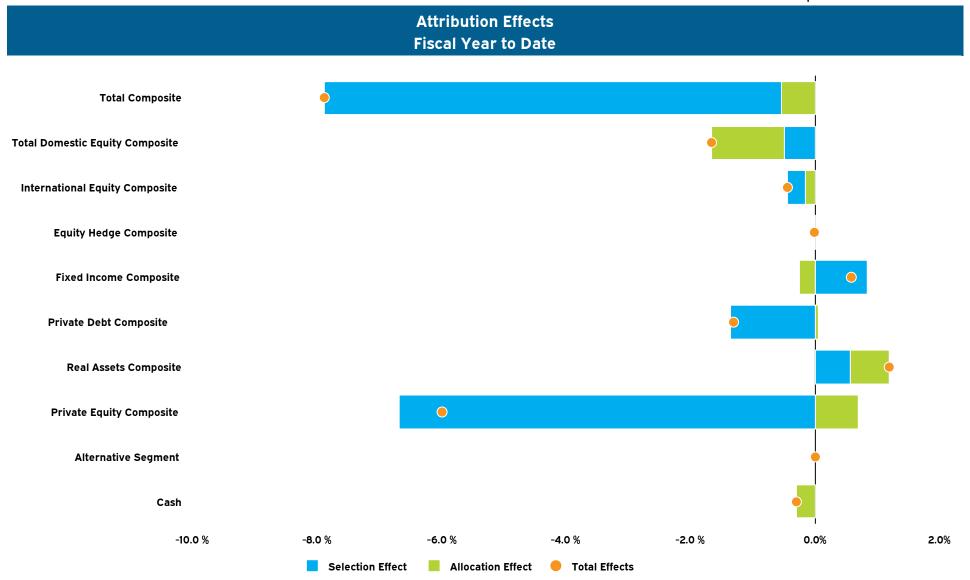
Total Plan Attribution | 1 Quarter Ending June 30, 2023



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 aver 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



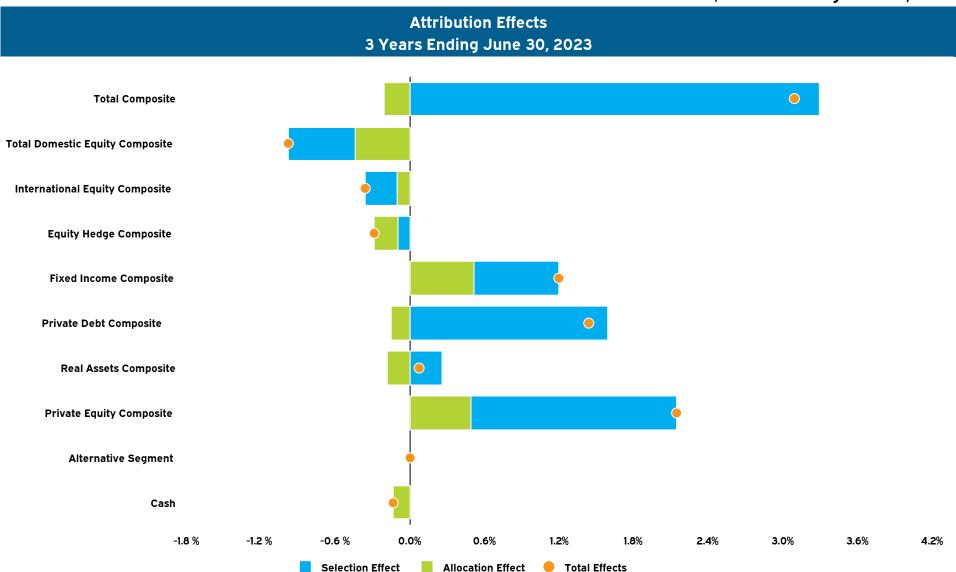
#### Total Plan Attribution | Fiscal Year to Date



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) multiplied by the time period performance of that asset class and summed. Values may not sum due to rounding



Total Plan Attribution | 3 Years Ending June 30, 2023



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 aver 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



Asset Allocation vs. Policy | As of June 30, 2023

Target	•	Current
17.0%		15.2%
12.0%		11.9%
25.0%		25.9%
17.0%		17.2%
9.0%		7.9%
20.0%		20.8%
		1.1%

	Allocation vs. Policy											
	Current Balance (\$)	Current Allocation (%)	Policy (%)	Within IPS Range?								
Domestic Equity	\$626,581,387	15	17	Yes								
International Equity	\$490,093,338	12	12	Yes								
Fixed Income	\$1,067,119,721	26	25	Yes								
Private Debt	\$706,728,621	17	17	Yes								
Real Assets	\$323,317,200	8	9	Yes								
Private Equity	\$854,789,858	21	20	Yes								
Cash	\$46,927,900	1	0	Yes								
Total Composite	\$4,115,792,557	100	100									

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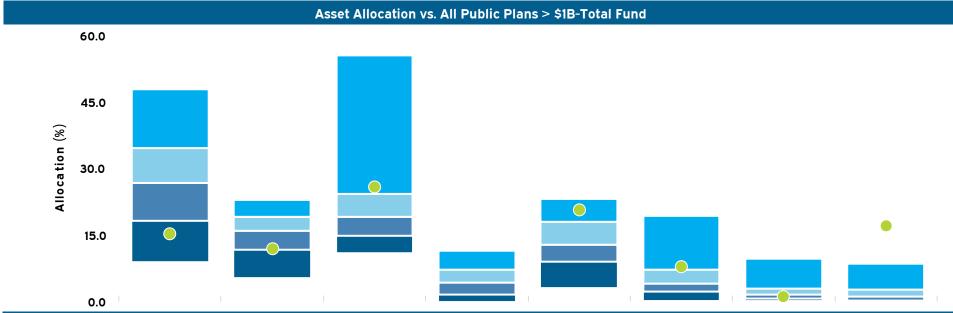
Asset Allocation vs. Policy | As of June 30, 2022

Target	(	Current
25.0%		13.0%
		9.6%
13.0%		19.9%
20.0%		22.2%
18.0%		8.0%
12.0%		26.6%
12.0%		
		0.5%

	Allocation vs Policy												
	Current Balance (\$)	Current Allocation (%)	Policy (%)	Within IPS Range?									
Domestic Equity	\$544,790,960	13	25	No									
International Equity	\$401,846,266	10	13	Yes									
Equity Hedge	\$7,731,695	0	0	Yes									
Fixed Income	\$830,912,143	20	20	Yes									
Private Debt	\$930,390,576	22	18	No									
Real Assets	\$334,696,167	8	12	Yes									
Private Equity	\$1,113,018,417	27	12	No									
Alternative Segment	\$71,203	0	0	Yes									
Cash	\$21,023,758	1	0	Yes									
Total Composite	\$4,184,481,185	100	100										

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Total Composite Asset Allocations | As of June 30, 2023



	US Equity	Global ex-US Equity	US Fixed	Hedge Funds	Private Equity	Real Assets	Cash & Equivalents	Other
<ul><li>Total Composite</li></ul>	15.2 (84)	11.9 (75)	25.9 (19)	-	20.8 (14)	7.9 (22)	1.1 (60)	17.2 (1)
5th Percentile	47.9	22.9	55.4	11.5	23.1	19.3	9.6	8.6
1st Quartile	34.6	19.0	24.3	7.1	18.1	7.2	2.9	2.6
Median	26.7	15.9	19.1	4.2	12.7	4.1	1.7	1.2
3rd Quartile	18.2	11.7	14.8	1.6	9.0	2.2	0.7	0.3
95th Percentile	9.1	5.4	11.1	0.0	3.3	0.3	0.3	0.2
Population	129	129	133	44	67	52	107	12

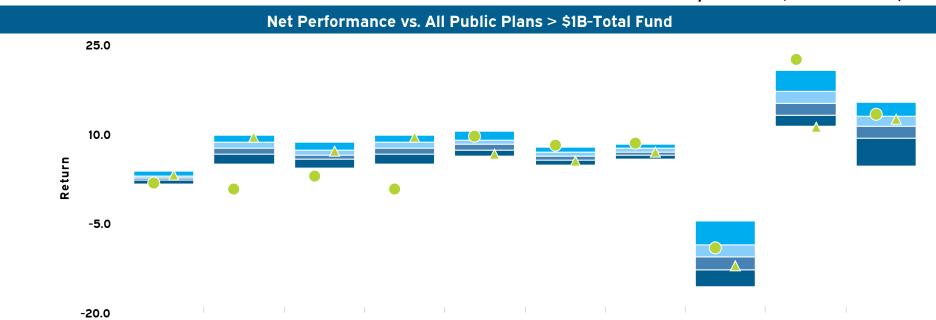
Other represents Private Debt allocation.

Parentheses contain percentile rankings.

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Public Plans Peer Group Returns | As of June 30, 2023



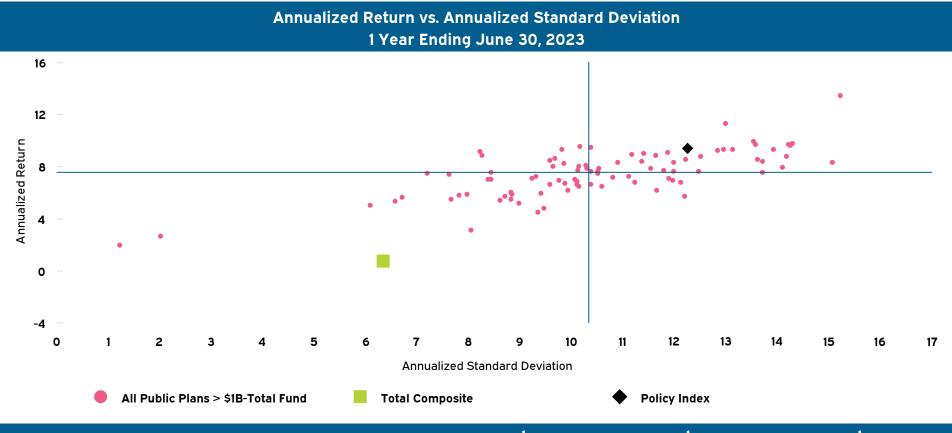
	QTD (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2022	2021	2020
Total Composite	1.8 (90)	0.7 (100)	3.0 (98)	0.7 (100)	9.7 (15)	8.1 (4)	8.4 (5)	-9.1 (32)	22.6 (3)	13.2 (22)
Policy Index	3.0 (24)	9.4 (10)	7.0 (34)	9.4 (10)	6.6 (94)	5.5 (77)	6.9 (53)	-12.1 (68)	11.1 (98)	12.4 (33)
5th Percentile	3.7	9.7	8.6	9.7	10.5	7.7	8.3	-4.7	20.7	15.2
1st Quartile	2.9	8.6	7.3	8.6	8.9	6.9	7.6	-8.6	17.2	13.0
Median	2.6	7.6	6.5	7.6	8.3	6.2	6.9	-10.7	15.2	11.3
3rd Quartile	2.3	6.5	5.7	6.5	7.3	5.5	6.5	-12.8	13.2	9.2
95th Percentile	1.5	4.9	4.3	4.9	6.3	4.7	5.8	-15.6	11.2	4.6

Parentheses contain percentile rankings. Calculation based on monthly periodicity.

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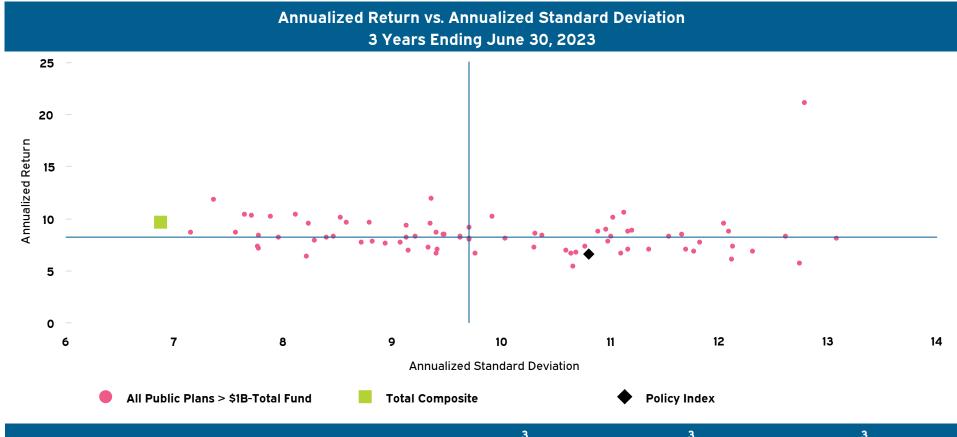
Total Plan Risk/Return | As of June 30, 2023



	1 Year Return	1 Year Standard Deviation	1 Year Sharpe Ratio	1 Year Information Ratio
Total Composite	0.7 (100)	6.3 (2)	-0.4 (99)	-1.3 (95)
All Public Plans > \$1B-Total Fund Median	7.6	10.3	0.4	-0.6
Policy Index	9.4	12.3	0.5	-



Total Plan Risk/Return | As of June 30, 2023



	3 Years Return	3 Years Standard Deviation	3 Years Sharpe Ratio	3 Years Information Ratio
Total Composite	9.7 (15)	6.9 (1)	1.2 (3)	0.4 (57)
All Public Plans > \$1B-Total Fund Median	8.3	9.7	0.7	0.5
Policy Index	6.6	10.8	0.5	-

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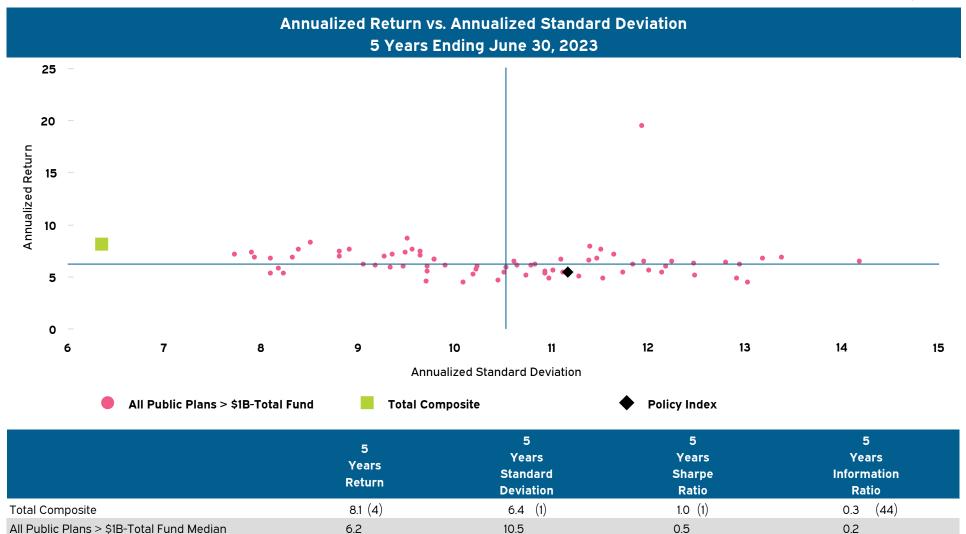


Policy Index

#### Metropolitan Government of Nashville and Davidson County

0.4

Total Plan Risk/Return | As of June 30, 2023



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11.2

5.5



Total Plan (Net of Fees) | As of June 30, 2023

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			Total	Plan (Ne	et Returns	s)					
	Market Value	% of	3 Мо	YTD	FYTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(\$)	Portfolio	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Total Composite	4,115,792,557	100.0	1.8 (96)	3.0 (99)	0.7 (100)	0.7 (100)	9.7 (6)	8.1 (4)	8.4 (5)	8.4 (12)	Jun-91
Policy Index			3.0 (64)	7.0 (67)	9.4 (42)	9.4 (42)	6.6 (71)	5.5 (82)	<i>6.9 (62)</i>		
Over/Under			-1.2	-4.0	-8.7	-8.7	3.1	2.6	1.5		
Domestic Equity	626,581,387	15.2	7.6 (41)	13.5 (46)	15.1 (59)	15.1 (59)	10.2 (73)	11.4 (25)	12.8 (18)	8.9 (37)	Apr-01
Russell 3000 Index			8.4 (33)	16.2 (33)	19.0 (37)	19.0 (37)	13.9 (41)	11.4 (26)	12.3 (23)	8.4 (55)	
Over/Under			-0.8	-2.7	-3.9	-3.9	-3.7	0.0	0.5	0.5	
International Equity	490,093,338	11.9	0.8 (85)	7.1 (86)	9.7 (86)	9.7 (86)	4.9 (75)	2.3 (81)	3.5 (95)	6.8 (60)	Jul-93
International Equity Policy Index			2.4 (56)	9.5 (67)	12.7 (69)	12.7 (69)	7.2 (54)	3.5 (63)	4.7 (84)	5.3 (100)	
Over/Under			-1.6	-2.4	-3.0	-3.0	-2.3	-1.2	-1.2	1.5	
Fixed Income	1,067,119,721	25.9	0.4 (34)	2.7 (43)	2.9 (30)	2.9 (30)	-0.1 (37)	1.6 (44)	3.1 (26)	5.5 (21)	Aug-91
Blmbg. U.S. Aggregate Index			-0.8 (85)	2.1 (63)	-0.9 (85)	-0.9 (85)	-4.0 (89)	0.8 (88)	1.5 (70)	4.9 (47)	
Over/Under			1.2	0.6	3.8	3.8	3.9	0.8	1.6	0.6	
Private Debt	706,728,621	17.2	2.7 (8)	2.1 (98)	2.4 (99)	2.4 (99)	11.1 (1)	7.2 (1)	7.3 (1)	13.0 (1)	Jan-09
Private Debt Policy Index			1.6 (36)	5.4 (23)	<i>8.9 (35)</i>	<i>8.9 (35)</i>	3.2 (48)	<i>3.2 (51)</i>	<i>3.9 (62)</i>	4.0 (100)	
Over/Under			1.1	-3.3	-6.5	-6.5	7.9	4.0	3.4	9.0	
Real Assets	323,317,200	7.9	1.1	0.5	0.3	0.3	10.3	4.8	7.0	6.2	Jul-01
NCREIF Property Index			-2.0	-3.8	-6.6	-6.6	6.8	5.9	7.8	8.1	
Over/Under			3.1	4.3	6.9	6.9	3.5	-1.1	-0.8	-1.9	
Private Equity	854,761,970	20.8	-0.6	-2.9	-13.3	-13.3	17.6	17.4	16.1	12.4	Oct-01
Russell 2000 Index			<i>5.2</i>	8.1	12.3	12.3	10.8	4.2	8.3	8.8	
Over/Under			-5.8	-11.0	-25.6	-25.6	6.8	13.2	7.8	3.6	
Cash	46,927,900	1.1	-0.1	-0.1	0.4	0.4	1.1	1.3	0.6	4.1	Jul-09
FTSE 3 Month T-Bill			1.3	2.4	3.7	3.7	1.3	1.6	1.0	0.7	
Over/Under			-1.4	-2.5	-3.3	-3.3	-0.2	-0.3	-0.4	3.4	

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## Total Plan (Net of Fees) | As of June 30, 2023

		Tra	ailing Ne	et Perfor	mance						
	Market Value (%)	% of Portfolio	3 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Composite	4,115,792,557	100.0	1.8 (96)	0.7 (100)	3.0 (99)	0.7 (100)	9.7 (6)	8.1 (4)	8.4 (5)	8.4 (12)	Jun-91
Policy Index			3.0 (64)	9.4 (42)	7.0 (67)	9.4 (42)	6.6 (71)	<i>5.5 (82)</i>	6.9 (62)		
Over/Under			-1.2	-8.7	-4.0	-8.7	3.1	2.6	1.5		
Domestic Equity	626,581,387	15.2	7.6 (41)	15.1 (59)	13.5 (46)	15.1 (59)	10.2 (73)	11.4 (25)	12.8 (18)	8.9 (37)	Apr-01
Russell 3000 Index			8.4 (33)	19.0 (37)	16.2 (33)	19.0 (37)	13.9 (41)	11.4 (26)	12.3 (23)	8.4 (55)	
Over/Under			-0.8	-3.9	-2.7	-3.9	-3.7	0.0	0.5	0.5	
BlackRock Large Cap ETF	1,408,056	0.0									
S&P 500 Index			<i>8.7 (31)</i>	19.6 (32)	<i>16.9 (32)</i>	19.6 (32)	14.6 (32)	12.3 (24)	12.9 (26)	13.6 (27)	
Over/Under											
PIMCO Managed Volatility	381,468,635	9.3	9.4 (27)	14.8 (56)	15.1 (38)	14.8 (56)	11.4 (73)	14.3 (7)		13.3 (9)	Jan-15
S&P 500 Index			<i>8.7 (31)</i>	19.6 (32)	<i>16.9 (32)</i>	19.6 (32)	14.6 (32)	12.3 (24)	12.9 (26)	11.6 (26)	
Over/Under			0.7	-4.8	-1.8	-4.8	-3.2	2.0		1.7	
Champlain Mid Cap Core	173,022,771	4.2	4.6 (65)	13.5 (70)	10.5 (49)	13.5 (70)	9.0 (68)	10.0 (29)	12.4 (13)	13.0 (22)	Dec-09
Russell Midcap Index			4.8 (61)	14.9 (60)	9.0 (61)	14.9 (60)	12.5 (55)	8.5 (54)	10.3 (49)	12.1 (43)	
Over/Under			-0.2	-1.4	1.5	-1.4	-3.5	1.5	2.1	0.9	
William Blair SMID	70,609,340	1.7	6.0 (28)	20.9 (14)	11.9 (33)	20.9 (14)	7.4 (82)	7.7 (45)	11.7 (12)	12.9 (12)	Dec-12
Russell 2500 Growth Index			6.4 (21)	18.6 (24)	13.4 (22)	18.6 (24)	6.6 (87)	7.0 (59)	10.4 (33)	11.5 (34)	
Over/Under			-0.4	2.3	-1.5	2.3	0.8	0.7	1.3	1.4	

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## Total Plan (Net of Fees) | As of June 30, 2023

	Market Value (%)	% of Portfolio	3 <b>M</b> o (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Equity	490,093,338	11.9	0.8 (86)	9.7 (89)	7.1 (93)	9.7 (89)	4.9 (80)	2.3 (83)	3.5 (93)	6.8 (58)	Jul-93
International Equity Policy Index			2.4 (57)	12.7 (74)	9.5 (76)	12.7 (74)	7.2 (57)	<i>3.5 (62)</i>	4.7 (84)	5.3 (100)	
Over/Under			-1.6	-3.0	-2.4	-3.0	-2.3	-1.2	-1.2	1.5	
Arrowstreet EAFE Fund	230,837,224	5.6	0.4							0.4	Apr-23
MSCI EAFE (Net)			3.0	18.8	11.7	18.8	8.9	4.4	5.4	3.0	
Over/Under			-2.6							-2.6	
Arrowstreet EM	71,206,770	1.7	1.7							1.7	Apr-23
MSCI Emerging Markets Index			1.0	2.2	<i>5.1</i>	2.2	<i>2.7</i>	1.3	3.3	1.0	
Over/Under			0.7							0.7	
Oaktree EM	135,420,204	3.3	0.9 (72)	8.7 (38)	4.7 (81)	8.7 (38)	5.1 (42)	3.5 (30)		3.0 (55)	Oct-13
MSCI Emerging Markets (Net)			0.9 (72)	1.7 (79)	4.9 (77)	1.7 (79)	2.3 (65)	0.9 (71)	3.0 (69)	2.4 (71)	
Over/Under			0.0	7.0	-0.2	7.0	2.8	2.6		0.6	
William Blair International Growth	50,018,740	1.2									Jul-23
MSCI AC World Index Growth			9.3 (13)	23.3 (17)	24.4 (12)	23.3 (17)	9.8 (26)	10.7 (21)	11.3 (25)		
Over/Under											

MEKETA INVESTMENT GROUP 33 of 55



## Total Plan (Net of Fees) | As of June 30, 2023

	Market Value (%)	% of Portfolio	3 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Fixed Income	1,067,119,721	25.9	0.4 (34)	2.9 (30)	2.7 (43)	2.9 (30)	-0.1 (37)	1.6 (44)	3.1 (26)	5.5 (21)	Aug-91
Blmbg. U.S. Aggregate Index			-0.8 (85)	-0.9 (85)	2.1 (63)	-0.9 (85)	-4.0 (89)	0.8 (88)	1.5 (70)	4.9 (47)	
Over/Under			1.2	3.8	0.6	3.8	3.9	0.8	1.6	0.6	
Marathon Loan Opportunities Fd	31,162,321	0.8	0.0	6.5	2.8	6.5	7.2	-0.5		2.5	Oct-14
Morningstar LSTA US Leveraged Loan			3.1	10.7	6.5	10.7	6.3	4.1	4.1	4.1	
Over/Under			-3.1	-4.2	-3.7	-4.2	0.9	-4.6		-1.6	
PIMCO Core Plus Total Return	234,284,565	5.7	-0.4 (32)	-0.1 (59)	2.8 (33)	-0.1 (59)	-3.2 (70)	1.1 (64)	1.7 (83)	3.8 (41)	Oct-06
Blmbg. U.S. Aggregate Index			-0.8 (80)	-0.9 (84)	2.1 (87)	-0.9 (84)	-4.0 (95)	0.8 (90)	1.5 (97)	3.0 (98)	
Over/Under			0.4	0.8	0.7	0.8	0.8	0.3	0.2	0.8	
PIMCO Corporate Credit	292,271,665	7.1	0.2 (1)	4.1 (1)	3.5 (1)	4.1 (1)	-1.3 (2)	2.9 (1)	3.9 (1)	5.4 (1)	Jun-09
PIMCO Corporate Credit Policy Index			0.2 (1)	<i>3.5 (1)</i>	<i>3.7 (1)</i>	<i>3.5 (1)</i>	-1.6 (3)	2.2 (1)	3.1 (1)	4.6 (2)	
Over/Under			0.0	0.6	-0.2	0.6	0.3	0.7	0.8	8.0	
PIMCO Unconstrained Bond	303,543,496	7.4	0.6 (45)	2.9 (59)	1.8 (75)	2.9 (59)	0.3 (51)	1.2 (60)		2.3 (44)	Sep-13
ICE BofA LIBOR 3-month Constant Maturity			1.2 (26)	3.6 (41)	<i>2.3 (57)</i>	3.6 (41)	1.3 (30)	1.7 (51)	1.2 (72)	1.2 (74)	
Over/Under			-0.6	-0.7	-0.5	-0.7	-1.0	-0.5		1.1	
PIMCO Private Income Fund	103,377,992	2.5	1.7 (100)	0.7 (100)	1.7 (100)	0.7 (100)	10.8 (45)			6.9 (98)	Apr-19
Fixed Income Private Debt Policy Index			1.6 (100)	8.9 (100)	5.4 (99)	8.9 (100)	<i>3.2 (97)</i>	3.2 (100)	3.9 (100)	2.6 (100)	
Over/Under			0.1	-8.2	-3.7	-8.2	7.6			4.3	
PIMCO Tactical Opportunities Fund	102,479,682	2.5	3.3 (99)	4.5 (100)	4.2 (100)	4.5 (100)	8.6 (75)			8.4 (84)	Jun-20
Fixed Income Private Debt Policy Index			1.6 (100)	8.9 (100)	5.4 (99)	8.9 (100)	<i>3.2 (97)</i>	3.2 (100)	3.9 (100)	<i>3.4 (97)</i>	
Over/Under			1.7	-4.4	-1.2	-4.4	5.4			5.0	

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### Total Plan (Net of Fees) | As of June 30, 2023

	Total Fiall (Net of Fees)   As of Suite 50, 2025										
	Market Value (%)	% of Portfolio	3 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Debt	706,728,621	17.2	2.7 (8)	2.4 (99)	2.1 (98)	2.4 (99)	11.1 (1)	7.2 (1)	7.3 (1)	13.0 (1)	Jan-09
Private Debt Policy Index			1.6 (36)	<i>8.9 (35)</i>	5.4 (23)	8.9 (35)	3.2 (48)	3.2 (51)	3.9 (62)	4.0 (100)	
Over/Under			1.1	-6.5	-3.3	-6.5	7.9	4.0	3.4	9.0	
Garrison Distressed Fund II	272	0.0									
Oaktree EPOF III	6,381,271	0.2									
Garrison Opp. Fund III	2,070,733	0.1									
Waterfall Eden Fund	320,554	0.0									
Cyrus Opps Fund II		0.0									
Courage Credit Opportunities Fund III	1	0.0									
Marathon European Credit Opps II	1,026,345	0.0									
Marathon European Credit Opps III	21,632,127	0.5									
Mount Logan Opportunities Fund IV	9,783,948	0.2									
Centerbridge Capital Partners III	29,230,876	0.7									
Oaktree Opps Fund X	47,962,821	1.2									
PIMCO COF III	40,092,772	1.0									
Hygieia SMA	96,922,484	2.4									
EIG-Energy Fund XV	3,515,468	0.1									
Accel Growth Fund, L.P.	26,825	0.0									
Cowen Healthcare Royalty II	555,168	0.0									
GSO Capital Opp. Fund II	1,089,825	0.0									
Energy Cap Mezz Opps Fund A	4,079,956	0.1									
Marathon CLO Managed	25,949,779	0.6									
Mount Logan Middle Market Funding	22,184	0.0									
EIG-Energy Fund XVI	16,715,465	0.4									
Anchorage Illiquid Opps IV	775,910	0.0									
Hayfin Direct Lending Fund	20,377	0.0									
Principal RE Debt	24,191	0.0									
OSP Value Fund	4,715,145	0.1									
Athyrium Opps Fund II	5,003,510	0.1									
Accel-KKR Growth Capital Partners II, L.P.	8,575,742	0.2									
PIMCO COF II	16,601,737	0.4									
Oaktree Euro Principal IV	23,211,574	0.6									
OSP Value Fund II	7,067,975	0.2									

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## Total Plan (Net of Fees) | As of June 30, 2023

	Market Value (%)	% of Portfolio	3 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Accel-KKR Credit Partners, L.P Series 1	26,671,681	0.6									
Courage Capital IV	20,714,125	0.5									
Arcmont SMA	82,920,227	2.0									
Oaktree European Principal Fund V	17,752,751	0.4									
Anchorage Illiquid Opps VII	54,477,100	1.3									
OSP Value Fund III	30,862,093	0.7									
Anchorage Illiquid Opps V	25,006,646	0.6									
AKKR NV SMA	16,212,563	0.4									

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#### Total Plan (Net of Fees) | As of June 30, 2023

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	Market Value (%)	% of Portfolio	3 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Real Assets	323,317,200	7.9	1.1	0.3	0.5	0.3	10.3	4.8	7.0	6.2	Jul-01
NCREIF Property Index			-2.0	-6.6	-3.8	-6.6	6.8	5.9	7.8	8.1	
Over/Under			3.1	6.9	4.3	6.9	3.5	-1.1	-0.8	-1.9	
ARES European RE IV	4,403,739	0.1									
JP Morgan European Real Estate		0.0									
Michelson Multifamily Fund, L.P.	30,890,087	0.8									
Soundmark Horizon	36,548,427	0.9									
Savanna Real Estate Fund III	1,372,642	0.0									
True North RE III	11,493,882	0.3									
AG Realty Fund VIII	4,462,466	0.1									
AG Realty Fund IX	14,221,273	0.3									
Stonelake Fund VI	17,883,173	0.4									
EIG Private Debt	7,792,883	0.2									
PIMCO Bravo		0.0									
True North HY II	1	0.0									
Oaktree European Capital Solutions Fund, L.P.	13,575,522	0.3									
PIMCO Bravo II	1,412,504	0.0									
PIMCO Bravo III	26,136,226	0.6									
Principal RE Debt II	4,521,880	0.1									
RCP II NEPC SYND P	2,982,361	0.1									
Riverstone CP II	10,078,242	0.2									
EIG Energy XVII	20,945,592	0.5									
AG Realty Fund X	14,656,119	0.4									
Oaktree European Capital Solutions Fund II, L.P	14,938,062	0.4									
Centerbridge RE II	8,614,456	0.2									
GSO Energy Select Opportunities Fund, L.P.	2,677,092	0.1									
Ares Energy Opp Fd	9,552,144	0.2									
Riverstone GL Energy & Power Fund V	9,125,533	0.2									
Sheridan Prod Ptrs III	8,313,000	0.2									
Chambers Energy III	19,445,442	0.5									
Riverstone GL Energy & Power Fund VI	18,239,693	0.4									

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#### Total Plan (Net of Fees) | As of June 30, 2023

	Market Value	% of	3 Мо	FYTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	Portfolio	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Private Equity	854,761,970	20.8	-0.6	-13.3	-2.9	-13.3	17.6	17.4	16.1	12.4	Oct-01
Russell 2000 Index	, ,		5.2	12.3	8.1	12.3	10.8	4.2	8.3	8.8	
Over/Under			-5.8	-25.6	-11.0	-25.6	6.8	13.2	7.8	3.6	
HarbourVest Dover Street VII	75,055	0.0									
HarbourVest International VI		0.0									
StepStone Global Partners V	43,423,897	1.1									
Fort Washington Fund VII	14,568,220	0.4									
StepStone Opportunities II	14,644,709	0.4									
Axiom Asia III	29,125,084	0.7									
HarbourVest 2013 Direct Fund	735,631	0.0									
HarbourVest Dover Street VIII		0.0									
LGT Crown Europe Small Buyout III	9,701,652	0.2									
LGT CESB IV	12,802,937	0.3									
StepStone Global Partners VI	76,123,696	1.8									
StepStone Global Partners VII	78,347,387	1.9									
StepStone Secondaries Fund I	13,463,412	0.3									
StepStone GE III	9,584,336	0.2									
StepStone Growth Equity IV	13,637,598	0.3									
Greycroft Growth	8,839,541	0.2									
LGT Co-Investment Fund	20,051,128	0.5									
StepStone Opportunities III	8,243,071	0.2									
Dyal Capital Partners II		0.0									
Helios Investors III	33,310,381	0.8									
Raine Partners II	35,127,803	0.9									
Columbia Capital VI	19,404,929	0.5									
Axiom Asia IV	70,969,691	1.7									
StepStone Opportunities IV	11,286,854	0.3									
Astorg VI	6,285,260	0.2									
LGT Crown Co Inv Opps II	11,101,341	0.3									
Axiom Asia Co-Investment I	11,265,726	0.3									
Columbia Capital VII	7,940,772	0.2									
Axiom Asia V	26,394,962	0.6									

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#### Total Plan (Net of Fees) | As of June 30, 2023

	Market Value	% of	3 Мо	FYTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	Portfolio	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
StepStone Global Partners IX	44,051,210	1.1									
StepStone GE V	13,921,249	0.3									
Raine Partners III	11,280,041	0.3									
Openview V	9,812,650	0.2									
Accel-KKR Capital Partners V, L.P.	24,532,525	0.6									
Accel KKR Credit Partners VI	5,785,771	0.1									
StepStone Opportunities VI	19,794,757	0.5									
LGT Crown Europe Small Buyout V	4,408,553	0.1									
Openview Venture Partners VI	6,816,615	0.2									
StepStone Secondaries IV	25,224,444	0.6									
StepStone SPV IX	8,689,962	0.2									
StepStone Global Partners X	26,512,386	0.6									
Axiom Asia VI	17,813,854	0.4									
StepStone Growth Equity VI, Leaders	6,598,667	0.2									
StepStone Growth Equity VI, Redpoint	3,903,887	0.1									
StepStone Growth Equity VI	3,173,090	0.1									
Axiom Colnv Fund II	3,316,824	0.1									
Axiom Opportunities	5,085,710	0.1									
StepStone Secondaries V	16,273,636	0.4									
Columbia CAP EP VIII	2,163,255	0.1									

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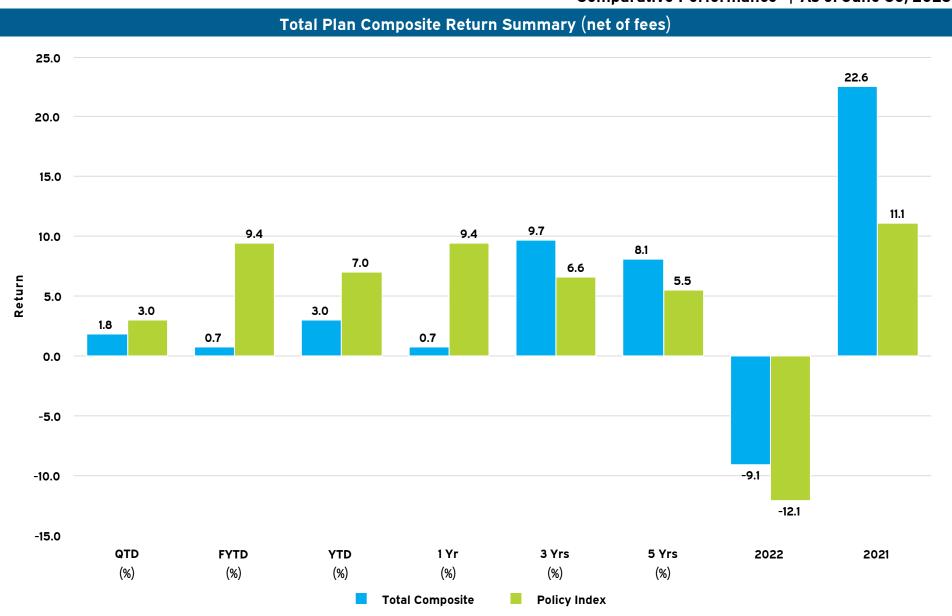


#### Total Plan (Net of Fees) | As of June 30, 2023

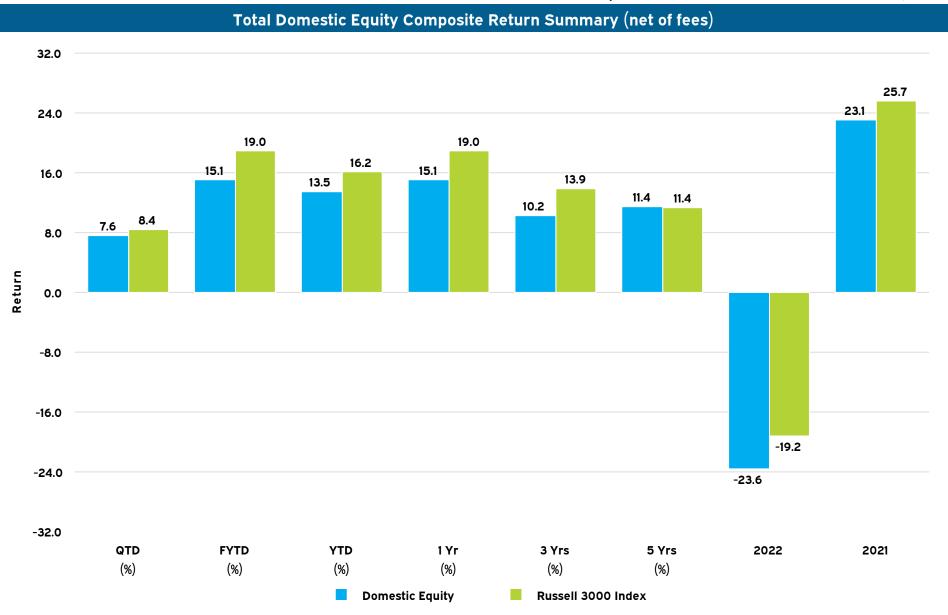
	Market Value (%)	% of Portfolio	3 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Cash	46,927,900	1.1	-0.1	0.4	-0.1	0.4	1.1	1.3	0.6	4.1	Jul-09
FTSE 3 Month T-Bill			1.3	3.7	2.4	3.7	1.3	1.6	1.0	0.7	
Over/Under			-1.4	-3.3	-2.5	-3.3	-0.2	-0.3	-0.4	3.4	
Cash Account	45,636,895	1.1	-0.1	0.3	-0.1	0.3	0.2	0.2	0.1	3.4	Jul-09
FTSE 3 Month T-Bill			1.3	<i>3.7</i>	2.4	3.7	1.3	1.6	1.0	0.7	
Over/Under			-1.4	-3.4	-2.5	-3.4	-1.1	-1.4	-0.9	2.7	
Miscellaneous Cash	1,290,998	0.0	0.9	3.4	2.4	3.4	11.4	7.4	2.9	3.2	May-12

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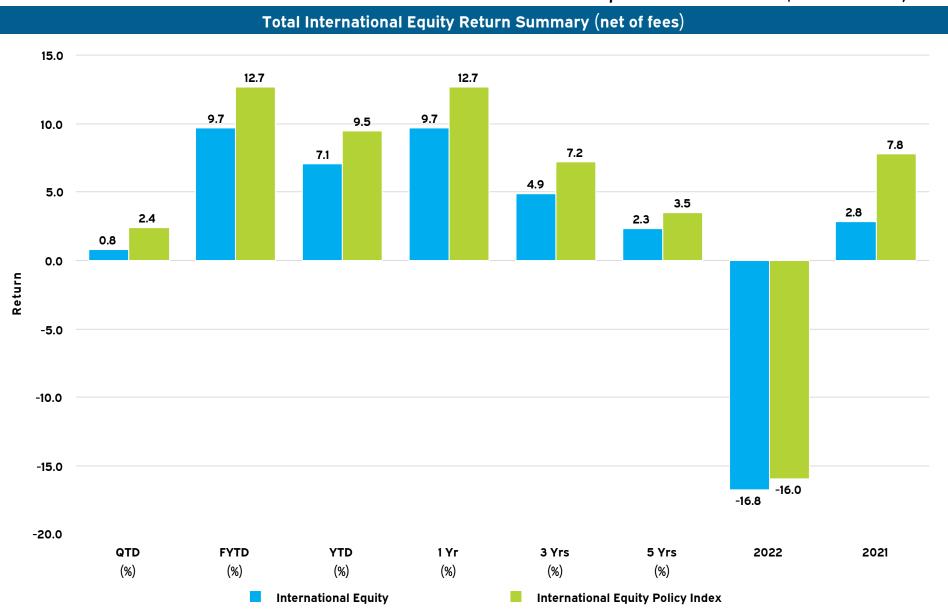




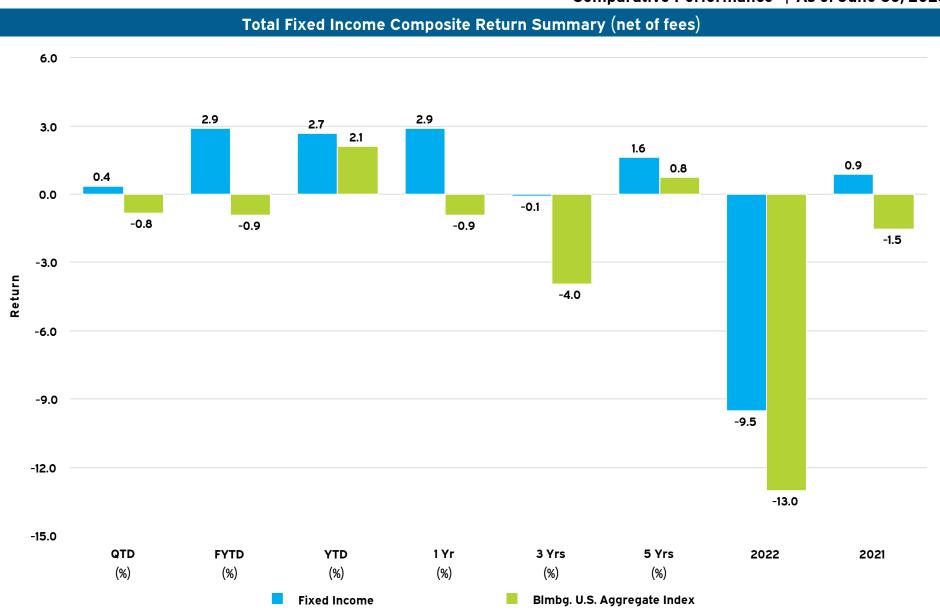




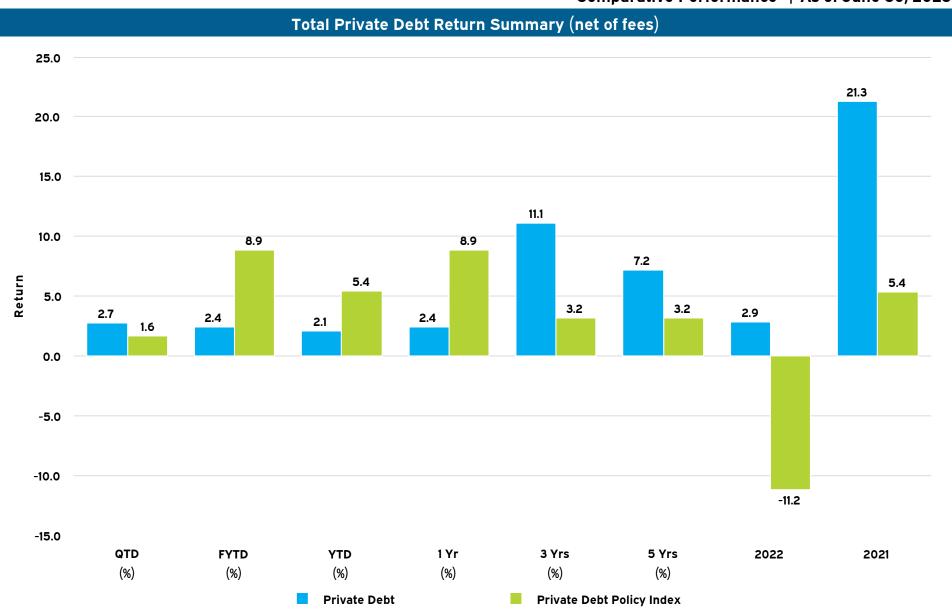




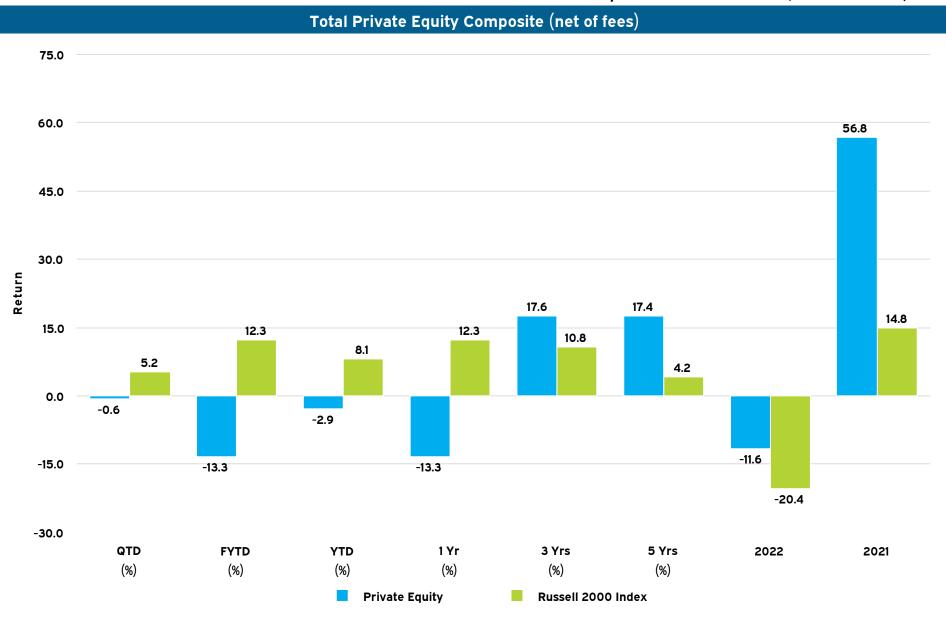




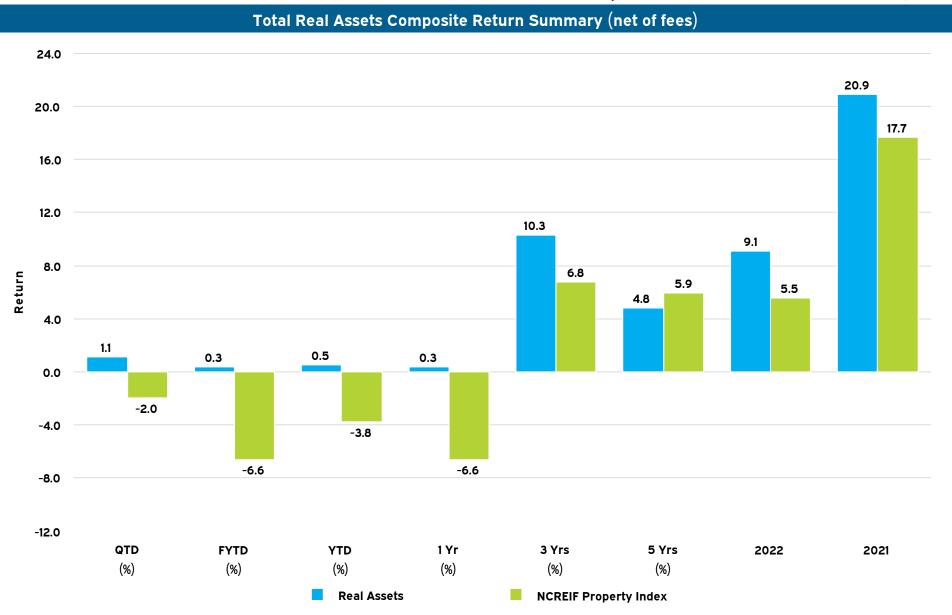














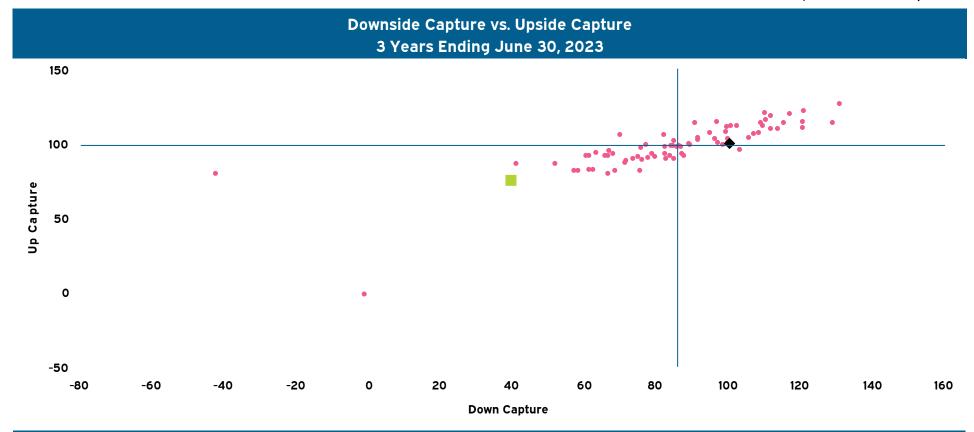
#### Total Plan Risk Return Statistics | As of June 30, 2023

	Ris	k Return Statistics		
	3 Year	rs	5 Yrs	5
	Total Composite	Policy Index	Total Composite	Policy Index
Return Summary Statistics				
Maximum Return	5.8	7.8	5.8	7.8
Minimum Return	-4.3	-6.0	-4.3	-9.7
Return	9.7	6.6	8.1	5.5
Excess Return	8.2	5.7	6.5	4.5
Excess Performance	3.1	0.0	2.6	0.0
Risk Summary Statistics				
Beta	0.5	1.0	0.5	1.0
Up Capture	75.5	100.0	70.7	100.0
Down Capture	39.6	100.0	40.0	100.0
Risk/Return Summary Statistics				
Standard Deviation	6.9	10.8	6.4	11.2
Sortino Ratio	2.2	0.8	1.7	0.6
Alpha	5.9	0.0	5.2	0.0
Sharpe Ratio	1.2	0.5	1.0	0.4
Excess Risk	7.0	10.8	6.5	11.2
Tracking Error	6.3	0.0	6.6	0.0
Information Ratio	0.4	-	0.3	-
Correlation Statistics				
R-Squared	0.7	1.0	0.7	1.0
Actual Correlation	0.8	1.0	0.9	1.0

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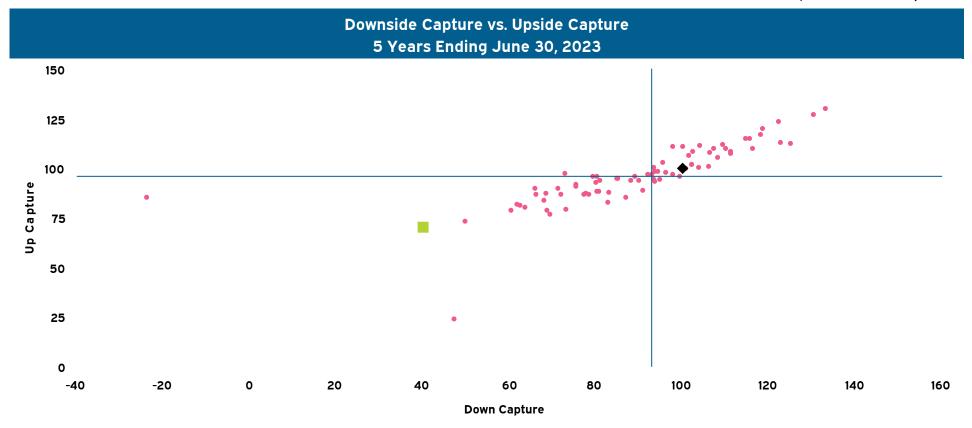
Total Plan | As of June 30, 2023



	3 Years Return	3 Years Up Capture	3 Years Down Capture
Total Composite	9.7	75.5	39.6
Policy Index	6.6	100.0	100.0



Total Plan | As of June 30, 2023



	5 Years Return	5 Years Up Capture	5 Years Down Capture
Total Composite	8.1	70.7	40.0
Policy Index	5.5	100.0	100.0



#### **Benchmark History**

June 2023	
Russell 2000 Index	20.0%
Russell 3000 Index	17.0%
Blmbg. US Aggregate Index	25.0%
ICEBofa High Yield Master II	17.0%
NCREIF Property Index	9.0%
MSCI AC World ex USA (Net)	12.0%

April 2021	
Russell 2000 Index	12.0%
Russell 3000 Index	25.0%
Blmbg. US Aggregate Index	20.0%
ICEBofa High Yield Master II	18.0%
NCREIF Property Index	12.0%
MSCI AC World ex USA (Net)	13.0%

April 2018	
Russell 2000 Index	12.0%
Russell 3000 Index	17.0%
Blmbg. US Aggregate Index	21.0%
ICEBofa High Yield Master II	15.0%
HFRI Equity Hedge (Total) Index	7.0%
NCREIF Property Index	12.0%
MSCI AC World ex USA (Net)	16.0%

June 2017	
Russell 2000 Index	12.0%
Russell 3000 Index	20.0%
Blmbg. US Aggregate Index	21.0%
ICEBofa High Yield Master II	15.0%
NCREIF Property Index	12.0%
MSCI AC World ex USA (Net)	13.0%

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# Private Market Performance Summary as of March 31, 2023



Total Composite | March 31, 2023

#### **Total Private Market Performance**

As of March 31, 2023

					Remaining			
Asset Class	Committed (\$ MM)	Contributed (\$ MM)	Unfunded (\$ MM)	Distributed (\$ MM)	Value (\$ MM)	TVPI (X)	Net IRR (%)	PME <sup>1</sup> (%)
Private Debt	1,832.8	1,635.2	235.5	1,323.9	887.3	1.35	9.6%	4.9%
Private Equity	1,247.8	984.6	265.4	1,107.0	845.9	1.98	15.6%	7.8%
Real Estate and Real Assets	1,006.2	770.1	238.9	694.9	318.0	1.32	6.0%	8.5%
Total	4,086.8	3,389.9	739.8	3,125.8	2,051.2	1.53	10.4%	

<sup>1</sup> Public Market Equivalent benchmarks are: MSCI ACWI IMI Index for Private Equity, Merrill Lynch High Yield Index for Private Debt, and NCREIF NPI for Real Estate/Real Assets.

# **Disclaimer**



# Metropolitan Government of Nashville and Davidson County Disclaimer, Glossary, and Notes

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