

# December 2024 Executive Summary



PRELIMINARY, SUBJECT TO REVISION

# Overview

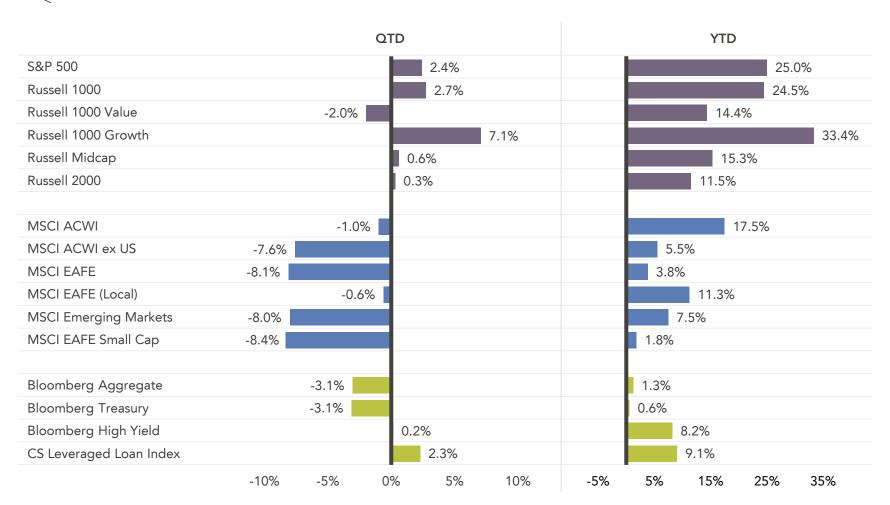
# Calendar year returns

2024	2023	2022	2021	2020	2019	2018	2017	2016	2015	5yr	10yr
Large Cap 25.0%	Large Cap 26.3%	Commodities 26.0%	Commodities 40.4%	Broad U.S. Equities 20.9%	Large Cap 31.5%	Bank Loans 1.1%	Emerging Markets 37.3%	Small Cap 21.3%	Intl Small Cap 9.6%	Large Cap 14.5%	Large Cap 13.1%
Broad U.S. Equities 23.8%	Broad U.S. Equities 26.0%	Bank Loans -1.1%	Large Cap 28.7%	Small Cap 20.0%	Broad U.S. Equities 31.0%	Core Bond 0.0%	Intl Small Cap 33.0%	High Yield 17.1%	Large Cap 1.4%	Broad U.S. Equities 13.9%	Broad U.S. Equities 12.5%
Mid Cap 15.3%	Intl Large Cap 18.2%	High Yield -11.2%	Broad U.S. Equities 25.7%	Large Cap 18.4%	Mid Cap 30.5%	High Yield -2.1%	Broad Intl Equities 27.2%	Mid Cap 13.8%	Core Bond 0.5%	Mid Cap 9.9%	Mid Cap 9.6%
Small Cap 11.5%	Mid Cap 17.2%	Core Bond -13.0%	Mid Cap 22.6%	Emerging Markets 18.3%	Small Cap 25.5%	Large Cap -4.4%	Intl Large Cap 25.0%	Broad U.S. Equities 12.7%	Broad U.S. Equities 0.5%	Small Cap 7.4%	Small Cap 9.6%
Commodities 9.3%	Small Cap 16.9%	Intl Large Cap -14.5%	Small Cap 14.8%	Mid Cap 17.1%	Intl Small Cap 25.0%	Broad U.S. Equities -5.2%	Large Cap 21.8%	Large Cap 12.0%	Bank Loans -0.4%	Commodities 7.1%	Intl Small Cap 5.5%
Bank Loans 9.1%	Broad Intl Equities 15.6%	Broad Intl Equities -16.0%	Intl Large Cap 11.3%	Intl Small Cap 12.3%	Intl Large Cap 22.0%	Mid Cap -9.1%	Broad U.S. Equities 21.1%	Commodities 11.4%	Intl Large Cap -0.8%	Bank Loans 5.7%	Intl Large Cap 5.2%
High Yield 8.2%	High Yield 13.4%	Mid Cap -17.3%	Intl Small Cap 10.1%	Broad Intl Equities 10.7%	Broad Intl Equities 21.5%	Small Cap -11.0%	Mid Cap 18.5%	Emerging Markets 11.2%	Mid Cap -2.4%	Intl Large Cap 4.7%	High Yield 5.2%
Emerging Markets 7.5%	Intl Small Cap 13.2%	Large Cap -18.1%	Broad Intl Equities 7.8%	Intl Large Cap 7.8%	Emerging Markets 18.4%	Intl Large Cap -13.8%	Small Cap 14.6%	Bank Loans 9.9%	Small Cap -4.4%	High Yield 4.2%	Bank Loans 5.1%
Broad Intl Equities 5.5%	Bank Loans 13.0%	Broad U.S. Equities -19.2%	Bank Loans 5.4%	Core Bond 7.5%	Commodities 17.6%	Commodities -13.8%	High Yield 7.5%	Broad Intl Equities 4.5%	High Yield -4.5%	Broad Intl Equities 4.1%	Broad Intl Equities 4.8%
Intl Large Cap 3.8%	Emerging Markets 9.8%	Emerging Markets -20.1%	High Yield 5.3%	High Yield 7.1%	High Yield 14.3%	Broad Intl Equities -14.2%	Commodities 5.8%	Core Bond 2.6%	Broad Intl Equities -5.7%	Intl Small Cap 2.3%	Emerging Markets 3.6%
Intl Small Cap 1.8%	Core Bond 5.5%	Small Cap -20.4%	Core Bond -1.5%	Bank Loans 2.8%	Core Bond 8.7%	Emerging Markets -14.6%	Bank Loans 4.2%	Intl Small Cap 2.2%	Emerging Markets -14.9%	Emerging Markets 1.7%	Core Bond 1.3%
Core Bond 1.3%	Commodities -4.3%	Intl Small Cap -21.4%	Emerging Markets -2.5%	Commodities -23.7%	Bank Loans 8.2%	Intl Small Cap -17.9%	Core Bond 3.5%	Intl Large Cap 1.0%	Commodities -32.9%	Core Bond -0.3%	Commodities 1.2%

Source: Bloomberg as of December 31, 2024. Please see end of document for benchmark information.



### **Index summary**



Source: Bloomberg as of December 31, 2024



### Asset class outlook

		CHANGE	HEAD	VINDS	NEUTRAL	TAILW	VINDS
	Core bonds						
Fixed	Bank loans						
Ę 'n	High yield						
	EMD						
10	Large-cap						
U.S. Equities	Mid-cap						
Equ	Small-cap						
U.S.	Value						
	Growth						
.S. les	Developed large-cap	•					
Non-U.S. Equities	Developed small-cap						
	Emerging markets						
Real Assets	Core real estate						
al As	Value-add real estate						
Re	Infrastructure						
o o	Equity long/short						
Hedge Funds	Credit						
	VRP	•					
Private Equity	Buyout						
	Venture Capital						
Private Credit	Direct lending						
Ę Ş	Distressed/opportunistic						

### **TAKEAWAYS**

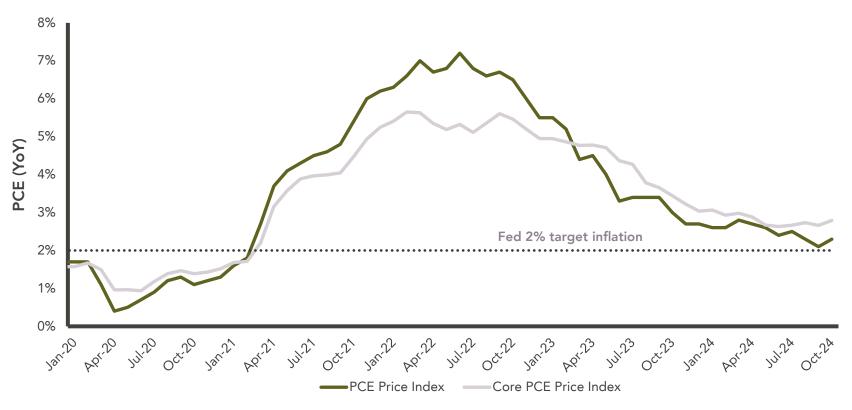
- Fixed Income: The Fed continued to cut in 4Q, but rates pushed higher out the curve due to inflation and deficit fears. This provided a headwind to fixed assets during the quarter. Spreads remain tight and trade inside long-term averages, but credit fundamentals remain resilient. Spreads could remain tight for an extended period, but fixed income yield remain attractive. Diversification will be key going forward.
- U.S.: Given the expectation for strong economic growth, the U.S. equity market remains attractive following two consecutive standout years. If earnings growth broadens out across non-Mag 7 companies, investors may exhibit a rotation out of growth- and momentum-oriented stocks and may increasingly favor small-cap and value equities. Small caps specifically remain attractively valued relative to their large-cap counterparts.
- Non-U.S.: Non-U.S. developed large-cap equities face headwinds (e.g., trade policy uncertainty and economic challenges), while non-U.S. developed small caps are poised to benefit from lower rates and may be more insulated from economic turmoil given their domestic revenue bases. EM stocks face a mixed outlook, with tailwinds for countries like Taiwan, Japan, and India, though China and Latin America face short-term struggles.
- Neal Assets: 2025 appears poised to be an attractive entry point for commercial real estate investment with valuations stabilizing, debt markets improving, and property fundamentals strengthening. Core infrastructure assets in the U.S. remain stable given inflation-linked revenue streams and growing interest in energy transition opportunities.
- Hedge Funds: Increased deal-making activity may benefit activist, event-driven, and merger arbitrage strategies. Market dispersion could be a tailwind for long/short equity managers, while VRP strategies benefit from higher yields on collateral pools but suffer from VIX levels that have largely sat below long-term averages for the last few quarters.
- Private Equity: Buyout valuations remain below public market multiples. 2025 should be a strong year for dealmaking, though inflation and uncertainty surrounding the future path of interest rates could significantly influence exit activity and fundraising this year.
- Private Credit: Though new issue spreads have tightened in recent quarters, direct lending yields remain attractive. Increased M&A expectations and pent-up demand for private equity exits supports strong origination volumes in 2025, while indicators of potential credit stress remain benign in aggregate.

For illustration only, as of December 31, 2024. These views apply to a 6–12-month horizon; arrows in Change column represent change in view since last quarter. This summary of individual asset class views shows relative direction and strength of conviction but is independent of portfolio construction considerations. These views should not be construed as a recommended portfolio or investment advice. Past performance does not imply future returns.



### **PCE**

# PCE, the preferred inflation gauge of the Federal Reserve, barely moved in November and remains above the central bank's target level

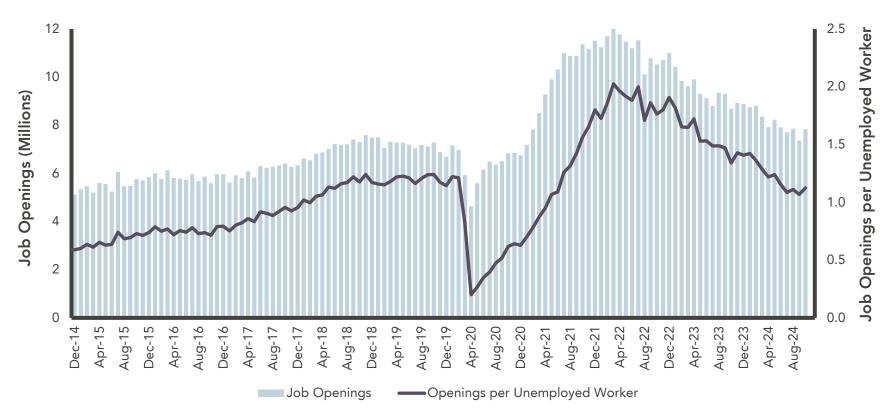


Source: Bloomberg, Bureau of Economic Analysis as of November 30, 2024



# Job openings

# U.S. job openings rose unexpectedly in November to roughly 8.1 million, a sign the labor market continues to show resilience

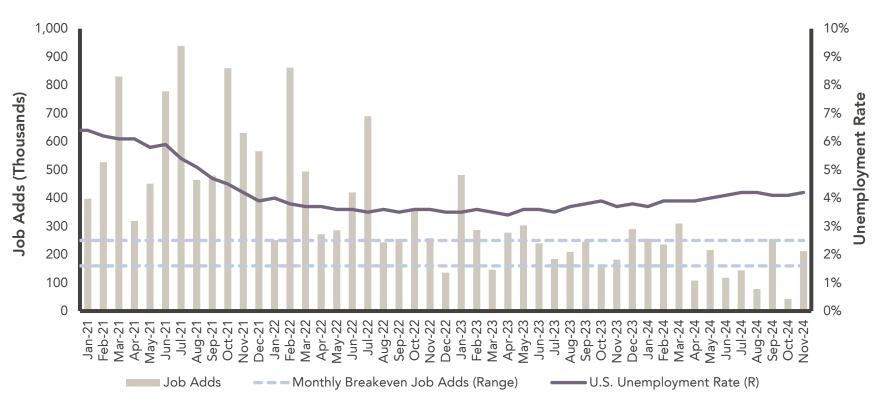


Source: Bloomberg, Bureau of Labor Statistics as of November 30, 2024



# Hiring and unemployment

256,000 new jobs were added in December to finish 2024 on high note; the unemployment rate ticked down slightly to 4.1%

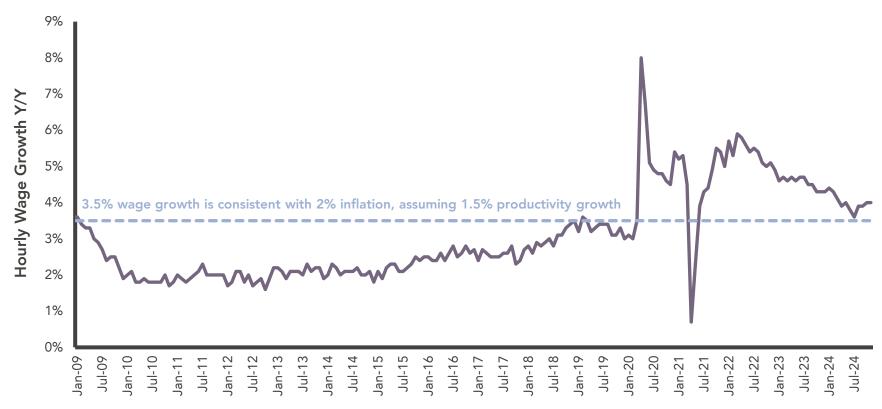


Source: Bloomberg, Bureau of Labor Statistics as of December 31, 2024. Monthly breakeven job adds are economists' estimates related to how fast payrolls can grow without tightening the labor market and stoking wage pressures (i.e., neutral payrolls growth).



# Wage growth

Wage growth, a key measure for gauging inflation pressures, rose 3.9% on a year-over-year basis in December, in line with expectations

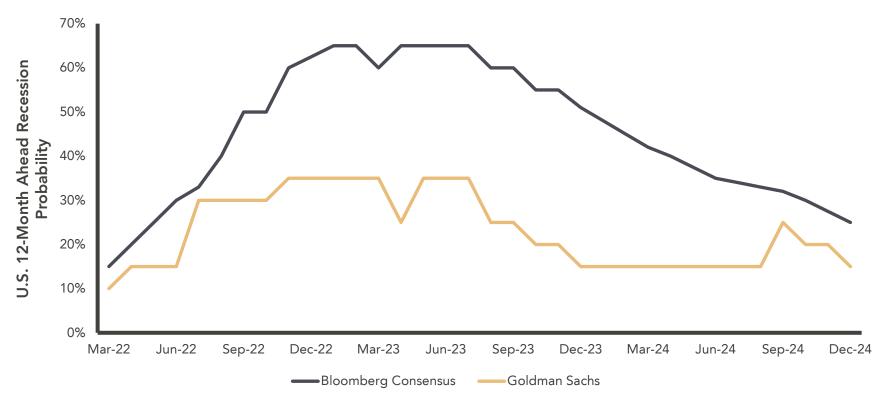


Source: Bloomberg, Bureau of Labor Statistics as of December 31, 2024



# How likely is a U.S. recession?

According to forecasters, the probability of a near-term recession in the U.S. has fallen over the last several quarters

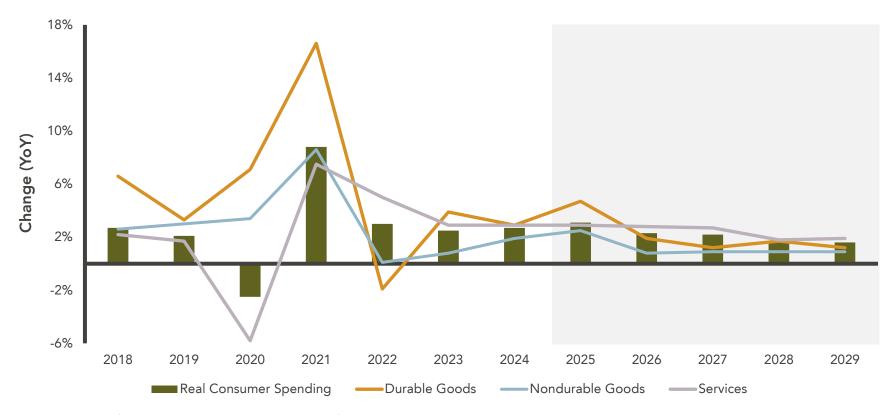


Source: Bloomberg, Goldman Sachs as of December 31, 2024



### Consumer spending expected to grow moderately

A strong consumer buoyed the U.S. economy in recent years; spending is expected to stay robust across goods and services into 2030

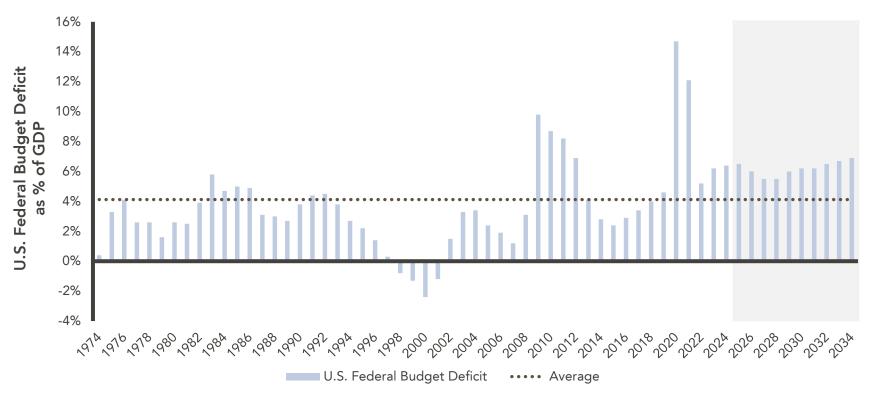


Source: Deloitte as of December 31, 2024. Gray shading indicates forecasts.



### U.S. budget deficits seen elevated for years to come

The U.S. budget deficit will likely run above trend for the next decade due to higher debt interest costs and Social Security spending

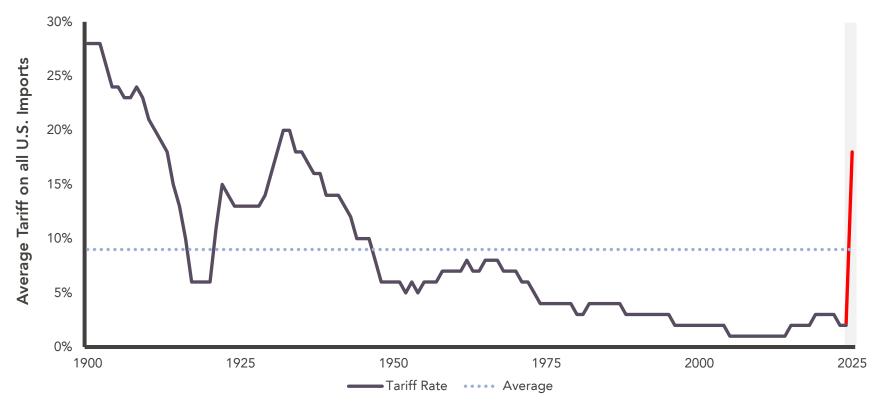


Source: Congressional Budget Office, Treasury Department as of December 31, 2024. CBO estimated 7% for 2024; chart shows the actual figure of 6.4% reported by the U.S. Treasury. The CBO estimates are based on existing legislation and assume 2017 tax cuts expire as scheduled. Gray shading indicates forecasts.



# The Trump trade war 2.0

President-elect Donald Trump's plans could raise average tariffs on U.S. imports to their highest levels in nearly 100 years

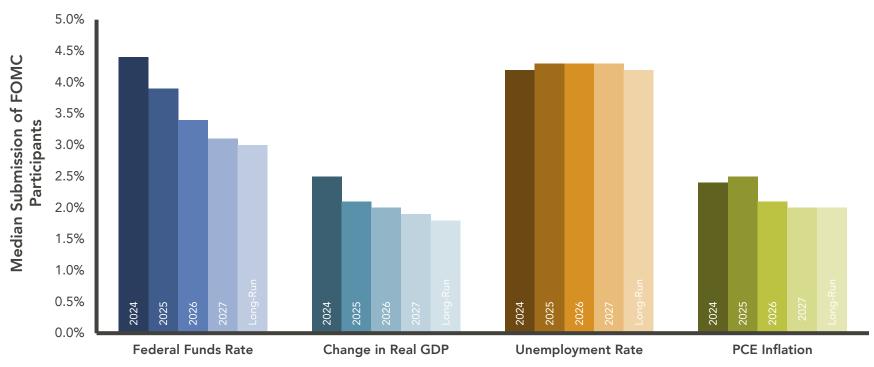


Source: Tax Foundation as of December 31, 2024. Gray shading indicates forecasts.



# Summary of economic projections

Federal Reserve officials expect moderation in GDP growth, inflation, and interest rate levels over the next few years

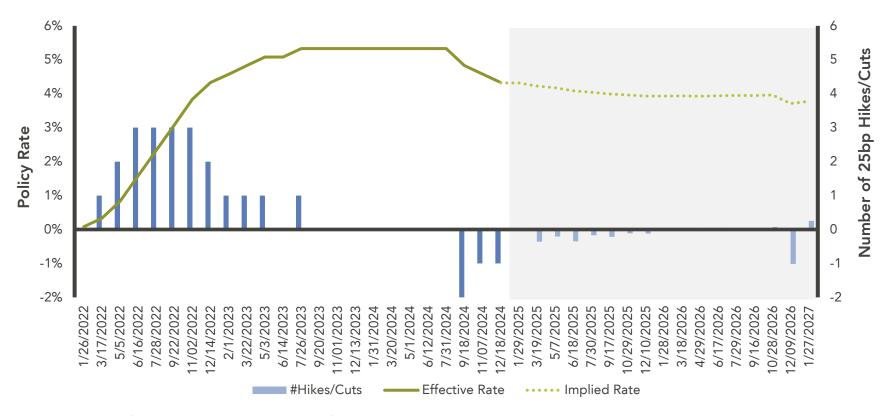


Source: Federal Reserve as of December 18, 2024. Long-run projections are defined as representing each participant's assessment of the value to which each variable would be expected to converge, over time, under appropriate monetary policy and in the absence of further shocks to the economy. "Appropriate monetary policy" is defined as the future path of policy that each participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her individual interpretation of the statutory mandate to promote maximum employment and price stability.



### Rate expectations

The number of forecasted Fed interest rate cuts in 2025 has fallen; investors now expect 1-2 cuts from the central bank this year



Source: Bloomberg as of January 8, 2025. Gray shading indicates forecasts.



# Washington Update: Policy to Portfolio

### A new administration and a new plan

### New government policies will likely have a mixed economic impact, which means details and sequencing matter

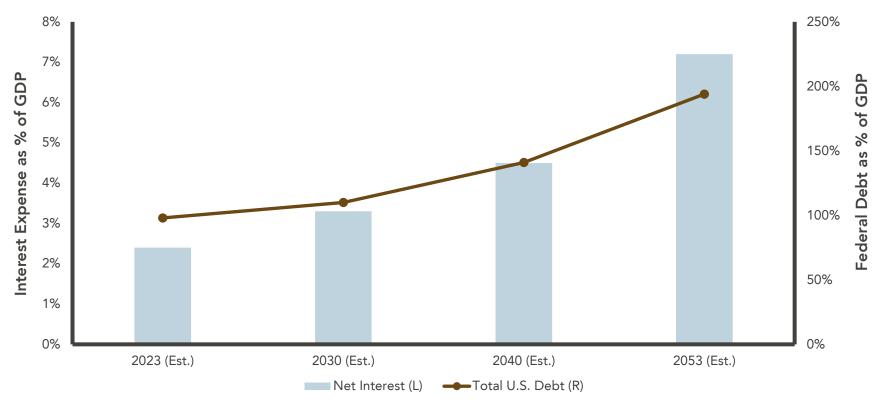
Policy	Detail	Impact on Growth	Impact on Inflation	Impact on Deficit
Expiring Trump Tax Cuts	<ul><li>Extend individual and reinstate expiring business provisions</li><li>New tax cuts will be marginal</li></ul>	Positive	Neutral	Increase
IRA Renewable Tax Credits	<ul><li>Targeted repeal of credits</li><li>Eliminate DOE Grants</li></ul>	Neutral	Neutral	Decrease
Tariffs	<ul><li>Tariffs will increase but less than rhetoric</li><li>China a specific target</li></ul>	Negative	Increase	Decrease
Immigration	<ul><li>Close border and restart wall</li><li>End Temporary Protected Status</li><li>Symbolic deportations</li></ul>	Negative	Neutral to Increase	Neutral
Deregulation	<ul><li>Energy permitting</li><li>More industry friendly regulatory agency</li><li>Banking changes</li></ul>	Positive	Lower	Neutral
Spending Cuts	<ul><li>DOGE could reduce spending marginally</li><li>Real cuts require Congress</li></ul>	Neutral to Negative	Neutral	Neutral to Decrease
Social Security/Medicare	<ul><li>No major changes</li></ul>	Neutral	Neutral	Increase

Source: PIMCO, Goldman Sachs, Deutsche Bank, Congressional Budget Office as of December 31, 2024



### New administration, same old problem

The U.S. debt situation continues to look gloomy, as both interest expense and total debt are expected to rise in the coming years

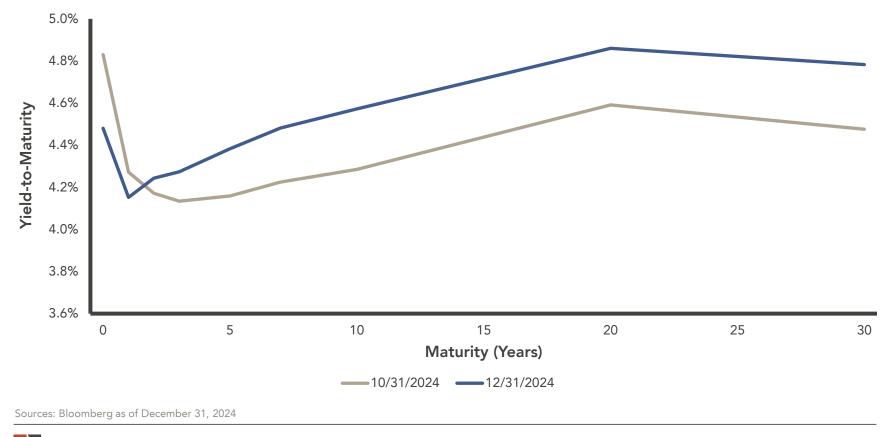


Sources: Congressional Budget Office as of March 31, 2024



# The Treasury curve is under pressure

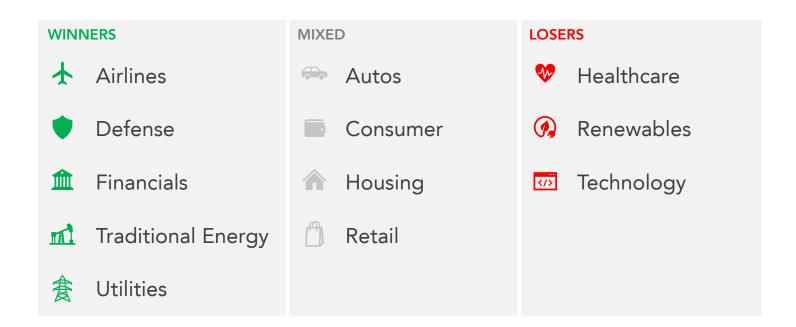
Even as the Federal Reserve has cut rates, Treasury yields have increased across the curve as inflation and deficit fears persist





### Winners and losers

### Economic polices will create opportunities within sectors, which should translate to tailwinds for active managers



Sources: PIMCO as of December 31, 2024



# **Donald Trump = currency king?**

Despite Trump's preference for a weaker dollar, investors have pushed the greenback higher; his election has also fueled digital currencies



Sources: Bloomberg as of December 31, 2024



# Fixed Income

# Fixed income performance

### Despite rate volatility, fixed income indices were mostly positive in 2024; long-dated indices fared poorly as back-end rates increased

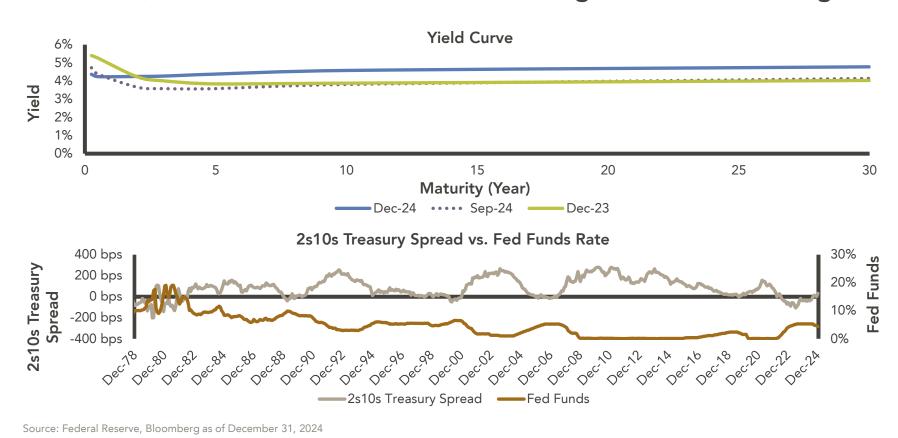
		MTD (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Broad Market Index	Blm Aggregate	-1.6	-3.1	1.3	1.3	-2.4	-0.3	1.3
Intermediate Index	Blm Int. Gov./Credit	-0.6	-1.6	3.0	3.0	-0.2	0.9	1.7
Government Only Indices	Blm Long Gov.	-5.3	-8.6	-6.4	-6.4	-11.9	-5.2	-0.6
	Blm Int. Gov.	-0.6	-1.7	2.4	2.4	-0.5	0.5	1.2
	Blm 1-3 Year Gov.	0.2	-0.1	4.0	4.0	1.4	1.4	1.4
	Blm U.S. TIPS	-1.6	-2.9	1.8	1.8	-2.3	1.9	2.2
Credit Indices	Blm U.S. Long Credit	-4.3	-6.3	-2.0	-2.0	-6.8	-1.9	2.1
	Blm High Yield	-0.4	0.2	8.2	8.2	2.9	4.2	5.2
	CS Leveraged Loan Index	0.6	2.3	9.1	9.1	6.8	5.7	5.1
Securitized Bond Indices	Blm MBS	-1.6	-3.2	1.2	1.2	-2.1	-0.7	0.9
	Blm ABS	-0.1	-0.1	5.0	5.0	2.0	2.0	2.1
	Blm CMBS	-0.5	-1.4	5.0	5.0	-0.5	1.0	2.2
Non-U.S. Indices	Blm Global Aggregate Hedged	-0.8	-0.9	3.4	3.4	-0.6	0.5	2.0
	JPM EMBI Global Diversified	-1.4	-1.9	6.5	6.5	-0.9	0.1	3.1
	JPM GBI-EM Global Diversified	-1.9	-7.0	-2.4	-2.4	-1.0	-1.9	0.4
Municipal Indices	Blm Municipal 5 Year	-0.7	-1.0	1.2	1.2	0.0	0.9	1.7
	Blm HY Municipal	-1.7	-1.1	6.3	6.3	0.3	2.7	4.3

Source: Bloomberg, Credit Suisse, JPMorgan as of December 31, 2024. The local currency GBI index is hedged and denominated in U.S. dollars.



### U.S. Treasury yield curve and steepness

The yield curve finally normalized in 4Q (after the longest inversion on record) as the Fed initiated rate cuts and long-end rates moved higher



### 10-Year Treasury term premium

Term premia increased in 4Q as investors demand more compensation to hold long-term debt on deficit and renewed inflation concerns



Source: Bloomberg as of December 31, 2024. Term premia is a measure used to approximate how much compensation investors require to hold long-term debt versus rolling over short-term debt.



### Fixed income forward returns

Yield levels still present mostly positive outcomes; the possibility of higher rates and spread widening pose near-term downside risks

### **TOTAL RETURN 12 MONTHS FORWARD**

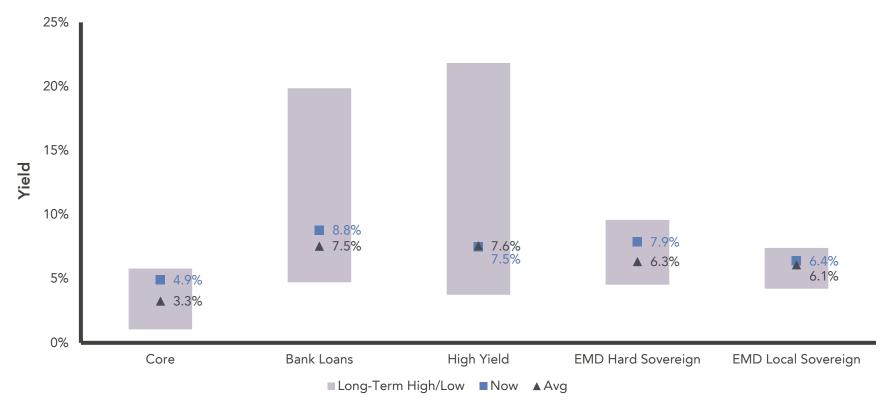
		Spread Movement (bps)								
		-100	-75	-50	-25	0	25	50	75	100
(\$0	-100	17.0%	15.5%	14.0%	12.5%	11.0%	9.5%	8.0%	6.5%	5.0%
(sdq)	-75	15.4%	14.0%	12.5%	11.0%	9.5%	8.0%	6.5%	5.0%	3.5%
Movement	-50	13.9%	12.4%	10.9%	9.4%	8.0%	6.5%	5.0%	3.5%	2.0%
ven	-25	12.4%	10.9%	9.4%	7.9%	6.4%	4.9%	3.4%	1.9%	0.5%
	0	10.9%	9.4%	7.9%	6.4%	4.9%	3.4%	1.9%	0.4%	-1.1%
Yield	25	9.4%	7.9%	6.4%	4.9%	3.4%	1.9%	0.4%	-1.1%	-2.6%
L Y	50	7.8%	6.4%	4.9%	3.4%	1.9%	0.4%	-1.1%	-2.6%	-4.1%
Treasury	75	6.3%	4.8%	3.3%	1.8%	0.4%	-1.1%	-2.6%	-4.1%	-5.6%
Ē	100	4.8%	3.3%	1.8%	0.3%	-1.2%	-2.7%	-4.2%	-5.7%	-7.1%

Source: Bloomberg as of December 31, 2024



# Fixed income yields

On a year-over-year basis, yields are only marginally different across sectors and still offer attractive carry for fixed income investors

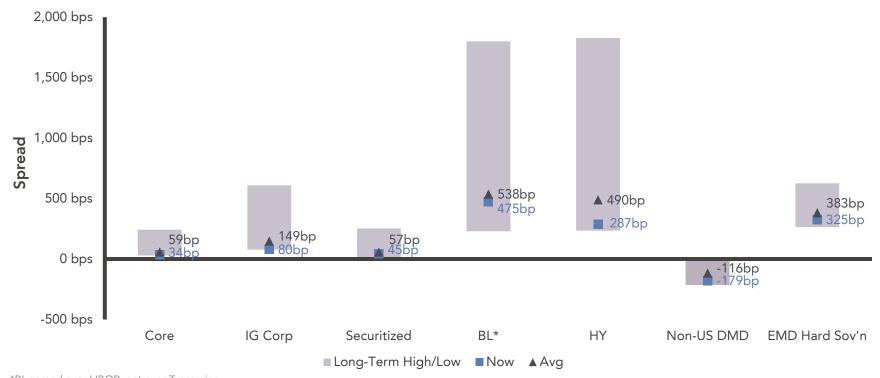


Source: Bloomberg, Credit Suisse, JPMorgan as of December 31, 2024. Long-term high, low, and average based on longest available data for each index.



# Fixed income spreads

Spreads started 2024 tight and moved tighter; they should remain tight barring a market shock, meaning investors should diversify across sectors

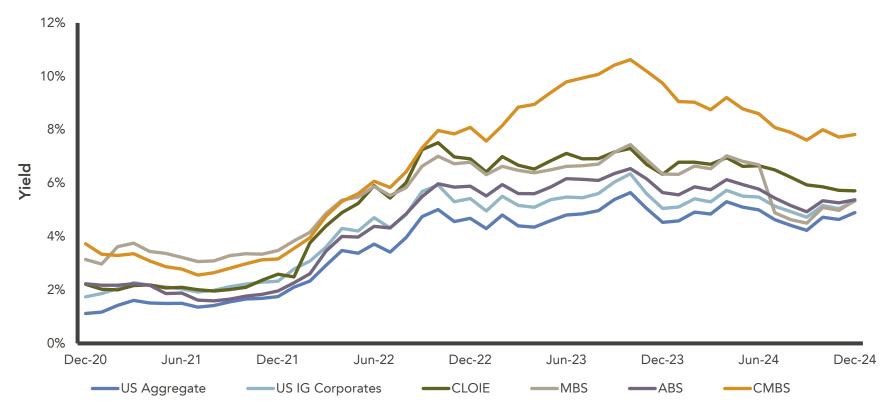


\*BL spread over LIBOR, not over Treasuries. Source: Bloomberg, Credit Suisse, JPMorgan as of December 31, 2024. Long-term high, low, and average based on longest available data for each index.



# Structured credit yields

Structured credit currently offers an attractive pick-up on all-in yield across most sectors relative to corporate credit



Source: Bloomberg, J.P. Morgan as of December 31, 2024



# Loan spreads and yields

### Loan spread and yield premiums increased in 4Q and are attractive versus high yield, despite pricing in higher risks

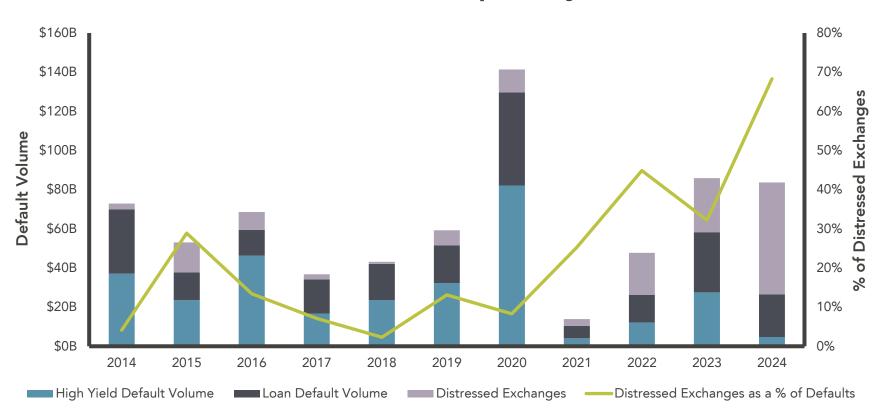


Source: Credit Suisse, J.P. Morgan as of December 31, 2024. Yield differential is the yield on the loan index minus the yield on the high yield index. Spread differential is the three-year discount margin of the loan index minus the spread of the high yield index.



### Distressed exchanges and LMEs

Headline default rates have increased in 2024, though may be overstated as this increase has come primarily from LMEs

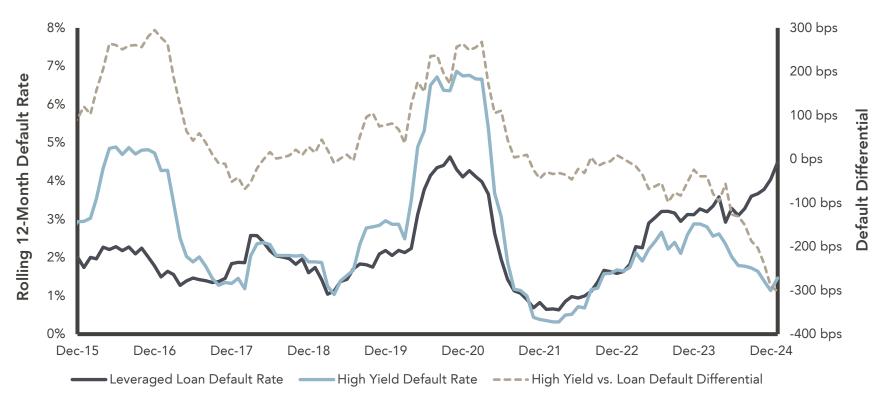


Source: J.P. Morgan as of December 31, 2024. LME: Liability Management Exercise.



### **Defaults**

### The gap in high yield and loan default rates is the largest on record as high yield continues to decrease and LMEs push loan rates higher

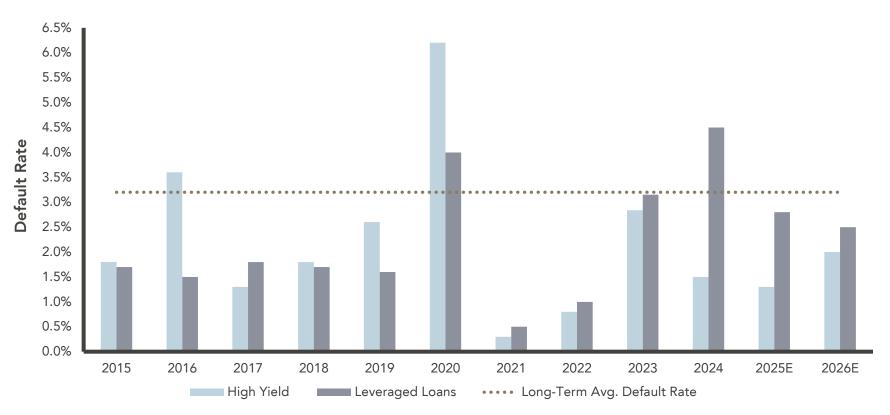


Source: J.P. Morgan as of December 31, 2024. Default rates includes distressed exchanges; long-term average default rate is the 25-year average of defaults in high yield and leveraged loans.



# **Default projections**

Defaults were lower than estimates for high yield and higher for loans in 2024; current forecasts are for below-average defaults across both

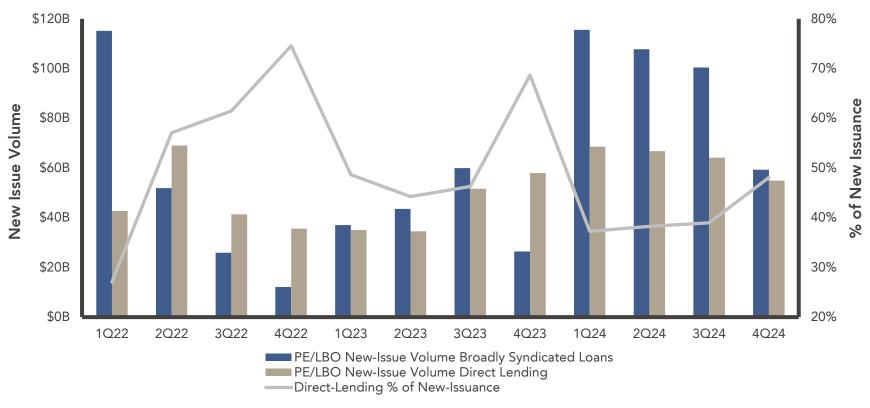


Source: J.P. Morgan as of December 31, 2024. Long-term average default rate is the 25-year average of defaults in high yield and leveraged loans.



### Loan and direct lending issuance

### PE & LBO issuance oscillates between loans and direct lending as public and private markets converge in a trend expected to grow

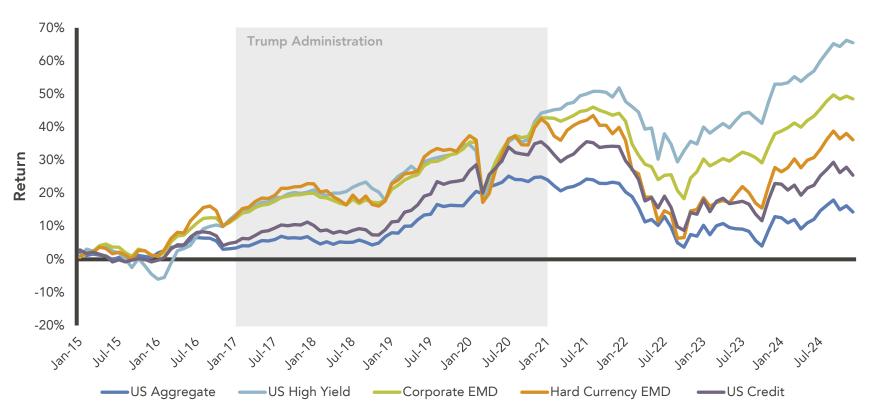


Source: LCD, Pitchbook as of December 31, 2024



### **EMD** and the Trump administration

EMD was in line with or better than U.S. credit markets during the last Trump term despite fears of policy impacts on emerging markets

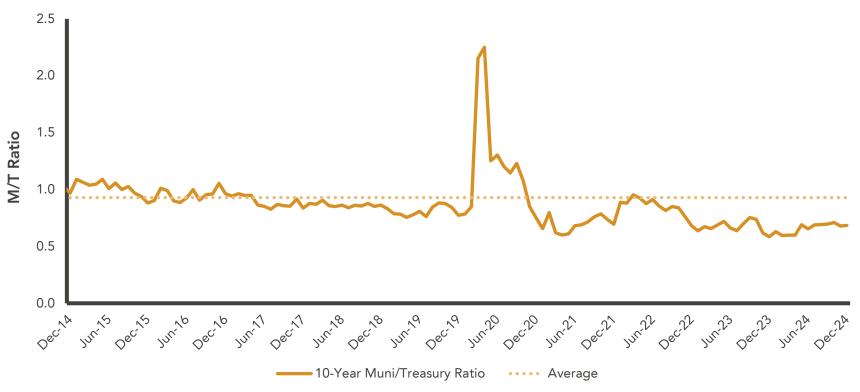


Source: Bloomberg, J.P. Morgan as of December 31, 2024



### **Municipal-to-Treasury ratio**

The 10-year Municipal-to-Treasury ratio moved marginally higher in 2024, as record issuance was largely absorbed by investor demand



Source: Bloomberg, Federal Reserve as of December 31, 2024. Municipal/Treasury ratio defined as the Bloomberg AAA 10-year Municipal Bond YTW as a percentage of the 10year Treasury Bond yield.



# **Municipal-to-Treasury ratios**

#### Municipal-to-Treasury ratios were volatile in 2024 but ended the year higher

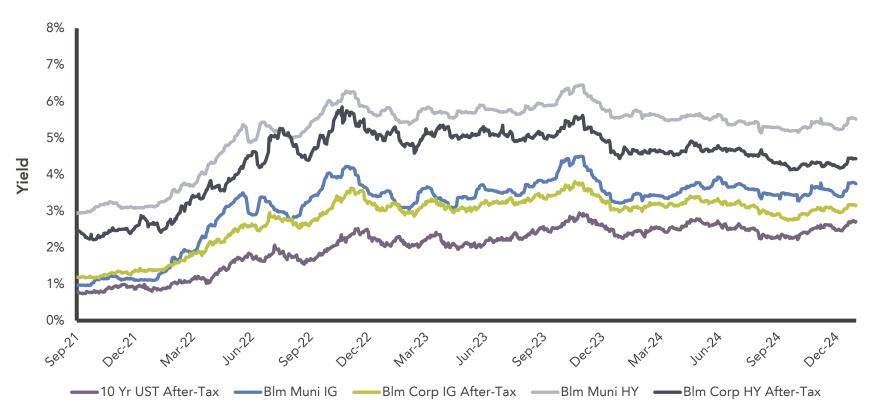
	MUN	TSY	<b>Ratio</b> (12/31/24)	<b>Ratio</b> (12/31/23)	<b>Ratio</b> (12/31/22)	<b>Ratio</b> (12/31/21)
1Y	2.95	4.23	0.71	0.54	0.60	0.49
3Y	2.81	4.22	0.66	0.59	0.61	0.35
5Y	2.88	4.25	0.66	0.58	0.64	0.48
<b>7</b> Y	2.98	4.32	0.67	0.56	0.65	0.59
10Y	3.11	4.39	0.68	0.58	0.68	0.70
30Y	3.82	4.58	0.81	0.84	0.91	0.81

Source: Bloomberg, U.S. Treasury as of December 31, 2024



# Municipal vs. corporate after-tax yields

Both IG and high yield municipals continue to offer attractive carry relative to after-tax corporates

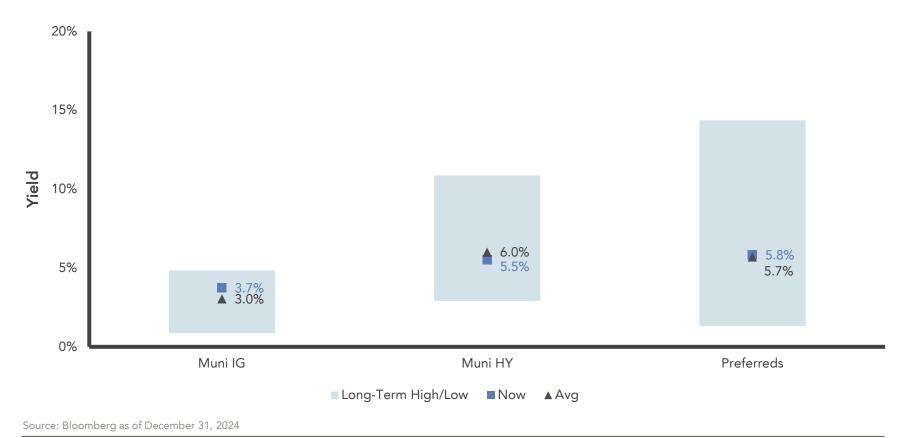


Source: Bloomberg as of December 31, 2024; based on 37% highest tax bracket and 3.8% net investment income tax



#### Municipal yields

Municipal yields increased in 4Q due to tax loss harvesting and an increase in Treasury yields on the longer end of the curve



# U.S. Equities

# **U.S.** equity performance

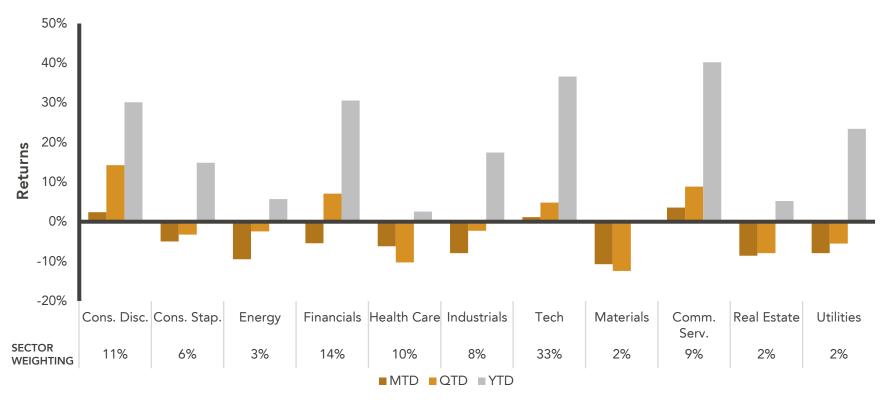
#### Most major U.S. equity indices generated double-digit returns in 2024; small-cap equities posted their worst relative December historically

		MTD (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Broad Market Indices	Dow Jones	-5.1	0.9	15.0	15.0	7.6	10.6	11.6
	Wilshire 5000	-3.0	2.9	24.2	24.2	7.8	13.7	12.4
	Russell 3000	-3.1	2.6	23.8	23.8	8.0	13.9	12.5
Large-Cap Market Indices	S&P 500	-2.4	2.4	25.0	25.0	8.9	14.5	13.1
	Russell 1000	-2.8	2.7	24.5	24.5	8.4	14.3	12.9
	Russell 1000 Value	-6.8	-2.0	14.4	14.4	5.6	8.7	8.5
	Russell 1000 Growth	0.9	7.1	33.4	33.4	10.5	19.0	16.8
Mid-Cap Market Indices	Russell Mid-Cap	-7.0	0.6	15.3	15.3	3.8	9.9	9.6
	Russell Mid-Cap Value	-7.3	-1.7	13.1	13.1	3.9	8.6	8.1
	Russell Mid-Cap Growth	-6.2	8.1	22.1	22.1	4.0	11.5	11.5
Small-Cap Market Indices	Russell 2000	-8.3	0.3	11.5	11.5	1.2	7.4	7.8
	Russell 2000 Value	-8.3	-1.1	8.1	8.1	1.9	7.3	7.1
	Russell 2000 Growth	-8.2	1.7	15.2	15.2	0.2	6.9	8.1



# **S&P 500 sector performance**

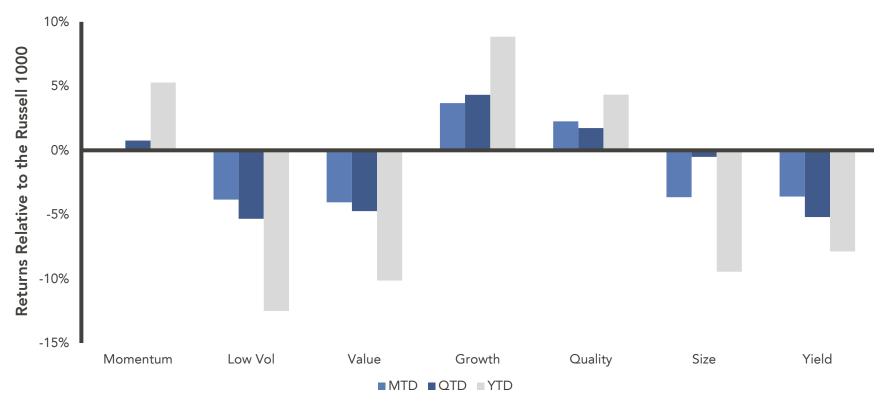
Nearly all sectors of the S&P 500 Index gained in 2024, as dispersion between the best and worst performing sectors reached 40%





#### Russell 1000 factor performance

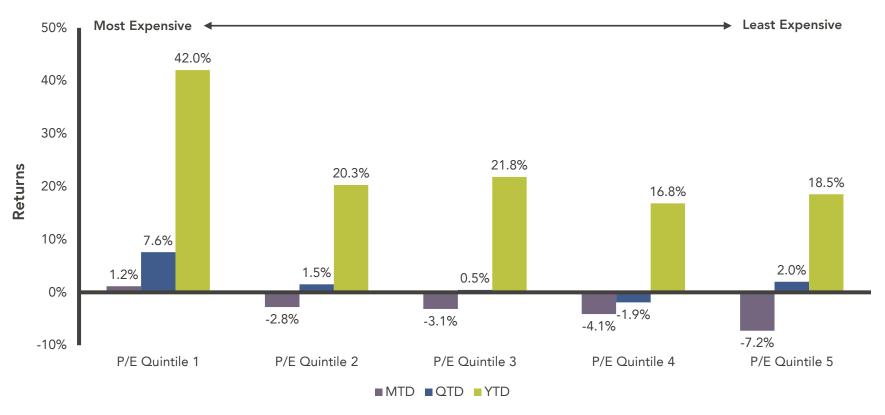
Markets reverted to trend in the fourth quarter, as the growth, quality, and momentum factors reasserted dominance





# **U.S.** equity valuations

#### Only the most expensive stocks of the S&P 500 Index advanced in December; this basket of equities notched 2024 market leadership

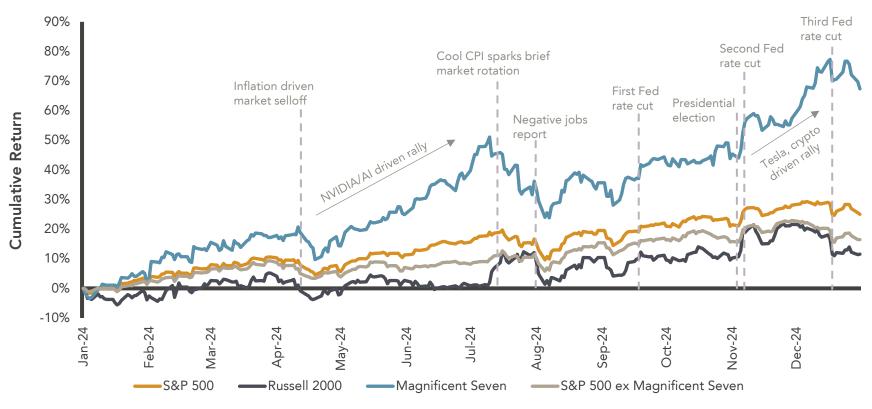


Source: FactSet as of December 31, 2024. SPY ETF used as a proxy for the S&P 500.



# Looking back at 2024

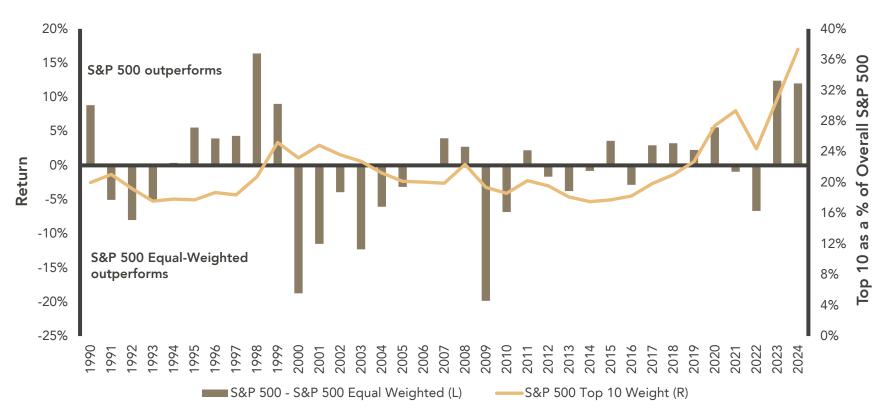
#### As small caps struggled amid weak earnings, the S&P 500 achieved 57 all-time highs in 2024 to extend its long-running leadership





#### Market concentration still a dominant theme

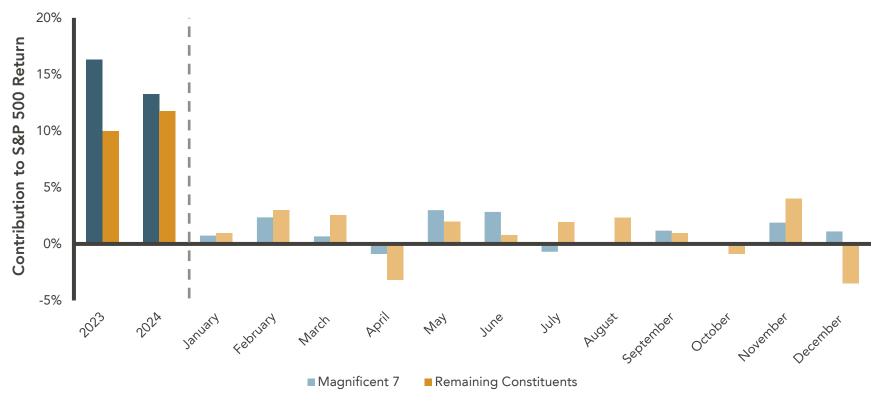
The top 10 S&P 500 positions fueled 60% of the 2024 return for the benchmark; less than 30% of stocks bested the index return last year





# The Magnificent Seven dominant again

Signs of market breadth quickly reverted in December, as the Fed signaled potentially fewer cuts in 2025 amid policy uncertainty



Source: FactSet as of December 31, 2024



#### Room to run?

#### U.S. equities have posted two consecutive years of over 20% gains; historical bull markets have varied in length

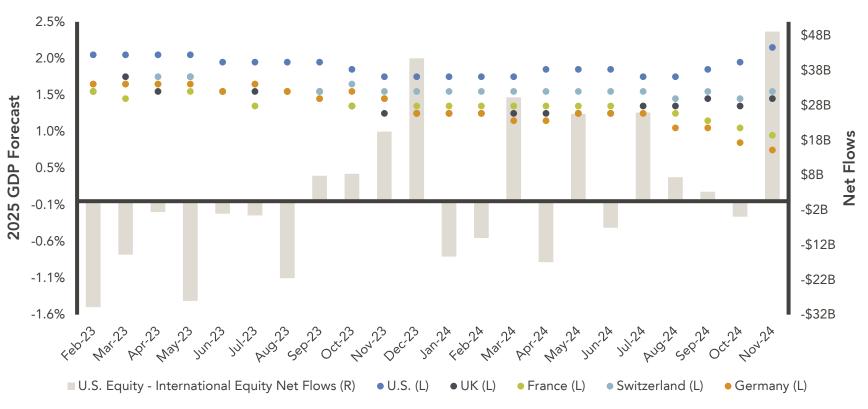
Bull Market Start	Bull Market End	Duration (Months)	Annualized Return	Cumulative Return	# of Pullbacks (-2% to -10%)
May-70	Jan-73	32	23%	74%	9
Oct-74	Nov-80	74	14%	126%	16
Aug-82	Aug-87	60	26%	225%	28
Dec-87	July-90	31	21%	63%	17
Oct-90	Mar-00	113	19%	408%	39
Oct-02	Oct-07	60	14%	95%	20
Mar-09	Feb-20	131	16%	397%	36
Mar-20	Jan-22	21	51%	109%	15
Oct-22	???	27	26%	68%	7
Ave	rage Bull Market	57	23%	169%	19

Source: Bloomberg as of December 31, 2024. S&P 500 Index used for calculations. Average bull market calculations are from June 1932 to December 2024.



# Investors drawn to U.S. economic strength

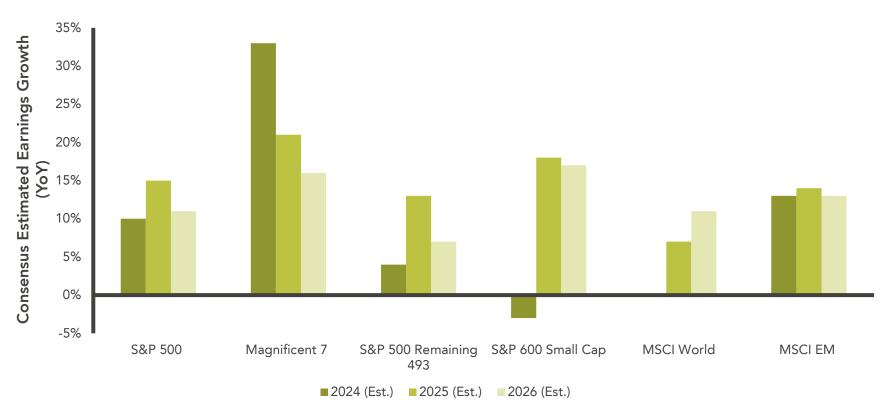
Amid strength in the U.S economy, markets experienced historic inflows into U.S. equities



Source: Bloomberg, Morningstar as of November 30, 2024

# **Earnings growth estimates**

Market breadth was lackluster in 2024 as earnings growth remains concentrated in the Magnificent 7, but the gap may narrow this year

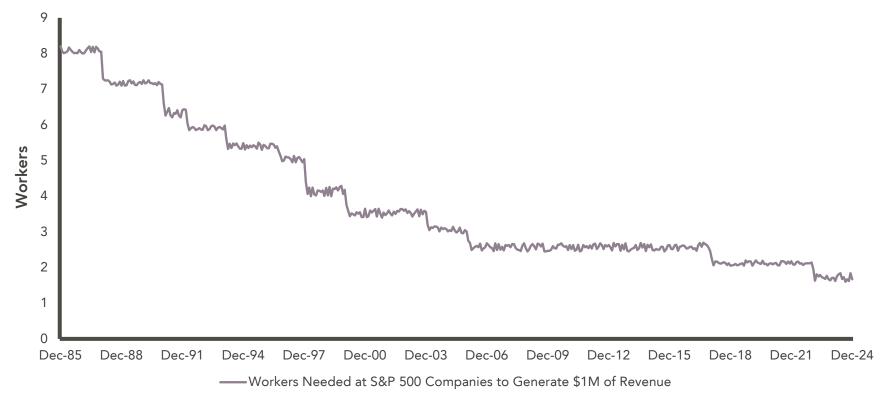


Source: SIT Investments, Bloomberg, and FactSet as of December 31, 2024. MSCI World excludes the U.S. and is expected to notch 0% earnings growth in 2024.



#### More with less

Advances in technology and artificial intelligence have allowed major companies to generate more revenue with fewer employees

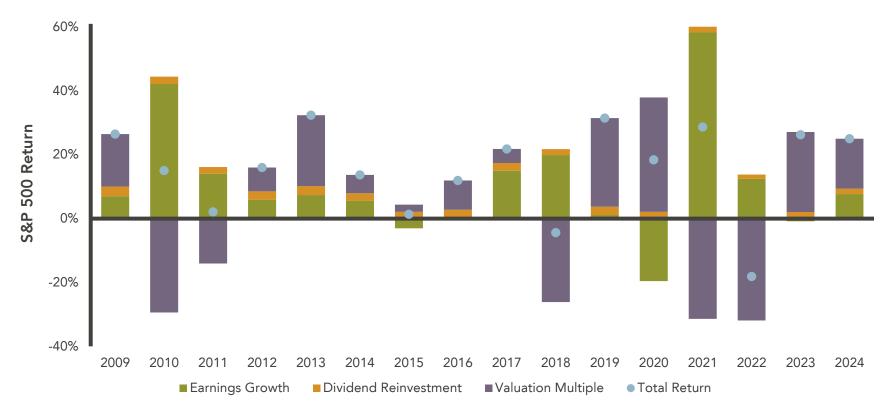


Source: Bank of America, Bloomberg as of December 31, 2024



#### **Decomposition of S&P 500 Index returns**

Although multiple expansion drove returns in 2024, earnings growth contributed to market gains, primarily via Magnificent 7 strength





# **U.S.** equity valuations

#### Despite underwhelming performance in December, large-cap equities remain expensive following a strong year

	S&P	500	Russell 1000		Russell N	Mid Cap	Russell 2000		
Valuation Metrics	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	
P/E	27.1	94	26.9	94	22.0	88	19.6	74	
Forward P/E	21.6	94	21.4	91	17.2	77	17.4	73	
P/B	5.1	99	4.9	99	3.0	89	2.1	38	
P/S	3.0	97	2.9	97	1.7	83	1.3	87	
P/CF	21.9	99	21.1	99	13.5	89	13.1	48	
EV/EBITDA	16.1	97	16.1	97	14.3	86	17.2	89	
Average		97		96		85		68	

Source: Bloomberg as of December 31, 2024. TTM P/E is adjusted for negative earnings. Small-cap forward P/E is adjusted for negative earnings. Percentiles are based on data Jan. 1995 - Dec. 2024.



# U.S. equity valuations by factor

#### Following a prolonged period of outperformance that stretches back to 2023, growth equities appear expensive relative to value equities

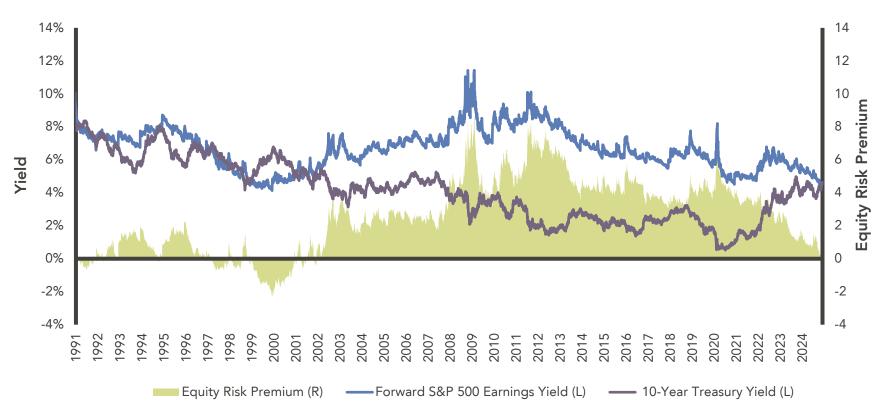
		ll 1000 alue		ll 1000 owth	Russell Mid C Value		Russell Mid Cap Growth		Russell 2000 Value		Russell 2000 Growth	
Valuation Metrics	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)
P/E	19.8	92	38.3	96	19.5	88	35.3	93	15.5	49	27.1	85
Forward P/E	16.3	93	28.9	94	15.2	77	27.8	88	14.3	66	22.1	81
P/B	2.7	94	13.7	98	2.4	93	10.9	95	1.3	24	4.5	88
P/S	1.8	89	6.0	100	1.5	88	2.5	81	1.0	70	2.1	93
P/CF	15.9	95	28.9	98	11.8	93	23.9	89	10.8	67	16.5	26
EV/EBITDA	12.1	94	23.5	95	13.1	84	20.8	89	13.0	64	24.7	95
Average		93		97		87		89		56		78

Source: Bloomberg as of December 31, 2024. TTM P/E is adjusted for negative earnings. Small-cap forward P/E is adjusted for negative earnings. Percentiles are based on data Jun. 2000 - Dec. 2024.



#### **Equity risk premium**

#### As U.S equities performed well alongside a rise in Treasury yields, the equity risk premium briefly turned negative in December



Source: Bloomberg as of December 31, 2024. The equity risk premium is the forward earnings yield of the S&P 500 minus the yield on the 10-year Treasury bond.



# Non-U.S. Equities

#### Global equity performance

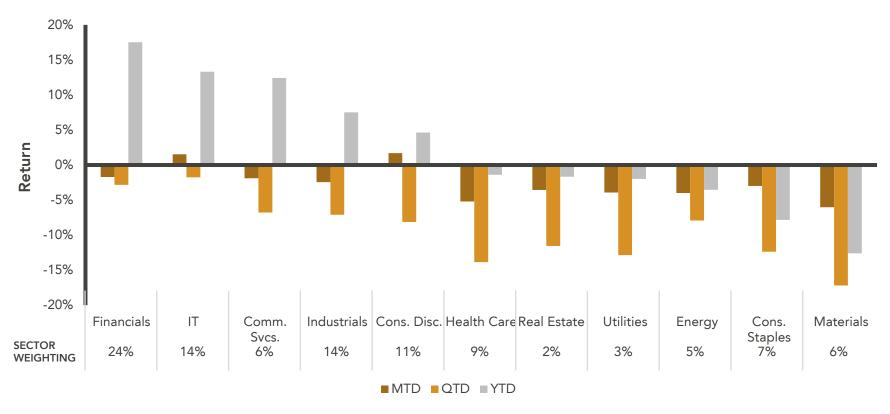
#### Despite major global equity indices ending the fourth quarter in the red, each was positive in 2024, with the MSCI ACWI leading the way

		MTD (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Global Equity Market Indices	MSCI ACWI	-2.4	-1.0	17.5	17.5	5.4	10.1	9.2
	MSCI ACWI ex. U.S.	-1.9	-7.6	5.5	5.5	0.8	4.1	4.8
Developed Markets Indices	MSCI EAFE	-2.3	-8.1	3.8	3.8	1.6	4.7	5.2
	MSCI EAFE Local	0.4	-0.6	11.3	11.3	6.3	7.6	7.1
Emerging Markets Indices	MSCI Emerging Markets	-0.1	-8.0	7.5	7.5	-1.9	1.7	3.6
	MSCI EM Local	1.2	-4.4	13.1	13.1	1.6	4.5	6.0
Small-Cap Market Indices	MSCI EAFE Small-Cap	-2.3	-8.4	1.8	1.8	-3.2	2.3	5.5
	MSCI EM Small-Cap	-1.0	-7.2	4.8	4.8	2.1	8.6	5.7
Frontier Markets Index	MSCI Frontier	0.2	-1.2	9.4	9.4	-3.5	1.8	2.2



# MSCI ACWI ex-U.S. sector performance

IT and Consumer Discretionary were the only positive sectors of non-U.S. stock markets in December, with Financials and IT leading in 2024

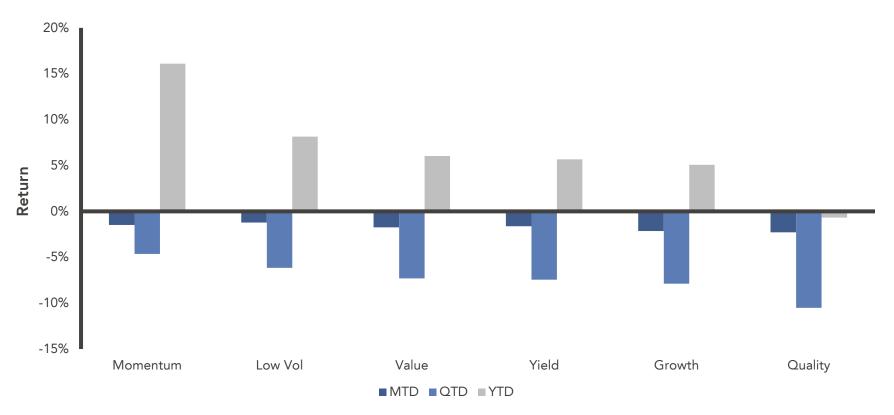


Source: Bloomberg as of December 31, 2024. Sector weights based on the MSCI ACWI ex-U.S. Index.



#### MSCI ACWI ex-U.S. factor performance

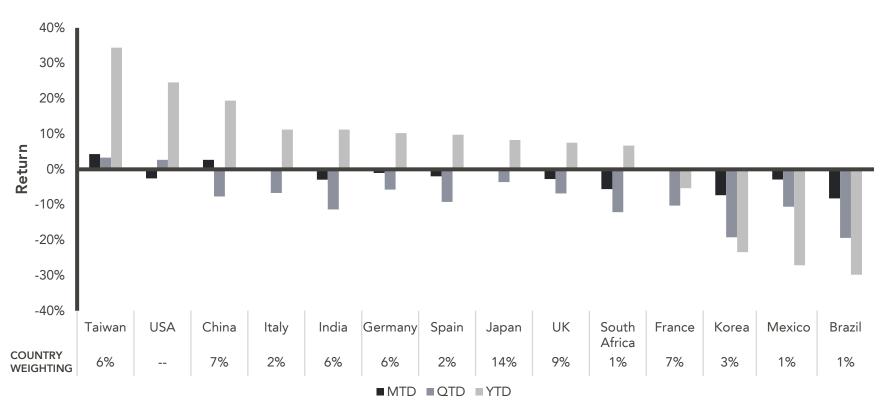
All style factors declined within non-U.S. equity markets in December, but most delivered positive returns in 2024





# Non-U.S. country performance

Taiwan and China notched positive returns in December and remained the top performing non-U.S. countries in 2024

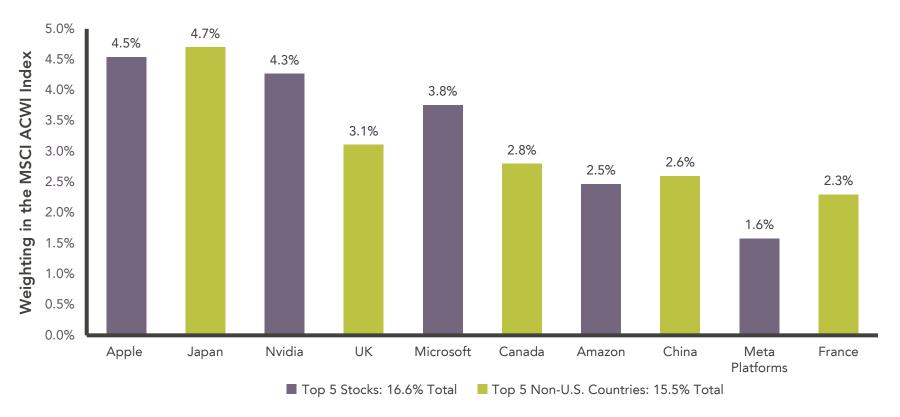


Source: Bloomberg as of December 31, 2024. Returns based on individual MSCI country indices; country weights based on the MSCI ACWI ex-U.S. Index.



# U.S. companies dominate global equity market

The top five U.S. companies make up a larger percentage of global equity markets than the top five non-U.S. countries

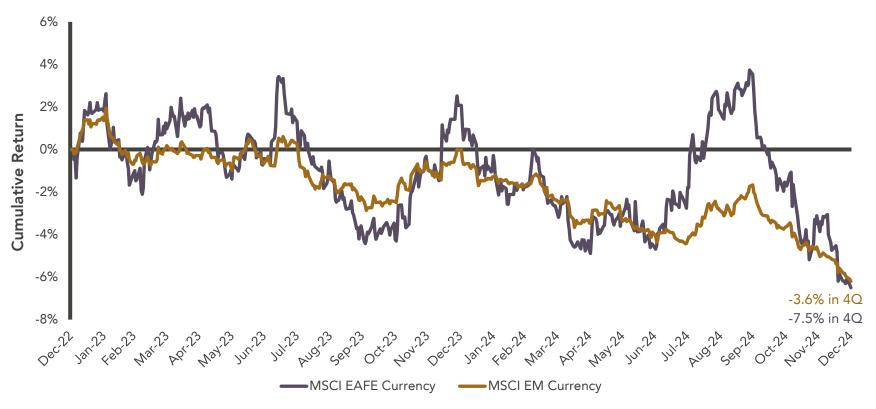


Source: MSCI. FactSet as of December 31, 2024



# Non-U.S. currency performance

Given the strengthening of the U.S. dollar, both developed and emerging market currencies posted negative returns in 4Q



Source: Bloomberg as of December 31, 2024. Currency return calculated by subtracting index return in USD by index return in local terms.



#### Global equity valuations

#### While valuations of U.S. large-cap stocks continue to appear expensive, non-U.S. equity indices have more attractive multiples

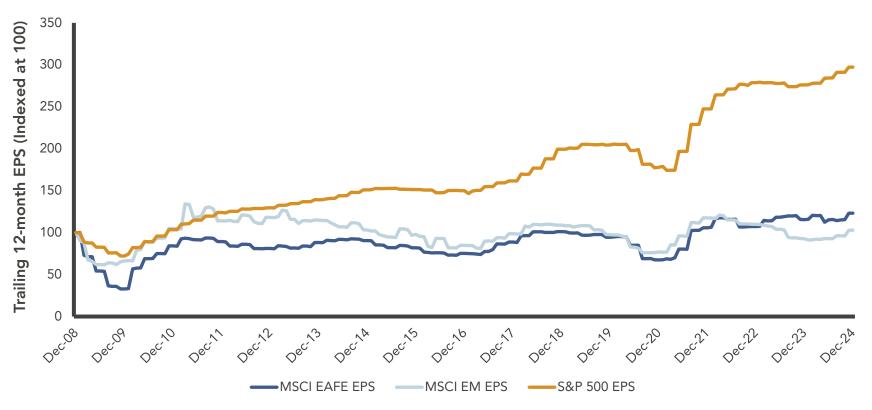
	S&P	500	MSCI EAFE		MSC	IEM	MSCI EAFE SC	
Valuation Metrics	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)
P/E	27.1	95.2	14.7	38.3	12.7	59.1	14.4	37.1
Forward P/E	21.6	98.6	14.0	69.3	11.8	69.7	12.5	30.6
P/B	5.1	99.3	1.8	54.5	1.7	47.1	1.4	40.0
P/S	3.0	96.9	1.3	89.2	1.3	60.9	0.9	67.4
P/CF	21.9	98.6	10.1	59.5	6.9	17.6	7.8	24.1
EV/EBITDA	16.1	96.9	10.0	18.5	10.0	93.2	9.6	31.2
Average		98		55		58		38

Source: Bloomberg as of December 31, 2024, data compiled on January 8, 2024. P/E is adjusted for negative earnings; percentiles are based on data dating back to 1999 (except for FP/E, which goes back to 2005).



# The gap widens

Since 2008, earnings for international equites have been materially lower than those of U.S. companies



Source: Bloomberg as of December 31, 2024, data compiled on January 9, 2024

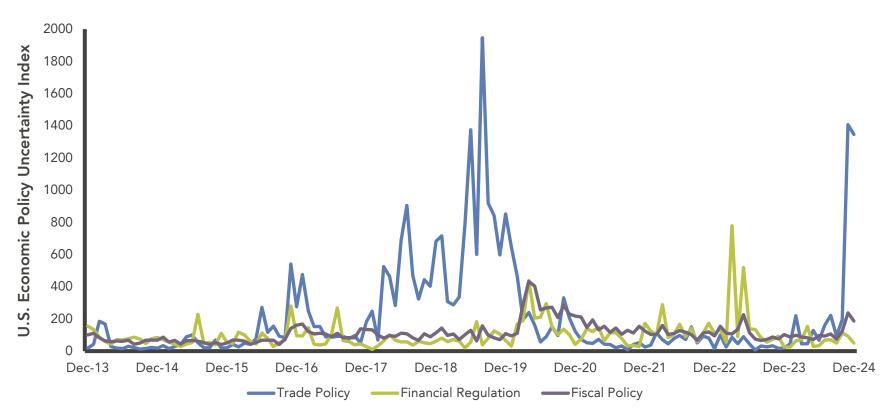


#### Four key themes within non-U.S. equity markets for 2025



# U.S. trade policy uncertainty spikes in 4Q

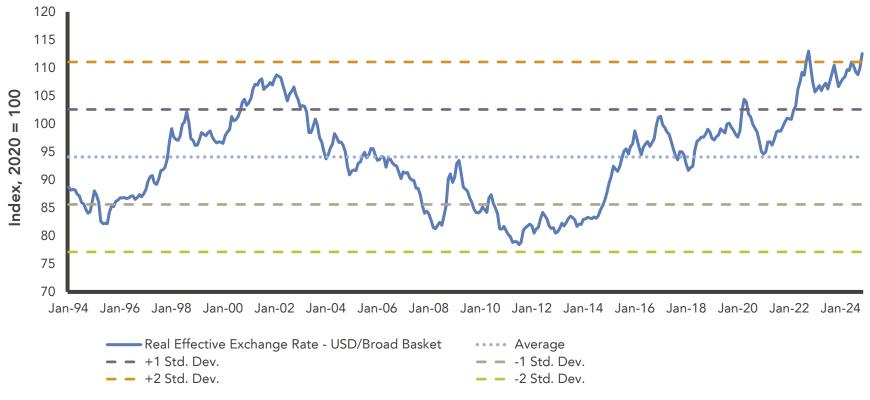
President Trump's tariff threats will likely impact global equity markets in 2025





# Can the dollar strengthen from here?

The greenback currently trades two standard deviations above its long-term average

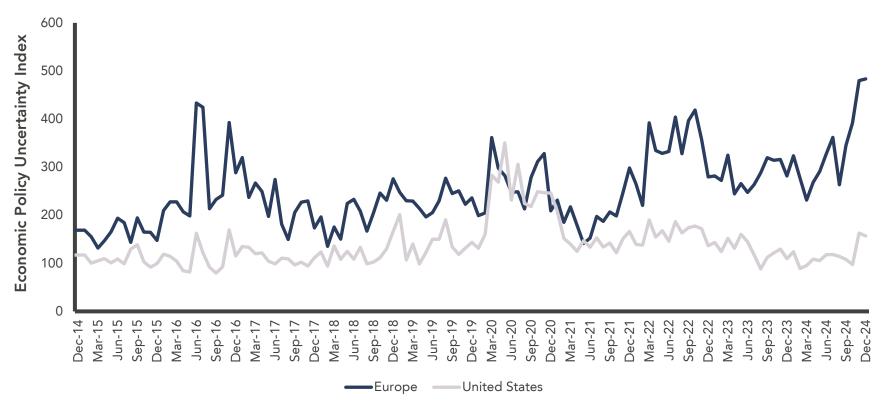


Source: Bank of International Settlements as of January 7, 2025. Real effective exchange rate adjusted for inflation.



# **European economic policy uncertainty**

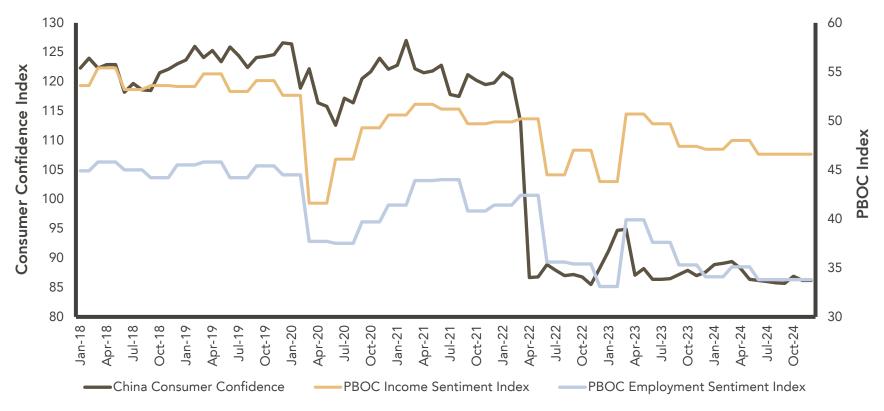
Economic policy uncertainty is at a multi-year high in Europe given a lackluster economy and President Trump's tariff threats





#### China's economic outlook remains clouded

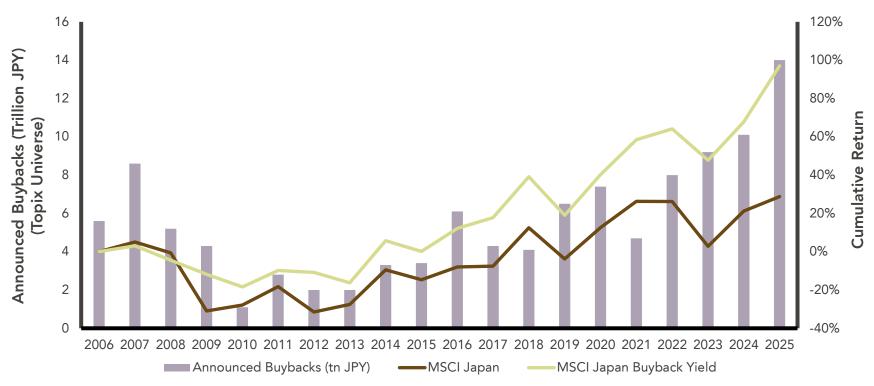
Chinese government stimulus measures have yet to to boost consumer confidence and employment sentiment





#### Better governance = better performance?

#### Buybacks in Japan have increased over the years, and stocks with a higher buyback yield have outperformed

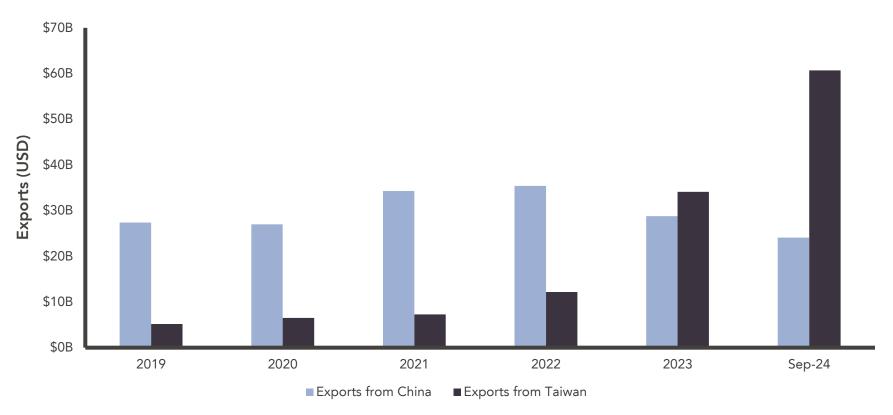


Source: JPMorgan, Bloomberg, MSCI as of December 31, 2024; refers to FY, 2025 includes April to November 2024. The MSCI Japan Buyback Yield Index is based on the MSCI Japan Index, its parent index, and includes large and mid-cap stocks across the Japanese market. The index is designed to reflect the performance of companies that return capital to shareholders through share buybacks.



#### Taiwan grows its server and graphics card exports

The shift in leadership from China to Taiwan in less-obvious Al-related exports highlights Taiwan's increasing leadership in the space

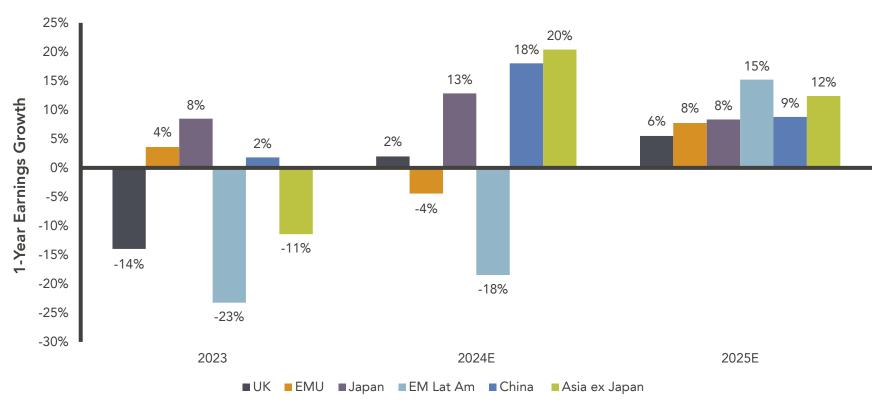


Source: Bloomberg as of September 30, 2024; data reflects only server and graphics card exports



# Global earnings growth expected to be positive

Unlike the previous two years, all major non-U.S. equity markets are expected to generate positive earning growth in 2025



Source: FactSet as of January 7, 2025



# Real Estate

# Real estate performance

# Despite some easing, write-downs in major sectors continued in 3Q; income gains remained steady

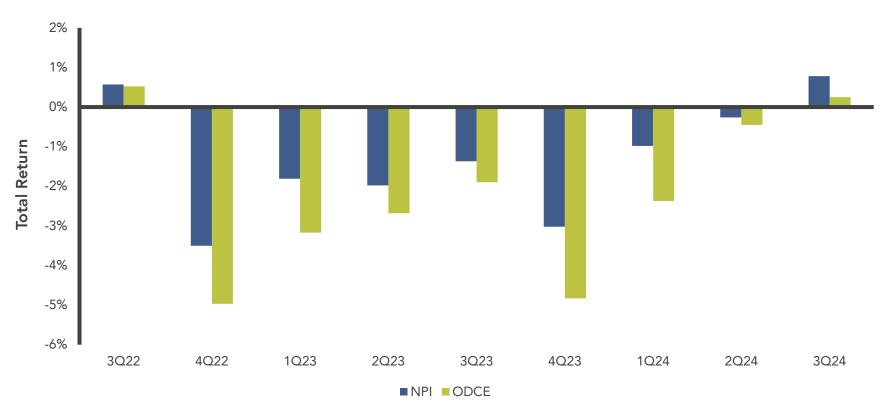
	QTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
NPI	0.8	-0.5	-3.5	0.9	3.3	5.9
Income	1.2	3.6	4.7	4.4	4.3	4.5
Appreciation	-0.4	-4.0	-7.9	-3.3	-1.0	1.3
NFI-ODCE	0.3	-2.6	-7.3	-0.2	2.9	6.1
Income	1.0	3.1	4.0	3.7	3.8	4.1
Appreciation	-0.8	-5.5	-11.0	-3.8	-0.9	1.9
FTSE NAREIT All Eq. REITs	16.8	14.2	34.8	3.5	5.1	8.0
Property Type						
NPI Multifamily	1.1	0.3	-2.7	2.1	4.3	5.9
NPI Industrial	1.1	1.5	-0.9	8.1	13.0	13.4
NPI Office	-1.1	-7.1	-12.1	-9.1	-4.1	1.7
NPI Retail	1.9	3.4	2.3	2.5	0.3	3.7
NPI Hotel	2.7	5.6	7.5	10.3	0.2	3.8
Geographic Sectors						
NPI East	1.0	-0.7	-3.8	-1.2	1.4	4.0
NPI Midwest	1.5	1.3	-1.1	0.4	1.6	4.2
NPI South	1.3	2.3	0.4	4.5	5.6	7.1
NPI West	0.2	-2.2	-5.8	0.5	3.7	7.0

Source: NCREIF as of September 30, 2024



# The beginning of the next cycle?

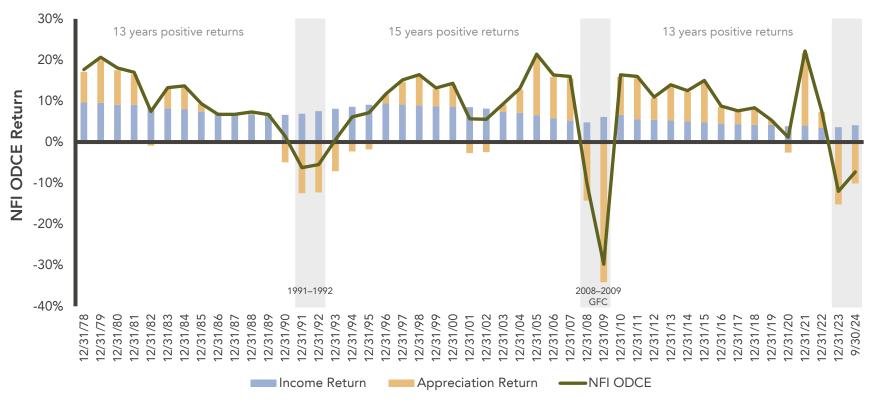
The third quarter of 2024 saw a positive CRE total return for the first time in two years



Source: NCREIF, AEW as of September 30, 2024

# Looking back to look ahead

### Historically, value adjustments have paved the way for prolonged phases of strong total returns

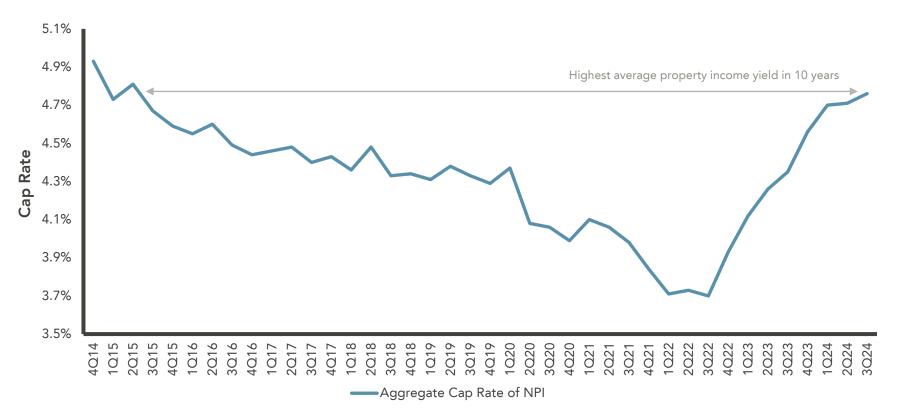


Source: NFI-ODCE, Principal Research as of September 30, 2024



# The most attractive entry point in years

Cap rates have moved higher, signaling improved income-generating potential for real estate investments

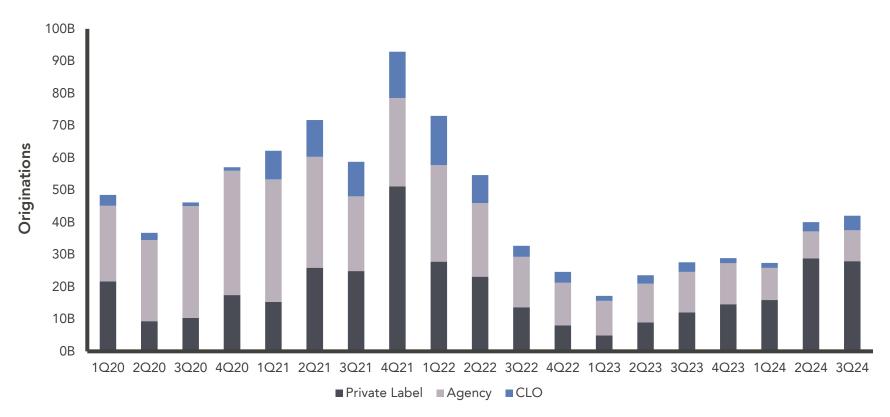


Source: NCREIF, AEW Research as of September 30, 2024



# Debt markets are re-opening

Increased transaction volumes within the debt markets are driving further optimism in real estate

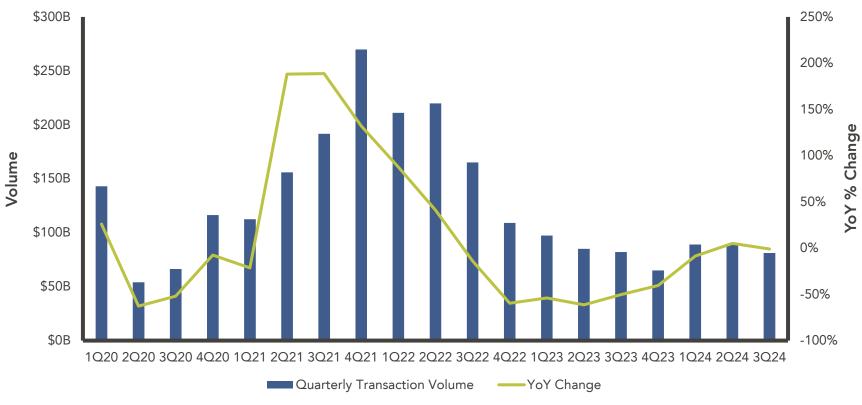


Source: Trepp, ARES Research as of September 30, 2024; chart is based on securitized commercial real estate debt market



# Transaction volumes are improving

Transaction volumes through 3Q appeared flat, but upward revisions for July and August show a 10+% year-over-year increase

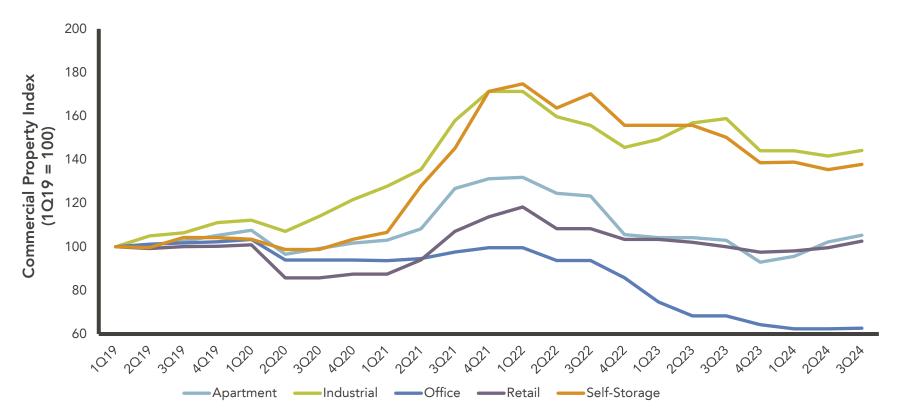


Source: MSCI - Real Capital Analytics, ARES Research as of September 30, 2024



### Prices improving across property sectors

Commercial real estate values are improving across most major sectors (except for Office)

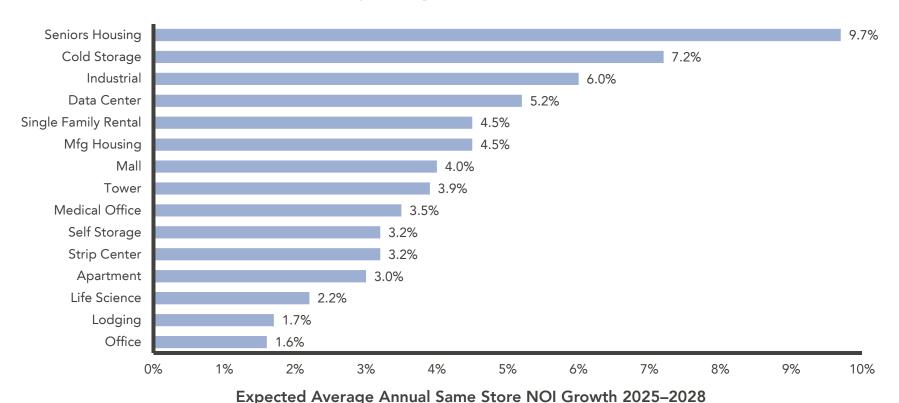


Source: Green Street, ARES Research as of September 30, 2024



# Next cycle's values to be driven by NOI growth

### NOI growth is expected to drive value in the coming years, with alternative sectors leading the pack

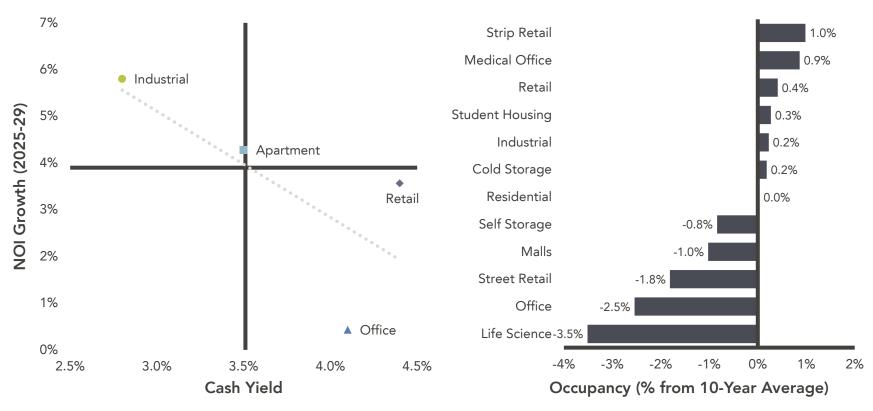


Source: Green Street, AEW Research as of September 30, 2024



### A differentiated sector outlook

### Despite expectations for Office to continue underperforming, opportunities in Retail, Apartment, and Industrial appear compelling

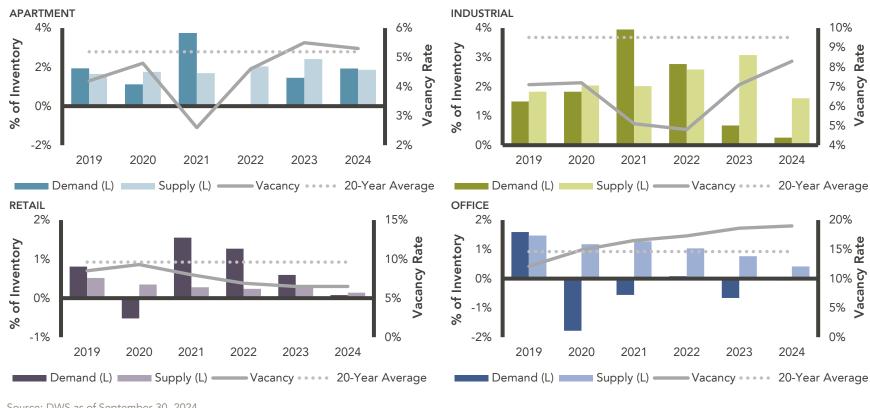


Source: DWS as of September 30, 2024. Comparison of occupancy rates from the first three quarters of 2024 against the 10-year average for the same period.



# Supply and demand by sector

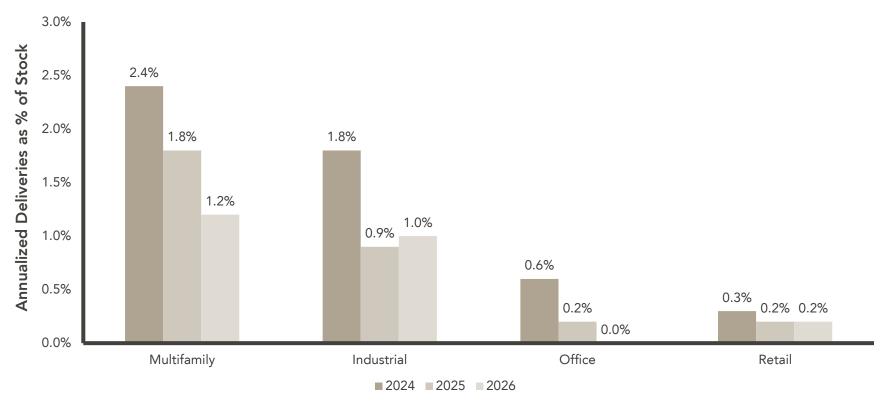
# Different sectors reflect divergent supply, demand, and vacancy dynamics



Source: DWS as of September 30, 2024

# Deliveries expected to slow

New deliveries of apartment and industrial assets are expected to slow, which should benefit market fundamentals



Source: Costar, MSREI Strategy, Morgan Stanley as of March 31, 2024



# Infrastructure

# Infrastructure performance

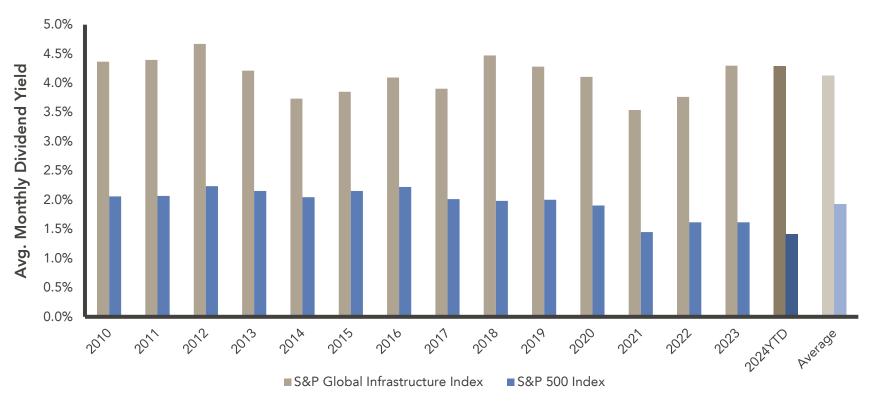
### Returns of private infrastructure were modestly positive in the third quarter of 2024

	3Q24 (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Burgiss Infrastructure Index (Private)	3.4%	10.9%	10.2%	9.6%	9.5%
DJB Global Infrastructure Index	14.4%	27.2%	6.0%	5.1%	5.2%
Bloomberg Aggregate	5.2%	11.6%	-1.4%	0.3%	1.8%
CPI + 5%	1.5%	8.0%	10.0%	9.2%	7.8%
S&P 500	5.9%	36.4%	11.9%	16.0%	13.4%
DJ Industrial Average	8.7%	28.8%	10.0%	11.8%	12.0%

Source: Bloomberg, Burgiss as of September 30, 2024

# Infrastructure yield

Consistent income of underlying infrastructure holdings has fostered favorable inflation-adjusted yields relative to the S&P 500 Index

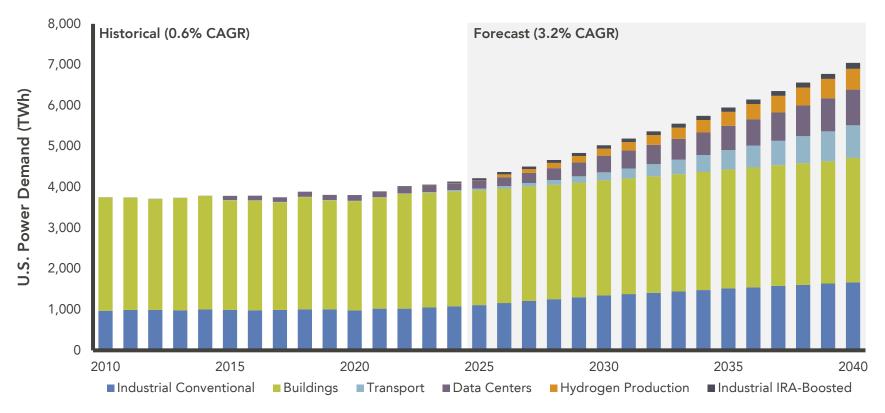


Source: Bloomberg as of September 30, 2024



# **Growing power demand**

### U.S. power demand, essentially flat for the last 15 years, is expected to expand by more than 70% by 2040, driving infrastructure needs

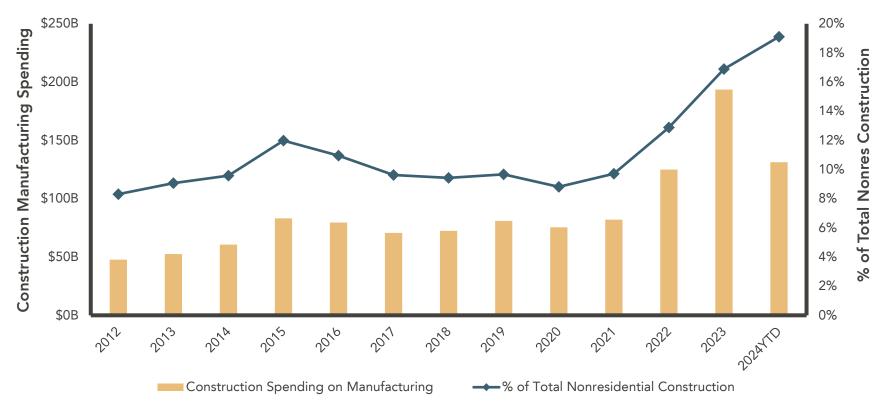


Source: Energy Capital Partners as of March 31, 2024



# Deglobalization push a tailwind for infrastructure

Increased U.S. construction spending in the manufacturing space supports infrastructure investments across sectors

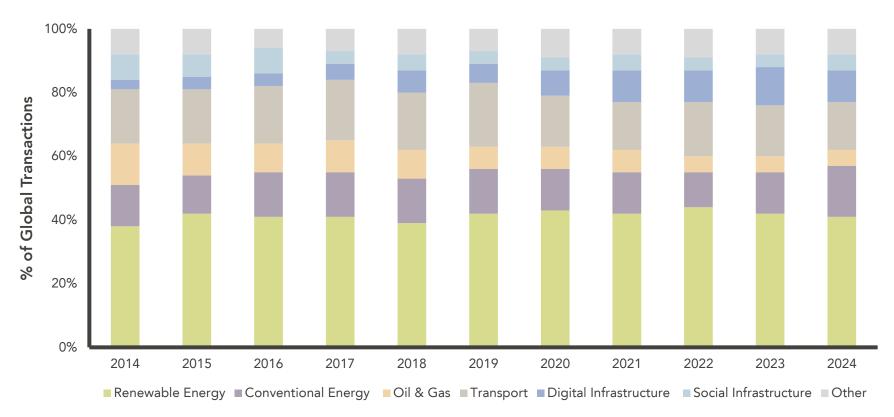


Source: U.S. Census Bureau, UBS as of July 31, 2024



### Global transaction breakdown

Investor interest in infrastructure has evolved over the past decade, with digital assets leading the growth



Source: RealfinX Platform as of September 30, 2024



# Private Equity

# **Private equity performance**

### Buyout and venture capital continue to outperform public markets over long time horizons

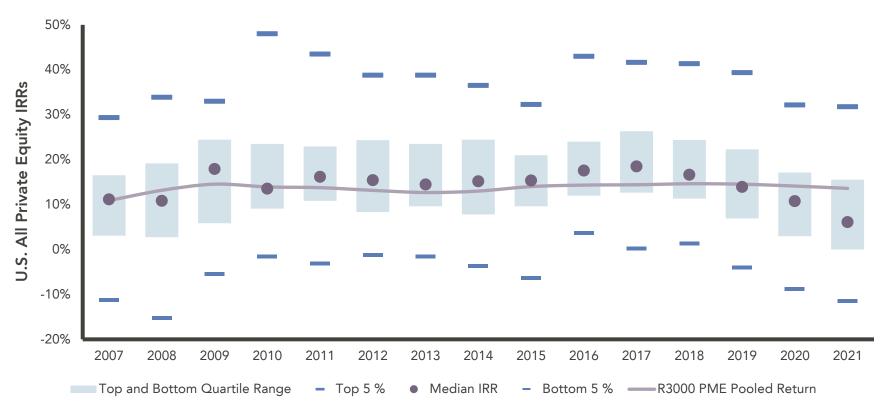
	3Q24 (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Global Private Equity	2.9	7.3	2.5	14.7	13.9
Global Buyout	3.3	9.0	6.6	15.4	14.1
Global Expansion	4.0	6.7	-0.4	7.6	7.2
Global Venture Capital	2.0	3.2	-5.0	14.4	14.8
U.S. Private Equity	2.2	6.7	2.7	16.6	15.1
U.S. Buyout	1.8	7.8	7.4	16.4	14.9
U.S. Expansion	5.7	11.3	1.0	11.7	11.8
U.S. Venture Capital	2.3	3.0	-6.3	16.9	15.4
MSCI All Country World Index	6.6	31.8	8.1	12.2	9.4
S&P 500	5.9	36.4	11.9	16.0	13.4
Russell 3000	6.2	35.2	10.3	15.3	12.8
Russell 2000 Growth	8.4	27.7	-0.4	8.8	8.9

Source: Burgiss Pooled Returns, Bloomberg as of September 30, 2024



# U.S. private equity vintage performance

Median private equity performance has exceeded the public market equivalent for the majority of vintage years

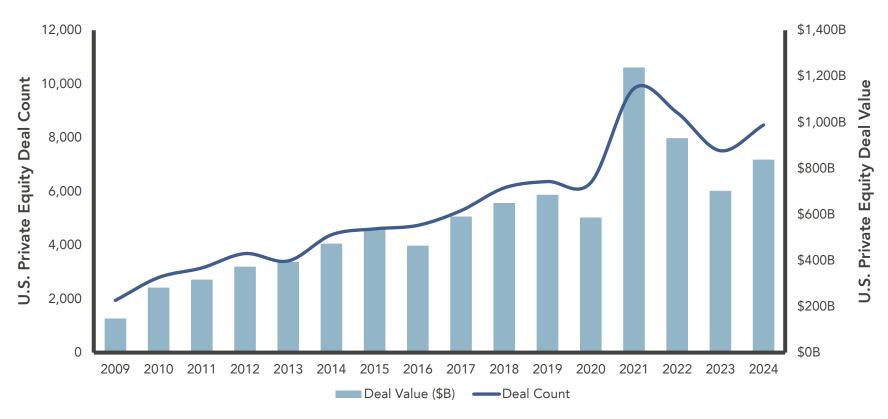


Source: Burgiss U.S. All Private Equity Public Market Equivalent, Pooled Returns as of September 30, 2024



# Private equity deployment

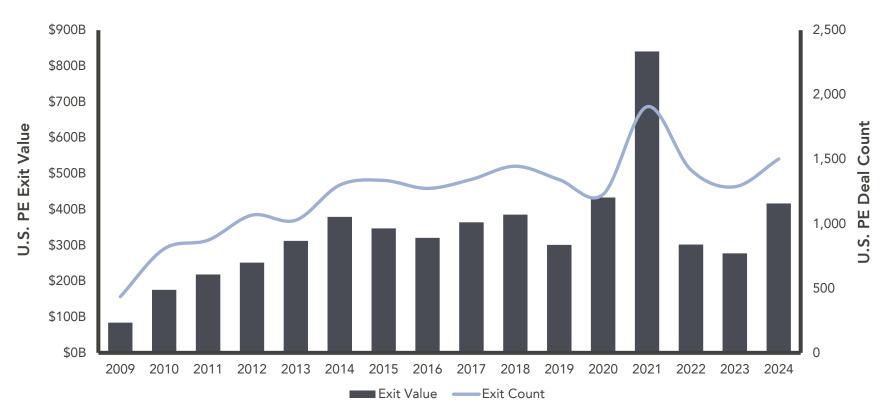
Private equity deal activity is currently tracking above both 2023 and pre-pandemic levels





### Private equity exit activity

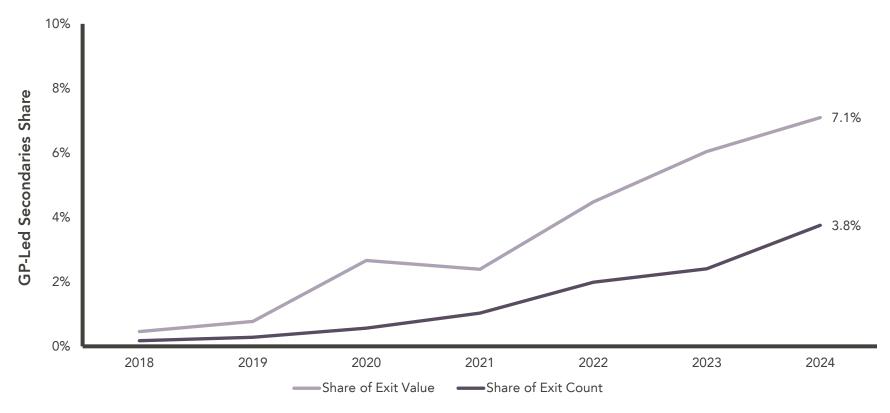
Private equity exit activity has rebounded, though 2021 levels remain aberrational





### **GP-led secondaries**

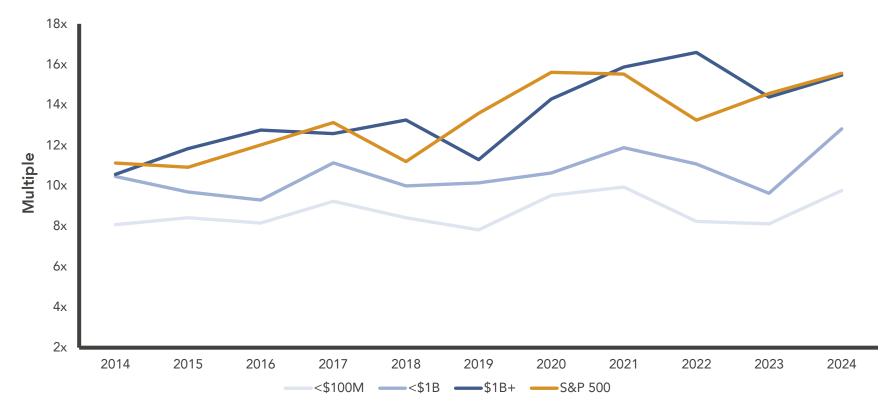
### As IPOs have slowed, GPs have in part turned to secondary transactions to generate liquidity





### Median EV/EBITDA multiples for North America and Europe

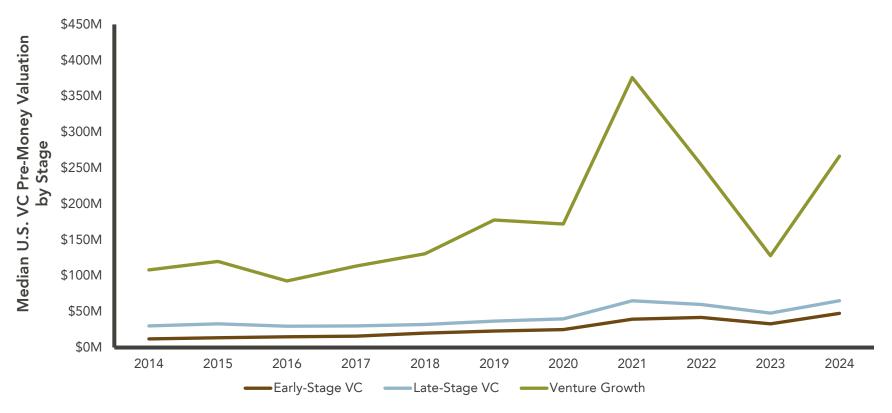
### Smaller deals continue trade below public market multiples





# Venture capital valuations

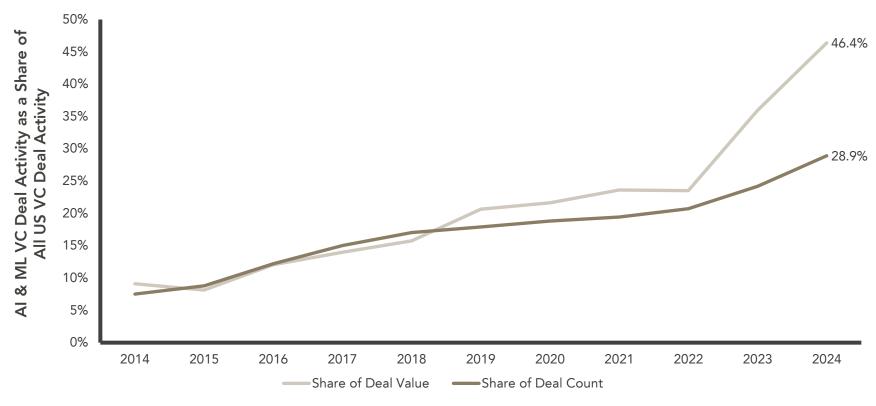
Venture growth valuations remain elevated and volatile, while earlystage venture valuations continue to show stability





### Al and ML have dominated the deal landscape

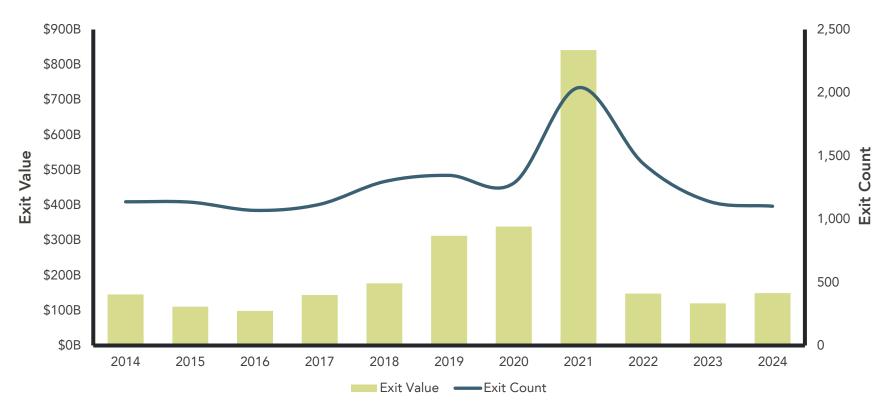
Artificial intelligence and machine learning have dominated venture deals over the last two years





### U.S. venture capital exit activity

A subdued IPO market continues to hamper venture capital exit activity in the U.S.





# Private Credit

# Private credit performance

# Private credit continues to deliver consistent absolute and relative returns, benefiting from attractive yields and a spread premium

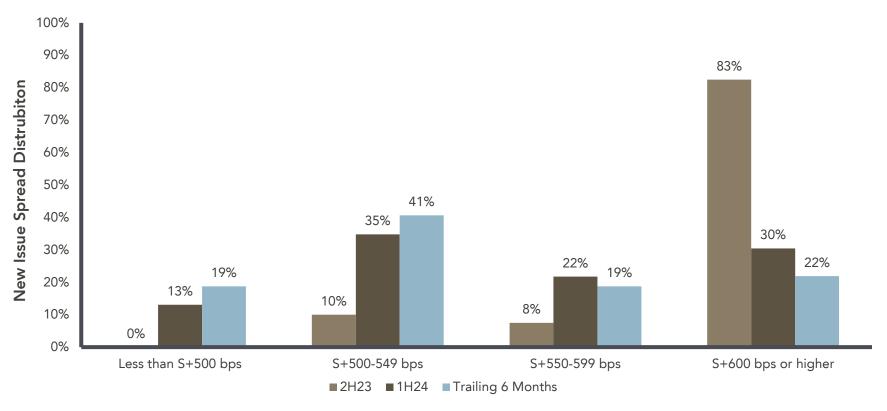
	QTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Private Credit	2.5	6.5	9.7	7.8	8.8	7.6
Middle Market Direct Lending	2.7	8.5	11.7	9.8	9.4	8.9
Credit Suisse Leveraged Loan	2.1	6.6	9.7	6.3	5.6	4.9
Bloomberg High Yield	5.3	8.0	15.7	3.1	4.7	5.0
Bloomberg Aggregate	5.2	4.4	11.6	-1.4	0.3	1.8
DJ Industrial Average	8.7	13.9	28.8	10.0	11.8	12.0
S&P 500	5.9	22.1	36.4	11.9	16.0	13.4
Russell 3000	6.2	20.6	35.2	10.3	15.3	12.8

Source: Burgiss All Debt universe, Cliffwater, eVestment as of September 30, 2024. All data calculated based on quarterly time-weighted returns.



# New issue sponsored direct lending spreads

Competition from syndicated markets has continued to tighten spreads, with 59% of recent deals done at SOFR+5.5% or tighter

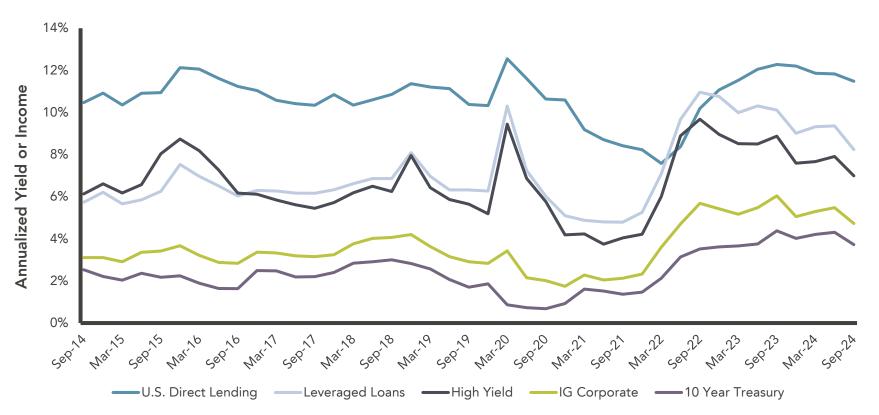


Source: PitchBook LCD as of September 30, 2024. Senior secured loans and unitranche data based on Pitchbook LCD News reporting.



# **Historical yields**

Despite recent new issue spread tightening, private credit offers a material yield premium over traditional fixed income markets



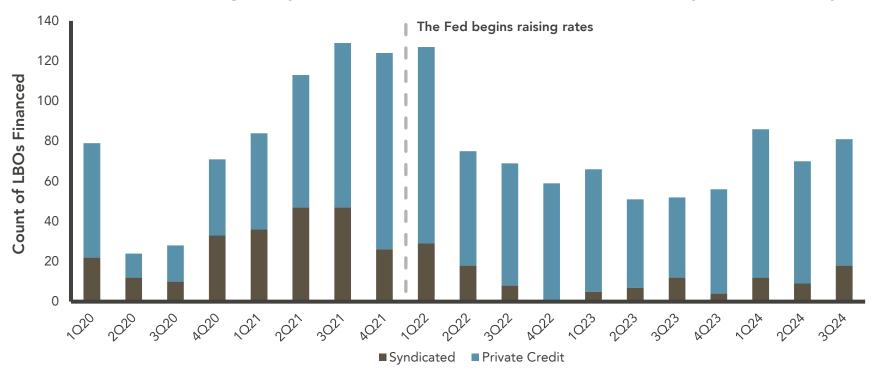
Source: Bloomberg, Credit Suisse, Cliffwater, St. Louis FRED as of September 30, 2024. Yield to 3-yr takeout is utilized for Direct Lending and Leveraged loans.



# LBO financing activity favors private credit

Cheaper debt financing, a resilient economy, and existing dry powder is expected to drive increased leverage buyout activity in 2025

Year-to-date leveraged buyout transactions have exceeded total calendar year 2023 activity



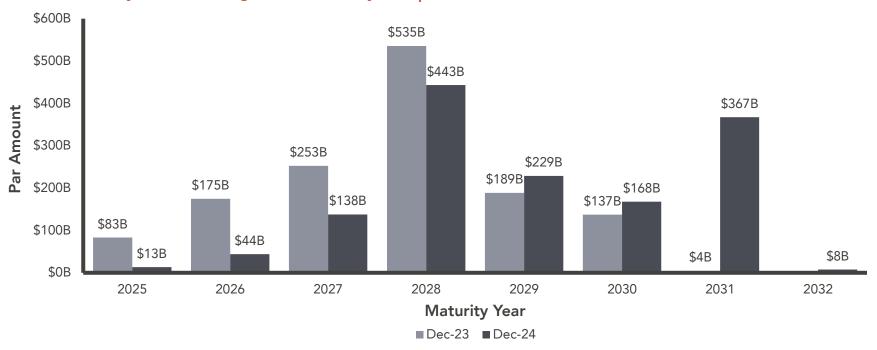
Source: PitchBook LCD as of September 30, 2024. Data is based on transactions covered by Pitchbook LCD News reporting.



# Leveraged loan maturity wall

# Loan maturities in 2027-2028 offer fresh refinancing opportunities and support private credit loan origination

In normal markets, loans are typically refinanced up to 24 months in advance of the loan maturity date to mitigate uncertainty and potential stress



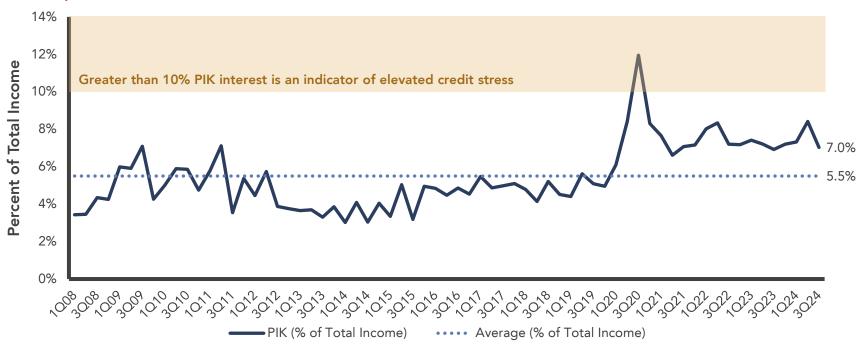
Source: PitchBook LCD as of December 31, 2024. Reflects Morningstar LSTA US Leveraged Loan index maturities excluding defaulted facilities.



### **PIK interest**

# Payment-in-kind (PIK) interest levels have been elevated in direct lending, but are well below levels that would indicate market stress

Historically, PIK was utilized to provide flexibility for stressed borrowers; with PIK more prevalent at origination for healthy borrowers, it is a less reliable indicator of credit stress

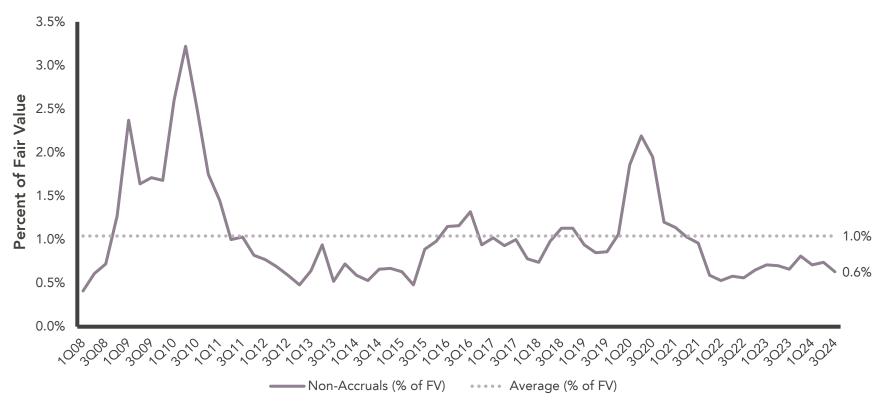


Source: Cliffwater Direct Lending Index data as of September 30, 2024



### Non-accruals

Loans that are not generating interest due to financial distress remain at benign levels and below long-term averages within direct lending



Source: Cliffwater Direct Lending Index data as of September 30, 2024



### Blurred lines in private credit

### Regulatory pressures have prompted banks, insurers, and private credit firms to partner, merging origination capabilities with capital

In 2024, 14 major banks formed partnerships to distribute loans to private credit, up from two announced partnerships in 2023

### NOTABLE BANK PARTNERSHIPS





























### INSURANCE/ASSET MANAGEMENT













### **Brookfield**



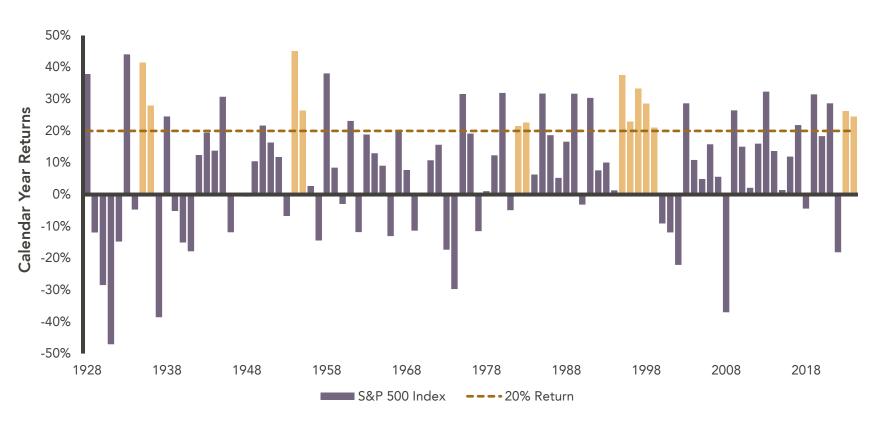
Source: OliverWyman, Bloomberg, Pitchbook. This is a representative but not an exhaustive list of bank partnerships and insurance/asset management transactions in 2024.



# December Charts of the Week

### Back to back!

### The S&P 500 Index just posted consecutive years with a greater than 20% return

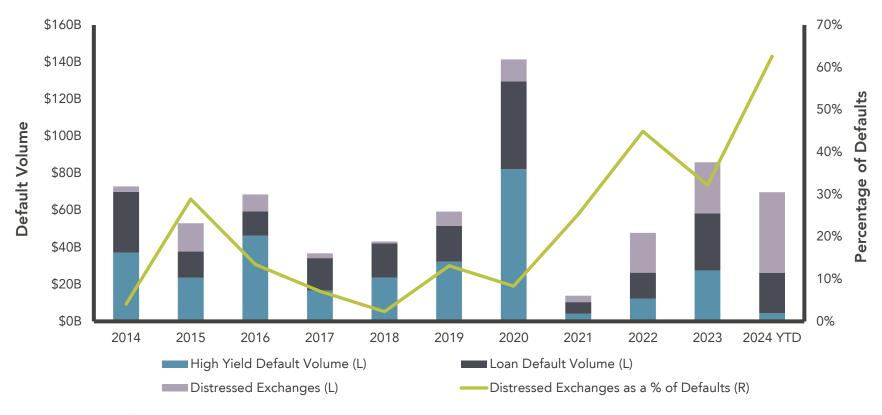


Source: Bloomberg as of December 20, 2024



### A damsel in distress

### An increase in distressed exchanges may be overstating overall default rates

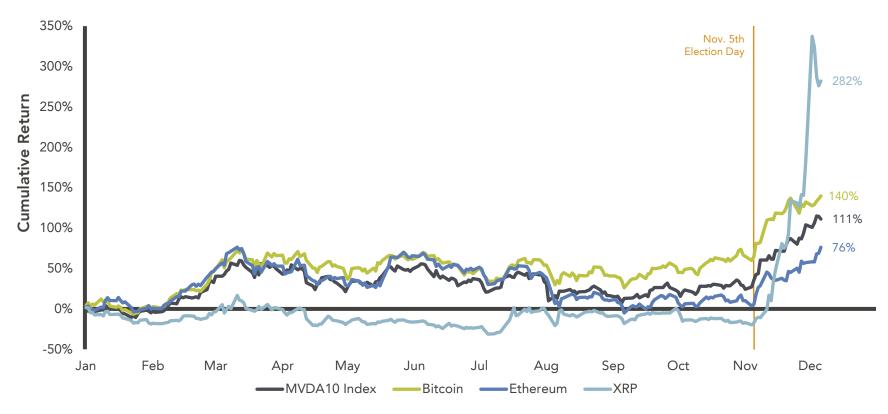


Source: J.P. Morgan as of November 30, 2024



### Cryptocurrencies surge post-election

A post-election rally has bolstered digital assets broadly and extended bitcoin's already notable performance in the closing weeks of 2024

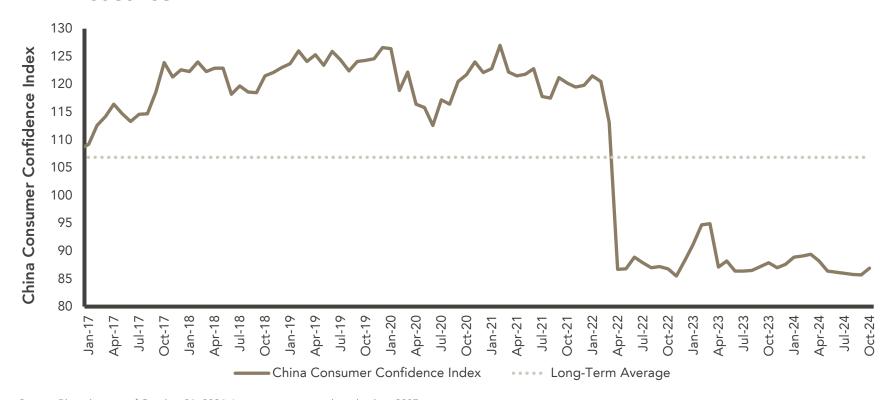


Source: Bloomberg as of December 6, 2024



### Reluctant to spend

Consumer confidence remains below average levels in China, an issue which the Chinese government hopes to address via stimulus measures

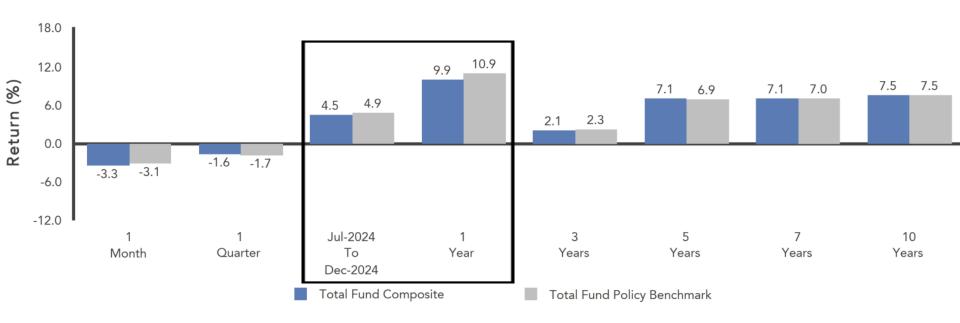


Source: Bloomberg as of October 31, 2024. Long-term average dates back to 2007.



### Performance Overview - COAG

### **COA General Employees' YTD Performance (Net of Fees)**



- International Equity composite outperformed its benchmark
- Fixed Income, Domestic Equity, Emerging Markets Equity and Global Equity composites underperformed their respective benchmarks

<sup>\*</sup> Year-to-date performance as of December 31, 2024



### **COA General Employees' Manager Contribution – YTD Performance**

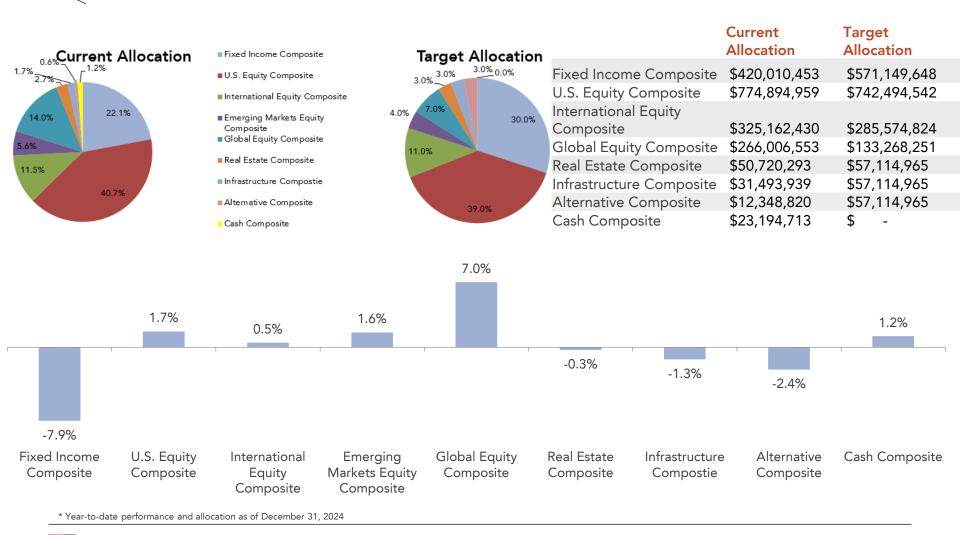
	<b>Absolute</b>	Benchmark	
<b>Top Performers</b>	Performance	Performance	Strategy
Hardman Johnston	+13.1%	+5.5%	International Equity
Brown SC	+8.5%	+3.4%	International Equity
Legato	+18.4%	+15.2%	U.S. Equity

Bottom Performers	Absolute Performance	Benchmark Performance	Strategy
Earnest SCC	+0.3%	+11.5%	U.S. Equity
Earnests EM	+1.7%	+7.5%	<b>Emerging Markets Equity</b>
Union Heritage	+16.5%	+25.0%	U.S. Equity

<sup>\*</sup> Year-to-date performance as of December 31, 2024



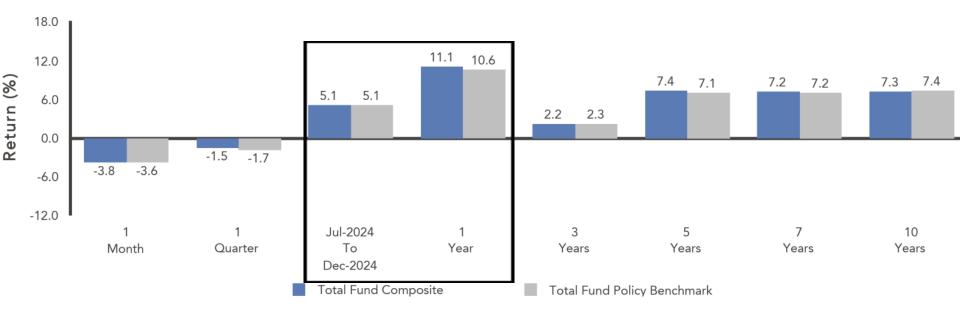
### COA General Employees' Asset Allocation vs Target Allocation





### Performance Overview - COAP

### **COA Police Officers' YTD Performance (Net of Fees)**



- International Equity composite outperformed its benchmark; passive strategies performed in-line with benchmarks
- Fixed Income, Domestic Equity and Real Estate composites underperformed their respective benchmarks

<sup>\*</sup> Year-to-date performance as of December 31, 2024



### **COA Police Officers' Manager Contribution – YTD Performance**

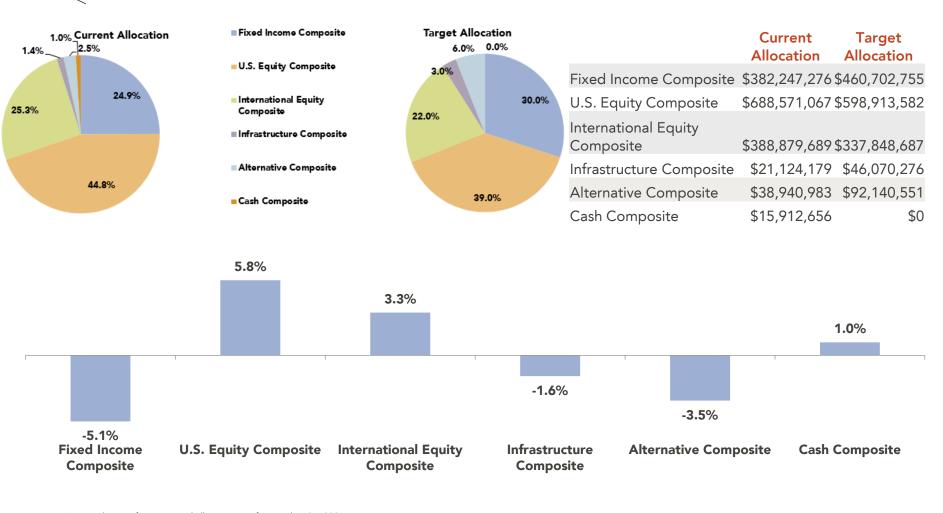
Top Performers	Absolute Performance	Benchmark Performance	Strategy
Driehaus SCG	+27.7%	+15.2%	U.S. Equity
Hardman Johnston	+13.1%	+5.5%	International Equity
Brown SC	+8.5%	+3.4%	International Equity

Bottom Performers	Absolute Performance	Benchmark Performance	Strategy
Earnest SCC	+0.3%	+11.5%	U.S. Equity
Intercontinental	-5.0%	-2.0%	U.S. Real Estate
Garcia Hamilton (G/C)	+1.4%	+3.0%	Fixed Income

<sup>\*</sup> Year-to-date performance as of December 31, 2024



### **COA Police Officers' Asset Allocation vs Target Allocation**

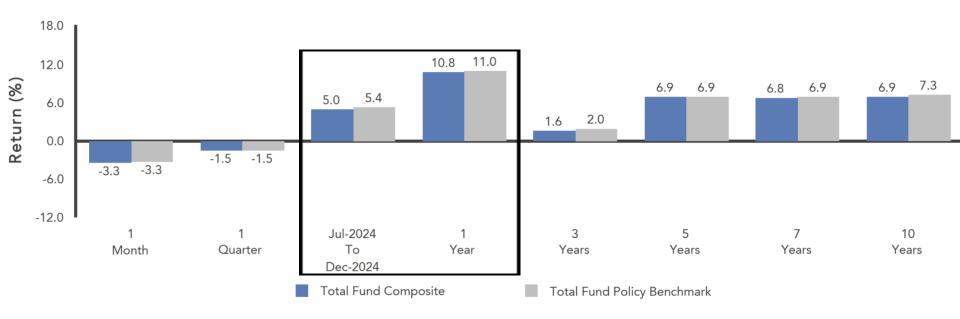


<sup>\*</sup> Year-to-date performance and allocation as of December 31, 2024



### Performance Overview - COAF

### **COA Firefighters' YTD Performance (Net of Fees)**



- International Equity composite outperformed its benchmark; composite and passive strategies performed in-line with their benchmarks
- Fixed Income, Domestic Equity and Real Estate composites underperformed their benchmarks

<sup>\*</sup> Year-to-date performance as of December 31, 2024



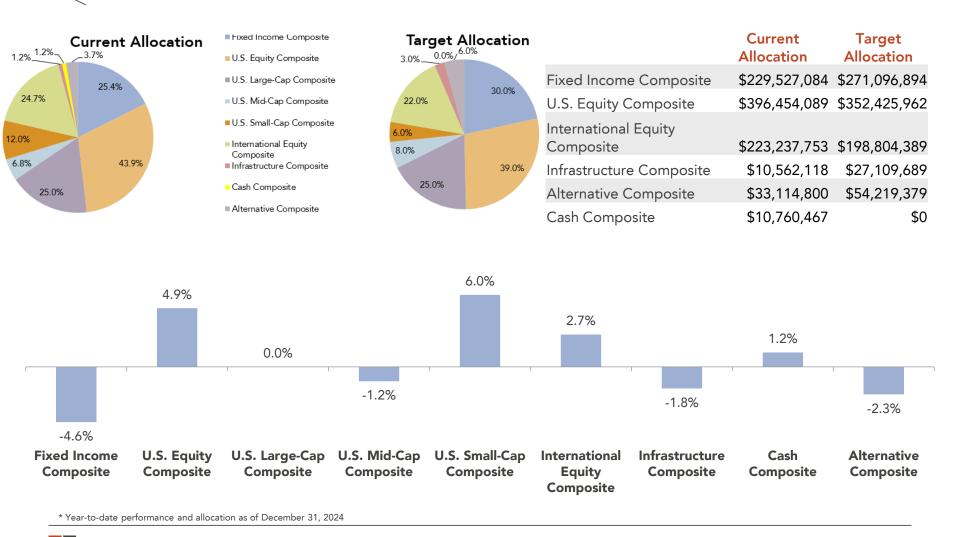
### **COA Firefighters' Manager Contribution – YTD Performance**

Top Performers	Absolute Performance	Benchmark Performance	Strategy
Driehaus SCG	+27.7%	+15.2%	U.S. Equity
Hardman Johnston	+13.1%	+5.5%	International Equity
Brown SC	+8.5%	+3.4%	International Equity

Bottom Performers	Absolute Performance	Benchmark Performance	Strategy
Earnest SCC	+0.3%	+11.5%	U.S. Equity
Intercontinental	-5.0%	-2.0%	U.S. Real Estate
Garcia Hamilton (Core)	-0.2%	+1.3%	Fixed Income

<sup>\*</sup> Year-to-date performance as of December 31, 2024

### COA Firefighters' Asset Allocation vs Target Allocation





Purpose:

## Empower our clients to meet their investment objectives

### **Vision**

Be a trusted partner to our clients through effective investment programs

### Mission

Provide independent and thoughtful investment guidance

### Why Marquette?

- ✓ Our people
- ✓ Independent expertise
- √ Focused client service
- ✓ Careful research

### Periodic table benchmarks

Core Bond	Bloomberg Aggregate
High Yield	Bloomberg High Yield
Bank Loans	CS Leverage Loan
Broad U.S. Equities	Russell 3000
Large Cap	S&P 500
Mid Cap	Russell Mid Cap
Small Cap	Russell 2000
Broad Intl Equities	MSCI ACWI ex-U.S.
Intl Large Cap	EAFE
Intl Small Cap	EAFE Small Cap
<b>Emerging Markets</b>	MSCI EM
Commodities	S&P GSCI



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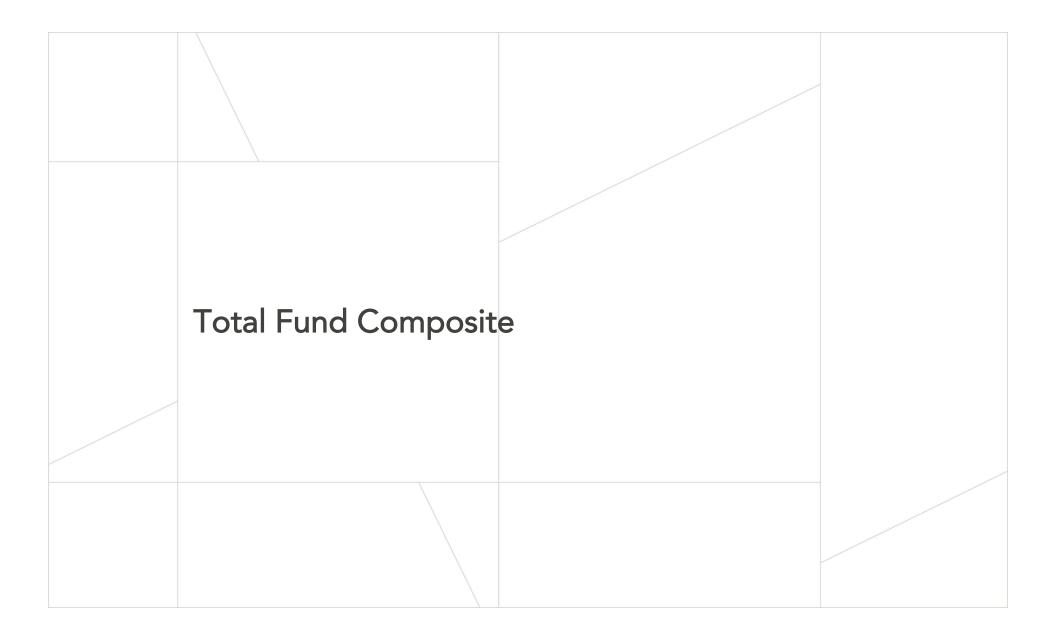
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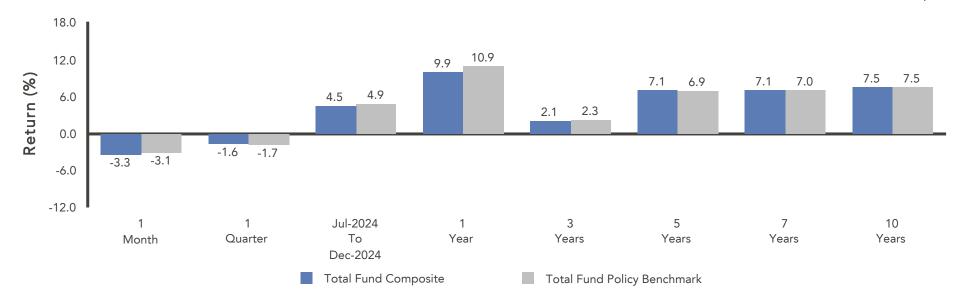
**Marquette**Associates

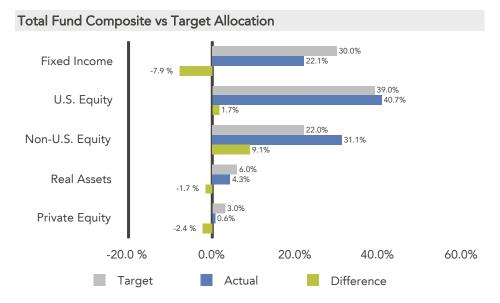
### City of Atlanta General Employees Pension Fund **Executive Summary** December 31, 2024





Performance Summary As of December 31, 2024





Summary of Cash Flows		
	1 Quarter (\$)	1 Year (\$)
Beginning Market Value	1,943,159,328	1,763,712,301
Net Cash Flow	-8,515,007	-37,581,735
Gain/Loss	-30,812,161	177,701,594
Ending Market Value	1,903,832,160	1,903,832,160



Portfolio Allocation Month Ending December 31, 2024

	Asset Class	Ending MV (\$)	Net Cash Flow (\$)	% of Portfolio	Policy (%)
Total Fund Composite		1,903,832,160	-1,419,664	100.0	100.0
Fixed Income Composite		420,010,453	-1,341	22.1	30.0
Mesirow	Core Fixed Income	230,720,441	-1,299	12.1	-
Garcia Hamilton	Core Fixed Income	86,327,715	-42	4.5	-
State Street U.S. Aggregate Bond Index SL Fund	Core Fixed Income	102,962,298	-	5.4	-
U.S. Equity Composite		774,894,959	-1,602	40.7	39.0
Large Cap Composite		475,196,365	-782	25.0	25.0
Union Heritage Large Cap Core	Large-Cap Core	234,083,079	-782	12.3	-
Blackrock S&P 500 Equity Index Fund	Large-Cap Core	241,113,287	-	12.7	-
Mid Cap Composite		107,127,592	-33	5.6	8.0
Invesco Oppenheimer Main Street Mid Cap	Mid-Cap Core	11,839,345	-33	0.6	-
BlackRock MidCap Equity Index	Mid-Cap Core	95,288,247	-	5.0	-
Small Cap Composite		192,571,002	-787	10.1	6.0
Channing Capital Management	Small-Cap Value	43,198,296	-144	2.3	-
Earnest Partners SCC	Small-Cap Core	83,542,467	-309	4.4	-
Ariel Investments	Smid-Cap Value	11,840,990	-16	0.6	-



Portfolio Allocation Month Ending December 31, 2024

	Asset Class	Ending MV (\$)	Net Cash Flow (\$)	% of Portfolio	Policy (%)
Legato		53,989,249	-318	2.8	-
Essex	Small-Cap Growth	12,265,482	-252	0.6	-
Bridge City	Small-Cap Growth	11,826,718	-21	0.6	-
Lebenthal Lisanti	Small-Cap Growth	8,789,095	-16	0.5	-
Nicholas	Smid-Cap Growth	8,724,896	-8	0.5	-
Rich Hall James	Small-Cap Growth	12,383,057	-21	0.7	-
International Equity Composite		219,160,453	-2	11.5	11.0
Artisan Partners International Value Fund (APHKX)	Non-U.S. Large-Cap Value	82,366,548	-	4.3	-
Hardman Johnston	Non-U.S. Large-Cap Core	108,984,928	-	5.7	-
Brown Capital International Small Cap	Non-U.S. Small-Cap Core	27,808,976	-2	1.5	-
Emerging Markets Equity Composite		106,001,977	-	5.6	4.0
Earnest Partners EM	Emerging Markets	71,042,300	-	3.7	-
Goldman Sachs Emerging Markets Equity	Emerging Markets	34,959,677	-	1.8	-
Global Equity Composite		266,006,553	-1,087	14.0	7.0
Globalt Tactical ETF	Global Balanced	160,267,700	-1,087	8.4	-
BlackRock MSCI ACWI Min Volatility Index	Global Low-Volatility	72,018,319	-	3.8	-
Northern Trust Global Volatility Fund	Global Low-Volatility	33,720,535	-	1.8	-



Portfolio Allocation Month Ending December 31, 2024

	Asset Class	Ending MV (\$)	Net Cash Flow (\$)	% of Portfolio	Policy (%)
Real Estate Composite		50,720,293	-	2.7	3.0
Intercontinental U.S. Real Estate	Core Real Estate	35,315,426	-	1.9	-
JP Morgan U.S. Real Estate	Core Plus Real Estate	15,404,867	-	0.8	-
Infrastructure Composite		31,493,939	-72	1.7	3.0
NT Global Broad Infrastructure	Publicly-Traded Infrastructure	31,493,939	-72	1.7	-
Alternative Composite		12,348,820	-2,731,707	0.6	3.0
Consequent Alternative Partners II, LP	U.S. Private Equity FoF	6,160,337	-2,731,707	0.3	-
Vista Equity Partners	LBO Private Equity	1,806,698	-	0.1	-
Grain Communications Opportunity Fund IV	Global Infrastructure	1,584,143	-	0.1	-
ICV Partners V, L.P.	LBO Private Equity	1,903,230	-	0.1	-
Ares Senior Direct Lending Fund III	Private Debt	894,411	-	0.0	-
Cash Composite		23,194,713	1,316,148	1.2	0.0
Cash	Cash & Equivalents	6,083,947	2,760,352	0.3	-
NT Operating	Cash & Equivalents	17,072,925	-1,444,199	0.9	-
Transition Account	Cash & Equivalents	37,841	-5	0.0	-



	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Total Fund Composite	-3.3	-1.6	4.5	9.9	11.2	2.1	7.1	7.1	7.5	7.6	Jan 97
Total Fund Policy Benchmark	-3.1	-1.7	4.9	10.9	12.2	2.3	6.9	7.0	7.5	7.6	
Fixed Income Composite	-1.8	-3.4	1.8	1.1	3.2	-2.3	-0.2	1.0	1.4	5.1	Apr 88
Blmbg. U.S. Aggregate Index	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	1.0	1.3	5.3	
Mesirow	-1.7	-3.0	1.9	1.4	3.4	-2.3	-0.1	1.1	1.4	3.4	Jul 06
Blmbg. U.S. Aggregate Index	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	1.0	1.3	3.2	
Garcia Hamilton	-2.4	-4.6	1.3	-0.1	2.4	-2.3	-0.3	0.9	-	1.2	Dec 16
Blmbg. U.S. Aggregate Index	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	1.0	1.3	1.3	
State Street U.S. Aggregate Bond Index SL Fund	-1.7	-3.0	2.0	1.4	3.5	-2.4	-0.3	1.0	-	1.3	Oct 15
Blmbg. U.S. Aggregate Index	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	1.0	1.3	1.3	
U.S. Equity Composite	-4.9	0.8	7.1	16.1	17.9	5.2	11.4	11.2	11.2	9.4	Jan 00
Russell 3000 Index	-3.1	2.6	9.0	23.8	24.9	8.0	13.9	13.2	12.5	7.8	
Large Cap Composite	-3.5	1.3	7.1	20.7	22.2	8.6	13.8	13.6	13.1	10.2	Feb 97
S&P 500 Index	-2.4	2.4	8.4	25.0	25.7	8.9	14.5	13.8	13.1	9.5	
Union Heritage Large Cap Core	-4.6	0.1	5.7	16.5	18.8	8.3	12.7	13.3	13.4	11.7	Jan 95
S&P 500 Index	-2.4	2.4	8.4	25.0	25.7	8.9	14.5	13.8	13.1	10.9	
Blackrock S&P 500 Equity Index Fund	-2.4	2.4	8.4	25.0	25.6	8.9	14.5	13.8	-	14.9	Oct 15
S&P 500 Index	-2.4	2.4	8.4	25.0	25.7	8.9	14.5	13.8	13.1	14.9	



Annualized Performance (Net of Fees)
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	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Mid Cap Composite	-7.1	0.6	7.8	14.4	15.4	5.0	10.3	8.6	8.5	8.4	Nov 95
S&P MidCap 400 Index	-7.1	0.3	7.3	13.9	15.2	4.9	10.3	9.1	9.7	11.3	
Invesco Oppenheimer Main Street Mid Cap	-6.5	2.5	12.2	-	-	-	-	-	-	19.2	Feb 24
Russell Midcap Index	-7.0	0.6	9.9	15.3	16.3	3.8	9.9	9.6	9.6	17.0	
BlackRock MidCap Equity Index	-7.1	0.3	7.3	13.9	15.2	4.9	-	-	-	19.5	Apr 20
S&P MidCap 400 Index	-7.1	0.3	7.3	13.9	15.2	4.9	10.3	9.1	9.7	19.5	
Small Cap Composite	-6.9	-0.2	6.7	7.6	10.8	-0.4	8.1	7.7	9.0	9.8	Nov 95
Russell 2000 Index	-8.3	0.3	9.6	11.5	14.2	1.2	7.4	6.9	7.8	8.6	
Channing Capital Management	-7.8	-0.3	7.5	10.8	15.2	3.2	8.8	6.7	7.4	9.0	Feb 13
Russell 2000 Value Index	-8.3	-1.1	9.0	8.1	11.3	1.9	7.3	6.1	7.1	8.5	
Earnest Partners SCC	-7.0	-2.3	2.2	0.2	6.3	-1.6	7.3	7.3	9.5	10.3	Jul 99
Russell 2000 Index	-8.3	0.3	9.6	11.5	14.2	1.2	7.4	6.9	7.8	7.8	
Ariel Investments	-7.0	0.7	14.2	-	-	-	-	-	-	17.8	Feb 24
Russell 2500 Value Index	-7.2	-0.3	9.3	11.0	13.5	3.8	8.4	7.2	7.8	14.2	



Annualized Performance (Net of Fees)
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	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Legato	-5.9	3.1	12.1	18.4	15.0	-2.4	8.0	8.3	-	7.7	Mar 15
Russell 2000 Growth Index	-8.2	1.7	10.3	15.2	16.9	0.2	6.9	7.2	8.1	7.7	
Essex	-4.1	8.6	20.5	22.0	15.9	-1.0	9.9	9.6	-	11.0	Apr 17
Russell 2000 Growth Index	-8.2	1.7	10.3	15.2	16.9	0.2	6.9	7.2	8.1	8.5	
Bridge City	-7.3	-0.8	8.6	11.0	12.1	-0.1	7.7	8.9	-	10.4	Aug 16
Russell 2000 Growth Index	-8.2	1.7	10.3	15.2	16.9	0.2	6.9	7.2	8.1	9.3	
Lebenthal Lisanti	-6.0	3.6	9.7	26.0	15.9	-5.6	7.4	8.8	-	11.6	Aug 16
Russell 2000 Growth Index	-8.2	1.7	10.3	15.2	16.9	0.2	6.9	7.2	8.1	9.3	
Nicholas	-8.5	1.1	7.3	19.8	20.3	0.0	-	-	-	2.1	Jun 21
Russell 2000 Growth Index	-8.2	1.7	10.3	15.2	16.9	0.2	6.9	7.2	8.1	-0.2	
Rich Hall James	-4.3	2.7	13.0	17.6	-	-	-	-	-	18.8	Sep 23
Russell 2000 Growth Index	-8.2	1.7	10.3	15.2	16.9	0.2	6.9	7.2	8.1	15.6	
International Equity Composite	-3.0	-4.8	2.4	10.0	12.2	1.2	6.7	6.2	7.4	7.8	Oct 10
MSCI EAFE (Net)	-2.3	-8.1	-1.4	3.8	10.8	1.6	4.7	4.1	5.2	5.4	
Artisan Partners International Value Fund (APHKX)	-3.5	-7.0	0.6	6.6	14.5	6.9	9.2	7.3	7.8	10.0	Jul 10
MSCI EAFE (Net)	-2.3	-8.1	-1.4	3.8	10.8	1.6	4.7	4.1	5.2	6.5	
Hardman Johnston	-2.7	-3.4	2.3	13.1	9.4	-3.0	4.7	5.4	7.2	6.8	Oct 10
MSCI AC World ex USA (Net)	-1.9	-7.6	-0.1	5.5	10.5	0.8	4.1	3.5	4.8	4.7	
Brown Capital International Small Cap	-2.4	-3.6	8.4	8.5	14.3	-3.6	-	-	-	-3.6	Jan 22
MSCI AC World ex USA Small Cap (Net)	-2.1	-7.7	0.6	3.4	9.3	-1.5	4.3	3.1	5.7	-1.5	



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	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Emerging Markets Equity Composite	0.2	-5.9	0.2	4.4	7.8	-0.5	2.4	2.3	-	6.8	Oct 15
MSCI Emerging Markets (Net)	-0.1	-8.0	0.0	7.5	8.7	-1.9	1.7	1.4	3.6	5.8	
Earnest Partners EM	0.7	-5.8	-0.4	1.7	7.2	1.0	3.3	3.0	-	7.4	Oct 15
MSCI Emerging Markets (Net)	-0.1	-8.0	0.0	7.5	8.7	-1.9	1.7	1.4	3.6	5.8	
Goldman Sachs Emerging Markets Equity	-0.7	-6.3	1.5	10.7	8.9	-	-	-	-	-2.7	Mar 22
MSCI Emerging Markets (Net)	-0.1	-8.0	0.0	7.5	8.7	-1.9	1.7	1.4	3.6	-0.3	
Global Equity Composite	-3.5	-1.4	6.2	13.5	13.5	3.6	7.7	7.8	7.9	8.4	Apr 13
MSCI AC World Index (Net)	-2.4	-1.0	5.6	17.5	19.8	5.4	10.1	9.2	9.2	9.5	
Globalt Tactical ETF	-3.3	-0.3	6.2	14.2	15.7	4.0	8.1	8.0	7.9	8.4	Apr 13
Custom Globalt	-3.3	-0.3	6.2	14.2	15.7	4.0	8.1	8.0	7.9	8.4	
BlackRock MSCI ACWI Min Volatility Index	-3.8	-3.5	5.9	11.4	9.9	2.8	-	-	-	7.8	May 20
MSCI AC World Minimum Volatility Index (Net)	-3.8	-3.5	6.0	11.4	9.5	2.5	4.7	6.0	6.9	7.4	
Northern Trust Global Volatility Fund	-3.4	-1.8	6.7	-	-	-	-	-	-	12.9	Apr 24
MSCI AC World Minimum Volatility Index (Net)	-3.8	-3.5	6.0	11.4	9.5	2.5	4.7	6.0	6.9	6.4	
Real Estate Composite	0.3	0.3	-0.5	-4.2	-10.1	-5.0	0.7	2.4	-	4.5	Mar 15
NFI-ODCE	0.4	1.2	1.2	-2.0	-7.5	-3.1	2.0	3.1	5.0	4.8	
Intercontinental U.S. Real Estate	0.5	0.5	-0.7	-4.9	-10.5	-4.9	0.9	3.0	-	5.1	Apr 15
NFI-ODCE	0.4	1.2	1.2	-2.0	-7.5	-3.1	2.0	3.1	5.0	4.8	
JP Morgan U.S. Real Estate	0.0	0.0	0.0	-0.2	-8.0	-4.6	1.0	1.8	-	2.8	Aug 16
NFI-ODCE	0.4	1.2	1.2	-2.0	-7.5	-3.1	2.0	3.1	5.0	3.8	



Annualized Performance (Net of Fees)
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	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Infrastructure Composite	-6.7	-7.3	4.0	-	-	-	-	-	-	4.6	Mar 24
STOXX Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.6	
Dow Jones Brookfield Global Infrastructure Index	-5.9	-3.1	10.9	10.0	7.2	2.4	3.7	5.1	4.7	13.7	
NT Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.6	Mar 24
STOXX Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.6	
Dow Jones Brookfield Global Infrastructure Index	-5.9	-3.1	10.9	10.0	7.2	2.4	3.7	5.1	4.7	13.7	
Alternative Composite	0.0	-0.2	0.3	-4.6	-0.4	-4.1	4.5	0.6	1.2	2.0	Nov 12
Custom Alternative Target Benchmark	0.0	0.0	0.9	-3.9	-9.3	-10.0	0.6	-2.0	-0.7	-	



Calendar Performance (Net of Fees)
As of December 31, 2024

	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Total Fund Composite	12.4	-14.0	13.8	16.4	22.0	-5.9	18.6	8.4	-0.6	7.9	23.0
Total Fund Policy Benchmark	13.6	-15.0	13.5	15.0	22.4	-6.0	17.3	9.1	0.3	8.8	20.4
All Public DB Plans Over \$1B Rank	26	86	68	3	2	89	4	22	61	4	2
Fixed Income Composite	5.4	-12.5	-1.9	8.2	8.2	0.2	3.5	2.7	0.8	4.9	-1.7
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0	-2.0
All Public DB Plans-US Fixed Income Rank	88	63	95	66	85	27	91	98	11	73	77
Mesirow	5.4	-12.7	-1.9	8.6	8.8	-0.3	3.4	3.1	-0.2	6.2	-2.1
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0	-2.0
eV US Core Fixed Inc Rank	75	35	78	37	56	61	72	47	89	34	74
Garcia Hamilton	5.0	-11.1	-2.3	8.1	7.1	0.8	3.6	-	-	-	-
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0	-2.0
eV US Core Fixed Inc Rank	91	13	94	54	93	7	62	-	-	-	-
State Street U.S. Aggregate Bond Index SL Fund	5.6	-13.2	-1.6	7.5	8.7	0.0	3.6	2.7	-	-	-
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0	-2.0
eV US Core Fixed Inc Rank	64	60	60	72	64	31	63	66	-	-	-



Calendar Performance (Net of Fees)
As of December 31, 2024

Composite   Comp											•
Russell 3000 Index         26.0         -19.2         25.7         20.9         31.0         -5.2         21.1         12.7           All Public DB Plans-US Equity Rank         88         24         78         43         47         59         17         39           Large Cap Composite         23.6         -14.2         25.2         19.1         32.2         -3.4         23.5         10.9           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           Union Heritage Large Cap Core         21.0         -9.9         19.7         19.5         33.6         -1.1         28.0         8.3           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           S&P 500 Equity Index Fund         26.3         -18.1         28.7         18.4         31.5         -4.4         21.9         12.0           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.9         12.0           S&P 500 Index         26.2         53.1         28.7         18.4         31.5         -4.4         21.									2015 (%)	2014 (%)	2013 (%)
All Public DB Plans-US Equity Rank         88         24         78         43         47         59         17         39           Large Cap Composite         23.6         -14.2         25.2         19.1         32.2         -3.4         23.5         10.9           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           Union Heritage Large Cap Core         21.0         -9.9         19.7         19.5         33.6         -1.1         28.0         8.3           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           Blackrock S&P 500 Equity Index Fund         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.9         12.0           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           S&P 500 Index         16.5         -13.0         24.7         18.4         31.5         -4.4         <	6.2	19.7	23.8	19.2	30.3	-6.3	22.3	13.0	-0.2	10.9	38.1
Large Cap Composite         23.6         -14.2         25.2         19.1         32.2         -3.4         23.5         10.9           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           Union Heritage Large Cap Core         21.0         -9.9         19.7         19.5         33.6         -1.1         28.0         8.3           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           eV US Large Cap Core Equity Rank         55         15         93         32         14         12         5         66           Blackrock S&P 500 Equity Index Fund         26.3         -18.1         28.7         18.4         31.5         -4.4         21.8         12.0           S&P 500 Index         26.3         -18.1         28.7         18.4         31.5         -4.4         21.9         12.0           S&P 500 Index         26.6         65         31         39         31         41         44         28           Mid Cap Composite         16.5         -13.0         24.7         13.1         23.4         -11.4 <t< td=""><td>9.2</td><td>26.0</td><td>25.7</td><td>20.9</td><td>31.0</td><td>-5.2</td><td>21.1</td><td>12.7</td><td>0.5</td><td>12.6</td><td>33.6</td></t<>	9.2	26.0	25.7	20.9	31.0	-5.2	21.1	12.7	0.5	12.6	33.6
S&P 500 Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.8       12.0         Union Heritage Large Cap Core       21.0       -9.9       19.7       19.5       33.6       -1.1       28.0       8.3         S&P 500 Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.8       12.0         eV US Large Cap Core Equity Rank       55       15       93       32       14       12       5       66         Blackrock S&P 500 Equity Index Fund       26.3       -18.1       28.7       18.4       31.5       -4.4       21.9       12.0         S&P 500 Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.9       12.0         S&P 500 Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.9       12.0         S&P 500 Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.8       12.0         S&P Good Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.8       12.0         S&P MidCap Corp Equity Rank       26.5       -13.0       24.7	24	Equity Rank 88	78	43	47	59	17	39	62	49	9
Union Heritage Large Cap Core 21.0 -9.9 19.7 19.5 33.6 -1.1 28.0 8.3 S&P 500 Index 26.3 -18.1 28.7 18.4 31.5 -4.4 21.8 12.0 eV US Large Cap Core Equity Rank 55 15 93 32 14 12 5 66 Blackrock S&P 500 Equity Index Fund 26.3 -18.1 28.7 18.4 31.5 -4.4 21.9 12.0 S&P 500 Index 26.3 -18.1 28.7 18.4 31.5 -4.4 21.8 12.0 eV US Large Cap Core Equity Rank 26 65 31 39 31 41 44 28	4.2	23.6	25.2	19.1	32.2	-3.4	23.5	10.9	2.7	13.5	32.7
S&P 500 Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.8       12.0         eV US Large Cap Core Equity Rank       55       15       93       32       14       12       5       66         Blackrock S&P 500 Equity Index Fund       26.3       -18.1       28.7       18.4       31.5       -4.4       21.9       12.0         S&P 500 Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.8       12.0         eV US Large Cap Core Equity Rank       26       65       31       39       31       41       44       28         Mid Cap Composite       16.5       -13.0       24.7       13.1       23.4       -11.4       19.9       12.0         S&P MidCap 400 Index       16.4       -13.1       24.8       13.7       26.2       -11.1       16.2       20.7         Invesco Oppenheimer Main Street Mid Cap       -	8.1	26.3	28.7	18.4	31.5	-4.4	21.8	12.0	1.4	13.7	32.4
eV US Large Cap Core Equity Rank 55 15 93 32 14 12 5 66  Blackrock S&P 500 Equity Index Fund 26.3 -18.1 28.7 18.4 31.5 -4.4 21.9 12.0  S&P 500 Index 26.3 -18.1 28.7 18.4 31.5 -4.4 21.8 12.0  eV US Large Cap Core Equity Rank 26 65 31 39 31 41 44 28  Mid Cap Composite 16.5 -13.0 24.7 13.1 23.4 -11.4 19.9 12.0  S&P MidCap 400 Index 16.4 -13.1 24.8 13.7 26.2 -11.1 16.2 20.7  Invesco Oppenheimer Main Street Mid Cap 17.2 -17.3 22.6 17.1 30.5 -9.1 18.5 13.8  eV US Mid Cap Equity Rank  S&P MidCap 400 Index 16.5 -13.0 24.7  S&P MidCap 400 Index 16.5 -13.0 24.7	9.9	Core 21.0	19.7	19.5	33.6	-1.1	28.0	8.3	5.5	12.0	32.8
Blackrock S&P 500 Equity Index Fund 26.3 -18.1 28.7 18.4 31.5 -4.4 21.9 12.0 S&P 500 Index 26.3 -18.1 28.7 18.4 31.5 -4.4 21.8 12.0 eV US Large Cap Core Equity Rank 26 65 31 39 31 41 44 28   Mid Cap Composite 16.5 -13.0 24.7 13.1 23.4 -11.4 19.9 12.0 S&P MidCap 400 Index 16.4 -13.1 24.8 13.7 26.2 -11.1 16.2 20.7   Invesco Oppenheimer Main Street Mid Cap	8.1	26.3	28.7	18.4	31.5	-4.4	21.8	12.0	1.4	13.7	32.4
S&P 500 Index       26.3       -18.1       28.7       18.4       31.5       -4.4       21.8       12.0         eV US Large Cap Core Equity Rank       26       65       31       39       31       41       44       28         Mid Cap Composite       16.5       -13.0       24.7       13.1       23.4       -11.4       19.9       12.0         S&P MidCap 400 Index       16.4       -13.1       24.8       13.7       26.2       -11.1       16.2       20.7         Invesco Oppenheimer Main Street Mid Cap       - <td>15</td> <td>Equity Rank 55</td> <td>93</td> <td>32</td> <td>14</td> <td>12</td> <td>5</td> <td>66</td> <td>7</td> <td>54</td> <td>43</td>	15	Equity Rank 55	93	32	14	12	5	66	7	54	43
eV US Large Cap Core Equity Rank       26       65       31       39       31       41       44       28         Mid Cap Composite       16.5       -13.0       24.7       13.1       23.4       -11.4       19.9       12.0         S&P MidCap 400 Index       16.4       -13.1       24.8       13.7       26.2       -11.1       16.2       20.7         Invesco Oppenheimer Main Street Mid Cap       -	8.1	Index Fund 26.3	28.7	18.4	31.5	-4.4	21.9	12.0	-	-	-
Mid Cap Composite         16.5         -13.0         24.7         13.1         23.4         -11.4         19.9         12.0           S&P MidCap 400 Index         16.4         -13.1         24.8         13.7         26.2         -11.1         16.2         20.7           Invesco Oppenheimer Main Street Mid Cap         - <t< td=""><td>8.1</td><td>26.3</td><td>28.7</td><td>18.4</td><td>31.5</td><td>-4.4</td><td>21.8</td><td>12.0</td><td>1.4</td><td>13.7</td><td>32.4</td></t<>	8.1	26.3	28.7	18.4	31.5	-4.4	21.8	12.0	1.4	13.7	32.4
S&P MidCap 400 Index       16.4       -13.1       24.8       13.7       26.2       -11.1       16.2       20.7         Invesco Oppenheimer Main Street Mid Cap       -	65	Equity Rank 26	31	39	31	41	44	28	-	-	-
Invesco Oppenheimer Main Street Mid Cap	3.0	16.5	24.7	13.1	23.4	-11.4	19.9	12.0	-5.8	13.2	37.4
Russell Midcap Index       17.2       -17.3       22.6       17.1       30.5       -9.1       18.5       13.8         eV US Mid Cap Equity Rank       -	3.1	16.4	24.8	13.7	26.2	-11.1	16.2	20.7	-2.2	9.8	33.5
eV US Mid Cap Equity Rank       -<	-	in Street Mid Cap	-	-	-	-	-	-	-	-	-
BlackRock MidCap Equity Index 16.5 -13.0 24.7 S&P MidCap 400 Index 16.4 -13.1 24.8 13.7 26.2 -11.1 16.2 20.7	7.3	17.2	22.6	17.1	30.5	-9.1	18.5	13.8	-2.4	13.2	34.8
S&P MidCap 400 Index 16.4 -13.1 24.8 13.7 26.2 -11.1 16.2 20.7	-	Rank	-	-	-	-	-	-	-	-	-
·	3.0	Index 16.5	24.7	-	-	-	-	-	-	-	-
VUICAM: LC F :: P   V2   20   40	3.1	16.4	24.8	13.7	26.2	-11.1	16.2	20.7	-2.2	9.8	33.5
eV US Mid Cap Equity Rank 62 39 48	39	Rank 62	48	-	-	-	-	-	-	-	-



Calendar Performance (Net of Fees)
As of December 31, 2024

	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Small Cap Composite	14.1	-19.4	20.9	23.7	29.5	-12.2	19.7	21.1	-3.0	6.7	37.3
Russell 2000 Index	16.9	-20.4	14.8	20.0	25.5	-11.0	14.6	21.3	-4.4	4.9	38.8
Channing Capital Management	19.8	-17.3	19.5	16.4	24.8	-17.2	6.7	28.1	-5.3	4.5	-
Russell 2000 Value Index	14.6	-14.5	28.3	4.6	22.4	-12.9	7.8	31.7	-7.5	4.2	34.5
eV US Small Cap Value Equity Rank	25	87	92	11	35	73	78	33	51	54	-
Earnest Partners SCC	12.8	-15.7	21.7	22.3	32.6	-13.1	24.1	25.0	-2.0	9.4	36.1
Russell 2000 Index	16.9	-20.4	14.8	20.0	25.5	-11.0	14.6	21.3	-4.4	4.9	38.8
eV US Small Cap Core Equity Rank	79	36	65	26	9	66	8	12	45	13	73
Ariel Investments	-	-	-	-	-	-	-	-	-	-	-
Russell 2500 Value Index	16.0	-13.1	27.8	4.9	23.6	-12.4	10.4	25.2	-5.5	7.1	33.3
eV US Small-Mid Cap Value Equity Rank	-	_	_	_	_	_	_	_	_	_	_



Calendar Performance (Net of Fees)
As of December 31, 2024

	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Legato	11.7	-29.7	19.3	32.5	25.7	-5.5	21.5	2.9	-	-	-
Russell 2000 Growth Index	18.7	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6	43.3
Essex	10.2	-27.7	28.7	28.2	26.3	-6.5	-	-	-	-	-
Russell 2000 Growth Index	18.7	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6	43.3
eV US Small Cap Equity Rank	88	84	31	29	41	26	-	-	-	-	-
Bridge City	13.2	-20.6	20.3	20.6	25.0	0.2	16.0	-	-	-	-
Russell 2000 Growth Index	18.7	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6	43.3
eV US Small Cap Equity Rank	73	66	62	39	49	9	42	-	-	-	-
Lebenthal Lisanti	6.6	-37.4	11.8	52.1	28.2	-1.7	28.9	-	-	-	-
Russell 2000 Growth Index	18.7	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6	43.3
eV US Small Cap Equity Rank	96	97	83	10	29	13	8	-	-	-	-
Nicholas	20.8	-31.0	-	-	-	-	-	-	-	-	-
Russell 2000 Growth Index	18.7	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6	43.3
eV US Small Cap Equity Rank	22	92	-	-	-	-	-	-	-	-	-
Rich Hall James	-	-	-	-	-	-	-	-	-	-	-
Russell 2000 Growth Index	18.7	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6	43.3
eV US Small Cap Equity Rank	-	-	-	-	-	-	-	-	-	-	-



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
International Equity Composite	14.4	-17.7	8.0	23.4	29.1	-14.6	30.4	3.4	-1.0	0.0	24.0
MSCI EAFE (Net)	18.2	-14.5	11.3	7.8	22.0	-13.8	25.0	1.0	-0.8	-4.9	22.8
All Public DB Plans-Intl Equity Rank	80	48	47	3	4	60	24	59	17	2	8
Artisan Partners International Value Fund (APHKX)	22.9	-6.8	17.0	8.8	24.2	-15.4	24.1	5.7	-1.5	-0.4	30.7
MSCI EAFE (Net)	18.2	-14.5	11.3	7.8	22.0	-13.8	25.0	1.0	-0.8	-4.9	22.8
eV EAFE Large Cap Value Rank	7	43	14	4	10	37	44	22	33	4	2
Hardman Johnston	5.7	-23.6	1.3	35.7	33.5	-13.8	37.4	1.1	-0.4	0.4	17.3
MSCI AC World ex USA (Net)	15.6	-16.0	7.8	10.7	21.5	-14.2	27.2	4.5	-5.7	-3.9	15.3
eV ACWI ex-US Large Cap Equity Rank	99	81	92	4	5	32	10	60	34	9	64
Brown Capital International Small Cap	20.4	-31.4	-	-	-	-	-	-	-	-	-
MSCI AC World ex USA Small Cap (Net)	15.7	-20.0	12.9	14.2	22.4	-18.2	31.6	3.9	2.6	-4.0	19.7
Foreign Small/Mid Growth Rank	10	61	-	-	-	-	-	-	-	-	-
Emerging Markets Equity Composite	11.3	-15.3	1.6	12.4	23.6	-15.5	36.0	11.8	-	-	-
MSCI Emerging Markets (Net)	9.8	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2	-2.6
All Public DB Plans-Emerging Markets Rank	78	22	60	71	1	57	25	14	-	-	-
Earnest Partners EM	13.0	-10.2	1.6	12.4	23.6	-15.5	36.0	11.9	-	-	-
MSCI Emerging Markets (Net)	9.8	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2	-2.6
eV Emg Mkts Equity Rank	46	9	46	72	26	49	52	32	-	-	-
Goldman Sachs Emerging Markets Equity	7.1	-	-	-	-	-	-	-	-	-	-
MSCI Emerging Markets (Net)	9.8	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2	-2.6
eV Emg Mkts Equity Rank	82	-	-	-	-	-	-	-	-	-	-



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Global Equity Composite	13.6	-13.8	13.1	15.4	22.4	-4.8	18.4	7.6	-1.0	8.9	-
MSCI AC World Index (Net)	22.2	-18.4	18.5	16.3	26.6	-9.4	24.0	7.9	-2.4	4.2	22.8
Globalt Tactical ETF	17.2	-15.9	12.7	16.3	22.4	-5.1	18.1	7.3	-1.3	8.6	-
Custom Globalt	17.2	-15.9	12.7	16.3	22.4	-5.1	18.1	7.3	-1.3	8.6	-
eV Global Balanced Rank	7	54	43	18	18	27	25	47	32	15	-
BlackRock MSCI ACWI Min Volatility Index	8.4	-10.0	14.2	-	-	-	-	-	-	-	-
MSCI AC World Minimum Volatility Index (Net)	7.7	-10.3	13.9	2.7	21.1	-1.6	17.9	7.4	2.8	11.0	16.9
eV Global Low Volatility Equity Rank	58	61	66	-	-	-	-	-	-	-	-
Northern Trust Global Volatility Fund	-	-	-	-	-	-	-	-	-	-	-
MSCI AC World Minimum Volatility Index (Net)	7.7	-10.3	13.9	2.7	21.1	-1.6	17.9	7.4	2.8	11.0	16.9
eV Global Low Volatility Equity Rank	-	-	-	-	-	-	-	-	-	-	-
Real Estate Composite	-15.6	5.8	21.4	-0.2	5.6	8.0	6.7	9.7	-	-	-
NFI-ODCE	-12.7	6.5	21.1	0.3	4.4	7.4	6.7	7.8	14.0	11.5	12.9
All Public DB Plans-Private Real Estate Rank	87	86	51	59	68	50	80	26	-	-	-
Intercontinental U.S. Real Estate	-15.8	7.4	20.1	1.0	8.2	9.2	7.5	11.1	-	-	-
NFI-ODCE	-12.7	6.5	21.1	0.3	4.4	7.4	6.7	7.8	14.0	11.5	12.9
JP Morgan U.S. Real Estate	-15.1	2.4	23.7	-2.0	2.1	5.5	5.6	-	-	-	-
NFI-ODCE	-12.7	6.5	21.1	0.3	4.4	7.4	6.7	7.8	14.0	11.5	12.9



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)
Infrastructure Composite	-	-	-	-	-	-	-	-	-	-	-
STOXX Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-	-
Dow Jones Brookfield Global Infrastructure Index	4.5	-6.6	19.9	-7.0	28.7	-7.9	15.8	12.5	-14.4	16.3	15.9
NT Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-	-
STOXX Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-	-
Dow Jones Brookfield Global Infrastructure Index	4.5	-6.6	19.9	-7.0	28.7	-7.9	15.8	12.5	-14.4	16.3	15.9
eV Infrastructure Rank	-	-	-	-	-	-	-	-	-	-	-
Alternative Composite	4.0	-11.2	15.6	22.2	-20.0	4.8	7.0	0.1	0.5	0.4	5.8
Custom Alternative Target Benchmark	-14.5	-11.2	15.6	22.2	-20.0	4.8	7.0	0.1	0.4	2.7	-

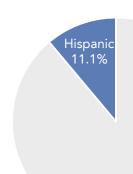


Investments		Commitment	Unfunded Commitment		Cumulative Distributions	Valua	Valuations		Performance			
Account Name	Vintage Year	(\$)	(\$)	(\$)	(\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	RVPI	Since Inception (%)	
2012												
GrayCo Alternative Partners II, L.P.	2012	28,000,000	3,582,424	24,417,576	22,857,482	6,160,337	29,017,819	0.9	1.2	0.3	2.0	
Sub Total		28,000,000	3,582,424	24,417,576	22,857,482	6,160,337	29,017,819	0.9	1.2	0.3	2.0	
2023												
Vista Equity Partners Fund VIII, L.P.	2023	5,000,000	3,400,943	1,824,611	203,528	1,806,698	2,010,226	0.1	1.1	1.0		
Grain Communications Opportunity Fund IV, L.P.	2023	5,000,000	3,213,961	2,018,903	237,895	1,584,143	1,822,038	0.1	0.9	0.8		
ICV Partners V, L.P.	2023	5,000,000	2,954,534	2,084,023	38,557	1,903,230	1,941,787	0.0	0.9	0.9		
Ares Senior Direct Lending Fund III, L.P.	2023	5,000,000	4,147,829	852,171	-	894,411	894,411	-	1.0	1.0		
Sub Total		20,000,000	13,717,267	6,779,708	479,980	6,188,483	6,668,463	0.1	1.0	0.9		
Total		48,000,000	17,299,691	31,197,284	23,337,462	12,348,820	35,686,282	0.7	1.1	0.4	2.0	



## Emerging & Minority Market Values As of December 31, 2024

	Asset Class	Market Value	% of Portfolio	% of Total Fund
Total MWDBE Compos	ite	\$777,394,843	100.0%	40.8%
Garcia Hamilton	(H) Core Fixed Income	\$86,327,715	11.1%	4.5%
Union Heritage	(AA) Large-Cap Core	\$234,083,079	30.1%	12.3%
Channing Capital	(AA) Small-Cap Value	\$43,198,296	5.6%	2.3%
Earnest Partners	SCC (AA) Small-Cap Core	\$83,542,467	10.7%	4.4%
Legato	(AA) Small-Cap Growth	\$53,989,249	6.9%	2.8%
Ariel Investments	( 1 4 5 5 5 6 5	\$11,840,990	1.5%	0.6%
Brown Internation Earnest Partners	, ,	\$27,808,976 \$71,042,300	3.6% 9.1%	1.5% 3.7%
Globalt	(AA) Global Balanced	\$160,267,700	20.6%	8.4%
Vista Equity Partr	ers (AA) LBO Private Equity	\$1,806,698	0.2%	0.1%
ICV Partners V, L.	P. (AA) LBO Private Equity	\$1,903,230	0.2%	0.1%
Grain Communica Opportunity Fund	1 2	\$1,584,143	0.2%	0.1%



African American 88.9%



#### **Total Fund Composite**

Fee Schedule As of December 31, 2024

Asset Class	InvestmentManager	Fee Schedule	Est. Annual Fee <sup>1</sup>	Expense Ratio	Industry Median <sup>2</sup>
Core Fixed Income	Mesirow	0.35% on the first \$10 million 0.25% on the next \$50 million 0.20% on the next \$150 million 0.15% on the next \$300 million 0.125% on the next \$500 million 0.10% on the balance	\$491,081	0.21%	0.22%
Core Fixed Income	Garcia Hamilton	0.18% on the balance	\$155,390	0.18%	0.26%
Core Fixed Income	State Street U.S. Aggregate Bond Index SL Fund	0.03% on the balance	\$30,889	0.03%	0.06%
Large-Cap Core	Union Heritage Large Cap Core	0.50% on the first \$10 million 0.45% on the next \$15 million 0.35% on the balance	\$849,291	0.36%	0.44%
Large-Cap Core	Blackrock S&P 500 Equity Index Fund	0.01% on the balance	\$24,111	0.01%	0.02%
Mid-Cap Core	Invesco Oppenheimer Main Street Mid Cap	0.60% on the first \$50 million 0.50% on the next \$100 million 0.45% on the balance	\$71,036	0.60%	0.70%
Mid-Cap Core	BlackRock MidCap Equity Index	0.01% on the balance	\$9,529	0.01%	0.06%
Small-Cap Value	Channing Capital Management	0.75% on the first \$25 million 0.65% on the next \$25 million 0.60% on the next \$50 million 0.55% on the balance	\$305,789	0.71%	0.90%
Small-Cap Core	Earnest Partners SCC	0.80% on the first \$10 million 0.65% on the next \$10 million 0.50% on the balance	\$462,712	0.55%	0.77%
Smid-Cap Value	Ariel Investments	1.00% on the first \$10 million 0.75% on the next \$10 million 0.50% on the balance	\$113,807	0.96%	0.88%
Small-Cap Growth	Legato	0.60% on the balance	\$323,935	0.60%	0.80%



Asset Class	InvestmentManager	Fee Schedule	Est. Annual Fee <sup>1</sup>	Expense Ratio	Industry Mediar <sup>2</sup>
Non-U.S. Large-Cap Value	Artisan Partners International Value Fund (APHKX)	1.03% on the balance	\$848,375	1.03%	0.92%
Non-U.S. Large-Cap Core	Hardman Johnston	0.75% on the first \$25 million 0.60% on the next \$50 million 0.50% on the balance	\$657,425	0.60%	0.65%
Non-U.S. Small-Cap Core	Brown Capital International Small Cap	1.06% on the balance	\$294,775	1.06%	1.29%
Emerging Markets	Earnest Partners EM	1.00% on the balance	\$710,423	1.00%	0.85%
Emerging Markets	Goldman Sachs Emerging Markets Equity	0.45% on the balance	\$157,319	0.45%	0.90%
Global Balanced	Globalt Tactical ETF	0.50% on the first \$50 million 0.30% on the next \$50 million 0.25% on the balance	\$550,669	0.34%	0.85%
Global Low-Volatility	BlackRock MSCI ACWI Min Volatility Index	0.025% on the balance	\$18,005	0.03%	0.42%
Global Low-Volatility	Northern Trust Global Volatility Fund	0.25% on the first \$50 million 0.22% on the next \$50 million 0.20% on the balance	\$84,301	0.25%	0.45%
Core Real Estate	Intercontinental U.S. Real Estate	1.10% on the first \$25 million 1.00% on the next \$25 million 0.85% on the next \$50 million 0.75% on the balance	\$378,154	1.07%	1.00%
Core Plus Real Estate	JP Morgan U.S. Real Estate	1.75% on the first \$10 million 1.05% on the next \$90 million	\$231,751	1.50%	1.00%
Publicly-Traded Infrastructure	NT Global Broad Infrastructure	0.47% on the balance	\$148,022	0.47%	0.75%
U.S. Private Equity FoF	Consequent Alternative Partners II, LP	1.00% on Committed Capital	\$280,000	4.55%	2.73%
LBO Private Equity	Vista Equity Partners	1.50% on the balance	\$27,100	1.50%	2.00%
Global Infrastructure	Grain Communications Opportunity Fund IV	2.00% on the balance	\$31,683	2.00%	1.50%
LBO Private Equity	ICV Partners V, L.P.	2.00% on the balance	\$38,065	2.00%	2.00%
Private Debt	Ares Senior Direct Lending Fund III	0.85% on the balance	\$7,602	0.85%	1.50%
Total Investment Management Fees			\$7,301,240	0.38%	0.48%



#### **DISCLOSURES**

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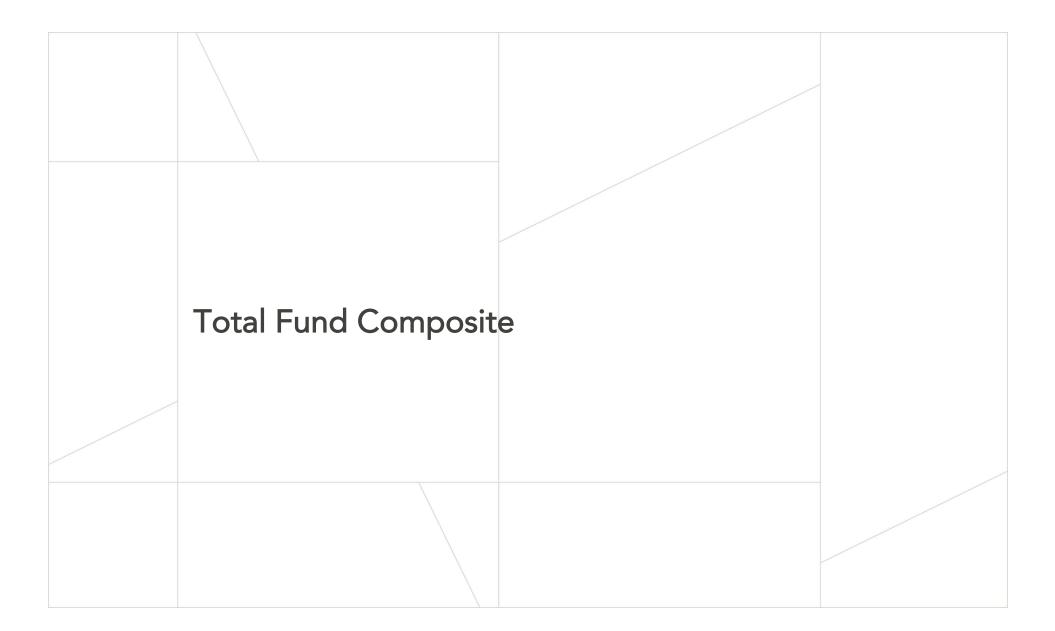




### City of Atlanta Police Officers' Pension Fund

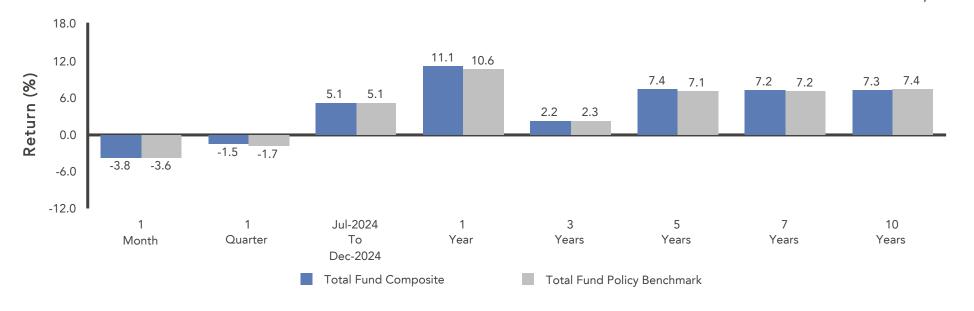
Executive Summary December 31, 2024

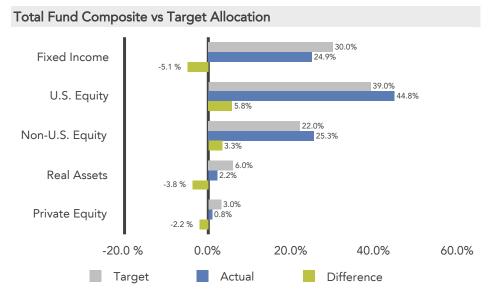






Performance Summary As of December 31, 2024





Summary of Cash Flows		
	1 Quarter (\$)	1 Year (\$)
Beginning Market Value	1,565,054,087	1,411,401,516
Net Cash Flow	-6,840,372	-34,061,497
Gain/Loss	-22,537,865	158,335,831
Ending Market Value	1,535,675,850	1,535,675,850



Portfolio Allocation Month Ending December 31, 2024

Total Fund Composite	Asset Class	Ending MV (\$) 1,535,675,850	Net Cash Flow (\$) 2,941,850	% of Portfolio 100.0	Policy (%) 100.0
Fixed Income Composite		382,247,276	-1,095	24.9	30.0
Mesirow	Core Fixed Income	211,425,813	-1,069	13.8	-
Garcia Hamilton	Int. Govt. Fixed Income	66,069,957	-26	4.3	-
BlackRock U.S.Aggregate Bond Index	Core Fixed Income	104,751,506	-	6.8	-
U.S. Equity Composite		688,571,067	-5,000,648	44.8	39.0
Union Heritage Large Cap Core	Large-Cap Core	28,719,410	-171	1.9	-
BlackRock Russell 1000 Index Fund	Large-Cap Core	274,740,766	-5,000,000	17.9	-
Invesco Oppenheimer Main Street Mid Cap	Mid-Cap Core	18,020,433	-50	1.2	-
BlackRock Mid Cap Equity Index Fund	Mid-Cap Core	193,948,696	-	12.6	-
Ariel Investments	Smid-Cap Value	17,481,913	-37	1.1	-
Macquarie SCC	Small-Cap Core	47,011,890	-146	3.1	-
Earnest Partners SCC	Small-Cap Core	49,492,423	-187	3.2	-
Channing Capital Management	Small-Cap Value	16,946,105	-57	1.1	-
Driehaus SCG	Small-Cap Growth	42,209,430	-	2.7	-



Portfolio Allocation Month Ending December 31, 2024

	Asset Class	Ending MV (\$)	Net Cash Flow (\$)	% of Portfolio	Policy (%)
International Equity Composite		388,879,689	-11,191	25.3	22.0
Artisan International Large Cap Value (APHKX)	Non-U.S. Large-Cap Value	88,574,652	-	5.8	-
Hardman Johnston	Non-U.S. Large-Cap Core	81,828,827	-	5.3	-
BlackRock MSCI EAFE Small Cap Index	Non-U.S. Small-Cap Core	9,496,447	-	0.6	-
Brown Capital International Small Cap	Non-U.S. Small-Cap Core	13,904,489	-1	0.9	-
BlackRock Emerging Markets Free Fund	Emerging Markets	13,164,343	-11,004	0.9	-
Goldman Sachs Emerging Markets Equity	Emerging Markets	21,982,759	-	1.4	-
Global Equity Composite		159,928,173	-186	10.4	-
BlackRock MSCI ACWI Min Volatility Index	Global Low-Volatility	104,600,492	-	6.8	-
Globalt Tactical ETF	Global Balanced	27,227,235	-186	1.8	-
Northern Trust Global Volatility Fund	Global Low-Volatility	28,100,445	-	1.8	-
Infrastructure Composite		21,124,179	-49	1.4	3.0
NT Global Broad Infrastructure	Publicly-Traded Infrastructure	21,124,179	-49	1.4	-



Portfolio Allocation Month Ending December 31, 2024

	Asset Class	Ending MV (\$)	Net Cash Flow (\$)	% of Portfolio	Policy (%)
Alternative Composite		38,940,983	-2,048,780	2.5	6.0
Intercontinental U.S. Real Estate	Core Real Estate	13,075,166	-	0.9	-
RREEF America II LP	Core Real Estate	12,048,000	-	0.8	-
Consequent Alternative Partners II, LP	U.S. Private Equity FoF	4,591,582	-2,048,780	0.3	-
Pharos Capital Partners III	LBO Private Equity	3,019,564	-	0.2	-
Vista Equity Partners	LBO Private Equity	1,824,887	-	0.1	-
Grain Communications Opportunity Fund IV	Global Infrastructure	1,584,143	-	0.1	-
ICV Partners V, L.P.	LBO Private Equity	1,903,230	-	0.1	-
Ares Senior Direct Lending Fund III	Private Debt	894,411	-	0.1	-
Cash Composite		15,912,656	10,003,613	1.0	0.0
Cash	Cash & Equivalents	4,757,048	2,048,022	0.3	-
Transition Cash Account	Cash & Equivalents	49,497	-6	0.0	-
NT Operating	Cash & Equivalents	11,106,110	7,955,597	0.7	-



	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Total Fund Composite	-3.8	-1.5	5.1	11.1	12.0	2.2	7.4	7.2	7.3	8.1	Feb 88
Total Fund Policy Benchmark	-3.6	-1.7	5.1	10.6	12.0	2.3	7.1	7.2	7.4	8.8	
Fixed Income Composite	-1.7	-3.1	1.9	1.4	3.4	-1.9	-0.2	0.9	1.3	2.6	Oct 07
Fixed Income Composite Blended Benchmark	-1.3	-2.5	2.2	1.9	3.7	-1.6	0.1	1.1	1.5	2.9	
Mesirow	-1.7	-3.1	1.9	1.4	3.3	-2.2	-0.1	1.1	1.4	2.3	Jun 10
Blmbg. U.S. Aggregate Index	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	1.0	1.3	2.2	
Garcia Hamilton	-1.5	-3.2	1.9	1.4	3.4	0.0	0.7	1.5	1.7	1.8	May 14
Blmbg. Intermed. U.S. Government/Credit	-0.6	-1.6	2.5	3.0	4.1	-0.2	0.9	1.7	1.7	1.8	
BlackRock U.S.Aggregate Bond Index	-1.7	-3.0	2.0	1.4	3.5	-2.3	-	-	-	-0.9	Apr 20
Blmbg, U.S. Aggregate Index	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	1.0	1.3	-1.0	



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	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
U.S. Equity Composite	-5.5	1.2	8.0	17.7	18.9	5.2	11.4	10.6	10.1	8.5	Feb 08
Domestic Equity Composite Blended Benchmark	-5.5	1.4	8.7	18.3	19.5	5.5	11.6	11.1	11.0	10.4	
Union Heritage Large Cap Core	-4.4	0.3	6.6	-	-	-	-	-	-	11.3	Mar 24
S&P 500 Index	-2.4	2.4	8.4	25.0	25.7	8.9	14.5	13.8	13.1	16.7	
BlackRock Russell 1000 Index Fund	-2.8	2.7	9.0	24.5	25.6	8.4	14.3	-	-	15.3	Nov 19
Russell 1000 Index	-2.8	2.7	9.0	24.5	25.5	8.4	14.3	13.6	12.9	15.2	
Invesco Oppenheimer Main Street Mid Cap	-6.5	2.5	12.2	-	-	-	-	-	-	19.2	Feb 24
Russell Midcap Index	-7.0	0.6	9.9	15.3	16.3	3.8	9.9	9.6	9.6	17.0	
BlackRock Mid Cap Equity Index Fund	-7.1	0.3	7.3	13.9	15.2	4.9	10.4	-	-	10.8	Dec 19
S&P MidCap 400 Index	-7.1	0.3	7.3	13.9	15.2	4.9	10.3	9.1	9.7	10.8	
Ariel Investments	-7.0	0.7	14.1	-	-	-	-	-	-	17.6	Feb 24
Russell 2500 Value Index	-7.2	-0.3	9.3	11.0	13.5	3.8	8.4	7.2	7.8	14.2	
Macquarie SCC	-7.8	0.7	9.5	10.8	11.8	1.7	8.5	7.8	-	7.9	Oct 17
Russell 2000 Index	-8.3	0.3	9.6	11.5	14.2	1.2	7.4	6.9	7.8	7.1	
Earnest Partners SCC	-6.9	-2.2	2.3	0.3	6.7	-1.3	-	-	-	-1.3	Nov 21
Russell 2000 Index	-8.3	0.3	9.6	11.5	14.2	1.2	7.4	6.9	7.8	0.5	
Channing Capital Management	-7.8	-0.1	7.9	-	-	-	-	-	-	14.4	Feb 24
Russell 2000 Value Index	-8.3	-1.1	9.0	8.1	11.3	1.9	7.3	6.1	7.1	13.2	
Driehaus SCG	-9.6	0.5	6.9	27.7	23.0	0.0	-	-	-	-0.9	Nov 21
Russell 2000 Growth Index	-8.2	1.7	10.3	15.2	16.9	0.2	6.9	7.2	8.1	-1.2	



	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
International Equity Composite	-3.1	-4.4	3.5	10.6	11.1	1.3	6.5	6.1	7.3	8.6	Jul 10
International Equity Composite Blended Benchmark	-2.6	-6.0	2.0	7.6	9.9	1.2	4.5	3.9	5.1	6.1	
Artisan International Large Cap Value (APHKX)	-3.5	-7.0	0.6	6.6	14.5	6.9	9.2	7.3	7.8	10.0	Jul 10
MSCI EAFE (Net)	-2.3	-8.1	-1.4	3.8	10.8	1.6	4.7	4.1	5.2	6.5	
Hardman Johnston	-2.7	-3.4	2.3	13.1	9.3	-3.0	4.6	5.4	7.2	7.5	Jul 10
MSCI AC World ex USA (Net)	-1.9	-7.6	-0.1	5.5	10.5	0.8	4.1	3.5	4.8	5.7	
BlackRock MSCI EAFE Small Cap Index	-2.5	-8.6	1.1	1.9	7.7	-2.8	-	-	-	7.9	May 20
MSCI EAFE Small Cap (Net)	-2.3	-8.4	1.3	1.8	7.3	-3.2	2.3	2.0	5.5	7.5	
Brown Capital International Small Cap	-2.4	-3.6	8.4	8.5	14.3	-3.6	-	-	-	-3.6	Jan 22
MSCI AC World ex USA Small Cap (Net)	-2.1	-7.7	0.6	3.4	9.3	-1.5	4.3	3.1	5.7	-1.5	
BlackRock Emerging Markets Free Fund	-0.2	-7.7	-0.1	7.3	8.3	-2.2	-	-	-	5.7	May 20
MSCI Emerging Markets (Net)	-0.1	-8.0	0.0	7.5	8.7	-1.9	1.7	1.4	3.6	5.9	
Goldman Sachs Emerging Markets Equity	-0.7	-6.3	1.5	10.7	8.9	-	-	-	-	-2.7	Mar 22
MSCI Emerging Markets (Net)	-0.1	-8.0	0.0	7.5	8.7	-1.9	1.7	1.4	3.6	-0.3	
BlackRock MSCI ACWI Min Volatility Index	-3.8	-3.5	5.9	11.4	9.9	2.8	-	-	-	7.8	May 20
MSCI AC World Minimum Volatility Index (Net)	-3.8	-3.5	6.0	11.4	9.5	2.5	4.7	6.0	6.9	7.4	
Globalt Tactical ETF	-3.2	-0.2	6.5	-	-	-	-	-	-	9.2	Apr 24
CoAP GLOBALT	-3.2	-0.2	6.5	-	-	-	-	-	-	9.2	
Northern Trust Global Volatility Fund	-3.4	-1.8	6.7	-	-	-	-	-	-	12.9	Apr 24
MSCI AC World Minimum Volatility Index (Net)	-3.8	-3.5	6.0	11.4	9.5	2.5	4.7	6.0	6.9	6.4	



	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Infrastructure Composite	-6.7	-7.3	4.0	-	-	-	-	-	-	4.3	Mar 24
STOXX Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.3	
Dow Jones Brookfield Global Infrastructure Index	-5.9	-3.1	10.9	10.0	7.2	2.4	3.7	5.1	4.7	13.7	
NT Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.3	Mar 24
STOXX Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.3	
Dow Jones Brookfield Global Infrastructure Index	-5.9	-3.1	10.9	10.0	7.2	2.4	3.7	5.1	4.7	13.7	
Alternative Composite	0.3	0.2	-0.2	-2.8	-5.6	-4.0	3.7	2.0	2.8	2.9	Jan 13
Alternatives Custom Benchmark	0.2	0.8	1.5	-1.6	-6.7	-6.1	3.7	1.9	2.7	2.5	
Intercontinental U.S. Real Estate	0.5	0.5	-0.7	-5.0	-10.6	-5.0	0.8	3.0	5.2	5.7	Sep 14
NFI-ODCE	0.4	1.2	1.2	-2.0	-7.5	-3.1	2.0	3.1	5.0	5.2	
RREEF America II LP	0.4	0.4	-	-	-	-	-	-	-	-	Sep 24
NFI-ODCE	0.4	1.2	1.2	-2.0	-7.5	-3.1	2.0	3.1	5.0	1.2	



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Total Fund Composite	12.9	-14.7	13.8	17.7	21.3	-6.2	15.6	9.2	-1.9	5.0
Total Fund Policy Benchmark	13.3	-14.7	13.7	15.7	22.0	-5.4	15.0	9.9	-0.3	8.3
All Public DB Plans Over \$1B Rank	21	92	67	2	3	91	47	11	87	67
Fixed Income Composite	5.4	-11.7	-1.8	6.8	7.5	-0.1	3.9	2.9	0.5	4.2
Fixed Income Composite Blended Benchmark	5.4	-11.2	-1.5	7.0	7.5	0.2	3.7	2.3	0.8	5.0
All Public DB Plans-Fixed Income Rank	97	54	95	80	93	37	92	100	15	47
Mesirow	5.3	-12.5	-1.9	8.8	8.8	-0.6	3.2	2.9	-0.1	6.3
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0
eV US Core Fixed Inc Rank	80	27	82	32	56	75	81	55	85	27
Garcia Hamilton	5.3	-6.4	-1.8	5.7	5.8	1.2	2.0	2.9	1.2	-
Blmbg. Intermed. U.S. Government/Credit	5.2	-8.2	-1.4	6.4	6.8	0.9	2.1	2.1	1.1	3.1
eV US Interm Duration Fixed Inc Rank	67	3	88	81	88	9	80	28	36	-
BlackRock U.S.Aggregate Bond Index	5.7	-13.0	-1.6	-	-	-	-	-	-	-
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0
eV US Core Fixed Inc Rank	61	48	63	-	-	-	-	-	-	-



	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
U.S. Equity Composite	20.2	-17.6	22.1	20.6	27.0	-7.1	18.8	12.6	-3.2	6.3
Domestic Equity Composite Blended Benchmark	20.6	-17.7	23.1	20.0	29.9	-7.2	19.3	14.6	-0.7	12.0
All Public DB Plans-US Equity Rank	81	35	90	31	97	71	90	47	99	98
Union Heritage Large Cap Core	-	-	-	-	-	-	-	-	-	-
S&P 500 Index	26.3	-18.1	28.7	18.4	31.5	-4.4	21.8	12.0	1.4	13.7
eV US Large Cap Core Equity Rank	-	-	-	-	-	-	-	-	-	-
BlackRock Russell 1000 Index Fund	26.6	-19.1	26.5	21.0	-	-	-	-	-	-
Russell 1000 Index	26.5	-19.1	26.5	21.0	31.4	-4.8	21.7	12.1	0.9	13.2
eV US Large Cap Core Equity Rank	25	74	59	24	-	-	-	-	-	-
Invesco Oppenheimer Main Street Mid Cap	-	-	-	-	-	-	-	-	-	-
Russell Midcap Index	17.2	-17.3	22.6	17.1	30.5	-9.1	18.5	13.8	-2.4	13.2
eV US Mid Cap Core Equity Rank	-	-	-	-	-	-	-	-	-	-
BlackRock Mid Cap Equity Index Fund	16.5	-13.0	24.7	13.8	-	-	-	-	-	-
S&P MidCap 400 Index	16.4	-13.1	24.8	13.7	26.2	-11.1	16.2	20.7	-2.2	9.8
eV US Mid Cap Equity Rank	62	39	48	54	-	-	-	-	-	-
Ariel Investments	-	-	-	-	-	-	-	-	-	-
Russell 2500 Value Index	16.0	-13.1	27.8	4.9	23.6	-12.4	10.4	25.2	-5.5	7.1
eV US Small-Mid Cap Value Equity Rank	-	-	-	-	-	-	-	-	-	-
Macquarie SCC	12.8	-15.9	23.8	15.6	26.3	-11.1	-	-	-	-
Russell 2000 Index	16.9	-20.4	14.8	20.0	25.5	-11.0	14.6	21.3	-4.4	4.9
eV US Small Cap Core Equity Rank	79	40	53	50	41	52	-	-	-	-



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Earnest Partners SCC	13.6	-15.7	-	-	-	-	-	-	-	-
Russell 2000 Index	16.9	-20.4	14.8	20.0	25.5	-11.0	14.6	21.3	-4.4	4.9
eV US Small Cap Equity Rank	72	44	-	-	-	-	-	-	-	-
Channing Capital Management	-	-	-	-	-	-	-	-	-	-
Russell 2000 Value Index	14.6	-14.5	28.3	4.6	22.4	-12.9	7.8	31.7	-7.5	4.2
eV US Small Cap Value Equity Rank	-	-	-	-	-	-	-	-	-	-
Driehaus SCG	18.5	-34.0	-	-	-	-	-	-	-	-
Russell 2000 Growth Index	18.7	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6
eV US Small Cap Growth Equity Rank	36	80	-	-	-	-	-	-	-	-
International Equity Composite	11.7	-15.8	8.1	21.7	29.2	-14.5	30.9	3.4	-1.0	-0.1
International Equity Composite Blended Benchmark	12.3	-14.3	10.3	9.1	21.8	-14.0	26.1	2.7	-3.3	-4.4
All Public DB Plans-Intl Equity Rank	95	16	46	4	3	58	20	59	16	3
Artisan International Large Cap Value (APHKX)	22.9	-6.8	17.0	8.8	24.2	-15.4	24.1	5.7	-1.5	-0.4
MSCI EAFE (Net)	18.2	-14.5	11.3	7.8	22.0	-13.8	25.0	1.0	-0.8	-4.9
Foreign Large Blend Rank	1	2	3	54	26	71	76	9	63	10
Hardman Johnston	5.7	-23.6	1.3	35.6	33.8	-13.7	37.7	1.1	-0.4	0.3
MSCI AC World ex USA (Net)	15.6	-16.0	7.8	10.7	21.5	-14.2	27.2	4.5	-5.7	-3.9
eV ACWI ex-US Large Cap Equity Rank	99	81	92	4	4	32	10	57	33	9
BlackRock MSCI EAFE Small Cap Index	13.7	-20.8	10.4	-	-	-	-	-	-	-
MSCI EAFE Small Cap (Net)	13.2	-21.4	10.1	12.3	25.0	-17.9	33.0	2.2	9.6	-4.9
eV EAFE Small Cap Equity Rank	53	47	66	-	-	-	-	-	-	-



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Brown Capital International Small Cap	20.4	-31.4	-	-	-	-	-	-	-	-
MSCI AC World ex USA Small Cap (Net)	15.7	-20.0	12.9	14.2	22.4	-18.2	31.6	3.9	2.6	-4.0
Foreign Small/Mid Growth Rank	10	61	-	-	-	-	-	-	-	-
BlackRock Emerging Markets Free Fund	9.3	-20.2	-2.7	-	-	-	-	-	-	-
MSCI Emerging Markets (Net)	9.8	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2
eV Emg Mkts Large Cap Equity Rank	75	57	67	-	-	-	-	-	-	-
Goldman Sachs Emerging Markets Equity	7.1	-	-	-	-	-	-	-	-	-
MSCI Emerging Markets (Net)	9.8	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2
eV Emg Mkts All Cap Equity Rank	76	-	-	-	-	-	-	-	-	-
BlackRock MSCI ACWI Min Volatility Index	8.4	-10.0	14.1	-	-	-	-	-	-	-
MSCI AC World Minimum Volatility Index (Net)	7.7	-10.3	13.9	2.7	21.1	-1.6	17.9	7.4	2.8	11.0
eV Global Low Volatility Equity Rank	58	61	67	-	-	-	-	-	-	-
Globalt Tactical ETF	-	-	-	-	-	-	-	-	-	-
CoAP GLOBALT	-	-	-	-	-	-	-	-	-	-
eV Global Balanced Rank	-	-	-	-	-	-	-	-	-	-
Northern Trust Global Volatility Fund	-	-	-	-	-	-	-	-	-	-
MSCI AC World Minimum Volatility Index (Net)	7.7	-10.3	13.9	2.7	21.1	-1.6	17.9	7.4	2.8	11.0
eV Global Low Volatility Equity Rank	-	-	-	-	-	-	-	-	-	-



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Infrastructure Composite	-	-	-	-	-	-	-	-	-	-
STOXX Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-
Dow Jones Brookfield Global Infrastructure Index	4.5	-6.6	19.9	-7.0	28.7	-7.9	15.8	12.5	-14.4	16.3
NT Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-
STOXX Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-
Dow Jones Brookfield Global Infrastructure Index	4.5	-6.6	19.9	-7.0	28.7	-7.9	15.8	12.5	-14.4	16.3
eV Infrastructure Rank	-	-	-	-	-	-	-	-	-	-
Alternative Composite	-8.2	-0.8	17.3	15.9	-10.0	6.4	8.0	3.3	2.3	2.4
Alternatives Custom Benchmark	-11.5	-5.0	21.5	19.3	-10.3	6.1	8.1	2.1	3.3	5.1
Intercontinental U.S. Real Estate	-15.9	7.2	20.2	1.1	8.2	9.3	7.5	11.1	12.4	-
NFI-ODCE	-12.7	6.5	21.1	0.3	4.4	7.4	6.7	7.8	14.0	11.5
IM U.S. Private Real Estate (SA+CF) Rank	84	29	61	35	12	15	45	14	73	-
RREEF America II LP	-	-	-	-	-	-	-	-	-	-
NFI-ODCE	-12.7	6.5	21.1	0.3	4.4	7.4	6.7	7.8	14.0	11.5
IM U.S. Open End Private Real Estate (SA+CF) Rank	-	-	-	-	-	-	-	-	-	-

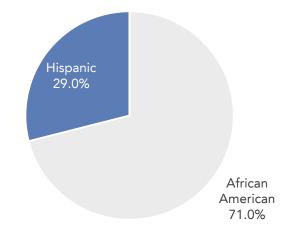


Investments		Commitment	Unfunded Commitment	Cumulative Contributions	Cumulative Distributions	Valua	Valuations		Perfo	rmance	
Account Name	Vintage Year	(\$)	(\$)	(\$)	(\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	RVPI	SI (%)
2012											
GrayCo Alternative Partners II, L.P.	2012	21,000,000	2,715,486	21,637,389	20,495,981	4,591,582	25,087,563	0.9	1.2	0.2	2.0
Sub Total		21,000,000	2,715,486	21,637,389	20,495,981	4,591,582	25,087,563	0.9	1.2	0.2	2.0
2013											
Pharos Capital Partners III, L.P.	2013	4,000,000	20,000	3,980,000	4,576,406	3,019,564	7,595,970	1.1	1.9	0.8	11.5
Sub Total		4,000,000	20,000	3,980,000	4,576,406	3,019,564	7,595,970	1.1	1.9	0.8	11.5
2023											
Vista Equity Partners Fund VIII, L.P.	2023	5,000,000	3,400,943	1,824,611	203,528	1,824,887	2,028,415	0.1	1.1	1.0	
Grain Communications Opportunity Fund IV, L.P.	2023	5,000,000	3,213,961	2,018,903	237,895	1,584,143	1,822,038	0.1	0.9	0.8	
ICV Partners V, L.P.	2023	5,000,000	2,954,534	2,084,023	38,557	1,903,230	1,941,787	0.0	0.9	0.9	
Ares Senior Direct Lending Fund III, L.P.	2023	5,000,000	4,147,829	852,171	-	894,411	894,411	-	1.0	1.0	
Sub Total		20,000,000	13,717,267	6,779,708	479,980	6,206,672	6,686,652	0.1	1.0	0.9	
Total		45,000,000	16,452,753	32,397,097	25,552,367	13,817,818	39,370,185	0.8	1.2	0.4	3.3



# Emerging & Minority Market Values As of December 31, 2024

				% of Total
	Asset Class	Market Value	Portfolio	Fund
Total MWDBE Composite		\$228,173,356	100.0%	14.9%
Garcia Hamilton	(H) Int. Govt. Fixed Income	\$66,069,957	29.0%	4.3%
Union Heritage	(AA) Large-Cap Core	\$28,719,410	12.6%	1.9%
Ariel Investments	(AA) Smid-Cap Value	\$17,481,913	7.7%	1.1%
Channing Capital	(AA) Small-Cap Value	\$16,946,105	7.4%	1.1%
Earnest Partners SCC	(AA) Small-Cap Core	\$49,492,423	21.7%	3.2%
Brown Capital	(AA) Non-U.S. Small-Cap Core	\$13,904,489	6.1%	0.9%
Globalt Tactical ETF	(AA) Global Balanced	\$27,227,235	11.9%	1.8%
Pharos Capital Partners III	(AA) LBO Private Equity	\$3,019,564	1.3%	0.2%
Vista Equity Partners	(AA) LBO Private Equity	\$1,824,887	0.8%	0.1%
ICV Partners V, L.P.	(AA) LBO Private Equity	\$1,903,230	0.8%	0.1%
Grain Communications Opportunity Fund IV	Private Equity - (AA) Infrastructure	\$1,584,143	0.7%	0.1%





#### Fee Schedule As of December 31, 2024

Core Fixed Income  Mesirow  0.35% on the first \$10 million 0.25% on the next \$50 million 0.20% on the next \$150 million 0.15% on the next \$300 million 0.125% on the next \$500 million 0.10% on the balance  Int. Govt. Fixed Income  Garcia Hamilton  0.25% on the first \$50 million 0.10% on the balance  \$142,677  0.22%  Core Fixed Income  BlackRock U.S.Aggregate Bond Index  0.0175% on the balance  \$18,332  0.02%	0.22%
0.11% on the next \$50 million 0.06% on the balance	
Core Fixed Income BlackRock U.S.Aggregate Bond Index 0.0175% on the balance \$18,332 0.02%	
	0.06%
Large-Cap Core Union Heritage Large Cap Core 0.50% on the first \$10 million \$130,518 0.45% 0.45% on the next \$15 million 0.35% on the balance	0.55%
Large-Cap Core BlackRock Russell 1000 Index Fund 0.015% on the balance \$41,211 0.02%	0.04%
Mid-Cap Core Invesco Oppenheimer Main Street Mid Cap 0.60% on the first \$50 million \$108,123 0.60% 0.50% on the next \$100 million 0.45% on the balance	0.70%
Mid-Cap Core BlackRock Mid Cap Equity Index Fund 0.01% on the balance \$19,395 0.01%	0.05%
Smid-Cap Value Ariel Investments 1.00% on the first \$10 million \$156,114 0.89% 0.75% on the next \$10 million 0.50% on the balance	0.88%
Small-Cap Core Macquarie SCC 0.65% on the first \$50 million \$305,577 0.65% 0.55% on the next \$50 million 0.45% on the balance	0.85%
Small-Cap Core Earnest Partners SCC 0.80% on the first \$10 million \$292,462 0.59% 0.65% on the next \$10 million 0.50% on the balance	0.85%
Small-Cap Value Channing Capital Management 0.75% on the first \$25 million \$127,096 0.75% 0.65% on the next \$25 million 0.60% on the next \$50 million 0.55% on the balance	0.90%
Small-Cap Growth Driehaus SCG 0.60% on the first \$50 million \$253,257 0.60% 0.50% on the next \$50 million 0.45% on the balance	0.90%



Asset Class	InvestmentManager	Fee Schedule	Est. Annual Fee <sup>1</sup>	Expense Ratio	Industry Median <sup>2</sup>
Non-U.S. Large-Cap Value	Artisan International Large Cap Value (APHKX)	1.03% on the balance	\$912,319	1.03%	0.92%
Non-U.S. Large-Cap Core	Hardman Johnston	0.75% on the first \$25 million 0.60% on the next \$50 million 0.50% on the balance	\$521,644	0.64%	0.65%
Non-U.S. Small-Cap Core	BlackRock MSCI EAFE Small Cap Index	0.045% on the balance	\$4,273	0.05%	0.25%
Non-U.S. Small-Cap Core	Brown Capital International Small Cap	1.06% on the balance	\$147,388	1.06%	1.29%
Emerging Markets	BlackRock Emerging Markets Free Fund	0.09% on the balance	\$11,848	0.09%	0.20%
Emerging Markets	Goldman Sachs Emerging Markets Equity	0.45% on the balance	\$98,922	0.45%	0.90%
Global Low-Volatility	BlackRock MSCI ACWI Min Volatility Index	0.025% on the balance	\$26,150	0.03%	0.42%
Global Balanced	Globalt Tactical ETF	0.50% on the first \$50 million 0.30% on the next \$50 million 0.25% on the balance	\$136,136	0.50%	0.38%
Global Low-Volatility	Northern Trust Global Volatility Fund	0.25% on the first \$50 million 0.22% on the next \$50 million 0.20% on the balance	\$70,251	0.25%	0.45%
Publicly-Traded Infrastructure	NT Global Broad Infrastructure	0.47% on the balance	\$99,284	0.47%	0.75%
Core Real Estate	Intercontinental U.S. Real Estate	1.10% on the first \$25 million 1.00% on the next \$25 million 0.85% on the next \$50 million 0.75% on the balance	\$143,827	1.10%	1.00%
U.S. Private Equity FoF	Consequent Alternative Partners II, LP	1.00% on Committed Capital	\$210,000	4.57%	2.74%
LBO Private Equity	Pharos Capital Partners III	2.00% on Committed Capital	\$80,000	2.65%	2.65%
LBO Private Equity	Vista Equity Partners	1.50% on the balance	\$27,373	1.50%	2.00%
Global Infrastructure	Grain Communications Opportunity Fund IV	2.00% on the balance	\$31,683	2.00%	1.50%
LBO Private Equity	ICV Partners V, L.P.	2.00% on the balance	\$38,065	2.00%	2.00%
Private Debt	Ares Senior Direct Lending Fund III	0.85% on the balance	\$7,602	0.85%	1.50%
Core Real Estate	RREEF America II LP	0.95% on the balance	\$114,456	0.95%	1.00%
Total Investment Management Fees			\$4,738,121	0.31%	0.38%



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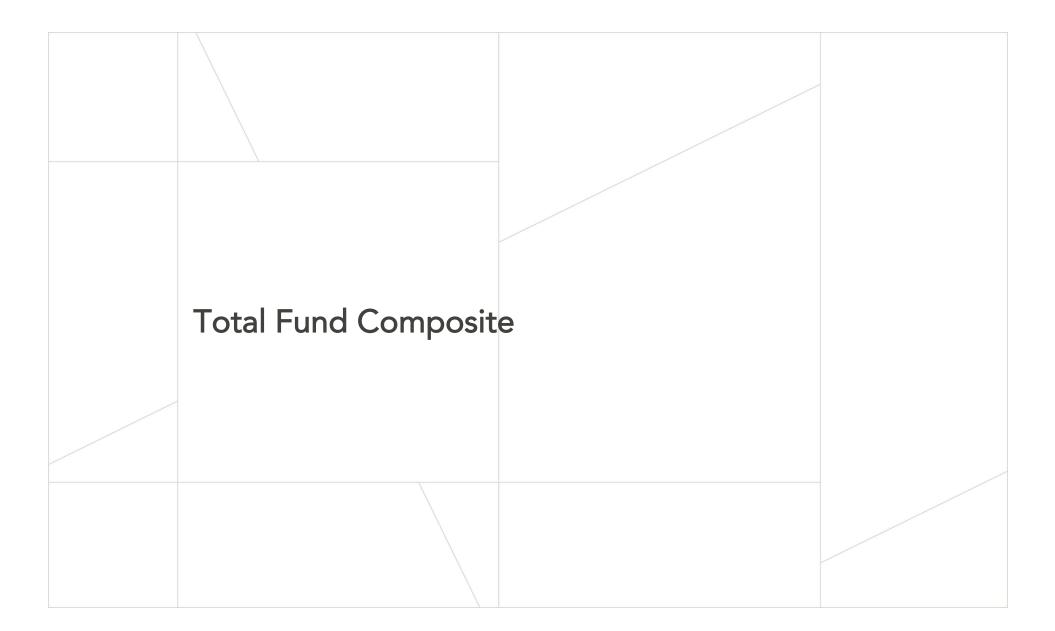


### City of Atlanta Firefighters

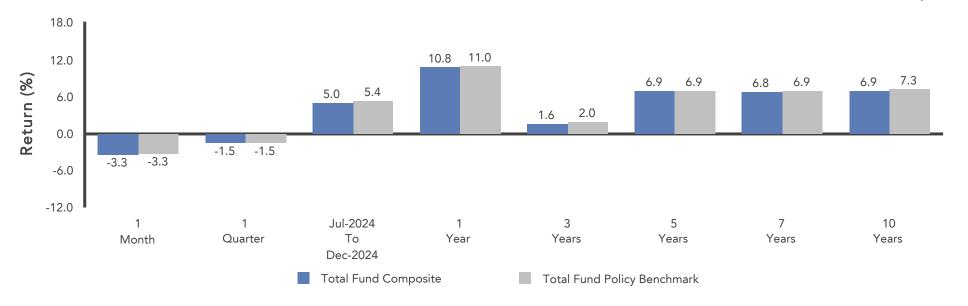
Pension Fund

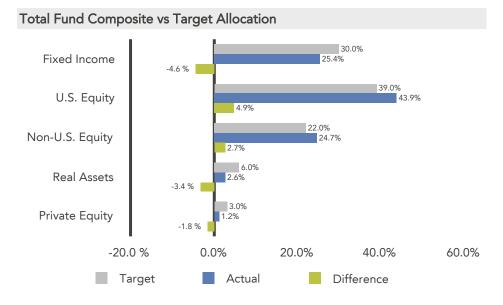
Executive Summary December 31, 2024











Summary of Cash Flows		
	1 Quarter (\$)	1 Year (\$)
Beginning Market Value	921,583,863	842,735,693
Net Cash Flow	-4,877,331	-31,527,350
Gain/Loss	-13,050,220	92,447,968
Ending Market Value	903,656,312	903,656,312



Portfolio Allocation Month Ending December 31, 2024

	Asset Class	Ending MV (\$)	Net Cash Flow (\$)	% of Portfolio	Policy (%)
Total Fund Composite		903,656,312	912,467	100.0	100.0
Fixed Income Composite		229,527,084	-911	25.4	30.0
Garcia Hamilton	Core Fixed Income	65,870,293	-33	7.3	-
Mesirow	Core Fixed Income	163,656,791	-879	18.1	-
U.S. Equity Composite		396,454,089	-369	43.9	39.0
Large Cap Composite		226,089,631	-103	25.0	25.0
Union Heritage Large Cap Core	Large-Cap Core	17,235,008	-103	1.9	-
BlackRock 1000 Index Fund	Large-Cap Core	208,854,622	-	23.1	-
Mid Cap Composite		61,817,525	-49	6.8	8.0
BlackRock Mid Cap Equity Index Fund	Mid-Cap Core	43,968,543	-	4.9	-
Invesco Oppenheimer Main Street Mid Cap	Mid-Cap Core	17,848,981	-49	2.0	-
Small Cap Composite		108,546,934	-217	12.0	6.0
Northern Trust Collective Russell 2000 Index	Small-Cap Core	14,141,874	-	1.6	-
Earnest SCC	Small-Cap Core	39,214,235	-148	4.3	-
Channing Capital Management	Small-Cap Value	11,189,313	-37	1.2	-
Driehaus SCG	Small-Cap Growth	26,677,177	-	3.0	-
Ariel Investments	Smid-Cap Value	17,324,335	-31	1.9	-



Portfolio Allocation Month Ending December 31, 2024

	Asset Class	Ending MV (\$)	Net Cash Flow (\$)	% of Portfolio	Policy (%)
International Equity Composite		223,237,753	-2,018,910	24.7	22.0
Ativo Capital	Non-U.S. Large-Cap Core	46,315,740	-2,000,060	5.1	-
Hardman Johnston	Non-U.S. Large-Cap Core	11,243,537	-	1.2	-
BlackRock MSCI EAFE Small Cap	Non-U.S. Small-Cap Core	17,222,369	-	1.9	-
Brown Capital International Small Cap	Non-U.S. Small-Cap Core	13,904,489	-1	1.5	-
BlackRock Emerging Markets Free Fund	Emerging Markets	22,326,459	-18,663	2.5	-
Goldman Sachs Emerging Markets Equity	Emerging Markets	21,982,759	-	2.4	-
Global Equity Composite		90,242,400	-186	10.0	-
BlackRock MSCI ACWI Min Volatility Index	Global Low-Volatility	46,154,896	-	5.1	-
Globalt Tactical ETF	Global Balanced	27,227,235	-186	3.0	-
Northern Trust Global Volatility Fund	Global Low-Volatility	16,860,268	-	1.9	-
Infrastructure Composite		10,562,118	-24	1.2	3.0
NT Global Broad Infrastructure	Publicly-Traded Infrastructure	10,562,118	-24	1.2	-



Portfolio Allocation Month Ending December 31, 2024

	Asset Class	Ending MV (\$)	Net Cash Flow (\$)	% of Portfolio	Policy (%)
Alternative Composite		33,114,800	-1,628,351	3.7	6.0
Intercontinental U.S. Real Estate	Core Real Estate	13,075,166	-	1.4	-
RREEF America II LP	Core Real Estate	8,032,000	-	0.9	-
Consequent Alternative Partners II, L.P.	U.S. Private Equity FoF	3,279,701	-1,463,415	0.4	-
ICV Partners III, L.P.	LBO Private Equity	1,028,936	-164,936	0.1	-
Pharos Capital Partners III	Distressed Private Equity	1,510,515	-	0.2	-
Vista Equity Partners	LBO Private Equity	1,806,698	-	0.2	-
Grain Communications Opportunity Fund IV	Global Infrastructure	1,584,143	-	0.2	-
ICV Partners V, L.P.	LBO Private Equity	1,903,230	-	0.2	-
Ares Senior Direct Lending Fund III	Private Debt	894,411	-	0.1	-
Cash Composite		10,760,467	4,561,033	1.2	0.0
Cash Account	Cash & Equivalents	4,352,587	1,620,322	0.5	-
Transition Account	Cash & Equivalents	49,456	-6	0.0	-
NT Operating	Cash & Equivalents	6,358,424	2,940,717	0.7	-



	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Total Fund Composite	-3.3	-1.5	5.0	10.8	11.9	1.6	6.9	6.8	6.9	8.3	Jan 88
Total Fund Policy Benchmark	-3.3	-1.5	5.4	11.0	12.0	2.0	6.9	6.9	7.3	8.9	
Fixed Income Composite	-1.9	-3.5	1.7	0.9	3.1	-2.3	-0.3	0.8	1.3	5.0	Jan 88
Fixed Income Composite Custom Benchmark	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	0.8	1.3	5.3	
Garcia Hamilton	-2.4	-4.6	1.4	-0.2	2.4	-2.3	-0.3	0.8	-	1.2	Jan 17
Blmbg. U.S. Aggregate Index	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	1.0	1.3	1.3	
Mesirow	-1.7	-3.1	1.9	1.4	3.3	-2.2	-0.1	1.0	1.3	2.2	Jun 10
Blmbg. U.S. Aggregate Index	-1.6	-3.1	2.0	1.3	3.4	-2.4	-0.3	1.0	1.3	2.2	
U.S. Equity Composite	-5.0	1.4	8.1	18.5	19.8	5.2	11.3	10.8	10.1	11.3	Jan 88
Russell 3000 Index	-3.1	2.6	9.0	23.8	24.9	8.0	13.9	13.2	12.5	11.2	
Large Cap Composite	-2.9	2.6	8.8	23.9	25.2	8.2	14.2	13.5	12.5	11.3	Jan 88
Russell 1000 Index	-2.8	2.7	9.0	24.5	25.5	8.4	14.3	13.6	12.9	11.4	
Union Heritage Large Cap Core	-4.4	0.3	6.6	-	-	-	-	-	-	11.3	Mar 24
S&P 500 Index	-2.4	2.4	8.4	25.0	25.7	8.9	14.5	13.8	13.1	16.7	
BlackRock 1000 Index Fund	-2.8	2.7	9.0	24.5	25.6	8.4	14.3	13.6	-	13.6	Jan 18
Russell 1000 Index	-2.8	2.7	9.0	24.5	25.5	8.4	14.3	13.6	12.9	13.6	



	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Mid Cap Composite	-7.1	0.4	7.3	13.4	15.0	4.7	10.3	9.8	8.8	8.5	Jun 98
S&P MidCap 400 Index	-7.1	0.3	7.3	13.9	15.2	4.9	10.3	9.1	9.7	10.0	
BlackRock Mid Cap Equity Index Fund	-7.3	-0.3	5.9	11.9	14.2	4.3	10.0	8.8	-	9.9	Sep 17
S&P MidCap 400 Index	-7.1	0.3	7.3	13.9	15.2	4.9	10.3	9.1	9.7	10.1	
Invesco Oppenheimer Main Street Mid Cap	-6.5	2.5	12.2	-	-	-	-	-	-	19.2	Feb 24
Russell Midcap Index	-7.0	0.6	9.9	15.3	16.3	3.8	9.9	9.6	9.6	17.0	
Small Cap Composite	-7.9	-0.6	6.5	12.3	13.9	-0.1	7.1	6.8	6.1	9.8	Oct 01
Russell 2000 Index	-8.3	0.3	9.6	11.5	14.2	1.2	7.4	6.9	7.8	9.1	
Northern Trust Collective Russell 2000 Index	-8.3	0.3	9.7	12.6	14.8	1.6	7.7	7.1	-	7.9	Mar 17
Russell 2000 Index	-8.3	0.3	9.6	11.5	14.2	1.2	7.4	6.9	7.8	7.7	
Earnest SCC	-7.0	-2.3	2.3	0.3	6.5	-1.5	-	-	-	-1.4	Nov 21
Russell 2000 Index	-8.3	0.3	9.6	11.5	14.2	1.2	7.4	6.9	7.8	0.5	
Channing Capital Management	-7.8	-0.1	7.9	-	-	-	-	-	-	14.4	Feb 24
Russell 2000 Value Index	-8.3	-1.1	9.0	8.1	11.3	1.9	7.3	6.1	7.1	13.2	
Driehaus SCG	-9.6	0.5	6.9	27.7	23.0	0.0	-	-	-	-0.9	Nov 21
Russell 2000 Growth Index	-8.2	1.7	10.3	15.2	16.9	0.2	6.9	7.2	8.1	-1.2	
Ariel Investments	-7.0	0.7	14.1	-	-	-	-	-	-	17.7	Feb 24
Russell 2500 Value Index	-7.2	-0.3	9.3	11.0	13.5	3.8	8.4	7.2	7.8	14.2	



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	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
International Equity Composite	-2.2	-4.4	3.7	9.6	11.0	-0.4	4.7	4.4	5.7	6.3	Jul 10
International Equity Composite Custom Benchmark	-2.3	-5.7	2.5	8.3	9.6	0.4	3.9	3.3	4.6	5.6	
Ativo Capital	-0.9	-4.9	1.7	6.4	15.4	3.2	6.0	4.7	-	5.5	Jan 16
MSCI AC World ex USA (Net)	-1.9	-7.6	-0.1	5.5	10.5	0.8	4.1	3.5	4.8	6.0	
Hardman Johnston	-2.7	-3.4	2.2	13.0	9.2	-3.1	4.6	5.3	7.1	7.4	Jul 10
MSCI AC World ex USA (Net)	-1.9	-7.6	-0.1	5.5	10.5	0.8	4.1	3.5	4.8	5.7	
BlackRock MSCI EAFE Small Cap	-2.5	-8.6	1.1	1.9	7.7	-2.8	2.7	2.5	-	2.5	Jan 18
MSCI EAFE Small Cap (Net)	-2.3	-8.4	1.3	1.8	7.3	-3.2	2.3	2.0	5.5	2.0	
Brown Capital International Small Cap	-2.4	-3.6	8.4	8.5	14.3	-3.6	-	-	-	-3.6	Jan 22
MSCI AC World ex USA Small Cap (Net)	-2.1	-7.7	0.6	3.4	9.3	-1.5	4.3	3.1	5.7	-1.5	
BlackRock Emerging Markets Free Fund	-0.2	-7.7	-0.1	7.3	8.3	-2.2	1.5	1.2	-	1.2	Jan 18
MSCI Emerging Markets (Net)	-0.1	-8.0	0.0	7.5	8.7	-1.9	1.7	1.4	3.6	1.4	
Goldman Sachs Emerging Markets Equity	-0.7	-6.3	1.5	10.7	8.9	-	-	-	-	-2.7	Mar 22
MSCI Emerging Markets (Net)	-0.1	-8.0	0.0	7.5	8.7	-1.9	1.7	1.4	3.6	-0.3	
BlackRock MSCI ACWI Min Volatility Index	-3.8	-3.5	5.9	11.4	9.9	2.8	-	-	-	7.8	May 20
MSCI AC World Minimum Volatility Index (Net)	-3.8	-3.5	6.0	11.4	9.5	2.5	4.7	6.0	6.9	7.4	
Globalt Tactical ETF	-3.2	-0.2	6.5	-	-	-	-	-	-	9.2	Apr 24
Custom Globalt	-3.2	-0.2	6.5	-	-	-	-	-	-	9.2	
Northern Trust Global Volatility Fund	-3.4	-1.8	6.7	-	-	-	-	-	-	12.9	Apr 24
MSCI AC World Minimum Volatility Index (Net)	-3.8	-3.5	6.0	11.4	9.5	2.5	4.7	6.0	6.9	6.4	



### Pension Fund-Total Fund Composite

	1 Mo (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	SI (%)	Inception Date
Infrastructure Composite	-6.7	-7.3	4.0	-	-	-	-	-	-	4.6	Mar 24
STOXX Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.6	
Dow Jones Brookfield Global Infrastructure Index	-5.9	-3.1	10.9	10.0	7.2	2.4	3.7	5.1	4.7	13.7	
NT Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.6	Mar 24
STOXX Global Broad Infrastructure	-6.7	-7.3	4.0	-	-	-	-	-	-	4.6	
Dow Jones Brookfield Global Infrastructure Index	-5.9	-3.1	10.9	10.0	7.2	2.4	3.7	5.1	4.7	13.7	
Alternative Composite	0.2	0.1	-0.5	-4.6	-7.4	-5.1	2.3	1.3	2.6	3.3	Dec 12
Alternatives Custom Benchmark	0.2	0.7	1.4	-1.7	-6.5	-5.7	5.3	7.3	8.8	-	
Intercontinental U.S. Real Estate	0.5	0.5	-0.7	-4.9	-10.6	-5.0	0.8	3.1	5.4	5.7	Sep 14
NFI-ODCE	0.4	1.2	1.2	-2.0	-7.5	-3.1	2.0	3.1	5.0	5.2	
RREEF America II LP	0.4	0.4	-	-	-	-	-	-	-	-	Sep 24
NFI-ODCE	0.4	1.2	1.2	-2.0	-7.5	-3.1	2.0	3.1	5.0	1.2	



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Total Fund Composite	13.0	-16.4	13.3	17.5	21.5	-6.4	16.1	8.6	-2.5	3.8
Total Fund Policy Benchmark	13.0	-15.4	14.5	15.1	22.1	-6.5	15.2	9.7	-0.1	8.7
All Public DB Plans Rank	54	82	61	7	16	93	28	17	91	93
Fixed Income Composite	5.2	-12.2	-2.0	7.6	7.9	-0.2	4.4	2.9	0.4	4.4
Fixed Income Composite Custom Benchmark	5.5	-13.0	-1.5	7.4	8.0	-0.2	4.4	2.2	0.8	5.0
All Public DB Plans-US Fixed Income Rank	93	52	96	73	89	47	60	94	33	77
Garcia Hamilton	5.0	-11.2	-2.3	8.0	7.0	0.8	3.5	-	-	-
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0
eV US Core Fixed Inc Rank	88	14	93	61	94	7	68	-	-	-
Mesirow	5.3	-12.5	-1.8	8.3	8.8	-0.6	3.4	2.8	-0.1	6.4
Blmbg. U.S. Aggregate Index	5.5	-13.0	-1.5	7.5	8.7	0.0	3.5	2.6	0.5	6.0
eV US Core Fixed Inc Rank	81	28	75	46	61	74	76	61	85	26



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	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
U.S. Equity Composite	21.2	-19.0	21.8	20.3	28.4	-6.3	18.9	12.7	-4.9	5.1
Russell 3000 Index	26.0	-19.2	25.7	20.9	31.0	-5.2	21.1	12.7	0.5	12.6
All Public DB Plans-US Equity Rank	74	64	91	34	89	59	89	43	100	98
Large Cap Composite	26.6	-19.1	26.5	21.0	31.5	-4.7	20.7	11.1	-0.3	7.2
Russell 1000 Index	26.5	-19.1	26.5	21.0	31.4	-4.8	21.7	12.1	0.9	13.2
eV US Large Cap Core Equity Rank	25	74	59	24	31	44	59	36	64	95
Union Heritage Large Cap Core	-	-	-	-	-	-	-	-	-	-
S&P 500 Index	26.3	-18.1	28.7	18.4	31.5	-4.4	21.8	12.0	1.4	13.7
eV US Large Cap Equity Rank	-	-	-	-	-	-	-	-	-	-
BlackRock 1000 Index Fund	26.6	-19.1	26.5	21.0	31.5	-4.8	-	-	-	-
Russell 1000 Index	26.5	-19.1	26.5	21.0	31.4	-4.8	21.7	12.1	0.9	13.2
eV US Large Cap Core Equity Rank	25	74	59	24	31	46	-	-	-	-
Mid Cap Composite	16.5	-13.0	24.8	13.8	26.3	-6.6	15.7	15.3	-9.1	7.1
S&P MidCap 400 Index	16.4	-13.1	24.8	13.7	26.2	-11.1	16.2	20.7	-2.2	9.8
eV US Mid Cap Core Equity Rank	54	34	67	55	75	28	76	34	97	83
BlackRock Mid Cap Equity Index Fund	16.5	-13.0	24.8	13.8	26.3	-11.0	-	-	-	-
S&P MidCap 400 Index	16.4	-13.1	24.8	13.7	26.2	-11.1	16.2	20.7	-2.2	9.8
eV US Mid Cap Core Equity Rank	54	34	67	55	75	60	-	-	-	-
Invesco Oppenheimer Main Street Mid Cap	-	-	-	-	-	-	-	-	-	-
Russell Midcap Index	17.2	-17.3	22.6	17.1	30.5	-9.1	18.5	13.8	-2.4	13.2
eV US Mid Cap Core Equity Rank	-	-	-	-	-	-	-	-	-	-



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Small Cap Composite	15.5	-23.0	10.7	27.7	23.8	-9.2	19.1	10.9	-13.6	-3.4
Russell 2000 Index	16.9	-20.4	14.8	20.0	25.5	-11.0	14.6	21.3	-4.4	4.9
eV US Small Cap Core Equity Rank	64	87	98	17	55	31	19	94	98	94
Northern Trust Collective Russell 2000 Index	17.1	-20.4	14.8	20.1	25.7	-10.9	-	-	-	-
Russell 2000 Index	16.9	-20.4	14.8	20.0	25.5	-11.0	14.6	21.3	-4.4	4.9
eV US Small Cap Core Equity Rank	52	76	91	35	44	50	-	-	-	-
Earnest SCC	13.2	-15.8	-	-	-	-	-	-	-	-
Russell 2000 Index	16.9	-20.4	14.8	20.0	25.5	-11.0	14.6	21.3	-4.4	4.9
eV US Small Cap Equity Rank	74	44	-	-	-	-	-	-	-	-
Channing Capital Management	-	-	-	-	-	-	-	-	-	-
Russell 2000 Value Index	14.6	-14.5	28.3	4.6	22.4	-12.9	7.8	31.7	-7.5	4.2
eV US Small Cap Value Equity Rank	-	-	-	-	-	-	-	-	-	-
Driehaus SCG	18.5	-34.0	-	-	-	-	-	-	-	-
Russell 2000 Growth Index	18.7	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6
eV US Small Cap Growth Equity Rank	36	80	-	-	-	-	-	-	-	-
Ariel Investments	-	-	-	-	-	-	-	-	-	-
Russell 2500 Value Index	16.0	-13.1	27.8	4.9	23.6	-12.4	10.4	25.2	-5.5	7.1
eV US Small-Mid Cap Value Equity Rank	-	-	-	-	-	-	-	-	-	-



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
International Equity Composite	12.4	-19.8	6.1	20.2	25.8	-14.4	31.4	-1.1	-1.2	-2.7
International Equity Composite Custom Benchmark	10.8	-15.8	8.3	10.7	21.4	-14.7	27.2	4.5	-5.7	-3.9
All Public DB Plans-Intl Equity Rank	94	70	72	8	17	50	17	94	17	24
Ativo Capital	25.0	-17.5	13.2	7.5	19.7	-13.6	21.2	-3.6	-	-
MSCI AC World ex USA (Net)	15.6	-16.0	7.8	10.7	21.5	-14.2	27.2	4.5	-5.7	-3.9
eV ACWI ex-US Large Cap Equity Rank	3	47	18	76	81	31	93	92	-	-
Hardman Johnston	5.6	-23.7	1.3	35.6	33.4	-13.9	37.5	1.2	-0.3	0.4
MSCI AC World ex USA (Net)	15.6	-16.0	7.8	10.7	21.5	-14.2	27.2	4.5	-5.7	-3.9
eV EAFE Large Cap Core Rank	100	96	100	1	1	42	1	37	57	8
BlackRock MSCI EAFE Small Cap	13.7	-20.8	10.4	12.8	25.6	-17.5	-	-	-	-
MSCI EAFE Small Cap (Net)	13.2	-21.4	10.1	12.3	25.0	-17.9	33.0	2.2	9.6	-4.9
eV EAFE Small Cap Equity Rank	53	47	66	42	36	28	-	-	-	-
Brown Capital International Small Cap	20.4	-31.4	-	-	-	-	-	-	-	-
MSCI AC World ex USA Small Cap (Net)	15.7	-20.0	12.9	14.2	22.4	-18.2	31.6	3.9	2.6	-4.0
Foreign Small/Mid Growth Rank	10	61	-	-	-	-	-	-	-	-
BlackRock Emerging Markets Free Fund	9.3	-20.2	-2.7	18.0	18.2	-14.6	-	-	-	-
MSCI Emerging Markets (Net)	9.8	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2
eV Emg Mkts Large Cap Equity Rank	75	57	67	40	60	36	-	-	-	-
Goldman Sachs Emerging Markets Equity	7.1	-	-	-	-	-	-	-	-	-
MSCI Emerging Markets (Net)	9.8	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2
eV Emg Mkts All Cap Equity Rank	76	-	-	-	-	-	-	-	-	-



	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
BlackRock MSCI ACWI Min Volatility Index	8.4	-10.0	14.2	-	-	-	-	-	-	-
MSCI AC World Minimum Volatility Index (Net)	7.7	-10.3	13.9	2.7	21.1	-1.6	17.9	7.4	2.8	11.0
eV Global Low Volatility Equity Rank	58	61	66	-	-	-	-	-	-	-
Globalt Tactical ETF	-	-	-	-	-	-	-	-	-	-
Custom Globalt	-	-	-	-	-	-	-	-	-	-
eV Global Balanced Rank	-	-	-	-	-	-	-	-	-	-
Northern Trust Global Volatility Fund	-	-	-	-	-	-	-	-	-	-
MSCI AC World Minimum Volatility Index (Net)	7.7	-10.3	13.9	2.7	21.1	-1.6	17.9	7.4	2.8	11.0
eV Global Low Volatility Equity Rank	-	-	-	-	-	-	-	-	-	-
Infrastructure Composite	-	-	-	-	-	-	-	-	-	-
STOXX Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-
Dow Jones Brookfield Global Infrastructure Index	4.5	-6.6	19.9	-7.0	28.7	-7.9	15.8	12.5	-14.4	16.3
NT Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-
STOXX Global Broad Infrastructure	-	-	-	-	-	-	-	-	-	-
Dow Jones Brookfield Global Infrastructure Index	4.5	-6.6	19.9	-7.0	28.7	-7.9	15.8	12.5	-14.4	16.3
eV Infrastructure Rank	-	-	-	-	-	-	-	-	-	-



### Pension Fund-Total Fund Composite

Calendar Performance (Net of Fees)

As of December 31, 2024

	2023 (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)
Alternative Composite	-10.2	-0.4	16.4	12.8	-7.9	6.0	7.7	4.7	4.4	1.6
Alternatives Custom Benchmark	-11.1	-4.1	24.5	24.1	14.7	10.3	17.7	8.9	11.0	12.6
Intercontinental U.S. Real Estate	-15.9	7.2	20.2	1.1	8.2	9.8	7.7	12.1	12.7	-
NFI-ODCE	-12.7	6.5	21.1	0.3	4.4	7.4	6.7	7.8	14.0	11.5
IM U.S. Open End Private Real Estate (SA+CF) Rank	84	29	61	35	12	1	41	11	70	-
RREEF America II LP	-	-	-	-	-	-	-	-	-	-
NFI-ODCE	-12.7	6.5	21.1	0.3	4.4	7.4	6.7	7.8	14.0	11.5
IM U.S. Open End Private Real Estate (SA+CF) Rank	-	_	_	-	-	-	-	-	_	-

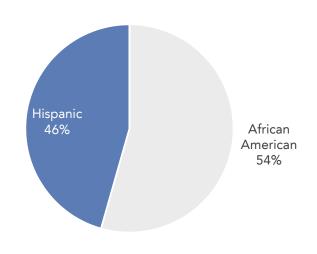


Investments		Commitment	Unfunded Commitment	Cumulative Contributions	Cumulative Distributions	Valua	ations		Perfo	rmance	
Account Name	Vintage Year	(\$)	(\$)	(\$)	(\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	RVPI	SI (%)
2012											
GrayCo Alternative Partners II, L.P.	2012	15,000,000	1,939,632	13,060,368	12,245,077	3,279,701	15,524,778	0.9	1.2	0.3	2.0
Sub Total		15,000,000	1,939,632	13,060,368	12,245,077	3,279,701	15,524,778	0.9	1.2	0.3	2.0
2014											
ICV Partners III, L.P.	2014	2,000,000	-60,121	2,358,328	1,412,845	1,028,936	2,441,782	0.6	1.0	0.4	0.6
Pharos Capital Partners III, L.P.	2014	2,000,000	10,000	1,990,000	2,288,620	1,510,515	3,799,135	1.2	1.9	0.8	11.5
Sub Total		4,000,000	-50,121	4,348,328	3,701,466	2,539,451	6,240,917	0.9	1.4	0.6	6.1
2023											
Vista Equity Partners Fund VIII, L.P.	2023	5,000,000	3,400,943	1,824,611	203,528	1,806,698	2,010,226	0.1	1.1	1.0	
Grain Communications Opportunity Fund IV, L.P.	2023	5,000,000	3,213,961	2,018,903	237,895	1,584,143	1,822,038	0.1	0.9	0.8	
ICV Partners V, L.P.	2023	5,000,000	2,954,534	2,084,023	38,557	1,903,230	1,941,787	0.0	0.9	0.9	
Ares Senior Direct Lending Fund III, L.P.	2023	5,000,000	4,147,829	852,171	-	894,411	894,411	-	1.0	1.0	
Sub Total		20,000,000	13,717,267	6,779,708	479,980	6,188,483	6,668,463	0.1	1.0	0.9	
Total		39,000,000	15,606,778	24,188,404	16,426,523	12,007,635	28,434,158	0.7	1.2	0.5	2.7



# Emerging & Minority Market Values As of December 31, 2024

		Asset Class	Market Value	% of Portfolio	% of Total Fund
Total MWDBE Composite			\$246,114,171	100.0%	27.2%
Garcia Hamilton	(H)	Core Fixed Income	\$65,870,293	26.8%	7.3%
Union Heritage	(AA)	Large-Cap Core	\$17,235,008	7.0%	1.9%
Earnest SCC	(AA)	Small-Cap Core	\$39,214,235	15.9%	4.3%
Channing	(AA)	Small-Cap Value	\$11,189,313	4.5%	1.2%
Ativo	(H)	Non-U.S. Large-Cap Core	\$46,315,740	18.8%	5.1%
Ariel	(AA)	Smid-Cap Value	\$17,324,335	7.0%	1.9%
Brown Capital	(AA)	Non-U.S. Small-Cap Core	\$13,904,489	5.6%	1.5%
Globalt	(AA)	Global Balanced	\$27,227,235	11.1%	3.0%
Pharos	(AA)	Distressed Private Equity	\$1,510,515	0.6%	0.2%
Vista Equity Partners	(AA)	LBO Private Equity	\$1,806,698	0.7%	0.2%
ICV Partners III, L.P.	(AA)	LBO Private Equity	\$1,028,936	0.4%	0.1%
ICV Partners V, L.P.	(AA)	LBO Private Equity	\$1,903,230	0.8%	0.2%
Grain Communications Opportunity Fund IV	(AA)	Private Equity - Infrastructure	\$1,584,143	0.6%	0.2%





### Fee Schedule As of December 31, 2024

Asset Class	InvestmentManager	Fee Schedule	Est. Annual Fee <sup>1</sup>	Expense Ratio	Industry Median
Core Fixed Income	Garcia Hamilton	0.25% on the first \$50 million 0.11% on the next \$50 million 0.06% on the balance	\$142,457	0.22%	0.26%
Core Fixed Income	Mesirow	0.35% on the first \$10 million 0.25% on the next \$50 million 0.20% on the next \$150 million 0.15% on the next \$300 million 0.125% on the next \$500 million 0.10% on the balance	\$367,314	0.22%	0.22%
Large-Cap Core	Union Heritage Large Cap Core	0.50% on the first \$10 million 0.45% on the next \$15 million 0.35% on the balance	\$82,558	0.48%	0.55%
Large-Cap Core	BlackRock 1000 Index Fund	0.01% on the balance	\$20,885	0.01%	0.04%
Mid-Cap Core	BlackRock Mid Cap Equity Index Fund	0.01% on the balance	\$4,397	0.01%	0.06%
Mid-Cap Core	Invesco Oppenheimer Main Street Mid Cap	0.60% on the first \$50 million 0.50% on the next \$100 million 0.45% on the balance	\$107,094	0.60%	0.70%
Small-Cap Core	Northern Trust Collective Russell 2000 Index	0.04% on the balance	\$5,657	0.04%	0.05%
Small-Cap Core	Earnest SCC	0.80% on the first \$10 million 0.65% on the next \$10 million 0.50% on the balance	\$241,071	0.61%	0.85%
Small-Cap Value	Channing Capital Management	0.75% on the first \$25 million 0.65% on the next \$25 million 0.60% on the next \$50 million 0.55% on the balance	\$83,920	0.75%	0.90%
Small-Cap Growth	Driehaus SCG	0.60% on the first \$50 million 0.50% on the next \$50 million 0.45% on the balance	\$160,063	0.60%	0.90%
Smid-Cap Value	Ariel Investments	1.00% on the first \$10 million 0.75% on the next \$10 million 0.50% on the balance	\$154,933	0.89%	0.90%



## **Total Fund Composite**

### Fee Schedule As of December 31, 2024

Asset Class	InvestmentManager	Fee Schedule	Est. Annual Fee <sup>1</sup>	Expense Ratio	Industry Median <sup>2</sup>
Non-U.S. Large-Cap Core	Ativo Capital	0.65% on the first \$100 million 0.55% on the balance	\$301,052	0.65%	0.68%
Non-U.S. Large-Cap Core	Hardman Johnston	0.75% on the first \$25 million 0.60% on the next \$50 million 0.50% on the balance	\$84,327	0.75%	0.68%
Non-U.S. Small-Cap Core	BlackRock MSCI EAFE Small Cap	0.045% on the balance	\$7,750	0.05%	0.25%
Non-U.S. Small-Cap Core	Brown Capital International Small Cap	1.06% on the balance	\$147,388	1.06%	1.29%
Emerging Markets	BlackRock Emerging Markets Free Fund	0.06% on the balance	\$13,396	0.06%	0.20%
Emerging Markets	Goldman Sachs Emerging Markets Equity	0.45% on the balance	\$98,922	0.45%	0.90%
Global Low-Volatility	BlackRock MSCI ACWI Min Volatility Index	0.025% on the balance	\$11,539	0.03%	0.45%
Global Balanced	Globalt Tactical ETF	0.50% on the first \$50 million 0.30% on the next \$50 million 0.25% on the balance	\$136,136	0.50%	0.39%
Global Low-Volatility	Northern Trust Global Volatility Fund	0.25% on the first \$50 million 0.22% on the next \$50 million 0.20% on the balance	\$42,151	0.25%	0.45%
Publicly-Traded Infrastructure	NT Global Broad Infrastructure	0.47% on the balance	\$49,642	0.47%	0.75%
Core Real Estate	Intercontinental U.S. Real Estate	1.10% on the first \$25 million 1.00% on the next \$25 million 0.85% on the next \$50 million 0.75% on the balance	\$143,827	1.10%	1.00%
U.S. Private Equity FoF	Consequent Alternative Partners II, L.P.	1.00% on Committed Capital	\$150,000	4.57%	9.15%
LBO Private Equity	ICV Partners III, L.P.	2.00% on Committed Capital Plus 20.0% Carried Interest, over an 8% Hurdle	\$40,000	3.89%	3.89%
Distressed Private Equity	Pharos Capital Partners III	2.00% on Committed Capital	\$40,000	2.65%	2.65%
LBO Private Equity	Vista Equity Partners	1.50% on the balance	\$27,100	1.50%	2.00%
Global Infrastructure	Grain Communications Opportunity Fund IV	2.00% on the balance	\$31,683	2.00%	1.50%
LBO Private Equity	ICV Partners V, L.P.	2.00% on the balance	\$38,065	2.00%	2.00%
Private Debt	Ares Senior Direct Lending Fund III	0.85% on the balance	\$7,602	0.85%	1.50%
Core Real Estate	RREEF America II LP	0.95% on the balance	\$76,304	0.95%	1.00%
Total InvestmentManagementFees			\$2,817,232	0.31%	0.41%



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