

# March 2023 Executive Summary



PRELIMINARY, SUBJECT TO REVISION

# Overview

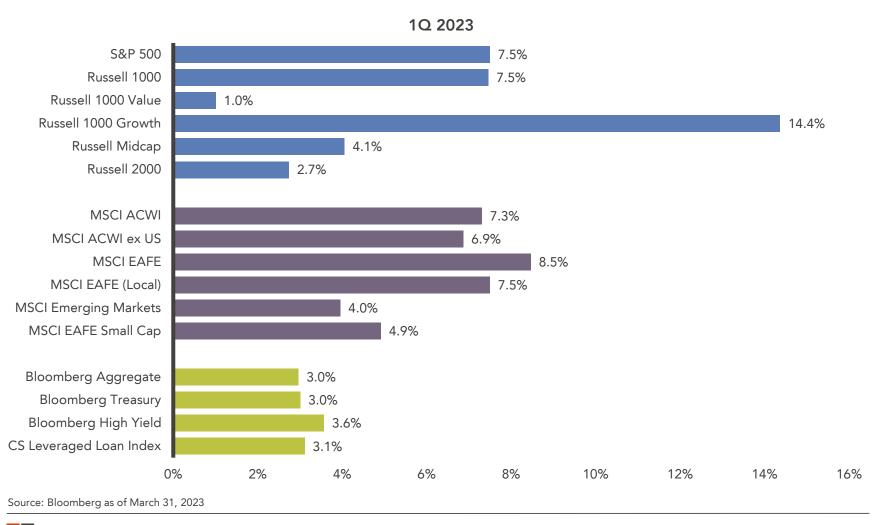
### **Year-to-date returns**

2023 YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014	5yr	10yr
Intl Large Cap 8.5%	Commodities 26.0%	Commodities 40.4%	Broad U.S. Equities 20.9%	Large Cap 31.5%	Real Estate 6.7%	Emerging Markets 37.3%	Small Cap 21.3%	Real Estate 13.3%	Large Cap 13.7%	Large Cap 11.2%	Large Cap 12.2%
Large Cap 7.5%	Real Estate 5.5%	Large Cap 28.7%	Small Cap 20.0%	Broad U.S. Equities 31.0%	Hedge Funds 4.8%	Intl Small Cap 33.0%	High Yield 17.1%	Intl Small Cap 9.6%	Mid Cap 13.2%	Broad U.S. Equities 10.5%	Broad U.S. Equities 11.7%
Broad U.S. Equities 7.2%	Bank Loans -1.1%	Broad U.S. Equities 25.7%	Large Cap 18.4%	Mid Cap 30.5%	Bank Loans 1.1%	Broad Intl Equities 27.2%	Mid Cap 13.8%	Large Cap 1.4%	Broad U.S. Equities 12.6%	Mid Cap 8.1%	Mid Cap 10.1%
Broad Intl Equities 6.9%	Hedge Funds -4.3%	Mid Cap 22.6%	Emerging Markets 18.3%	Small Cap 25.5%	Core Bond 0.0%	Intl Large Cap 25.0%	Broad U.S. Equities 12.7%	Core Bond 0.5%	Real Estate 11.8%	Real Estate 6.1%	Small Cap 8.0%
Intl Small Cap 4.9%	High Yield -11.2%	Real Estate 17.7%	Mid Cap 17.1%	Intl Small Cap 25.0%	High Yield -2.1%	Large Cap 21.8%	Large Cap 12.0%	Broad U.S. Equities 0.5%	Core Bond 6.0%	Commodities 4.9%	Real Estate 7.7%
Mid Cap 4.1%	Core Bond -13.0%	Small Cap 14.8%	Intl Small Cap 12.3%	Intl Large Cap 22.0%	Large Cap -4.4%	Broad U.S. Equities 21.1%	Commodities 11.4%	Bank Loans -0.4%	Small Cap 4.9%	Hedge Funds 4.8%	Intl Small Cap 5.9%
Emerging Markets 4.0%	Intl Large Cap -14.5	Intl Large Cap 11.3%	Hedge Funds 11.8%	Broad Intl Equities 21.5%	Broad U.S. Equities -5.2%	Mid Cap 18.5%	Emerging Markets 11.2%	Intl Large Cap -0.8%	Hedge Funds 3.0%	Small Cap 4.7%	Intl Large Cap 5.0%
High Yield 3.6%	Broad Intl Equities -16.0%	Hedge Funds 10.2%	Broad Intl Equities 10.7%	Emerging Markets 18.4%	Mid Cap -9.1%	Small Cap 14.6%	Bank Loans 9.9%	Hedge Funds -1.1%	High Yield 2.5%	Bank Loans 3.5%	Hedge Funds 4.6%
Bank Loans 3.1%	Mid Cap -17.3%	Intl Small Cap 10.1%	Intl Large Cap 7.8%	Commodities 17.6%	Small Cap -11.0%	Hedge Funds 8.6%	Real Estate 8.0%	Mid Cap -2.4%	Bank Loans 2.1%	Intl Large Cap 3.5%	Broad Intl Equities 4.2%
Core Bond 3.0%	Large Cap -18.1%	Broad Intl Equities 7.8%	Core Bond 7.5%	High Yield 14.3%	Intl Large Cap -13.8%	High Yield 7.5%	Hedge Funds 5.4%	Small Cap -4.4%	Emerging Markets -2.2%	High Yield 3.2%	High Yield 4.1%
Small Cap 2.7%	Broad U.S. Equities -19.2%	Bank Loans 5.4%	High Yield 7.1%	Hedge Funds 10.5%	Commodities -13.8%	Real Estate 7.0%	Broad Intl Equities 4.5%	High Yield -4.5%	Broad Intl Equities -3.9%	Broad Intl Equities 2.5%	Bank Loans 3.9%
Hedge Funds 1.2%	Emerging Markets -20.1%	High Yield 5.3%	Bank Loans 2.8%	Core Bond 8.7%	Broad Intl Equities -14.2%	Commodities 5.8%	Core Bond 2.6%	Broad Intl Equities -5.7%	Intl Large Cap -4.9%	Core Bond 0.9%	Emerging Markets 2.0%
Commodities -4.9%	Small Cap -20.4%	Core Bond -1.5%	Real Estate 1.6%	Bank Loans 8.2%	Emerging Markets -14.6%	Bank Loans 4.2%	Intl Small Cap 2.2%	Emerging Markets -14.9%	Intl Small Cap -4.9%	Intl Small Cap 0.9%	Core Bond 1.4%
Real Estate* -5.0%	Intl Small Cap -21.4%	Emerging Markets -2.5%	Commodities -23.7%	Real Estate 6.4%	Intl Small Cap -17.9%	Core Bond 3.5%	Intl Large Cap 1.0%	Commodities -32.9%	Commodities -33.1%	Emerging Markets -0.9%	Commodities -3.8%

Source: Bloomberg as of March 31, 2023. \*Real Estate returns are 4Q 2022. Please see end of document for benchmark information.



# **Index summary**



#### Asset class outlook

	CHANG	CHANGE HEADWIND		NEUTRAL	TAILV	VINDS
Fixed	Core bonds					
	Bank loans					
	High yield					
	EMD					
	Large-cap					
ities	Mid-cap					
Equ	Small-cap					
U.S. Equities	Value					
	Growth					
Non-U.S. Equities	Developed large-cap					
	Developed small-cap					
	Emerging markets					
Real Assets	Core real estate					
l As	Value-add real estate					
Rea	Infrastructure					
<u>Φ</u> ν	Equity long/short					
Hedge Funds	Credit					
ΙL	VRP					
rate	Buyout					
Private Equity	Venture Capital ▼					
Private Credit	Direct lending					
Priv Cre	Distressed/opportunistic					

#### TAKEAWAYS

- Sixed Income: The all-in yield on the Bloomberg Aggregate remains attractive and the economy is starting to show signs of stress, which may push rates lower and provide additional return. Spreads are more attractive but could move significantly wider in a recessionary environment.
- U.S.: After a strong showing in 1Q23, growth multiples appear less attractive relative to history, though companies have focused on right-sizing cost structures in advance of a potential recession, which may provide earnings support. Growth equities may also benefit from normalizing interest rates in a low growth environment.
- Non-U.S.: Potential tailwinds for non-U.S. equities include attractive valuations, strong PMIs, and the possibility of continued currency correction. Risks include geopolitical tensions and tighter lending standards that could curtail growth in the space.
- Neal Assets: Continued (albeit slowing) rate hikes, waning transaction volume, and slowing rent growth will exert downward pressure on near-term real estate appraisals. While financing is a transient headwind for infrastructure, decarbonization initiatives and legislative incentives should support demand for the asset class longer-term.
- Hedge Funds: Heightened volatility and uncertainty across asset classes provides a robust opportunity set for hedge funds. Tightening financial conditions and high financing costs will likely create attractive opportunities for stressed, distressed, and long/short credit funds.
- Private Equity: Public market volatility and valuation compression have created attractive entry points for investors with dry powder. Continued capital in-flows into larger private market funds should benefit the exit environment for small buyout, lower-middle market, and early-stage venture funds. Uncertainty in the VC market may impact near-term opportunities.
- Private Credit: Direct lending is attractive against the backdrop of increased inflation and rising rates, as most loans contain floating rates linked to LIBOR/SOFR. Investors benefit from a strong structure and yield premium relative to traditional fixed income. Distressed and opportunistic are challenged in the current market.

For illustration only, as of March 31, 2023. These views apply to a 6- to 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.



# **CPI** easing

Headline CPI has continued to correct with help from energy prices; core CPI has started to level out well above the Fed's 2% target

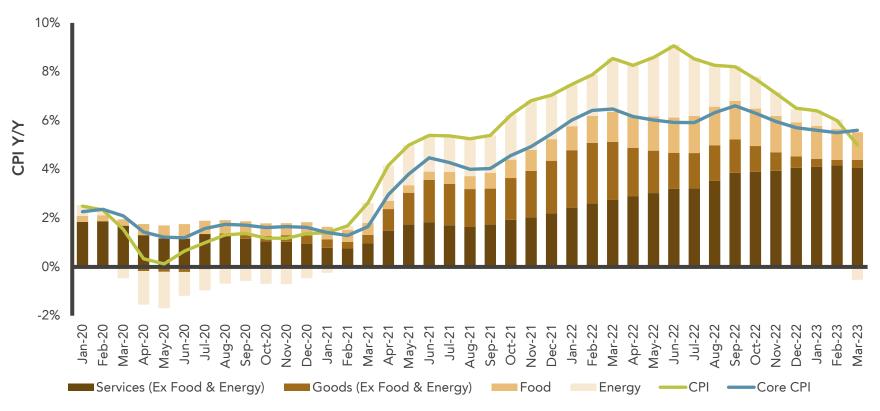


Source: Bloomberg, Bureau of Labor Statistics as of March 31, 2023



#### Contribution to headline CPI

The contribution to inflation from Services ticked down in March, though the contribution from Goods reaccelerated

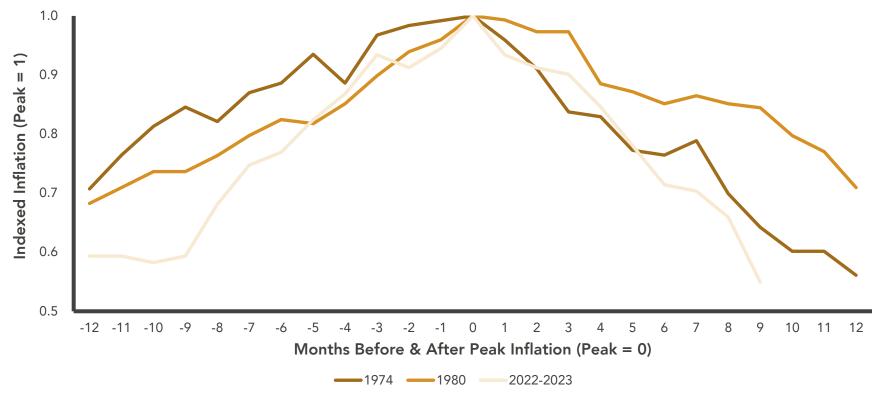


Source: Bloomberg, Bureau of Labor Statistics as of March 31, 2023



#### Historical inflation reversion

Headline CPI has corrected faster off the June peak than it did in 1974 or 1980

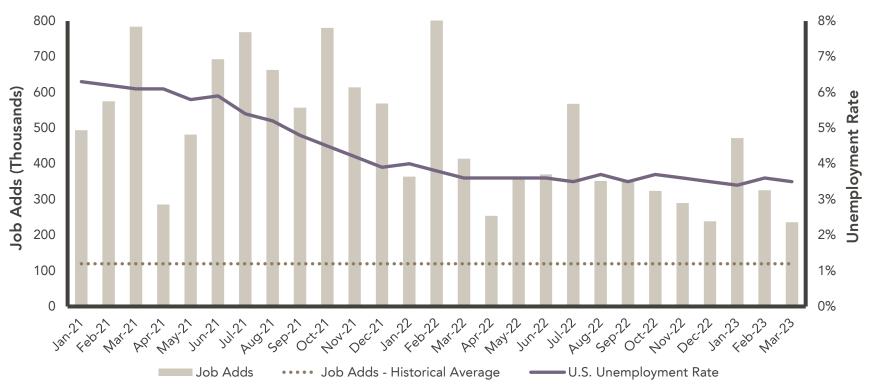


Source: Bloomberg, Bureau of Labor Statistics, 1492 Capital Management, Furey Research as of March 31, 2023



# Unemployment near multi-decade lows

Though hiring remains strong, the slowdown in job adds is generally supportive of an upcoming pause by the Fed

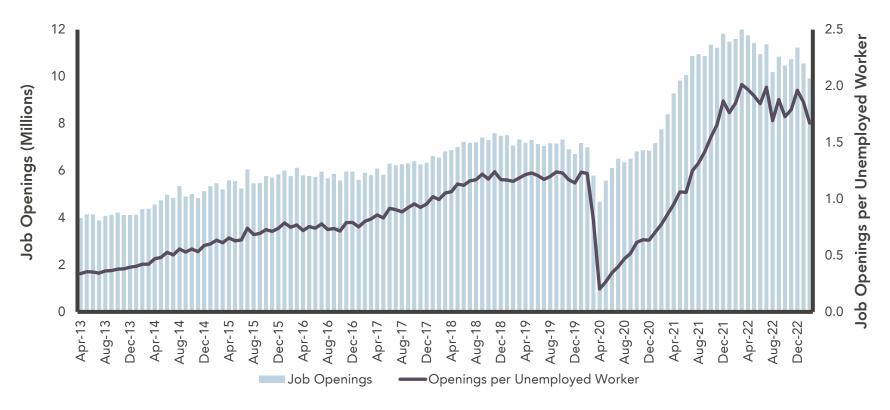


Source: Bloomberg, Bureau of Labor Statistics as of March 31, 2023. Job Adds – Historical Average represents the 30-year average prior to the onset of COVID-19 (March 1990 – February 2020).



# Job openings easing

Though progress has been made, the supply and demand of workers remains out of balance, keeping pressure on wages

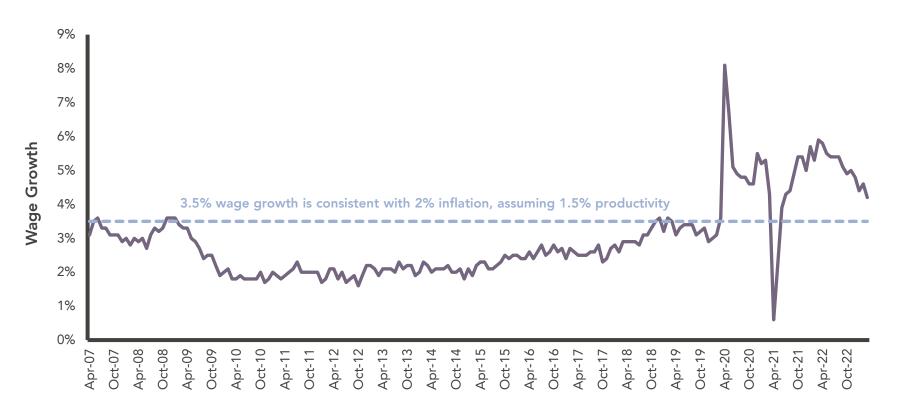


Source: Bloomberg, Bureau of Labor Statistics as of February 28, 2023



# Wage growth

Slowing wage growth is encouraging, though trends need to continue to be consistent with target 2% inflation

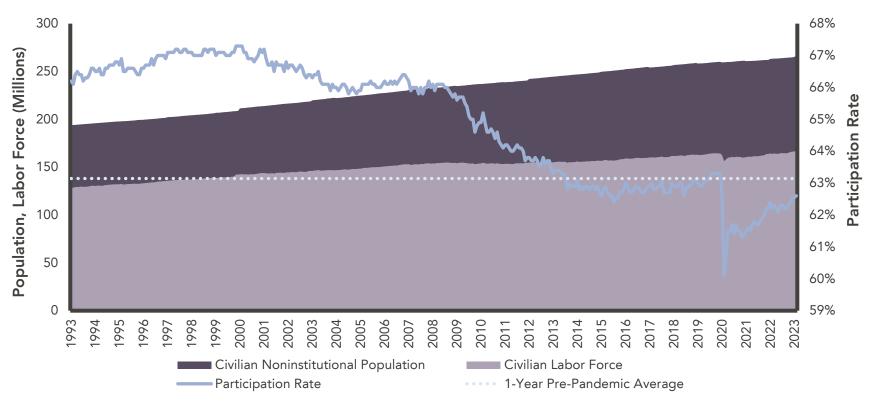


Source: Bloomberg, Bureau of Labor Statistics as of March 31, 2023



# Labor participation gap

Labor participation has recovered to 62.6%, still leaving a gap of nearly 1.4 million workers relative to the pre-COVID average

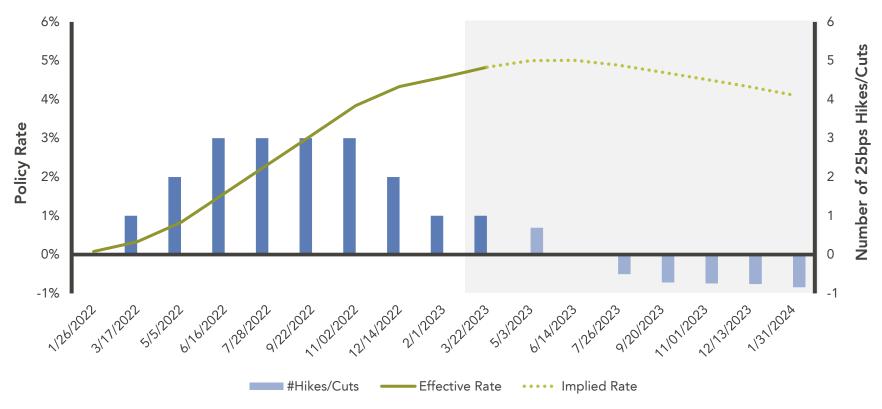


Source: Bloomberg, Bureau of Labor Statistics as of March 31, 2023



# Rate expectations

Futures are pricing in one additional 25bps hike in May; expected rate cuts in the back half of the year may be overly optimistic

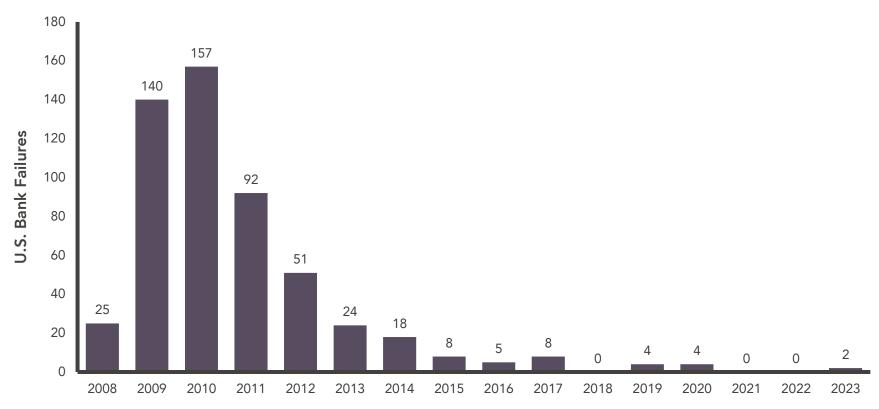


Source: Bloomberg as of April 12, 2023



#### **Bank failures**

# Bank failures in the U.S. have been rare since the GFC, with the banking industry overall much better capitalized

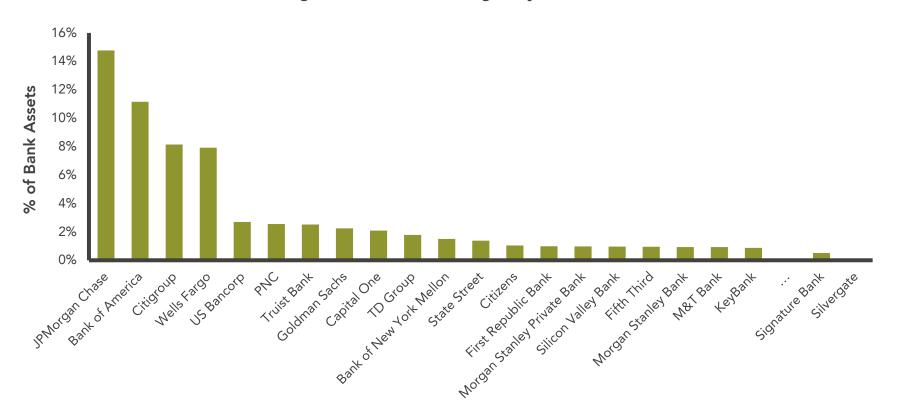


Source: FDIC, S&P Global Market Intelligence as of March 31, 2023



# Largest U.S. banks

Though SVB and Signature are the second and third largest bank failures in U.S. history, combined they represent less than 2% of assets

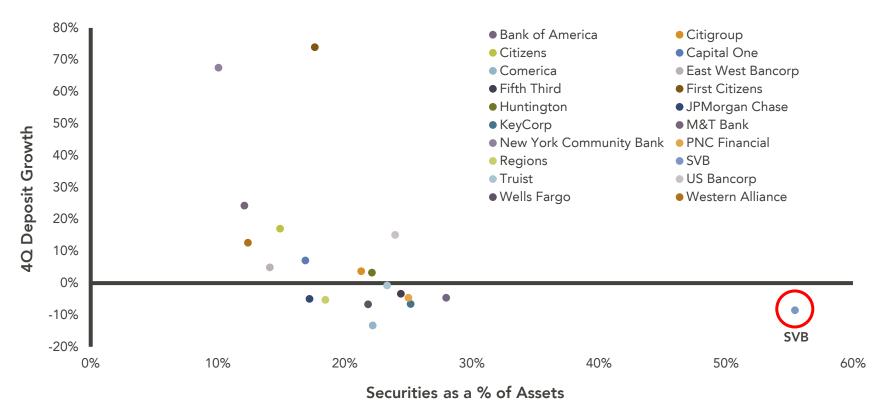


Source: Federal Reserve as of December 31, 2022. Consolidated assets as a percentage of total insured U.S. commercial banks with consolidated assets of at least \$300 million.



#### **SVB**

#### A concentrated deposit base and an outsized securities portfolio contributed to SVB's demise

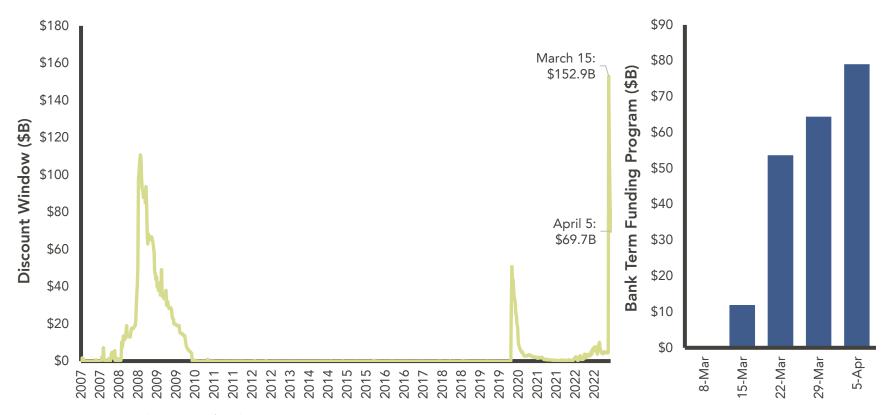


Source: Bloomberg Intelligence as of December 31, 2022



# **Bank borrowing**

Total bank borrowing is off mid-March peaks, an indication that bank liquidity pressures are subsiding

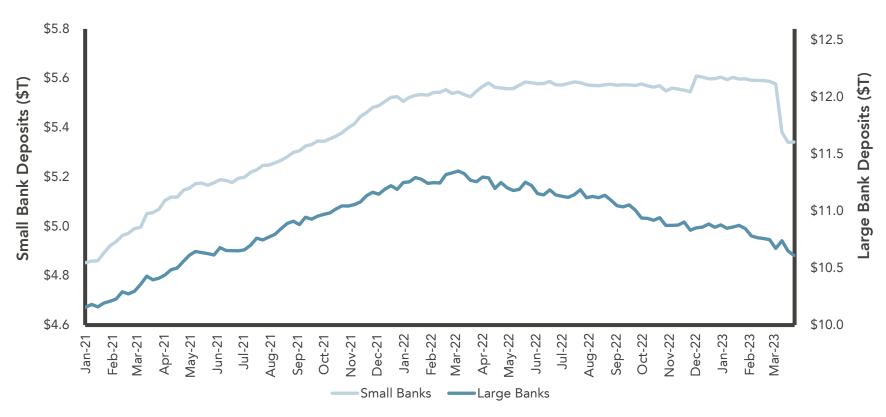


Source: Bloomberg, Federal Reserve as of April 5, 2023



# **Bank deposits**

# Deposit outflow from small banks in the wake of SVB and Signature stabilized by the end of March

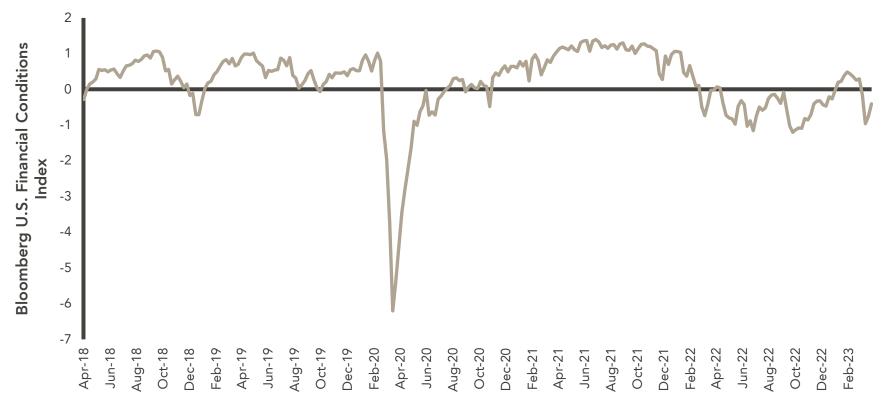


Source: Bloomberg, Federal Reserve as of March 31, 2023



#### Financial conditions

Financial conditions fell into restrictive territory in March; tighter credit could slow economic growth and reduce the need for higher rates



# Fixed Income

# Fixed income performance

#### After a volatile quarter that saw large swings in interest rates, rates rallied in March to drive positive total returns across most markets

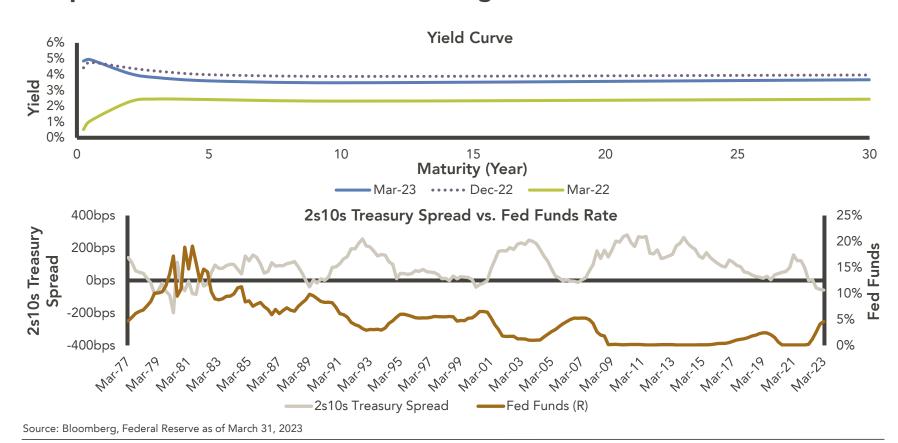
		MTD (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Broad Market Index	Blm Aggregate	2.5	3.0	3.0	-4.8	-2.8	0.9	1.4
Intermediate Index	Blm Int. Gov./Credit	2.3	2.3	2.3	-1.7	-1.3	1.4	1.3
Government Only Indices	Blm Long Gov.	4.7	6.2	6.2	-15.9	-11.2	-0.4	1.4
	Blm Int. Gov.	2.4	2.3	2.3	-1.5	-2.3	1.1	0.9
	Blm 1-3 Year Gov.	1.6	1.6	1.6	0.2	-0.8	1.1	0.8
	Blm U.S. TIPS	2.9	3.3	3.3	-6.1	1.8	2.9	1.5
Credit Indices	Blm U.S. Long Credit	4.1	5.4	5.4	-11.3	-2.6	1.1	2.9
	Blm High Yield	1.1	3.6	3.6	-3.3	5.9	3.2	4.1
	CS Leveraged Loan Index	-0.1	3.1	3.1	2.1	8.4	3.5	3.9
Securitized Bond Indices	Blm MBS	1.9	2.5	2.5	-4.9	-3.3	0.2	1.0
	Blm ABS	1.3	1.9	1.9	0.4	0.6	1.6	1.4
	Blm CMBS	1.0	1.7	1.7	-4.1	-1.3	1.3	1.8
Non-U.S. Indices	Blm Global Aggregate Hedged	2.2	2.9	2.9	-3.9	-2.1	1.0	1.9
	JPM EMBI Global Diversified	1.0	1.9	1.9	-6.9	0.0	-0.6	2.0
	JPM GBI-EM Global Diversified	4.1	5.6	5.6	-0.7	0.9	-2.4	-1.5
Municipal Indices	Blm Municipal 5 Year	1.9	1.9	1.9	1.8	0.7	1.7	1.6
	Blm HY Municipal	1.6	2.7	2.7	-4.5	2.7	3.1	3.6

Source: Bloomberg, Credit Suisse, JPMorgan as of March 31, 2023. The local currency GBI index is hedged and denominated in U.S. dollars.



# U.S. Treasury yield curve and steepness

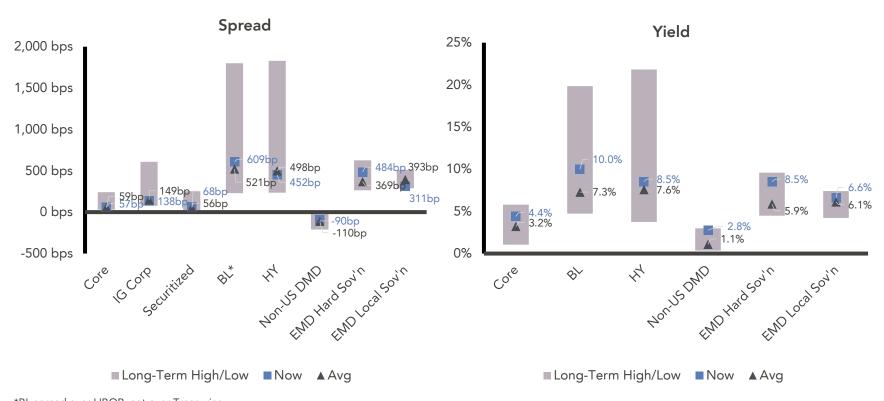
The inversion of the yield curve between 2- and 10-year Treasuries persists as front-end rates remain high and back-end rates flattened





# Fixed income spreads and yields

#### Spreads across fixed income widened in March while yields were lower as rates fell with lower Treasury yields

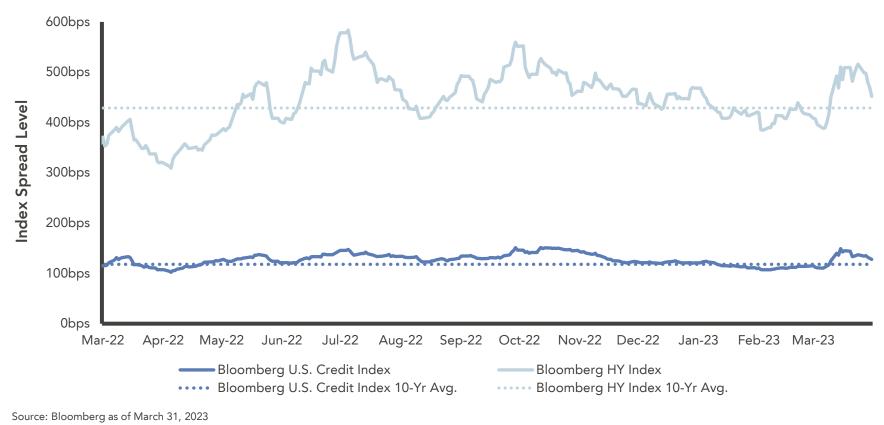


\*BL spread over LIBOR, not over Treasuries. Source: Bloomberg, Credit Suisse, Deutsche, JPMorgan as of March 31, 2023. Long-term high, low, and average based on longest available data for each index.



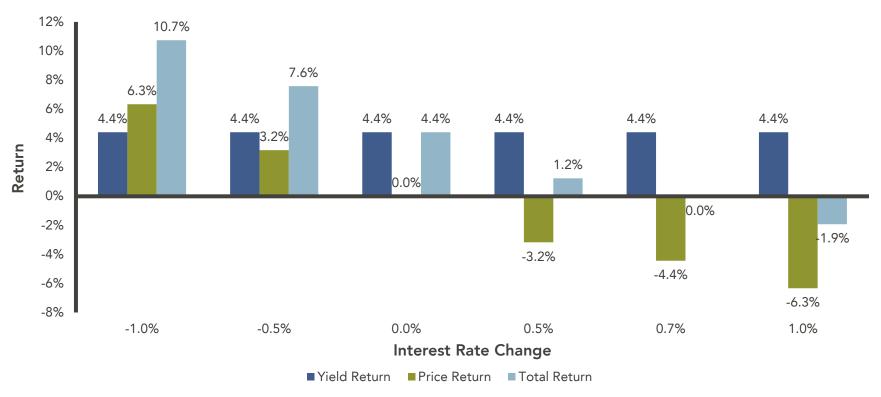
# U.S. credit spreads vs. historical averages

#### U.S. IG credit spreads widened slightly in March while high yield spreads gapped out but reversed course as the quarter ended



### Fixed income sensitivity to interest rate moves

With starting yields substantially higher than in the past, further rate increases will have a diminished impact on overall fixed income returns

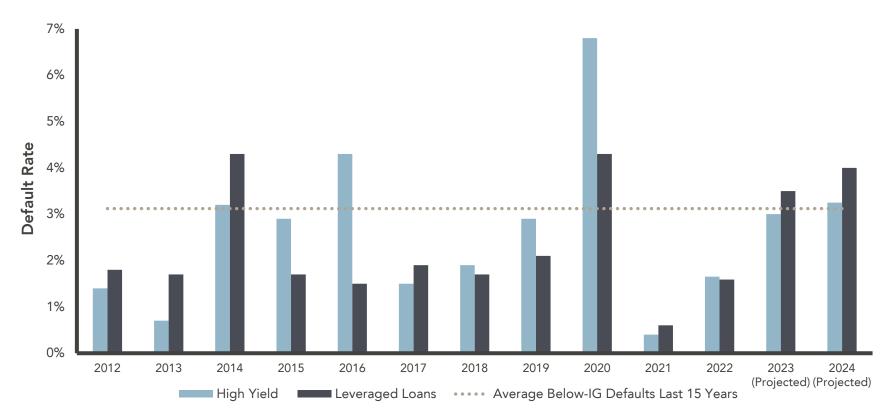


Source: Bloomberg as of March 31, 2023. Based on the Bloomberg US Aggregate Index. Price return calculated by multiplying the duration of the index by the modeled rate change. Yield return determined by the current YTW of the index.



# Below-investment grade defaults

High yield and loan defaults are projected to trend higher, surpassing historical averages in 2024

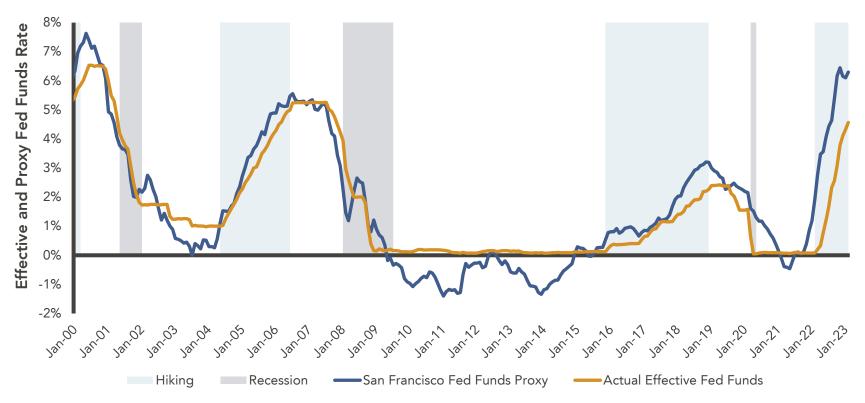


Source: JP Morgan as of March 31, 2023



# Federal Reserve proxy rate vs. effective rate

Using the San Francisco Fed's proxy fed funds rate, actual financial conditions are tighter than what effective fed funds rate alone shows

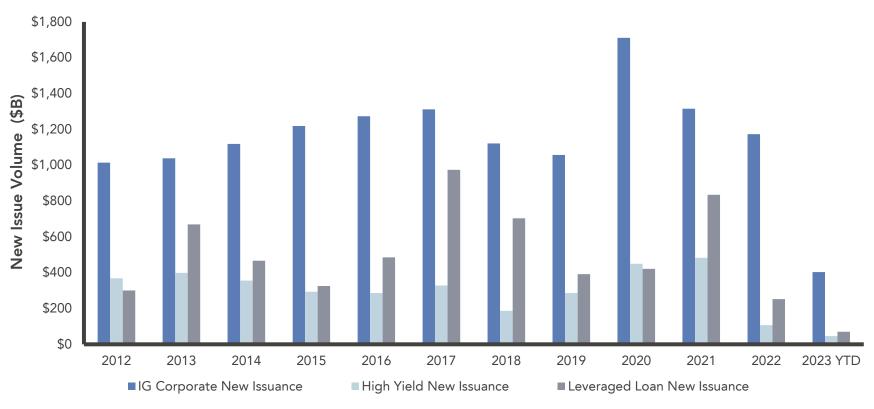


Source: Bloomberg, San Francisco Federal Reserve as of March 31, 2023



#### Fixed income new issuance

#### Higher interest rates have continued to weigh on new issue activity

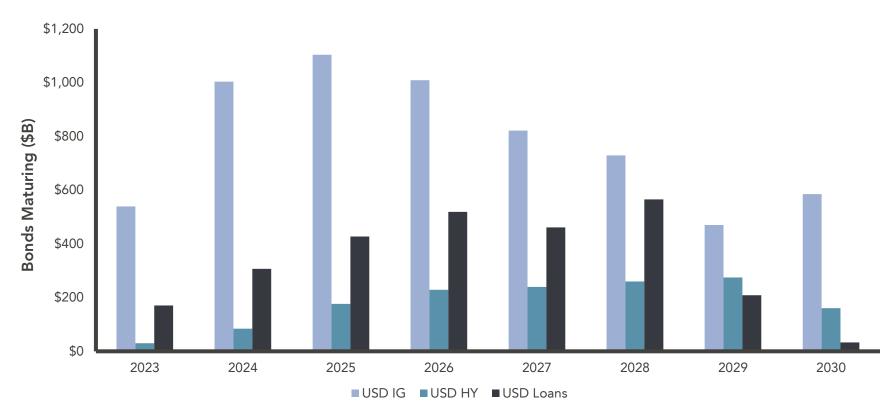


Source: Bloomberg, JP Morgan, SIFMA as of March 31, 2023



# Fixed income maturity wall

Higher interest rates may put pressure on companies that need to issue new debt in the near-term





# Opportunities and risks in fixed income

#### **Opportunities**

#### Bonds are back

After years of ultra-low interest rates, bonds are finally offering attractive levels of yields and are back to their income-generating role in portfolios. Yields are above long-term averages in nearly every sector.

The Fed hiking cycle is likely coming to an end After the Fed took aggressive steps to curb inflation in 2022, its pace has slowed and the tightening cycle is likely closer to the end. This should be positive for fixed income as rate volatility moderates.

#### Risks

#### Economic downturn

The attractiveness of credit fluctuated during 2022, but spreads ended the year near historical averages. Spreads slightly rose in the first quarter as the market showed signs of stress, though are nowhere near recessionary levels. If there is a bear market, spreads could widen significantly.

#### Weakening of fundamentals in below IG

While leveraged credit balance sheets have so far been resilient, particularly in high yield, there are signs of deterioration. There has been an increase in leverage off near-term lows, declining quarterly revenues, and rating downgrades outpacing upgrades. Additionally, interest coverage ratios are expected to decrease as issuers will need to refinance at higher rates.

# U.S. Equities

# **U.S.** equity performance

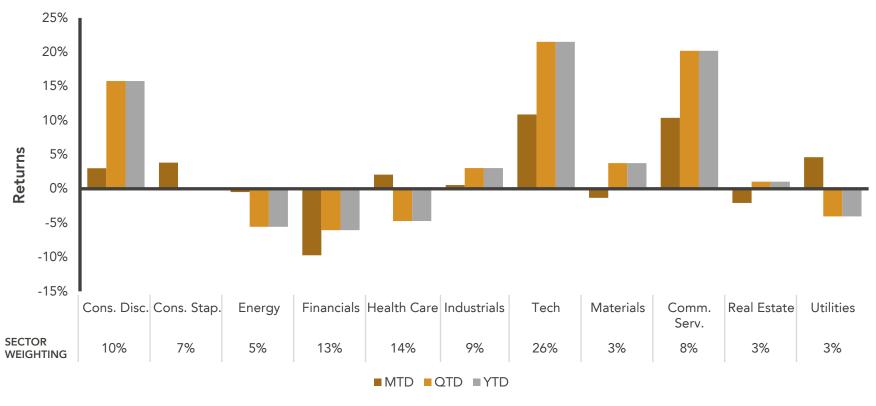
#### A tough March weighed on small-cap value; growth indices started 2023 strongly

		MTD (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Broad Market Indices	Dow Jones	2.1	0.9	0.9	-2.0	17.3	9.0	11.1
	Wilshire 5000	2.8	7.3	7.3	-8.6	18.8	10.7	11.9
	Russell 3000	2.7	7.2	7.2	-8.6	18.5	10.5	11.7
Large-Cap Market Indices	S&P 500	3.7	7.5	7.5	-7.7	18.6	11.2	12.2
	Russell 1000	3.2	7.5	7.5	-8.4	18.6	10.9	12.0
	Russell 1000 Value	-0.5	1.0	1.0	-5.9	17.9	7.5	9.1
	Russell 1000 Growth	6.8	14.4	14.4	-10.9	18.6	13.7	14.6
Mid-Cap Market Indices	Russell Mid-Cap	-1.5	4.1	4.1	-8.8	19.2	8.1	10.1
	Russell Mid-Cap Value	-3.1	1.3	1.3	-9.2	20.7	6.5	8.8
	Russell Mid-Cap Growth	1.4	9.1	9.1	-8.5	15.2	9.1	11.2
Small-Cap Market Indices	Russell 2000	-4.8	2.7	2.7	-11.6	17.5	4.7	8.0
	Russell 2000 Value	-7.2	-0.7	-0.7	-13.0	21.0	4.5	7.2
	Russell 2000 Growth	-2.5	6.1	6.1	-10.6	13.4	4.3	8.5



# **S&P 500 sector performance**

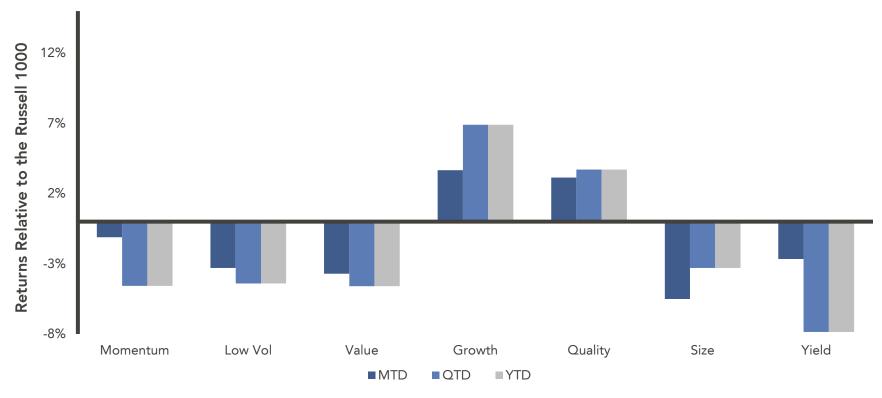
Growth-oriented sectors, including Technology, Communications, and Consumer Discretionary, posted a strong quarter





# Russell 1000 factor performance

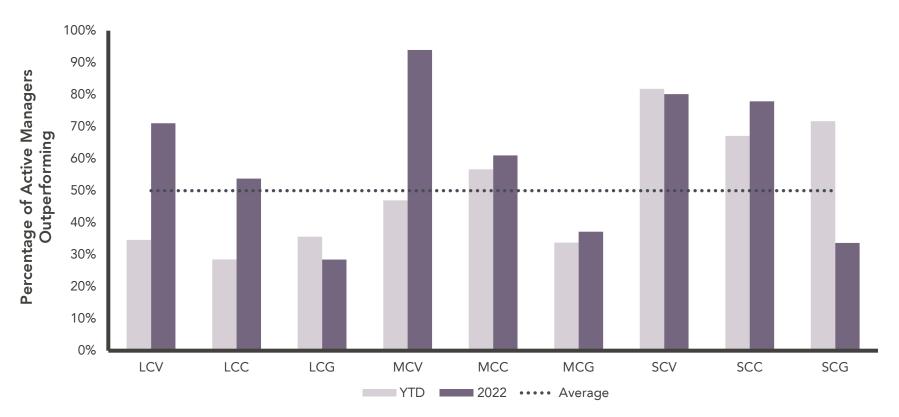
#### Growth and quality factors shined in the first quarter following underperformance in 2022





# **Active manager performance**

After mixed performance in 2022, small-cap active managers led in the first quarter

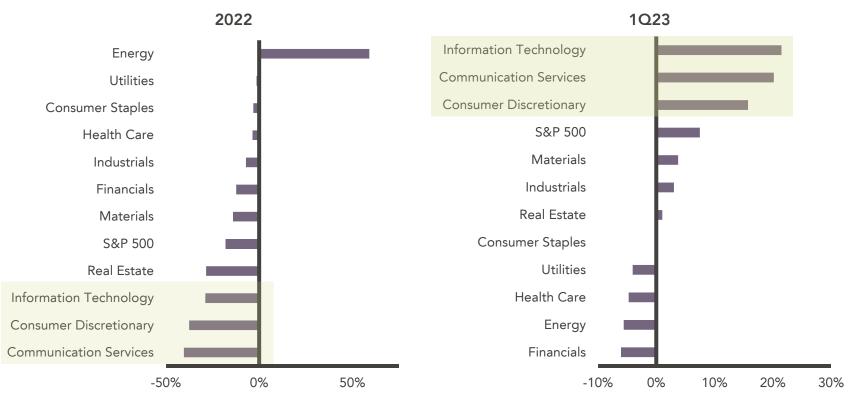


Source: Morningstar as of March 31, 2023



# Sector strength reversed

#### Growth-oriented sectors were laggards in 2022 but outperformed the S&P 500 in the first quarter





# **Style performance shifts**

#### Large-cap value dominance in 2022 gave way to small-cap strength prior to the banking crisis; large-cap growth took over to end 1Q

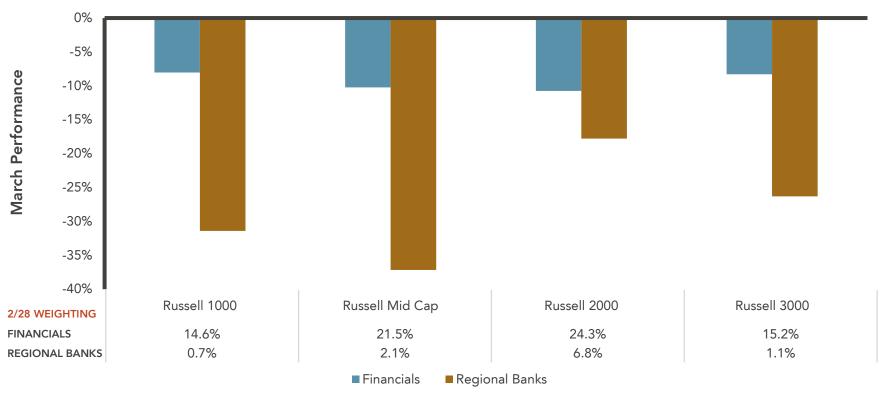
2022		STYLE						
		Value	Core	Growth				
	Large	-7.5	-19.1	-29.1				
SIZE	Mid	-12.0	-17.3	-26.7				
	Small	-14.5	-20.4	-26.4				

1/1/23- 3/8/23		STYLE						
		Value	Core	Growth				
	Large	1.3	4.7	8.3				
SIZE	Mid	4.1	5.8	8.9				
	Small	5.4	6.9	8.5				

3/9/23- 3/31/23		STYLE						
		Value	Core	Growth				
	Large	-0.3	2.6	5.6				
SIZE	Mid	-2.7	-1.6	0.3				
	Small	-5.7	-3.9	-2.2				

# Regional banking crisis

#### The Financials sector, and especially regional banks, were impacted across the market cap spectrum in March

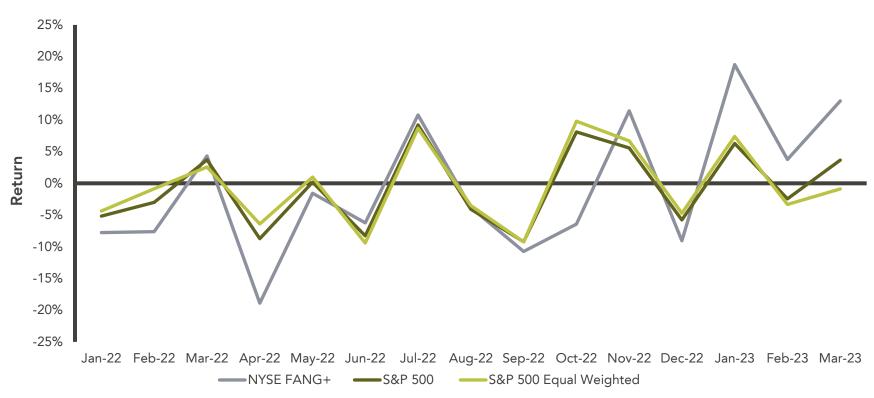


Source: FactSet as of March 31, 2023



# Mega-caps drive performance

Amid market volatility, a flight to safety in mega-cap stocks led the **S&P 500 higher in the first quarter** 

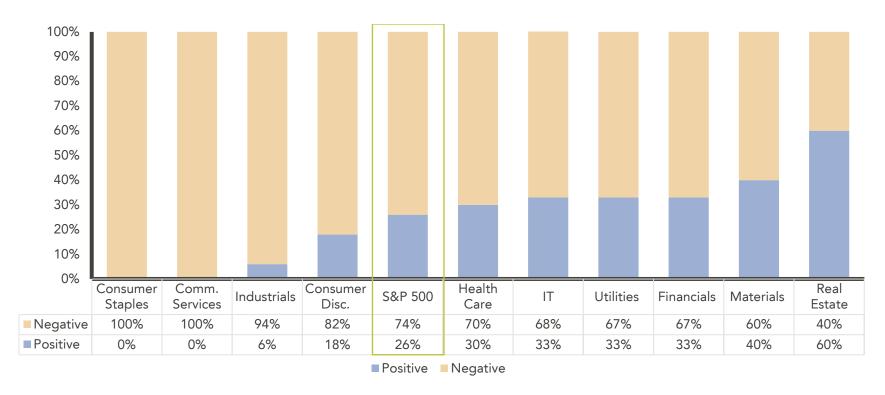


Source: Bloomberg as of March 31, 2023. The NYSE FANG+ Index provides exposure to 10 technology stocks, Meta, Apple, Amazon, Netflix, Microsoft, Google, Tesla, NVIDIA, Snowflake, and Advanced Micro Devices.



# **Earnings**

#### First quarter EPS guidance was generally negative across sectors

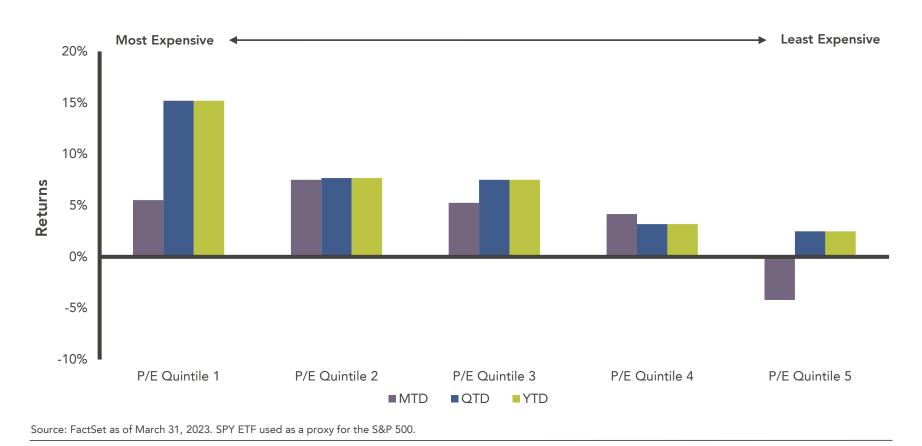


Source: FactSet as of April 6, 2023, based on the 106 companies that issued first quarter guidance. Guidance is classified as negative if the estimate (or midpoint of a range estimates) provided by a company is lower than the mean EPS estimate (or revenue estimate) the day before the quidance was issued. Guidance is classified as positive if the estimate (or mid-point of a range of estimates) provided by the company is higher than the mean EPS estimate (or revenue estimate) the day before the guidance was issued.



# U.S. equity valuations

#### The most expensive stocks in the S&P 500 outperformed to start 2023





# **U.S.** equity valuations

#### Large-cap valuations shifted back to the high end of historical ranges; small-caps continue to look relatively attractive

	S&P 500		Russell 1000		Russell Mid Cap		Russell 2000	
Valuation Metrics	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)
P/E	21.1	72	20.7	71	17.7	36	12.5	4
Forward P/E	17.0	63	16.9	64	14.8	32	13.3	12
P/B	4.1	84	3.9	84	3.0	89	2.0	33
P/S	2.3	92	2.2	91	1.6	78	1.1	64
P/CF	14.2	73	14.2	73	12.5	71	11.7	29
EV/EBITDA	12.4	68	12.7	68	12.2	64	13.6	58
Average		75		75		62		33

Source: Bloomberg as of March 31, 2023. 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 - Mar. 2023.



# U.S. equity valuations by factor

#### Growth indices appear more expensive following strength in the first quarter

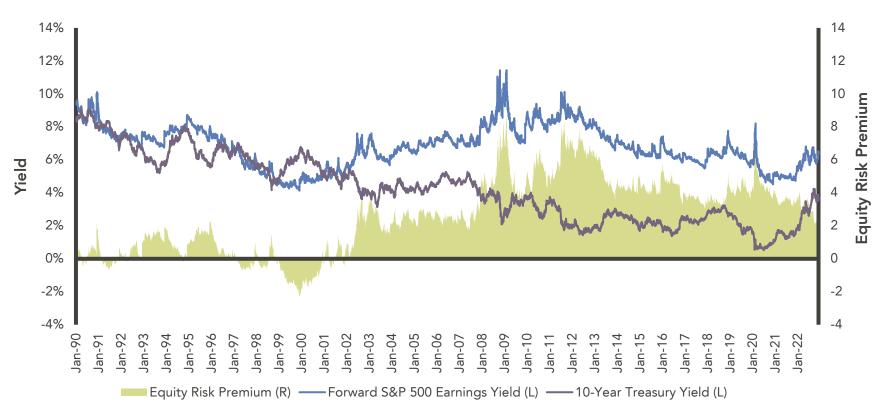
	Russell 1000 Value		Russell 1000 Growth		Russell Mid Cap Value		Russell Mid Cap Growth		Russell 2000 Value		Russell 2000 Growth	
Valuation Metrics	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)
P/E	16.1	56	28.5	83	15.2	30	25.0	71	9.9	5	16.2	8
Forward P/E	13.6	47	22.0	81	12.8	25	20.3	67	11.0	7	16.6	28
P/B	2.4	85	10.0	92	2.2	89	7.3	90	1.3	22	3.8	60
P/S	1.6	78	3.6	86	1.3	72	2.4	79	0.9	58	1.5	45
P/CF	10.5	58	21.0	86	10.3	77	19.2	78	8.3	25	18.6	45
EV/EBITDA	10.6	60	16.1	78	10.7	53	16.7	77	13.0	67	13.6	38
Average		64		84		58		77		31		37

Source: Bloomberg as of March 31, 2023. 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 - Mar. 2023



# **Equity risk premium**

#### The equity risk premium remains compressed relative to the post-**GFC/pre-COVID** period



Source: Bloomberg as of March 31, 2023. Equity risk premium is calculated as the forward earnings yield of the S&P 500 minus the yield on the 10-year Treasury bond.



# Opportunities and risks in U.S. equities

#### **Opportunities**

Small-cap valuations below long-term averages The forward price-to-earnings ratio of the Russell 2000 remains below its long-term average, which may set investors up for better returns to the extent the interest rate environment stabilizes and banking system concerns abate. Onshoring may also help bolster small-cap equities.

#### Gains may follow large market declines

U.S. markets have historically generated positive returns following peak inflation and negative calendar year returns.

#### Don't count U.S. equities out

Pressure from interest rate increases and downward earnings revisions has seen the equity risk premium compress. Given expectations for a Fed pause in the second quarter, U.S. equities may be well positioned as interest rates normalize and inflation moderates.

#### Risks

#### Case for a recession strengthens

The regional banking crisis, OPEC production cuts, and anemic global growth increase the risk of recession as the Fed maintains its stance against persistent inflation.

Earnings guidance overwhelmingly negative 74% of S&P 500 companies have issued negative EPS guidance for the first quarter, with a 6.8% year-overyear earnings decline estimated.

#### Monetary policy uncertainty

Markets are expecting rate cuts in the back half of the year, which could lead to a repricing lower if the Fed holds rates higher for longer.

#### Geopolitical strife

Ongoing instability in Europe and elsewhere could have negative impacts on U.S. multi-national companies that derive a significant portion of revenues overseas.

# Non-U.S. Equities

# Global equity performance

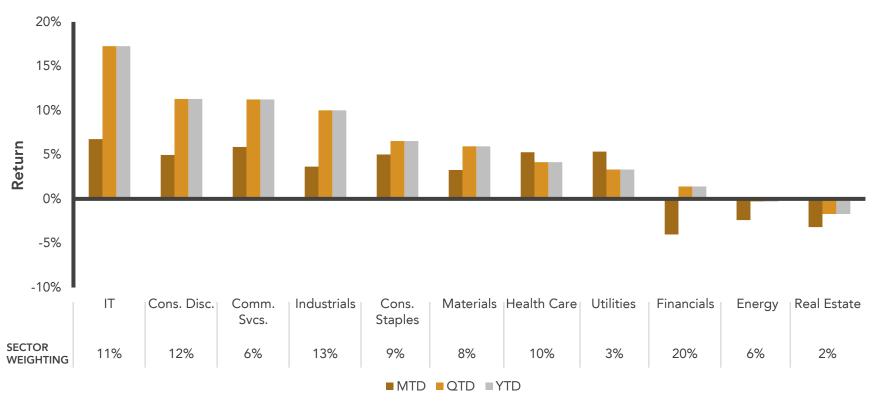
#### Non-U.S. equity markets posted a strong start to 2023

		MTD (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Global Equity Market Indices	MSCI ACWI	3.1	7.3	7.3	-7.4	15.4	6.9	8.1
	MSCI ACWI ex. U.S.	2.4	6.9	6.9	-5.1	11.8	2.5	4.2
Developed Markets Indices	MSCI EAFE	2.5	8.5	8.5	-1.4	13.0	3.5	5.0
	MSCI EAFE Local	0.5	7.5	7.5	3.8	14.6	6.2	7.3
Emerging Markets Indices	MSCI Emerging Markets	3.0	4.0	4.0	-10.7	7.8	-0.9	2.0
	MSCI EM Local	2.2	3.8	3.8	-6.6	8.8	1.9	5.0
Small-Cap Market Indices	MSCI EAFE Small-Cap	-0.2	4.9	4.9	-9.8	12.1	0.9	5.9
	MSCI EM Small-Cap	0.9	3.9	3.9	-11.0	20.7	1.8	3.2
Frontier Markets Index	MSCI Frontier	1.2	3.1	3.1	-17.5	7.9	-2.8	2.7



# MSCI ACWI ex-U.S. sector performance

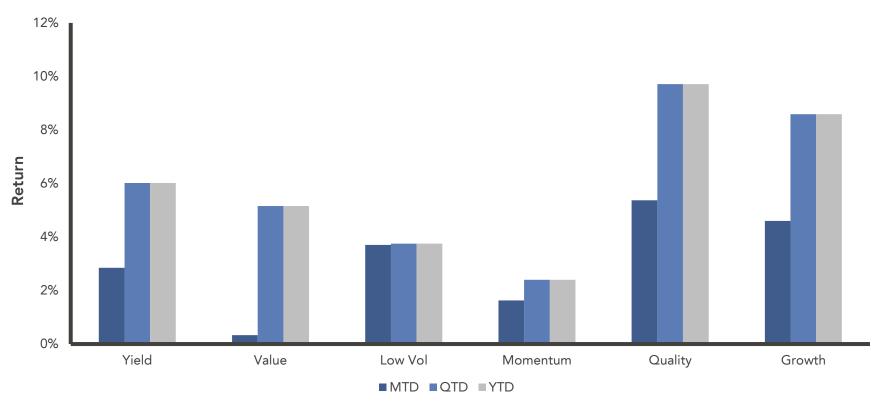
After a difficult 2022, growth-oriented sectors like IT and Consumer Discretionary posted a hot start to 2023





# MSCI ACWI ex-U.S. factor performance

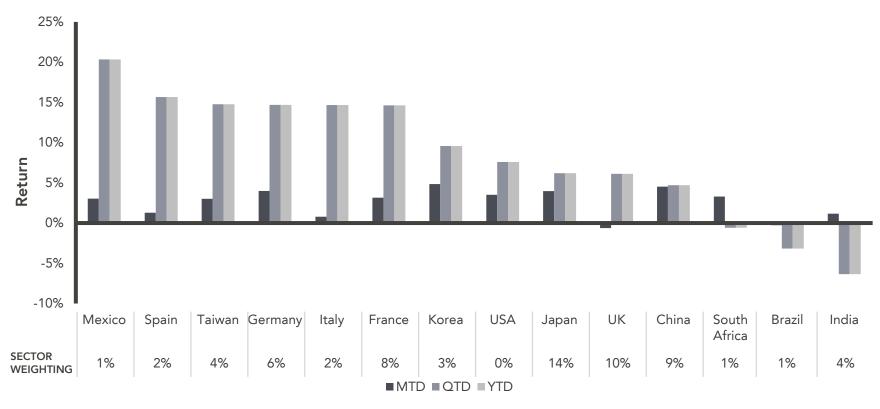
#### Quality and growth factors notched a strong quarter after a challenging 2022





# **Country performance**

India, Brazil, and South Africa were the only major countries to post negative performance in the first quarter

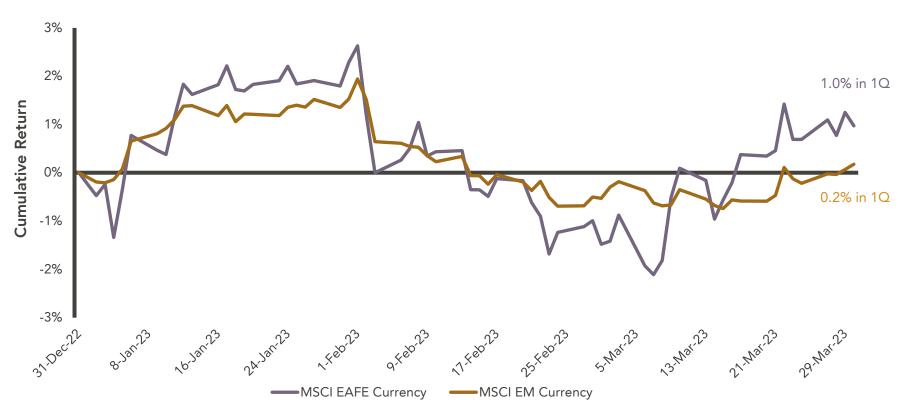


Source: Bloomberg as of March 31, 2023. Returns based on individual MSCI country indices, country weights based on the MSCI ACWI ex-U.S. Index.



# Non-U.S. currency performance

After strong performance to end 2022, foreign currencies began 2023 slightly positive

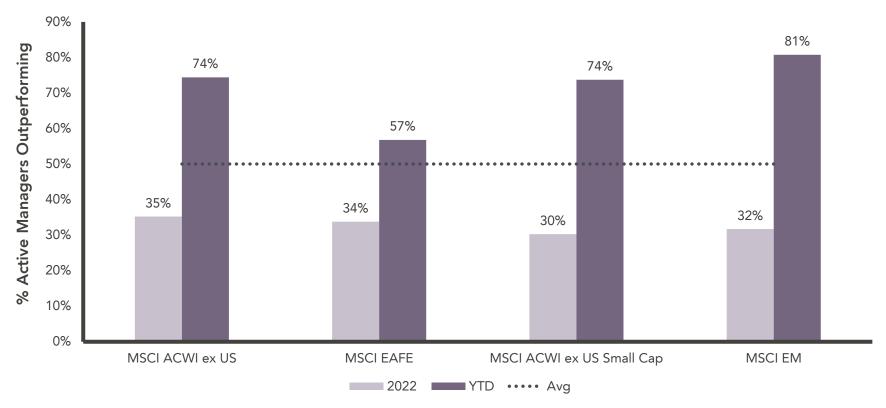


Source: Bloomberg as of March 31, 2023. Currency return calculated by subtracting index return in USD by index return in local terms.



# **Active manager performance**

#### After a difficult 2022, most active managers generated positive relative returns in the first quarter

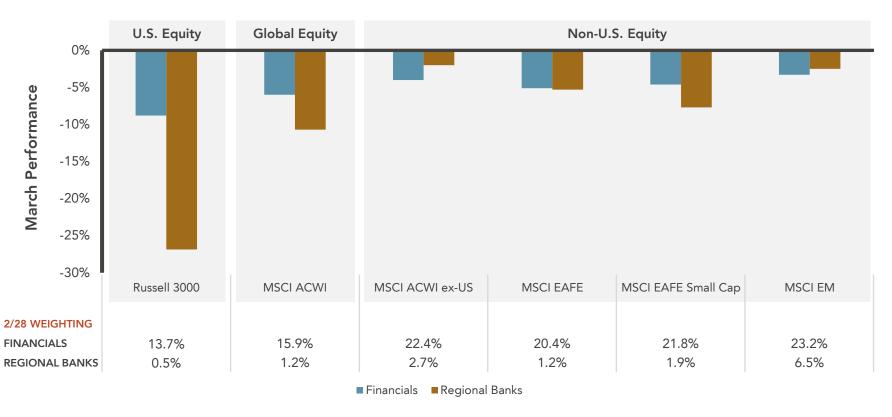


Source: Morningstar as of March 31, 2023. Data on actively managed mutual funds pulled April 4, 2023.



# U.S. regional banking crisis

Non-U.S. regional banks and other financials were less impacted in March than their U.S. counterparts

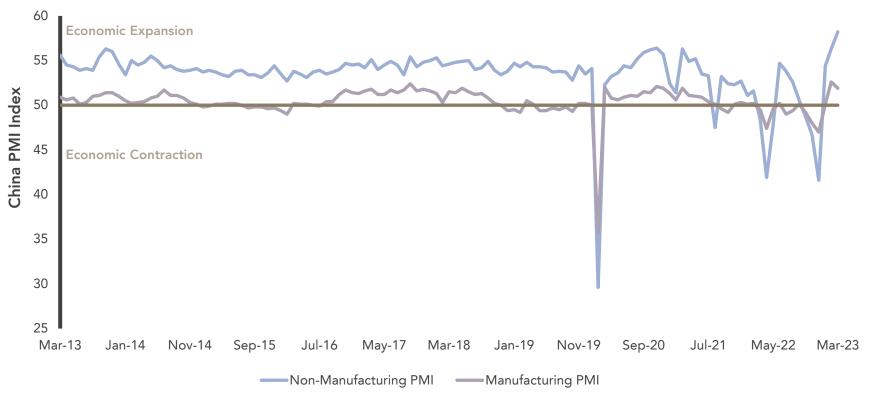


Source: FactSet as of March 31, 2023



# China PMIs bounce amid reopening

Boosted by the curtailing of the country's zero-COVID policy, China's non-manufacturing PMI reached a decade high in March

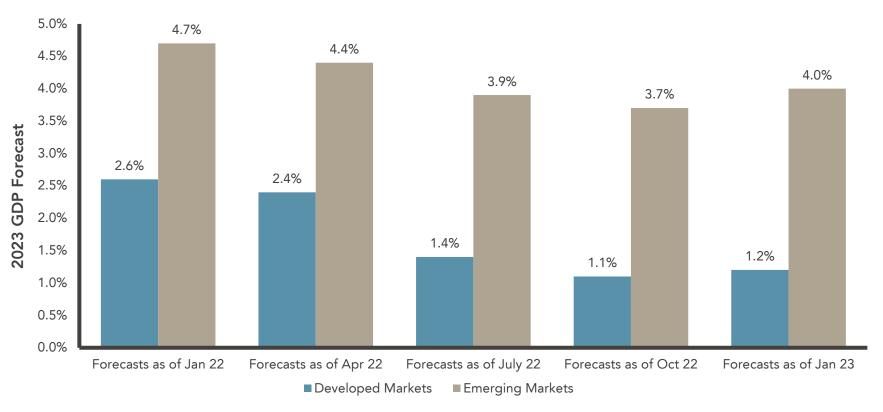


Source: Bloomberg as of March 31, 2023. A PMI reading above 50 indicates expansion from the previous month, while below 50 indicates contraction.



# **GDP** expectations

#### The most recent GDP growth estimates for 2023 have ticked up for both developed and emerging markets



Source: IMF as of March 31, 2023



# Global equity valuations

#### Non-U.S. equity benchmarks remain meaningfully cheaper than the S&P 500 index

	S&P 500		MSCI EAFE		MSCI EM		MSCI EAFE SC	
Valuation Metrics	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)	Current	Historical Percentile (%)
P/E	21.1	74	13.8	27	11.0	27	12.7	19
Forward P/E	17.0	79	12.6	36	10.6	38	10.5	18
P/B	4.1	88	1.8	61	1.6	38	1.3	29
P/S	2.3	90	1.3	90	1.2	48	0.8	57
P/CF	14.2	76	8.1	29	7.5	36	9.7	50
EV/EBITDA	12.4	68	7.8	1	7.8	47	9.0	15
Average		79		41		39		31

Source: Bloomberg as of March 31, 2023, data pulled on April 4, 2023. P/E is adjusted for negative earnings; percentiles are based on data going back to 1999 except for FP/E which goes back to 2005.



# Opportunities and risks in non-U.S. equities

#### **Opportunities**

Non-U.S. equity valuations are relatively cheap International indices currently trade at attractive valuations, relative to both domestic benchmarks and their own histories.

#### Currencies may continue to correct

Despite positive performance from foreign currencies in recent months, the U.S. dollar remains above trend. With the Federal Reserve likely to moderate its pace of interest rate hikes, further correction could persist into the future. Additional "de-dollarization" (e.g., China's use of the yuan in commodity trading) could also lead to weakening of the USD.

#### China reopening

China's relaxation of its zero-COVID policy late last year has led to a strong rebound in its economy this year. Unlike in the rest of the world, inflation has remained low, allowing the People's Bank of China to maintain an easy monetary policy.

#### **Risks**

Fallout from turmoil in the U.S. banking system Recent events in the U.S. banking sector are likely to lead to additional tightening of lending standards, which could further slow growth in developed economies.

Inflation, lower manufacturing, unrest in the eurozone The rate of inflation in the euro area remains above 6.5% (with core inflation ticking up in February), while manufacturing activity is trending lower, and the French government is grappling with the prospects of widespread labor strikes due to its recent attempt at pension reform.

#### Geopolitical tensions remain elevated

The conflict in Ukraine continues and the spy balloon incident that occurred during the first quarter further complicates relations between the United States and China.

# Real Estate

# Real estate performance

#### Real estate returns were negative in the fourth quarter, driven by valuation markdowns in the office sector

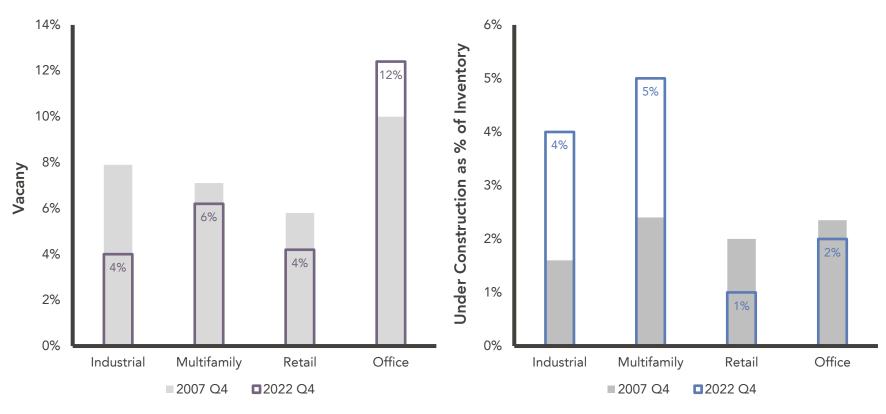
Indices	4Q22 (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
NPI	-3.5	5.5	8.1	7.5	8.8
Income	1.0	3.9	4.1	4.3	4.7
Appreciation	-4.5	1.6	3.8	3.1	4.0
NFI-ODCE	-5.0	7.5	9.9	8.7	10.1
Income	0.8	3.4	3.8	3.9	4.4
Appreciation	-5.8	3.9	6.0	4.6	5.6
FTSE NAREIT All Eq. REITs	4.1	-24.9	0.2	4.4	7.1
Property Type					
NPI Apartment	-3.2	7.1	9.4	7.9	8.6
NPI Office	-4.8	-3.4	1.4	3.5	6.3
NPI Industrial	-3.6	14.6	22.4	18.9	16.0
NPI Retail	-1.6	2.7	-0.3	0.6	5.8
NPI Hotel	3.4	10.0	-4.8	-0.8	3.6
Geographic Sectors					
NPI East	-3.9	2.2	5.5	5.3	6.8
NPI Midwest	-3.4	2.1	4.2	4.0	6.6
NPI South	-2.5	8.5	9.6	8.4	9.6
NPI West	-3.8	7.0	9.9	9.4	10.6

Source: NCREIF as of December 31, 2022



### **Market fundamentals**

# Vacancy rates, with the exception of office, are healthy and new construction is aligned with sector demand

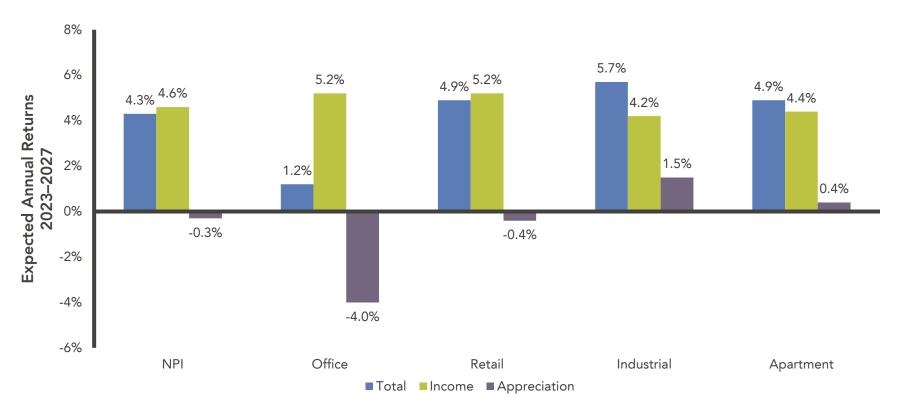


Source: CoStar, TA Realty as of December 31, 2022



# Returns by property type

Leasing activity and mark-to-market rent growth, rather than cap rate compression, are expected to drive performance through 2027



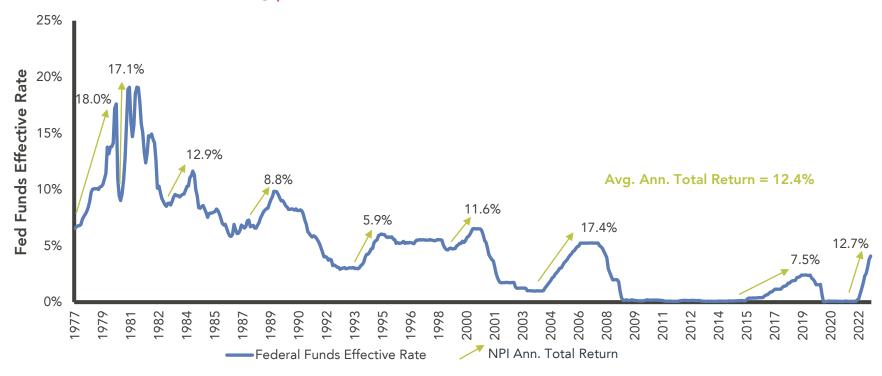
Source: PREA Consensus Survey, AEW as of December 31, 2022



# Performance amid higher interest rates

Core real estate has historically maintained positive unlevered returns in rising rate environments

NPI total returns during periods of Fed rate hikes

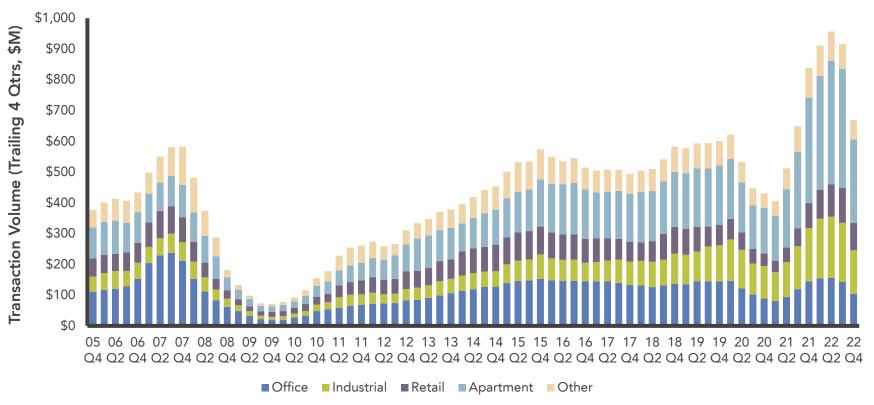


Source: NCREIF, Federal Reserve, Moody's Analytics, Clarion Partners Investment Research as of December 31, 2022



# **U.S.** transaction activity

Despite record sales volume in 2021, muted borrowing activity and rising debt costs curtailed momentum in the second half of 2022

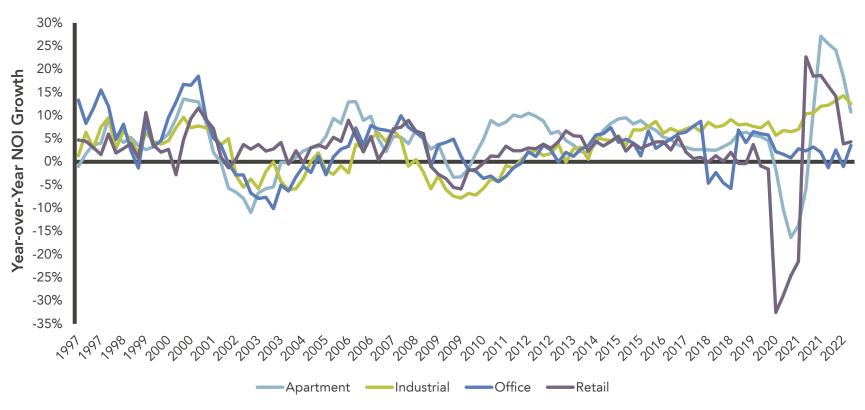


Source: RCA, MSCI, AEW as of December 31, 2022



#### **NOI** declines

The pace of market rent increases has slowed materially; net operating income growth has continued to fade for three of the four core sectors



Source: NCREIF, AEW as of December 31, 2022



### Opportunities and risks in real estate

#### **Opportunities**

Sector opportunities from market dislocations

Ongoing housing supply shortfalls and tighter lending conditions have continued to present home-buying hurdles for Millennials and Gen Z. Against this backdrop, apartment and single-family rentals have provided investors with leasing flexibility in markets with high population, income, and job growth.

Non-core opportunities in a distressed environment Despite a challenging fundraising environment, sectorfocused and opportunistic managers are well positioned to drive accretive returns via targeted deal flow, light capex renovations, and asset repositioning at the property level. Real estate investors have the opportunity to enter distressed debt and secondary market opportunities at unlevered, discounted entry points.

Resilient hedge against inflation and floating-rate debt Shorter-duration lease structures in apartments, singlefamily rentals, and hospitality allow real estate managers to mark rents to current market rates and pass through incremental maintenance, renovation, and financing costs.

#### Risks

Elevated debt costs and growing redemption queues

Higher construction and borrowing costs should force real estate investors to source returns from value-add acquisitions rather than ground-up development. Uncertain wait times and large redemption gueues have presented institutional investors with renewed challenges in offsetting the current market volatility and the resulting "denominator effect."

Valuation declines and slowing rental growth

All 26 funds included in NFI-ODCE reported negative appreciation in the 4th quarter and downward pressure on pricing is expected to persist through the first half of 2023. In addition, eight funds reported income returns at or below 0.7%, a reflection of the impact of the rising cost of variablerate debt and lower in-place rents in many industrial and office portfolios.

#### Hawkish Fed and muted transaction volume

The hawkish Fed, slowing rent growth, and geopolitical uncertainty are widening property bid-ask spreads. Broader concerns about a 2023 recession and limited debt financing are starting to negatively impact portfolio underwriting, fundraising, and acquisitions/dispositions.

# Private Equity

# Private equity performance

#### Through 3Q, performance across private equity continued to outpace most public market indices

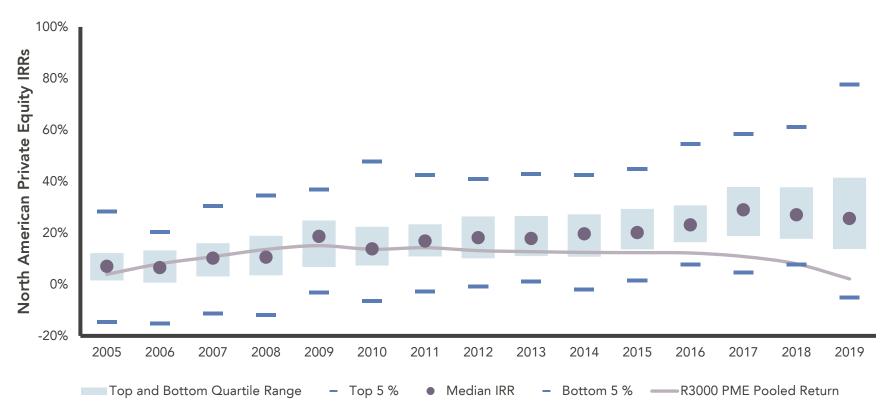
	3Q22 (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Global Private Equity	-1.8	-0.5	20.1	17.5	15.6
North America Private Equity	-3.2	3.9	23.2	20.2	17.5
Europe Private Equity	-5.9	-7.7	16.1	14.0	13.3
Rest of World Private Equity	-2.3	-5.5	11.7	10.3	11.2
Global VC	-1.9	-5.9	27.0	23.3	18.9
North America VC	-1.2	-6.1	31.8	26.2	19.9
Europe VC	-5.0	-11.3	23.6	20.1	14.9
Rest of World VC	-3.2	-2.6	19.3	19.8	19.9
MSCI All Country World Index	-6.8	-20.7	3.7	4.4	7.3
S&P 500	-4.9	-15.5	8.2	9.2	11.7
Russell 3000	-4.5	-17.6	7.7	8.6	11.4
Russell 2000 Growth	0.2	-29.3	2.9	3.6	8.8

Source: Burgiss, Bloomberg as of September 30, 2022



# U.S. private equity vintage performance

Private equity performance continues to be strong with median industry performance exceeding the public market equivalent

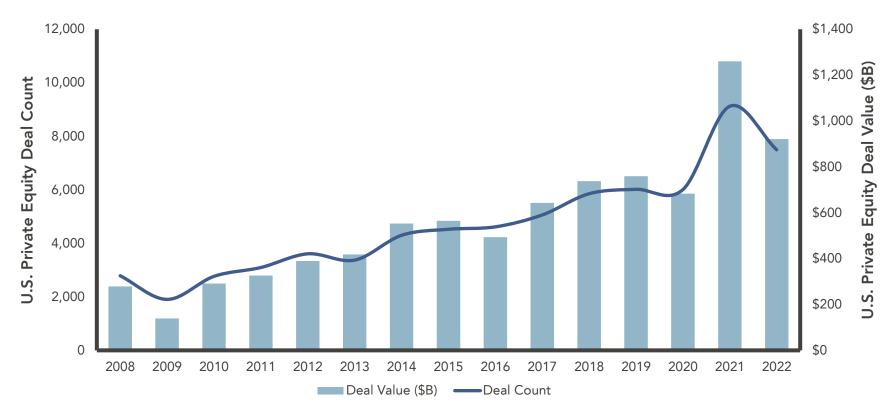


Source: Burgiss North American All Private Equity Public Market Equivalent, Pooled Returns as of September 30, 2022



# Private equity deployment

Higher interest rates have caused deal activity to slow relative to 2021 highs, though activity remains above historical levels

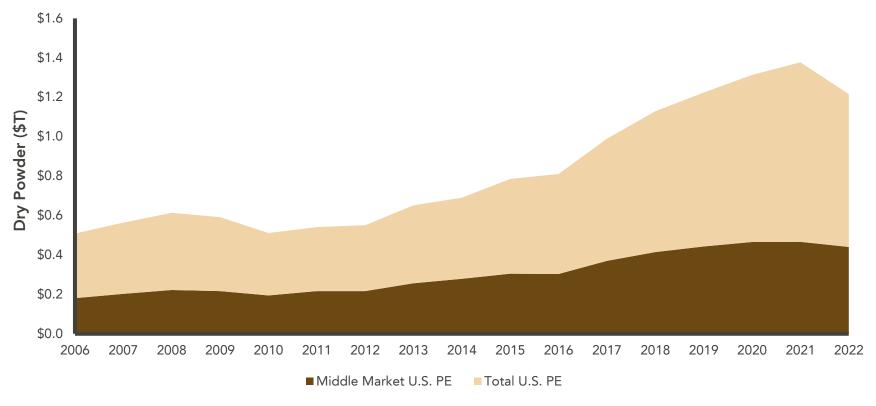


Source: Pitchbook as of December 31, 2022



# Dry powder

High levels of dry powder at the large end of the market will continue to create exit opportunities for middle market private equity

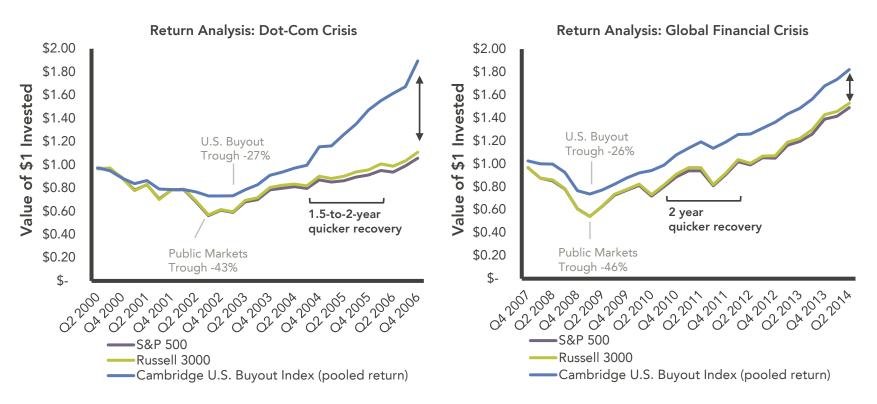


Source: Pitchbook as of December 31, 2022



# Private equity resilience during downturns

#### Private equity has historically experienced less significant pullbacks with quicker recoveries during public market downturns

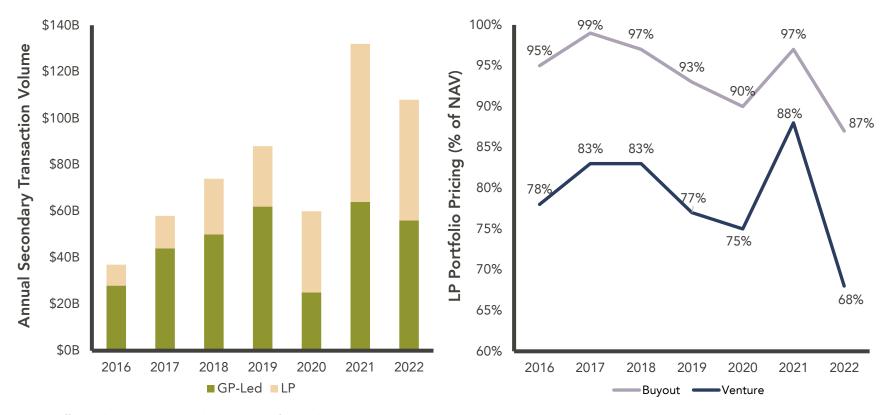


Source: Bloomberg; Cambridge Associates; Neuberger Berman



# Secondary market

The secondary market is evolving with attractively priced deals and GP-led transactions representing a significant portion of the market

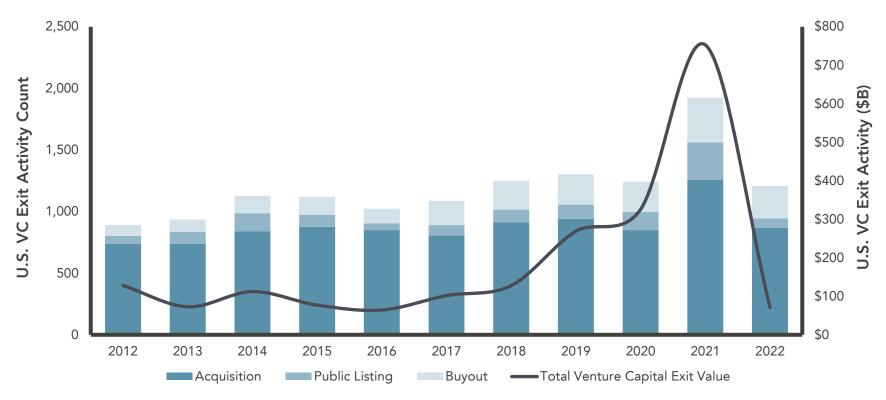


Source: Jefferies Global Secondary Market Review as of December 31, 2022



# Venture capital exit activity

Venture capital exit activity has declined due to the mismatch between buyer/seller expectations and a closed IPO market

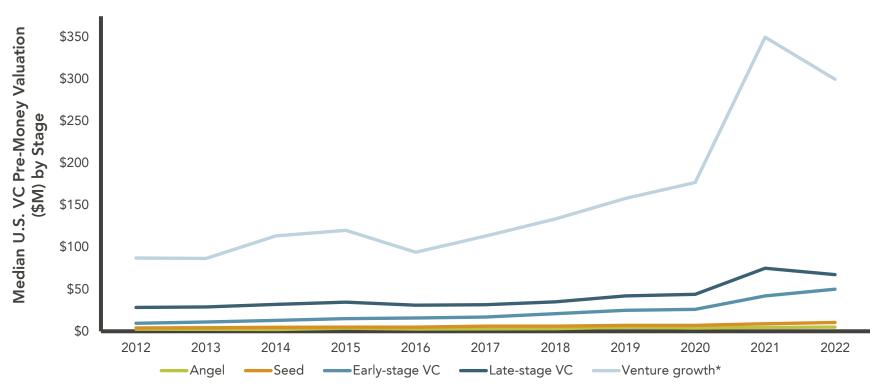


Source: Pitchbook as of December 31, 2022



# **Venture capital valuations**

Late-stage U.S. venture and venture growth valuations corrected in 2022 off record highs while earlier stage funds remained steady



Source: Pitchbook as of December 31, 2022. Pitchbook defines Venture Growth as any financing that is Series E or later or any VC financing of a company that is at least seven years old and has raised at least six VC rounds.



# Opportunities and risks in private equity

#### **Opportunities**

#### Relative value opportunity

Private equity transactions continue to occur at lower valuations than public equity valuations, though the spread has narrowed with the public market pullback.

#### Small buyouts remain attractive

Small buyouts continue to benefit from inefficiencies and growing demand from capital raised by larger funds, creating a strong exit environment.

#### Secondary market is attractive

The secondary market has evolved with GP-led transactions becoming a significant portion of volume, and pricing has decreased making it an attractive opportunity set for investors.

#### **Risks**

#### Valuation pressures at upper end of market

Large private equity and late-stage venture valuations are most aligned with declining public market valuations. We expect valuations to continue to decline for the next 3-6 quarters, creating buying opportunities for those with dry powder to invest.

#### Traditional lending continues to be scarce

As interest rates have risen and traditional lenders continue to work through their overhang of leveraged buyout debt, private equity managers are pivoting to more creative capital structures or over-equitizing their buyout deals in the short-term, potentially dampening early return metrics (IRR). The latter option is predicated on the expectation that a future refinancing package will be available at a more favorable interest rate.

# Private Credit

# Private credit performance

#### Private credit performance was solid in 3Q 2022 relative to public equity and fixed income

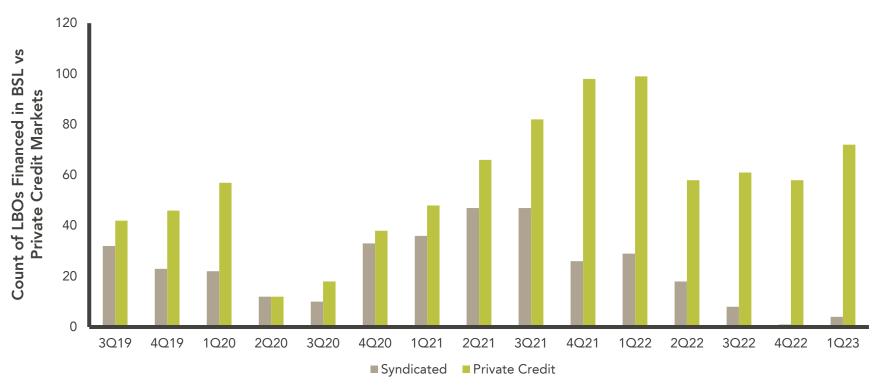
	3Q22 (%)	1 Yr (%)	3 Yr (%)	5 Yr (%)	10 Yr (%)
Private Credit	1.0	5.8	9.3	8.5	9.2
Credit Suisse Leveraged Loan	1.2	-2.6	2.1	3.0	3.7
Bloomberg High Yield	-0.6	-14.1	-0.5	1.6	3.9
Bloomberg Aggregate	-4.8	-14.6	-3.3	-0.3	0.9
DJ Industrial Average	-6.2	-13.4	4.4	7.4	10.5
S&P 500	-4.9	-15.5	8.2	9.2	11.7
Russell 2000	-2.2	-23.5	4.3	3.6	8.6

Source: Burgiss, Bloomberg as of September 30, 2022



# **LBO** financing

Private credit lenders continue to take market share as banks reduce risk underwriting amid market volatility and overhang from hung deals

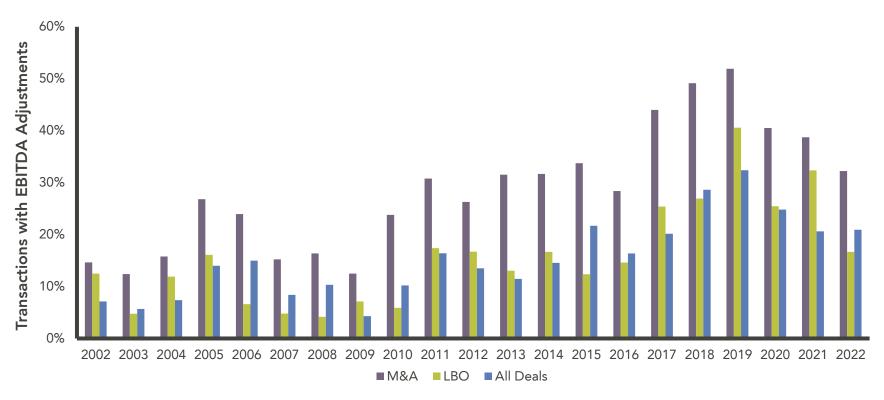


Source: PitchBook | LCD through March 28, 2023. Private credit count is based on transactions covered by LCD News.



# Transactions with EBITDA adjustments

Deal terms have shifted in favor of credit investors, illustrated by fewer synergistic EBITDA adjustments that favor PE sponsors

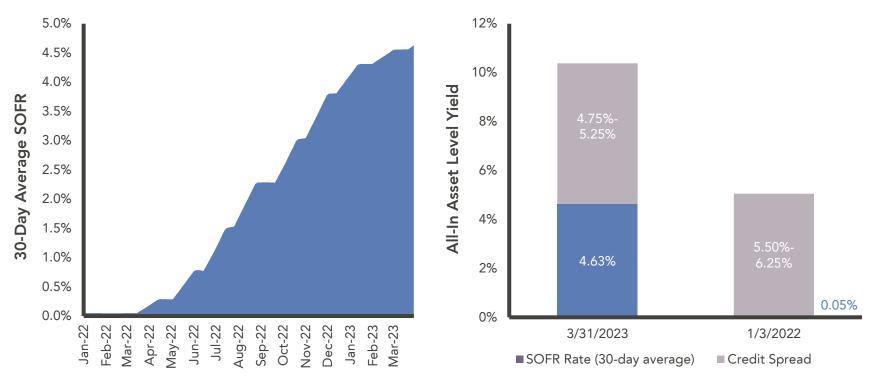


Source: LCD as of December 31, 2022



# Rising rates drive attractive pricing

A pickup in base rates along with widening credit spreads are driving incremental yield pickup for first lien/unitranche direct lending deals

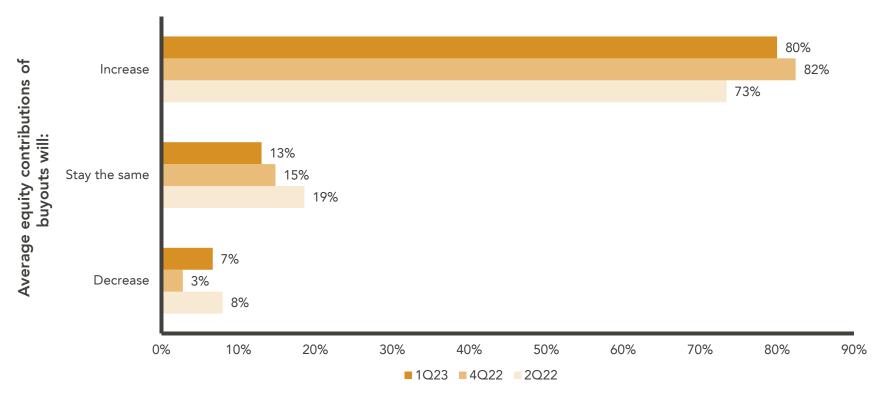


Source: Federal Reserve Bank of New York as of March 31, 2023. Credit spreads based on sample of representative deals closed.



# Lower leverage, more equity

Lenders should have more cushion in a capital structure to the extent equity contributions in LBO deals increase

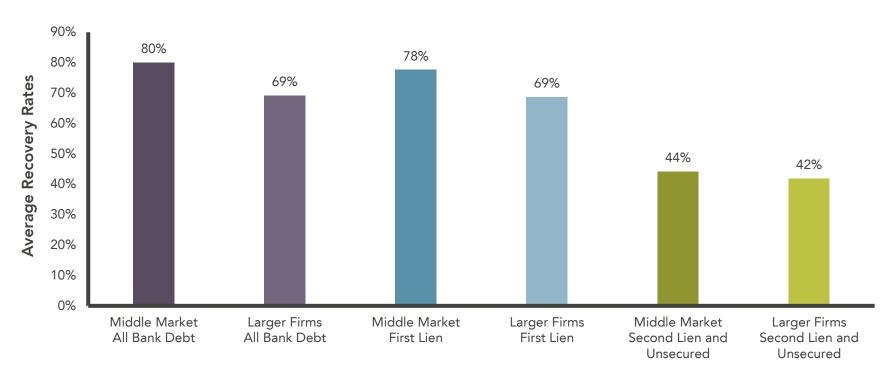


Source: PitchBook | LCD as of March 22, 2023



# **Recovery rates**

#### Middle market companies have historically exhibited higher recoveries in the event of default relative to larger peers



Source: S&P Ratings Direct, Will Middle-Market Recoveries Falter When the Cycle Turns. Ultimate recovery rate from 1987- June 2018. Middle market loans defined as firms with \$350 million or less in total debt outstanding at the time of default. Bonds are indicative of larger firm bonds. Ultimate recovery is the non-discounted dollar-weighted recovery weight following the emergence from 3 types of default: bankruptcy filings, distressed exchanges, and non-bankruptcy restructurings.



# Opportunities and risks in private credit

#### **Opportunities**

#### Rising interest rates

Clients continue to search for alternatives in a rising interest rate environment. Private credit offers enhanced yield, diversification, and strong downside protection.

#### Inflation

The Fed raising interest rates to help combat inflation is a tailwind for private credit as most loans have floating yields, acting as a hedge. Private credit real returns remain positive.

#### Banking challenges

The recent turmoil and instability in the banking system, particularly with regional banks, could cause small-to-midsize corporate borrowers to seek alternatives and more stable lenders, such as private credit.

#### **Risks**

#### Increased competition

With more managers and capital coming into the private credit market, deal competition may increase, which may force lenders to lower pricing and utilize less restrictive credit agreements, eroding the current premiums relative to HY, IG, and Treasuries.

#### Inflation & SOFR

High inflation but flat SOFR rates would leave private credit yields unchanged — diminishing investors' real return.

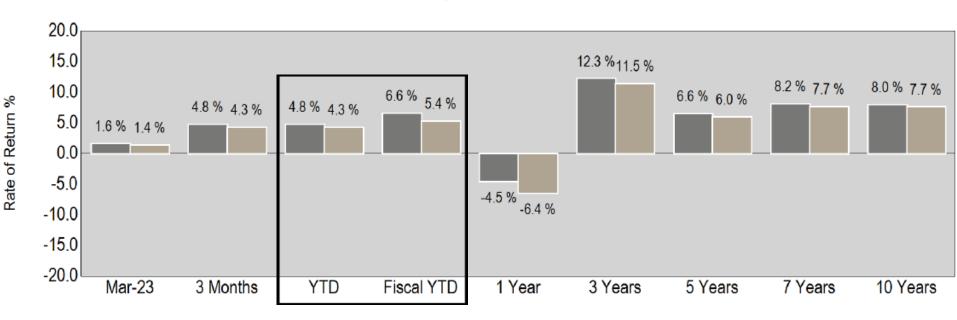
#### Market correction

Market volatility and the potential for a hard landing on the back of higher rates and QT could cause a slowdown in the overall economy and limit company access to the capital markets.

# Performance Overview - COAG

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

Return Summary Ending March 31, 2023



- Total Fund Composite
  Total Fund Policy Benchmark
  - Domestic Small-Cap Equity, International Equity, and Emerging Markets Equity composites outperformed their respective benchmarks; Fixed Income and Real Estate composites performed in-line with their benchmarks
  - Domestic Large-Cap Equity and Global Equity composites underperformed their benchmarks

    \* Year-to-date performance as of March 31, 2023



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

	Absolute	Benchmark	
Top Performers	Performance	Performance	Strategy
Channing SCV	3.6%	-0.7%	U.S. Equity
Earnest SCC	5.8%	2.7%	U.S. Equity
Hardman Johnston	8.9%	6.9%	International Equity

	<b>Absolute</b>	Benchmark		
<b>Bottom Performers</b>	Performance	Performance	Strategy	
Union Heritage	5.3%	7.5%	U.S. Equity	
Legato SCG	5.0%	6.1%	U.S. Equity	

<sup>\*</sup> Year-to-date performance as of March 31, 2023



# **COA General Employees' – Manager Excess Performance**

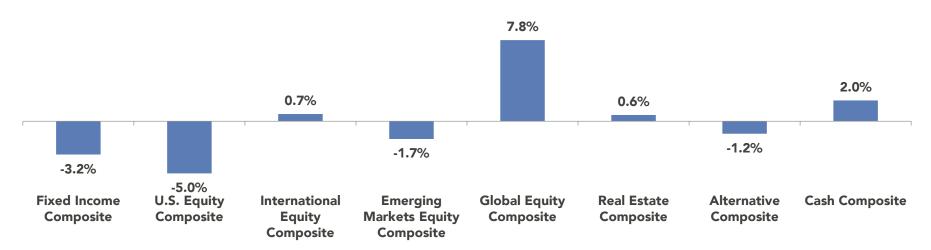
End	ling	March	ı 31,	, 2023

	Benchmark	3 Mo Perf vs Benchmark 6 Mo Perf	vs Benchmark
Total Fund Composite	Total Fund Policy Benchmark	0.5%	1.4%
Fixed Income Composite	Bloomberg US Aggregate TR	0.1%	0.3%
Mesirow	Bloomberg US Aggregate TR	-0.2%	0.2%
Garcia Hamilton	Bloomberg US Aggregate TR	0.7%	0.9%
State Street U.S. Aggregate Bond Index SL Fund	Bloomberg US Aggregate TR	0.1%	0.0%
U.S. Equity Composite	Russell 3000	-1.5%	0.1%
Large Cap Composite	S&P 500	-1.1%	1.1%
Union Heritage Large Cap Core	S&P 500	-2.2%	2.2%
Blackrock S&P 500 Equity Index Fund	S&P 500	0.0%	0.0%
Mid Cap Composite	S&P 400 MidCap	0.0%	0.0%
BlackRock MidCap Equity Index	S&P 400 MidCap	0.0%	0.0%
Small Cap Composite	Russell 2000	2.5%	3.0%
Channing Capital Management	Russell 2000 Value	4.3%	3.6%
Earnest Partners SCC	Russell 2000	3.1%	4.8%
Legato	Russell 2000 Growth	-1.1%	-2.5%
Essex	Russell 2000 Growth	1.4%	1.5%
Bridge City	Russell 2000 Growth	-2.7%	1.7%
Lebenthal Lisanti	Russell 2000 Growth	-0.4%	-6.8%
Nicholas	Russell 2000 Growth	-3.1%	-7.5%
International Equity Composite	MSCI EAFE	0.7%	2.7%
Artisan Partners International Value Fund (APHKX)	MSCI EAFE	1.7%	4.4%
Hardman Johnston	MSCI ACWI ex USA	2.0%	8.2%
Brown Capital International Small Cap	MSCI ACWI ex US Small Cap	1.8%	3.4%
Emerging Markets Equity Composite	MSCI Emerging Markets	1.4%	2.8%
Earnest Partners EM	MSCI Emerging Markets	1.5%	4.3%
Goldman Sachs Emerging Markets Equity	MSCI Emerging Markets	1.1%	-0.9%
Global Equity Composite	MSCI ACWI	-3.0%	-5.9%
Globalt Tactical ETF	Globalt Benchmark	0.5%	-0.7%
BlackRock MSCI ACWI Min Volatility Index	MSCI ACWI Minimum Volatility Index	0.2%	0.4%
Real Estate Composite	NFI-ODCE .	-0.1%	-1.2%
Intercontinental U.S. Real Estate	NFI-ODCE	-0.5%	-1.5%
JP Morgan U.S. Real Estate	NFI-ODCE	0.6%	-0.5%
Alternative Composite	Custom Alternative Target Benchmark	-4.9%	-10.1%
Consequent Alternative Partners II, LP	Consequent Alt BM	0.0%	0.0%



# COA General Employees' Asset Allocation vs Target Allocation





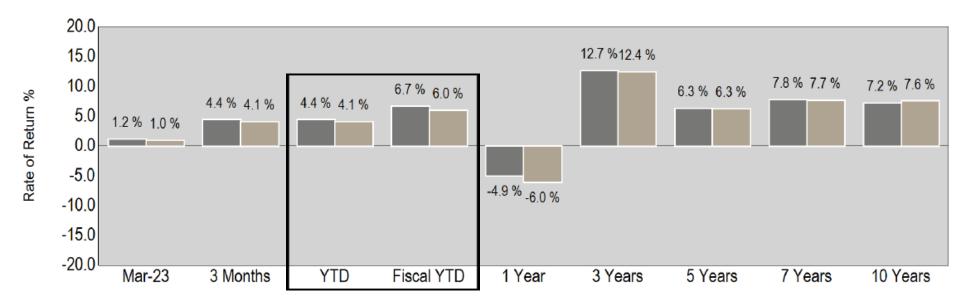
<sup>\*</sup> Year-to-date performance and allocation as of March 31, 2023



# Performance Overview - COAP

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

#### Return Summary Ending March 31, 2023



- Total Fund Composite
  Total Fund Policy Benchmark
  - Fixed Income and International Equity composites outperformed their benchmarks; Domestic Equity composite and passive strategies performed in-line with benchmarks
  - Alternative composite underperformed its benchmark

<sup>\*</sup> Year-to-date performance as of March 31, 2023



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

	<b>Absolute</b>	Benchmark	
Top Performers	Performance	Performance	Strategy
Earnest SCC	5.8%	2.7%	U.S. Equity
Hardman Johnston	8.9%	6.9%	International Equity
Brown SC	6.5%	4.7%	International Equity

Bottom Performers	Absolute Performance	Benchmark Performance	Strategy
Driehaus SCG	4.1%	6.1%	U.S. Equity
Intercontinental	-3.8%	-3.3%	U.S. Real Estate

<sup>\*</sup> Year-to-date performance as of March 31, 2023

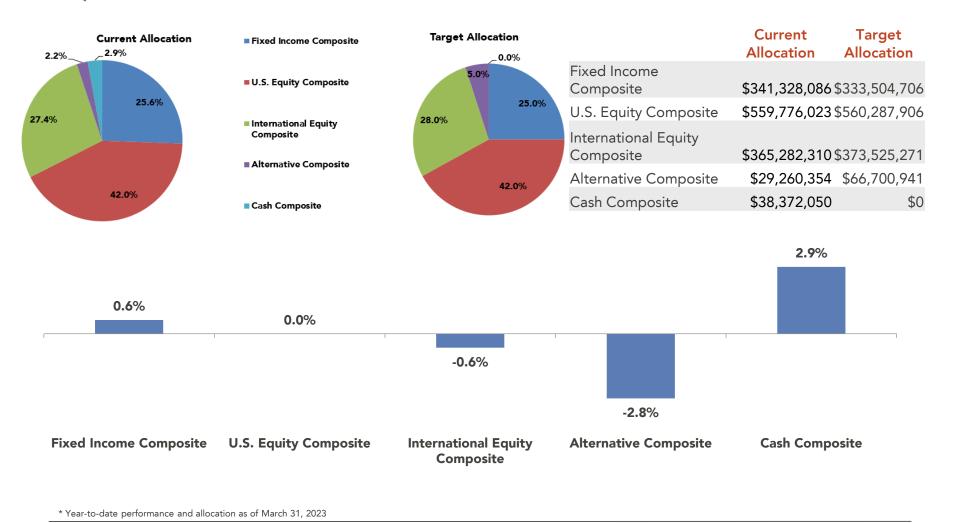


# **COA Police Officers' – Manager Excess Performance**

	Benchmark	3 Mo Perf vs Benchmark 6 Mo Perf vs	s Benchmark
Total Fund Composite	Total Fund Policy Benchmark	0.3%	0.8%
Fixed Income Composite	Fixed Income Composite Blended Benchmark	0.2%	0.5%
Mesirow	Bloomberg US Aggregate TR	-0.2%	0.1%
Garcia Hamilton	Bloomberg US Govt/Credit Int TR	0.6%	1.4%
BlackRock U.S.Aggregate Bond Index	Bloomberg US Aggregate TR	0.2%	0.0%
U.S. Equity Composite	Domestic Equity Composite Blended Benchmark	0.1%	0.2%
BlackRock Russell 1000 Index Fund	Russell 1000	0.0%	0.1%
BlackRock Mid Cap Equity Index Fund	S&P 400 MidCap	0.0%	0.0%
Macquarie SCC	Russell 2000	-0.2%	0.8%
Earnest Partners SCC	Russell 2000	3.1%	4.8%
Driehaus SCG	Russell 2000 Growth	-2.0%	-5.1%
International Equity Composite	International Equity Composite Blended Benchmark	1.0%	2.7%
Artisan International Large Cap Value (APHKX)	MSCI EAFE	1.7%	4.4%
Hardman Johnston	MSCI ACWI ex USA	2.0%	8.1%
BlackRock MSCI EAFE Small Cap Index	MSCI EAFE Small Cap	0.2%	0.5%
Brown Capital International Small Cap	MSCI ACWI ex US Small Cap	1.8%	3.4%
BlackRock Emerging Markets Free Fund	MSCI Emerging Markets	0.0%	0.0%
Goldman Sachs Emerging Markets Equity	MSCI Emerging Markets	1.1%	-0.9%
BlackRock MSCI ACWI Min Volatility Index	MSCI ACWI Minimum Volatility Index	0.2%	0.4%
Alternative Composite	Alternatives Custom Benchmark	-0.2%	-0.4%
Intercontinental U.S. Real Estate	NFI-ODCE	-0.5%	-1.6%
Consequent Alternative Partners II, LP	Custom Consequent Alt BM	0.0%	0.0%
Pharos Capital Partners III	Cambridge Associates All PE	0.0%	4.9%



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

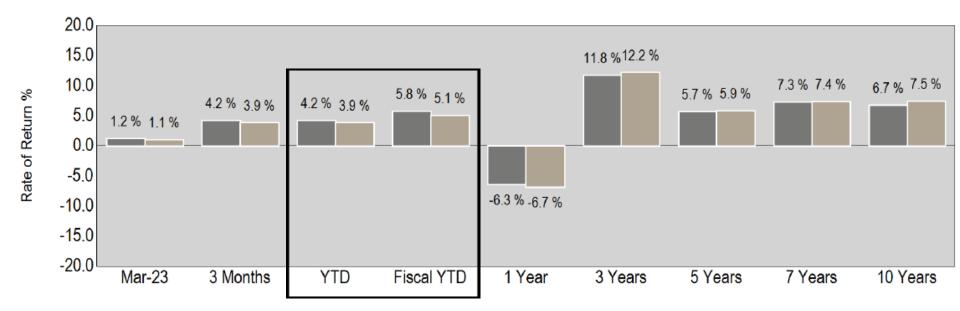




# Performance Overview - COAF

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

#### Return Summary Ending March 31, 2023



- Total Fund Composite
  Total Fund Policy Benchmark
  - International Equity composite outperformed its benchmark; Fixed Income composite and Passive strategies performed in-line with their benchmarks
  - Domestic Equity composite and Core Real Estate underperformed their benchmarks

<sup>\*</sup> Year-to-date performance as of March 31, 2023



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

	Absolute	Benchmark	
Top Performers	Performance	Performance	Strategy
Earnest SCC	5.8%	2.7%	U.S. Equity
Ativo	9.2%	6.9%	International Equity
Hardman Johnston	8.9%	6.9%	International Equity

Bottom Performers	Absolute Performance	Benchmark Performance	Strategy
Driehaus SCG	4.1%	6.1%	U.S. Equity
Intercontinental	-3.8%	-3.3%	U.S. Real Estate

<sup>\*</sup> Year-to-date performance as of March 31, 2023

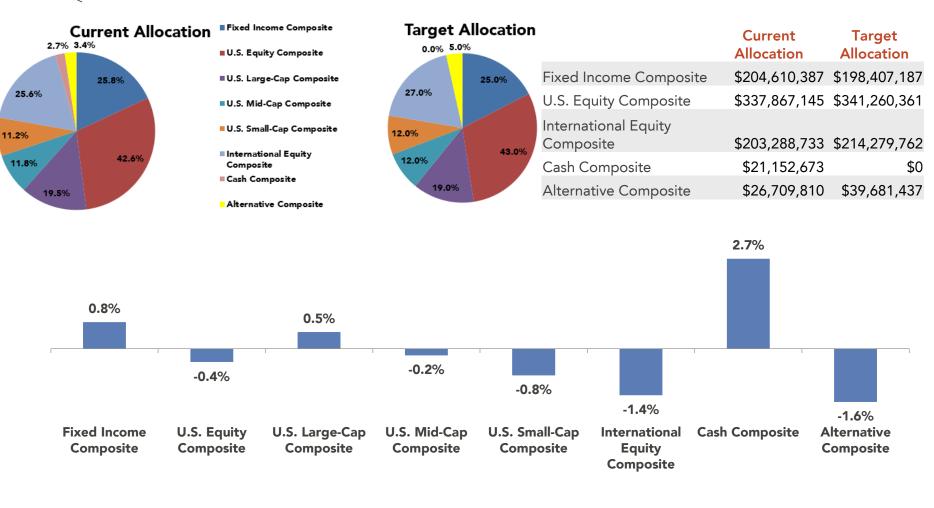


# **COA Firefighters' – Manager Excess Performance**

	Benchmark	3 Mo Perf vs Benchmark 6 Mo Perf	vs Benchmark
Total Fund Composite	Total Fund Policy Benchmark	0.3%	0.5%
Fixed Income Composite	Fixed Income Composite Custom Benchmark	0.0%	0.4%
Garcia Hamilton	Bloomberg US Aggregate TR	0.7%	1.0%
Mesirow	Bloomberg US Aggregate TR	-0.2%	0.2%
U.S. Equity Composite	Russell 3000	-1.5%	-1.0%
Large Cap Composite	Russell 1000	0.0%	0.1%
BlackRock 1000 Index Fund	Russell 1000	0.0%	0.1%
Mid Cap Composite	S&P 400 MidCap	0.0%	0.0%
BlackRock Mid Cap Equity Index Fund	S&P 400 MidCap	0.0%	0.0%
Small Cap Composite	Russell 2000	2.0%	1.2%
Northern Trust Collective Russell 2000 Index	Russell 2000	0.1%	0.1%
Earnest SCC	Russell 2000	3.1%	4.8%
Driehaus SCG	Russell 2000 Growth	-2.0%	-5.1%
International Equity Composite	International Equity Composite Custom Benchmark	0.8%	0.8%
Ativo Capital	MSCI ACWI ex USA	2.3%	1.8%
Hardman Johnston	MSCI ACWI ex USA	2.0%	8.1%
BlackRock MSCI EAFE Small Cap	MSCI EAFE Small Cap	0.2%	0.5%
Brown Capital International Small Cap	MSCI ACWI ex US Small Cap	1.8%	3.4%
BlackRock Emerging Markets Free Fund	MSCI Emerging Markets	0.0%	0.0%
Goldman Sachs Emerging Markets Equity	MSCI Emerging Markets	1.1%	-0.9%
BlackRock MSCI ACWI Min Volatility Index	MSCI ACWI Minimum Volatility Index	0.2%	0.4%
Alternative Composite	Alternatives Custom Benchmark		
Intercontinental U.S. Real Estate	NFI-ODCE	-0.5%	-1.6%
Consequent Alternative Partners II, L.P.	Consequent Alt BM	0.0%	0.0%



## **COA Firefighters' Asset Allocation vs Target Allocation**



<sup>\*</sup> Year-to-date performance and allocation as of March 31, 2023



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	Barclays Aggregate
High Yield	Barclays 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	ACWI ex-U.S.
Intl Large Cap	EAFE
Intl Small Cap	EAFE Small Cap
<b>Emerging Markets</b>	MSCI EM
Commodities	S&P GSCI
Hedge Funds	HFRI Fund Weighted Composite
Real Estate	NCREIF

Based on quarterly returns for real estate and monthly returns for the rest



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#### (Preliminary, Subject to Change)



#### **Pension Fund**

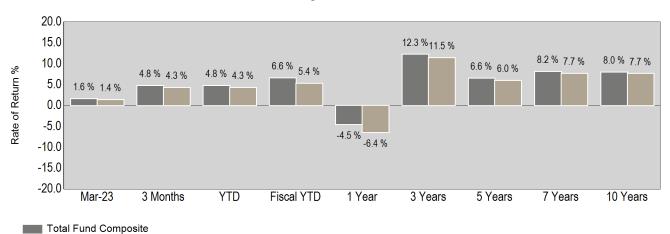
City of Atlanta General Employees
Pension Fund
Executive Summary

March 31, 2023

#### **Total Fund Composite**

Market Value: \$1,693.7 Million and 100.0% of Fund

#### Return Summary Ending March 31, 2023



#### **Return Summary YTD**

Total Fund Policy Benchmark

	Total Return
Total Fund Composite	4.8%
Fixed Income Composite	3.1%
U.S. Equity Composite	5.7%
Large Cap Composite	6.4%
Mid Cap Composite	3.8%
Small Cap Composite	5.2%
International Equity Composite	9.2%
Emerging Markets Equity Composite	5.4%
Global Equity Composite	4.3%
Real Estate Composite	-3.4%
Alternative Composite	0.0%

#### **Asset Allocation vs. Target**

	Current	Current	Policy	Difference	%
Fixed Income	\$369,056,704	21.8%	25.0%	-\$54,373,763	-3.2%
U.S. Equity	\$626,964,050	37.0%	42.0%	-\$84,399,135	-5.0%
Non-U.S. Equity	\$486,739,657	28.7%	28.0%	\$12,497,533	0.7%
Real Assets	\$61,578,806	3.6%	3.0%	\$10,767,150	0.6%
Private Equity	\$13,610,281	0.8%	2.0%	-\$20,264,156	-1.2%
Other	\$135,772,371	8.0%		\$135,772,371	8.0%
Total	\$1,693,721,869	100.0%	100.0%		

#### **Summary of Cash Flows**

	Last Three Months	Year-To-Date	One Year
Beginning Market Value	\$1,626,711,838	\$1,626,711,838	\$1,839,817,155
Net Cash Flow	-\$12,147,004	-\$12,147,004	-\$64,249,596
Net Investment Change	\$79,157,035	\$79,157,035	-\$81,845,689
Ending Market Value	\$1,693,721,869	\$1,693,721,869	\$1,693,721,869

#### **Total Fund Composite**

Market Value: \$1,693.7 Million and 100.0% of Fund

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Total Fund Composite		1,693,721,869	-12,147,004	100.0	100.0	0
Fixed Income Composite		369,056,704	-1,735	21.8	25.0	-54,373,763
Mesirow	Core Fixed Income	208,676,141	-1,619	12.3		
Garcia Hamilton	Core Fixed Income	75,478,638	-115	4.5		
State Street U.S. Aggregate Bond Index SL Fund	Core Fixed Income	84,901,925	0	5.0		
U.S. Equity Composite		626,964,050	-3,467	37.0	42.0	-84,399,135
Large Cap Composite		349,423,348	-1,509	20.6	18.0	44,553,412
Union Heritage Large Cap Core	Large-Cap Core	173,706,626	-1,509	10.3		
Blackrock S&P 500 Equity Index Fund	Large-Cap Core	175,716,722	0	10.4		
Mid Cap Composite		83,470,121	0	4.9	12.0	-119,776,503
BlackRock MidCap Equity Index	Mid-Cap Core	83,470,121	0	4.9		
Small Cap Composite		194,070,581	-1,958	11.5	12.0	-9,176,044
Channing Capital Management	Small-Cap Value	36,716,590	-331	2.2		
Earnest Partners SCC	Small-Cap Core	115,137,614	-1,387	6.8		
Legato		42,216,376	-240	2.5	-	42,216,376
Essex	Small-Cap Growth	12,093,580	-61	0.7		
Bridge City	Small-Cap Growth	12,404,045	-56	0.7		
Lebenthal Lisanti	Small-Cap Growth	11,575,888	-62	0.7		
Nicholas	Smid-Cap Growth	6,142,863	-61	0.4		
International Equity Composite		231,539,812	0	13.7	13.0	11,355,969
Artisan Partners International Value Fund (APHKX)	Non-U.S. Large-Cap Value	100,373,645	0	5.9		
Hardman Johnston	Non-U.S. Large-Cap Core	108,483,639	0	6.4		
Brown Capital International Small Cap	Non-U.S. Small-Cap Core	22,682,528	0	1.3		
Emerging Markets Equity Composite		106,111,316	0	6.3	8.0	-29,386,434
Earnest Partners EM	Emerging Markets	75,143,574	0	4.4		
Goldman Sachs Emerging Markets Equity	Emerging Markets	30,967,742	0	1.8		
Global Equity Composite		250,407,300	-3,009	14.8	7.0	131,846,769
Globalt Tactical ETF	Global Balanced	149,088,528	-3,009	8.8		
BlackRock MSCI ACWI Min Volatility Index	Global Low-Volatility	101,318,772	0	6.0		
Real Estate Composite		61,578,806	-66,946	3.6	3.0	10,767,150
Intercontinental U.S. Real Estate	Core Real Estate	42,450,634	-66,946	2.5		
JP Morgan U.S. Real Estate	Core Plus Real Estate	19,128,172	0	1.1		

#### **Total Fund Composite**

Market Value: \$1,693.7 Million and 100.0% of Fund

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Alternative Composite		13,610,281	0	0.8	2.0	-20,264,156
Consequent Alternative Partners II, LP	U.S. Private Equity FoF	13,610,281	0	0.8		
Cash Composite		34,453,599	-12,071,847	2.0	0.0	34,453,599
Cash	Cash & Equivalents	28,731,727	-12,349,111	1.7		
SEC Lending	Cash & Equivalents	0	0	0.0		
NT Operating	Cash & Equivalents	5,721,872	277,264	0.3		

#### Investment Manager

#### Annualized Performance (Net of Fees)

Market Value: \$1,693.7 Million and 100.0% of Fund

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Total Fund Composite	1.6%	4.8%	4.8%	6.6%	-4.5%	-0.6%	12.3%	6.6%	8.2%	8.0%	7.4%	Jan-97
Total Fund Policy Benchmark	1.4%	4.3%	4.3%	5.4%	-6.4%	-1.6%	11.5%	6.0%	7.7%	7.7%	7.3%	Jan-97
Fixed Income Composite	2.6%	3.1%	3.1%	0.2%	-4.5%	-4.2%	-2.2%	1.0%	1.0%	1.4%	5.2%	Apr-88
Bloomberg US Aggregate TR	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%	1.4%	5.4%	Apr-88
Mesirow	2.5%	2.8%	2.8%	0.2%	-4.6%	-4.3%	-2.3%	1.0%	1.0%	1.4%	3.5%	Jun-06
Bloomberg US Aggregate TR	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%	1.4%	3.3%	Jun-06
Garcia Hamilton	3.0%	3.7%	3.7%	0.5%	-3.5%	-3.5%	-1.3%	1.1%			1.4%	Nov-16
Bloomberg US Aggregate TR	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%	1.4%	1.1%	Nov-16
State Street U.S. Aggregate Bond Index SL Fund	2.5%	3.1%	3.1%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%		1.2%	Sep-15
Bloomberg US Aggregate TR	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%	1.4%	1.1%	Sep-15
U.S. Equity Composite	0.4%	5.7%	5.7%	11.0%	-6.4%	0.8%	19.0%	9.9%	11.7%	11.6%	8.8%	Dec-99
Russell 3000	2.7%	7.2%	7.2%	9.7%	-8.6%	1.2%	18.5%	10.4%	12.0%	11.7%	6.7%	Dec-99
Large Cap Composite	3.7%	6.4%	6.4%	12.2%	-4.5%	4.7%	18.6%	11.7%	12.9%	12.8%	9.5%	Jan-97
S&P 500	3.7%	7.5%	7.5%	10.0%	-7.7%	3.3%	18.6%	11.2%	12.4%	12.2%	8.5%	Jan-97
Union Heritage Large Cap Core	3.8%	5.3%	5.3%	14.6%	-1.0%	6.1%	17.9%	11.9%	13.4%	13.5%	11.3%	Dec-94
S&P 500	3.7%	7.5%	7.5%	10.0%	-7.7%	3.3%	18.6%	11.2%	12.4%	12.2%	10.1%	Dec-94
Blackrock S&P 500 Equity Index Fund	3.7%	7.5%	7.5%	10.0%	-7.7%	3.3%	18.6%	11.2%	12.4%		12.8%	Sep-15
S&P 500	3.7%	7.5%	7.5%	10.0%	-7.7%	3.3%	18.6%	11.2%	12.4%	12.2%	12.8%	Sep-15
Mid Cap Composite	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	7.1%	9.0%	9.2%	8.0%	Oct-95
S&P 400 MidCap	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	7.7%	9.9%	9.8%	11.0%	Oct-95
BlackRock MidCap Equity Index	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	-	-		22.1%	Mar-20
S&P 400 MidCap	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	7.7%	9.9%	9.8%	22.1%	Mar-20
Small Cap Composite	-3.7%	5.2%	5.2%	8.8%	-9.9%	-5.3%	21.3%	8.0%	11.2%	10.3%	9.9%	Oct-95
Russell 2000	-4.8%	2.7%	2.7%	6.7%	-11.6%	-8.7%	17.5%	4.7%	8.6%	8.0%	8.2%	Oct-95
Channing Capital Management	-5.4%	3.6%	3.6%	3.0%	-13.1%	-5.6%	21.6%	4.6%	7.7%	7.5%	8.0%	Feb-13
Russell 2000 Value	-7.2%	-0.7%	-0.7%	2.7%	-13.0%	-5.2%	21.0%	4.5%	7.9%	7.2%	7.6%	Feb-13
Earnest Partners SCC	-3.4%	5.8%	5.8%	11.1%	-7.1%	-2.6%	22.3%	9.4%	12.7%	12.1%	10.8%	Jul-99
Russell 2000	-4.8%	2.7%	2.7%	6.7%	-11.6%	-8.7%	17.5%	4.7%	8.6%	8.0%	7.4%	Jul-99



#### Investment Manager

#### Annualized Performance (Net of Fees)

Market Value: \$1,693.7 Million and 100.0% of Fund

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Legato	-3.1%	5.0%	5.0%	7.4%	-14.8%	-12.1%	17.5%	6.7%	9.6%		6.4%	Mar-15
Russell 2000 Growth	-2.5%	6.1%	6.1%	10.7%	-10.6%	-12.5%	13.4%	4.3%	8.7%	8.5%	6.1%	Mar-15
Essex	-4.9%	7.5%	7.5%	14.6%	-9.1%	-10.1%	24.7%	8.5%			10.2%	Mar-17
Russell 2000 Growth	-2.5%	6.1%	6.1%	10.7%	-10.6%	-12.5%	13.4%	4.3%	8.7%	8.5%	6.5%	Mar-17
Bridge City	-3.2%	3.4%	3.4%	6.0%	-8.5%	-6.7%	17.3%	8.2%			10.0%	Jul-16
Russell 2000 Growth	-2.5%	6.1%	6.1%	10.7%	-10.6%	-12.5%	13.4%	4.3%	8.7%	8.5%	7.6%	Jul-16
Lebenthal Lisanti	-1.3%	5.7%	5.7%	4.6%	-22.1%	-16.3%	13.8%	6.6%			10.8%	Jul-16
Russell 2000 Growth	-2.5%	6.1%	6.1%	10.7%	-10.6%	-12.5%	13.4%	4.3%	8.7%	8.5%	7.6%	Jul-16
Nicholas	-2.2%	3.0%	3.0%	5.5%	-18.5%						-13.5%	May-21
Russell 2000 Growth	-2.5%	6.1%	6.1%	10.7%	-10.6%	-12.5%	13.4%	4.3%	8.7%	8.5%	-13.2%	May-21
International Equity Composite	3.4%	9.2%	9.2%	15.2%	0.5%	-2.0%	16.5%	5.9%	8.8%	7.5%	7.7%	Oct-10
MSCI EAFE	2.5%	8.5%	8.5%	15.4%	-1.4%	-0.1%	13.0%	3.5%	6.2%	5.0%	5.2%	Oct-10
Artisan Partners International Value Fund (APHKX)	3.6%	10.2%	10.2%	18.2%	5.9%	5.3%	21.7%	7.2%	8.6%	7.9%	10.0%	Jun-10
MSCI EAFE	2.5%	8.5%	8.5%	15.4%	-1.4%	-0.1%	13.0%	3.5%	6.2%	5.0%	6.3%	Jun-10
Hardman Johnston	3.3%	8.9%	8.9%	13.5%	-2.0%	-6.4%	13.4%	5.5%	9.7%	7.4%	7.0%	Oct-10
MSCI ACWI ex USA	2.4%	6.9%	6.9%	10.0%	-5.1%	-3.3%	11.8%	2.5%	5.9%	4.2%	4.2%	Oct-10
Brown Capital International Small Cap	3.5%	6.5%	6.5%	10.7%	-9.3%						-22.2%	Dec-21
MSCI ACWI ex US Small Cap	0.2%	4.7%	4.7%	8.7%	-10.4%	-5.3%	15.0%	1.7%	5.7%	5.1%	-13.2%	Dec-21
Emerging Markets Equity Composite	2.2%	5.4%	5.4%	3.5%	-8.3%	-6.0%	13.0%	0.8%	6.2%		7.1%	Sep-15
MSCI Emerging Markets	3.0%	4.0%	4.0%	0.8%	-10.7%	-11.0%	7.8%	-0.9%	4.9%	2.0%	5.4%	Sep-15
Earnest Partners EM	2.2%	5.5%	5.5%	5.7%	-5.4%	-3.1%	15.2%	2.0%	7.1%		8.0%	Sep-15
MSCI Emerging Markets	3.0%	4.0%	4.0%	0.8%	-10.7%	-11.0%	7.8%	-0.9%	4.9%	2.0%	5.4%	Sep-15
Goldman Sachs Emerging Markets Equity	2.3%	5.1%	5.1%	-1.4%	-14.6%						-16.9%	Feb-22
MSCI Emerging Markets	3.0%	4.0%	4.0%	0.8%	-10.7%	-11.0%	7.8%	-0.9%	4.9%	2.0%	-11.8%	Feb-22
Global Equity Composite	3.2%	4.3%	4.3%	5.8%	-6.1%	-0.3%	11.0%	6.5%	8.0%	7.7%	7.7%	Mar-13
MSCI ACWI	3.1%	7.3%	7.3%	9.7%	-7.4%	-0.4%	15.4%	6.9%	9.2%	8.1%	8.1%	Mar-13
Globalt Tactical ETF	2.7%	6.0%	6.0%	7.2%	-6.3%	-0.9%	10.9%	6.4%	7.9%	7.4%	7.4%	Mar-13
Globalt Benchmark	1.9%	5.5%	5.5%	7.2%	-6.7%	-1.7%	11.5%	6.0%	7.6%	7.3%	7.3%	Mar-13
BlackRock MSCI ACWI Min Volatility Index	3.8%	1.7%	1.7%	3.9%	-5.7%	1.3%					6.3%	Apr-20
MSCI ACWI Minimum Volatility Index	3.7%	1.5%	1.5%	3.5%	-6.1%	1.0%	8.2%	5.0%	6.2%	6.7%	5.9%	Apr-20

## Annualized Performance (Net of Fees)

Market Value: \$1,693.7 Million and 100.0% of Fund

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Real Estate Composite	-3.4%	-3.4%	-3.4%	-9.2%	-3.3%	10.5%	7.2%	6.7%	7.3%		7.8%	Feb-15
NFI-ODCE	-1.1%	-3.3%	-3.3%	-8.0%	-3.9%	10.6%	7.5%	6.6%	6.8%	8.5%	7.5%	Feb-15
Intercontinental U.S. Real Estate	-3.8%	-3.8%	-3.8%	-8.5%	-2.1%	10.2%	7.8%	7.6%	8.4%		8.8%	Mar-15
NFI-ODCE	-1.1%	-3.3%	-3.3%	-8.0%	-3.9%	10.6%	7.5%	6.6%	6.8%	8.5%	7.5%	Mar-15
JP Morgan U.S. Real Estate	-2.7%	-2.7%	-2.7%	-10.6%	-5.8%	10.7%	6.0%	5.0%			5.7%	Jul-16
NFI-ODCE	-1.1%	-3.3%	-3.3%	-8.0%	-3.9%	10.6%	7.5%	6.6%	6.8%	8.5%	6.7%	Jul-16
Alternative Composite	0.0%	0.0%	0.0%	0.0%	-6.9%	-0.1%	10.7%	1.0%	2.3%	1.8%	2.7%	Oct-12
Custom Alternative Target Benchmark	1.7%	4.9%	4.9%	7.0%	-5.6%	1.6%	14.8%	8.3%	9.4%	9.1%	9.7%	Oct-12
Consequent Alternative Partners II, LP	0.0%	0.0%	0.0%	0.0%	-6.9%	-0.1%	10.7%	1.0%	2.3%	2.0%	2.1%	Jan-13
Consequent Alt BM	0.0%	0.0%	0.0%	0.0%	-6.9%	-0.1%	10.7%	1.0%	2.3%	2.0%	2.1%	Jan-13

# Calendar Performance (Net of Fees)

Market Value: \$1,693.7 Million and 100.0% of Fund

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	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Total Fund Composite	-14.0%	13.8%	16.4%	22.0%	-5.9%	18.6%	8.4%	-0.6%	8.0%	23.0%	13.4%
Total Fund Policy Benchmark	-15.0%	13.4%	15.0%	22.4%	-6.0%	17.3%	9.1%	0.2%	8.8%	20.4%	12.4%
InvMetrics Public DB > \$1B Net Rank	87	68	4	4	86	6	29	56	4	1	26
Fixed Income Composite	-12.5%	-1.9%	8.2%	8.2%	0.2%	3.5%	2.7%	0.8%	4.9%	-1.7%	4.8%
Bloomberg US Aggregate TR	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
InvMetrics Public DB Total Fix Inc Net Rank	68	96	37	63	41	70	68	31	27	59	59
Mesirow	-12.7%	-1.9%	8.6%	8.8%	-0.3%	3.4%	3.1%	-0.2%	6.2%	-2.1%	6.1%
Bloomberg US Aggregate TR	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
eV US Core Fixed Inc Net Rank	34	81	37	60	61	77	51	89	27	75	44
Garcia Hamilton	-11.1%	-2.3%	8.1%	7.1%	0.8%	3.6%					
Bloomberg US Aggregate TR	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
eV US Core Fixed Inc Net Rank	8	94	52	93	10	64		-		-	
State Street U.S. Aggregate Bond Index SL Fund	-13.2%	-1.6%	7.5%	8.7%	0.0%	3.6%	2.7%		-		
Bloomberg US Aggregate TR	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
eV US Core Fixed Inc Net Rank	61	54	74	68	34	65	71				
U.S. Equity Composite	-16.2%	23.8%	19.2%	30.3%	-6.3%	22.3%	13.0%	-0.2%	10.9%	38.1%	16.5%
B # 0000	40.007	05.70/	00.00/	24 00/	-5.2%	21.1%	12.7%	0.5%	12.6%	22 60/	16.4%
Russell 3000	-19.2%	25.7%	20.9%	31.0%	-3.2%	21.1/0	12.170	0.070	12.0%	33.6%	10.470
InvMetrics Public DB US Eq Net Rank	-19.2% 23	25.7% 82	20.9%	40	-5.2% 58	13	45	51	51	6	24
InvMetrics Public DB US Eq Net Rank	23	82	28	40	58	13	45	51	51	6	24
InvMetrics Public DB US Eq Net Rank  Large Cap Composite	23 <b>-14.2</b> %	82 <b>25.2</b> %	28 <b>19.1%</b>	40 <b>32.2</b> %	58 -3.4%	13 23.5%	45 10.9%	51 <b>2.7</b> %	51 <b>13.5</b> %	6 <b>32.7%</b>	24 <b>15.6</b> %
InvMetrics Public DB US Eq Net Rank  Large Cap Composite  S&P 500	-14.2% -18.1%	82 25.2% 28.7%	28 19.1% 18.4%	40 32.2% 31.5%	-3.4% -4.4%	23.5% 21.8%	45 10.9% 12.0%	51 2.7% 1.4%	51 13.5% 13.7%	6 32.7% 32.4%	24 15.6% 16.0%
InvMetrics Public DB US Eq Net Rank  Large Cap Composite  S&P 500  Union Heritage Large Cap Core	23 -14.2% -18.1% -9.9%	82 25.2% 28.7% 19.7%	28 19.1% 18.4% 19.5%	40 32.2% 31.5% 33.6%	-3.4% -4.4% -1.1%	13 23.5% 21.8% 28.0%	45 10.9% 12.0% 8.3%	51 2.7% 1.4% 5.5%	51 13.5% 13.7% 12.0%	6 32.7% 32.4% 32.8%	24 15.6% 16.0% 15.1%
InvMetrics Public DB US Eq Net Rank  Large Cap Composite  S&P 500  Union Heritage Large Cap Core  S&P 500  eV US Large Cap Core Equity	23 -14.2% -18.1% -9.9% -18.1%	82 25.2% 28.7% 19.7% 28.7%	28 19.1% 18.4% 19.5% 18.4%	40 32.2% 31.5% 33.6% 31.5%	-3.4% -4.4% -1.1% -4.4%	13 23.5% 21.8% 28.0% 21.8%	45 10.9% 12.0% 8.3% 12.0%	51 2.7% 1.4% 5.5% 1.4%	51 13.5% 13.7% 12.0% 13.7%	6 32.7% 32.4% 32.8% 32.4%	24 15.6% 16.0% 15.1% 16.0%
InvMetrics Public DB US Eq Net Rank  Large Cap Composite  S&P 500  Union Heritage Large Cap Core  S&P 500  eV US Large Cap Core Equity  Net Rank	23 -14.2% -18.1% -9.9% -18.1% 15	82 25.2% 28.7% 19.7% 28.7% 92	28 19.1% 18.4% 19.5% 18.4% 24	32.2% 31.5% 33.6% 31.5% 12	-3.4% -4.4% -1.1% -4.4% 9	23.5% 21.8% 28.0% 21.8%	45 10.9% 12.0% 8.3% 12.0% 62	51 2.7% 1.4% 5.5% 1.4% 5	51 13.5% 13.7% 12.0% 13.7%	6 32.7% 32.4% 32.8% 32.4%	24 15.6% 16.0% 15.1% 16.0%
InvMetrics Public DB US Eq Net Rank  Large Cap Composite  S&P 500  Union Heritage Large Cap Core  S&P 500  eV US Large Cap Core Equity Net Rank  Blackrock S&P 500 Equity Index Fund	23 -14.2% -18.1% -9.9% -18.1% 15 -18.1%	82 25.2% 28.7% 19.7% 28.7% 92 28.7%	28 19.1% 18.4% 19.5% 18.4% 24 18.4%	32.2% 31.5% 33.6% 31.5% 12 31.5%	-3.4% -4.4% -1.1% -4.4% 9	13 23.5% 21.8% 28.0% 21.8% 4 21.9%	45 10.9% 12.0% 8.3% 12.0% 62 12.0%	51 2.7% 1.4% 5.5% 1.4% 5	51  13.5% 13.7% 12.0% 13.7% 59	32.7% 32.4% 32.8% 32.4% 39	24 15.6% 16.0% 15.1% 16.0% 46
InvMetrics Public DB US Eq Net Rank  Large Cap Composite  S&P 500  Union Heritage Large Cap Core  S&P 500  eV US Large Cap Core Equity Net Rank  Blackrock S&P 500 Equity Index Fund  S&P 500  eV US Large Cap Core Equity Net Rank	23 -14.2% -18.1% -9.9% -18.1% -15 -18.1% -64	82 25.2% 28.7% 19.7% 28.7% 92 28.7% 28.7% 29	28  19.1% 18.4% 19.5% 18.4% 24  18.4% 18.4% 29	32.2% 31.5% 33.6% 31.5% 12 31.5% 31.5% 28	-3.4% -4.4% -1.1% -4.4% -9 -4.4% -4.4% -31	23.5% 21.8% 28.0% 21.8% 4 21.9% 21.8% 46	45 10.9% 12.0% 8.3% 12.0% 62 12.0% 12.0% 20	51  2.7%  1.4%  5.5%  1.4%  5   1.4%	51  13.5% 13.7% 12.0% 13.7% 59 13.7%	32.7% 32.4% 32.8% 32.4% 39  32.4%	24 15.6% 16.0% 15.1% 16.0% 46 16.0%
InvMetrics Public DB US Eq Net Rank  Large Cap Composite  S&P 500  Union Heritage Large Cap Core  S&P 500  eV US Large Cap Core Equity  Net Rank  Blackrock S&P 500 Equity Index Fund  S&P 500  eV US Large Cap Core Equity	23 -14.2% -18.1% -9.9% -18.1% 15 -18.1% -18.1%	82 25.2% 28.7% 19.7% 28.7% 92 28.7% 28.7%	28 19.1% 18.4% 19.5% 18.4% 24 18.4% 18.4%	40 32.2% 31.5% 33.6% 31.5% 12 31.5% 31.5%	-3.4% -4.4% -1.1% -4.4% 9 -4.4%	23.5% 21.8% 28.0% 21.8% 4 21.9% 21.8%	45 10.9% 12.0% 8.3% 12.0% 62 12.0% 12.0%	51 2.7% 1.4% 5.5% 1.4% 5	51  13.5% 13.7% 12.0% 13.7% 59	32.7% 32.4% 32.8% 32.4% 39	24 15.6% 16.0% 15.1% 16.0% 46
Large Cap Composite S&P 500  Union Heritage Large Cap Core S&P 500 eV US Large Cap Core Equity Net Rank  Blackrock S&P 500 Equity Index Fund S&P 500 eV US Large Cap Core Equity Net Rank  Mid Cap Composite	23 -14.2% -18.1% -9.9% -18.1% -15 -18.1% -18.1% -64 -13.0%	82 25.2% 28.7% 19.7% 28.7% 92 28.7% 29 24.7%	28 19.1% 18.4% 19.5% 18.4% 24 18.4% 29 13.1%	32.2% 31.5% 33.6% 31.5% 12 31.5% 31.5% 28	-3.4% -4.4% -1.1% -4.4% -9 -4.4% -31 -11.4%	13 23.5% 21.8% 28.0% 21.8% 4 21.9% 21.8% 46	45 10.9% 12.0% 8.3% 12.0% 62 12.0% 20 12.0%	51  2.7%  1.4%  5.5%  1.4%  5   1.4%   -5.8%	51  13.5% 13.7%  12.0% 13.7% 59  13.7% 13.2%	6 32.7% 32.4% 32.8% 32.4% 39 32.4% 37.4%	24 15.6% 16.0% 15.1% 16.0% 46 16.0% 19.9%
Large Cap Composite  S&P 500  Union Heritage Large Cap Core  S&P 500  eV US Large Cap Core Equity Net Rank  Blackrock S&P 500 Equity Index Fund  S&P 500  eV US Large Cap Core Equity Net Rank  Mid Cap Composite  S&P 400 MidCap	23 -14.2% -18.1% -9.9% -18.1% -15 -18.1% -44 -13.0% -13.1%	82 25.2% 28.7% 19.7% 28.7% 92 28.7% 29 24.7% 24.8%	28 19.1% 18.4% 19.5% 18.4% 24 18.4% 29 13.1% 13.7%	32.2% 31.5% 33.6% 31.5% 12 31.5% 31.5% 28 23.4% 26.2%	58 -3.4% -4.4% -1.1% -4.4% 9 -4.4% 31 -11.4% -11.1%	13 23.5% 21.8% 28.0% 21.8% 4 21.9% 21.8% 46 19.9% 16.2%	45 10.9% 12.0% 8.3% 12.0% 62 12.0% 12.0% 20 12.0%	51  2.7%  1.4%  5.5%  1.4%  5   1.4%   -5.8%  -2.2%	51  13.5% 13.7% 12.0% 13.7% 59 13.7% 13.2% 9.8%	6 32.7% 32.4% 32.8% 32.4% 39 32.4% 37.4%	24 15.6% 16.0% 15.1% 16.0% 46 16.0% 19.9% 17.9%

## Calendar Performance (Net of Fees)

Market Value: \$1,693.7 Million and 100.0% of Fund

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	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Small Cap Composite	-19.4%	20.9%	23.7%	29.5%	-12.2%	19.7%	21.1%	-3.0%	6.7%	37.3%	14.0%
Russell 2000	-20.4%	14.8%	20.0%	25.5%	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%
Channing Capital Management	-17.3%	19.5%	16.4%	24.8%	-17.2%	6.7%	28.1%	-5.3%	4.5%		
Russell 2000 Value	-14.5%	28.3%	4.6%	22.4%	-12.9%	7.8%	31.7%	-7.5%	4.2%	34.5%	18.0%
eV US Small Cap Value Equity Net Rank	88	91	13	37	72	78	32	57	55		
Earnest Partners SCC	-15.7%	21.7%	22.3%	32.6%	-13.1%	24.1%	25.0%	-2.0%	9.4%	36.1%	15.8%
Russell 2000	-20.4%	14.8%	20.0%	25.5%	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%
eV US Small Cap Equity Net Rank	45	59	37	15	61	19	27	38	10	73	43
Legato	-29.7%	19.3%	32.5%	25.7%	-5.5%	21.5%	2.9%				
Russell 2000 Growth	-26.4%	2.8%	34.6%	28.5%	-9.3%	22.2%	11.3%	-1.4%	5.6%	43.3%	14.6%
Essex	-27.7%	28.7%	28.2%	26.3%	-6.5%						
Russell 2000 Growth	-26.4%	2.8%	34.6%	28.5%	-9.3%	22.2%	11.3%	-1.4%	5.6%	43.3%	14.6%
eV US Small Cap Equity Net Rank	84	31	30	38	28						
Bridge City	-20.6%	20.3%	20.6%	25.0%	0.2%	16.0%	-	-	-	-	
Russell 2000 Growth	-26.4%	2.8%	34.6%	28.5%	-9.3%	22.2%	11.3%	-1.4%	5.6%	43.3%	14.6%
eV US Small Cap Equity Net Rank	66	61	39	48	10	42					
Lebenthal Lisanti	-37.4%	11.8%	52.1%	28.2%	-1.7%	28.9%					
Russell 2000 Growth	-26.4%	2.8%	34.6%	28.5%	-9.3%	22.2%	11.3%	-1.4%	5.6%	43.3%	14.6%
eV US Small Cap Equity Net Rank	97	82	11	28	14	8					
Nicholas	-31.0%										
Russell 2000 Growth	-26.4%	2.8%	34.6%	28.5%	-9.3%	22.2%	11.3%	-1.4%	5.6%	43.3%	14.6%
eV US Small Cap Equity Net Rank	91				-						
International Equity Composite	-17.7%	8.0%	23.4%	29.1%	-14.6%	30.4%	3.4%	-1.0%	0.0%	24.0%	19.6%
MSCI EAFE	-14.5%	11.3%	7.8%	22.0%	-13.8%	25.0%	1.0%	-0.8%	-4.9%	22.8%	17.3%
Artisan Partners International Value Fund (APHKX)	-6.8%	17.0%	8.8%	24.2%	-15.4%	24.1%	5.7%	-1.5%	-0.4%	30.7%	23.0%
MSCI EAFE	-14.5%	11.3%	7.8%	22.0%	-13.8%	25.0%	1.0%	-0.8%	-4.9%	22.8%	17.3%
eV EAFE Large Cap Value Net Rank	37	3	1	6	35	47	29	38	1	4	5
Hardman Johnston	-23.6%	1.3%	35.7%	33.5%	-13.8%	37.4%	1.1%	-0.4%	0.4%	17.3%	15.6%
MSCI ACWI ex USA	-16.0%	7.8%	10.7%	21.5%	-14.2%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%
eV ACWI ex-US Large Cap Equity Net Rank	79	92	4	7	34	8	51	30	5	60	81



## Calendar Performance (Net of Fees)

Market Value: \$1,693.7 Million and 100.0% of Fund

Ca	lend	lar	Year	

						Calenda	rrear				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Brown Capital International Small Cap	-31.4%					-	-				
MSCI ACWI ex US Small Cap	-20.0%	12.9%	14.2%	22.4%	-18.2%	31.6%	3.9%	2.6%	-4.0%	19.7%	18.5%
Foreign Small/Mid Growth MStar MF Rank	66			-							
Emerging Markets Equity Composite	-15.3%	1.6%	12.4%	23.6%	-15.5%	36.0%	11.8%				-
MSCI Emerging Markets	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
Earnest Partners EM	-10.2%	1.6%	12.4%	23.6%	-15.5%	36.0%	11.9%				
MSCI Emerging Markets	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
eV Emg Mkts Equity Net Rank	9	46	73	27	42	57	31				
Goldman Sachs Emerging Markets Equity								-			
MSCI Emerging Markets	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
eV Emg Mkts All Cap Equity Net Rank											
Blobal Equity Composite	-13.8%	13.1%	15.4%	22.4%	-4.8%	18.4%	7.6%	-1.0%	8.9%		
MSCI ACWI	-18.4%	18.5%	16.3%	26.6%	-9.4%	24.0%	7.9%	-2.4%	4.2%	22.8%	16.1%
eV Global Core Equity Net Rank	29	88	50	70	13	88	22	66	11		
Globalt Tactical ETF	-15.9%	12.7%	16.3%	22.4%	-5.1%	18.1%	7.3%	-1.3%	8.6%	-	
Globalt Benchmark	-16.4%	13.8%	15.1%	22.4%	-6.1%	17.3%	9.1%	-1.1%	6.8%		
eV Global Balanced Net Rank	61	47	30	34	17	12	54	39	13		
BlackRock MSCI ACWI Min Volatility Index	-10.0%	14.2%				-	-		-		-
MSCI ACWI Minimum Volatility Index	-10.3%	13.9%	2.7%	21.1%	-1.6%	17.9%	7.4%	2.8%	11.0%	16.9%	10.1%
eV Global Low Volatility Equity Net Rank	55	76									
eal Estate Composite	5.8%	21.4%	-0.2%	5.6%	8.0%	6.7%	9.7%		-		-
NFI-ODCE	6.5%	21.1%	0.3%	4.4%	7.4%	6.7%	7.8%	14.0%	11.5%	12.9%	9.8%
InvMetrics Public DB Real Estate Priv Net Rank	73	67	78	59	28	61	6				
Intercontinental U.S. Real Estate	7.4%	20.1%	1.0%	8.2%	9.2%	7.5%	11.1%				
NFI-ODCE	6.5%	21.1%	0.3%	4.4%	7.4%	6.7%	7.8%	14.0%	11.5%	12.9%	9.8%
JP Morgan U.S. Real Estate	2.4%	23.7%	-2.0%	2.1%	5.5%	5.6%		-			
NFI-ODCE	6.5%	21.1%	0.3%	4.4%	7.4%	6.7%	7.8%	14.0%	11.5%	12.9%	9.8%
Iternative Composite	-9.2%	15.6%	22.2%	-20.0%	4.8%	7.0%	0.1%	0.5%	0.4%	5.8%	
Custom Alternative Target Benchmark	-13.5%	19.2%	17.1%	22.3%	-4.1%	16.1%	8.7%	1.0%	9.6%	24.4%	12.5%
InvMetrics Public DB Alts Net Rank	75	79	6	99	44	52	96	74	89	90	
Consequent Alternative Partners II, LP	-9.2%	15.6%	22.2%	-20.0%	4.8%	7.0%	0.1%	0.4%	2.7%		
Consequent Alt BM	-9.2%	15.6%	22.2%	-20.0%	4.8%	7.0%	0.1%	0.4%	2.7%	4.1%	

Private Markets Composite

## Performance Summary

### **Private Market Investments Overview**

Investments		Commitr	ments	Contributions &	Distributions	Valuati	ions		Perform	nance	
Investment Name	Vintage Year	Commitment (\$)	Unfunded Commitment (\$)	Cumulative Contributions (\$)	Cumulative Distributions (\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	RVPI	IRR (%)
GrayCo Alternative Partners II, L.P.	2012	28,000,000	3,582,424	24,417,576	15,686,750	13,610,281	29,297,031	0.64	1.20	0.56	2.29
Total		28,000,000	3.582.424	24.417.576	15.686.750	13.610.281	29.297.031	0.64	1.20	0.56	2.29

MWDBE Composite Market Values

		Asset Class		Market Value	% of Portfolio	% of Total Fund
Total MWDBE Composite				\$541,081,946	100.0%	31.9%
Garcia Hamilton	(H)	Core Fixed Incon	пе	\$75,478,638	13.9%	4.5%
Union Heritage	(AA)	Large-Cap Core		\$173,706,626	32.1%	10.3%
Channing Capital Management	(AA)	Small-Cap Value		\$36,716,590	6.8%	2.2%
Earnest Partners SCC	(AA)	Small-Cap Core		\$115,137,614	21.3%	6.8%
Legato	(AA)	Small-Cap Growt	h	\$42,216,376	7.8%	2.5%
Brown Capital International Small Cap	(AA)	Non-U.S. Small (	Cap Core	\$22,682,528	4.2%	1.3%
Earnest Partners EM	(AA)	Emerging Market	S	\$75,143,574	13.9%	4.4%
(AA) African American						
(A) Asian			Actual %			
(H) Hispanic		Minority	31.9%			

0.0%

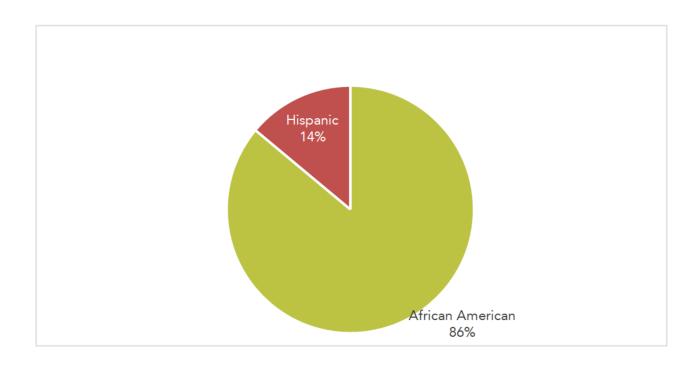
0.0%

Female

Disabled

(NA) Native American

(W) Women



<sup>\*</sup>Please note: our calculations do not include Consequent Capital Management

## Fee Schedule

Market Value: \$1,693.7 Million and 100.0% of Fund

		Wante	value. ψ1,095.7 Willion a	100.070 01
Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	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 0.100% on the balance	0.22% \$457,352	0.22%
Core Fixed Income	Garcia Hamilton	0.18% on the balance	0.18% \$135,862	0.26%
Core Fixed Income	State Street US Agg	0.03% on the balance	0.03% \$25,471	0.06%
Large-Cap Core	Union Heritage	0.50% on the first \$20 million 0.45% on the next \$15 million 0.35% on the balance	0.38% \$652,973	0.44%
Large-Cap Core	Blackrock S&P 500 Equity Index Fund	0.01% on the balance	0.01% \$17,572	0.02%
Mid-Cap Core	BlackRock MidCap Equity Index	0.01% on the balance	0.01% \$8,347	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	0.72% \$263,658	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	0.54% \$620,688	0.77%
Small-Cap Cgrowth	Legato	0.60% on the balance	0.60% \$347,442	0.80%
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	0.60% \$654,918	0.65%
Non-U.S. Large-Cap Value	Artisan Partners International Value Fund (APHKX)	1.03% on the balance	1.03% \$1,033,849	0.92%
Emerging Markets	Earnest Partners EM	1.00% on the balance	1.00% \$751,436	0.85%
Emerging Markets	Goldman Sachs Emerging Markets Equity	0.45% on the balance	0.45% \$139,355	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	0.35% \$522,721	0.85%
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	1.10% \$197,378	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	1.42% \$270,846	1.00%
U.S. Private Equity FoF	Consequent Alternative Partners II, LP	1.00% on Committed Capital	2.06% \$280,000	2.06%
Global Low-Volatility	BlackRock MSCI ACWI Min Volatility Index	0.025% on the balance	0.03% \$25,330	0.42%
Non-U.S. Small-Cap Core	Brown Capital International Small Cap	1.06% on the balance	1.06% \$240,435	1.29%
Total Investment Management Fees			0.39% \$6,645,631	0.46%

<sup>&</sup>lt;sup>1</sup> Expense Ratio & Estimated Annual Fee are Based on Market Value at Month End.



<sup>&</sup>lt;sup>2</sup> Source: 2019 Marquette Associates Investment Management Fee Study.

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## (Preliminary, Subject to Change)



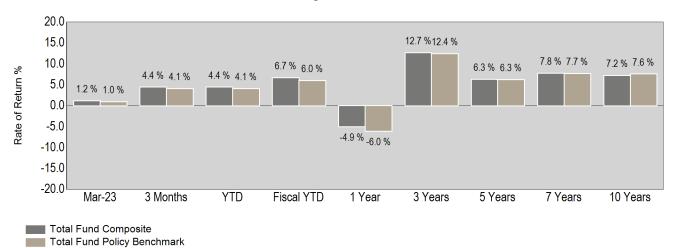
### **Pension Fund**

City of Atlanta Police Officers
Pension Fund
Executive Summary

March 31, 2023

Market Value: \$1,334.0 Million and 100.0% of Fund

### Return Summary Ending March 31, 2023



### **Return Summary YTD**

	Total Return
Total Fund Composite	4.4%
Fixed Income Composite	2.9%
U.S. Equity Composite	5.3%
International Equity Composite	5.6%
Alternative Composite	-2.1%

#### Asset Allocation vs. Target

	Current	Current	Policy	Difference	%
Fixed Income Composite	\$341,328,086	25.6%	25.0%	\$7,823,380	0.6%
U.S. Equity Composite	\$559,776,023	42.0%	42.0%	-\$511,883	0.0%
International Equity Composite	\$365,282,310	27.4%	28.0%	-\$8,242,960	-0.6%
Alternative Composite	\$29,260,354	2.2%	5.0%	-\$37,440,587	-2.8%
Cash Composite	\$38,372,050	2.9%	0.0%	\$38,372,050	2.9%
Total	\$1,334,018,823	100.0%	100.0%		

### **Summary of Cash Flows**

	Last Three Months	Year-To-Date	One Year
Beginning Market Value	\$1,282,133,971	\$1,282,133,971	\$1,436,872,244
Net Cash Flow	-\$5,454,765	-\$5,454,765	-\$32,436,453
Net Investment Change	\$57,339,617	\$57,339,617	-\$70,416,967
Ending Market Value	\$1,334,018,823	\$1,334,018,823	\$1,334,018,823

Market Value: \$1,334.0 Million and 100.0% of Fund

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Total Fund Composite		1,334,018,823	-5,454,765	100.0	100.0	0
Fixed Income Composite		341,328,086	-2,130	25.6	25.0	7,823,380
Mesirow	Core Fixed Income	194,202,426	-2,044	14.6		
Garcia Hamilton	Int. Govt. Fixed Income	54,843,200	-86	4.1		
BlackRock U.S.Aggregate Bond Index	Core Fixed Income	92,282,460	0	6.9		
U.S. Equity Composite		559,776,023	-3,277	42.0	42.0	-511,883
BlackRock Russell 1000 Index Fund	Large-Cap Core	225,510,877	0	16.9		
BlackRock Mid Cap Equity Index Fund	Mid-Cap Core	199,302,596	0	14.9		
Macquarie SCC	Small-Cap Core	60,707,734	-2,561	4.6		
Earnest Partners SCC	Small-Cap Core	45,518,738	-519	3.4		
Driehaus SCG	Small-Cap Growth	28,736,078	-198	2.2		
International Equity Composite		365,282,310	0	27.4	28.0	-8,242,960
Artisan International Large Cap Value (APHKX)	Non-U.S. Large-Cap Value	88,402,337	0	6.6		
Hardman Johnston	Non-U.S. Large-Cap Core	73,749,912	0	5.5		
BlackRock MSCI EAFE Small Cap Index	Non-U.S. Small-Cap Core	8,611,329	0	0.6		
Brown Capital International Small Cap	Non-U.S. Small-Cap Core	11,341,264	0	0.9		
BlackRock Emerging Markets Free Fund	Emerging Markets	11,681,385	0	0.9		
Goldman Sachs Emerging Markets Equity	Emerging Markets	19,472,617	0	1.5		
Global Low Volatility Composite		152,023,466	0	11.4	-	152,023,466
BlackRock MSCI ACWI Min Volatility Index	Global Low-Volatility	152,023,466	0	11.4		
Alternative Composite		29,260,354	-736,968	2.2	5.0	-37,440,587
Intercontinental U.S. Real Estate	Core Real Estate	16,331,439	-99,283	1.2		
Consequent Alternative Partners II, LP	U.S. Private Equity FoF	10,179,039	0	0.8		
Pharos Capital Partners III	LBO Private Equity	2,749,876	-637,685	0.2		
Cash Composite		38,372,050	-4,712,390	2.9	0.0	38,372,050
Cash	Cash & Equivalents	33,759,283	-4,905,487	2.5		
Transition Cash Account	Cash & Equivalents	5,190	-2	0.0		
NT Operating	Cash & Equivalents	4,607,577	193,099	0.3		

## Annualized Performance (Net of Fees)

Market Value: \$1,334.0 Million and 100.0% of Fund

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs		10 Yrs	Inception	Inception Date
Total Fund Composite	1.2%	4.4%	4.4%	6.7%	-4.9%	-1.5%	12.7%	6.3%	7.8%	7.2%	8.0%	Jan-88
Total Fund Policy Benchmark	1.0%	4.1%	4.1%	6.0%	-6.0%	-1.7%	12.4%	6.3%	7.7%	7.6%	8.7%	Jan-88
Fixed Income Composite	2.6%	2.9%	2.9%	0.5%	-3.9%	-4.0%	-2.0%	0.5%	0.7%	1.2%	2.6%	Sep-07
Fixed Income Composite Blended Benchmark	2.4%	2.7%	2.7%	0.2%	-3.6%	-3.9%	-2.2%	0.8%	0.8%	1.3%	2.9%	Sep-07
Mesirow	2.6%	2.8%	2.8%	0.5%	-4.4%	-4.3%	-2.2%	1.1%	1.0%	1.4%	2.3%	May-10
Bloomberg US Aggregate TR	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%	1.4%	2.2%	May-10
Garcia Hamilton	2.5%	2.9%	2.9%	1.4%	-0.6%	-1.9%	-0.2%	1.5%	1.3%		1.7%	Apr-14
Bloomberg US Govt/Credit Int TR	2.3%	2.3%	2.3%	0.7%	-1.7%	-2.9%	-1.3%	1.4%	1.1%	1.3%	1.4%	Apr-14
BlackRock U.S.Aggregate Bond Index	2.5%	3.2%	3.2%	0.0%	-4.7%	-4.4%	-2.7%				-2.7%	Mar-20
Bloomberg US Aggregate TR	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%	1.4%	-2.8%	Mar-20
U.S. Equity Composite	-0.8%	5.3%	5.3%	10.4%	-7.5%	-1.1%	18.8%	8.5%	10.4%	9.6%	7.4%	Jan-08
Domestic Equity Composite Blended Benchmark	-1.0%	5.2%	5.2%	10.1%	-8.0%	-0.6%	19.0%	9.1%	11.1%	10.9%	9.4%	Jan-08
BlackRock Russell 1000 Index Fund	3.2%	7.5%	7.5%	9.9%	-8.4%	1.9%	18.6%				10.8%	Oct-19
Russell 1000	3.2%	7.5%	7.5%	9.9%	-8.4%	1.9%	18.6%	10.9%	12.2%	12.0%	10.8%	Oct-19
BlackRock Mid Cap Equity Index Fund	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%				8.6%	Nov-19
S&P 400 MidCap	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	7.7%	9.9%	9.8%	8.6%	Nov-19
Macquarie SCC	-4.1%	2.5%	2.5%	6.6%	-8.3%	-2.9%	19.6%	6.9%			6.6%	Sep-17
Russell 2000	-4.8%	2.7%	2.7%	6.7%	-11.6%	-8.7%	17.5%	4.7%	8.6%	8.0%	4.9%	Sep-17
Earnest Partners SCC	-3.4%	5.8%	5.8%	11.1%	-7.1%						-7.7%	Oct-21
Russell 2000	-4.8%	2.7%	2.7%	6.7%	-11.6%	-8.7%	17.5%	4.7%	8.6%	8.0%	-14.5%	Oct-21
Driehaus SCG	-2.0%	4.1%	4.1%	8.6%	-14.7%						-24.8%	Oct-21
Russell 2000 Growth	-2.5%	6.1%	6.1%	10.7%	-10.6%	-12.5%	13.4%	4.3%	8.7%	8.5%	-18.7%	Oct-21

## Annualized Performance (Net of Fees)

Market Value: \$1,334.0 Million and 100.0% of Fund

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
International Equity Composite	3.5%	5.6%	5.6%	8.9%	-3.5%	-2.7%	15.5%	5.5%	8.6%	7.2%	8.5%	Jun-10
International Equity Composite Blended Benchmark	2.9%	4.6%	4.6%	7.5%	-5.5%	-2.3%	11.9%	2.8%	5.9%	4.5%	5.8%	Jun-10
Artisan International Large Cap Value (APHKX)	3.6%	10.2%	10.2%	18.2%	5.9%	5.3%	21.7%	7.2%	8.6%	7.9%	10.0%	Jun-10
MSCI EAFE	2.5%	8.5%	8.5%	15.4%	-1.4%	-0.1%	13.0%	3.5%	6.2%	5.0%	6.3%	Jun-10
Hardman Johnston	3.3%	8.9%	8.9%	13.5%	-2.0%	-6.4%	13.3%	5.5%	9.7%	7.4%	7.7%	Jun-10
MSCI ACWI ex USA	2.4%	6.9%	6.9%	10.0%	-5.1%	-3.3%	11.8%	2.5%	5.9%	4.2%	5.4%	Jun-10
BlackRock MSCI EAFE Small Cap Index	0.0%	5.1%	5.1%	10.2%	-9.1%	-6.2%					9.2%	Apr-20
MSCI EAFE Small Cap	-0.2%	4.9%	4.9%	9.5%	-9.8%	-6.8%	12.1%	0.9%	5.3%	5.9%	8.7%	Apr-20
Brown Capital International Small Cap	3.5%	6.5%	6.5%	10.7%	-9.3%						-22.2%	Dec-21
MSCI ACWI ex US Small Cap	0.2%	4.7%	4.7%	8.7%	-10.4%	-5.3%	15.0%	1.7%	5.7%	5.1%	-13.2%	Dec-21
BlackRock Emerging Markets Free Fund	3.2%	4.0%	4.0%	0.7%	-10.7%	-11.1%		-	-		4.9%	Apr-20
MSCI Emerging Markets	3.0%	4.0%	4.0%	0.8%	-10.7%	-11.0%	7.8%	-0.9%	4.9%	2.0%	4.9%	Apr-20
Goldman Sachs Emerging Markets Equity	2.3%	5.1%	5.1%	-1.4%	-14.6%						-16.9%	Feb-22
MSCI Emerging Markets	3.0%	4.0%	4.0%	0.8%	-10.7%	-11.0%	7.8%	-0.9%	4.9%	2.0%	-11.8%	Feb-22
BlackRock MSCI ACWI Min Volatility Index	3.8%	1.7%	1.7%	3.9%	-5.7%	1.3%					6.3%	Apr-20
MSCI ACWI Minimum Volatility Index	3.7%	1.5%	1.5%	3.5%	-6.1%	1.0%	8.2%	5.0%	6.2%	6.7%	5.9%	Apr-20
Alternative Composite	-2.1%	-2.1%	-2.1%	-3.9%	-2.8%	4.8%	11.1%	4.4%	5.2%	4.3%	4.4%	Dec-12
Alternatives Custom Benchmark	-0.6%	-1.9%	-1.9%	-4.9%	-6.2%	3.7%	12.2%	4.6%	5.2%			Dec-12
Intercontinental U.S. Real Estate	-3.8%	-3.8%	-3.8%	-8.6%	-2.3%	10.1%	7.8%	7.6%	8.4%		9.2%	Aug-14
NFI-ODCE	-1.1%	-3.3%	-3.3%	-8.0%	-3.9%	10.6%	7.5%	6.6%	6.8%	8.5%	7.8%	Aug-14
Consequent Alternative Partners II, LP	0.0%	0.0%	0.0%	0.0%	-6.9%	-0.1%	10.7%	1.0%	2.3%	1.2%		Oct-12
Custom Consequent Alt BM	0.0%	0.0%	0.0%	0.0%	-6.9%	-0.1%	10.7%	1.0%	2.3%	1.2%		Oct-12

# Calendar Performance (Net of Fees)

Market Value: \$1,334.0 Million and 100.0% of Fund

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	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
<b>Total Fund Composite</b>	-14.7%	13.8%	17.7%	21.3%	-6.2%	15.6%	9.2%	-1.9%	5.0%	22.5%	12.8%
Total Fund Policy Benchmark	-14.7%	13.6%	15.7%	22.0%	-5.4%	15.0%	9.9%	-0.3%	8.3%	21.3%	12.9%
InvMetrics Public DB > \$1B Net Rank	94	68	2	6	89	50	10	85	56	1	46
Fixed Income Composite	-11.7%	-1.8%	6.8%	7.5%	-0.1%	3.9%	2.9%	0.5%	4.2%	-1.8%	4.0%
Fixed Income Composite Blended Benchmark	-11.2%	-1.5%	7.0%	7.5%	0.2%	3.7%	2.3%	0.8%	5.0%	-2.0%	4.2%
InvMetrics Public DB Total Fix Inc Net Rank	55	95	62	72	46	65	65	39	38	68	87
Mesirow	-12.5%	-1.9%	8.8%	8.8%	-0.6%	3.2%	2.9%	-0.1%	6.3%	-2.2%	5.4%
Bloomberg US Aggregate TR	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
eV US Core Fixed Inc Net Rank	24	86	31	60	75	82	58	85	23	79	60
Garcia Hamilton	-6.4%	-1.8%	5.7%	5.8%	1.2%	2.0%	2.9%	1.2%			
Bloomberg US Govt/Credit Int TR	-8.2%	-1.4%	6.4%	6.8%	0.9%	2.1%	2.1%	1.1%	3.1%	-0.9%	3.9%
eV US Interm Duration Fixed Inc Net Rank	3	92	78	88	9	82	20	27			
BlackRock U.S.Aggregate Bond Index	-13.0%	-1.6%									
Bloomberg US Aggregate TR	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
eV US Core Fixed Inc Net Rank	47	59									
U.S. Equity Composite	-17.6%	22.1%	20.6%	27.0%	-7.1%	18.8%	12.6%	-3.2%	6.3%	33.6%	5.0%
Domestic Equity Composite Blended Benchmark	-17.7%	23.1%	20.0%	29.9%	-7.2%	19.3%	14.6%	-0.7%	12.0%	34.4%	16.6%
InvMetrics Public DB US Eq Net Rank	54	95	15	95	71	80	53	90	96	68	99
BlackRock Russell 1000 Index Fund	-19.1%	26.5%	21.0%	_	-						
Russell 1000	-19.1%	26.5%	21.0%	31.4%	-4.8%	21.7%	12.1%	0.9%	13.2%	33.1%	16.4%
eV US Large Cap Core Equity Net Rank	75	56	18								
BlackRock Mid Cap Equity Index Fund	-13.0%	24.7%	13.8%								
			13.070							_	
S&P 400 MidCap	-13.1%	24.8%	13.7%	26.2%	 -11.1%	 16.2%	 20.7%	 -2.2%	9.8%	33.5%	 17.9%
S&P 400 MidCap eV US Passive Mid Cap Equity Net Rank	-13.1% 7			 26.2% 	 -11.1% 	 16.2% 	20.7% 			 33.5% 	 17.9% 
eV US Passive Mid Cap Equity Net Rank	7	24.8% 1	13.7% 25			 16.2% 	 20.7% 			 33.5% 	 17.9% 
eV US Passive Mid Cap Equity Net	7 -15.9%	24.8% 1 23.8%	13.7% 25 15.6%	26.3%	-11.1%		20.7%  21.3%		9.8%		
eV US Passive Mid Cap Equity Net Rank Macquarie SCC	7	24.8% 1	13.7% 25			 16.2%   14.6%		-2.2% 		33.5%  38.8% 	17.9%   16.3%
eV US Passive Mid Cap Equity Net Rank  Macquarie SCC Russell 2000 eV US Small Cap Core Equity Net Rank	-15.9% -20.4% 41	24.8% 1 23.8% 14.8% 55	13.7% 25 15.6% 20.0% 44	26.3% 25.5% 34	-11.1% -11.0%	 14.6% 		-2.2%   -4.4% 	9.8%   4.9% 		
eV US Passive Mid Cap Equity Net Rank  Macquarie SCC  Russell 2000  eV US Small Cap Core Equity Net	7 -15.9% -20.4% 41 -15.7%	24.8% 1 23.8% 14.8% 55	13.7% 25 15.6% 20.0% 44	26.3% 25.5% 34	-11.1% -11.0% 50	 14.6% 	 21.3% 	-2.2%   -4.4% 	9.8%   4.9% 	 38.8% 	 16.3% 
eV US Passive Mid Cap Equity Net Rank  Macquarie SCC Russell 2000 eV US Small Cap Core Equity Net Rank  Earnest Partners SCC	-15.9% -20.4% 41	24.8% 1 23.8% 14.8% 55	13.7% 25 15.6% 20.0% 44	26.3% 25.5% 34	-11.1% -11.0%	 14.6% 	 21.3% 	-2.2%   -4.4% 	9.8%   4.9% 		
eV US Passive Mid Cap Equity Net Rank  Macquarie SCC Russell 2000 eV US Small Cap Core Equity Net Rank  Earnest Partners SCC Russell 2000	7 -15.9% -20.4% 41 -15.7% -20.4%	24.8% 1 23.8% 14.8% 55  14.8%	13.7% 25 15.6% 20.0% 44  20.0%	26.3% 25.5% 34	-11.1% -11.0% 50	 14.6% 	 21.3% 	-2.2%   -4.4% 	9.8%  4.9%  4.9%	 38.8% 	 16.3% 
eV US Passive Mid Cap Equity Net Rank  Macquarie SCC Russell 2000 eV US Small Cap Core Equity Net Rank  Earnest Partners SCC Russell 2000 eV US Small Cap Equity Net Rank	7 -15.9% -20.4% 41 -15.7% -20.4% 45	24.8% 1 23.8% 14.8% 55  14.8%	13.7% 25 15.6% 20.0% 44  20.0%	26.3% 25.5% 34  25.5%	-11.1% -11.0% 50  -11.0%	 14.6% 	 21.3%   21.3% 	-2.2%  -4.4%  -4.4%	9.8%  4.9%  4.9% 	 38.8% 	 16.3% 

## Calendar Performance (Net of Fees)

Market Value: \$1,334.0 Million and 100.0% of Fund

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						Calenda	r Year				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
International Equity Composite	-15.8%	8.1%	21.7%	29.2%	-14.5%	30.9%	3.4%	-1.0%	-0.1%	23.7%	19.3%
International Equity Composite Blended Benchmark	-14.3%	10.3%	9.1%	21.8%	-14.0%	26.1%	2.7%	-3.3%	-4.4%	19.0%	17.1%
InvMetrics Public DB Dev Mkt ex-US Eq Net Rank	21	45	7	16	54	14	21	36	1	7	26
Artisan International Large Cap Value (APHKX)	-6.8%	17.0%	8.8%	24.2%	-15.4%	24.1%	5.7%	-1.5%	-0.4%	30.7%	23.0%
MSCI EAFE	-14.5%	11.3%	7.8%	22.0%	-13.8%	25.0%	1.0%	-0.8%	-4.9%	22.8%	17.3%
Foreign Large Blend MStar MF Rank	1	5	56	24	54	81	9	62	9	2	9
Hardman Johnston	-23.6%	1.3%	35.6%	33.8%	-13.7%	37.7%	1.1%	-0.4%	0.3%	17.4%	15.6%
MSCI ACWI ex USA	-16.0%	7.8%	10.7%	21.5%	-14.2%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%
eV ACWI ex-US Large Cap Equity Net Rank	79	92	4	6	33	7	50	29	6	60	81
BlackRock MSCI EAFE Small Cap Index	-20.8%	10.4%		-			_				
MSCI EAFE Small Cap	-21.4%	10.1%	12.3%	25.0%	-17.9%	33.0%	2.2%	9.6%	-4.9%	29.3%	20.0%
eV EAFE Small Cap Equity Net Rank	50	64		-			-				
Brown Capital International Small Cap	-31.4%			-			-				
MSCI ACWI ex US Small Cap	-20.0%	12.9%	14.2%	22.4%	-18.2%	31.6%	3.9%	2.6%	-4.0%	19.7%	18.5%
Foreign Small/Mid Growth MStar MF Rank	66			-			-				
BlackRock Emerging Markets Free Fund	-20.2%	-2.7%		-			_				
MSCI Emerging Markets	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
eV Emg Mkts Large Cap Equity Net Rank	70	63		-			-				
Goldman Sachs Emerging Markets Equity											
MSCI Emerging Markets	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
eV Emg Mkts All Cap Equity Net Rank											
BlackRock MSCI ACWI Min Volatility Index	-10.0%	14.1%							-		
MSCI ACWI Minimum Volatility Index	-10.3%	13.9%	2.7%	21.1%	-1.6%	17.9%	7.4%	2.8%	11.0%	16.9%	10.1%
eV Global Low Volatility Equity Net Rank	55	76		-			-				
Alternative Composite	-0.1%	17.3%	15.9%	-10.0%	6.4%	8.0%	3.3%	2.3%	2.4%	4.8%	
Alternatives Custom Benchmark	-4.5%	20.9%	19.3%	-10.5%	6.0%	8.2%	2.1%	3.3%			
InvMetrics Public DB Alts Net Rank	50	72	9	99	35	41	85	64	84	92	
Intercontinental U.S. Real Estate	7.2%	20.2%	1.1%	8.2%	9.3%	7.5%	11.1%	12.4%			
NFI-ODCE	6.5%	21.1%	0.3%	4.4%	7.4%	6.7%	7.8%	14.0%	11.5%	12.9%	9.8%
Consequent Alternative Partners II, LP	-9.2%	15.6%	22.3%	-20.0%	4.9%	7.0%	0.1%	0.2%	2.4%	-2.1%	
Custom Consequent Alt BM	-9.2%	15.6%	22.3%	-20.0%	4.9%	7.0%	0.1%	0.2%	2.4%	-2.1%	



Private Markets Composite Performance Summary

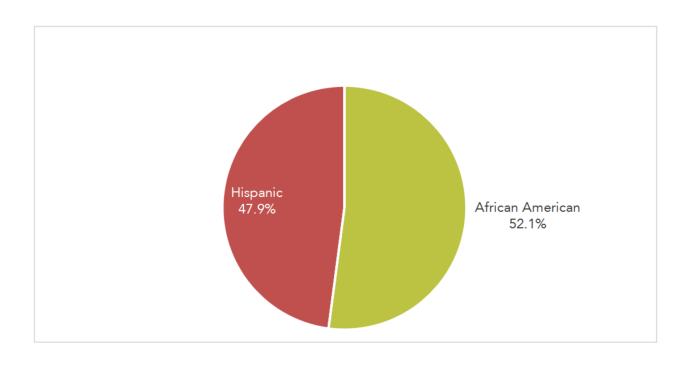
## **Private Market Investments Overview**

Investments		Commit	ments	Contributions &	Distributions	Valuat	ions		Perform	nance	
Investment Name	Vintage Year	Commitment (\$)	Unfunded Commitment (\$)	Cumulative Contributions (\$)	Cumulative Distributions (\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	RVPI	IRR (%)
	2014		-4,000,000	4,000,000	912,171			0.23			-39.27
GrayCo Alternative Partners II, L.P.	2012	21,000,000	2,715,486	21,637,389	15,117,933	10,179,039	25,296,972	0.70	1.17	0.47	2.29
Pharos Capital Partners III, L.P.	2013	4,000,000	80,000	3,920,000	4,576,406	2,749,876	7,326,283	1.17	1.87	0.70	12.29
Total		25.000.000	-1.204.514	29.557.389	20.606.511	12.928.915	32.623.255	0.70	1.10	0.44	1.89

MWDBE Composite Market Values

		Asset Class		Market Value	% of Portfolio	% of Total Fund
Total MWDBE Composite				\$114,453,078	100.0%	8.6%
Garcia Hamilton	(H)	Int. Govt. Fixed	Income	\$54,843,200	47.9%	4.1%
Earnest Partners SCC	(AA)	Small-Cap Core	е	\$45,518,738	39.8%	3.4%
Brown Capital International Small Cap	(AA)	Non-U.S. Small	l-Cap Core	\$11,341,264	9.9%	0.9%
Pharo Capital Partners III	(AA)	LBO Private Eq	uity	\$2,749,876	2.4%	0.2%
(AA) African American						
(A) Asian			Actual %			
(H) Hispanic		Minority	8.6%			
(NA) Native American		Female	0.0%			
(W) Women		Disabled	0.0%			

<sup>\*</sup>Please note: our calculations do not include Consequent Capital Management



## Fee Schedule

Market Value: \$1,334.0 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	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	0.22% \$428,405	0.22%
Int. Govt. Fixed Income	Garcia Hamilton	0.25% on the first \$50 million 0.11% on the next \$50 million 0.06% on the balance	0.24% \$130,328	0.25%
Core Fixed Income	BlackRock U.S.Aggregate Bond Index	0.0175% on the balance	0.02% \$16,149	0.06%
Large-Cap Core	BlackRock Russell 1000 Index Fund	0.015% on the balance	0.02% \$33,827	0.04%
Mid-Cap Core	BlackRock Mid Cap Equity Index Fund	0.01% on the balance	0.01% \$19,930	0.05%
Small-Cap Core	Macquarie SCC	0.65% on the first \$50 million 0.55% on the next \$50 million 0.45% on the balance	0.63% <b>\$3</b> 83,893	0.77%
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	0.60% \$272,594	0.85%
Small-Cap Growth	Driehaus SCG	0.60% on the first \$50 million 0.50% on the next \$50 million 0.45% on the balance	0.60% \$172,416	0.90%
Non-U.S. Large-Cap Value	Artisan International Large Cap Value (APHKX)	1.03% on the balance	1.03% \$910,544	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	0.65% <b>\$</b> 479,999	0.65%
Non-U.S. Small-Cap Core	BlackRock MSCI EAFE Small Cap Index	0.045% on the balance	0.05% \$3,875	0.25%
Non-U.S. Small-Cap Core	Brown Capital International Small Cap	1.06% on the balance	1.06% \$120,217	1.29%
Emerging Markets	BlackRock Emerging Markets Free Fund	0.09% on the balance	0.09% \$10,513	0.20%
Emerging Markets	Goldman Sachs Emerging Markets Equity	0.45% on the balance	0.45% \$87,627	0.90%
Global Low-Volatility	BlackRock MSCI ACWI Min Volatility Index	0.025% on the balance	0.03% \$38,006	0.36%
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	1.10% \$179,646	1.00%
U.S. Private Equity FoF	Consequent Alternative Partners II, LP	1.00% on Committed Capital	2.06% \$210,000	2.06%
LBO Private Equity	Pharos Capital Partners III	2.00% on Committed Capital	2.91% \$80,000	2.91%
Total Investment Management F	ees		0.27% \$3,577,969	0.35%

<sup>&</sup>lt;sup>1</sup> Expense Ratio & Estimated Annual Fee are Based on Market Value at Month End.

<sup>&</sup>lt;sup>2</sup> Source: 2019 Marquette Associates Investment Management Fee Study.



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## (Preliminary, Subject to Change)



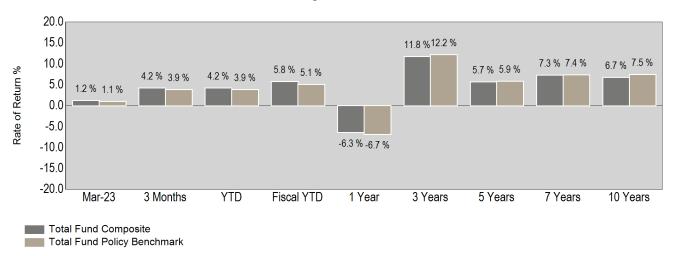
### **Pension Fund**

City of Atlanta Firefighters
Pension Fund
Executive Summary

March 31, 2023

Market Value: \$793.6 Million and 100.0% of Fund

### Return Summary Ending March 31, 2023



### **Return Summary YTD**

	Total Return
Total Fund Composite	4.2%
Fixed Income Composite	3.0%
U.S. Equity Composite	5.7%
International Equity Composite	4.5%
Alternative Composite	-2.3%

### **Asset Allocation vs. Target**

	Current	Current	Policy	Difference	%
Fixed Income Composite	\$204,610,387	25.8%	25.0%	\$6,203,200	0.8%
U.S. Equity Composite	\$337,867,145	42.6%	43.0%	-\$3,393,216	-0.4%
International Equity Composite	\$203,288,733	25.6%	27.0%	-\$10,991,029	-1.4%
Alternative Composite	\$26,709,810	3.4%	5.0%	-\$12,971,627	-1.6%
Cash Composite	\$21,152,673	2.7%	0.0%	\$21,152,673	2.7%
Total	\$793,628,747	100.0%	100.0%		

### **Summary of Cash Flows**

	Last Three Months	Year-To-Date	One Year
Beginning Market Value	\$772,736,582	\$772,736,582	\$872,025,917
Net Cash Flow	-\$12,159,374	-\$12,159,374	-\$24,466,439
Net Investment Change	\$33,051,539	\$33,051,539	-\$53,930,731
Ending Market Value	\$793,628,747	\$793,628,747	\$793,628,747

Market Value: \$793.6 Million and 100.0% of Fund

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Total Fund Composite		793,628,747	-12,159,374	100.0	100.0	0
Fixed Income Composite		204,610,387	-1,456	25.8	25.0	6,203,200
Garcia Hamilton	Core Fixed Income	57,175,724	-85	7.2		
Mesirow	Core Fixed Income	147,434,663	-1,370	18.6		
U.S. Equity Composite		337,867,145	-702	42.6	43.0	-3,393,216
Large Cap Composite		154,726,534	0	19.5	19.0	3,937,072
BlackRock 1000 Index Fund	Large-Cap Core	154,726,534	0	19.5		
Mid Cap Composite		93,978,562	0	11.8	12.0	-1,256,888
BlackRock Mid Cap Equity Index Fund	Mid-Cap Core	93,978,562	0	11.8		
Small Cap Composite		89,162,048	-702	11.2	12.0	-6,073,401
Northern Trust Collective Russell 2000 Index	Small-Cap Core	16,907,575	0	2.1		
Earnest SCC	Small-Cap Core	45,519,112	-518	5.7		
Driehaus SCG	Small-Cap Growth	26,735,361	-184	3.4		
International Equity Composite		203,288,733	536	25.6	27.0	-10,991,029
Ativo Capital	Non-U.S. Large-Cap Core	39,239,090	536	4.9		
Hardman Johnston	Non-U.S. Large-Cap Core	10,133,469	0	1.3		
BlackRock MSCI EAFE Small Cap	Non-U.S. Small-Cap Core	15,617,155	0	2.0		
Brown Capital International Small Cap	Non-U.S. Small-Cap Core	11,341,264	0	1.4		
BlackRock Emerging Markets Free Fund	Emerging Markets	19,811,393	0	2.5		
Goldman Sachs Emerging Markets Equity	Emerging Markets	19,472,617	0	2.5		
Global Low Volatility Composite		87,673,747	0	11.0	-	87,673,747
BlackRock MSCI ACWI Min Volatility Index	Global Low-Volatility	87,673,747	0	11.0		
Alternative Composite		26,709,810	-418,531	3.4	5.0	-12,971,627
Intercontinental U.S. Real Estate	Core Real Estate	16,331,439	-99,283	2.1		
Consequent Alternative Partners II, L.P.	U.S. Private Equity FoF	7,270,742	0	0.9		
ICV Partners III, L.P.	LBO Private Equity	1,731,958	0	0.2		
Pharos Capital Partners III	LBO Private Equity	1,375,671	-319,248	0.2		
Cash Composite		21,152,673	-11,739,222	2.7	0.0	21,152,673
Cash Account	Cash & Equivalents	20,550,007	-8,831,914	2.6		
Transition Account	Cash & Equivalents	5,009	-2	0.0		
NT Operating	Cash & Equivalents	597,657	-2,907,306	0.1		

## Annualized Performance (Net of Fees)

Market Value: \$793.6 Million and 100.0% of Fund

						-	5	- , -				
	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Total Fund Composite	1.2%	4.2%	4.2%	5.8%	-6.3%	-2.7%	11.8%	5.7%	7.3%	6.7%	8.1%	Jan-88
Total Fund Policy Benchmark	1.1%	3.9%	3.9%	5.1%	-6.7%	-2.2%	12.2%	5.9%	7.4%	7.5%	8.8%	Jan-88
Fixed Income Composite	2.7%	3.0%	3.0%	0.5%	-4.2%	-4.1%	-2.0%	0.5%	0.8%	1.3%	5.2%	Jan-88
Fixed Income Composite Custom Benchmark	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.5%	0.7%	1.2%	5.4%	Jan-88
Garcia Hamilton	3.0%	3.7%	3.7%	0.5%	-3.5%	-3.5%	-1.4%	1.1%			1.3%	Dec-16
Bloomberg US Aggregate TR	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%	1.4%	1.0%	Dec-16
Mesirow	2.6%	2.8%	2.8%	0.5%	-4.5%	-4.2%	-2.2%	1.0%	0.9%	1.3%	2.2%	May-10
Bloomberg US Aggregate TR	2.5%	3.0%	3.0%	-0.1%	-4.8%	-4.5%	-2.8%	0.9%	0.9%	1.4%	2.2%	May-10
U.S. Equity Composite	-0.4%	5.7%	5.7%	10.5%	-8.0%	-2.0%	18.5%	8.4%	10.4%	9.4%	10.9%	Jan-88
Russell 3000	2.7%	7.2%	7.2%	9.7%	-8.6%	1.2%	18.5%	10.4%	12.0%	11.7%	10.6%	Jan-88
Large Cap Composite	3.2%	7.5%	7.5%	9.9%	-8.4%	1.9%	18.6%	10.9%	12.0%	11.1%	10.7%	Jan-88
Russell 1000	3.2%	7.5%	7.5%	9.9%	-8.4%	1.9%	18.6%	10.9%	12.2%	12.0%	10.7%	Jan-88
BlackRock 1000 Index Fund	3.2%	7.5%	7.5%	9.9%	-8.4%	1.9%	18.6%	10.9%			10.2%	Dec-17
Russell 1000	3.2%	7.5%	7.5%	9.9%	-8.4%	1.9%	18.6%	10.9%	12.2%	12.0%	10.2%	Dec-17
Mid Cap Composite	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	7.7%	10.5%	9.4%	8.1%	Jun-98
S&P 400 MidCap	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	7.7%	9.9%	9.8%	9.7%	Jun-98
BlackRock Mid Cap Equity Index Fund	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	7.7%			8.7%	Aug-17
S&P 400 MidCap	-3.2%	3.8%	3.8%	12.2%	-5.1%	-0.4%	22.1%	7.7%	9.9%	9.8%	8.6%	Aug-17
Small Cap Composite	-3.3%	4.7%	4.7%	9.5%	-10.4%	-9.1%	16.3%	4.8%	8.0%	5.9%	9.5%	Oct-01
Russell 2000	-4.8%	2.7%	2.7%	6.7%	-11.6%	-8.7%	17.5%	4.7%	8.6%	8.0%	8.6%	Oct-01
Northern Trust Collective Russell 2000 Index	-4.8%	2.8%	2.8%	6.9%	-11.5%	-8.7%	17.6%	4.8%	-		5.9%	Feb-17
Russell 2000	-4.8%	2.7%	2.7%	6.7%	-11.6%	-8.7%	17.5%	4.7%	8.6%	8.0%	5.8%	Feb-17
Earnest SCC	-3.4%	5.8%	5.8%	11.1%	-7.2%	-	-	-			-7.8%	Oct-21
Russell 2000	-4.8%	2.7%	2.7%	6.7%	-11.6%	-8.7%	17.5%	4.7%	8.6%	8.0%	-14.5%	Oct-21
Driehaus SCG	-2.0%	4.1%	4.1%	8.6%	-14.7%						-24.8%	Oct-21
Russell 2000 Growth	-2.5%	6.1%	6.1%	10.7%	-10.6%	-12.5%	13.4%	4.3%	8.7%	8.5%	-18.7%	Oct-21

## Annualized Performance (Net of Fees)

Market Value: \$793.6 Million and 100.0% of Fund

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
International Equity Composite	3.2%	4.5%	4.5%	5.9%	-8.4%	-5.6%	11.4%	2.7%	6.3%	5.0%	5.8%	Jul-10
International Equity Composite Custom Benchmark	2.8%	3.7%	3.7%	5.1%	-7.6%	-4.4%	11.2%	1.7%	5.4%	3.9%	5.2%	Jul-10
Ativo Capital	3.7%	9.2%	9.2%	13.5%	-6.7%	0.1%	12.2%	2.7%	4.3%		4.0%	Jan-16
MSCI ACWI ex USA	2.4%	6.9%	6.9%	10.0%	-5.1%	-3.3%	11.8%	2.5%	5.9%	4.2%	5.6%	Jan-16
Hardman Johnston	3.3%	8.9%	8.9%	13.4%	-2.1%	-6.5%	13.3%	5.3%	9.6%	7.4%	7.7%	Jul-10
MSCI ACWI ex USA	2.4%	6.9%	6.9%	10.0%	-5.1%	-3.3%	11.8%	2.5%	5.9%	4.2%	5.4%	Jul-10
BlackRock MSCI EAFE Small Cap	0.0%	5.1%	5.1%	10.2%	-9.1%	-6.2%	12.6%	1.4%			1.4%	Dec-17
MSCI EAFE Small Cap	-0.2%	4.9%	4.9%	9.5%	-9.8%	-6.8%	12.1%	0.9%	5.3%	5.9%	0.9%	Dec-17
Brown Capital International Small Cap	3.5%	6.5%	6.5%	10.7%	-9.3%						-22.2%	Dec-21
MSCI ACWI ex US Small Cap	0.2%	4.7%	4.7%	8.7%	-10.4%	-5.3%	15.0%	1.7%	5.7%	5.1%	-13.2%	Dec-21
BlackRock Emerging Markets Free Fund	3.2%	4.0%	4.0%	0.7%	-10.7%	-11.1%	7.6%	-1.0%			-0.7%	Dec-17
MSCI Emerging Markets	3.0%	4.0%	4.0%	0.8%	-10.7%	-11.0%	7.8%	-0.9%	4.9%	2.0%	-0.6%	Dec-17
Goldman Sachs Emerging Markets Equity	2.3%	5.1%	5.1%	-1.4%	-14.6%						-16.9%	Feb-22
MSCI Emerging Markets	3.0%	4.0%	4.0%	0.8%	-10.7%	-11.0%	7.8%	-0.9%	4.9%	2.0%	-11.8%	Feb-22
BlackRock MSCI ACWI Min Volatility Index	3.8%	1.7%	1.7%	3.9%	-5.7%	1.3%					6.3%	Apr-20
MSCI ACWI Minimum Volatility Index	3.7%	1.5%	1.5%	3.5%	-6.1%	1.0%	8.2%	5.0%	6.2%	6.7%	5.9%	Apr-20
Alternative Composite	-2.3%	-2.3%	-2.3%	-5.1%	-3.2%	4.7%	9.9%	4.1%	5.2%	4.4%	5.2%	Dec-12
Intercontinental U.S. Real Estate	-3.8%	-3.8%	-3.8%	-8.6%	-2.3%	10.1%	7.8%	7.7%	8.6%		9.2%	Aug-14
NFI-ODCE	-1.1%	-3.3%	-3.3%	-8.0%	-3.9%	10.6%	7.5%	6.6%	6.8%	8.5%	7.8%	Aug-14
Consequent Alternative Partners II, L.P.	0.0%	0.0%	0.0%	0.0%	-6.9%	-0.1%	10.7%	1.0%	2.3%	1.7%	1.9%	Dec-12
Consequent Alt BM	0.0%	0.0%	0.0%	0.0%	-6.9%	-0.1%	10.7%	1.0%	2.3%	1.7%	1.9%	Dec-12

# Calendar Performance (Net of Fees)

Market Value: \$793.6 Million and 100.0% of Fund

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Total Fund Composite	-16.3%	13.3%	17.5%	21.5%	-6.4%	16.1%	8.6%	-2.5%	3.8%	22.4%	13.0%
Total Fund Policy Benchmark	-15.4%	14.5%	15.1%	22.1%	-6.5%	15.2%	9.7%	-0.2%	8.7%	21.9%	13.1%
InvMetrics Public DB > \$250mm Net Rank	94	62	6	6	92	33	14	88	81	1	34
Fixed Income Composite	-12.2%	-2.0%	7.6%	7.9%	-0.2%	4.4%	2.9%	0.4%	4.4%	-1.9%	4.2%
Fixed Income Composite Custom Benchmark	-13.0%	-1.5%	7.4%	8.0%	-0.2%	4.4%	2.2%	0.8%	5.0%	-2.0%	4.2%
InvMetrics Public DB Total Fix Inc Net Rank	63	97	53	68	49	60	64	40	34	69	74
Garcia Hamilton	-11.2%	-2.3%	8.0%	7.0%	0.8%	3.5%					
Bloomberg US Aggregate TR	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
eV US Core Fixed Inc Net Rank	8	93	61	93	10	71					
Mesirow	-12.5%	-1.8%	8.3%	8.8%	-0.6%	3.4%	2.8%	-0.1%	6.4%	-2.3%	5.5%
Bloomberg US Aggregate TR	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%
eV US Core Fixed Inc Net Rank	26	77	43	67	75	78	65	86	22	82	60
U.S. Equity Composite	-19.0%	21.8%	20.3%	28.4%	-6.3%	18.9%	12.7%	-4.9%	5.1%	34.8%	16.8%
Russell 3000	-19.2%	25.7%	20.9%	31.0%	-5.2%	21.1%	12.7%	0.5%	12.6%	33.6%	16.4%
InvMetrics Public DB US Eq Net Rank	80	97	18	87	58	79	50	97	98	36	21
Large Cap Composite	-19.1%	26.5%	21.0%	31.5%	-4.7%	20.7%	11.1%	-0.3%	7.2%	32.0%	16.1%
Russell 1000	-19.1%	26.5%	21.0%	31.4%	-4.8%	21.7%	12.1%	0.9%	13.2%	33.1%	16.4%
eV US Large Cap Core Equity Net Rank	75	56	18	29	34	59	26	58	96	49	29
BlackRock 1000 Index Fund	-19.1%	26.5%	21.0%	31.5%	-4.8%						
Russell 1000	-19.1%	26.5%	21.0%	31.4%	-4.8%	21.7%	12.1%	0.9%	13.2%	33.1%	16.4%
eV US Large Cap Core Equity Net Rank	75	56	18	29	37		-				

## Calendar Performance (Net of Fees)

Market Value: \$793.6 Million and 100.0% of Fund

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Mid Cap Composite	-13.0%	24.8%	13.8%	26.3%	-6.6%	15.7%	15.3%	-9.1%	7.1%	40.1%	17.0%
S&P 400 MidCap	-13.1%	24.8%	13.7%	26.2%	-11.1%	16.2%	20.7%	-2.2%	9.8%	33.5%	17.9%
eV US Mid Cap Core Equity Net Rank	34	59	51	78	24	74	30	94	66	15	32
BlackRock Mid Cap Equity Index Fund	-13.0%	24.8%	13.8%	26.3%	-11.0%						
S&P 400 MidCap	-13.1%	24.8%	13.7%	26.2%	-11.1%	16.2%	20.7%	-2.2%	9.8%	33.5%	17.9%
eV US Mid Cap Core Equity Net Rank	34	59	51	78	51		-	-			-
Small Cap Composite	-23.0%	10.7%	27.7%	23.8%	-9.2%	19.1%	10.9%	-13.6%	-3.4%	43.6%	19.8%
Russell 2000	-20.4%	14.8%	20.0%	25.5%	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%
eV US Small Cap Core Equity Net Rank	88	97	18	52	36	17	93	99	97	21	11
Northern Trust Collective Russell 2000 Index	-20.4%	14.8%	20.1%	25.7%	-10.9%						
Russell 2000	-20.4%	14.8%	20.0%	25.5%	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%
eV US Small Cap Core Equity Net Rank	75	92	30	40	49	-	-				-
Earnest SCC	-15.8%										
Russell 2000	-20.4%	14.8%	20.0%	25.5%	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%
eV US Small Cap Equity Net Rank	46			-							
Driehaus SCG	-34.0%			-	-	-	_				
Russell 2000 Growth	-26.4%	2.8%	34.6%	28.5%	-9.3%	22.2%	11.3%	-1.4%	5.6%	43.3%	14.6%
eV US Small Cap Growth Equity Net Rank	76										



# Calendar Performance (Net of Fees)

Market Value: \$793.6 Million and 100.0% of Fund

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	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
International Equity Composite	-19.8%	6.1%	20.2%	25.8%	-14.4%	31.4%	-1.1%	-1.2%	-2.7%	18.5%	15.6%
International Equity Composite Custom Benchmark	-15.8%	8.3%	10.7%	21.4%	-14.7%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%
InvMetrics Public DB Dev Mkt ex-US Eq Net Rank	98	78	11	34	48	11	84	37	19	82	99
Ativo Capital	-17.5%	13.2%	7.5%	19.7%	-13.6%	21.2%	-3.6%				
MSCI ACWI ex USA	-16.0%	7.8%	10.7%	21.5%	-14.2%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%
eV ACWI ex-US Large Cap Equity Net Rank	47	24	76	80	31	95	89				
Hardman Johnston	-23.7%	1.3%	35.6%	33.4%	-13.9%	37.5%	1.2%	-0.3%	0.4%	17.3%	15.6%
MSCI ACWI ex USA	-16.0%	7.8%	10.7%	21.5%	-14.2%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%
eV EAFE Large Cap Core Net Rank	96	99	1	1	45	1	29	50	5	91	92
BlackRock MSCI EAFE Small Cap	-20.8%	10.4%	12.8%	25.6%	-17.5%	-		-	-		
MSCI EAFE Small Cap	-21.4%	10.1%	12.3%	25.0%	-17.9%	33.0%	2.2%	9.6%	-4.9%	29.3%	20.0%
eV EAFE Small Cap Equity Net Rank	50	64	38	38	26						
Brown Capital International Small Cap	-31.4%			-		-	-		-		
MSCI ACWI ex US Small Cap	-20.0%	12.9%	14.2%	22.4%	-18.2%	31.6%	3.9%	2.6%	-4.0%	19.7%	18.5%
Foreign Small/Mid Growth MStar MF Rank	66						-				
BlackRock Emerging Markets Free Fund	-20.2%	-2.7%	18.0%	18.2%	-14.6%	-			-		
MSCI Emerging Markets	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
eV Emg Mkts Large Cap Equity Net Rank	70	63	44	65	24						
Goldman Sachs Emerging Markets Equity	-	-		-	-	-	-	-	-	-	-
MSCI Emerging Markets	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%
eV Emg Mkts All Cap Equity Net Rank											
BlackRock MSCI ACWI Min Volatility Index	-10.0%	14.2%									
MSCI ACWI Minimum Volatility Index	-10.3%	13.9%	2.7%	21.1%	-1.6%	17.9%	7.4%	2.8%	11.0%	16.9%	10.1%
eV Global Low Volatility Equity Net Rank	55	76					-				
Alternative Composite	0.2%	16.4%	12.8%	-7.9%	6.0%	7.7%	4.7%	4.4%	1.6%	4.8%	
InvMetrics Public DB Alts Net Rank	47	74	12	99	36	43	74	47	86	92	
Intercontinental U.S. Real Estate	7.2%	20.2%	1.1%	8.2%	9.8%	7.7%	12.1%	12.7%			
NFI-ODCE	6.5%	21.1%	0.3%	4.4%	7.4%	6.7%	7.8%	14.0%	11.5%	12.9%	9.8%
Consequent Alternative Partners II, L.P.	-9.2%	15.6%	22.3%	-20.0%	4.9%	7.0%	0.1%	0.2%	0.8%	4.0%	
Consequent Alt BM	-9.2%	15.6%	22.3%	-20.0%	4.9%	7.0%	0.1%	0.2%	0.8%	4.0%	

Private Markets Composite

# Performance Summary

## **Private Market Investments Overview**

Investments		Commit	ments	Contributions &	Distributions	Valuati	ons		Perform	nance	
Investment Name	Vintage Year	Commitment (\$)	Unfunded Commitment (\$)	Cumulative Contributions (\$)	Cumulative Distributions (\$)	Valuation (\$)	Total Value (\$)	DPI	TVPI	RVPI	IRR (%)
GrayCo Alternative Partners II, L.P.	2012	15,000,000	1,939,632	13,060,368	8,403,614	7,270,742	15,674,356	0.64	1.20	0.56	2.30
ICV Partners III, L.P.	2014	2,000,000	31,337	2,266,870	1,243,869	1,731,958	2,975,827	0.55	1.31	0.76	4.85
Pharos Capital Partners III, L.P.	2014	2,000,000	40,000	1,960,000	2,288,620	1,375,671	3,664,292	1.17	1.87	0.70	12.20
Total		19,000,000	2,010,969	17,287,238	11,936,104	10,378,371	22,314,475	0.69	1.29	0.60	3.48

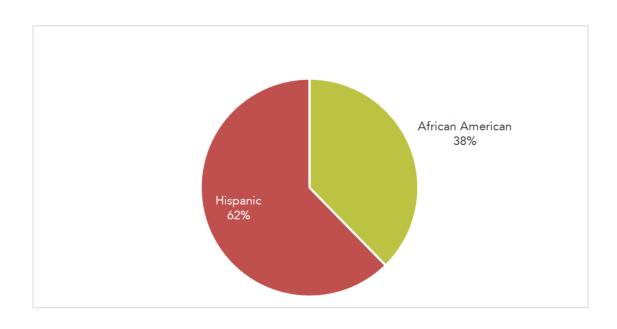
MWDBE Composite Market Values

		Asset Class	Market Value	% of Portfolio	% of Total Fund
Total MWDBE Composite			\$154,650,861	100.0%	19.5%
Garcia Hamilton	(H)	Core Fixed Income	\$57,175,724	37.0%	7.2%
Ativo	(H)	Non-U.S. Large-Cap Core	\$39,239,090	25.4%	4.9%
Earnest SCC	(AA)	Small-Cap Core	\$45,519,112	29.4%	5.7%
Brown Capital International Small Cap	(AA)	Non-U.S. Small-Cap Core	\$11,341,264	7.3%	1.4%
Pharos Capital Partners III	(AA)	LBO Private Equity	\$1,375,671	0.9%	0.2%

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(A) Asian		Actual %
(H) Hispanic	Minority	19.5%
(NA) Native American	Female	0.0%
(W) Women	Disabled	0.0%

<sup>\*</sup>Please note: our calculations do not include Consequent Capital Management



## Fee Schedule

Market Value: \$793.6 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	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	0.65% \$255,054	0.68%
Large-Cap Core	BlackRock 1000 Index Fund	0.01% on the balance	0.01% \$15,473	0.04%
Mid-Cap Core	BlackRock Mid Cap Equity Index Fund	0.01% on the balance	0.01% \$9,398	0.06%
Core Fixed Income	Garcia Hamilton	0.25% on the first \$50 million 0.11% on the next \$50 million 0.06% on the balance	0.23% \$132,893	0.26%
U.S. Private Equity FoF	Consequent Alternative Partners II, L.P.	1.00% on Committed Capital	2.06% \$150,000	2.06%
LBO Private Equity	ICV Partners III, L.P.	2.00% on Committed Capital Plus 20.0% Carried Interest, over an 8% Hurdle	2.31% \$40,000	2.31%
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	1.10% \$179,646	1.00%
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	0.75% \$76,001	0.68%
Small-Cap Core	Earnest SCC	0.80% on the first \$10 million 0.65% on the next \$10 million 0.50% on the balance	0.60% \$272,596	0.85%
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	0.23% \$334,869	0.22%
Small-Cap Core	Northern Trust Collective Russell 2000 Index	0.04% on the balance	0.04% \$6,763	0.05%
LBO Private Equity	Pharos Capital Partners III	2.00% on Committed Capital	2.91% \$40,000	2.91%
Emerging Markets	BlackRock Emerging Markets Free Fund	0.06% on the balance	0.06% \$11,887	0.20%
Emerging Markets	Goldman Sachs Emerging Markets Equity	0.45% on the balance	0.45% \$87,627	0.90%
Non-U.S. Small-Cap Core	BlackRock MSCI EAFE Small Cap	0.045% on the balance	0.05% \$7,028	0.25%
Global Low-Volatility	BlackRock MSCI ACWI Min Volatility Index	0.025% on the balance	0.03% \$21,918	0.42%
Small-Cap Growth	Driehaus SCG	0.60% on the first \$50 million 0.50% on the next \$50 million 0.45% on the balance	0.60% \$160,412	0.90%
Non-U.S. Small-Cap Core	Brown Capital International Small Cap	1.06% on the balance	1.06% \$120,217	1.29%
Total Investment Managemen	nt Fees		0.24% \$1,921,782	0.34%

<sup>&</sup>lt;sup>1</sup> Expense Ratio & Estimated Annual Fee are Based on Market Value at Month End. <sup>2</sup> Source: 2019 Marquette Associates Investment Management Fee Study.



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